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Institutional Reforms in California Groundwater Law

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I. INTRODUCTION

Allocation of groundwater in California has long been a difficult problem. The history of water use in California has been to pump groundwater until it becomes scarce and then to develop a supply of supplemental imported water. This happened in the City of Los Angeles, where three thousand artesian wells disappeared in thirty years as a result of overpumping.¹ The development of the Owens Valley and Colorado River supplies were designed to offset the deficit created by overpumping.² Similarly, groundwater levels in the Central Valley had declined precipitously until the Central Valley Project brought additional supplies for agricultural use.³

Although groundwater problems are not new, they are more important today than ever. Groundwater currently contributes approximately 16.6 million acre-feet annually in an attempt to meet California's water needs.⁴ The rapid urban growth and lengthy drought experienced in the past ten years have led to the increased withdrawal of groundwater to meet water needs, causing a lowering of groundwater levels and leading to a severe groundwater overdraft problem. Overdraft occurs whenever groundwater

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1. THE METROPOLITAN WATER DISTRICT, HISTORY AND FIRST ANNUAL REPORT 17 (1939).

2. NORRIS HUNDLEY, JR., THE GREAT THIRST 119-200 (1992).

3. *Id.* at 235.

4. CALIFORNIA DEPARTMENT OF WATER RESOURCES, CALIFORNIA WATER: LOOKING TO THE FUTURE, BULLETIN NO. 160-87, 31 (1987) [hereinafter CALIFORNIA WATER: LOOKING TO THE FUTURE].

extractions increase or the withdrawable maximum decreases to the point where any surplus ends, or both.⁵ State groundwater basins are estimated to be annually overdrafted by two million acre-feet.⁶ Historically, overdraft problems have been mitigated by the importation of supplemental water through large water development projects.⁷ This alternative is less viable now because of the higher cost of such projects and the environmental constraints on their construction.⁸

Water quality issues also affect groundwater availability. Many groundwater basins have been polluted by toxic chemicals used in manufacturing and agricultural applications and cannot be utilized for domestic purposes.⁹ Groundwater supplies are also being viewed as a source of water for transfers to meet growing urban needs. Coupled with these limitations and requirements is the recognition of the need to allocate sufficient water to meet environmental needs. The use of groundwater supplies for environmental needs is an additional limitation on the availability of groundwater supplies for consumptive use.

The time is long past for comprehensive groundwater regulation in California. The failure of Californians to act will not make the problem disappear. Rather, as with the State's failure to comprehensively address water issues in the San Francisco Bay/Sacramento-San Joaquin Delta region,¹⁰ it will constitute an open invitation to the federal government to become involved either directly or through the application of federal laws such as the Endangered Species Act.

California groundwater law as it currently exists is perhaps best summarized as the right to pump as much water as possible until one is sued.¹¹ California groundwater is not regulated by a statewide manage-

5. *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 278, 537 P.2d 1250, 1307, 123 Cal. Rptr. 1, 58 (1975). A groundwater basin is considered to be in a state of surplus when the amount of water extracted from it "is less than the maximum" amount of groundwater "that could be withdrawn without adverse effects on the basin's long term supply." *Id.* at 277, 537 P.2d at 1307, 123 Cal. Rptr. at 58.

6. CALIFORNIA WATER: LOOKING TO THE FUTURE, *supra* note 4, at 31.

7. *Id.* at 39-57.

8. For example, numerous state and federal laws must be satisfied prior to development of projects, such as the National Environmental Policy Act, 42 U.S.C.A. §§ 4321-4370d (West 1977 & Supp. 1993), the state Endangered Species Act, CAL. FISH & GAME CODE §§ 2050-2098 (West Supp. 1994), the federal Endangered Species Act, 16 U.S.C. §§ 1531-1543 (1988), the Clean Water Act, 33 U.S.C.A. §§ 1250-1376 (West 1986 & Supp. 1993), and the California Environmental Quality Act, CAL. PUB. RES. CODE §§ 21000-21178.1 (West 1986 & Supp. 1994).

9. Donn W. Furman, Comment, *Poisoned Waters: An Examination of Agricultural Water Pollution*, 3 SAN JOAQUIN AGRIC. L. REV. 99, 100 (1993).

10. 4 CAL. WATER L. & POL'Y REP. 75, 80 (Feb. 1994).

11. See *infra* notes 21-72 (summarizing common law treatment of groundwater in California).

ment system, despite the severe overdraft of many basins.¹² The California Legislature has not granted the State Water Resources Control Board jurisdiction over groundwater, even though it may be interconnected with surface water resources, because groundwater is presumed to be percolating water.¹³ Most property owners with land overlying groundwater need only drill a well or construct other diversion works and extract the groundwater.¹⁴ Although some governmental controls do exist, they are often not enforced with any consistency. This has led to judicial management through court adjudications coupled with varying local controls. This system has always been extremely inefficient and is now hopelessly archaic. By way of examples, the adjudication of the San Fernando Basin took twenty years to complete,¹⁵ the adjudication of the Raymond Basin took twelve years,¹⁶ and the adjudication of the Mojave Basin, after two different lawsuits and eighteen years, has still not been completed.¹⁷

This Article considers possible institutional reforms in California groundwater law that would better promote the protection of state groundwater basins and natural resources, as well as ensure adequate water supplies for consumptive uses. Part II discusses existing California groundwater law.¹⁸ Alternative methods of groundwater regulation that have been implemented in other western states and the relative success of each system are reviewed in Part III.¹⁹ Finally, Part IV contains an outline of possible statewide reforms to protect the State's groundwater and to ensure adequate supplies to meet the needs of all competing uses.²⁰

12. The lack of state regulation of groundwater is in stark contrast to the elaborate regulation of appropriated surface water. *See* CAL. WATER CODE §§ 1200-1851 (West 1971 & Supp. 1994) (describing the regulation of appropriated surface water).

13. Percolating water is water that simply seeps through the ground and does not form any part of a stream (subsurface or otherwise). *Vineland Irrigation Dist. v. Azusa Irrigating Co.*, 126 Cal. 486, 494, 58 P. 1057, 1059 (1899).

14. The right to drill is limited only by the fact that all water must be used for a reasonable and beneficial purpose. CAL. CONST. art. X, § 2.

15. *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 207, 537 P.2d 1250, 1258-59, 123 Cal. Rptr. 1, 9-10 (1975).

16. *City of Pasadena v. City of Alhambra*, 33 Cal. 2d 908, 916, 207 P.2d 17, 22-23 (1949).

17. *Judgment Pursuant to Stipulation, City of Barstow v. City of Adelanto*, No. 208568 (Riverside Sup. Ct. May 4, 1993).

18. *See infra* notes 21-133 and accompanying text (describing current California groundwater law).

19. *See infra* notes 134-202 and accompanying text (discussing other states' groundwater regulations).

20. *See infra* notes 203-270 and accompanying text (explaining possible reforms to California groundwater law).

II. EXISTING GROUNDWATER LAW IN CALIFORNIA

A. *Common Law*

Unlike appropriated surface water, which is chiefly regulated by the State Water Resources Control Board (SWRCB),²¹ groundwater in California is primarily governed by common law doctrines and the State Constitution, with disputes over groundwater frequently resolved through the courts. The use of percolating groundwater in California is governed by the doctrines of correlative rights, and reasonable and beneficial use. The doctrine of reasonable use, which is set forth in Article X, section 2 of the California Constitution,²² limits a groundwater user to the amount of water reasonably needed for beneficial purposes.²³ The doctrine of correlative rights gives all landowners overlying a groundwater basin equal rights to the water, and all must share in any water shortages.²⁴ Rights between overlying owners are mutual and reciprocal. Each overlying owner is entitled to take all that can be beneficially used on the land if there is enough water in the basin.²⁵ If there is not enough water in the basin, however, then each user is limited to a proportionate fair share of the total amount available based on reasonable need.²⁶ Thus, in cases of water shortage, all overlying owners are entitled to a fair and just proportion of the available waters.²⁷

An overlying use of groundwater can be paramount to a non-overlying use.²⁸ A non-overlying use is considered an appropriative use when groundwater is exported from an overlying area for use outside the basin.²⁹ The rationale for this rule is that the water used away from the overlying property cannot return for further use, thus depleting the waters

21. See CAL. WATER CODE § 175 (West Supp. 1994) (establishing the State Water Resources Control Board within the California Environmental Protection Agency). See generally *id.* §§ 1250-1845 (West 1971 & Supp. 1994) (describing the duties of the State Water Resources Control Board within the context of surface water appropriation).

22. See CAL. CONST. art. X, § 2 (stating that “[t]he right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served . . .”).

23. *Katz v. Walkinshaw*, 141 Cal. 116, 134, 74 P. 766, 771 (1903).

24. *Id.* at 134-36, 74 P. at 771-72.

25. *Tehachapi-Cummings County Water Dist. v. Armstrong*, 49 Cal. App. 3d 992, 1001, 122 Cal. Rptr. 918, 924 (1975).

26. *Id.*

27. *City of Pasadena v. City of Alhambra*, 33 Cal. 2d 908, 925-26, 207 P.2d 17, 28 (1949).

28. *Corona Foothill Lemon Co. v. Lillibridge*, 8 Cal. 2d 522, 525, 66 P.2d 443, 444 (1937).

29. *Armstrong*, 49 Cal. App. 3d at 1000 n.6, 1001, 122 Cal. Rptr. at 924 n.6.

underlying the lands of the overlying users and ultimately impairing their value. Accordingly, water that is surplus to the reasonable and beneficial needs of the overlying users is available to allow appropriation of groundwater.³⁰ To make matters more confusing, certain types of underground water, underflow and underground streams, are appropriated in the same manner as surface water, pursuant to the procedures in the Water Code.³¹

In 1949, the California Supreme Court issued a landmark decision that added a new principle to the long established correlative rights doctrine.³² In *City of Pasadena v. City of Alhambra*,³³ most of the substantial pumpers in the Raymond Basin, both overlying and appropriative, were joined in a lawsuit to determine rights to the groundwater basin.³⁴ Groundwater levels in the basin had been declining for twenty-two of the twenty-four years prior to the filing of the lawsuit.³⁵ The plaintiff, City of Pasadena, claimed that extractions from the basin should be limited to the safe yield of the basin.³⁶

The court in *Pasadena* first decided that it would limit pumping to the safe yield of the basin.³⁷ The court then determined which of the parties should bear the burden of curtailing the total production to the safe yield by developing the doctrine of "mutual prescription."³⁸ The court held that all parties who had appropriated water from the basin after the overdraft began and before the complaint was filed acquired prescriptive rights³⁹ against all of the other overlying owners and prior appropriators.⁴⁰ In doing this, the court rejected the notion that water must be allocated

30. These rules are modified with respect to groundwater storage rights; an importer of water to a basin has first call to that amount of water that it adds to the total basin supply. See *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 255-64, 537 P.2d 1250, 1291-97, 123 Cal. Rptr. 1, 42-48 (1975) (summarizing cases in which the importer of water to a basin was given first priority to the water that the importer added to the total basin supply).

31. See CAL. WATER CODE § 1200 (West 1971) (providing the procedures for appropriating underflow and underground streams).

32. See *City of Pasadena v. City of Alhambra*, 33 Cal. 2d 908, 926-28, 207 P.2d 17, 28-30 (1949) (applying the doctrine of mutual prescription to appropriation of groundwater).

33. 33 Cal. 2d 908, 207 P.2d 17 (1949).

34. *City of Alhambra*, 33 Cal. 2d at 916, 207 P.2d at 22-23.

35. *Id.* at 922, 207 P.2d at 26.

36. *Id.* at 916, 207 P.2d at 22-23.

37. *Id.* at 924, 207 P.2d at 27.

38. *Id.* at 926-28, 207 P.2d at 28-30.

39. A prescriptive water right is a permanent right to use water acquired when the essential elements for adverse use are present for the required period of time described by the applicable statute of limitations. HAROLD E. ROGERS & ALAN H. NICHOLS, *WATER FOR CALIFORNIA* §§ 228-229 (1967).

40. *City of Pasadena v. City of Alhambra*, 33 Cal. 2d 908, 933, 207 P.2d 17, 32-33 (1949).

strictly on the basis of priority and first in time appropriation.⁴¹ The court held that such strict application of the rule of priority would result in an unequal sharing of the burden of curtailing water use because pumping by later appropriators would be eliminated and no restriction on amount would be placed on pumping by earlier appropriators.⁴² The parties agreed to a stipulated judgment, which provided that their water rights were based on the amount continuously used over the five years preceding the litigation.⁴³ Accordingly, the court limited pumping from the basin to the basin's safe yield, with all parties' usage proportionately reduced.⁴⁴

By reducing the amount that each party could extract, the *Pasadena* court halted the decline of groundwater levels in the basin. A supply of supplemental Colorado River water from the Metropolitan Water District made the physical solution work, and the increased return flows resulting from the use of larger amounts of imported water increased the safe yield of the basin.⁴⁵ As a result, in 1955 the court increased the amount the parties could pump.⁴⁶ Unfortunately, this concept of mutual prescription also encourages greater groundwater pumping than necessary, creating "a race to the pumphouse" mentality.⁴⁷ In order to establish a right to the groundwater, overlying well owners and landowners must extract groundwater.⁴⁸ There is no benefit from reducing pumping to conserve water because the result would only be to make more water available to others.

Groundwater rights in several Southern California water basins were subsequently adjudicated. The West Basin,⁴⁹ Central Basin⁵⁰ and Main San Gabriel Basin⁵¹ adjudications all were resolved with physical solutions that depended on the availability of supplemental water. The

41. *Id.* at 932-33, 207 P.2d at 32.

42. *Id.*

43. *Id.* at 933, 207 P.2d at 33.

44. *Id.* at 922, 207 P.2d at 26.

45. James H. Krieger & Harvey O. Banks, *Ground Water Basin Management*, 50 CAL. L. REV. 56, 60-61 (1962).

46. *Id.* at 61.

47. *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 267, 537 P.2d 1250, 1299, 123 Cal. Rptr. 1, 50 (1975).

48. *See City of Pasadena v. City of Alhambra*, 33 Cal. 3d 199, 926, 207 P.2d 17, 29 (1949) (stating that the taking of nonsurplus groundwater must be actual, open and notorious for a prescriptive right to groundwater to ripen).

49. *See WILLIAM BLOMQUIST, DIVIDING THE WATERS: GOVERNING GROUNDWATER IN SOUTHERN CALIFORNIA* 97-126 (1992) (explaining the problems and solutions concerning the West Basin).

50. *See id.* at 127-58 (discussing the Central Basin).

51. *See id.* at 159-88 (reviewing issues concerning the Main San Gabriel Basin).

judgments provide permanent watermaster⁵² administration of groundwater extractions under a judicially approved and supervised physical solution that provides authority to fund and operate programs to control groundwater overdrafts by replenishment with imported water.⁵³ In 1975, the California Supreme Court in *City of Los Angeles v. City of San Fernando*,⁵⁴ significantly curtailed the mutual prescription doctrine. The court held that Civil Code section 1007⁵⁵ prevented prescription of groundwater rights owned by public agencies and public utilities.⁵⁶ This case began in 1955 when the City of Los Angeles brought suit against the cities of San Fernando, Glendale, Burbank and other pumpers to declare that Los Angeles had a prior right to all of the groundwater in the upper Los Angeles River Area.⁵⁷ Los Angeles also sought to enjoin all other pumpers from extracting groundwater without its permission.⁵⁸

In a long decision touching on many kinds of water rights, the court declined to rely upon the theory of mutual prescription.⁵⁹ The court held that public agencies could not lose water rights through prescription, and that prescription could not occur without actual notice of who is prescribing the water.⁶⁰ The court concluded that an overlying user or appropriator could neither claim a paramount right to the full quantity of water that the user had been pumping, nor lose the right to pump by reason of the continued pumping of others.⁶¹ All parties were subjected to a proportionate reduction in the quantities of water they had been pumping, as the court limited the total annual pumpage from the basin to a safe yield.⁶²

52. A watermaster serves as a managing agency and may perform various functions, including record-collecting, accounting, policy-making, levying assessments, and purchasing and recharging areas with supplemental water. See ANNE J. SCHNEIDER, GROUNDWATER RIGHTS IN CALIFORNIA, GOVERNOR'S COMMISSION TO REVIEW CALIFORNIA WATER RIGHTS 53-58 (1977) (describing watermaster management).

53. *Id.* at 22-25.

54. 14 Cal. 3d 199, 537 P.2d 1250, 123 Cal. Rptr. 1 (1975).

55. See CAL. CIV. CODE § 1007 (West 1982) (indicating that one can never gain title to land dedicated to a public use by a public utility or dedicated to or owned by the state or any public entity through prescription).

56. *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 274, 537 P.2d 1250, 1304-05, 123 Cal. Rptr. 1, 55-56 (1975).

57. *Id.* at 207-08, 537 P.2d at 1258-59, 123 Cal. Rptr. at 9-10.

58. *Id.* at 207, 537 P.2d at 1258-59, 123 Cal. Rptr. at 9-10.

59. *Id.* at 274, 537 P.2d at 1304-05, 123 Cal. Rptr. at 55-56.

60. *Id.* at 277, 282, 537 P.2d at 1307, 1310, 123 Cal. Rptr. at 58, 61.

61. *Id.* at 283-86, 537 P.2d at 1311-13, 123 Cal. Rptr. at 62-64.

62. *Id.* at 293, 537 P.2d at 1319, 123 Cal. Rptr. at 69. The case also re-established that parties importing water have a right to the return flow from it. *Id.* at 255-64, 537 P.2d at 1291-97, 123 Cal. Rptr. at 42-48.

The major reason for the rejection of mutual prescription in the *Los Angeles* case was that the fact situation was dramatically different than that which occurred in Pasadena's Raymond Basin. In *Los Angeles*, none of the defendants had begun using groundwater after the overdraft began.⁶³ The court frankly stated that mutual prescription was not needed for its purpose in *Pasadena*—which was avoiding the complete elimination of later appropriative uses.⁶⁴

With the passage of nearly twenty years since the *Los Angeles* decision, many practitioners have come to believe that the real law of the case is contained in one footnote within the 161-page decision.⁶⁵ In footnote 61, the court quoted extensively from a United States Supreme Court case, *Nebraska v. Wyoming*,⁶⁶ which was decided on the basis of equitable apportionment. The *Los Angeles* court stated that a mechanical application of the mutual prescription doctrine did not always result in the most equitable apportionment of water on the basis of need.⁶⁷ The strong implication of this statement was that, in the future, courts would have to look at equitable factors, such as those considered in the *Nebraska* case, including physical and climatic conditions, consumptive use in different areas, and the extent of established uses.⁶⁸

As a result of the *Los Angeles* decision, significant uncertainty exists over the status of the right to extract water from unadjudicated overdrafted groundwater basins in California, at least to the extent the overdraft is caused by entities extracting groundwater for public use.⁶⁹ Unlike surface water appropriators, there are no senior or junior water users that gain priority by being the first to pump groundwater.⁷⁰ Pumping simply continues until it is determined that the basin is in overdraft.⁷¹ With no statutory or regulatory scheme to allocate or protect the common supply, an injured party's only remedy is to bring a lawsuit to stop harmful

63. *Id.* at 266, 537 P.2d at 1299, 123 Cal. Rptr. at 50.

64. *Id.* at 266-67, 537 P.2d at 1299, 123 Cal. Rptr. at 50.

65. *See Los Angeles*, 14 Cal. 3d at 265-66 n. 61, 537 P.2d at 1298 n. 61, 123 Cal. Rptr. at 49 n. 61.

66. 325 U.S. 589 (1945).

67. *Los Angeles*, 14 Cal. 3d at 265, 537 P.2d at 1298, 123 Cal. Rptr. at 49.

68. *Id.* An appellate court decision also noted that when insufficient groundwater is available, many factors must be looked at in determining an owner's proportionate share. *Tehachapi-Cummings County Water Dist. v. Armstrong*, 49 Cal. App. 3d 992, 1001, 122 Cal. Rptr. 918, 925 (1975). These factors include, but are not limited to, the amount of water available, the extent of ownership in the basin, and the nature of the projected use. *Id.* at 1001, 122 Cal. Rptr. at 925.

69. *Wright v. Goleta Water Dist.*, 174 Cal. App. 3d 74, 90-91, 219 Cal. Rptr. 740, 751-52 (1985); *Armstrong*, 49 Cal. App. 3d at 1000-02, 122 Cal. Rptr. at 923-25.

70. *Armstrong*, 49 Cal. App. 3d at 1001, 122 Cal. Rptr. at 924.

71. *Id.*

pumping practices. Due to the expense and time involved in adjudicating groundwater basin claims, as well as the uncertainty of results, only twelve groundwater basin claims have been adjudicated in California, most of which have been in Southern California.⁷²

B. State Groundwater Control

Comprehensive legislation that would have adopted the recommendations of the Commission to Review California Water Rights Law created by Governor Edmund Brown⁷³ was introduced in 1979 and would have established groundwater provisions. The legislation subsequently died in committee as a result of opposing ideas regarding groundwater management.⁷⁴ Despite the somewhat confused state of the common law of groundwater regulation, the SWRCB's jurisdiction in this area is extremely limited, particularly in comparison to its broad powers to manage surface water.⁷⁵ There are very few provisions in the Water Code that can be utilized to control groundwater use. Water Code sections 4999 through 5008 require the reporting of all groundwater pumped in Riverside, San Bernardino, Los Angeles and Ventura counties.⁷⁶ However, this is an after-the-fact reporting requirement which consists merely of the filing of a form, with no discretionary action by the SWRCB to limit pumping or assess penalties for overdrafting basins.⁷⁷

Other laws regarding groundwater are similarly unhelpful for those seeking statewide control over groundwater. Water Code sections 1005.1 through 1008 protect groundwater pumpers from the loss of rights in periods of non-use when they have alternative supplies available.⁷⁸ Water Code sections 13550 through 13554.3 prohibit the use of groundwater for

72. The adjudicated basins are as follows: Northern California — In Siskiyou County — Scott River Stream System and Scott River Valley (as part of a general stream adjudication pursuant to Cal. Water Code §§ 2500-2503 (1971)). Southern California — Kern County's Tehachapi Basin, the Cummings Basin of Kern and San Bernardino Counties, Los Angeles County's Central Basin, West Basin, Upper Los Angeles River Area, Raymond Basin, and Main San Gabriel Basin, San Bernardino County's Warren Valley Basin, Cucamonga Basin, and San Bernardino Basin Area (partially in Riverside County), and the Chino Basin in Riverside County.

73. Cal. Exec. Order No. B-26-77 (May 11, 1977).

74. Michael P. Mallery, Comment, *Groundwater: A Call for Comprehensive Management Program*, 14 PAC. L.J. 1279, 1299 (1983).

75. See *supra* note 21 and accompanying text (discussing the SWRCB's extensive power to manage surface water).

76. CAL. WATER CODE §§ 4999-5008 (West 1971 and Supp. 1994).

77. *Id.*

78. *Id.* §§ 1005.1-1008 (West 1971 & Supp. 1994).

certain purposes such as golf course irrigation, if reclaimed water⁷⁹ is readily available and reasonably priced.⁸⁰ Section 1242 of the Water Code requires that water stored in a groundwater basin be appropriated for that purpose.⁸¹ Additionally, the Department of Water Resources has county guidelines for well construction and abandonment ordinances.⁸²

In contrast, the SWRCB's authority over surface water is far-reaching. No surface water may be appropriated without an application to the State Board.⁸³ The SWRCB must issue a permit before surface water may be appropriated, and a hearing may be required before the permit is issued.⁸⁴ The State Board is also specifically authorized to consider the appropriation application in light of the protection of beneficial uses, including fish and wildlife resources.⁸⁵ The California Supreme Court has concluded that, except where vested rights will be negatively impacted, all surface water appropriations should be subject to the Water Code provisions.⁸⁶

C. Local Government Management

Local public entities serve as the primary groundwater managers in California today. Water users and local governments often prefer to create a management structure for a groundwater basin by legislation, thus assuring predictable groundwater extraction regulations and restricting its place of use to the local area. Counties typically have groundwater well permit requirements with their health and environmental protection departments responsible for jurisdiction over domestic well supply and quality issues.⁸⁷ Water districts also have the ability to manage groundwater.⁸⁸

79. Reclaimed or recycled water is water that has been treated for waste and is, therefore, suitable for beneficial use. *Id.* § 13050(n) (West Supp. 1994).

80. *Id.* §§ 13550-13554.3 (West 1992).

81. *Id.* § 1242 (West 1971).

82. *Id.* § 13800 (West 1992).

83. *Id.* § 1250 (West 1971).

84. *Id.* §§ 1225, 1250-1350 (West 1971 & Supp. 1994).

85. *Id.* § 1243 (West Supp. 1994); *id.* § 1243.5 (West 1971).

86. *People v. Shirokow*, 26 Cal. 3d 301, 309, 605 P.2d 859, 865, 162 Cal. Rptr. 30, 35 (1980).

87. For example, the County of San Bernardino has extensive well construction and operation requirements. SAN BERNARDINO COUNTY CODE §§ 33.0630-33.0645 (Jan. 18, 1988) (copy on file with the *Pacific Law Journal*).

88. For example, the Orange County Water District has been authorized by the legislature to manage groundwater use and storage. CAL. WATER CODE app. §§ 40-1 to -45 (West 1968 & Supp. 1994).

Perhaps the earliest example of significant local control of groundwater occurred in Orange County. Orange County began experiencing serious groundwater overdraft in the 1920's, and in 1933 the Orange County Water District was formed to deal with the problem.⁸⁹ The Orange County Water District Act was amended in 1953 to give the District additional powers.⁹⁰ Foremost among these powers was the authority to purchase and spread supplemental water and to implement pump and ad valorem⁹¹ real property taxes.⁹² The purpose of the pump tax was to raise funds needed to purchase a supplemental supply of water to replenish the basin and to build in an incentive to conserve water by increasing its cost.⁹³ The ad valorem tax was to be used to offset the administrative overhead in implementing the pump tax and to purchase replenishment water in an amount up to 375,000 acre feet (the 1953 estimate of the accumulated overdraft in the basin).⁹⁴ The program has proved to be very effective in reducing the critical overdraft in the basin.⁹⁵

Unfortunately, effective local control over groundwater without litigation, as occurred in Orange County, has been rare. In an attempt to encourage more local control of groundwater, in 1992, the Legislature adopted Assembly Bill 3030,⁹⁶ which grants local entities the authority to create groundwater management plans in groundwater basins.⁹⁷ Enacted as California Water Code sections 10750 through 10755.4, Assembly Bill 3030 authorizes local agencies providing water service to adopt a groundwater management plan subject to a hearing process and majority protest by landowners.⁹⁸ Any local agency, whose service area includes a groundwater basin or portion of a groundwater basin that is not subject to groundwater management pursuant to another judgment or statute, may adopt or implement a groundwater management plan.⁹⁹ Additionally, a local agency that does not provide water service, but provides flood

89. Blomquist, *supra* note 49, at 247-49.

90. *Id.* at 254.

91. An ad valorem tax is a tax imposed on the value of property. BLACK'S LAW DICTIONARY 51 (6th ed. 1990).

92. Krieger & Banks, *supra* note 45, at 62.

93. *Id.*

94. Blomquist, *supra* note 49, at 253-54.

95. *Id.* at 269; Krieger & Banks, *supra* note 45, at 62.

96. 1992 Cal. Stat. ch. 947, § 2, at 3897-3901 (enacting CAL. WATER CODE §§ 10750-10767).

97. CAL. WATER CODE § 10753(a) (West Supp. 1994).

98. *Id.* §§ 10753.2-10753.9 (West Supp. 1994).

99. *Id.* § 10753(a) (West Supp. 1994).

control, groundwater quality management or groundwater replenishment may also implement a water management plan.¹⁰⁰

A groundwater management plan may include components relating to the control of saline water intrusion, regulation of the migration of contaminated groundwater, mitigation of conditions of overdraft and the replenishment of groundwater extracted by water producers.¹⁰¹ However, the statute does not authorize the local agency to make a binding determination of the water rights of any person or entity.¹⁰² Additionally, the statute does not authorize the local agency to limit or suspend extractions unless it has determined that groundwater replenishment programs or other alternative sources of water supply have proved insufficient or infeasible to lessen the demand for groundwater.¹⁰³

Although Assembly Bill 3030 was only recently adopted, one court has already indicated that it will be taken seriously as a method for local groundwater control.¹⁰⁴ In *Myers Seed v. County of Tehama*,¹⁰⁵ the superior court invalidated a Tehama County ordinance designed to protect groundwater resources of the county.¹⁰⁶ The ordinance prohibited the operation of new wells that impacted neighboring wells and prohibited transport of pumped water off the parcel on which the well was located without a permit issued by the county.¹⁰⁷ The court invalidated the ordinance because the county had failed to comply with the requirement of Water Code section 10750, which requires local agencies to work cooperatively to manage groundwater within their jurisdiction.¹⁰⁸ The court found that Tehama County's failure to consult with other agencies

100. *Id.* § 10753(b) (West Supp. 1994).

101. *Id.* § 10753.7 (West Supp. 1994).

102. *Id.* § 10753.8(b) (West Supp. 1994).

103. *Id.* § 10753.8(c) (West Supp. 1994). Assembly Bill 1152 prohibits the local agency from imposing Assembly Bill 3030 fees or assessments on pumping of groundwater pursuant to a groundwater remediation program required by law or a groundwater storage contract with a local agency. 1993 Cal. Legis. Serv. ch. 320, sec. 4 (amending CAL. WATER CODE § 10754.2).

104. Statement of Decision, *Myers v. County of Tehama*, Nos. 34147, 34446 (Tehama Sup. Ct. Aug. 11, 1993).

105. *Id.* Tehama County appealed to the California Court of Appeal, Third District. *County Authority to Regulate Groundwater to Be Decided by Court of Appeal*, 4 CAL. WATER L. & POL'Y REP. 75, 90 (Feb. 1994). The case will be the first direct appellate consideration of the preemption issue. *Id.*

106. Statement of Decision at 4, *Myers v. County of Tehama*, Nos. 34147, 34446 (Tehama Sup. Ct. Aug. 11, 1993).

107. *Tehama Court Invalidates Groundwater Ordinance*, 4 CAL. WATER L. & POL'Y REP. 1, 11 (Oct. 1993).

108. Statement of Decision at 4, *Myers v. County of Tehama*, Nos. 34147, 34446 (Tehama Sup. Ct. Aug. 11, 1993).

invalidated the ordinance.¹⁰⁹ It remains to be seen if the provisions of Assembly Bill 3030 will lead to more effective local control of groundwater, although district management has the advantage of taking public interest, as well as private rights, into account, and there is enough flexibility to deal with changes in circumstances.

Another type of local control of groundwater is exercised through Water Replenishment Districts, which are special districts formed to replenish groundwater supplies within district boundaries.¹¹⁰ The purpose of these districts is to take any actions necessary: (1) to replenish the groundwater of the district, including buying, selling and exchanging water; (2) to protect or prevent interference with water, the quality or the water rights of any person or property within the district; or (3) to put water to beneficial use that is under its control or management.¹¹¹ A district may also take action to prevent contaminants from entering its groundwater supplies and to remove contaminants from its groundwater supplies.¹¹² A district also has the power to take any actions outside the district to protect groundwater supplies within the district, provided there is a direct relationship between the groundwater supply where the action is to be taken and the groundwater supply within the district.¹¹³

Additionally, several groundwater management districts, primarily located in Northern California, have been formed by the State Legislature.¹¹⁴ Several of these districts regulate groundwater extraction by ordinance or impose pump taxes on extractions. For example, the Fox Canyon Groundwater Management Agency Act allows the adoption of ordinances to control the use and extraction of groundwater and levies groundwater extraction charges.¹¹⁵

109. *Id.*

110. *See* CAL. WATER CODE §§ 60000-60449 (West 1966 & Supp. 1994) (establishing the Water Replenishment District Act).

111. *Id.* §§ 60220-60223 (West 1966).

112. *Id.* § 60224 (West 1966 & Supp. 1994).

113. *Id.* § 60225 (West 1966 & Supp. 1994).

114. Examples of groundwater management districts include the following: Honey Lake Valley Ground Water Management District, Lassen County, CAL. WATER CODE app. §§ 129-101 to 129-1301 (West Supp. 1994), Sierra Valley Ground Water Management District, Sierra County, *Id.* §§ 119-101 to 119-1302 (West Supp. 1994), Mono County Tri-Valley Ground Water Management District, Mono County, *Id.* §§ 128-1 to 128-906 (West Supp. 1994), Mendocino City Community Services District, Mendocino County, CAL. WATER CODE §§ 10700 to 10717 (West 1992), Pajaro Valley Water Management Agency, Santa Cruz County, CAL. WATER CODE app. § 124-1 to 124-1108 (West Supp. 1994), Ojai Ground Water Management Agency, Ventura County, *Id.* §§ 131-101 to 131-1107 (West Supp. 1994), Fox Canyon Ground Water Management Agency, Ventura County, *Id.* §§ 121-102 to 121-1105 (West Supp. 1994), Monterey Peninsula Water Management District, Monterey County, *Id.* §§ 118-101 to 118-901 (West Supp. 1994).

115. CAL. WATER CODE app. §§ 121-403 to 121-1001 (West Supp. 1994).

Counties also control groundwater through ordinances enacted in response to local problems. Long before enactment of the Tehama County ordinance discussed above, Inyo County adopted an ordinance regulating the extraction of groundwater within the Owens Valley.¹¹⁶ This ordinance, adopted in 1980 in response to groundwater exports by the City of Los Angeles, established a comprehensive system of groundwater management,¹¹⁷ with the goal of protecting Inyo County's environment and economy. Environmental damage can be mitigated under the ordinance by maintaining the groundwater level at a depth which is capable of supporting natural resources.¹¹⁸ The ordinance also attempts to satisfy the needs of extractors by considering alternative sources of supply and their conservation policies and practices.¹¹⁹ The City of Los Angeles challenged the ordinance in court, but the parties reached a settlement before a decision was entered.¹²⁰

At least three other counties have enacted groundwater control ordinances. Imperial County enacted an ordinance designed to prevent the exportation of groundwater to Mexico, and Butte and Glen Counties enacted virtually identical ordinances to prevent the exportation of groundwater from their respective counties.¹²¹ At least one commentator has questioned the constitutionality of these ordinances.¹²² The enactment of Assembly Bill 3030 and the Tehama County decision may cast a further shadow over their validity.¹²³

A potential problem with these ordinances is that counties and other local entities may not have the ability to regulate groundwater within their police powers. In *Birkenfield v. City of Berkeley*,¹²⁴ the California

116. INYO COUNTY, CAL., CODE ch. 7.01 (1980).

117. Antonio Rossman & Michael J. Steel, *Forging the New Water Law; Public Regulation of "Proprietary" Groundwater Rights*, 33 HAST. L.J. 903, 930 (1982); see *id.* at 929-49 (discussing the Inyo County ordinance).

118. *Id.* at 930-31.

119. *Id.*

120. Russell Kletzing, *Imported Groundwater Banking: The Kern Water Bank — A Case Study*, 19 PAC. L.J. 1225, 1262 (1988).

121. *Id.* at 1261-62.

122. *Id.* at 1262.

123. *Id.* The constitutionality of these ordinances has been challenged as conflicting with the constitutional requirement that water be put to reasonable use to the maximum extent possible. *Id.*; see CAL. CONST. art. X, § 2 (requiring the state's water resources to be put to the most beneficial use).

124. 17 Cal. 3d 129, 550 P.2d 1001, 130 Cal. Rptr. 465 (1976).

Supreme Court stated that a city's police power can be applied only within its own territory and can be preempted by general state law.¹²⁵

Additionally, local entities are subordinate to state laws that regulate groundwater.¹²⁶ For example, a county's police power is considered preempted if it is in conflict with general laws.¹²⁷ Thus, local ordinances could be invalid if either expressly or impliedly in conflict with state law. On the other hand, in 1933, the California Supreme Court upheld a county ordinance preventing groundwater extractions for a wasteful, unreasonable or non-beneficial purpose.¹²⁸ The Court found that the ordinance was a valid exercise of the county's police power and that groundwater was not solely the responsibility of the State Legislature.¹²⁹ In a more recent case, a court of appeal upheld a county water district's underground water storage program.¹³⁰ In *Niles Sand & Gravel Company v. Alameda Water District*,¹³¹ a gravel company was enjoined from interfering with the District's storage program through its pumping operations.¹³² The court held that any damage caused by the District's program to the gravel operator was noncompensable.¹³³

Most western states employ some type of statewide system of groundwater regulation. These schemes encompass a wide spectrum of possible systems, with some states opting for a heavily centralized regime, while others rely more on local control. Each state must develop a system tailored to its particular needs and political situation. As one of the final holdouts in the area of groundwater management, California has the advantage of being able to evaluate the successes and failures of other states' programs before it decides on the regime which best fits California.

125. *Birkenfield v. City of Berkeley*, 17 Cal. 3d 129, 140, 550 P.2d 1001, 1009, 130 Cal. Rptr. 465, 473 (1976).

126. CAL. CONST. art. X, § 7.

127. *Id.*; see Rossman & Steel, *supra* note 117, at 936-43 (discussing preemption of local groundwater regulations).

128. *In re Maas*, 219 Cal. 422, 426-27, 27 P.2d 373, 374-75 (1933).

129. *Id.* at 424-25, 27 P.2d at 374.

130. *Niles Sand & Gravel Co. v. Alameda Water Dist.*, 37 Cal. App. 3d 924, 112 Cal. Rptr. 846 (1974).

131. 37 Cal. App. 3d 924, 112 Cal. Rptr. 846 (1974).

132. *Id.* at 927, 112 Cal. Rptr. at 848.

133. *Id.* at 936-37, 112 Cal. Rptr. at 854-55.

III. GROUNDWATER REGULATIONS IN OTHER STATES

A. Texas

The system used to regulate groundwater in Texas is very similar to that used in California, in that Texas has no centralized mechanism of state regulation.¹³⁴ Texas groundwater belongs to the owner of the overlying estate.¹³⁵ The system is based on the English Rule of absolute ownership of groundwater, which Texas has followed since 1904.¹³⁶ The English Rule is a rule of capture or first possession, based on the concept that groundwater is not owned until it is pumped or "captured."¹³⁷ In *Corpus Christi v. Pleasanton*,¹³⁸ the Texas Supreme Court applied the English Rule and held that percolating waters are the property of the owner of the surface estate.¹³⁹ Therefore, an overlying landowner can use all of the percolating water that the owner can capture for beneficial purposes, on or off the owner's land.¹⁴⁰ The overlying owner can also sell such water to others, who may put the water to beneficial use on or off the original owner's property.¹⁴¹

The Texas Legislature has not chosen to exercise control over groundwater. The statute that describes the waters of the State does not even mention percolating waters.¹⁴² By failing to modify the common law rule of absolute ownership, the Texas Legislature has abdicated any authority it may have had to regulate groundwater directly.¹⁴³ In addition, the legislature surrendered any ability it had to manage groundwater by

134. Karen H. Norris, *The Stagnation of Texas Ground Water Law: A Political v. Environmental Stalemate*, 22 ST. MARY'S L. REV. 493, 508-09 (1990).

135. TEX. WATER CODE ANN. § 52.002 (West Supp. 1994).

136. Norris, *supra* note 134, at 498 n.32 (citing *Houston & T.C. Ry. v. East*, 81 S.W. 279, 280 (Tex. 1904)). The Texas Supreme Court reaffirmed the holding in *Houston* as recently as 1983. *City of Sherman v. Public Utilities Commission*, 643 S.W.2d 681, 686 (Tex. 1983).

137. David Todd, *Common Resources, Private Rights and Liabilities: A Case Study on Texas Groundwater Law*, 32 NAT. RESOURCES J. 233, 249 (1992).

138. 276 S.W.2d 798 (Tex. 1955).

139. *Corpus Christi v. Pleasanton*, 276 S.W.2d 798, 802 (Tex. 1955.)

140. *Id.*

141. *Id.* The user may even transport the water for use outside of the entire basin's surface area. *Id.*

142. See TEX. WATER CODE ANN. § 11.021(a) (West 1988) (describing the water that is the property of the state).

143. Eric Behrens & Matthew G. Dore, *Rights of Landowners to Percolating Groundwater in Texas*, 32 S. TEX. L.J. 185, 192 (1991). Section 52.002 of the Texas Water Code states, in relevant part: "[t]he ownership and rights of the owner of the land and his lessees and assigns in underground water are hereby recognized, and nothing in this code shall be construed as depriving or divesting the owner or his lessees and assigns of the ownership or rights." TEX. WATER CODE ANN § 52.002 (West Supp. 1994).

exempting such water from regulations common to surface water.¹⁴⁴ The legislature's primary attempts to regulate groundwater have consisted of the passage of a conservation amendment and a law requiring the plugging and capping of flowing artesian wells.¹⁴⁵

Instead of directly regulating groundwater, the Texas Legislature has simply codified judicial decisions.¹⁴⁶ The courts, however, have not welcomed this deference.¹⁴⁷ They have resisted involvement in groundwater disputes, claiming that groundwater regulation is primarily a legislative problem.¹⁴⁸ Matters have been made worse by defining "groundwater" broadly, thereby expanding the amount of unregulated water in the State. As in California, Texas has the presumption that groundwater is percolating water.¹⁴⁹

Texas has placed the chief political responsibility for regulating groundwater withdrawals on local entities known as Underground Water Conservation Districts.¹⁵⁰ Such districts have the authority to control well spacing, recharge aquifers, monitor activities, pursue research and education, and reduce wasteful uses.¹⁵¹ Their local nature makes them better suited than state agencies for certain tasks, such as designing conservation plans ideally tailored for the needs of specific areas.¹⁵² However, there are many documented shortcomings of the districts, most of which are related to their lack of state-wide funding and enforcement authority.¹⁵³

This laissez-faire attitude toward groundwater use in Texas has not served the State well.¹⁵⁴ Not surprisingly, the problems Texas faces with

144. TEX. WATER CODE ANN. § 52.003 (West Supp. 1994).

145. TEX. CONST. art. XVI, § 59; *see* TEX. WATER CODE ANN. §§ 11.201-11.207 (West 1988 & Supp. 1994) (governing artesian wells).

146. Todd, *supra* note 137, at 258.

147. *Id.*

148. *Id.*

149. Norris, *supra* note 134, at 501-02. The Texas Water Code limits the definition of "underground water" to percolating water, thereby excluding water flowing underground. TEX. WATER CODE ANN. § 52.001(b) (West Supp. 1994). However, the courts apply the presumption that water underneath one's property is percolating. *Texas Co. v. Burkett*, 296 S.W. 273, 278 (Tex. 1927).

150. *See* TEX. WATER CODE ANN. §§ 52.001-52.401 (West 1972 & Supp. 1994) (governing underground water districts).

151. *Id.* § 52.117 (West 1988); *id.* § 52.169 (West Supp. 1990).

152. Norris, *supra* note 134, at 500-01 n.44.

153. *Id.* at 503; *see also* Todd, *supra* note 137, at 259-60 (describing the problems with Underground Water Conservation Districts).

154. *See, e.g.,* Norris, *supra* note 134, at 504-05 (stating that groundwater supply problems will worsen if the state does not take action); Todd, *supra* note 137, at 262 (explaining that there are serious problems with groundwater use in Texas).

its groundwater supply are the same, if not worse, than the problems in California. Water authorities in Texas complain that water supplies during a drought will barely meet demand.¹⁵⁵ Many of the state's aquifers are losing water faster than they can naturally recharge.¹⁵⁶ Much of the groundwater is contaminated by abandoned wells.¹⁵⁷ Finally, the runaway pumping of groundwater has caused Texas to run afoul of the Endangered Species Act by depleting groundwater flow crucial to threatened species.¹⁵⁸

B. New Mexico

If the regulatory schemes of Texas and California illustrate the sporadic and inefficient approach to groundwater management, New Mexico's method of regulation sits at the opposite end of the regulatory spectrum. For over a century, New Mexico has followed the rule of prior appropriation,¹⁵⁹ which is based on the "first come, first served" principle.¹⁶⁰ In other words, the first beneficial user of groundwater retains the right to use.¹⁶¹ Importantly, New Mexico law also provides that all groundwater in the state belongs to the public.¹⁶² Therefore, although anyone has the right to beneficially use groundwater, and "priority of appropriation [gives] the better right,"¹⁶³ one must follow the procedures set out by state law to obtain a permit to withdraw groundwater.¹⁶⁴

The permitting system employed by New Mexico is very centralized and relatively simple. Any person who wants to appropriate groundwater from a declared water basin must apply for a permit from the State Engineer.¹⁶⁵ The State Engineer acts like a "water czar," administering

155. Norris, *supra* note 134, at 504.

156. *Id.* at 505.

157. *Id.* at 503.

158. See *infra* notes 243-250 (explaining that a federal judge held that the excessive pumping of the Edwards Aquifer was violating the Endangered Species Act).

159. N.M. CONST. art. 16, § 2; *Trambley v. Luterman*, 27 P. 312, 315 (N.M. 1891).

160. Norris, *supra* note 134, at 508.

161. *Id.*

162. N.M. STAT. ANN. § 72-12-1 (Michie 1985).

163. N.M. CONST. art. 16, § 2.

164. See N.M. STAT. ANN. §§ 72-12-1 to 72-12-28 (Michie 1985 & Supp. 1993) (governing underground waters).

165. See *id.* § 72-12-3 (Michie 1985) (limiting the State Engineer's power to declare an underground basin). The application must include: (1) The particular underground stream, channel, artesian basin, reservoir, or lake from which water will be appropriated; (2) the beneficial use to which the water will be applied; (3) the

all matters relating to the appropriation, transfer and distribution of all water within the state.¹⁶⁶ However, the State Engineer does not have jurisdiction where there is no declared basin.¹⁶⁷ The State Engineer also has no control over water rights acquired prior to the creation of the Engineer's power, but such rights become subject to the State Engineer's jurisdiction if they are transferred.¹⁶⁸

The State Engineer may approve an application and issue a permit to appropriate groundwater from a declared basin only after a determination that unappropriated water is available and that the proposed appropriation will not adversely affect existing appropriators.¹⁶⁹ The applicant has the burden of proof on these issues, but the State Engineer must also make an independent investigation.¹⁷⁰ New Mexico law also allows the State Engineer to revoke an appropriation permit when an owner fails to beneficially use water for four years and continues not to use the water for a year after the State Engineer notifies the owner of the potential forfeiture.¹⁷¹ However, the courts are reluctant to uphold such forfeitures and look hard to find an acceptable reason for the nonuse.¹⁷²

Judicial decisions in New Mexico have reinforced the State Engineer's broad administrative powers over groundwater. For example, the courts have held that the State Engineer has the power to allow water to be taken from an underground water basin only until a certain predetermined point and then terminate all existing water rights at one time.¹⁷³ In addition,

location of the proposed well; (4) the name of the owner of the land on which the well will be located; (5) the amount of water applied for; (6) the use for which the water is desired; and (7) if the use is for irrigation, the description of the land to be irrigated and the name of the owner of the land. *Id.*

166. *Id.* § 72-2-1 (Michie 1985).

167. *Id.* § 72-12-25 (Michie 1985). The State Engineer may not declare a basin if an aquifer is 2,500 feet or more below the ground surface and contains nonpotable water. *Id.* All declared basins must have ascertainable boundaries. *Id.* By 1984, the State Engineer had declared 31 basins, covering over 84,000 square miles. Zachary A. Smith, *Centralized Decisionmaking in the Administration of Groundwater Rights: The Experience of Arizona, California and New Mexico and Suggestions for the Future*, 24 NAT. RESOURCES J. 641, 677 (1984).

168. Charles T. DuMars, *New Mexico Water Law: An Overview and Discussion of Current Issues*, 22 NAT. RESOURCES J. 1045, 1047 (1982). The State Engineer also has no discretion over wells for nominal domestic use. N.M. STAT. ANN. § 72-12-1 (Michie 1985). The State Engineer must grant the permit upon receipt of an application for the permit. *Id.*

169. N.M. STAT. ANN. § 72-12-3(E) (Michie 1985).

170. See DuMars, *supra* note 168, at 1048-52 (citing *City of Roswell v. Berry*, 452 P.2d 179 (N.M. 1969)); Smith, *supra* note 163, at 677-78 (citing *McBee v. Reynolds*, 399 P.2d 110 (N.M. 1965) and *Heine v. Reynolds*, 367 P.2d 708 (N.M. 1962)).

171. N.M. STAT. ANN. § 72-12-8(A) (Michie Supp. 1993).

172. DuMars, *supra* note 168, at 1052.

173. See *Mathers v. Texaco, Inc.*, 421 P.2d 771, 776 (N.M. 1966) (explaining that the State Engineer has the authority to permit water to be taken from an underground water basin until a predetermined point and then terminate all existing water rights at one time); see also DuMars, *supra* note 168, at 1054-56 (providing a

the State Engineer can regulate the relationship between groundwater withdrawals and surface water appropriations by forcing new well users to retire surface rights to match the additional well's reduction of surface flow.¹⁷⁴

A mid-1980's poll indicated that the various players in the New Mexico groundwater arena were pleased with the State's centralized system.¹⁷⁵ They cited "uniformity and consistency" as benefits of the scheme, and they felt that a more localized regime would add needless costs and procedures.¹⁷⁶ However, this is not to say that the "water czar" system works perfectly, even within New Mexico itself. The poll indicated that the users' opinion of the centralized system was highly dependent on the identity and attitudes of the State Engineer.¹⁷⁷ The obvious implication is that New Mexico groundwater users will remain happy with the centralized regime only if it continues to serve their interests.¹⁷⁸ In fact, the power of the State Engineer has not enabled New Mexico to avoid the problem of overdraft: in 1970, for example, statewide overdraft was estimated at 719,000 acre-feet.¹⁷⁹

C. Arizona

Arizona's experience with groundwater management falls somewhere between those of New Mexico and Texas. While surface water and water flowing in underground channels in Arizona are public property subject to the prior appropriation doctrine,¹⁸⁰ percolating waters are governed by the rule of reasonable use.¹⁸¹ Under this rule, which is also called the American rule, people may use the groundwater located beneath their land, but they are limited to the amount of water "reasonably necessary for the

lengthy discussion of *Mathers*).

174. See *City of Albuquerque v. Reynolds*, 379 P.2d 73, 81-82 (N.M. 1962) (providing that the State Engineer can require new well users to retire surface rights to match the additional well's reduction of surface flow); see also *DuMars*, *supra* note 168, at 1056-57 (providing a lengthy discussion of *Reynolds*).

175. *Smith*, *supra* note 167, at 686.

176. *Id.*

177. *Id.*

178. *Id.* at 686-87.

179. *Id.* at 643 n.11.

180. ARIZ. REV. STAT. ANN. § 45-141(A) (Supp. 1993).

181. *Smith*, *supra* note 163, at 644. Arizona courts presume that groundwater is percolating (i.e., not part of an identifiable stream). *Maricopa County Mun. Water Conservation Dist. v. Southwest Cotton Co.*, 4 P.2d 369, 374 (Ariz. 1931).

beneficial use of the surface estate.”¹⁸² The doctrine prohibits owners from transferring the water to another or to outside land.¹⁸³

This original scheme failed to manage groundwater efficiently, and as early as the 1930’s, the Arizona Legislature began searching for a more controlled system of management.¹⁸⁴ After several unsuccessful attempts,¹⁸⁵ the legislature passed the 1980 Groundwater Management Act (“Act”),¹⁸⁶ a restrictive and detailed plan for groundwater regulation. The core of the Act was the creation of four Active Management Areas (AMA),¹⁸⁷ encompassing over eighty percent of Arizona’s population and sixty-nine percent of its overdraft.¹⁸⁸ The Act also created the State Department of Water Resources (DWR) and provided the agency with jurisdiction over all ground and surface water within the state.¹⁸⁹

The Act sets certain goals for each AMA¹⁹⁰ and directs the DWR to attain those goals by issuing detailed management plans for each AMA.¹⁹¹ The Act requires plans for five different management periods,¹⁹² with stricter conservation measures being phased in with each successive plan.¹⁹³ Persons within an AMA may withdraw groundwater only if they have a DWR permit or possess a “grandfather right.”¹⁹⁴ The Act lists the seven types of withdrawal permits that the DWR may

182. Norris, *supra* note 134, at 507-08.

183. *Id.* at 508.

184. Smith, *supra* note 167, at 645.

185. *See id.* at 645-49 (describing efforts to enact groundwater regulations).

186. ARIZ. REV. STAT. ANN. §§ 45-401 to 45-655 (1987 & Supp. 1993) [hereinafter “the Act”]. The Arizona Supreme Court has affirmed the Act’s constitutionality. *Town of Chino Valley v. City of Prescott*, 638 P.2d 1324, 1330 (Ariz. 1981). For a detailed summary of the Act and its passage, see Philip R. Higdon & Terence W. Thompson, *The 1980 Arizona Groundwater Management Code*, 1980 ARIZ. ST. L.J. 621 (1980) (discussing the 1980 Arizona Groundwater Management Code).

187. ARIZ. REV. STAT. ANN. § 45-411 (1987).

188. Smith, *supra* note 167, at 651.

189. ARIZ. REV. STAT. ANN. §§ 45-102 to 45-103 (1987 & Supp. 1993). The governor appoints the director of the DWR with the advice and consent of the Senate. *Id.* § 45-104 (Supp. 1993).

190. *Id.* § 45-562 (1987).

191. *Id.* §§ 45-564 to 45-568 (Supp. 1993).

192. *Id.* The five management periods are: 1980-1990, 1990-2000, 2000-2010, 2010-2020 and 2020-2025.
Id.

193. Smith, *supra* note 167, at 653. If the conservation plans have proved to be unsuccessful by the year 2006, the Act allows the DWR to purchase and retire water rights for irrigated land. ARIZ. REV. STAT. ANN. § 45-566(A)(9) (1993).

194. Smith, *supra* note 163, at 654.

issue.¹⁹⁵ There are three types of grandfather rights,¹⁹⁶ any of which must be claimed within fifteen months of the naming of an AMA.¹⁹⁷

Even if a person possesses an irrigation grandfather right to extract groundwater from an AMA, the Act limits the amount available to that which the AMA director determines is necessary to irrigate the land.¹⁹⁸ The Act provides some flexibility by allowing such owners to “bank” allowable water not withdrawn in a given year and, conversely, to exceed their limits and make up the difference later.¹⁹⁹ The Act anticipates that over time the AMA directors will manipulate the allowable levels in a downward direction, in order to implement the conservation goals of the Act.²⁰⁰ Finally, and perhaps most importantly, the Act includes civil and criminal sanctions for violators.²⁰¹

The Arizona Groundwater Management Act is one of the newest and most comprehensive regulatory regimes for groundwater in the West.²⁰² The system has a psychological advantage over New Mexico’s prior appropriation scheme in that property owners still technically own the water beneath their property pursuant to the reasonable use doctrine.²⁰³ One would also expect the Act to provide economic benefits by employing a statewide authority, as one large public entity tends to be more efficient than numerous small agencies.²⁰⁴ On the other hand, some have already identified perceived problems with the Act, such as shortcomings in the

195. ARIZ. REV. STAT. ANN. §§ 45-513 to 45-519 (1987 & Supp. 1993); see Smith, *supra* note 167, at 657-59 (describing each type of permit).

196. ARIZ. REV. STAT. ANN. § 45-462(D) (1987). The first such right is the “irrigation grandfather right,” which arises on land that was irrigated at some point during the five years prior to the creation of the AMA. *Id.* § 45-465 (Supp. 1993). The second such right is the “type I non-irrigation right,” which is created when a person buys and retires an irrigation grandfather right. *Id.* § 45-463 (Supp. 1993). Finally, there is the “type II non-irrigation right,” created by withdrawals made for non-irrigation purposes during any one of the five years prior to the creation of an AMA. *Id.* § 45-464 (1987).

197. *Id.* § 45-476(A) (Supp. 1993).

198. *Id.* § 45-465 (Supp. 1993).

199. *Id.* § 45-467 (Supp. 1993); see Smith, *supra* note 163, at 655-56 (providing a more detailed explanation of the system).

200. Smith, *supra* note 167, at 656.

201. ARIZ. REV. STAT. ANN. §§ 45-635 to 45-636 (1987). As for judicial review of director decisions, the Act allows aggrieved parties to appeal to a special judge appointed by the Chief Justice of the Supreme Court. *Id.* § 45-405(F) (1987).

202. Smith, *supra* note 167, at 660.

203. Norris, *supra* note 134, at 515. The adoption of a prior appropriation scheme by a state today would also be more difficult to justify under its police powers than reasonable use would be. *Id.* at 515-16.

204. *Id.* at 516.

program's conservation measures.²⁰⁵ In fact, it is probably too early to determine if the Act simply needs fine-tuning, or if a successful program of detailed statewide regulation of groundwater is impossible to achieve in Arizona.²⁰⁶

IV. THE FUTURE DIRECTION OF GROUNDWATER LAW IN CALIFORNIA

California groundwater is not currently regulated by a statewide management system.²⁰⁷ The resulting management void has contributed to the severe overdraft of many basins.²⁰⁸ Given the competing demands placed on groundwater within the state and the inability of the courts to provide encompassing protective measures, it appears that California must institutionally reform its system of groundwater management or face potentially disastrous consequences in the not-so-distant future.

A. Adjudications

In the absence of any comprehensive groundwater legislation, the future of groundwater law will be its past, and the regulation of groundwater through court adjudications will continue. In twelve groundwater basins in California, disputes over the right to use groundwater have been settled by the courts.²⁰⁹ Courts can use the reference adjudication procedure, which is applicable to all water rights and allows a court to refer matters to the State Board as a referee on any or all matters involved with a lawsuit for a determination of rights to water.²¹⁰ However, as a practical matter, the State Board is so busy with other issues that this is probably not a feasible procedure unless a court wants to postpone a matter for five years. Even after a reference is completed, a trial can be conducted on exceptions taken to the reference

205. See Robert Jerome Glennon, "Because That's Where the Water Is": Retiring Current Water Uses to Achieve the Safe-Yield Objective of the Arizona Groundwater Management Act, 33 ARIZ. L. REV. 89, 95-98 (1991) (identifying the weaknesses inherent in the conservation program).

206. See Smith, *supra* note 167, at 685 (noting that users in Arizona felt that it was too soon to predict the effectiveness of the Act).

207. See *supra* notes 73-86 and accompanying text (discussing the history of water use in California).

208. See *supra* notes 1-8 and accompanying text (describing the extent of overdraft in California).

209. See *supra* note 72 and accompanying text (stating that claims involving twelve groundwater basins have been adjudicated in California).

210. See CAL. WATER CODE §§ 2000-2076 (West 1971 & Supp. 1994) (governing the determination of water rights with the State Board as referee).

report.²¹¹ The losing party can except to everything in the report, requiring the trial court to conduct a de novo review. Such a result essentially eliminates the usefulness of the reference.

Adjudications have other shortcomings. Because a statutory adjudication cannot include a determination of percolating groundwater rights, it is ultimately not a useful tool for judicial groundwater management.²¹² Adjudications are also always very lengthy and expensive, as attempting to serve all of the parties in a large basin can take years, with no certainty of outcome. Additionally, adjudications do not regulate water quality. For example, the main San Gabriel Basin Water Master had to return to court to be able to limit pumping for quality reasons.²¹³

Finally, the public interest is often not represented, since adjudications involve privately-held rights. Future uncertainty can also be a problem, since adjudications are not controlling on non-parties or non-using overlying owners. A court has also held that an unused overlying water right may not be subordinated to presently exercised appropriative rights.²¹⁴ In reaching this conclusion, the court decried the legislature's inaction in the groundwater arena.²¹⁵ In *Wright v. Goleta Water District*,²¹⁶ the court addressed the issues of whether it should subordinate an unexercised overlying right to an exercised appropriative right.²¹⁷ The court carefully considered the decision in *In Re Waters of Long Valley Stream System*,²¹⁸ a case involving a statutory adjudication where the court held that the State Board had the power to subordinate the right of an unexercised riparian user to all currently exercised rights.²¹⁹ The *Long Valley* court recognized that the effects of future uncertainty concerning water use inhibit long-range planning and foster litigation.²²⁰ The court in *Wright* stated that such concerns should apply with "equal vigor" to groundwater since the legislature had totally failed to enact a

211. *Id.* § 2017 (West 1971).

212. *See id.* § 2501 (West 1971) (providing that the Board may determine the rights of a stream system); *see also id.* § 2500 (West 1971) (excluding underground water, other than subterranean streams through known channels, from the definition of a stream system).

213. *See Blomquist, supra* note 49, at 175-76 (explaining that the San Gabriel Basin Water Master had to receive court permission to limit pumping for quality reasons).

214. *Wright v. Goleta Water Dist.*, 174 Cal. App. 3d 74, 87, 219 Cal. Rptr. 740, 749 (2d Dist. 1985).

215. *Id.* at 87-88, 219 Cal. Rptr. at 749-50.

216. 174 Cal. App. 3d 74, 219 Cal. Rptr. 740 (2d Dist. 1985).

217. *Id.* at 78, 219 Cal. Rptr. at 743.

218. 25 Cal. 3d 339, 599 P.2d 656, 158 Cal. Rptr. 350 (1979).

219. *In re Waters of Long Valley Stream Sys.*, 25 Cal. 3d 339, 358-59, 599 P.2d 656, 668, 158 Cal. Rptr. 350, 362 (1979).

220. *Id.* at 355, 599 P.2d at 666, 158 Cal. Rptr. at 360.

program to fulfill the State's water policy declarations.²²¹ In a stinging rebuke to existing water policy, the court concluded:

Even though it may appear a logical extension of *Long Valley* to allow a trial court adjudicating competing claims to groundwater to subordinate an unexercised right to a present appropriate use, we must hold such extension inappropriate. Philosophically, we agree with the District's position but stare decisis and due process considerations, not a concern under the current riparian scheme, compel us to reach the opposite conclusion in this case.²²²

Although no legislative action has been taken since these decisions, an example of the future of groundwater adjudications is found in the adjudication initiated by the Mojave Water Agency over the waters of the Mojave River watershed in the Mojave desert in southern California. Although this adjudication encompassed both surface and groundwater, its provisions are likely to be emulated in any future groundwater adjudications.

The lawsuit was initiated in 1990 by the City of Barstow which alleged that the cumulative water production upstream of Barstow had overdrafted the watershed.²²³ In 1991, the Mojave Water Agency filed a cross-complaint to determine all of the water rights in the watershed within the Agency's boundaries.²²⁴

It is estimated that the watershed has been in overdraft since the early 1950's and that the annual overdraft is between 70,000 and 90,000 acre feet.²²⁵ Water use in the adjudicated area has traditionally been for agriculture, although in the past twenty years rapid urbanization has occurred. The municipalities in the upper watershed initially sought an assessment on every acre foot of water produced, a so-called "gross pump

221. *Wright v. Goleta Water Dist.*, 174 Cal. App. 3d 74, 86, 219 Cal. Rptr. 740, 749 (1985).

222. *Id.* at 87, 219 Cal. Rptr. at 749.

223. Judgment Pursuant to Stipulation at 1, *City of Barstow v. City of Adelanto*, No. 208568 (Riverside Sup. Ct. Sept. 22, 1993). At this time the proposed judgment has only been entered as to the stipulating parties and there may be a trial involving the rights of the non-stipulating parties that could impact the terms of the proposed judgment. *Id.*

224. *Id.* at 2.

225. JONES & STOKES ASSOCIATES, INC., MOJAVE WATER AGENCY REGIONAL WATER MANAGEMENT PLAN DRAFT ENVIRONMENTAL IMPACT REPORT 2-9 (Feb. 1994) (copy on file with the *Pacific Law Journal*).

tax.”²²⁶ The effect of a gross pump tax would have been to quickly eliminate virtually all agriculture in the region. A more equitable “net pump tax” was eventually agreed upon, which gives all producers a base annual production right determined by the highest annual amount produced by the producer in the five years before the initial complaint was filed.²²⁷ All producers agreed to a ratcheting down of this production amount by five percent per year for four years after an initial year.²²⁸ Producers will still be able to produce their base production right but will have to pay an assessment on it.²²⁹ Thus, after five years all producers will have a free production allowance of eighty percent of their base annual production right.²³⁰ After that time, the free production allowance may either increase or decrease, based on a determination of the overdraft in the producer’s subarea.²³¹

The judgment is based on the availability of supplemental water, which is water imported by the Mojave Water Agency pursuant to its contract with the Department of Water Resources for State Water Project water, i.e., other water brought into the watershed or production foregone by existing producers.²³² To raise money for the purchase of supplemental water, the judgment calls for two primary assessments. The first is a replacement water assessment levied against each producer’s production in excess of its free production allowance.²³³ The second is a makeup water assessment to be levied against each acre-foot of production not assessed a replacement water assessment.²³⁴ This assessment is intended to satisfy obligations to other subareas that are established within the judgment.²³⁵ There is also an administrative assessment and an assessment against producers of less than ten acre-feet who are otherwise

226. Author’s Litigation Notes, *City of Barstow v. City of Adelanto*, No. 208568 (on file with the *Pacific Law Journal*).

227. Judgment Pursuant to Stipulation at 38, *City of Barstow v. City of Adelanto*, No. 208568 (Riverside Sup. Ct. Sept. 22, 1993); *see id.* at 7-8 (stating that the base annual production right is determined by the highest yearly production by the producer between 1986 and 1990).

228. *Id.* at 27.

229. *See id.* at 38-42 (describing the procedure for levying assessments).

230. *Id.* at 27.

231. Judgment Pursuant to Stipulation at 27-28, *City of Barstow v. City of Adelanto*, No. 208568, (Riverside Sup. Ct. Sept. 22, 1993).

232. *Id.* at 40; *see id.* at 13 (defining supplemental water).

233. *Id.* at 38.

234. *Id.*

235. *Id.*

not subject to the provisions of the judgment.²³⁶ The judgment also has an apparently unique and somewhat revolutionary biological resource assessment. Although the judgment has as a goal the maintenance of water levels for the protection of endangered species and riparian habitat, if those water levels are not met, an assessment of fifty cents can be levied against every acre-foot of production to create a trust fund (not to exceed one million dollars) to be used to purchase water and maintain resource areas.²³⁷

The proposed judgment also provides for water transfers.²³⁸ Any production right (the judgment treats all types of production produced under different water rights as the same) may be transferred. Under these rules, an agricultural user can transfer a production right to an urban user on an acre-foot for acre-foot basis.²³⁹ Thus, the proposed judgment accomplished what at many points seemed impossible. It provides for an orderly transition from agricultural to urban water use and a method for compensating those farmers that no longer choose to farm, as well as including a method for protecting the natural resources of the area.

Relying on increased adjudication of groundwater disputes would certainly be easier than attempting to push a comprehensive regulatory program through the legislature and past powerful water interests. In addition, courts have the flexibility to take an individual approach to each problem and tailor a remedy that seems to be best for the particular basin. However, there are numerous shortcomings to such an approach.²⁴⁰ For instance, the costs in terms of time and money are high, as all individuals with a potential water right to each basin must be brought into the process.²⁴¹ More importantly, "the conclusion of one court as to the best, most pragmatic solution may not be the most efficient management solution."²⁴² Since a court must adjudicate the rights of the parties to the case, it cannot consider the overall state interest in managing a scarce

236. See *id.* (providing that producers who do not produce in a given year must pay the amount paid by minimal producers for that year); see also *id.* at 9-10 (defining a minimal producer as a person whose base annual production is not greater than ten acre-feet).

237. *Id.* at 39.

238. *Id.* at F-1.

239. *Id.*

240. See *supra* notes 212-222 and accompanying text (explaining the disadvantages to adjudicating water rights).

241. See Deborah A. de Lambert, Comment, *District Management for California's Groundwater*, 11 *ECOLOGY L.Q.* 373, 374 (1984) (discussing the inefficiency and problems with relying on litigation in groundwater management disputes).

242. Michael P. Mallery, Comment, *Groundwater: A Call for a Comprehensive Management Program*, 14 *PAC. L.J.* 1279, 1290 (1983).

resource.²⁴³ Finally, judicial solutions are an inherently after-the-fact, piecemeal approach to solving resource management problems, which leave the state of the law uncertain.

B. Federal Control

A system of comprehensive groundwater management could be administered by the federal government. However, given the federal government's current preoccupation with changes to the Clean Water Act and the Endangered Species Act, any comprehensive federal groundwater management in the near future is extremely unlikely. Actually, federal government regulation of groundwater has already begun to occur through the enforcement of the federal Endangered Species Act (ESA).²⁴⁴ Thus far, California has only felt the bite of the ESA in the San Joaquin-Sacramento Delta where the listing of the delta smelt and the winter run chinook salmon have curtailed surface water diversions. Unless California develops some method to control and prevent the overdraft of its groundwater basins, federal control of groundwater through the ESA may suddenly become a harsh reality. For an example of how continued inaction could lead to draconian federal regulation of the state's resources, groundwater users in California need only consider the recent experience of Texas and its depletion of the Edwards Aquifer.²⁴⁵

The Edwards Aquifer is the City of San Antonio's sole source of water.²⁴⁶ Authorities knew as early as the 1950's that the aquifer faced overdraft problems, but they were unable to develop a management plan for the area.²⁴⁷ In the 1980's, excessive pumping reduced springflows at springs which provide habitats for several species listed under the ESA.²⁴⁸ In 1989, the Sierra Club filed a lawsuit charging that the U.S. Fish and Wildlife Service (USFWS) was violating the ESA by failing to control pumping from the Edwards Aquifer.²⁴⁹

243. *Id.*

244. 16 U.S.C. §§ 1531-1543 (1988).

245. *Sierra Club v. Interior Dept.*, 36 ERC 1533, 1548 (W.D. Tex. 1993) (holding that pumping controls were necessary to save threatened species from extinction); *WATER STRATEGIST, TEXAS REGULATES THE EDWARDS AQUIFER 1* (July 1993).

246. *WATER STRATEGIST*, *supra* note 245, at 1.

247. *Id.* at 2.

248. *Id.* at 7.

249. *Id.*

In 1993, a federal district judge ruled in favor of the Sierra Club, holding that pumping controls were necessary to save threatened species from extinction.²⁵⁰ The judge noted that no such controls were in place as of 1993, despite the fact that in 1989 the USFWS had decided against using the “blunt axe” of federal intervention because Texas assured the USFWS that the state would “quickly” establish its own pumping controls.²⁵¹ The judge blamed the state’s continued inaction on political disputes and on the fact that “those who benefit by unregulated pumping do not believe pumping will be limited to protect endangered species.”²⁵² Finally, the judge issued the following ultimatum: “The next session of the Texas [L]egislature offers the last chance for adoption of an adequate state plan before the ‘blunt axes’ of Federal intervention have to be dropped.”²⁵³

The scolding finally spurred Texas to action. It took a court decision and the threat of federal control to bring it about, but the Texas Legislature finally created a statewide authority to limit pumping from the aquifer.²⁵⁴ The legislature passed a bill creating the Edwards Aquifer Authority and providing the agency with complete management authority over pumping from Edwards Aquifer.²⁵⁵ The bill also set provisional short-term targets for annual pumpage, which the Authority is to meet through its permitting powers.²⁵⁶

The Edwards Aquifer case should be a warning to those who would resist efforts in California to establish more state authority over groundwater pumping. The current “pump until you are sued” system simply begs for conservation problems that provide the federal government with an excuse to get involved in local matters. True, the federal judge in Texas provided local authorities with a second chance. However, as one author warns, “the possibility of retaining local power should not be taken for granted.”²⁵⁷ Texas was able to act quickly because it had foreseen the potential for difficulty as early as 1989 and therefore already had a

250. *Sierra Club v. Interior Dept.*, 36 ERC 1533, 1548 (W.D. Tex. 1993).

251. *Id.* at 1550.

252. *Id.* at 1554.

253. *Id.*

254. WATER STRATEGIST, *supra* note 245, at 12.

255. *Id.* at 11.

256. *Id.*

257. *Id.* at 12.

management strategy developed.²⁵⁸ Pumpers in California will not be so lucky if they continue to bury their heads in the sand.

C. Local Control

Another future option for groundwater regulation is the continued local control of groundwater by counties, cities or other special districts. As discussed earlier, providing for such local controls has been the legislature's recent method of choice.²⁵⁹ This option allows local input and flexibility regarding how groundwater should best be allocated to the competing interests in the specific area. In a state such as California, which encompasses a large and hydrologically diverse area, such specialized attention to the different needs of different areas is essential. Authorities in New Mexico and Arizona simply do not have to deal with the number of issues and competing geographical interests which exist in California.

However, there are several reasons why the system of local administration cannot do the job alone. First, local controls often create inconsistent regulations, which is especially problematic because groundwater basins invariably extend beyond the boundaries of manmade political subdivisions.²⁶⁰ Second, local bodies almost uniformly lack the enforcement powers and funding necessary to manage a resource as vast and essential as groundwater.²⁶¹ For example, Assembly Bill 3030 may not allow local entities to limit groundwater extractions.²⁶² Moreover, local regulations may violate the commerce clause if restrictions on the

258. *Id.*

259. *See supra* notes 87-133 and accompanying text (discussing local government management of groundwater).

260. *de Lambert, supra* note 241, at 396; *Mallery, supra* note 242, at 1294. In addition, several different agencies with different powers and goals may conflict within one local district. *de Lambert, supra* note 241, at 396.

261. *See supra* notes 124-125 and accompanying text (stating that local entities may not be able to regulate groundwater under their police powers). For example, one commentator notes:

The absence of adequate resource management and conservation efforts in water poor areas of the state has been one factor causing rich areas to resist water transfers; residents of water rich areas sense that better management and increased conservation efforts could forestall the need for expensive new water projects. A clear state policy requiring proper water use state-wide [would] ease concerns and prompt cooperation.

de Lambert, supra note 241, at 397-98.

262. 1992 Cal. Legis. Serv. ch. 947, sec. 2 (enacting CAL. WATER CODE §§ 10750-10767).

transfer of groundwater out of the area discriminate against interstate commerce.²⁶³

Local agencies acting alone cannot solve statewide problems, which must be handled in a consistent manner, rather than through a checkerboard of management controls. This is a particular problem because of the regional differences in California. For example, in northern California, groundwater regulation has concentrated on the protection of basins from exports, while in southern California the focus has been on the quantification of water rights and the importation of supplemental water so that production can be maintained or increased. In some situations, such as the Inyo County ordinance, local controls serve to disfavor outsiders over local residents. Another issue that has not been addressed is storage of local water in groundwater basins. Finally, local entities, with differing constituents, political agendas and purposes, would undoubtedly have difficulty cooperating to effectuate a statewide solution to the problem.

D. State Control

In order to manage this dwindling resource most efficiently, California must adopt some scheme of state control of groundwater.²⁶⁴ The SWRCB already regulates the use and allocation of most surface water and is responsible for enforcing Article X, Section 2 of the California Constitution.²⁶⁵ Furthermore, the federal government has shown deference to the State in water law issues.²⁶⁶ Unlike local public entities, the State has the financial resources necessary to adequately analyze the statewide problems and could possibly facilitate groundwater transfers and imports into those basins that are overdrafted. The State also has the enforcement authority necessary to ensure that the management scheme is implemented and followed. Finally, the State is equipped to oversee and coordinate local efforts and thereby reduce the current uncertainty with respect to groundwater management.

263. See U.S. CONST. art. I, § 8, cl. 3 (granting Congress the power to regulate interstate commerce). In *Sphorhase v. Nebraska*, the Supreme Court held that groundwater was considered an article of commerce, and Nebraska's regulation of groundwater exports was therefore subject to Commerce Clause scrutiny. *Sphorhase v. Nebraska*, 458 U.S. 941, 953 (1982).

264. This suggestion is by no means a new one; rather, it is simply an ignored one. See generally de Lambert, *supra* note 241, at 373-400 (describing how California should attain state control over groundwater); Mallery, *supra* note 242, at 1279-1307 (explaining that California needs to enact some state control of groundwater).

265. See *supra* notes 73-86 and accompanying text (discussing the SWRCB's regulation of surface water).

266. 33 U.S.C. § 1251(g) (1988).

California does not lack a variety of models from which to pick and choose elements of its regulatory scheme. Several western states, including Arizona,²⁶⁷ New Mexico,²⁶⁸ Oklahoma²⁶⁹ and Colorado,²⁷⁰ have extensive, yet different, programs in place. Certainly, California has its own unique problems and characteristics, and the legislature will have to decide how far along the "regulatory spectrum" it must (or can) proceed in order to create an effective, yet acceptable, system. As noted above, the diversity of California's water interests will certainly not allow the State to implement a regime as centralized as New Mexico's because California must retain a large measure of local flexibility.

From the beginning of any serious attempt to create a statewide system of groundwater management, the legislature must recognize that pumpers will be hostile to centralized administration, and the legislature must seriously address their concerns.²⁷¹ For example, the primary concerns of agricultural pumpers have been that regulating groundwater will increase their costs and that it is unnecessary because additional surface supplies will become available.²⁷² However, it is very unlikely that significant additional surface supplies will become available given increased demands and environmental restrictions. The pumpers must overcome their fears of losing local control and recognize that the current situation is too destructive to last forever.²⁷³ It makes no sense for pumpers to put off their day of reckoning until even more groundwater basins are in overdraft and their backs are against the wall. California has the opportunity now to review several different options for a statewide groundwater management system, learn from other states' mistakes, and craft a plan that meets the state's groundwater needs. It should not pass on this opportunity any longer.

267. See *supra* notes 180-206 and accompanying text (describing Arizona's regulatory scheme).

268. See *supra* notes 159-179 and accompanying text (explaining New Mexico's form of regulation).

269. See Mallery, *supra* note 242, at 1302-04 (arguing for the adoption of Oklahoma's scheme in California).

270. See COLO. REV. STAT. §§ 37-90-101 to 37-90-141 (West 1973 & Supp. 1993) (providing the Colorado Ground Water Management Act).

271. Smith, *supra* note 167, at 686-87.

272. *Id.*

273. See de Lambert, *supra* note 241, at 398-99 (discussing objections to centralized control).