McGeorge Law Review

Volume 25 | Issue 3 Article 7

1-1-1994

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I. INTRODUCTION

When the *Pacific Law Journal* last published a symposium on water law,[1] water marketing in California was in its nascency.[2] While much had been written[3] over the years touting the benefits of water transfers and water marketing,[4] as of 1988 there had been few concrete examples of successful water transfers.[5] Despite repeated efforts by the California

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1. *Symposium: Revisiting California Water Law*, 19 PAC. L.J. 957-1434 (1988).

2. *See generally* Kevin M. O'Brien, *Water Marketing in California*, 19 PAC. L.J. 1165 (1988) (discussing the state of water marketing as of 1988).

3. For previous discussions of water transfers, see Gary D. Weatherford, *Legal Aspects of Interregional Water Diversion*, 15 UCLA L. REV. 1299 (1968); CHARLES J. MEYERS & RICHARD A. POSNER, MARKET TRANSFERS OF WATER RIGHTS: TOWARDS AN IMPROVED MARKET IN WATER RESOURCES (National Water Commission Legal Study No. 4, 1971); CLIFFORD T. LEE, GOVERNOR'S COMMISSION TO REVIEW CALIFORNIA WATER RIGHTS LAW, THE TRANSFER OF WATER RIGHTS IN CALIFORNIA (Staff Paper No. 5, 1977).

4. The terms "water marketing" and "water transfers" are used interchangeably in this article to mean the transfer, temporary or permanent, of water rights (including both real property and contractual interests) from one purpose or place of use to another, without loss of priority. From a technical standpoint, however, "water marketing" generally connotes the buying and selling of water entitlements in a free market system, much like other commodities. O'Brien, *supra* note 2, at 1166-67. In the authors' view, it is unlikely that a true commodity-type market for water entitlements will develop in California. Water transfers and the general use of economic incentives, however, will play an increasingly prominent role in California water policy.

5. At that time, the most widely discussed example of water marketing in California was the transaction between the Imperial Irrigation District (IID) and the Metropolitan Water District of Southern California (MWD), which involved the financing of improvements in IID's water system by MWD in return for a portion of the water saved by the improvements. *See* Harrison Dunning, *The Physical Solution in Western Water Law*, 57 U. COLO. L. REV. 445, 479-83 (1986). In addition, the Yuba County Water Agency (YCWA) made transfers in 1987 and 1988 to the California Department of Water Resources in the amount of 83,100 and 135,000 acre-feet, respectively. Testimony of Donn A. Wilson, Administrator of YCWA, before the State Water Resources Control Board (Jan. 17, 1992) at fig. 5 (copy on file with the authors) [hereinafter YCWA Testimony]. Of course, water transfers in California have early origins, the most notable being transfers from the Owens Valley by the City

Legislature to remove perceived legal barriers to the transfer of water,[6] it was unclear whether water transfers would ever make a significant contribution to water resource management in California.

Much has changed since 1988. From 1987 through 1992, California endured six years of drought. A number of successful water transfers occurred in the early part of the drought.[7] The Drought Water Bank was established in 1991,[8] making the Department of Water Resources (DWR) the principal arbiter of water transfers during the drought.[9] In 1991, the Water Bank effected transfers of 400,000 acre-feet of water involving 350 sellers and 20 buyers; another 265,000 acre-feet of water was held in carry-over storage by the State Water Project for use in subsequent years.[10] In 1992, more than 150,000 acre-feet of water was transferred under the auspices of the Water Bank.[11] Water transfers, in short, played a major role in helping California weather a water supply crisis.

Another seminal event in the development of water marketing in California was the 1992 enactment of the federal Central Valley Project Improvement Act (CVPIA).[12] The CVPIA established sweeping new directives for the Bureau of Reclamation (Bureau) in relation to water transfers of Central Valley Project (CVP) water.[13] More fundamentally, the CVPIA altered the Bureau's mission and purpose in operating the CVP from one focused on meeting the needs of agricultural, municipal, industrial and power contractors to one focused on achieving a "reasonable balance" among competing demands for use of CVP water, including the requirements of fish and wildlife.[14]

While the question of whether water transfers will contribute substantially to California's future water resource management policy has

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6. *See infra* notes 31-66 and accompanying text (discussing recent legislation).

7. For example, the YCWA transferred water to DWR in 1987 (83,100 acre-feet), 1988 (135,000 acre-feet), 1989 (110,000 acre-feet), and 1990 (109,000 acre-feet). YCWA Testimony, *supra* note 5, at fig. 5. YCWA also transferred water to the city of Napa in 1989 (7,000 acre-feet) and 1990 (6,700 acre-feet), and to the East Bay Municipal Utility District in 1989 (60,000 acre-feet). *Id.*

8. The Drought Water Bank was established pursuant to Cal. Exec. Order No. W-3-91.

9. Although the State Water Resources Control Board (SWRCB) retained its statutory authority to review and approve transfer petitions, in the authors' view the SWRCB showed considerable deference to DWR in the review and approval of Water Bank transfers. *See infra* note 16.

10. DEPARTMENT OF WATER RESOURCES, STATE OF CALIFORNIA, PROGRAM ENVIRONMENTAL IMPACT REPORT FOR STATE DROUGHT WATER BANK iii (1993) [hereinafter WATER BANK EIR].

11. *Id.*

12. Central Valley Project Improvement Act, Pub. L. No. 102-575, §§ 3401-3412, 106 Stat. 4600, 4706 (1992) [hereinafter CVPIA] (codified in scattered sections of the United States Code, titles 16, 25, and 43).

13. *Id.* § 3405, 106 Stat. 4709-4714; *see infra* section IV(A)(1) (discussing transfer of CVP water).

14. CVPIA § 3402(f), 106 Stat. 4600.

now been answered in the affirmative, many questions remain concerning how water transfers will (and should) occur. Most significant is the question of whether DWR and the Bureau should play a central role in the review and approval of water transfers. A central thesis of this Article, however, is that the development of water marketing in California will be greatly hindered if the Bureau and DWR continue to play a dominant role in certain aspects the water transfer process. Historically, the principal role of DWR and the Bureau has been to operate the state's two major water projects.[15] In the authors' view, there is a strong institutional bias within each agency to preserve and maximize the yield of the two projects for the benefit of the agencies' major constituency groups, namely project contractors and, increasingly, fish and wildlife advocates. When the Bureau and DWR are thrust into the new role of determining how much water is available for transfer by non-project water users,[16] they become entangled in a conflict of interest. Part IV(A) of this Article discusses this conflict, asserting that it precipitated the promulgation of questionable policy in relation to determining the amount of water available for transfer.[17] Due in part to the exigent circumstances of the drought, this issue thus far has received little debate. But if, over the long term, prospective sellers holding senior water rights are to continue to enter the market, they must have assurances that the playing field is a level one and that the decision-makers are not tainted by conflicts of interest.

The other key issue affecting the future of water transfers in California involves the Sacramento-San Joaquin River Delta. Since most transfers will involve the export of water from north to south through the Delta, and since export pumping is currently restricted pursuant to the Endangered

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15. The Central Valley Project is operated by the United States Bureau of Reclamation, while the State Water Project (SWP) is operated by DWR. *See* HAROLD E. ROGERS & ALAN H. NICHOLS, WATER FOR CALIFORNIA 20-115 (1967) (describing the two projects).

16. Technically, authority to approve transfers involving water used pursuant to state-issued water rights is vested in the SWRCB. *See, e.g.*, CAL. WATER CODE §§ 1700-1745.11 (West Supp. 1994). However, most transfers in California will involve the use of conveyancing facilities owned and operated by the Bureau or DWR. California law requires DWR and other public entities to make available for water transfers unused capacity in conveyance facilities. CAL. WATER CODE §§ 1810-1814 (West Supp. 1994). However, in practice, DWR has insisted on playing a much more expansive role in the review of water transfer proposals, including involvement in the initial determination of how much water is available for transfer. In a memorable statement made in connection with the establishment of the Drought Water Bank, California Governor Pete Wilson admonished prospective buyers and sellers to utilize the Water Bank for all transfers because "we've got them by the aqueduct." Norman Hill, *Introduction to Water Transfers*, LAND USE FORUM, Fall 1992, 319, 322. This not-so-subtle reminder that state and federal conveyance facilities are needed, in most instances, to effect water transfers has seemingly become the unofficial motto of many state and federal water officials.

17. *See infra* notes 67-119 and accompanying text.

Species Act[18] (resulting in few available "windows" for the conveyance of water to the south),[19] it is clear that until the Delta is fixed, widespread water transfers will not occur. While a solution to the Delta's perplexing ills is beyond the scope of this Article (and at times, seemingly beyond the capacity of mankind), the development of water transfer policy in California will continue to be linked inextricably to Delta conditions.[20]

The purpose of this Article, then, is to trace the development of water marketing in California over the past six years. After reviewing California's water supply outlook[21] and recently adopted state legislation pertaining to water transfers,[22] the bulk of the Article examines the major unresolved issues that continue to hinder the development of water marketing.[23]

II. THE CASE FOR WATER MARKETING: CALIFORNIA'S WATER SUPPLY OUTLOOK

In the coming years, California water transfer policy will likely develop against a backdrop of chronic water shortages. DWR estimates that, by the year 2020, demand for water in California will exceed supply by 2.2-4.2

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18. The Endangered Species Act, 16 U.S.C. §§ 1531-1544 (1988 & Supp. II 1990) [hereinafter ESA].

19. While the water quality and fishery problems associated with the Delta are myriad, export pumping restrictions have been imposed as a result of two actions under ESA. On or about February 12, 1993, the National Marine Fisheries Service (NMFS) issued an opinion resulting from its formal consultation with the Bureau pursuant to § 7 of ESA, 16 U.S.C. § 1536. The opinion, entitled "Biological Opinion for the Operation of the Federal Central Valley Project and the California State Water Project," concluded that the long-term operation of the two projects would be likely to jeopardize the continued existence of Sacramento River winter-run Chinook salmon. NATIONAL MARINE FISHERIES SERVICE, BIOLOGICAL OPINION FOR THE OPERATION OF THE FEDERAL CENTRAL VALLEY PROJECT AND THE CALIFORNIA STATE WATER PROJECT 51 (1993) (on file with the *Pacific Law Journal*). It identified particular measures as a "reasonable and prudent alternative" which, if implemented, according to NMFS would avoid jeopardy to the winter-run salmon as a result of long-term operation of the projects. *Id.* The measures included numerical limits on the incidence of take at the Bureau's pumps, which have the practical effect of limiting export pumping. *Id.* at 60. In addition, on May 26, 1993, the United States Fish & Wildlife Service issued its Biological Opinion regarding the effects of the operation of CVP on Delta Smelt. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE, FORMAL CONSULTATION ON CENTRAL VALLEY PROJECT OPERATIONS CRITERIA AND PLAN FOR 1993: EFFECTS ON DELTA SMELT 2 (May 26, 1993) (on file with the *Pacific Law Journal*). This latter opinion imposes additional restrictions on export operations for 1993. *Id.* at 2-31. As a result of the two opinions, extra export pumping capacity has been available only in the late summer and early fall. Hill, *supra* note 16, at 321.

20. Presently the SWRCB is not approving long-term transfers that divert additional water from the Delta until an environmental evaluation of the cumulative impacts of transfers is prepared. Hill, *supra* note 16, at 321. This evaluation which was being conducted by a consortium of parties under the auspices of a programmatic environmental impact report, is currently in abeyance. Interview with Albert I. Herson, Vice President & General Counsel, Jones & Stokes Associates, Inc. (Feb. 16, 1994) (notes on file with the authors).

21. *See infra* notes 24-30 and accompanying text.

22. *See infra* notes 31-66 and accompanying text.

23. *See infra* notes 67-217 and accompanying text.

million acre-feet per year (MAF/yr).[24] In dry years, a shortfall of 5.8-7.8 MAF/yr is expected.[25]

These projected shortages will occur principally because of an increased demand for water by urban and environmental interests. California's population is expected to grow from its current 31 million inhabitants to 49 million by the year 2020.[26] In that period, urban demand for water will increase by about 4.8 MAF/yr.[27] Likewise, demand for environmental protection is expected to grow dramatically within the next few years.

The United States Environmental Protection Agency (EPA) has issued proposed Bay-Delta standards which, if adopted, will decrease the supply of water available for agricultural and urban use by 540,000 ar/yr in normal years and 1.1 MAF/yr in dry years.[28] The trend toward allocation of water to fish and wildlife and other "instream" uses will further diminish the amount of water that is available for consumptive use.

California's water supply is unlikely to increase significantly. No major new water supply projects are anticipated, due to environmental and fiscal considerations.[29] Moreover, California's share of Colorado River water may decrease substantially as Arizona and Nevada begin to divert their full allotted appropriations. This could decrease the amount of water now available to the Metropolitan Water District (MWD) by 400,000 acre-feet or as much as 1 MAF/yr.[30] Since much of California's urban growth is occurring in the southern part of the state, water shortfalls in that region could be particularly severe.

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24. CALIFORNIA WATER COMMISSION, DEPARTMENT OF WATER RESOURCES, DRAFT CALIFORNIA WATER PLAN UPDATE 14 (Vol. I 1993) [hereinafter DRAFT WATER PLAN UPDATE]. The 2 MAF/yr range is attributed to uncertainty over how much water will be required to meet the environmental demands of the Delta. *Id.*

25. *Id.*

26. *Id.* at 146. California's population explosion has already begun. The state's population grew by 6 million in the 1980's, and is presently growing by 600,000-700,000 persons per year. NORTHWEST ECONOMIC ASSOCIATES, CALIFORNIA AGRICULTURE SUPPORTS WATER TRANSFERS: THIRD PARTY IMPACTS IN PERSPECTIVE 3-4 (May 1993) [hereinafter NEA]. Most of the urban sprawl associated with burgeoning population is occurring in the Central Valley and South Coast regions. DRAFT WATER PLAN UPDATE, *supra* note 24, at 146.

27. DRAFT WATER PLAN UPDATE, *supra* note 24, at 14, 170.

28. Water Quality Standards for Surface Waters of the Sacramento River, San Joaquin River, and San Francisco Bay and Delta of the State of California, 59 Fed. Reg. 810 (1994) (to be codified at 40 C.F.R. § 131). Controversy exists as to the accuracy of the EPA's estimates of water supply impacts resulting from its proposed water quality standards; some water users contend that the EPA seriously underestimates such impacts.

29. DRAFT WATER PLAN UPDATE, *supra* note 24, at 367.

30. *Id.* at 12.

III. RECENT STATE LEGISLATION AFFECTING WATER TRANSFERS

Continuing a trend begun in the early 1980's, the California Legislature has, since 1988,[31] adopted numerous measures intended to promote water marketing. Whereas the early legislation focused on removing physical and institutional barriers to water marketing, the recent legislation principally seeks to mitigate third-party impacts resulting from water transfers. This Section briefly summarizes the legislation adopted between 1988-1993.

A. 1988 Legislation

Short and long term transfer provisions were consolidated in 1988 to clarify the relationship between transfers and the rights of other legal water users. The legislation did not radically alter the former statutory scheme. The most significant change in the short term or "temporary" transfer provisions[32] was to the definition of "consumptive use." Water Code section 1725 now permits a permittee or licensee to transfer only the amount of water that the permittee or licensee would have "consumptively used" or stored in the absence of the transfer.[33] "Consumptively used" is defined by the statute as the "amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion."[34] As discussed in part IV(A) below,[35] this statutory definition has not resolved all issues relating to determination of the quantity of water available for transfer.[36]

Long term transfers are still treated differently than temporary changes. First, long term transfers, because of their potential environmental consequences, are not exempt from the California Environmental Quality Act (CEQA) as are temporary transfers.[37] Second, the transfer approval process is much different from that required for short term transfers. Prior to approving a long term transfer petition, the State Water Resources

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31. For a discussion of pre-1988 state legislation, *see* O'Brien, *supra* note 2, at 1190-95.

32. Temporary changes are water transfers for a period of one year or less. CAL. WATER CODE § 1728 (West Supp. 1994).

33. *Id.*, § 1725 (West Supp. 1994).

34. *Id.*

35. *See infra* notes 67-119 and accompanying text.

36. For example, the "consumptive use" definition may lead to the depletion of ground water supplies, since seepage water can be transferred based upon this definition. *See* Hill, *supra* note 16, at 322.

37. CAL. WATER CODE § 1729 (West Supp. 1994).

Control Board (SWRCB) must hold a hearing, at which time the recommendations of the Department of Fish and Game (DFG) are to be reviewed.[38] A petition may then be approved if it does not result in *substantial* injury to any legal user or unreasonably affect fish and wildlife.[39] This qualification of the no injury rule recognizes that long term transfers, by their very nature, will have more substantial impacts than temporary changes.

B. 1991 Legislation

Senate Bill 301, enacted in 1991, was designed to protect fish and wildlife interests from injury resulting from water transfers.[40] Any person filing a petition to change the point of diversion, place of use, or purpose of use must, in addition to notifying the SWRCB, notify the DFG in writing.[41] The short and long term transfer provisions were amended to clarify that any permittee or licensee proposing a transfer must so notify the DFG.[42] The DFG must supposedly ensure that the transfer will not unreasonably affect fish & wildlife.[43] Additionally, any person entitled to the use of water, whether based on appropriative, riparian, or other right, may petition the State Board to transfer water for instream purposes.[44] The Board may approve such a change so long as it does not increase the amount of water that the person is entitled to and does not unreasonably affect other legal users of the water.[45] Significantly, the proposed use need not involve a diversion of water.[46] Water has never been transferred for instream purposes pursuant to this provision, however.[47]

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38. *Id.* § 1736 (West Supp. 1994). The trial transfer provisions were eliminated from this section in 1988. *See* O'Brien, *supra* note 2, at 1191 (discussing trial transfers for temporary transfers).

39. CAL. WATER CODE § 1729 (West Supp. 1994).

40. *Id.*, §§ 1703, 1707, 1726, 1736 (West Supp. 1994) (codifying Senate Bill 301).

41. *Id.* § 1703 (West Supp. 1994).

42. *Id.* §§ 1726, 1736 (West Supp. 1994).

43. *See id.* § 1725 (West Supp. 1994) (stating that transfers may not unreasonably affect fish and wildlife).

44. *Id.* § 1707(a) (West Supp. 1994).

45. *Id.* § 1707(b) (West Supp. 1994).

46. *Id.*

47. Telephone Interview with Steve Macaulay, Chief of Water Transfers Office, Department of Water Resources (Feb. 4, 1994) (on file with the authors) [hereinafter Macaulay Interview]. The one petition filed under this provision was withdrawn because of numerous protests. The petitioner had wished to fallow land along Butte Creek and to allow the water to flow into the San Francisco Bay. Serious questions were raised as to whether there had been a history of irrigation on the land and whether any of the water ever would reach the Bay because of numerous downstream diversions. *Id.*

The 1991 Legislature also enacted Assembly Bill 1605.[48] The legislation created a water leasing procedure which seeks to provide water to water deficient areas, encourage conservation, and protect third parties and areas of origin.[49] A water rights holder may lease up to 25% of the water the lessor would have applied or stored in absence of the lease agreement for a period not to exceed five years.[50] Such a lease constitutes a reasonable, beneficial use and thereby protects the lessor's water rights.[51] The legislature apparently believed that these leases would encourage conservation by giving water rights holders an incentive to reduce their use of water.

The leasing provisions seek to protect third parties from adverse consequences of water transfers. A lease may not injure another legal user of water or unreasonably affect fish, wildlife, or other instream uses.[52] The SWRCB must be notified of all lease agreements, and shall in turn notify all legal users as well as the DFG.[53] Water leases may not impair water quality in the Delta,[54] and, unlike short term transfers, must comply with CEQA.[55] Additionally, water districts must give individual members notice of any proposed lease and distribute proceeds from a lease in accordance with Water Code section 1022.[56] These provisions protect other legal water users, water district members, and environmental interests from adverse consequences of water leases. By doing so, however, these protective measures, particularly the Delta restrictions, also diminish the number of potential water leases. In fact, these water leasing provisions have not yet been invoked.[57]

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48. CAL. WATER CODE §§ 1020-30 (West Supp. 1994) (codifying Assembly Bill 1605).

49. *Id.*

50. *Id.* §§ 1020, 1021(a) (West Supp. 1994).

51. *Id.* § 1024(c)(1) (West Supp. 1994).

52. *Id.* § 1021(b) (West Supp. 1994).

53. *Id.* §§ 1025, 1025.5, 1026 (West Supp. 1994). The lessor need not file a petition for a change in point of diversion, place of use, or purpose. *Id.* § 1025.7 (West Supp. 1994).

54. *Id.* § 1027(a) (West Supp. 1994).

55. *Id.* § 1029 (West Supp. 1994). If the lessor is a water district, the lessor is the lead agency. If the lessor is a private party and the lessee a water district, the lessee is the lead agency. If both parties are private parties, the State Board is the lead agency. *Id.*

56. *Id.* § 1022(b)(1), (3) (West Supp. 1994).

57. Macaulay Interview, *supra* note 47. The greatest impediment has been the Delta dilemma, which has obstructed all long term water transfers. *Id.* There has been a substantial amount of discussion about these water leasing provisions. *Id.*

C. 1992 Legislation

In 1992 the Legislature attempted to tackle the myriad of problems associated with transfers involving water districts. Prior to 1992, for instance, it was unclear whether a water district could transfer only "surplus" water.[58] While the 1992 legislation did not definitively resolve all of these issues, it did clarify them somewhat.

The 1992 legislation states that a water supplier[59] may transfer water outside of the supplier's service area if the supplier has allocated the amount of water available for the water year to its water users.[60] However, the water transferred need *not* be surplus water.[61] The water supplier may transfer water that has been made available through (1) conservation or alternate water supply measures taken by individual water users or by the water supplier; or (2) a contract with a water user to have the water user reduce its allocation through dry farming, fallowing, or other actions that will reduce water use.[62] There is, however, a restriction on the amount of water a supplier may obtain due to fallowing.[63] Thus, so long as the needs of the water users are being met, a supplier may transfer water outside of its service area even if this ultimately results in the provision of less water than its service area is entitled to receive. This option gives water suppliers flexibility as well as an incentive to conserve water, thereby increasing the amount of water available for transfer.[64]

The 1992 legislation also seeks to minimize the adverse effects that transfers may have on ground water basins. A transferror may only substitute groundwater for the transferred water if the groundwater use is consistent with a groundwater management plan or if the water supplier determines the transfer will not lead to overdraft conditions.[65] This requirement, combined with Assembly Bill 3030 (Groundwater

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58. O'Brien, *supra* note 2, at 1193.

59. "Water supplier" is defined as "a local public agency or private company supplying or storing water, or a mutual water company." CAL. WATER CODE § 1745(b) (West Supp. 1994).

60. *Id.* § 1745.04 (West Supp. 1994).

61. *Id.* § 1745.06 (West Supp. 1994).

62. *Id.* § 1745.05(a)(1)-(2) (West Supp. 1994).

63. If land fallowing agreements impact 20% of a district's water supply, public hearings and express District approval are required. *Id.* § 1745.05(b) (West Supp. 1994).

64. This flexibility also decreases the need for individual water users to have the ability to transfer their water outside of the district. *See infra* section IV(D) (discussing user-initiated transfers).

65. CAL. WATER CODE § 1745.10 (West Supp. 1994).

Management), has spurred the preparation of groundwater management plans across the state.[66]

IV. UNRESOLVED ISSUES

A. Quantifying Transferable Water: The "Real Water" Issue

The issue of greatest controversy in relation to water transfers continues to be how to determine the amount of water available for transfer. This is hardly surprising given the huge economic stakes involved in resolving this critical issue.

As noted above, a critical issue underlying the development of transfer policy is the appropriate role of DWR and the Bureau. Nowhere is this issue more central than in the determination of transferable water. On the one hand, DWR and the Bureau have a legitimate interest in protecting the integrity of the Central Valley Project and the State Water Project against the effects of improper transfers. As DWR has observed,

> Most of California's agricultural water use is in the Central Valley, and this is where much future water transfer activity is likely to be concentrated. Within the Sacramento and San Joaquin river basins, all appraisals of water transfers must begin with the recognition that the Federal Central Valley Project [(CVP)] and the State Water Project [(SWP)] absorb most errors that are made in water transfers. This exposure results from the conditions of water rights permits under which the CVP and SWP withdraw water from the Delta and its tributaries. Those conditions, ordered by the State Water Resources Control Board, require the release of water from CVP and SWP reservoirs as needed to maintain specified water quality and flow criteria in the Delta. To the extent paper water transfers reduce the flow of water available to meet Delta criteria, the deficiencies must be made up by release of additional water from Federal and State reservoirs. If subsequent runoff soon refills the reservoirs, there may be no net harm. However, under continued drought conditions, significant water supply impacts may result. Thus, the Federal and State water contractors have an

66. Macaulay Interview, *supra* note 47; *see* CAL. WATER CODE §§ 10750-10755.10 (West Supp. 1994) (codifying Assembly Bill 3030). Section 10753 permits local agencies to implement groundwater management plans. *Id.* § 10753 (West Supp. 1994).

> interest in ensuring that transfers of Sacramento-San Joaquin basin water do not simply take water from the CVP and SWP without compensation and sell it elsewhere. (Conditions are somewhat different in other basins, but many of the principles described herein are applicable.)[67]

While there is general agreement that "errors" in water transfers should be avoided so as to prevent improper impacts on the two projects, there is considerable disagreement as to what constitutes an "error." In the authors' view, DWR and the Bureau share a strong institutional bias to preserve and maximize the yield of the two projects for the benefit of the agencies' major constituencies, namely project contractors and, increasingly, environmental interest groups. As discussed below, this bias has led to the establishment of questionable policy on the quantification of transferable water.

1. Legal Background

Interestingly, California was the first state to recognize the appropriative water right as a transferable property interest. In a trilogy of decisions between 1857 and 1867,[68] the California Supreme Court established the basic principle that an appropriator possesses a property interest that extends to the right to change the point of diversion, place of use, or purpose of use without loss of priority, so long as the change does not cause "injurious consequences" to the rights of others.[69] The courts of other western states generally accepted California's water transfer principles.[70]

The principal limitation on the right of an appropriator to transfer water is the "no injury" rule, now codified in sections 1702 and 1706 of the

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67. DEPARTMENT OF WATER RESOURCES, WATER TRANSFERS IN CALIFORNIA: TRANSLATING CONCEPT INTO REALITY 11-12 (Nov. 1993) [hereinafter WATER TRANSFERS].

68. Davis v. Gale, 32 Cal. 26 (1867); Kidd v. Laird, 15 Cal. 162 (1860); Maeris v. Bicknell, 7 Cal. 261 (1857).

69. *See* Lawrence J. MacDonnell, *Transferring Water Uses in the West*, 43 OKLA. L. REV. 119, 123-25 (1990) (discussing early California cases).

70. *See, e.g.*, Biggs v. Utah Irrigating Ditch Co., 7 Ariz. 331, 64 P. 494 (1901); Davis v. Gale, 32 Cal. 26 (1867) (adopting California principles on water transfer); Fuller v. Swan River Placer Mining Co., 12 Colo. 12, 19 P. 836 (1888) (quoting with approval from Kidd v. Laird, 15 Cal. 161 (1860)); Trambley v. Luterman, 6 N.M. 15, 27 P. 312 (1891); and Hague v. Nephi Irrigation Co., 16 Utah 421, 52 P. 765 (1898); Frank v. Hicks, 4 Wyo. 502, 35 P. 475 (1894).

California Water Code.[71] The no injury rule arose from the interdependency of water uses and the definition of appropriative rights. Under the appropriation doctrine, "each appropriator is given a protectable property interest in the stream regime as it exists when he initiates his appropriation."[72]

The most frequent type of injury which can result from a change in the purpose or place of use is an increase in consumptive use. The term "consumptive use" is typically defined as loss of water to the stream system or other aquatic regime from which the right being changed is supplied.[73]

In determining whether a proposed transfer will increase consumptive use — thus raising the potential for violation of the "no injury" rule — a central issue is how to establish the baseline against which any increase in consumptive use is measured. This issue has two elements, one relating to the definition of the right itself and the other relating to the temporal point of reference. With respect to the first component, it has long been the rule in many western states that the historic practices of the irrigator, rather than the irrigator's decreed or "paper" right, control in determining limitations to a change in use.[74] At least one western state, New Mexico, has rejected the historic use rule. The New Mexico Supreme Court rejected the historic use rule, holding that a prior adjudication decree, and not the actual practices of the appropriation, controls as to the quantity of water which can be diverted at the new place of use.[75] This issue has not been squarely addressed by California courts. It seems likely, however, that

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71. California Water Code § 1702 states: "Before permission to make such a change is granted the petitioner shall establish, to the satisfaction of the board, and it shall find, that the change will not operate to the injury of any legal user of water involved." CAL. WATER CODE § 1702 (West 1971). California Water Code § 1706 states: "The person entitled to the use of water by virtue of an appropriation other than under the Water Commission Act or this code may change the point of diversion, place of use, or purpose of use if others are not injured by such change, and may extend the ditch, flume, pipe, or aqueduct by which the diversion is made to places beyond that where the first use was made." *Id.* § 1706 (West 1971).

72. George A. Gould, *Conversion of Agricultural Water Rights to Industrial Use*, 27 ROCKY MTN. MIN. L. INST. 1791, 1798-99 (1982). An appropriator is not protected from all changes in the stream regime. For example, a farmer may change to a new crop although the new crop requires water at different times or consumes more water than did the old crop. Harkey v. Smith, 247 P. 550, 553 (N.M. 1926).

73. Gould, *supra* note 72, at 1823. This is an important point because DWR and the Bureau have defined consumptive use not as any loss of water to the stream system from which the right being changed is supplied but as a loss to any beneficial use (as, for example, where deep percolation occurs to saline sink or polluted aquifer). The net result is to eliminate from the computation of consumptive use water that may be removed from one useable water source to another useable water source and is hydrologically separate from the first source. This is a significant change from established principles of western water law.

74. *See, e.g.*, WYO. STAT. § 41-3-104 (1977); Weibert v. Rothe Bros., Inc., 618 P.2d 1367 (Colo. 1980); City of Westminster v. Church, 445 P.2d 52 (Colo. 1968).

75. W.S. Ranch Co. v. Kaiser Steel Corp., 439 P.2d 714, 715 (N.M. 1968).

California courts would look for guidance on this issue to newly enacted Water Code section 1725, which, in the context of temporary transfers, defines the transferable amount by reference to past consumptive use.[76]

With respect to the temporal aspect of the baseline issue, Professor George Gould has observed that:

> The historic use rule raises several interesting questions. First, how long a period is historic? For example, can an appropriator raising alfalfa begin raising sugar beets, which require more water, and thereby increase consumptive use? If so, how long must sugar beets be raised in order to establish a historic use? Or if only part of the acreage to which the right is attached has been actively irrigated in recent years, may the appropriator extend his use to unirrigated portions and increase consumption and diversion entitlements? Once again, if he may do this, for how long a period must he engage in this practice to establish historic use?[77]

The authors have found no California authority squarely addressing these questions. However, general water law principles of California and other western states suggest that historic use should be defined by reference to maximum historic consumption, absent an adjudicatory determination that the appropriative right has been lost, in whole or part, by forfeiture or abandonment.[78]

It is well-established under California law that an appropriative water right is perfected by diligent application of water to beneficial use.[79] Once perfected, the right becomes a protected property interest that may not be taken without just compensation.[80] While California law provides that water held under a vested right "may" revert to the public if all or any part of the water is not used for a period of five years, the reversion is not automatic.[81] The statute provides that, "[s]uch reversion shall occur upon a finding by the board following notice to the permittee and a public

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76. CAL. WATER CODE § 1725 (West Supp. 1994).

77. Gould, *supra* note 72, at 1843.

78. For a discussion of the laws of abandonment and forfeiture in California, see WELLS A. HUTCHINS, THE CALIFORNIA LAW OF WATER RIGHTS 285-98 (1956). The statutory period for forfeiture in California is five years. CAL. WATER CODE § 1241 (West Supp. 1994).

79. *E.g.*, Duckworth v. Watsonville Water & Light Co., 158 Cal. 206, 210-11, 110 P. 927, 929-30 (1910).

80. *E.g.*, United States v. State Water Resources Control Bd., 182 Cal. App. 3d 82, 101, 227 Cal. Rptr. 161, 168 (1987).

81. CAL. WATER CODE § 1241 (West Supp. 1994).

hearing if requested by the permittee."[82] Moreover, the case law makes clear that the party claiming forfeiture has the burden of proving the facts that constitute the forfeiture.[83] While the authors have found no California authority squarely addressing the issue of resumption of use following non-use for a period of five years, other western states have sustained the resumption of use where no third party has intervened.[84]

Applying these principles, a cogent argument can be made that historic use should be defined by reference to maximum historic consumption, absent a determination, following notice and a hearing, that a forfeiture or abandonment of the right has occurred. Arguably, any unilateral determination by DWR, the Bureau, or the SWRCB to define historic use by reference to some other, more limited, timeframe would result in the unconstitutional infringement of vested property interests.

2. *Bureau Policy Under CVPIA*

All transfers involving Central Valley Project (CVP) water are now governed by section 3405 of the CVPIA.[85] Section 3405 provides that all transfers of CVP water shall be subject to review and approval by the Secretary of the Interior under the conditions specified in the statute.[86] Transfers involving more than 20% of CVP water subject to long term contract within any contracting district or agency is also subject to review and approval by that district or agency under conditions specified in the CVPIA.[87]

The transfer provisions of the CVPIA provide minimal guidance regarding how to quantify water available for transfer. Section 3405(a)(1)(A) provides that no transfer or combination of transfers shall exceed, in any year, the average annual quantity of water under contract actually delivered to the contracting district or agency "during the last three years of normal water delivery prior to the date of enactment of this title."[88] Section 3405(a)(1)(I) provides that the water subject to transfer

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82. *Id.*
83. Erickson v. Queen Valley Ranch Co., 22 Cal. App. 3d 578, 582, 99 Cal. Rptr. 466, 448 (1971).
84. *E.g.*, Application of Boyer, 248 P.2d 540, 544 (Idaho 1952).
85. CVPIA § 3405.
86. *Id.* § 3405(a)(1).
87. *Id.* Among the conditions is the provision that the transfer "will have no unreasonable impact on the water supply, operations, or financial conditions of the transferor's contacting district or agency or its water users." *Id.* § 3405(a)(1)(K).
88. *Id.* § 3405(a)(1)(A).

three years of normal water delivery prior to the date of enactment of this title."[88] Section 3405(a)(1)(I) provides that the water subject to transfer "shall be limited to water that would have been consumptively used or irretrievably lost to beneficial use during the year or years of the transfer."[89] The phrase "consumptively used or irretrievably lost to beneficial use" is not defined in the Act.

The Bureau has adopted "Interim Guidelines" for implementation of the water transfer provisions of the CVPIA.[90] The Interim Guidelines attempt to clarify the standards by which water is deemed to have been "consumptively used or irretrievably lost to beneficial use" within the meaning of section 3405(a)(1)(I).[91] The Interim Guidelines state:

> (1) Crop consumptive use shall be the total evapotranspiration of applied water minus effective precipitation and does not include transportation losses, return flows, leaching, frost protection, or deep percolation to useable ground-water basins.
>
> (2) Project water irretrievably lost to beneficial use shall mean deep percolation to an unuseable ground-water aquifer (e.g., a saline sink or a ground-water aquifer that is polluted to the degree that water from that aquifer cannot be directly used.).[92]

The Bureau's definition of "consumptive use" and "irretrievably lost" are remarkable in their restrictiveness. For example, these definitions purport to exclude from the definition of "consumptive use" all seepage and transportation losses, including seepage to useable groundwater basins. The Bureau's definitions are contrary to established principles of western water law[93] and to express provisions of California law, which defines

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88. *Id.* § 3405(a)(1)(A).

89. *Id.* § 3405(a)(1)(I). Transfers between project contractors within counties, watersheds, or other areas of origin are deemed to meet the conditions in subsections (A) and (I). *Id.* § 3405(a)(1)(M).

90. BUREAU OF RECLAMATION, UNITED STATES DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION'S INTERIM GUIDELINES FOR IMPLEMENTATION OF WATER TRANSFERS UNDER TITLE XXXIV OF PUBLIC LAW 102-575 (Feb. 19, 1993) (copy on file with the *Pacific Law Journal*) [hereinafter INTERIM GUIDELINES]. The Interim Guidelines are to remain in effect until the final rules and regulations for transfers under CVPIA are promulgated. *Id.* at 1.

91. *Id.* at 4.

92. *Id.*

93. *See, e.g.*, Farmers' Highline Canal & Reservoir Co. v. City of Golden, 272 P. 2d 629, 631 (Colo. 1954) (stating that the transfer of water to a different drainage increases consumptive use); Dry Creek No. 2 Ditch Co. v. Coal Bridge Co., 129 P.2d 292, 296 (Colo. 1942) (stating that consumptive use includes all elements of loss to the stream).

include seepage to groundwater.[94] Neither the language of CVPIA nor its legislative history suggest that Congress intended such a restrictive approach.

Even more remarkable than the Interim Guidelines themselves is the interpretation given them by Bureau staff. The Bureau apparently intends to use the "last three years of normal delivery prior to October 30, 1992" as the temporal baseline for determining the amount of water consumptively used or irretrievably lost to beneficial use during the year of the transfer.[95] A plain reading of the statute, however, indicates that the "last three years" language of section 3405(a)(1)(A) merely refers to the maximum amount of water that may be transferred. There is no indication that Congress intended the provision to be used as the temporal baseline for determining historic consumptive use. The difference could be critical to a water user that has decreased its consumptive use of water in recent years as a result, for example, of fluctuations in irrigated acreage.[96] Under the Bureau's interpretation, the user could not transfer the amount it historically consumed. This interpretation is contrary to principles of western water law and penalizes water users for conserving water and enhancing irrigation efficiency.

a. Do the Interim Guidelines Violate the Administrative Procedure Act?

A significant, and as yet unanswered, question is whether the Bureau's Interim Guidelines violate the Administrative Procedure Act (APA).[97] The Bureau did not undertake a notice and rulemaking procedure prior to implementing the Interim Guidelines. Under section 553 of the APA, any regulation other than interpretative rules, general policy statements, or internal organization rules must be accompanied by a rulemaking procedure.[98] Exceptions to this general provision are to be strictly construed.[99]

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94. CAL. WATER CODE § 1725 (West Supp. 1994). Technically, this definition applies only to temporary transfers. In all likelihood, however, this definition would provide guidance to a court reviewing a long term transfer as well.

95. Telephone Interview with Gail Hefler-Scott, Bureau of Reclamation (Feb. 8, 1994) (notes on file with the authors) [hereinafter Hefler-Scott Interview].

96. Agricultural water use, of course, is related closely to agricultural commodity prices. Selecting the three years of normal delivery preceding the enactment of CVPIA as the measuring rod is, at best, arbitrary.

97. 5 U.S.C. §§ 500-576 (1988).

98. Flagstaff Medical Ctr., Inc. v. Sullivan, 962 F.2d 879, 885-86 (9th Cir. 1992).

99. *Id.* at 886.

If the Interim Guidelines are legally challenged, the Bureau would likely argue that its Interim Guidelines fall under the "public property" exception[100] to section 553 and are thus not subject to the rulemaking requirement. The public property exception applies to any agency action where public property is involved.[101] It has covered the Bureau's adoption of a Reservoir Regulation Manual,[102] as well as its withdrawal of low cost federal power to a city.[103] The exception has also been applied to the sale of federally owned timber and the operation of a floodway.[104]

Water is, however, a unique resource. While the federal government owns the diversion and conveyance facilities of the CVP, it does not "own" the water coursing through them. The United States Supreme Court has held that beneficial ownership of water rights in irrigation projects constructed pursuant to the Reclamation Act do not necessarily reside with the U.S. government. In *Ickes v. Fox*,[105] the Court stated:

> Although the government diverted, stored and distributed the water, the contention of petitioner that thereby ownership of the water or water-rights became vested in the United States is not well founded. Appropriation was made not for the use of the government, but, under the Reclamation Act, for the use of the land owners; and by the terms of the law and of the contract already referred to, the water-rights became the property of the land owners, wholly distinct from the property right of the government in the irrigation works.[106]

The *Ickes* Court declared the government to be "a carrier and distributor" of water, whose rights to receive revenue for the water were based solely upon its contracts with Reclamation Act contractors.[107] Since then, the

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100. 5 U.S.C. § 553(a)(2) (1988).

101. Ono v. Harper, 592 F. Supp. 698, 700 (D.Haw. 1983).

102. Oahe Conservancy Sub-Dist. v. Alexander, 493 F. Supp. 1294, 1302-03 (D.S.D. 1980). The mechanical operation of a dam is a matter related to public property because of the dam's generation of electric power. *Id.* at 1303.

103. City of Santa Clara v. Andrus, 572 F.2d 660, 673 (9th Cir. 1978), *cert. denied*, 439 U.S. 859 (1979).

104. Duke City Lumber Co. v. Butz, 382 F. Supp. 362, 373 (D.C. 1974), *aff'd in part*, 539 F.2d 220 (D.C. Cir. 1976), *cert. denied*, 429 U.S. 1039 (1977); *see* Story v. Marsh 732 F.2d. 1375, 1384 (8th Cir. 1984) (holding that flowage easements are owned by the government).

105. 300 U.S. 82 (1937).

106. Ickes v. Fox, 300 U.S. 82, 94-95 (1937).

107. *Id.* at 95

Supreme Court has repeatedly reaffirmed that the United States does not own the water rights of its projects.[108] As the Court eloquently stated in *Nevada v. United States*, "the Government is completely mistaken if it believes that the water rights confirmed to it . . . were like so many bushels of wheat, to be bartered, sold, or shifted about as the Government might see fit."[109]

In the authors' view, it is unlikely that promulgation of the Interim Guidelines would fall under the public property exception to the APA's notice and rulemaking requirement. Exceptions to the general rule, including the public property exception, are to be strictly construed.[110] While the Bureau would argue that water is no different from electricity, timber, or other natural resources and is thus public property, water rights to the CVP water are privately held and should not be considered "public property." Accordingly, the Interim Guidelines violate the APA.

b. Do CVPIA and the Bureau Guidelines Impair Existing Contracts?

It is well established that a valid contract right of an irrigation district against the United States is property protected by the Fifth Amendment to the United States Constitution.[111] Moreover, the Due Process Clause of the Fifth Amendment limits the exercise of sovereign power which would impair obligations under the government contracts.[112] The government cannot reserve to itself an unlimited right to escape its contract "without rendering its promises illusory and the contract void."[113] The Reclamation Reform Act of 1982 provides that: "Amendments to contracts which are not required by the provisions of this subchapter shall not be made without the consent of the non-Federal party."[114]

The issue arises as to whether the Bureau's clear deviation from established principles of California water law in the definition of consumptive use violates the foregoing principles. While an in-depth

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108. Nevada v. United States, 463 U.S. 110, 126 (1983) (stating that the Government's ownership of water rights is at most nominal). *See* Nebraska v. Wyoming, 325 U.S. 589, 614 (1945) (holding that a property right in water is separate and distinct from a property right in conveyance facilities).

109. *Nebraska*, 325 U.S. at 126.

110. *See supra* notes 90-93 and accompanying text.

111. Madera Irrigation Dist. v. Hancock, 985 F.2d 1397, 1401 (9th Cir.), *cert. denied*, 114 S. Ct. 59 (1993).

112. *Id.*

113. Torncello v. United States, 681 F.2d 756, 760 (Cl. Ct. 1982).

114. 43 U.S.C. § 390cc(d) (1988).

analysis of this issue is beyond the scope of this Article, it appears that the Bureau has, by administrative fiat, purported to modify the transferable property interests established under the Bureau water supply contracts.[115]

3. DWR Policies

As already discussed, state law was recently amended to clarify the definition of "consumptively used," at least in the context of temporary transfers. Remarkably, however, DWR has rejected the statutory definition, choosing instead to follow, in lockstep fashion,[116] the approach adopted by the Bureau. DWR states:

> Recently adopted Water Code sections 484(b) and 1725 apply to temporary water transfers. They introduce an element of uncertainty by defining "consumptively used" as "*the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion.*" The reference to percolation broadens the definition beyond its traditional meaning, and may encourage transfer proposals that are not hydrologically sound (i.e., proposals that do not acknowledge the links between surface and ground water). However, the Department feels the italicized phrase clarifies that the Legislature did not intend to authorize transfers of paper water or transfers that would injure other users. For example, percolation would be considered part of "consumptive use" only when the water percolated was irretrievably lost to subsequent beneficial use (the same approach as used by P.L. 102-575).[117]

While the Department may "feel" that the italicized phrase indicates that percolation would be considered part of "consumptive use" only when

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115. A central issue in the analysis of this topic is whether Bureau water supply contracts confer a transferable property interest analogous to state-issued water rights. While there are certainly differences between the property interests conferred by federal contracts and state water rights, in the authors' view the element of transferability is implicit in the federal contracts. The authors further believe that the nature and extent of the transferability interest will be defined by reference to established state water law principles.

116. The Bureau has chosen to work closely with DWR for its definition of "consumptive use." The Bureau is consulting with DWR in its revision of the term "crop consumptive use," which will appear in its March 1994 addendum to the Interim Guidelines. Hefler-Scott Interview, *supra* note 95.

117. WATER TRANSFERS, *supra* note 67, at 14 (emphasis in original).

the water percolated was irretrievably lost to subsequent beneficial use, that is not what the statutory language says. Under the clear language of Water Code section 1725, water is deemed "consumptively used," *inter alia*, if it has "percolated underground."[118] DWR's willingness to deviate from long-established water transfer principles and the clear language of the temporary transfer statute, in favor of the approach used in CVPIA, is indicative of its institutional bias in favor of restricting the transfer rights of senior water rights holders. For the same reasons discussed above,[119] DWR's policies raise substantial constitutional issues which are likely to be resolved only through future litigation.

B. Rights Subject to Transfer

California's system of water rights is often referred to as a "dual system,"[120] referring to the two leading doctrinal bases of rights to the use of surface waters: riparian rights and appropriative rights. Appropriative rights established prior to December 19, 1914 can be transferred if there is no adverse impact on other legal water users;[121] in such cases no administrative approvals are required.[122] Appropriative rights established under a permit from the SWRCB can be transferred, but the SWRCB's approval is normally required for any change in purpose or place of use or point of diversion.[123] The issue of the transferability of riparian rights has recently arisen.

Traditionally, riparian rights were viewed as not being subject to transfer because the rights run with the land.[124] Since riparians must use the water on their riparian land, non-riparians who obtain the water right are similarly restricted.[125] Increasingly, however, riparian owners have sought to transfer their rights.[126] For example, the Drought Water Bank

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118. CAL. WATER CODE § 1725 (West Supp. 1994).

119. *See supra* notes 111-115 and accompanying text.

120. *See generally* William R. Attwater & James Markle, *Overview of California Water Rights and Water Quality Law*, 19 PAC. L.J. 957, 959 (1988) (discussing the dual system).

121. CAL. WATER CODE §§ 1725-1745.11 (West Supp. 1994).

122. *Id.*

123. *Id.*

124. *See, e.g., In re* Waters of Hallet Creek Stream Sys., 44 Cal. 3d 448, 749 P.2d 324, 243 Cal. Rptr. 448 (1988).

125. Duckworth v. Watsonville Water and Light Co., 150 Cal. 520, 89 P. 338 (1907). If a riparian does transfer his right to a downstream appropriator, the effect is essentially that the riparian pledges to forego his diversion and will not object to the downstream appropriation. *Id.* at 526, 89 P. at 341. This becomes problematic, however, when there are many riparian diverters downstream since they may divert this water. *Id.*

126. LEE, *supra* note 3, at 25.

purchased riparian water on the theory that water can be made available elsewhere if the riparian owner is persuaded not to exercise the right. Similarly, it has been argued that land held under a water rights settlement contract with the Bureau or DWR, which confirms "base" riparian rights, should be viewed as having a transferable right on the theory that the agreement between buyer and seller would call for a "permanent covenant" prohibiting riparian diversions during certain months of the year, and that diversions by the buyer for use on non-riparian land would occur under the authority of State Water Project water rights.[127] It is unclear at this juncture whether such arguments will be successful.

Another area of increasing controversy is water transfers that involve groundwater, either as a direct source of transfer or as a substitute for transferred surface supplies. Legal analysis of such transfers is often complicated by the difficulty, from a technical standpoint, of determining the nature and extent of the hydrologic connection between groundwater and surface watercourses. While groundwater is in many instances naturally interconnected to surface water, the degree of hydrologic continuity varies greatly. In some cases groundwater withdrawal will significantly decrease surface flows within days, while in others the effect on surface waters may take years to appear, if it does so at all.[128] Ascertaining the effect that a groundwater withdrawal will have on basin waters is an extremely imprecise and complex process. To complicate this issue further, the SWRCB does not have the jurisdiction to regulate the extraction of percolating groundwater.[129] As a result, the principal responsibility for analyzing the water supply and the environmental impacts of transfers involving groundwater typically rests with the Bureau and DWR, as operators of required conveyancing facilities.

In recent years, the California Legislature has sought to ameliorate the adverse impacts of transfers involving groundwater. For instance, Water Code section 1220 prohibits direct exports of groundwater from the Sacramento and Delta-Central Sierra Basins unless the pumping complies with a voter approved groundwater management plan.[130] In addition,

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127. Memorandum from Water Transfer Associates to the Department of Water Resources (Aug. 31, 1993) (on file with the authors). The memorandum describes the proposed sale of riparian rights by Broomieside Ranch in Sutter County. *Id.* The proposed sale addressed the need for an agreement between buyer and seller prohibiting riparian diversions. *Id.*

128. WATER TRANSFERS, *supra* note 67, at 16.

129. The SWRCB has jurisdiction over subterranean streams flowing through known and definite channels. CAL. WATER CODE § 1200 (West 1971).

130. CAL. WATER CODE § 1220 (West Supp. 1994).

local water agencies are now authorized to adopt groundwater management plans, which could have significant impacts on direct groundwater export.[131] Finally, Water Code section 1745.10, discussed above, regulates *indirect* transfers of groundwater, which occur when an irrigator substitutes groundwater for surface water and then transfers the rights to the surface water.[132] This section requires that any such transfer be consistent with an adopted groundwater management plan.[133] However, if no plan has been adopted, the transfer must be approved by the water supplier from whose area the water is transferred, based on a determination that the transfer "will not create or contribute to, conditions of long-term overdraft in the affected groundwater basin."[134]

It is ironic that, with the exception of the Water Bank,[135] it is becoming increasingly difficult to transfer groundwater even though groundwater pumping for overlying basin use is essentially unregulated in California. In the authors' view, legislative standards are required to clarify, first, who has the burden of proving that a transfer involving groundwater will result in injury, and, second, how "injury" is defined in the groundwater context, where the effects of transfers on an aquifer may not immediately manifest themselves.

C. The Future Role of the Drought Water Bank

In the midst of the drought in 1991, DWR announced that the State Water Project would be unable to make any deliveries to agricultural contractors and only 10% of its normal deliveries to municipal and industrial contractors.[136] The state's reservoirs were at 54% of their normal levels[137] and no end to the drought was in sight. These circumstances prompted Governor Wilson to issue an executive order which directed DWR to establish the Drought Water Bank to facilitate the short term transfer of water.[138] Related legislation granted water suppliers

131. *Id.* §§ 10750-10753 (West Supp. 1994).
132. *Id.* § 1745.10 (West Supp. 1994).
133. *Id.*
134. *Id.*
135. Most Water Bank groundwater substitution contracts have permitted the transfer of one acre foot of unused surface diversion for each acre foot pumped from the ground. WATER TRANSFERS, *supra* note 67, at 15.
136. RICHARD W. WAHL, WATER MARKETING IN CALIFORNIA: PAST EXPERIENCE, FUTURE PROSPECTS 10 (Reason Found. Pol'y Study No. 162, 1993).
137. DEPARTMENT OF WATER RESOURCES, STATE OF CALIFORNIA, THE 1991 DROUGHT WATER BANK 1 (1991) [hereinafter DWR].
138. Executive Order 91-W-3.

the right to contract with the Bank and emphasized that Bank contracts would not result in the loss of water rights.[139]

DWR rapidly designed the program and drafted the Water Bank contracts. In 1991, DWR set a standard purchase price of $125 per acre-foot (af), which it believed would be enough to induce vast agricultural participation.[140] The selling price was set at $175/af; transportation costs through the Delta and administrative costs accounted for the $50 differential.[141] Water purchasers had to enter into separate conveyance contracts, often with DWR or the Bureau, to transport the water from the Delta to its ultimate place of use.[142] This additional transport fee made the water very expensive to urban purchasers.[143] Within months of its creation, the Water Bank entered into 351 purchase contracts which resulted in the procurement of 820,805 af of water.[144] Thirteen buyers purchased about 560,000 af of this water in 1991. The remaining 266,000 af ended up as SWP carryover storage.[145]

Most of the purchasers were large urban entities. DWR required purchasers to have critical water needs, meaning that they had seventy-five percent or less water than they would have had in a normal water year.[146] Because of this requirement and the relatively high purchase price, large municipal suppliers were practically the only entities that could buy the water. As a result, the water purchasers were mostly urban suppliers located south of the Delta.[147] Of the total amount of water purchased, forty-seven percent went to meet immediate urban demands, forty percent went into storage, and thirteen percent was immediately used by the agricultural sector.[148]

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139. WAHL, *supra* note 137, at 9; *see* CAL. WATER CODE § 1745.05 (West Supp. 1994) (specifying water eligibility for transfer).

140. DWR, *supra* note 136, at 7. This purchase price resulted in a payment of $450 per acre for land that had been planted with water intensive crops such as alfalfa, pasture, and rice, and a payment of $250 and below per acre for low water intensive crops such as wheat and barley. *Id.*

141. Forty-five dollars represents the transportation costs; $5 the administrative costs. John B. Loomis, *The 1991 State of California Water Bank: Water Marketing Takes a Quantum Leap*, 3 RIVERS 129, 130 (1992).

142. DWR, *supra* note 137, at 9.

143. For instance, the ultimate cost to San Francisco was $400/af. *Id.*

144. *Id.* at 2. This is approximately the amount of water that would be supplied by a $3 billion dam. Loomis, *supra* note 141, at 130.

145. WAHL, *supra* note 136, at 16; Loomis, *supra* note 141, at 12. The SWP purchased the water, then passed the costs along to its contracting water districts. WAHL, *supra* note 136, at 17.

146. WAHL, *supra* note 136, at 18.

147. Metropolitan Water District purchased the largest amount of water (215,000 af), while the next two largest purchasers were San Francisco (50,000 af) and Kern County Water Agency (53,000 af). Loomis, *supra* note 141, at 131.

148. WAHL, *supra* note 136, at 12.

Most of the water sellers were agricultural interests located north of and in the Delta.[149] Fifty percent of the water sold to the Bank was made available by farmers who temporarily took their lands out of production. In all, 166,000 acres of farm land was fallowed or dry farmed.[150] Most of this land had supported corn and wheat in previous years.[151] The effect on corn production was particularly severe.[152] The second largest source of water (thirty-two percent) came from water districts and farmers who substituted ground water pumping for their surface water diversions.[153] Finally, eighteen percent of the water sold to the Water Bank came from reservoir storage.[154]

When all was said and done, the Water Bank provided more than enough water in the driest year of the drought. Heavy rainfall in March 1991, coupled with the high purchase price and conveyance costs, greatly diminished the demand for the water. Nonetheless, DWR managed to implement a program to meet critical needs and sell most of the water in 1991.

The 1992 Water Bank was conducted on a much smaller scale than 1991's Bank. Because of the large amount of carryover storage, DWR set the purchase price at only $50/af. This amount was too low to induce farmers to forego surface irrigation, and consequently all of the purchased water came from storage and ground water substitution projects.[155] The water was sold at $72/af, and was bought primarily by agricultural entities.[156] In the end, the Water Bank purchased 193,193 af of water and was able to sell all of it in 1992.[157]

Despite its hasty creation and economic inefficiencies, the Water Bank helped California through a major crisis. DWR, in its role as a broker, clearinghouse, and transporter, provided both sellers and purchasers with transfer opportunities that they might not otherwise have had. The Water Bank will continue to play a vital role in mitigating the adverse

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149. DWR, *supra* note 137, at 16.

150. *Id.* Twenty percent of the agricultural land in Sacramento County and 10% in San Joaquin County was fallowed or dry farmed. WAHL, *supra* note 136, at 30.

151. DWR, *supra* note 137, at 16.

152. Corn production in the Delta region dropped 66% due to land fallowing. *Id.*

153. WAHL, *supra* note 137, at 11. Much of the increased ground water pumping occurred in the Yuba and Feather River watersheds. *Id.*

154. *Id.*

155. *Id.* at 14.

156. Sixty percent of the water went to agricultural uses, 25% to urban uses, and 15% for fish and wildlife uses. *Id.*

157. *Id.* at 12-14.

consequences of droughts.[158] However, as noted above, DWR's authority to determine the amount of water available for transfer should be curtailed, given the agency's principal role of project operator.[159]

D. The Debate Over User-Initiated Transfers

Potential water purchasers claim that water transfers would increase if individual water users, within water districts, were permitted to sell their water outside of the districts.[160] There have been several recent legislative attempts aimed at permitting these "user initiated transfers." With the possible exception of CVPIA,[161] these legislative proposals have thus far been rejected.[162]

Water districts and agricultural purveyors are strongly opposed to such legislation. If a large number of members sell their water outside of a district, fewer members are left to pay the district's fixed capital costs. This defection increases the real costs for those members who decide not to sell their water. Since districts act as trustees for *all* of their members, they are obligated to keep costs as low as possible. User initiated transfers threaten their ability to uphold this obligation.[163] Moreover, individual members who do not transfer their water argue that, since they are paying for the facilities, they are entitled to any of the water that their fellow members decide to sell.[164]

Since most district charters and bylaws are unclear as to whether user initiated transfers are permissible,[165] there have been several recent

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158. For a discussion of potential efficiency improvements see WAHL, *supra* note 136, at 15-18. For a review of potential equity improvements, see WATER BANK EIR, *supra* note 10, at 185-86.

159. *See supra* notes 136-158 and accompanying text.

160. In some cases, individual users must also seek approval of their parent districts to *purchase* water. For instance, the DWR-MWD contract requires the approval of both of these parties before a member agency of the MWD may purchase water from a source outside of its service area. George Basye & David R.E. Aladjem, *Water-User Transfer Legislation: Is It Needed?*, 4 CAL. WATER RPTR. 19, 22 (1993).

161. While CVPIA does not squarely address the issue of user-initiated transfers, implicit in the requirements relating to approvals of transfers by "contracting districts" is the notion that water may be transferred by district water users. Pub. Law No. 102-575, § 3405(2). Where more than twenty percent of the water under contract to a district is proposed for transfer, approval by the district is required. *Id.*

162. Basye & Aladjem, *supra* note 160, at 20 (discussing the failure to pass legislation regarding the transfer of agricultural water).

163. COMMITTEE ON WESTERN WATER MANAGEMENT, WATER SCIENCE & TECHNOLOGY BOARD, COMMISSION ON ENGINEERING AND TECHNOLOGY SYSTEMS, NATIONAL RESOURCE COUNCIL, WATER TRANSFERS IN THE WEST 226 (1992) [hereinafter WATER TRANSFERS IN THE WEST].

164. Brian Gray et al., *Transfer of Federal Reclamation Water: A Case Study of California's San Joaquin Valley*, 21 ENVTL. L. 911, 973 (1991).

165. *Id.* at 974.

legislative attempts to allow such transfers. Assembly Bill 2090 sought to give individual water users pro rata rights to district water.[166] Had this legislation been enacted, water districts would have lost the ability to effectively manage their water since water users would have been permitted to transfer water without the approval of the district or its other members.[167] A more modest proposal, Assembly Bill 2020, would have given water purveyors veto power over water sales initiated by their individual water users.[168] If given this veto power, the Districts' refusals would have been subject to an arbitrary and capricious standard.[169]

Legislation in this area appears unnecessary since there is little evidence that the perceived legal restrictions have diminished the supply of water available for transfer. Water Code section 1745.05 strikes an appropriate balance by permitting individual water users to contract with their districts for the use of less water through conservation or fallowing measures.[170] In this manner, the water user gets consideration from the district while the district has the ability to market the water and effectively manage its water supplies.

E. Mitigating Third Party Impacts

Widespread water marketing has the potential to cripple agricultural communities. The transfer of significant amounts of water from rural communities, particularly over long periods of time, may lead to extensive land fallowing and abandonment. The effects of this land and crop abandonment ripple through local agricultural economies, adversely affecting both farm workers and farm related industries.[171] Community tax bases also shrink as a result of the loss of revenue,[172] just at the time local government services are most needed.

The actual severity of these third party effects is in dispute. Water transfer proponents cite the 1991 Drought Water Bank as evidence that areas of origin will not be greatly impacted by water marketing and that water marketing will have a very positive effect on the California

166. Basye & Aladjem, *supra* note 160, at 20.
167. *Id.*
168. *Id.*
169. *Id.* at 21.
170. CAL. WATER CODE § 1745.05 (West Supp. 1994).
171. These industries include seed and fertilizer sales, grocery stores, restaurants and retailers, banks and lending institutions, medical services, and trucking. NEA, *supra* note 26, at 2.
172. WATER TRANSFERS IN THE WEST, *supra* note 163, at 227.

economy. Agricultural communities argue that such analyses overlook the effect that transfers have at the *local* level, and that long term transfers could have much more devastating impacts than observed to date.

1. Socio-Economic Impacts of Water Transfers

Urban areas and agricultural water sellers were clearly the big winners of the 1991 Bank. A recent study, conducted by the Rand Corporation, concluded that urban areas benefitted by $59 million while the agricultural sellers benefitted by $45 million.[173] Farmers who sold their water because of irrigation withdrawal earned an average revenue of $35/af while those who substituted groundwater for their surface supplies earned an average of $17/af.[174] This large influx of revenue to agricultural sellers helped mitigate the impacts on their communities. For instance, farm investment rose by $5.7 million due to the sudden revenue influx.[175] This investment at least partially softened the blow to agricultural related industries.

The operation of the Water Bank caused crop sales to shrink by about three percent in eleven agricultural counties.[176] Yolo, San Joaquin, Butte, and Yuba Counties were hit the hardest.[177] Rice, sugar beets, and alfalfa were affected the most.[178] Overall, crop losses caused agricultural business to drop by two to three percent in the affected counties and resulted in a loss of approximately $13 million from unemployment.[179] Still, this unemployment was not severe.[180] As expected, part time labor was hit the hardest.[181]

The Rand Report concluded that there were "no overall adverse economic impacts on county economies" as a result of the Water Bank.[182] The two to three percent drop in agricultural business was a

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173. WATER BANK PROGRAM EIR, *supra* note 10, at 181.

174. RAND CORPORATION, CALIFORNIA DEPARTMENT OF WATER RESOURCES, CALIFORNIA'S 1991 DROUGHT WATER BANK 37 (1993) [hereinafter RAND REPORT].

175. *Id.* at 39.

176. *Id.* at 40.

177. *Id.* at 34.

178. RAND REPORT, *supra* note 174, at 22.

179. *Id.* at 54; WAHL, *supra* note 136, at 31.

180. The Rand Report estimates that only 162 jobs were lost as a result of the Bank. WATER BANK EIR, *supra* note 10, at 181 (summarizing the Rand Report).

181. RAND REPORT, *supra* note 174, at 39.

182. *Id.* at 54.

small one compared to the agricultural downturn of the 1980's.[183] When juxtaposed with the enormous benefits that the Bank created,[184] it is relatively easy to dismiss these third party impacts on areas of origin as minor.

It is much less easy, however, to dismiss these impacts when they are viewed at a more local and personal level. Northwest Associates conducted a study of the 1991 decline in San Joaquin Valley water usage attributable to the drought (800,000 af). This study employed total figures instead of percentages. It concluded that 237,000 acres of land were idled, 124,000 acres suffered decreased yield, and 13,000 acres were abandoned as a result of decreased water usage.[185] Farm revenues fell $282 million while total revenues (farm and farm related) dropped $545 million.[186] As a result, total employment in the San Joaquin Valley fell by 9,000.[187]

Additionally, the 1991 Water Bank might not be an accurate portrayal of the effect of short term transfers. March rains softened the Bank's blow to agricultural communities by providing needed irrigation. In some instances, farmers received a full share of crops in the absence of surface irrigation.[188] Were it not for this late rainfall, the effects on areas of origin would have been more severe.

Long term transfers of water from areas such as the San Joaquin Valley could have more profound and lasting effects. The long term withdrawal of water from agricultural communities will cause the permanent abandonment of large tracts of land. Since land value is decreased by approximately fifty percent when not irrigated,[189] this abandonment will severely decrease the tax base and impact community services. A long series of short term transfers (such as repeated involvement with the Water Bank) could similarly impact agricultural regions since it is difficult to stop and then restart farm production.[190]

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183. This decline is about one sixth of that experienced at the low point of the 1980's. WAHL, *supra* note 136, at 31.

184. The RAND Report estimated that *net* benefits to the state to be $91 million. WATER BANK EIR, *supra* note 10, at 181.

185. NEA, *supra* note 26, at 17.

186. *Id.*

187. *Id.* The enormous discrepancy in unemployment estimates between the RAND Report and the NEA Study illustrates the difficulty inherent in determining the real area of origin effects of water transfers. It is almost impossible to separate "background noise," such as U.S. Department of Agriculture programs and natural crop variation, from the transfers themselves. *See* WATER BANK EIR, *supra* note 10, at 183 (explaining variables).

188. RAND REPORT, *supra* note 174, at 181.

189. NEA, *supra* note 26, at 18.

190. *Id.* at 11.

The Water Bank EIR recognized these problems and recommended that there be a consecutive three year limitation on Water Bank participation by any one region.[191]

These areas of origin concerns should not bar water marketing; rather, buyers and sellers should consider these impacts and seek to reduce them. The twenty percent land fallowing restriction of Water Code section 1745.05 is an example of how water transfers can be managed so as to mitigate damage to areas of origin. Another proposal is to tax water transfers and transfer the revenue to community governments. The 1991 Water Bank contracted with Yolo and Butte Counties, for instance, and transferred two percent of its receipts from sellers in those counties to the counties to offset any community impacts.[192] While measures such as these are not a complete panacea to adverse third party impacts, they do at least they soften the blow to areas of origin without unduly restricting water transfers.

2. *Impacts on the Environment*

Water marketing has the potential to both enhance and harm environmental resources. Transfers threaten to deplete groundwater basins, increase the amount of water consumptively used, and disrupt fisheries. However, they also have the potential to increase water use efficiency and augment instream flows.

Extensive water marketing could severely deplete groundwater basins. Much of the water sold to the 1991 Water Bank, for instance, was available because of massive groundwater substitution that took place in the Feather and Yuba River basins.[193] Such groundwater depletion can lead to subsidence, poor water quality, and low water levels.[194] This problem could be particularly severe in the Central Valley, since Central Valley urban areas already obtain much of their water from groundwater supplies.[195] The recent enactment of Water Code section 1745.10 should minimize groundwater overdraft, however. This provision permits groundwater substitution only if it is consistent with an approved groundwater management plan or if the water supplier determines that the

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191. WATER BANK EIR, *supra* note 10, at 184.
192. *Id.* at 11-12.
193. WAHL, *supra* note 136, at 11.
194. WATER BANK EIR, *supra* note 10, at 116.
195. NEA, *supra* note 26, at 13.

transfer will not cause long term overdraft problems.[196] Future Water Banks will ensure that transferors act in accordance with this provision.[197]

There is also a perceived danger that transfers will increase the consumptive use of water and, thus, adversely affect instream flows. Water Code section 1725 partially eliminates this threat by explicitly limiting transfers to the amount consumptively used. The State Board must also find that a proposed change in use will not unreasonably affect fish and wildlife.[198]

Of greater concern is the effect that large scale transfers could have on the ecology of the Delta. During the 1991 Water Bank, officials were concerned that extensive water transportation through the Delta could harm endangered and threatened species such as winter run chinook salmon and striped bass.[199] The DFG recommended timing restrictions to cool water temperatures for the benefit of migrating salmon.[200] As a result, the DWR released water from the San Luis Reservoir (located south of the Delta) early in the season, and was thus able to delay delivery through the Delta until September and October to protect the salmon and bass.[201] Additionally, the DWR kept the Shasta Reservoir at maximum storage levels to ensure proper water quality for the winter run salmon.[202] With these measures, the state was able to facilitate water transfers while also accommodating environmental concerns.

In light of the impending Delta water quality standards and endangered species restrictions, it is probably more accurate to view decreased water marketing as a third party impact of environmental protection. Already, Delta transport restrictions are creating difficult obstacles to water transfers. Long term transfers are temporarily suspended until study of their ecological consequences is completed.[203] Unfortunately, most transferred water must pass through the Delta via SWP facilities. Since transfers have the lowest priority (behind SWP and CVP contractors) for use of these facilities, transport restrictions hit long term transfers the

196. CAL. WATER CODE § 1745.10 (West Supp. 1994); CVPIA, Pub. L. No. 102-575, §§ 3405(J), 106 Stat. 4600, 4706 (1992) (stating that the Secretary must determine that the transfer will not have significant long term adverse impacts on groundwater conditions in transferor's service area).

197. WATER BANK EIR, *supra* note 10, at 7-8.

198. CAL. WATER CODE § 1725 (West Supp. 1994).

199. WATER BANK EIR, *supra* note 10, at 154.

200. *Id.*

201. DWR, *supra* note 137, at 10.

202. *Id.*

203. Hill, *supra* note 16, at 322.

hardest.[204] Until complex Delta ecological questions are resolved, both short and long term transfers will be impeded or made impossible.

The "final solution" to the Delta quandary must permit some type of long term water marketing to occur. Revenue generated from water sales may be used by agricultural purveyors and farmers to fund capital improvements that will in turn lead to more efficient water use.[205] More efficient water use will decrease water demand and, consequently, obviate the need for new and potentially ecologically damaging projects. Water transfers also have the potential to increase instream flows and provide habitat for waterfowl.[206]

F. Antitrust Concerns

The growth of water marketing has led several antitrust experts to consider whether antitrust liability may attach in some cases to water transfers. While an exhaustive analysis of this issue is well beyond the scope of this Article, this brief discussion seeks to identify the major issues.

The Sherman Act prohibits agreements and predatory conduct that result in restraints on competition.[207] Commentators have cited two principal reasons why water marketing transactions should not run afoul of the antitrust laws. They are (1) state action immunity, and (2) the *Noerr-Pennington* exception.

First, it has been argued that most water transfers should fall under the state action immunity exception to the Sherman Act.[208] This exception applies when a state authorizes restraints on competition.[209] A recent federal appellate decision, *Kern-Tulare Water District v. City of Bakersfield*,[210] held that a municipality's refusal to transfer surplus water was immune from antitrust liability because competition was displaced by

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204. RICHARD HOWITT ET AL., CALIFORNIA DEPARTMENT OF WATER RESOURCES, A RETROSPECTIVE ON CALIFORNIA'S 1991 EMERGENCY DROUGHT WATER BANK 6 (1992).

205. WATER TRANSFERS IN THE WEST, *supra* note 163, at 230.

206. Both the 1991 and 1992 Water Banks provided supplemental water for wildlife refuges. WATER BANK EIR, *supra* note 10, at 9. For a discussion of how water marketing can augment instream flows, see Paul R. Williams & Stephen J. McHugh, *Water Marketing and Instream Flows: The Next Step in Protecting California's Instream Values*, 9 STAN. ENVTL. L.J. 132 (1990).

207. 15 U.S.C. §§ 1, 2 (Supp. II 1990).

208. Ronald S. Katz & Mary B. Neumayr, *Water Marketing/Transfers And The Antitrust Laws*, 4 CAL. WATER L. & POL'Y RPTR. 4 (1993).

209. *Id.* at 4. The immunity has been extended to apply to the conduct of municipalities, local governmental agencies, and in some instances, private actors. *Id.*

210. 828 F.2d 514 (9th Cir. 1987), *cert. denied*, 486 U.S. 1015 (1988).

regulation in the area of municipal control over water rights.[211] If it is foreseeable that the restriction at issue is a result of the grant of regulatory authority to the entity, the decision is protected by the state immunity doctrine.[212] The holding of *Kern-Tulare Water District* was limited to municipal control over water transfers and did not involve a combination of municipalities.[213] As such, it is unclear whether a reviewing court would permit a water district, for instance, or a combination of municipalities, to veto a proposed transfer.[214]

Second, commentators argue that the *Noerr-Pennington* doctrine should immunize private efforts to influence water district transfer decisions from antitrust liability.[215] This doctrine generally permits lobbying efforts that may harm competitors so long as the lobbying proponents have an expectation that their lobbying will result in lawful government action.[216] Private attempts at influencing water district transfers, either through election of board representatives or exertion of legal pressure, should thus be protected by this doctrine.[217]

The authors are not as sanguine as other commentators concerning the potential for antitrust issues arising from the development of water markets. In the authors' view, the method by which, for example, the purchase price of water is established by the Drought Water Bank, merits continued scrutiny to ensure compliance with state and federal antitrust protections.

V. CONCLUSION

Water transfers in California came of age during the 1987-92 drought. The Drought Water Bank was remarkably successful in facilitating the movement of large quantities of water from agricultural to urban sectors.

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211. Kern-Tulare Water Dist. v. Bakersfield, 828 F.2d 514, 519 (9th Cir. 1987), *cert. denied*, 486 U.S. 1015 (1988). The Court found that the municipality's decision did not result in unreasonable use. *Id.* at 521.

212. *Id.* at 519; Katz & Neumayr, *supra* note 208, at 5.

213. *Id.* at 517. Additionally, there was a clause in the municipality - water district contract that granted the city the right to veto a proposed transfer. *Id.* at 516. Whether a court would allow a similar restriction in the absence of such a contract is an open question.

214. Additionally, since most parties to transfers are public entities, the public entity exception to the active state supervision requirement applies. Grason Elec. Co. v. Sacramento Mun. Util. Dist., 770 F.2d 833, 838 (9th Cir. 1985), *cert. denied*, 474 U.S. 1103 (1986) (stating that this exception applies to municipalities). Because of active regulation, it would also appear that private parties to transfers would not fall under state action immunity, since the state would be actively supervising the transfer.

215. Katz & Neumayr, *supra* note 208, at 6.

216. *Id.*

217. *Id.*

But at what price? The institutionalization of DWR and the Bureau in the role of chief arbiter of future transfer policy is troubling, given those agencies' dual roles. Unless objective standards can be developed by unbiased decision-makers, it is questionable whether water marketing will achieve its full potential.