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Eric L. Garner

THE CALIFORNIA SUPREME COURT REVIEWS THE MOJAVE RIVER ADJUDICATION

ERIC L. GARNER AND STEVEN M. ANDERSON[‡]

INTRODUCTION

The California Supreme Court's decision to review the Mojave Basin adjudication brings with it hope that the court will deliver some much needed clarity to, and guidance on, certain aspects of California water law. The appellate court decision in *City of Barstow v. Mojave Water Agency*[1] applied principles of strict priority based predominantly on traditional notions of the relationship among different types of water rights. As this article will demonstrate, the California Supreme Court has virtually never used a rigid scheme of prioritization when resolving water rights disputes. Indeed, with the wide range of options available

‡ Mr. Garner and Mr. Anderson practice at the Southern California law firm Best Best & Krieger. BBK specializes in water, environmental, natural resources, and endangered species law. The firm represents numerous public agencies, including the Metropolitan Water District of Southern California, the California State Water Contractors, and other local water agencies, as well as private clients. One of BBK's senior partners is currently serving as a special master for the United States Supreme Court in a water rights dispute between two states. Firm water law attorneys have also authored the definitive book on California water issues, *California Water*, written numerous articles on Western water law issues, and conducted trials and pursued appeals before all levels of California state and federal courts.

1. City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 64 Cal. App. 4th 737 (1998), *petition for review granted*, 961 P.2d 398, 78 Cal. Rptr. 2d 184 (Cal. 1998). For the convenience of California practitioners, the editors have included parallel citations for California cases cited in this article.

to resolve the Mojave problem, the only surprise might be if the supreme court chooses to apply principles of strict priority.

Section I of this article provides an overview of California groundwater law. Section II discusses the background and setting of the *Mojave* case and the appellate court's opinion. Section III discusses the development of several water law doctrines that have played a role in previous California Supreme Court decisions and that will probably influence the high court's decision in this case. Section IV lays out some of the issues now facing the California Supreme Court, including the role of equitable apportionment and physical solutions in groundwater adjudications, the scope of the reasonable use doctrine, the concept of certainty, and the modern relevance of traditional notions of vested water rights.

I. CALIFORNIA GROUNDWATER LAW

A. Common Law

California and Texas are the only western states without some form of statewide groundwater regulation.[2] California groundwater is chiefly governed by common law doctrines and the State Constitution. Although the State Water Resources Control Board ("SWRCB" or "State Board") has broad authority to control surface water appropriations, the State Board does not regulate percolating groundwater.[3] Consequently, groundwater disputes have frequently been resolved in court.

California law recognizes three types of groundwater: defined underground streams, the underflow of surface streams, and percolating waters.[4] The law of surface water rights governs diversions from defined underground streams and from the underflow of surface streams.[5] All underground waters not fitting into these two categories, including waters in underground basins and waters that have escaped from streams, are considered percolating waters.[6] There is a presumption that groundwater is percolating.[7]

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2. *See generally* Eric Behrens & Mathew G. Dore, *Rights of Landowners to Percolating Groundwater in Texas*, 32 S. TEX. L. REV. 185, 192 (1991); Karen H. Norris, *The Stagnation of Texas Ground Water Law: A Political v. Environmental Stalemate*, 22 ST. MARY'S L.J. 493, 507-09 (1990); David Todd, *Common Resources, Private Rights and Liabilities: A Case Study on Texas Groundwater Law*, 32 NAT. RESOURCES J. 233, 249, 257-59 (1992); TEX. WATER CODE ANN. § 52.002 (West Supp. 1994).

3. *See* CAL. WATER CODE § 175 (West 1997). *See generally id.*, §§ 1250-1845 (outlining SWRCB's duties regarding surface water appropriation).

4. Arroyo Ditch & Water Co. v. Baldwin, 100 P. 874, 875, 155 Cal. 280, 284 (1909); CAL. WATER CODE § 1200 (West 1997).

5. Rancho Santa Margarita v. Vail, 81 P.2d 533, 561, 563-64, 11 Cal. 2d 501, 556, 560-62 (1938); Peabody v. City of Vallejo, 40 P.2d 486, 495-96, 2 Cal. 2d 351, 375-76 (1935); City of Los Angeles v. Pomeroy, 57 P. 585, 597-98, 124 Cal. 597, 630, 632 (1899); CAL. WATER CODE §§ 1200-1201 (West 1997).

6. Vineland Irr. Dist. v. Azusa Irr. Co., 58 P. 1057, 1059, 126 Cal. 486, 494 (1899); CAL. WATER CODE §§ 1200, 2500 (West 1997).

7. Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 924-

The doctrines of correlative rights and reasonable use restrict the use of percolating groundwater. In *Katz v. Walkinshaw*,[8] the California Supreme Court rejected the English doctrine of absolute ownership for the more equitable correlative approach. The doctrine of correlative rights affords all overlying landowners equal rights to available water.[9] Each overlying owner is entitled to take all water that it can beneficially use on its overlying land, so long as there is sufficient water in the basin to meet all needs.[10] Because overlying owners hold mutual and reciprocal rights, in times of groundwater scarcity each user is limited to a proportionate, equitable share of the total amount available based on reasonable need.[11]

Groundwater reasonably and beneficially utilized on property overlying the groundwater basin from which it is pumped is traditionally considered paramount to an appropriative non-overlying use.[12] Groundwater exported from an overlying area for out of basin use is considered an appropriation because it does not return to the basin for further use.[13] Only surplus groundwater is available for appropriation.

The California Supreme Court's landmark 1949 decision in *City of Pasadena v. City of Alhambra* added a new principle to the correlative rights doctrine.[14] There, most of the substantial pumpers in the Raymond Basin, both overlying and appropriative, were joined in a lawsuit to determine rights to a groundwater basin that had been declining for twenty-two of the previous twenty-four years.[15] Plaintiff City of Pasadena claimed that pumping should be limited to the safe yield of the basin.[16]

The *Pasadena* court agreed to limit pumping to the safe yield of the basin and articulated the doctrine of "mutual prescription" to determine which pumpers should curtail their total extractions to ensure the basin's long-term health.[17] 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 rights[18] against all

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25, 49 Cal. App. 3d 992, 1001 (1975).

8. Katz v. Walkinshaw, 74 P. 766, 141 Cal. 116 (1903).

9. *Id.* at 771, 141 Cal. at 133.

10. *Id.*

11. *Id.*

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

13. Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 924, 49 Cal. App. 3d 992, 1000 n.6, 1001 (1975).

14. City of Pasadena v. City of Alhambra, 207 P.2d 17, 33 Cal. 2d 908 (1949).

15. *Id.* at 22-23, 26, 33 Cal. 2d at 916, 922.

16. *Id.*

17. *Id.* at 27, 29-30, 33 Cal. 2d at 924, 926-28.

18. 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. 1 HAROLD E. ROGERS & ALAN H. NICHOLS, WATER FOR CALIFORNIA – PLANNING LAW & PRACTICE FINANCE, §§ 228-229, at 328-35 (1967).

other overlying owners and prior appropriators.[19] The court essentially rejected the notion that water should always be allocated strictly on the basis of priority and "in time" appropriation.[20] The court modified the strict application of the priority of overlying rights over appropriative rights that it had articulated twelve years earlier in *Corona Foothill Lemon Co.*[21] According to the court, strict application of the rule of priority would result in an unequal sharing of the burden of curtailing overdraft, because pumping by later appropriators would be eliminated while no restrictions would be placed on pumping by earlier appropriators.[22] The parties entered into a stipulated judgment which based their water rights on the amount of water continuously used over the five-year period preceding the commencement of the litigation.[23] Ultimately, the court limited Raymond Basin groundwater extractions to the amount of the safe yield, with a proportionate reduction in all parties' usage.[24]

The *Pasadena* court's action effectively halted the decline of groundwater levels in the basin. Increased return flows resulting from the growing use of imported Colorado River water raised the safe yield of the basin enough to allow the court to increase the parties' "decreed pumping rights" in 1955.[25]

Despite its successful application in the Raymond Basin, the California Supreme Court subsequently noted that the concept of mutual prescription actually encourages unnecessary groundwater pumping and creates "a race to the pumphouse" mentality,[26] since in order to establish a right overlying well owners and landowners must extract groundwater.[27] Consequently, mutual prescription encourages an individual to pump as much water as possible.

Several other Southern California groundwater basin adjudications followed in the wake of the Raymond Basin decision. Adjudications of the West Basin,[28] Central Basin[29] and Main San Gabriel Basin[30] were all resolved with physical solutions. In each case, the court continues to supervise a permanent watermaster who has authority to fund and operate programs to control groundwater extractions and to prevent

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19. *City of Pasadena*, 207 P.2d at 28-30, 33 Cal. 2d at 926-28.
20. *Id.* at 32, 33 Cal. 2d at 932-33.
21. Corona Foothill Lemon Co. v. Lillibridge, 66 P.2d 443, 8 Cal. 2d 522 (1937).
22. *City of Pasadena*, 207 P.2d at 32, 33 Cal. 2d at 932-33.
23. *Id.* at 33, 33 Cal. 2d at 933.
24. *Id.* at 26, 33 Cal. 2d at 922.
25. James H. Krieger & Harvey O. Banks, *Ground Water Basin Management*, 50 CAL. L. REV. 56, 60-62 (1962).
26. *See* City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1299, 14 Cal. 3d 199, 267 (1975).
27. ANNE J. SCHNEIDER, GROUNDWATER RIGHTS IN CALIFORNIA - GOVERNOR'S COMMISSION TO REVIEW CALIFORNIA WATER RIGHTS 19-22 (1977).
28. *See* WILLIAM BLOMQUIST, DIVIDING THE WATERS: GOVERNING GROUNDWATER IN SOUTHERN CALIFORNIA 97-126 (1992).
29. *Id.* at 127-58.
30. *Id.* at 159-88.

overdrafts by replenishment with imported water.[31] The expense and time involved in adjudicating groundwater basins, as well as the uncertainty of results, has meant in practical terms that only twelve California groundwater basins have been fully adjudicated.[32]

In its next major groundwater decision, *City of Los Angeles v. City of San Fernando*,[33] the California Supreme Court significantly curtailed the mutual prescription doctrine. In 1955, the City of Los Angeles brought suit against the cities of San Fernando, Glendale, Burbank, and other groundwater pumpers to declare that Los Angeles had a prior and superior right to all groundwater in the upper Los Angeles River area.[34] Los Angeles also sought to enjoin the cities and other pumpers from extracting groundwater without its permission.[35]

In a long decision that reviewed and commented on numerous types of water rights, the court declined to follow the theory of mutual prescription. Instead, the court concluded that California Civil Code section 1007 prevents the prescription of groundwater rights owned by a public agency or a public utility,[36] and that prescription against persons other than a public entity cannot occur without actual notice of who is prescripting the water.[37] Thus, the court held that in a groundwater basin with multiple pumpers, continuous pumping by an overlying user or an appropriator does not create a paramount right to the full quantity of water extracted, nor does continuous pumping cause other pumpers in the basin to lose their rights.[38] In *San Fernando*, the court held that Civil Code section 1007[39] precludes prescription of groundwater rights owned by public utilities and public agencies,[40] but also implied that prescription may be limited by overlying owners' con-

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31. Schneider, *supra* note 27, at 22-25.

32. The adjudicated basins are as follows:

Northern California: Siskiyou County – Scott River Stream System, Scott River Valley (as part of a general adjudication pursuant to CAL. WATER CODE §§ 2500-2503 (West 1997)).

Southern California: Kern County: Tehechapi Basin. Kern and San Bernardino Counties: Cummings Basin. Los Angeles County: Central Basin, West Basin, Upper Los Angeles River area, Raymond Basin, Main San Gabriel Basin. San Bernardino County: Warren Valley Basin, Cucamonga Basin, San Bernardino Basin area (partially in Riverside County). Riverside County: Chino Basin.

33. City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1258, 14 Cal. 3d 199, 206-07 (1975).

34. *Id.* at 1258-59, 14 Cal. 3d at 207.

35. *Id.* at 1259, 14 Cal. 3d at 207.

36. *Id.* at 1305, 1307, 14 Cal. 3d at 274, 277.

37. *Id.* at 1311, 14 Cal. 3d at 282.

38. *Id.* at 1311-14, 14 Cal. 3d at 283-86.

39. *San Fernando*, 537 P.2d at 1301, 14 Cal. 3d at 270 (1975) (citing CAL. CIV. CODE §1007 (West 1997)). California Civil Code section 1007 provides in pertinent part: "[N]o possession by any person, firm or corporation no matter how long continued of any land, water, water right, easement, or other property whatsoever dedicated to a public use by a public utility, or dedicated to or owned by the state or any public entity, shall ever ripen into any title, interest or right against the owner thereof." CAL. CIV. CODE §1007 (West 1997).

40. *San Fernando*, 537 P.2d at 1304-05, 14 Cal. 3d at 274.

tinued exercise of their rights by pumping water.[41] The self-help doctrine was later clarified to mean: "[O]verlying users retain priority but lose amounts not pumped."[42]

To resolve the problem in the upper Los Angeles River basin, the court imposed a proportionate reduction in the quantities of water available to each party to bring the total annual extractions from the basin within the safe sustainable yield.[43]

The primary reason the *San Fernando* court rejected the doctrine of mutual prescription was that its facts dramatically differed from *City of Pasadena.* In *San Fernando,* each of the Defendants was pumping

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41. *Id.* at 1319 n.101, 14 Cal. 3d at 293 n.101. "Even though cities cannot Lose (sic) their water rights by prescription, their Acquisition (sic)of prescriptive ground water rights is subject to the limitations stemming from the lawful owner's self-help set forth in *City of Pasadena* . . . ." *id.* (italics added). This "self-help" doctrine, which seems to afford overlying owners a measure of protection against potential prescriptors, was first articulated in *Pasadena.* City of Pasadena v. City of Alhambra, 207 P.2d 17, 33 Cal. 2d 908 (Cal. 1949). There, appropriators and overlying users alike had been taking non-surplus groundwater from the basin for over 20 years. This mutual pumping eventually led to an overdraft and a lawsuit to determine relative water rights. *Id.* at 32, 33 Cal. 2d at 931-32. As the appropriators had continuously and adversely pumped groundwater for a period well exceeding the statutory five years, and had met all the other statutory requirements, their extraction would seem to prevail over the overlying owners. However, the court held that the running of the statutory period was effectively interrupted by the self-help, i.e., the ongoing pumping, of the overlying owners. *Id.*

> The original [overlying] owners by their own acts, although not by judicial assistance, thus retained or acquired a right to continue to take some water in the future. The wrongdoers [municipalities *et al.*] also acquired prescriptive rights to continue to take water, but their rights were limited to the extent that the original owners retained or acquired rights by their pumping. *Id.*

42. Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc., 28 Cal. Rptr. 2d 909, 915, 23 Cal. App. 4th 1723, 1732 (1994). Blue Skies Country Club owned a golf course overlying a groundwater basin. *Id.* at 911, 23 Cal. App. 4th at 1727. The Country Club had been extracting water from the basin since 1956. Due to perpetual overdraft, Hi-Desert County Water District filed a complaint against the Country Club and other overlying water users to determine the parties' water rights. The trial court's 1977 judgement in that case allocated 585 acre-feet per year to the golf course. *Id.* at 912, 23 Cal. App. 4th at 1726. However, in May 1991, a final summary report issued in conjunction with the case indicated that Blue Skies would have to pay a "replenishment assessment of '$1009 per acre foot for each acre-foot of extracted groundwater beyond the safe yield allocation,' rather than beyond the adjudicated allotment." *Id.* at 913, 23 Cal. App. 4th at 1729. Thereafter, in November 1991, the trial court approved the final summary report. The defendant then moved for an order to amend the safe yield declaration and the judgement. *Id.* at 914, 23 Cal. App. 4th at 1730. The defendant Country Club appealed from the judgement.

On appeal the defendants claimed that the trial court's post-judgement order improperly gave all parties equal priority. The *Blue Skies* court noted that, under *San Fernando,* overlying users in an overdraft basin either retain their original overlying rights or obtain new rights by prescription, so long as they continue to pump. Stated another way, overlying owners retain their water rights by using them. *Id.* at 915, 23 Cal. App. 4th at 1731-32. Thus, the trial court erred in holding that the parties' water rights were all prescriptive and equal in priority and thus constituted an improper redefinition of the parties' rights. *Id.* at 916, 23 Cal. App. 4th at 1732-33.

43. *San Fernando,* 537 P.2d at 1315, 14 Cal. 3d at 293. The case also re-established that parties importing water have a right to the return flow from it. *Id.* at 1291-97, 14 Cal. 3d at 255-64.

groundwater before the basin went into overdraft. The court determined that the purpose served by the mutual prescription doctrine in *City of Pasadena*, avoiding the complete elimination of later appropriative uses, was not necessary to achieve a safe yield in the Los Angeles River Basin.[44]

In the quarter century since the *San Fernando* decision, it has been theorized that the case's most important and long-lasting impact may be in one footnote among the one hundred six page opinion. In footnote 61,[45] the court quoted extensively from a United States Supreme Court case, *Nebraska v. Wyoming*,[46] which was decided on the basis of the "equitable apportionment" doctrine. The footnote states that mechanical application of mutual prescription does not always result in the most equitable apportionment of water based on each party's need.[47] Instead, courts should examine whether mutual prescription or some other physical solution best satisfies equitable factors such as those considered in *Nebraska*, including physical and climatic conditions, consumptive use in different areas, and the extent of established uses.[48]

This language from the *San Fernando* decision, as well as the case's application of Civil Code section 1007, indicate that the supreme court does not believe strict priority should be applied to determine water rights in overdrafted groundwater basins in California, especially where the overdraft is caused in part by public entities extracting groundwater for public use.[49]

B. State Groundwater Control

Despite the complex nature of the common law of groundwater regulation, the State Board's jurisdiction over groundwater has been kept extremely limited, particularly in comparison to its broad powers to manage surface water. There are very few provisions in the Water Code that can be utilized to control use of percolating groundwater.[50] Water Code section 4999 *et seq.* requires after-the-fact reporting of all groundwater pumped in certain counties (Riverside, San Bernardino, Los Angeles and Ventura Counties), but gives no authority to the State Board to limit pumping or assess penalties for overdrafting. Other

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44. *Id.* at 1298-99, 14 Cal. 3d at 266-67.

45. *Id.* at 1298 n.61, 14 Cal. 3d at 265 n.61.

46. Nebraska v. Wyoming, 325 U.S. 589 (1945).

47. *San Fernando*, 537 P.2d at 1298 n.61, 14 Cal. 3d at 265 n.61.

48. *Id.* at 1298, 14 Cal. 3d at 165; Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 925, 49 Cal. App. 3d at 1001 (1975).

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

50. In 1979, comprehensive legislation that would have adopted the groundwater management recommendations of the Commission to Review California Water Rights Law created by Governor Edmond Brown (Cal. Exec. Order No. B-26-77 (May 11, 1977)) was introduced, but the measure subsequently died in committee as a result of opposing ideas regarding groundwater management. Michael P. Mallery, *Groundwater: A Call for a Comprehensive Management Program*, 14 PAC. L.J. 1279, 1299 (1983).

state statutes related to groundwater are also limited.[51]

In contrast, the State Board's authority over surface water is virtually plenary. No surface water may be appropriated without a permit from the State Board.[52] In its consideration and issuance of a permit, the State Board is specifically authorized to consider the protection of beneficial uses, including fish and wildlife resources.[53] The California Supreme Court has upheld the State Board's broad powers, finding that, except where vested rights will be negatively impacted, all surface water appropriations are subject to the Water Code's provisions.[54]

C. Local Government Management

Local public entities provide some groundwater management in California. Some water users and local governments prefer that a groundwater basin management structure be created by legislation to help assure predictable groundwater extraction regulations and to permit groundwater exportation.[55] Counties also typically have groundwater well permit requirements and assign the county health and environmental protection department jurisdiction over domestic well supply and quality issues.[56]

However, effective local controls over groundwater have been rare. In 1992, in an attempt to encourage more local control of groundwater, the California Legislature adopted Assembly Bill 3030,[57] which grants local entities the authority to create groundwater management plans for groundwater basins.[58] A groundwater management plan may

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51. *E.g.*, Water Code sections 1005.1 - 1005.4 protect groundwater pumpers from the loss of rights in periods of non-use when they have alternative supplies available. CAL. WATER CODE §§ 1005.1-1005.4 (West 1997). Water Code sections 13550 and 13050 prohibit the use of groundwater for certain purposes, such as golf course irrigation, if reclaimed water is readily available and reasonably priced. *Id.* § 13550. Reclaimed water or recycled water is water that has been treated for waste and is, therefore, suitable for beneficial use. *Id.* § 13050. However, the State Board must conduct a hearing and receive testimony before making such a determination, a process that can take several years. *Id.* § 13550(a). Water Code section 1242 requires the issuance of a permit to store water in a groundwater basin. *Id.* § 1242.

52. CAL. WATER CODE §§ 1225, 1250-1350 (West 1997).

53. *Id.* §§ 1243-1243.5.

54. People v. Shirokow, 605 P.2d 859, 865, 26 Cal. 3d 301, 309 (1980).

55. Perhaps the earliest example of significant local control of groundwater via state statute occurred in Orange County. Orange County began experiencing serious groundwater overdraft in the 1920's, and in 1935 the Orange County Water District was formed as a result of special legislation. BLOMQUIST, *supra* note 28, at 247-49. The acts granted the District authority to purchase and spread supplemental water with funding from a pump tax and ad valorem real property tax. Krieger & Banks, *supra* note 25, at 62. The program has proved to be very effective in reducing the critical overdraft in the basin. BLOMQUIST, *supra* note 28, at 269; Krieger & Banks, *supra* note 25, at 62.

56. For example, the County of San Bernardino has extensive well construction and operation requirements. SAN BERNARDINO COUNTY CODE §§ 33.0630-33.0645.

57. CAL. WATER CODE §§ 10750-10750.10 (West 1997).

58. *Id.* § 10753(a). AB 3030 authorizes local water agencies to adopt a groundwater management plan subject to a hearing process and majority protest by landowners. *Id.* §§ 10753.2-10753.9. Any local water agency whose service area includes a groundwater

include components to control saline water intrusion, regulate migration of contaminated groundwater, mitigate conditions of overdraft, and replenish groundwater extracted by water producers.[59] However, AB 3030 does not authorize local water agencies to make binding determinations of the water rights of any person or entity, nor in most cases to limit or suspend groundwater extractions.[60]

Another type of local groundwater control is exercised through Water Replenishment Districts—special districts formed to replenish groundwater supplies within district boundaries.[61] The purpose of these districts is to take any actions necessary to: (1) replenish district groundwater, including buying, selling and exchanging water; (2) protect or prevent interference with groundwater quality or groundwater rights; or (3) take any action necessary to put groundwater to beneficial use.[62] A district may also take action to prevent contaminants from entering its groundwater supplies, and to remove contaminants from groundwater.[63]

Counties also control groundwater through ordinances enacted in response to local problems. For example, Inyo County adopted an ordinance in 1980 to address groundwater exports from the Owens Valley by the City of Los Angeles. The ordinance establishes a comprehensive system of groundwater management, with the goal of protecting Inyo County's environment and economy by maintaining groundwater levels at a depth which is capable of supporting natural resources.[64] Several counties have enacted ordinances to prevent the export of groundwater from their respective areas.[65]

A potential problem with these ordinances is that counties and other local entities may not have the authority under their police powers to regulate groundwater, particularly groundwater extractions.[66] Additionally, local ordinances are subordinate to state laws that regulate groundwater and are considered pre-empted if expressly or implicitly in conflict with general state law.[67] In 1933, however, the California Supreme Court upheld a county ordinance preventing groundwater extractions for a wasteful, unreasonable or non-beneficial

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basin or portion of a groundwater basin that is not otherwise managed or adjudicated may adopt or implement a groundwater management plan. *Id.* § 10753(b).

59. *Id.* § 10753.7.

60. *Id.* § 10753.8(b)-(c). Groundwater extractions can be limited or suspended pursuant to a management plan only if the local water agency has determined that groundwater replenishment programs or other alternative sources of water supply have proved insufficient or infeasible to lessen the demand for groundwater. *Id.*

61. CAL. WATER CODE § 60000 (West 1997).

62. *Id.* §§ 60220-60223.

63. *Id.* §§ 60224-60225.

64. Antonio Rossmann & Michael J. Steel, *Forging the New Water Law: Public Regulation of "Proprietary" Groundwater Rights*, 33 HASTINGS L.J. 903 (1982).

65. Russell Kletzing, *Imported Groundwater Banking: The Kern Water Bank—A Case Study*, 19 PAC. L.J. 1225, 1261-62 (1988).

66. *See* Birkenfeld v. City of Berkeley, 550 P.2d 1001, 17 Cal. 3d 129 (1976) (city's police power is limited to affecting only those areas within its jurisdiction).

67. CAL. CONST. art. XI, § 7; *see* Rossmann, *supra* note 64, at 936-43.

purpose.[68] The court found the ordinance was a valid exercise of the county's police power and groundwater regulation was not solely the responsibility of the state legislature.[69]

More recently, the third district court of appeal upheld a Tehama County ordinance requiring a permit to pump groundwater for use on nonoverlying land.[70] The court held that the ordinance was not preempted by codified water policy indicating the state's paramount interest in and authority over water, by state law limiting export of water from certain protected areas, or by water code provisions authorizing local water agencies to adopt and enforce groundwater management plans.[71]

II. THE MOJAVE BASIN

A. The Trial Court Decision

The Mojave River system is located in an arid, desert area southwest of Death Valley, California. It is more than 90 miles in length and encompasses a groundwater basin of approximately 3,600 square miles. The basin consists of one large watershed with five distinct subareas.

The water system has surface and subsurface flows as well as substantial associated percolating groundwater. The surface and groundwater constitute an interconnected water supply. Surface flows serve to replenish the groundwater basin and the groundwater basin sometimes feeds the river. Surface flows disappear into the basin, but geologic constrictions force the water back to the surface in some places.[72] The region receives less than 4 inches of rainfall annually. Recharge of basin aquifers ordinarily occurs only after major storms.

Basin overdraft[73] began in the 1950's and greatly increased in the 1980's. Attempts to address the overdraft problem in the 1960's and early 1970's were unsuccessful.[74] By the early 1990's, overdraft exceeded 90,000 acre-feet annually and may well have been much

68. *Ex parte* Maas, 27 P.2d 373, 219 Cal. 422 (1933).

69. *Id.* at 424-25. *See* Alameda County Water Dist. v. Niles Sand & Gravel Co., 112 Cal. Rptr. 846, 37 Cal. App. 3d 924 (1974) (validating a county water district's underground water storage program).

70. Baldwin v. County of Tehama, 36 Cal. Rptr. 2d 886, 889, 31 Cal. App. 4th 166, 171 (1994).

71. *Id.* at 891, 893-95, 31 Cal. App. 4th at 175, 178-81.

72. Respondents' Brief at 1-6, City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 64 Cal. App. 4th 737 (1998) (No. E017881).

73. Groundwater overdraft is "the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin [i.e., the safe yield] over a period of years during which supply conditions approximate average." 1 CALIFORNIA DEP'T OF WATER RESOURCES, CALIFORNIA WATER PLAN UPDATE, BULLETIN 160-93, at 386 (1994). "Overdraft commences whenever extractions increase, or the withdrawable maximum decreases, or both, to the point where the surplus ends." City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1307, 14 Cal. 3d 199, 277 (1975).

74. Respondents' Brief at 5, *Mojave* (No. E017881).

higher. The overdraft grew with population and economic expansion in desert communities served by the basin. In essence, the local economy was built on overdraft and basin groundwater reserves. By 1990, rapid urban growth was causing a shift in water use away from agricultural to municipal uses. By that time, more than 230,000 acre-feet was annually utilized as follows: approximately 60% agriculture, 31% municipal, and 9% fish hatchery, aquaculture, and lake use.

In May 1990, the City of Barstow and the Southern California Water Company ("SCWC") filed a complaint claiming that groundwater extraction by the City of Adelanto, the Mojave Water Agency ("MWA") and other "upstream" producers on the Mojave River system (collectively "municipal purveyors" or "stipulating parties") adversely impacted Barstow's groundwater supply.[75] Plaintiffs requested that the municipal purveyors be ordered to provide an average annual flow of 30,000 acre-feet in the Mojave River Channel near Barstow.[76] Plaintiffs also sought to compel MWA to import State Water Project water.[77]

In July 1991, MWA filed an amended cross-complaint which joined all water producers within the Mojave River watershed, except for certain small producers.[78] MWA sought a judicial declaration that water supply available in the basin was insufficient to meet demand and also requested a declaration of the water rights of in-basin water producers.[79] Originally, more than 3,000 parties were named.[80] Eventually, parties pumping less than 10 acre-feet of water annually were dismissed from the action[81] and approximately 450 parties remained.

In October 1991, the trial court ordered a litigation standstill so that the parties could try to negotiate a "physical solution" to the overdraft problem.[82] By September 1993, a large majority of basin water producers remaining in the action had agreed to a negotiated physical solution to the overdraft problem.[83] More than 95% of the producers named in the action either stipulated to the proposed physical solution judgment or did not oppose it. Measured from a water production standpoint, parties aggregating 89% of the basin's water production agreed to the solution, while parties representing 93% of the municipal use and 85% of the agricultural use supported or did not oppose the stipulated judgment.

The decreed purpose of the physical solution was to: (1) develop

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75. City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 64 Cal. App. 4th 737 (1998). MWA and other named water purveyors supply water to communities in the area including Hemet, Victorville, and Apple Valley.

76. Respondents' Brief at 6-7, *Mojave* (No. E017881).

77. *Mojave*, 75 Cal. Rptr. 2d at 482, 64 Cal. App. 4th at 744.

78. *Id.*

79. *Id.*

80. City of Barstow v. City of Adelanto, Riverside County Superior Court Case No. 208568 (Trial Court Judgment Jan. 10, 1996).

81. Respondents' Brief at 7, *Mojave*, (No. E017881).

82. *Mojave*, 75 Cal. Rptr. 2d at 482, 64 Cal. App. 4th at 744-45.

83. *Id.* at 483, 64 Cal. App. 4th at 745; Respondents' Brief at 7, *Mojave* (No. E017881).

means to conserve local water; (2) guarantee that downstream water producers would not be adversely affected by production upstream; and (3) raise money to purchase supplemental water supplies. The drafters of the physical solution envisioned a system not aimed at balancing water production with natural supply, but rather a "solution that generates the money necessary to acquire water . . . through transfer or through import . . . . [I]n the long term the amount of water supply needed for the area will be made available as opposed to reducing back to some arbitrary amount of water supply."[84]

In anticipation of the physical solution, the parties investigated the production levels of nearly 6800 basin wells. From that study, a "base annual right" equivalent to the highest amount of water taken by each individual producer during the five-year period from 1986-1990 was determined. Significantly, this base annual production right was calculated without affording priority based on the type of use or water right.[85]

The stipulating parties agreed to share the burden of groundwater shortage proportionately by reducing their individual production by 20%. A "ramp down" procedure allowed the parties to decrease their pumping by 5% annually over the first five years following court approval of the physical solution. Thereafter, unless an adjustment was made based on local hydrologic circumstances, parties could pump 80% of their base annual right without accruing a replenishment assessment obligation. In other words, the stipulating parties did not allege any water rights priorities in favor of the physical solution. Thus, there was no reliance on *inter se* priorities. Producers exceeding their base annual rights, i.e., their fair share of the subarea free production allowance, agreed to pay a "replenishment water assessment."[86] The court-appointed watermaster was required to use these assessments to purchase imported water to replace excess subarea production.[87] The physical solution did not place restrictions on the quantity of water a producer could pump. Rather, pumpers exceeding specific pumping levels were simply assessed fees based on the amount of overproduction.[88]

The judgment divided the Mojave River Basin into five geologic subareas, with certain subareas required to provide a specific, historical quantity of water to the adjoining downstream subarea.[89] This water supply obligation of the upstream subarea is known as "make-up water."[90] A make-up water assessment could be imposed if downstream supply obligations were not satisfied. In other words, the watermaster would impose such assessments to meet any subarea's deficiency in

84. *Mojave* at 484-85, 64 Cal. App. 4th at 745.
85. *Id.*
86. *Id.*
87. *Id.*
88. *Id.*
89. *Id.*
90. *Id.*

providing water to the adjoining downstream subarea.[91]

The physical solution also provided for transferable "free production allowance rights" among the parties, subject to specified consumptive-use limitations. Thus, the parties had the right to transfer water off their property. For example, an agricultural user could transfer its free production allowance to an urban user.

At the stipulating parties' request, the trial court approved the physical solution by way of interlocutory judgment on September 23, 1993, and bound the signatories to follow it.[92] However, the matter proceeded to trial to determine the rights of several parties not stipulating to the physical solution. The nonstipulating parties fell primarily into two groups: an association of individual dairy farmers owning overlying lands in the basin (collectively "Cardozo Group" or "Cardozo Appellants") and the Jess Ranch Water Company.

After a bench trial, the court determined that *inter alia*:

1. Imposition of the physical solution on the nonstipulating parties was necessary to implement the mandate of Article X, Section 2 of the California Constitution;

2. Continued basin pumping not in conformance with the dictates of the physical solution would itself constitute an unreasonable use or method of water use;

3. The physical solution was a fair and equitable basis for satisfaction of all water rights in the Mojave Basin area, was in furtherance of the mandate of the State Constitution and the water policy of the State of California, and took into account applicable public trust interests;

4. The physical solution was fair and equitable to the Cardozo Group and the solution could be imposed upon them because "the constitutional mandate of reasonable and beneficial use dictates an equitable apportionment of rights when a water basin is in overdraft."

5. Continuing jurisdiction over the judgment and the parties was necessary in case any party exercised its right to modify, amend or amplify any practical features of the physical solution based on changed circumstances or new information.[93]

Following the trial court's judgment, the Cardozo Group and the Jess Ranch Water Company filed an appeal.[94] The Cardozo Group al-

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91. *Id.* Separate administrative assessments on each acre-foot of production were levied to fund watermaster administrative activities and to maintain riparian habitat and environmental values. Respondents' Brief at 13-14, *Mojave* (No. E017881).

92. Respondents' Brief at 8, *Mojave* (No. E017881); *see also Mojave*, 75 Cal. Rptr. at 482-83, 64 Cal. App. 4th at 745.

93. City of Barstow v. City of Adelanto, Riverside County Superior Court Case No. 208568, at 6, 24-25, 41 (Trial Court Judgment Jan. 10, 1996).

94. This article does not examine any of the claims on appeal of the Jess Ranch Water Company. Among other allegations, the Jess Ranch Water Company contended that the trial court erred by assuming that the proposed physical solution was valid and by compelling Jess Ranch to prove the validity of its water rights. *Mojave*, 75 Cal. Rptr. 2d at 483, 64 Cal. App. 4th at 749. Jess Ranch also contended that the trial court improperly failed to take into account Jess Ranch's established water rights. *Id.* Jess Ranch further argued that the proposed physical solution was inequitable because it

leged that the trial court disregarded their preexisting, paramount riparian and overlying rights and that the trial court's judgment should be revised to recognize and protect these outstanding water rights.[95]

Respondents MWA, Barstow, SCWC, *et al.*, (i.e., the parties stipulating to the physical solution) defended the trial court's action arguing, among other points, that Article X, Section 2 of the California Constitution required the equitable apportionment of water in overdrafted groundwater basins.

B. The Appellate Court's Decision

Taking the position that water rights priorities are absolute and cannot be modified or curtailed in any way to accommodate a physical solution, the *Mojave* court[96] overturned the trial court's judgment. The tenor of the court's opinion is captured in its determination that "the trial court could not overlook well settled principles of water law to establish its own system of groundwater allocation."[97]

The first part of the court's opinion is devoted to equitable apportionment. That section examines Article X, Section 2 of the California Constitution, the California Supreme Court's decisions in *Pasadena v. Alhambra* and *Los Angeles v. San Fernando,* and more recent appellate decisions interpreting and implementing those two cases. The second portion of the opinion presents the court's analysis of the development of the law of physical solutions.[98]

Relying principally upon footnote 61 of the *San Fernando* opinion,[99]

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did not treat Jess Ranch the same as other water producers. *Id.* Specifically, Jess Ranch contended that the base annual production right that it was awarded was not calculated on the same basis as the base annual production rights of other producers. *Id.*

95. *Mojave,* 75 Cal. Rptr. 2d at 483, 64 Cal. App. 4th at 746.

96. References to the "*Mojave* court" in this article mean the appellate court panel.

97. *Mojave,* 75 Cal. Rptr. 2d at 485, 64 Cal. App. 4th at 749.

98. By granting the stipulating parties' petition for review, the California Supreme Court has effectively withdrawn the court of appeal's opinion. *See* Cal. Rules of Court, Rules 976, 977, 979. Nevertheless, the appellate court's reasoning is relevant because it frames the issues facing the high court, sets out the legal and policy arguments in favor of recognizing traditional water rights priorities, and illustrates the practical difficulties associated with resolving disputes involving groundwater.

99. Footnote 61 of the *San Fernando* opinion reads:

> The principles by which the United States Supreme Court equitably apportions water among states are illustrated in Nebraska v. Wyoming (1945) 325 U.S. 589, 618 .... After observing that apportionment between states whose laws base water rights on priority of appropriation should primarily accord with that principle, the court said: 'But if an allocation between appropriation States is to be just and equitable, strict adherence to the priority rule may not be possible. For example, the economy of a region may have been established on the basis of junior appropriations. So far as possible those established uses should be protected though strict application of the priority rule might jeopardize them. Apportionment calls for exercise of an informed judgment on a consideration of many factors. Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sec-

the stipulating parties argued that *San Fernando* "has been consistently interpreted as approval by the California Supreme Court of the use of equitable apportionment as a basis to allocate water among users in an overdrafted basin."[100] According to the stipulating parties, the trial court was required to consider environmental conditions, developed water uses in the basin, economic reliance on existing water usage, and other pertinent factors.[101] They also alleged that *San Fernando* cautioned against a mechanical application of mutual prescription because that approach "does not necessarily result in the most equitable apportionment of water according to need."[102]

The *Mojave* court flatly rejected the arguments that *City of Pasadena* and *San Fernando*, as well as Article X, Section 2[103] of the California Constitution, allow for or encourage any modification of priorities in the context of a physical solution.[104] According to the panel, *City of Pasadena* was not dispositive because in *Mojave* neither the stipulating parties nor the trial court relied on the doctrine of mutual prescription.[105] The *Mojave* court also concluded that *City of Pasadena* and *San Fernando* did not support the stipulating parties' arguments regarding equitable apportionment.[106] The panel further determined that its recent decision in *Hi-Desert County Water District v. Blue Skies Country Club, Inc.*,[107] as well as *Wright v. Goleta Water District*[108] and *In re Waters of Long*

> tions of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas if a limitation is imposed on the former—these are all relevant factors. They are merely illustrative, not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made.'

City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1298 n.61, 14 Cal. 3d 199, 265 n.61 (1975).

100. *Mojave*, 75 Cal. Rptr. 2d at 490, 64 Cal. App. 4th at 755-56.

101. Respondents' Brief at 13-14, 19, *Mojave* (No. E017881). In fact, the stipulating parties' brief sets out more than ten equitable factors which, they maintain, show the propriety and equitable nature of the negotiated physical solution imposed by the trial court.

102. *Id.* at 21 (citing *San Fernando*, 537 P.2d at 1265, 14 Cal. 3d at 265).

103. As discussed previously, Article X, Section 2 of the California Constitution requires that all water rights be limited by the concept of reasonable and beneficial use. Peabody v. City of Vallejo, 40 P.2d 486, 498-99, 2 Cal. 2d 351, 383 (1935).

104. Respondents' Brief at 17-18, *Mojave* (No. E017881).

105. *Mojave*, 75 Cal. Rptr. 2d at 488, 64 Cal. App. 4th at 752. "The City of Pasadena case does not support the position that an appropriator can acquire rights without prescription." *Id.*

106. *Id.* at 490-91, 64 Cal. App. 4th at 757.

107. Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc., 28 Cal. Rptr. 2d 909, 23 Cal. App. 4th 1723 (1994).

108. Wright v. Goleta Water Dist., 219 Cal. Rptr. 740, 174 Cal. App. 3d 74 (1985). The *Wright* court held that limiting the unexercised rights of overlying users in a groundwater basin adjudication is improper. *Id.* at 749, 174 Cal. App. 3d at 88. However, it has not yet been finally determined whether unexercised overlying rights can be prescripted. *See* City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1318 n.100, 14 Cal. 3d 199, 293 n.100 (stating that the prescriptive rights of appropriators "would not necessarily impair the private defendants' rights to ground water for New

Valley Creek Stream System,[109] did not impliedly support application of the equitable apportionment doctrine. Instead, the *Mojave* court stated that flexible application of water rights priorities allowed in the context of surface water adjudications could not be applied in the groundwater area.[110] Ultimately, the *Mojave* panel held that neither the California Supreme Court nor any appellate court had endorsed "a pure equitable apportionment which disregards existing rights of overlying owners"[111] and that neither footnote 61 nor Article X, Section 2 permitted the trial court to "disregard existing water rights in order to fashion an allegedly equitable solution based on prior usage rather than current beneficial use."[112]

To support its conclusions, the panel relied upon legal precedent stating: (1) that absolute extinguishment of a riparian right would raise a "serious constitutional issue;"[113] (2) that proportionate shares of groundwater pumping for overlying owners should be based upon current, beneficial need for water rather than upon average use over a period of years;[114] and (3) that overlying owners may use self-help to protect their rights by continually pumping.[115]

The *Mojave* court also expressed its disagreement with the stipulating parties' interpretation of *Imperial Irrigation District v. State Water Resources Control Board*,[116] ("*IID 2*") and with the reasoning of *IID 2* itself.[117] The panel questioned the "unusual addendum" in the *IID 2* opinion which referred to California water rights law as an "evolving process of governmental redefinition of water rights."[118] In fact, the *Mojave* panel determined that the addendum actually added to the uncertainty of California water rights law.[119] The opinion challenged the idea that the 1928 constitutional amendment resulted in a legal development that created a system to marshal the state's water resources to satisfy the

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(sic) overlying uses for which the need had not yet come into existence during the prescriptive period"); *see also Hi-Desert County Water Dist.*, 28 Cal. Rptr. 2d 909, 23 Cal. App. 4th 1723 (1994) (holding that trial court improperly rendered all pumpers' rights equal in priority when golf course had, by exercising its pumping rights prior to the adjudication, guaranteed a right to pump 535 acre feet free of any assessments in the physical solution).

109. *In re* Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 25 Cal. 3d 339 (1979).

110. *Mojave*, 75 Cal. Rptr. 2d at 492-94, 64 Cal. App. 4th at 759-60.

111. *Id.* at 492, 64 Cal. App. 4th at 758.

112. *Id.* at 496, 64 Cal. App. 4th at 765.

113. *Id.* at 494, 64 Cal. App. 4th at 761-62 (citing *Long Valley*, 599 P.2d at 663, 25 Cal. 3d at 761-62).

114. *Id.* at 494, 64 Cal. App. 4th at 762 (citing Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 49 Cal. App. 3d 992 (1975)).

115. *Id.* at 496, 64 Cal. App. 4th at 764 (quoting Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc., 28 Cal. Rptr. 2d 909, 915, 23 Cal. App. 4th 1723, 1732 (1994)).

116. Imperial Irrigation Dist. v. State Water Resources Control Bd., 275 Cal. Rptr. 250, 225 Cal. App. 3d 548 (1990).

117. *Mojave*, 75 Cal. Rptr. 2d at 495, 64 Cal. App. 4th at 763.

118. *Id.*

119. *Id.*

ever-changing needs of society.

The *Mojave* panel also rejected the stipulating parties' contention that trial courts are bound to impose a physical solution if one is available. According to the panel, the doctrine of physical solutions originally contemplated only modifications of engineering and diversion facility activities to ensure the highest and best use of water.[120] Acknowledging that the California Supreme Court has sanctioned somewhat broader trial court application of the physical solution principles to assure the beneficial use of water, the *Mojave* court nevertheless concluded that the high court did not contemplate wholesale disregard of the existing water rights of overlying owners or riparians who refused to participate in a negotiated solution.[121] Rather, according to the panel, the "purpose of a physical solution is to avoid a waste of water without unreasonably or adversely affecting the rights of the parties."[122]

III. CALIFORNIA WATER LAW DOCTRINES

A. Development of the Reasonable Use Doctrine

Over the past 70 years, California courts have almost uniformly departed from the application of strict rules of priority where equitable considerations have suggested modification of traditional property-based water rights principles.[123] This movement away from strict application of priorities is related to several interrelated legal developments in California water law, including the adoption of Article X, Section 2 of the California Constitution, the California Supreme Court's recognition of the public trust doctrine, and evolving principles of California groundwater law.[124]

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120. *Id.* at 496, 64 Cal. App. 4th at 765 (quoting 1 Rogers & Nichols, *supra* note 18, § 441, at 579).

121. *Id.* at 496-99, 64 Cal. App. 4th at 765-70.

122. *Id.* at 499, 64 Cal. App. 4th at 769 (quoting Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc., 28 Cal. Rptr. 2d 909, 918, 23 Cal. App. 4th 1763 (1994)).

123. The redefinition of water rights during the mid-1900's has been explained as follows: "The concept of an immutable, vested right with an absolute priority was replaced with a flexible, context-related right. The limits of the new right were contingent on supply, competing uses of water, and the amount of benefit obtained from exercising the right." ARTHUR L. LITTLEWORTH & ERIC L. GARNER, CALIFORNIA WATER 95 (1995). *See also* Clifford W. Schulz & Gregory S. Weber, *Changing Judicial Attitudes Towards Property Rights in California Water Resources: From Vested Rights to Utilitarian Reallocations*, 19 PAC. L.J. 1031 (1988).

124. Commentators have challenged the notion that water rights have ever been or should ever be equated with traditional property rights. *See* Joseph L. Sax, *The Constitution, Property Rights and the Future of Water Law*, 61 U. COLO. L. REV. 257 (1990); Joseph L. Sax, *The Limits of Private Rights in Public Waters*, 19 ENVTL. L. 473 (1989); *see also* CAL. WATER CODE § 104 (West 1997) ("It is hereby declared that the people of the State have a paramount interest in the use of all the water of the State and that the State shall determine what water of the State, surface and underground, can be converted to public use or controlled for public protection."). *See generally* Joseph L. Sax, *Some Thoughts on the Decline of Private Property*, 58 WASH. L. REV. 481 (1983).

The rejection of absolute water rights priorities by California courts has sprung in part from the adoption of Article X, Section 2 of the California Constitution[125] and increased concomitantly with the judicial application of this constitutional amendment. However, to find the origin of the doctrine of reasonable use,[126] one must look much further back in California's water jurisprudence. In the seminal water case of *Lux v. Haggin*[127] the California Supreme Court recognized the doctrine of reasonable use between riparians. The court held that riparians were entitled to a reasonable use of water, and that what is a reasonable use is a question of fact, depending upon the circumstances of each particular case.[128]

In its opinion in *Katz v. Walkinshaw*,[129] in which the California Supreme Court recognized the doctrine of correlative rights, it also further embraced the reasonable use doctrine. The court noted approvingly:

> The doctrine of reasonable use, on the other hand, affords some measure of protection to property now existing, and greater justification for the attempt to make new developments. It limits the right of others to such amount of water as may be necessary for some useful purpose in connection with the land from which it is taken.[130]

The constitutional provision requiring reasonable and beneficial use of *all* waters[131] in the State resulted directly from the California Supreme Court's decision in *Herminghaus v. Southern California Edison Co.*[132] In that case, Herminghaus, a riparian rancher, objected to Edison's construction of a reservoir which impeded flows of the San Joaquin River. Herminghaus used the peak flows of the river to inundate ranch lands and sought to retain the full flow of the river. She claimed that an appropriator could not cut off her riparian right in any significant measure. The court agreed, rejecting contentions that the rancher's use wasted water and contravened the common good.[133]

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125. Case law favoring utilitarian allocation of water over strict prioritization may also be due, in part, to the recognition that rigid application of water rights priorities ignores the fact that domestic use of water is the highest use of water in the state. *See* CAL. WATER CODE § 106 (West 1997).

126. *See generally* United Sates v. State Water Resources Control Bd., 227 Cal. Rptr. 161, 171, 182 Cal. App. 3d 82, 105 (1986) (holding that the reasonable use doctrine was deemed the "cardinal principle" of California water rights law).

127. Lux v. Haggin, 10 P. 674, 69 Cal. 255 (1886).

128. *Id.* at 755, 69 Cal. at 394.

129. Katz v. Walkinshaw, 74 P. 766, 141 Cal. 116 (1903).

130. *Id.* at 771, 141 Cal. at 134.

131. *See* Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 45 P.2d 972, 986, 3 Cal. 2d 489, 524 (1935) (holding that Article X, Section 2 of the California Constitution applies to overlying and appropriative use of groundwater).

132. Herminghaus v. Southern Cal. Edison Co., 252 P. 607, 200 Cal. 81 (1926).

133. *Id.* at 615, 200 Cal. at 100-01.

Subsequent to the passage of the constitutional amendment in 1928, the Court reconsidered and rejected this absolutist position. Seven years after *Herminghaus*, in *Gin Chow v. City of Santa Barbara*,[134] the California Supreme Court was faced with a very similar factual situation. In *Gin Chow*, Santa Barbara built a dam upstream from Chow's riparian property.[135] Chow argued that any diminution of his riparian right was unlawful, and "It is insisted that however small the invasion of the riparian right may be and however slight the benefit may be to the riparian owner, still it must be presumed, as a matter of law, that damage to his lands has resulted entitling him to an injunction."[136]

The court ruled that Chow received minimal benefit from the flow, that requiring flow to reach his property constituted a waste of water, and that therefore his use was unreasonable. Thus, the court refused to grant the riparian a complete priority over the appropriator.[137] "[W]hat is an unreasonable use is a judicial question depending upon the facts of each case. Likewise, what is a reasonable or unreasonable use of water is a judicial question to be determined in the first instance by the trial court."[138] The court also modified riparian rights in cases brought in the years following *Gin Chow*.[139]

In *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District*,[140] the court determined that Lindsay-Strathmore's pumping and export of water out of the Delta, although beneficial, was not necessarily reasonable in light of competing uses and circumstances. In explaining how Article X, Section 2 had changed water law, the court explicitly stated that strict priorities would not always prevail and that the needs of others could be part of the lower court's analysis of the situation at issue:

> Under this new doctrine, it is clear that when a riparian or overlying owner brings an action against an appropriator, it is no longer sufficient to find that the plaintiffs in such action are riparian or overlying owners, and, on the basis of such finding, issue the injunction. It is now necessary for the trial court to determine whether such owners, considering all the needs of those in the particular water field, are putting the

134. Gin Chow v. City of Santa Barbara, 22 P.2d 5, 217 Cal. 673 (1933).

135. *Id.* at 6-7, 217 Cal. at 677-78.

136. *Id.* at 13, 217 Cal. at 694.

137. *Id.* at 18, 217 Cal. at 706.

138. *Id.*

139. *See* Peabody v. City of Vallejo, 40 P.2d 486, 2 Cal. 2d 351 (1935) (allowing City to impound creek flow, and ostensibly awarding downstream riparian only reasonable amount of water necessary for beneficial uses); *see also* City of Lodi v. East Bay Mun. Util. Dist., 60 P.2d 439, 448, 452, 7 Cal. 2d 316, 337, 344 (1936) (modifying riparian rights to accommodate appropriator and explaining how court's holding would have been different if case had been decided before adoption of Article X, Section 2).

140. Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 45 P.2d 972, 989, 3 Cal. 2d 489, 531 (1935).

> waters to any reasonable beneficial uses, giving consideration to all factors involved, including reasonable methods of use and reasonable methods of diversion. From a consideration of such uses, the trial court must then determine whether there is a surplus in the water field subject to appropriation.[141]

In the 1960's, the court extended the reasonable use doctrine further. In *Joslin v. Marin Municipal Water District,*[142] a unanimous supreme court determined that riparians' use of substantial creek flow to deposit rock, sand and gravel on their land constituted an unreasonable use of water. In reaching this conclusion, the court refused to enjoin a water district appropriator which had blocked flow and mineral deposit through construction of a dam. The court further held that since a

> reasonable use of water depends on the circumstances of each case, such an inquiry cannot be resolved in vacuo isolated from state-wide considerations of transcendent importance. Paramount among these we see the ever increasing need for the conservation of the water in this state, an inescapable reality of life quite apart from its express recognition in the 1928 amendment.[143]

Thus, the court effectively precluded exercise of the right for the purpose for which it was being used.

A decade later, the court further clarified the limits on the exercise of a higher priority riparian right and held that riparians could be made to endure "some inconvenience or to incur reasonable expenses" for the benefit of junior appropriators.[144] In *Forni,* the State Board filed an action to restrict certain wine grape growers from directly diverting water from the Napa River during the two-month spring frost period. The complaint alleged that the growers' diversions sometimes resulted in a dry river and deprived downstream interests of flow to utilize for their own frost protection. The appellate court held that the upstream riparian diversions were unreasonable in both use and method of use. "As we have repeatedly underscored, the overriding constitutional consideration is to put the water resources of the state to a reasonable use and make them available for the constantly increasing needs of all the people."[145] Application of strict water rights priorities would have compelled the court to award the entire flow of the river to riparians and senior appropriators. Recognizing the unjust

141. *Id.* at 986, 3 Cal. 2d at 524-25.

142. Joslin v. Marin Mun. Water Dist., 429 P.2d 889, 67 Cal. 2d 132 (1967).

143. *Id.* at 894, 67 Cal. 2d at 140.

144. People *ex rel.* State Water Resources Control Bd. v. Forni, 126 Cal. Rptr. 851, 856, 54 Cal. App. 3d 743, 751-52 (1976).

145. *Id.* at 856, 54 Cal. App. 3d at 751.

allocation of water that would have resulted, the court ordered that a compromise physical solution be crafted.

Three years after *Forni*, in *In re Waters of Long Valley Creek Stream System*, the court determined that the State Board had explicit power to limit and reprioritize future riparian rights.[146] *Long Valley* involved a stream adjudication conducted by the State Board under the auspices of Water Code Sections 2500 *et seq.* Ramelli, an owner of riparian land in the watershed, claimed a prospective riparian right to irrigate more than 2,800 acres of undeveloped land. He made this claim despite the fact that for the previous 60 years he and his predecessors had irrigated only 89 acres.

The court upheld the State Board's determination that Ramelli's unexercised riparian rights should be given a priority lower than the presently exercised appropriative rights of others in the watershed.[147] While the court ruled that Ramelli's riparian claim to the future use of waters could not be entirely extinguished, it held that the State Board "may make determinations as to the scope, nature and priority of the right that it deems reasonably necessary to the promotion of the state's interest in fostering the most reasonable and beneficial use of its scarce water resources."[148] This holding modifies, at least in the context of a State Board stream adjudication, earlier case law holding that a dormant riparian right was paramount to an active appropriative right.[149] More importantly, the decision implicitly recognizes that adjudications are not conducive to inflexible applications of water rights priorities.

As stated by the *Long Valley* court:

> It is well established that what is a reasonable use of water varies with the facts and circumstances of the particular case (citations omitted). And it appears self-evident that the reasonableness of a riparian use cannot be determined without considering the effect of such use of all the needs of those in the stream system (citation omitted), nor can it be made "in vacuo isolated from the statewide considerations of transcendent importance."[150]

The high court also seemingly suggested that "vested" water rights could be completely extinguished if such action constituted the sole method to ensure the reasonable and beneficial use of waters.[151]

The authority of courts to modify water rights priorities was further

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146. *In re* Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 25 Cal. 3d 339 (1979).

147. *Id.* at 668-69, 25 Cal. 3d at 358-59.

148. *Id.* at 669, 25 Cal. 3d at 359.

149. *E.g.*, Peabody v. City of Vallejo, 40 P.2d 486, 498-99, 2 Cal. 2d 351 (Cal. 1935).

150. *Long Valley*, 599 P.2d at 665, 25 Cal. 3d at 354 (citing Joslin v. Marin Mun. Water Dist., 429 P.2d 889, 67 Cal. 2d 132 (1967)).

151. *Id.* at 667, 25 Cal. 3d at 357.

solidified in cases subsequent to *Long Valley*. In *Imperial Irrigation District v. State Water Resources Control Board*,[152] ("*IID 2*"), a California appellate court held that the State Board could stop an irrigation district from wasting water since the district only had vested rights to the reasonable use of water.[153] In a statement challenged by the *Mojave* panel, the *IID 2* court explained that water use entitlements in California had evolved "beyond traditional concepts of vested and immutable rights:"[154]

> All things must end, even in the field of water law. It is time to recognize that this law is in flux and that its evolution has passed beyond traditional concepts of vested and immutable rights. In his review of our Supreme Court's recent water rights decision in *In re Water of Hallett Creek Stream System* (citation omitted),[155] Professor Freyfogle explains that California is engaged in an evolving process of governmental redefinition of water rights. He concludes that "California has regained for the public much of the power to prescribe water use practices, to limit waste, and to sanction water transfers." He asserts that the concept that "water use entitlements are clearly and permanently defined," and are "neutral [and] rule-driven," is a pretense to be discarded. It is a fundamental truth, he writes, that "everything is in the process of changing or becoming" in water law.
>
> In affirming this specific instance of far-reaching change, imposed upon traditional uses by what some claim to be evolutionary process, we but recognize this evolutionary process, and urge reception and recognition of same upon those whose work in the practical administration of water distribution makes such change understandably difficult to accept.[156]

The *Mojave* panel took exception to the *IID 2* court's suggestions that California water law is in flux. According to the panel, "such

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152. Imperial Irrigation Dist. v. State Water Resources Control Bd., 275 Cal. Rptr. 250, 225 Cal. App. 3d 548 (1990).

153. *Id.* at 261, 225 Cal. App. 3d at 563-64.

154. *Id.* at 267, 225 Cal. App. 3d at 573.

155. *In re* Water of Hallett Creek Stream Sys., 749 P.2d 324, 338, 44 Cal. 3d 448, 472 (1988). In *Hallett* the court recognized an unexercised riparian right held by the federal government on its reserved lands, but held that the State Board had authority to evaluate (and presumably to limit) any new proposed use of that water. Thus, the court has even limited the nature of a vested right on federal reserved lands. *Id.* at 337-38, 44 Cal. 3d at 471-72; *see also* United States v. Alpine Land & Reservoir Co., 697 F.2d 851, 854-55 (9th Cir. 1983) (declaring that when determining reasonable use as that term is understood in Western water law, consideration should be made of the alternative uses of water).

156. Imperial Irrigation Dist. v. State Water Resources Control Bd., 275 Cal. Rptr. 250, 267-68, 225 Cal. App. 3d 548, 573 (1990) (citing Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529, 1546-47 (1989)).

statements only create the uncertainty which our Supreme Court (sic) has cautioned us against."[157] In drawing this conclusion, the *Mojave* court relied on the fact that Article X, Section 2 has not changed substantively since 1928. However, the panel did not specifically address the line of cases showing the judicial development of the law of reasonable use.

In another fairly recent case, *United States v. State Water Resources Control Board*,[158] (the "Racanelli" decision), an appellate court held that the State Board could place restrictions on the state and federal water projects without regard to their respective priorities. That case determined, *inter alia*, which parties would be responsible for curtailing their water usage to provide mandated outflow from the Sacramento-San Joaquin Rivers/San Francisco Bay-Delta estuary. The Bureau of Reclamation, operator of the federal Central Valley Project, alleged that it had a higher priority than the State Water Project. Accordingly, the Bureau argued that the State Board had no authority to compel the federal project to contribute equal flows for Delta water quality. The court disagreed, declaring that

> [t]he scope and priority of appropriative rights are properly defined by the Board acting within its power to consider the relative benefits of competing interests and to impose such conditions as are necessary to protect the public interest . . . . [T]he Board . . . acted well within its authority and did not infringe upon or otherwise unlawfully impair the 'vested' appropriative rights of the U.S. Bureau.[159]

Although the California Supreme Court's most recent water law opinion, *National Audubon Society v. Superior Court*,[160] was not a reasonable use case, the court once again refused to apply strict priority principles. In that case, the court was faced with a conflict between appropriative water rights and the public trust doctrine. The Defendant, Los Angeles Department of Water and Power ("DWP"), urged the court to reject the application of the public trust doctrine to DWP's water diversion license. On the other hand, the Plaintiffs argued that the public trust doctrine limits all appropriative water rights. The court rejected both priority arguments:

> We are unable to accept either position. In our opinion, both the public trust doctrine and the water rights system

157. City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 495, 64 Cal. App. 4th 737, 763 (1998).

158. United States v. State Water Resources Control Bd., 227 Cal. Rptr. 161, 182 Cal. App. 3d 82 (1986).

159. *Id.* at 189-90, 182 Cal. App. 3d at 133; *see also* National Audubon Soc'y v. Superior Court, 658 P.2d 709, 729 n.30, 33 Cal. 3d 419, 447 n.30 (1983) (inferring that unreasonable use may be any use less than the optimum allocation of water).

160. *National Audubon Soc'y*, 658 P.2d 709, 33 Cal. 3d 419 (1983).

> embody important precepts which make the law more responsive to the diverse needs and interests involved in the planning and allocation of water resources. To embrace one system of thought and reject the other would lead to an unbalanced structure, one which would either decry as a breach of trust appropriations essential to the economic development of this state, or deny any duty to protect or even consider the values promoted by the public trust. Therefore, [we must seek] an accommodation which will make use of the pertinent principles of both the public trust doctrine and the appropriative water rights system . . . .[161]

The case law recited above illustrates that reasonable use, the public trust doctrine and other concepts in California water law are not static[162] and that water rights may be reprioritized and significantly limited if the type or method of use in question is no longer reasonable.

In the context of the Mojave adjudication, the most noteworthy case outlined above may be *Forni*. There, the court made clear that senior users could be made to endure some inconvenience for the good of other local interests and that courts should bear in mind the needs of *all* California water users when resolving a water dispute.[163] Moreover, *Long Valley* indicates that land-based water rights may be reprioritized and limited if the circumstances so dictate. The *Mojave* court's holding that immutable overlying rights can in no way be impacted by a physical solution is fundamentally inconsistent with these cases.

B. Physical Solutions

A parallel development allowing and encouraging courts to utilize "physical solutions" to resolve water disputes has come concurrently with the development of the reasonable use doctrine. Courts have shown their willingness to approve and encourage physical solutions requiring parties to share the responsibility of water cutbacks. A physical solution resolves the parties' competing claims to water by satisfying, in a cooperative approach, the reasonable needs of each user.

Judicial recognition of physical solutions grew out of the distaste for prohibitive injunctions, the more drastic remedy associated with early water rights infringement cases.[164] Courts appeared hesitant to enjoin any reasonable and beneficial use of water when a less harsh solution might be available. The importance of physical solutions in resolving water disputes was elevated further with the implementation of

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161. *Id.* at 727, 33 Cal. 3d at 445.

162. *See* ARTHUR L. LITTLEWORTH & ERIC L. GARNER, CALIFORNIA WATER 89 (1995) (citing United States v. State Water Resources Control Bd., 227 Cal. Rptr. 161, 187-88, 182 Cal. App. 3d 82, 130 (1986)).

163. *See also* Joslin v. Marin Mun. Water Dist., 429 P.2d 889, 67 Cal. 2d 140 (1967).

164. *See, e.g.*, Montecito Valley Water Co. v. City of Santa Barbara, 77 P. 1113, 1118, 144 Cal. 578, 592 (1904).

the Article X, Section 2 requirement that the state's water resources be utilized "to the fullest extent of which they are capable."[165] "Since the adoption of the 1928 constitutional amendment, it is not only within the power but it is also the duty of the trial court to admit evidence relating to possible physical solutions, and if none is satisfactory to suggest on its own motion such physical solution."[166] Nevertheless, a court's physical solution power was limited: physical solutions could not be applied to eliminate vested rights and should "be adequate to protect the one having the paramount right in the substantial enjoyment thereof."[167]

Still, the equitable nature of the judicial role in water rights disputes was squarely recognized. In *Tulare*, the court remanded the action to the trial court to determine the amount of, and to protect, the water necessary to secure Plaintiffs' rights.[168] In this context, the court outlined the nature of the trial court's duty:

> [T]he trial court should not lose sight of the fact that this is an equity case. The equity courts possess broad powers and should exercise them so as to do substantial justice. Heretofore, the equity courts, in water cases, apparently have not seen fit to work out physical solutions of the problems presented, unless such solutions have been suggested by the parties. But it should be kept in mind that the equity court is not bound or limited by the suggestions or offers made by the parties to this, or any similar action.[169]

Thereafter, the California Supreme Court regularly ordered lower courts to ascertain whether physical solutions could be formulated, to impose them where appropriate "regardless of whether the parties agree," to utilize them to prevent unreasonable waste of water, to retain continuing jurisdiction to revisit any unsatisfactory aspects of the solution, and to protect prior appropriators without "unduly restraining" lower priority water rights holders.[170]

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165. City of Lodi v. East Bay Mun. Util. Dist., 60 P.2d 439, 450, 7 Cal. 2d 316, 341 (1936).

166. *Id.*

167. Peabody v. City of Vallejo, 40 P.2d 486, 499, 2 Cal 2d 383-84 (1935); *see also* Rancho Santa Margarita v. Vail, 81 P.2d 533, 562-63, 11 Cal. 2d 501, 557-59 (1938).

168. Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 45 P.2d 972, 1013-15, 3 Cal. 2d 489, 579-83 (1935).

169. *Id.* at 1010, 3 Cal. 2d at 574.

170. *City of Lodi*, 60 P.2d at 450-53, 7 Cal. 3d at 341-45; *see also* Reclamation Dist. No. 833 v. Quigley, 64 P.2d 399, 402, 8 Cal. 2d 183, 188 (1937) (stating the trial court should have attempted to ascertain the most reasonable physical solution); Meridian Ltd. v. City and County of San Francisco, 90 P.2d 537, 571-72, 13 Cal 2d 424, 491-93 (1939) (physical solution allowed); *Montecito Valley*, 77 P.2d at 1122, 144 Cal. at 578 (directing the court to fashion a physical solution); *Peabody*, 40 P.2d at 497-99, 2 Cal. 2d at 380; Hillside Water Co. v. City of Los Angeles, 76 P.2d 681, 688-89, 10 Cal. 2d 677, 687 (1938) (ordering trial court to develop physical solution for benefit of school); Allen v. California Water & Tel. Co., 176 P.2d 8, 22-23, 29 Cal. 2d 446, 488-90

In *Rancho Santa Margarita v. Vail*, the court reaffirmed the trial court's responsibility to fashion a physical solution even if the parties did not suggest it: (1) to ensure that water is not wasted; and (2) to preclude the imposition of an injunctive remedy that might ultimately be injurious to one or both parties.[171] In *Vail*, the court even set out specific suggestions for the trial court to use on remand to allocate the waters of the Santa Margarita River between the two litigants.[172]

In *Forni*, the case involving grape growers' rights to water from the Napa River, the appellate court called for a physical solution. On remand, both riparians and appropriators were required to build water storage facilities to give them access to water during periods of peak demand.[173] Physical solutions have also been employed to resolve several large, multi-party groundwater and surface water rights cases in Southern California.[174] Each of these actions terminated at the trial court level.

The importance of the law of physical solutions as it applies to the *Mojave* case is several-fold. The law states that courts have equitable power and a duty to consider utilizing physical solutions where it is feasible to do so. The *Mojave* panel's opinion would have limited this authority by virtually eliminating the trial court's power to curtail water users with "paramount" rights. This holding is also in conflict with previous California Supreme Court decisions involving the use of physical solutions to reach an equitable apportionment of water rights.

C. Equitable Apportionment

The doctrine of equitable apportionment is a water allocation method customary to Western water law that originally derives from federal common law.[175] Equitable apportionment has been considered by several California courts reviewing groundwater disputes.[176] Al-

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(1946).

171. *Rancho Santa Margarita*, 81 P.2d at 562, 11 Cal. 2d at 559-60. "[I]t has been held that it is not only within the power, but it is the duty of the trial court, to work out, if possible a physical solution . . . ." *Id.*

172. *Id.* at 563, 11 Cal. 2d at 560.

173. People *ex rel.* State Water Resources Control Bd. v. Forni, 126 Cal. Rptr. 851, 855-58, 54 Cal. App. 3d 743, 750-54 (1976); *see also* California Trout, Inc. v. Superior Court, 266 Cal. Rptr. 788, 801-02 n.6, 218 Cal. App. 3d 187, 208-10 n.6 (1990) (noting that the Los Angeles Department of Water and Power could be compelled as a price of continued appropriation from streams feeding Mono Lake to take reasonable steps to restore the creeks and fisheries to their natural state, so long as there was no associated waste of water).

174. *See, e.g.*, Orange County Water Dist. v. City of Chino, Orange County Superior Court Case No. 117628 (1969) (ground and surface water rights to Santa Ana water system); Chino Basin Mun. Water Dist. v. City of Chino, San Bernardino Superior Court Case No. 1644327 (1978) (general adjudication of Chino Basin, a large groundwater basin); Western Mun. Water Dist. v. East San Bernardino County Water Dist., Riverside County Superior Court Case No. 78426 (physical solution involving certain parties in upper watershed of Santa Ana water system).

175. *See, e.g.*, Nebraska v. Wyoming, 325 U.S. 589, 617-19; Arizona v. California, 373 U.S. 546, 555 (1963).

176. *E.g.*, City of Pasadena v. City of Alhambra, 207 P.2d 17, 28, 33 Cal. 2d 908, 924-

though not recognized by the term "equitable apportionment," the doctrine was first applied by the California Supreme Court in *City of Pasadena.* There, the court determined that rigid application of water rights priorities in the basin would result in:

> An unequal sharing of the burden of curtailing the overdraft . . . . Such a result does not appear to be justified where all the parties have been producing water from the underground basin for many years, and none of them have acted to protect the supply or prevent invasion of their rights until this proceeding was instituted. Moreover, it seems probable that the solution adopted by the trial court will promote the best interest of the public, because a pro tanto reduction of the amount of water devoted to each present use would normally be less disruptive than total elimination of some of the uses.[177]

This affirmance of the trial court's pro tanto reduction of each user's water right was an attempt by the court to reach an equitable apportionment. An absolute application of the priority rule in *City of Pasadena* would have compelled later appropriators to bear the full brunt of groundwater restrictions, while earlier appropriators would have been free to resume full pumping.[178]

In *San Fernando,* the California Supreme Court reexamined and reworked the concept of mutual prescription to reach an equitable apportionment. The court recognized the superior status of Los Angeles' Pueblo rights[179] and precluded the application of prescription as against public entities,[180] but also determined that overlying owners could retain their priority and rights through the doctrine of self-help.[181]

San Fernando is an extremely important case to the extent it suggests the court's support of flexible application of the priority rule. The court again acknowledged that application of rigid allocation schemes may not produce fair results and will not necessarily lead to the most equitable apportionment of water.[182] Most illustrative of this movement towards equitable apportionment is footnote 61 of the decision. Quoting the United States Supreme Court's opinion in *Nebraska v. Wyoming,* the California Supreme Court wrote:

26, 933-35 (1949); Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 924-26, 49 Cal. App. 3d 992, 1000-03 (1975).

177. *Pasadena,* 207 P.2d at 32, 33 Cal. 2d at 932-33.

178. *Id.*

179. City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1288-90, 14 Cal. 3d 199, 252-54 (1975).

180. *Id.* at 1304-05, 14 Cal. 3d at 274.

181. *Id.* at 1319 n.101, 14 Cal. 3d at 293 n.101.

182. *Id.* at 1291-98, 14 Cal. 3d at 256-265.

> [I]f an allocation between appropriation States is to be just and equitable, strict adherence to the priority rule may not be possible. For example, the economy of a region may have been established on the basis of junior appropriations. So far as possible those established uses should be protected though strict application of the priority rule might jeopardize them. Apportionment calls for the exercise of an informed judgment on a consideration of many factors. Priority of appropriation is the guiding principle. But physical and climactic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical affect of wasteful uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former—these are all relevant factors. They are merely an illustrative not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made.[183]

Other factors to be considered when a court applies an equitable apportionment are set out in *Tehachapi-Cummings County Water District v. Armstrong.*

> By analogy to riparian rights, where there is insufficient water for the current reasonable needs of all the overlying owners, many factors are to be considered in determining each owner's proportionate share: the amount of water available, the extent of ownership in the basin, the nature of the projected use—if for agriculture, the area sought to be irrigated, the character of the soil, the practicability of irrigation, i.e. the expense thereof, the comparative profit of the different crops which could be made of the water on the land—all these and many other considerations must enter into the solution of the problem.[184]

In their brief to the appellate court, the stipulating parties compared the Mojave Basin adjudication to the factual situation in *City of Pasadena.* Specifically, the stipulating parties contended that, like in *City of Pasadena,* the Mojave Basin overdraft had commenced long before the filing of the litigation in the matter.[185] In addition, the Cardozo Appellants had not commenced their pumping in the Mojave Ba-

183. *Id.* at 1298 n.61, 14 Cal. 3d at 265 n.61.

184. Tehachapi-Cummings County Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 925, 49 Cal. App. 3d 992, 1001-02 (1975).

185. Respondents' Brief at 22, City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 64 Cal. App. 4th 737 (1998) (No. E017881).

sin until after the overdraft had begun.[186] Also, the stipulating parties alleged that many of the other factors set out in footnote 61 of the *San Fernando* opinion indicated that an equitable allocation of the basin waters would be the most fair and just result.[187] Above all, the court was asked to recognize that the multi-billion-dollar economy of the basin had developed during the more than four decades since the overdraft began.[188]

The appeals court opinion in *Mojave* declined plaintiffs' invitation to reach an equitable apportionment in the Mojave basin.[189] However, the numerous cases supporting physical solutions and apparently signaling a judicial recognition of equitable apportionment were not satisfactorily distinguished by the *Mojave* appeals court decision. In addition, the *Mojave* panel's substantial reliance on *Wright v. Goleta Water District*[190] to justify its refusal to reach an equitable apportionment seems misplaced. There, overlying landowners filed an action for declaratory and injunctive relief to determine the relative rights to a groundwater basin in Santa Barbara County.[191] The trial court in *Wright* held that the unexercised rights of overlying landowners had a lower priority than the rights of appropriators who exercised their water rights.[192] The trial court drew this conclusion by analogizing the case to the stream adjudication involving riparian rights in *In re Waters of Long Valley Creek Stream System.*[193] As indicated earlier, in that case the California Supreme Court held that the State Board had the authority to define and limit unexercised riparian rights in considering those rights in relation to all other water rights of a stream system pursuant to the statutory adjudication procedure set out in the Water Code.[194]

However, the appellate court in *Wright* rejected the trial court's analogy to riparian rights law. The court of appeal's opinion acknowledged that the trial court's conclusion promoted certainty in Califor-

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186. *Id.*

187. Respondents' Brief at 23, *Mojave* (No. E017881). The stipulating parties pointed out that: (1) all of the parties to the litigation had actual or constructive knowledge of their contribution to the overdraft; (2) the physical solution would not unduly impact agricultural interests and could in fact provide benefits to those individuals and corporations by allowing for transfer of water rights in certain circumstances; (3) the physical solution protected groundwater flow and historical stream amounts; (4) underground storage capacity in the basin was maximized; (5) junior water users might be unfairly impacted if water rights priorities were strictly enforced; (6) most water rights in the basin were subject to heavy dispute; and (7) no party could show, including the dairy farming Cardozo Appellants, that they would be significantly or economically impacted by any of the assessments proposed to be part of the physical solution. Respondents' Brief at 23-24, *Mojave* (No. E017881).

188. Respondents' Brief at 23, *Mojave* (No. E017881).

189. *Mojave*, 75 Cal. Rptr. 2d at 488, 64 Cal. App. 4th at 754-55.

190. Wright v. Goleta Water Dist., 219 Cal. Rptr. 740, 174 Cal. App. 3d 74 (1985).

191. *Id.* at 743, 174 Cal. App. 3d at 78.

192. *Id.*

193. *In re* Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 25 Cal. 3d 339 (1979).

194. *Wright*, 219 Cal. Rptr. at 746, 174 Cal. App. 3d at 83 (citing *Long Valley*, 599 P.2d at 668-69, 25 Cal. 3d at 356-59).

nia water rights law by setting forth firm water rights for the parties to the adjudication.[195] Indeed, the appellate court stated that, in philosophical terms, it agreed with the trial court's position.[196] The opinion, nevertheless, concluded that *stare decisis* and due process considerations compelled the judicial recognition of the validity of unexercised overlying rights because, unlike the restrictions placed on riparian rights in cases such as *Long Valley, People v. Shirokow,*[197] (prescriptive rights), and *National Audubon Society v. Superior Court,*[198] (public trust doctrine), groundwater is exempt from the pervasive regulations affecting surface water.[199]

> [A]bsent a statutory scheme for comprehensive determination of all groundwater rights, the application of *Long Valley* to a private adjudication would allow prospective rights of overlying landowners to be subject to the vagaries of an individual plaintiff's pleading without adequate due process protections (italics added). Therefore, we must reverse the judgment and remand the matter for a re-determination in accord with the principles enunciated in *Tulare District v. Lindsay-Strathmore District* . . . (italics added).[200]

It should be recognized that the *Wright* court's refusal to limit overlying rights focused on due process considerations not applicable to the *Mojave* decision. The Mojave Basin physical solution was developed over a lengthy period and all major pumpers participated in that outcome. No claim was made by the Cardozo Appellants that they were not given notice of the negotiations, not allowed to participate in the negotiations or at trial, or that their due process rights were violated. The *Mojave* panel also ignored the fact that the *Wright* court remanded the matter to the trial court to follow the principles outlined in *Tulare,* a case which is noteworthy for the Supreme Court's lengthy discussion of the trial court's duty to use its equitable powers to encourage or fashion a physical solution. Finally, contrary to the *Wright* holding, *stare decisis* does not call for unwavering commitment to overlying rights. Thus, the *Mojave* panel abided by the strict letter of the *Wright* holding, while ignoring the reasoning of that case.

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195. *Wright,* 219 Cal. Rptr. at 749, 174 Cal. App. 2d at 86.

196. *Id.*

197. People v. Shirokow, 605 P.2d 859, 26 Cal. 3d 301 (1980).

198. National Audubon Soc'y v. Superior Court, 658 P.2d 709, 33 Cal. 3d 419 (1983).

199. *Wright,* 219 Cal. Rptr. at 749, 174 Cal. App. 3d at 89.

200. *Id.* at 750, 174 Cal. App. 3d at 89. In *Wright* and in *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District,* 45 P.2d 972, 3 Cal. 2d 489 (1935), the California Supreme Court explained the effects and relationship between Article X, Section 2 of the California Constitution and the long-standing riparian rights doctrine. *Tulare,* 45 P.2d at 985-87, 3 Cal. 2d at 524-26.

IV. ISSUES FACING THE CALIFORNIA SUPREME COURT

The California Supreme Court may be ready to explicitly recognize the goal of equitable apportionment in California groundwater law. This acceptance could take one of many forms. For example, footnote 61 from the *San Fernando* decision may indicate the direction the high court's opinion will take. Consistent with footnote 61, even if equitable apportionment were more formally recognized by the court, water rights priorities would still remain a primary focus of judicial action in groundwater rights disputes.

Another issue facing the California Supreme Court is what is meant by certainty in water rights. In light of the *Mojave* court's finding that "certainty" is promoted by judicial recognition of the absolute sanctity of overlying water rights, the meaning and proper application of that term may need to be reevaluated and clarified by the California Supreme Court. This is especially true in light of the California Supreme Court's language in *Peabody v. City of Vallejo* which seems to equate certainty with the "substantial enjoyment" of a prior right.[201]

Assuring certainty of water rights has always been a challenge facing California water law. The California Supreme Court's line of decisions limiting the application of strict priorities and encouraging physical solutions hinges upon the practical policy that uncertainty is the bane of California water rights and that "vested" water rights are a principal source of that uncertainty.[202] Among other problems, uncertainty

> inhibits long range planning and investment for the development and use of waters .... [D]ormant riparian rights "constitute the main threat to nonriparian and out-of-watershed development, they are the principal cause of insecurity of existing riparian uses .... They are unrecorded, their quantity is unknown, their administration in the courts provides very little opportunity for control in the public interest. To the extent that they may deter others from using the water for fear of their ultimate exercise, they are wasteful, in the sense of costing the economy the benefits lost from deterred uses."[203]

A long line of cases, beginning with *Gin Chow*, illustrates the intertwined concepts of reasonableness and certainty. The relationship between reasonableness and certainty is undeniable.[204] As explained in

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201. Peabody v. City of Vallejo, 40 P.2d 486, 499, 2 Cal. 2d 357, 383-84 (1935).

202. *See In re* Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 666, 25 Cal. 3d 339, 354-55 (1979); Imperial Irrigation Dist. v. State Water Resources Control Bd., 275 Cal. Rptr. 250, 225 Cal. App. 3d 548 (1990).

203. *Long Valley*, 599 P.2d at 666, 25 Cal. 3 at 355.

204. As the concept of reasonableness has evolved, so it appears, has the concept of certainty. Once certainty seemed to focus on assuring that individual local producers

the stipulating parties' petition for review of the *Mojave* decision to the California Supreme Court:

> This Court has held that the constitutional requirement of creating the maximum beneficial use of state waters mandates the quantitative determination of rights in a comprehensive adjudication of all rights to use a water source (citation omitted). Quantification is necessary to create certainty as to amounts which may be produced. Such certainty generates water producers' investment in facilities which in turn causes water to be put to maximum *reasonable and beneficial* use (citation omitted).[205]

In the modern context, limiting unexercised riparian or overlying rights and quantifying water rights as part of a stream or basin adjudication creates certainty. Economic investment, whether urban or agricultural, relies on a secure water supply and on the orderly movement of water and water rights. The *Mojave* panel seems to have turned the concept of certainty on its head by determining that certainty is manifested by recognizing the immutable unquantified and unregulated water rights of an overlying owner, while simultaneously concluding that: "[u]ncertainty is promoted by a [trial court] judgment which disregards all existing and future riparian, overlying and prescriptive rights, and allocates water on the basis of the amount of actual production (regardless of whether there was a right to produce) in one of the five years prior to filing of suit."[206]

To bolster its holding that overlying water rights cannot be disregarded in the Mojave Basin without the concurrence of the Cardozo Appellants, the panel relied on *Wright v. Goleta Water District.* However, *Wright* expressly recognizes that certainty is promoted by declaring firm, quantified water rights for each party to a groundwater adjudication, not by leaving overlying owners with unregulated, unquantified rights.[207]

> *Long Valley*, in a riparian setting, recognized the pernicious effects of uncertainty concerning the rights of water users, including the inhibition it causes on long-range planning

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had sufficient available water to meet their needs. *See* Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 45 P.2d 972, 996, 3 Cal. 2d 489, 545 (1935). Now, certainty seems to be examined from a broader statewide perspective. *See* Imperial Irrigation Dist. v. State Water Resources Control Bd., 275 Cal. Rptr. 250, 225 Cal. App. 3d 548, 570-71 (1990); *Long Valley*, 599 P.2d at 666, 25 Cal. 3d at 355.

205. Respondents' Brief at 14, City of Barstow v. Mojave Water Agency, 75 Cal. Rptr. 2d 477, 64 Cal. App. 4th 737 (1998) (No. E017881).

206. *Mojave*, 75 Cal. Rptr. 2d at 493, 64 Cal. App. 4th at 760-61.

207. Wright v. Goleta Water Dist., 219 Cal. Rptr. 740, 748, 174 Cal. App. 3d 74, 86 (1985). Indeed, as early as 1935, the California Supreme Court recognized that uncertainty is created where water rights holders are unable to appropriate a fixed quantity of water. *Tulare*, 45 P.2d at 996, 3 Cal. 2d at 545.

> and investment for development and use of water, and the fostering of costly and piecemeal litigation (citation omitted) (italics added). Those same factors *should* apply with equal vigor to groundwater rights since the Legislature "has totally failed to enact a program that would fulfill the State's own policy declarations (citation omitted) (emphasis added)." Like the unexercised riparian right, the unexercised groundwater right of an overlying landowner is unrecorded, of unknown quantity, with little opportunity for control in the public interest, and wasteful to the extent it deters others from using water for fear of its ultimate exercise (citations omitted).
>
> 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 appropriative use, we must hold such extension inappropriate (italics added). Philosophically, we agree with District's position but stare decisis and due process considerations, not a concern under the current riparian statutory scheme, compel us to reach the opposite conclusion in this case.[208]

Based upon this reasoning, the *Mojave* court's position on the certainty issue and its reliance on *Wright* is untenable. Under the appellate court decision, the Cardozo Appellants' water rights remain unquantified and limited only by the doctrines of reasonable and beneficial use. The stipulating parties cannot be certain as to the amount of water that will be used by Cardozo Appellants and thus how much water will be available for other basin water users. The Cardozo Appellants themselves do not know the amount of their rights.[209]

Moreover, by leaving Cardozo Appellants' rights undefined and keeping the farmers out of the physical solution, they need not participate in the mechanisms embodied in the solution to guarantee the health of the groundwater basin. Nevertheless, the Cardozo Appellants will enjoy the benefits of the physical solution in the form of increased recharge to the Mojave Basin. Thus, they reap at least some of the rewards attendant to the improved water supply to the basin without contributing to the stipulating parties' effort. This result ignores the practical realities of resolving overdraft problems in groundwater basins, and causes the type of "inconclusive fragmentary definition of water rights" and uncertainty the California Supreme Court has sought

208. *Wright*, 219 Cal. Rptr. at 749, 174 Cal. App. 3d at 87.

209. In a similar vein, the Cardozo Appellants' water rights may be less certain under the *Mojave* opinion than they would be under the physical solution. Their overlying use of water to grow alfalfa could still be deemed unreasonable in the future. *See generally* Joslin v. Marin Mun. Water Dist., 429 P.2d 889, 67 Cal. 2d 140 (1967).

to discourage.[210]

The California Supreme Court may also opine on other water law issues presented in *Mojave.* The existing decisions raise uncertainty about who curtails water use in an overdrafted basin. The *San Fernando* case clearly holds that municipal appropriators cannot be prescripted against because of Civil Code section 1007.[211] However, the holding in *Blue Skies* implies that an overlying user cannot lose its right to water it has pumped. This conflict leaves unresolved which user curtails its water use when there is not enough water available in the basin. Is it the appropriator who cannot be prescripted against, or is it the overlyer who cannot lose its right to water that it has pumped?

The court may explain how the statutory policy declaring domestic use of water to be the highest use of water impacts the Mojave Basin.[212] Finally, the court may also settle arguments raised at the trial court level that the Cardozo Appellants should be precluded by the doctrines of laches and estoppel from contesting pumping by the municipal purveyors. Municipal pumping, and the basin's severe overdraft, have been known to the general public for more than four decades. Thus, the stipulating parties have argued that the Cardozo Appellants lost their right of protest by not contesting the municipal water production sooner.

V. CONCLUSION

The *Mojave* case illustrates that the rigid application of water rights in a groundwater adjudication is incongruent with California water law. In this era of increasing demand and limited supply, traditional water rights priorities can no longer be the sole component of a court's analysis. Inflexibility is not a practical method for determining water rights in a modern society, especially one with a growing emphasis on municipal and industrial water allocation. As illustrated by the result reached by the *Mojave* panel, inequitable results flow from rigid application of water rights priorities. The California Supreme Court now has the opportunity to revisit and advance groundwater law and to help fashion a contemporary solution to overdraft problems.

210. *See In re* Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 666, 25 Cal. 3d 339, 355-56 (1979).

211. City of Los Angeles v. City of San Fernando, 537 P.2d 1250, 1305, 14 Cal. 3d 199, 275 (1975).

212. Cal. Water Code §106 (West 1997).