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Communities and Water Markets: A Review of the Model Water Transfer Act

Santos Gomez

Penn Loh

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Reflections on the "Model Water Transfer Act" by the Natural Heritage Institute

*Gregory A. Thomas and Tara L. Mueller**

I. Introduction

The state's limited water supply is, for all intents and purposes, fully appropriated, and yet there are large and growing unmet needs in all sectors, particularly in drier years. A functional water market, if we can stimulate it, has unique potential to reallocate these scarce supplies to maximize their social value in a manner that is efficient and acceptable to the current rights holders. The Model Water Transfer Act (Model Act) is the latest in a series of recent proposals to reform the state laws governing the market transfer of water and water rights in California, a state where transfers are more debated than consummated due to a plethora of obstacles. Transfers are more difficult in California than in other jurisdictions due to a number of unique circumstances. Developed water supplies are dominated by the two large public projects, the federal Central Valley Project (CVP) and the State Water Project (SWP). Under these two regimes, water is distributed largely through local district contractors. This scheme of developed surface water is the largest source of groundwater recharge in many areas of this state in which irrigators rely on groundwater more than anywhere in the western reclamation domain. As a result, water transfers often require approval at three levels, the local district, the Bureau of Reclamation or the Department of Water Resources, and the State Water Resources Control Board (Board). Thus, they are subject to many checkpoints, rules, criteria and inertial influences. Successful transfers across district boundaries are rare; multi-year transfers even more rare.¹

*Gregory A. Thomas, J.D., is the founder and chief executive officer of the Natural Heritage Institute, a non-profit natural resources conservation organization. Between 1983-88, he was visiting a law professor at UCLA, UC Berkeley, and universities in the People's Republic of China. From 1978-83, he was a senior attorney with the Natural Resources Defense Council's international program and later the managing attorney of its San Francisco office. His practice has encompassed virtually every aspect of natural resource management, including water, energy, air quality, biodiversity, environmental planning, and international conservation. He has experience in litigation and administrative trials, policy analysis, legislative advocacy, and consensus building processes.

The Model Act would make incremental progress in lowering some of the legal hurdles to water transfers, although it would sweep too broadly in expediting the Board approval process, as discussed below. Since previous efforts have foundered on attempting a more comprehensive set of reforms, incremental progress may be the prudent course. Yet, larger steps will eventually be needed, in our view, to allow water transfers to achieve their potential as a mechanism for expanding the beneficial use and reallocating the limited supply of water. In the California context, it is difficult to view state water law in isolation, fitting as it does within a water allocation system that is dominated by the CVP and its contracting districts. Thus, federal reclamation law and the incentives that drive local and private initiatives are as important as state law in devising an optimal water transfer system. Ideally, the proposal to reform state water transfer laws would derive from a comprehensive analysis of the critical constraints and disincentives, viewed from the vantage point of the actors at the critical decisional nodes, those who own or control the already allocated supply, those who want access to that supply, those who are at risk when water rights are transferred, and those in the approval loop.

Proceeding from a global vantage point, it is easier to discern where the state rules need to be "tuned up" to make a comprehensive approach work. It is also easier to see where the federal rules are the critical constraint, and where the voluntary initiatives may need to be fostered. These insights would permit the proposed state law reforms to include incentives for private initiative in furtherance of transfers. It would also provide a source of advice to the U.S. Congress and the partisans in the current debate over reforms to reclamation law regarding how the federal transfer rules could be fashioned to produce an optimal state-federal transfer framework. While more ambitious, describing the larger institutional framework within which imported state laws could best operate would be a valuable service.

Tara Mueller, J.D., at the time this was written, was a staff attorney at the Natural Heritage Institute, a non-profit, public interest natural resources law and consulting firm in San Francisco. She is currently the Director of the Biodiversity Legal Program at the Environmental Law Foundation in Oakland, California. Ms. Mueller's practice focuses on endangered species, forestry, water rights and water quality, land use, and wetlands law. She is the author of the *Guide to the Federal and California Endangered Species Laws*, published by the Planning and Conservation League Foundation, as well as numerous articles on endangered species and other environmental issues. Ms. Mueller is also the co-chair of the Legislative Committee of the Environmental Law Section of the California State Bar. She is a 1992 graduate of Hastings College of Law.

1. For a more detailed explanation of the local, state and federal regimes which govern market reallocations of water in California, see Brian E. Gray, *The Modern Era in California Water Law*, 45 HASTINGS L.J. 249 (1994). For a more detailed explanation of the institutional barriers which have historically inhibited a more prolific California water market, see Barton H. Thompson, Jr., *Institutional Perspectives on Water Policy and Markets*, 81 CALIF. L. REV. 671 (1993).

It is from this vantage point that we now turn to address particular issues raised by the Model Act, highlight areas of special concern, and offer suggestions on alternative solutions. In Part II, we begin by proposing an incentive scheme intended to stimulate user-initiated transfers and enhance the role and participation of water districts in the movement of water across district boundaries. In Part III, we focus on the special problems associated with limiting transferable water to the either consumptively used or irretrievably lost. In Part IV, our attention turns to the Model Act provision which protects groundwater resources, and the essential function it would serve particularly in areas of critical overdraft. Part V concentrates on the significant dangers inherent in the Model Act's sweeping reform of the administrative approval process. Recognizing the importance of an expedited process, we offer an alternative approach which not only streamlines transfer approvals, but at the same time adequately safeguards environmental protection. Part VI focuses on third party economic consequences of an aggressive water market, and in Part VII, we promote an impact compensation fund better designed to ameliorate these concerns and simultaneously facilitate transfer activity. Part VIII focuses on the Model Act's cumulative instream flow provision, the effectiveness of which could be enhanced by a simple measure bringing greater security to voluntary flow dedication. Finally, in Part IX, we question the propriety of the severely limiting time constraints under which the Board would be required to promulgate regulations sufficient to protect Delta water quality standards.

II. Creating Incentives for Water and Irrigation Districts to Facilitate Water Transfers

A key to voluntary water transfers is to encourage water districts to play a facilitative role. A fundamental impediment has been the stalemate over the extent to which members of water districts enjoy a transferable interest in the water allotted to them and the extent to which other members, or the district itself, can or should be able to constrain or veto member initiated transfers. The issue is whether a member of the district holds an individual water right unencumbered by any collective rights. In one view, district members have a legal right to transfer their allotment outside the district. In the view of many district managers and members, however, water supplied by a district is like a common property resource, in that any allotment not used by one district member reverts to the common pool and becomes available for other members to use. In fact, the internal allocation rules, arrangements and contracts with districts are quite variable, and in many, the common property mentality is not without a rational basis.²

2. GREGORY A. THOMAS AND MICHELLE LEIGHTON-SCHWARTZ, NATURAL HERITAGE INSTITUTE, LEGAL AND INSTITUTIONAL STRUCTURES FOR MANAGING AGRICULTURAL DRAINAGE IN THE SAN JOAQUIN VALLEY: DESIGNING A FUTURE, 116-30 (September 30, 1990) (report prepared for the Sam Joaquin Valley Drainage Program).

The Model Act addresses this issue in Part H by authorizing districts to act as the transfer agent for water made available by its members³ provided that the governing body of the district approves.⁴ In our view, this approach is too timid. Several measures for enhancing the role of water districts in the movement of water across district boundaries are presented below.

The Natural Heritage Institute (NHI) has proposed that incentives be provided to encourage districts to establish water "buy back" programs in which the districts would offer to purchase water back from its members at prices, amounts, and times that respond to offers to buy received from outside of the district. Ideally, the offers to buy and sell would be posted on a state-wide electronic bulletin board, which we refer to as the "California Water Exchange" (CWE).⁵ A software package for this has

3. A MODEL WATER TRANSFER ACE FOR CALIFORNIA [hereinafter MODEL ACT] § 801(b), reprinted in 4 WEST-NORTHWEST 3 (1996).

4. *Id.* § 802.

5. The California Water Exchange might confer the following structure and powers:

- The CWE could be set up without authorizing legislation by simply creating a private, non-profit corporation. Its board of governance might include potential buyers and sellers of water (including environmental water purchasers), representatives of water districts such as the Association of California Water Agencies, and agencies that own or control the conveyance systems. It might be funded through modest service charges paid by parties to water transfers.
- CWE would develop a computerized water transfer data base that will match potential buyers with potential sellers. It will be accessible by modem to permit computerized trading.

The CWE might enter into options with buyers and sellers to lock in prices and quantities of both offers to buy and offers to sell. It might also enter into options for conveyance capacity for water transfers and make this available to facilitate consummated deals on a cost-reimbursable basis. All these transactions would be subject to a modest surcharge to defray the CWE's operating costs.

- CWE will facilitate transfers but will not "occupy the field." That is to say, parties will deal with CWE on a voluntary basis only. Any buyer or seller would remain free to deal separately.
- It may act as an escrow agent for transfer.
- It may receive environmental mitigation payments provided by parties to a transfer. Such payments may make that transfer eligible for fast-track treatment by the State Water Resources Control Board (State Board), as described below. CWE would expend the mitigation funds as intended by the source or as instructed by the State Board. For instance, it might contribute the funds to the Central Valley Project Improvement Act (CVPIA) Restoration fund, or use the funds to purchase instream flows pursuant to recommendations by the U.S. Fish and Wildlife Service or the California Department of Fish and Game.

already been developed for NHI's water conservation project with water districts under a grant from the U.S. Bureau of Reclamation. Under the Central Valley Project Improvement Act (CVPIA), all transfers of CVP water require the approval of the Bureau of Reclamation.⁶ It would be highly desirable to have a centralized entity to deal with the Bureau for these approvals. The districts would set these terms to respond to offers to buy water from the CWE of any other entity. As provided by sections 801(b) and (c) of the Model Act, any member's decision to release water back to her district would be wholly voluntary.⁷

To assure that in-district needs would be met before water left the district, the buy back programs should include a right of first refusal exercisable by any district member at the bid price plus a pro rata share of the costs incurred by the district in administering the program.⁸ The remaining buy back water would be available to satisfy purchase offers from outside of the district (i.e. from the CWE). Notably, all of this can be accomplished under existing law,⁹ including the buy back programs and the electronic bulletin board.

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- If requested by the parties to a transaction (and if its costs are defrayed by those parties) CWE may represent the transaction in the State Board's approval process. If approval by the Bureau of Reclamation (Bureau) is required, it may also represent the parties in that proceeding. CWE would issue annual reports of transactions consummated and their economic effects.
 - CWE might also study and report on constraints and barriers to transfers and make recommendations on how to remove them.

6. See Central Valley Project Improvement Act [hereinafter CVPIA], Pub. L. No. 102-575, §§ 3405(a)(1)-(2), 106 Stat. 4600 (1992).

7. MODEL ACT §§ 801(b)-(c).

8. However, there is an issue whether the right of first refusal should not apply to environmental water transfers which confer a broad public benefit that should not be subject to preemption by water users interested in purchasing the same water.

9. Recent additions to state and federal water transfer law seek to encourage an active water market, and many of the more important legislative reforms necessary to carry this forward have already been accomplished. See generally Gray, *supra* note 1. CVPIA section 3405(a) specifically encourages user-initiated transfers by significantly reducing the plenary power of Central Valley Project water agency contractors to block extrajurisdictional transfers. See CVPIA, Pub. L. No. 102-575, § 3405, 106 Stat. 4600 (1992). Moreover, section 3405(a) provides for transfers to private non-profit organizations such as the CWE for any purpose recognized as beneficial under applicable state law, and section 3405(a)(1)(F) gives project users a pre-emptive right of first refusal over all transfers of project water for uses outside the CVP service area. *Id.* California Water Code sections 109(a) and (b) declare it State policy to facilitate the voluntary transfer of water and water rights where consistent with the public welfare of the place of export and place of import, and direct all appropriate State agencies to provide technical assistance and identify conservation measures that will make additional water available. CAL. WATER CODE § 109 (West 1996). Section 481 requires that entities seeking to enter into water transfer arrangements, as well as a list of the physical facilities which may be available to carry out water supply transfers. *Id.* § 481. Section 382

The buy back water could be generated through any of the techniques that constitute "conserved water" as defined by the Model Act, including on-farm efficiency improvements, crop shifting or land fallowing.¹⁰ The district would also generate water for transfer (or use within the district) by reducing losses in its water delivery system (e.g., lining canals). Some of the buy back water would be purchased by other growers or agricultural districts and would remain in the agricultural economy. However, some buy back water would be purchased by municipal districts or for environmental purposes. With respect to this fraction, the only potential adverse effect on the local economy would be from reduced agricultural production as a result of fallowing land. Other means of generating buy back water would not reduce agricultural production.

To address local impacts of land fallowing, districts could institute an impact mitigation program and impose a surcharge on water transfers out of the district to finance it. This fee would presumably not apply to the exercise of rights of first refusal by growers within the district, thus creating a price differential between in-district and out-of-district transfers. This should be legitimate as long as the assessment was in fact used to mitigate impacts of transfers. Under this approach, the responsibility for avoiding or mitigating the adverse effects of water transfers on the local community would lie with the local water districts.

All of this is theoretically achievable. What is lacking is sufficient incentives for the districts to undertake this facilitative role. NHI has proposed that districts which develop "buy back" programs or other facilitative mechanisms that are approved by an appropriate regulatory body should be eligible for certain rewards or privileges. For instance, certain requirements of federal reclamation law might be regarded as satisfied in the case of approved programs.¹¹ Similar consideration should be given to benefits that might accrue

authorizes local water agencies to sell, lease, exchange, or transfer water that is surplus to the needs of the agency's users, and sections 1810-1814 prohibit state and local agencies from denying a bona fide transferor of water the use of unused capacity in a water conveyance facility. *Id.* §§ 382, 1810-1814.

10. MODEL ACT § 501.

11. Our suggestions include:

- Such programs would automatically satisfy the water conservation mandates of the CVPIA and the Reclamation Reform Act.
- Districts with approved programs would be entitled to have their determinations of "unreasonable impact" under section 3405(a)(1)(k) of the CVPIA treated either as conclusive, with substantial deference, or with a rebuttable presumption of correctness in the Bureau's approval process. See CVPIA, Pub. L. No. 102-575, section 3405(a)(1)(k), 106 Stat. 4600(1992).
- Members of districts with approved plans would not have to pay the "M&I" surcharge that the Bureau otherwise exacts under the CVPIA when they exercise a right of first refusal (provided the restoration fund is otherwise made whole through, for instance, an excess profit recapture policy as described elsewhere in this article).

under state law. Creating such an "enabling environment" for water transfers may ultimately prove to be more important for facilitating water transfers than the legal reforms proposed in the Model Act.

III. The Consumptive Use Limitation, the Connection Between Groundwater Recharge/Discharge and Surface Water Transfers, and Avoiding Adverse Effects on Third Parties and the Environment

California agriculture is heavily reliant on groundwater, which comprises some 40% of water for this sector.¹² This is more than in any other western state.¹³ In the Central Valley Project service area south of the delta, deep percolation from surface water allocation contributes more to groundwater recharge than does natural runoff.¹⁴ CVPIA transfer rules confine transferable water to that fraction irretrievably lost to subsequent beneficial use¹⁵ and thus render this incidental recharge water ineligible for transfer (except in areas where the groundwater is too saline for reuse, e.g., in the most severely impacted of the drainage-problem areas on the west side of the San Joaquin River).¹⁶ There is also a state law presumption that only consumptive use is subject to transfer.¹⁷ Yet, groundwater recharge is nowhere specified as an

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- The degree of latitude and discretion accorded to the district in the transfer approval process should obviously depend upon how exacting the criteria are for approving district water transfer programs. If the criteria assure that the district will not use the "unreasonableness" determination to thwart transactions that are consistent with the intent of the CVPIA, districts with approved programs can be given broad latitude to manage and approve the transfer of water out of and into the district.

12. CAL. DEP'T OF WATER RESOURCES (hereinafter DWR), CALIFORNIA WATER PLAN UPDATE, BULLETIN 160-93, at 79 (1993).

13. UNITED STATES GEOLOGICAL SURVEY, NATIONAL WATER SUMMARY 1987 - WATER SUPPLY AND USE, Table 19 (1987) (summary by State of freshwater withdrawals by source and category of use).

14. DWR, *supra* note 12, at 82.

15. CVPIA, Pub. L. No. 102-575, § 3405(a)(1)(I), 106 Stat. 4600 (1992).

16. See FINAL REPORT OF THE SAN JOAQUIN VALLEY DRAINAGE PROGRAM, A MANAGEMENT PLAN FOR AGRICULTURAL SUBSURFACE DRAINAGE AND RELATED PROBLEMS ON THE WESTSIDE OF THE SAN JOAQUIN VALLEY, [hereinafter FINAL REPORT] (Sept. 1990) (providing a comprehensive study of agricultural drainage and drainage-related problems affecting the west side of the San Joaquin Valley).

17. California Water Code section 1725, that applies to temporary changes in the point of diversion, place of use, or purpose of use, requires that transfers for a period of one year or less involve only the amount of water that would have been consumptively used or stored in the absence of the proposed temporary change. The statute defines "consumptive use" as the amount of water consumed through use by evapotranspiration,

authorized purpose of the CVP or the SWP.¹⁸ Such rules to protect this fraction of irrigation water applications from transfer in effect confer upon the groundwater users a vested right to this recharge water.

The Model Act appears to retain the rule that only water that would otherwise have been consumptively used is eligible for transfer. We so infer because approvals of transfers are made contingent upon a finding that the transfer, be it short or long-term, would not result in significant injury to any legal user of water, including, presumably, groundwater users, nor unreasonably affect fish, wildlife, or other instream beneficial uses.¹⁹ This "consumptive use limitation" implicates the fundamental issue of water transfer reform which has heretofore been given scant attention in the debate. Yet, it defies finesse.

The rule that transferable water is limited to the fraction consumptively used makes sense where the water originates within the same hydrologic basin in which it is used. Within a hydrologic unit, surface and groundwater are unitary. Water percolating into the groundwater can be recovered and applied once again to the surface. But in California the state and federal projects, which dominate the water supply system, are designed to move water out of "basins of origin" to service areas which are in hydrologically disconnected basins (e.g., from the Sacramento to the San Joaquin basin; from the San Joaquin basin to Kern County; and from the Trinity River basin to the Sacramento basin). Where the water is imported into a CVP or SWP service areas, the consumptive use limitation arguably should not apply to the transfer of this water to other users within or outside of that service area.

The perverse effects of limiting transfers to water that does not return to beneficial use are twofold. First, this criterion places a large fraction of the developed water supply outside of the market. This is most unfortunate, in that

underground percolation, or otherwise removed from use in the downstream water supply as a result of direct diversion. *See* CAL. WATER CODE § 1725 (West 1996). No similar limitation applies to long-term transfers under sections 1735 and 1736, the corollary to which is that there is no exemption from California Environmental Quality Act either. *Id.* §§ 1735-1736. This, in conjunction with application of the "no injury" rule, has effectively limited transferable water in California to that consumptively used.

18. A 1937 Act authorized the Central Valley Project under the Reclamation Act to be used for "first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and third, for power." Act of Aug. 26, 1937, Pub. L. No. 75-392, 50 Stat. 850 (1937). *See also* CVPIA, Pub. L. No. 102-575, § 3402, 106 Stat. 4600(1992); and CAL. WATER CODE §§ 100000-10011 (West 1996).

19. MODEL ACT § 404(a) (short-term transfers) and (b) (long-term transfers). This presumably includes groundwater pumpers and users of tailwater or return flow. Section 404(b). *See also* section 502 which provides that transfers of "conserved" water shall not exceed the average annual quantity of water "consumed" by the transferor or irretrievably lost to all consumptive use during the ten years immediately preceding the transfer. *See infra* Part V for NHI's comments on the Model Act's specially expedited process for "conserved" water.

the primary advantage of the water markets is that it "unlocks" the water supply from the shackles of the prior appropriation doctrine which allocates water on the basis of the sequence of acquisition in contrast to its highest economic or social value. Second, this rule would often exclude from transfer the very water that is most easily salvaged without deleterious effects on existing uses: water liberated through efficiency improvements such as lining canals or improving water application techniques or technologies on the farm.²⁰ In short, the very strategies that have been the focus of most water conservation successes in the state, including the Imperial Irrigation District-Municipal Water District collaboration, give rise to water that may not be eligible for transfer.²¹ This limitation on transferability is a serious deterrent to water transfers in California.

The consumptive use limitation is intended to protect the sequential uses of return flow and deep percolation. Sequential "users" of excess irrigation applications also includes the environment. Wetlands and springs systems sometimes depend upon excessive irrigation applications.²² Also, in some districts, such as Arvin Edison, surface water deliveries are intended to benefit the members who use groundwater as well, and these members pay for that recharge water.²³

Protecting these uses, while avoiding the rigidities associated with recognizing a universe of subsidiary water right, is the challenge facing water rights reformers. A partial solution may lie in distinguishing between the rights that can accrue to subsidiary users of native waters, as opposed to imported waters, and to distinguish between secondary users who pay for this water, and those who do not. The former distinction is already recognized in existing law, but need to be reaffirmed and carried forward into water transfers law. The California rule appears to be that an importer of surface water does not relinquish control of the return flow; that is, the importer can recover the return flow irrespective of whether others are making use of it.²⁴

The fundamental question is whether the return flow and deep percolation of imported water can also be salvaged for transfer in cases where the secondary users do not pay a share of the cost of importation. Stated another way, the question is whether water transfer policy should recognize a distinction between the transferability of salvaged surface water depending on

20. The consumptive use limitation confines transfers to water that would otherwise be lost to evaporation, transpiration, or flows to saline sinks. The universe of conservation techniques that would generate transferable water is accordingly limited to land fallowing, crop substitution, or techniques to reduce evaporation, such as replacing sprinklers with drip irrigation systems. See MODEL ACT § 501.

21. See discussion of this case in Gregory A. Thomas, *Conserving Aquatic Biodiversity: A Critical Comparison of Legal Tools for Augmenting Stream Flows in California*, 15 ENV'T'L L. 3 (1996).

22. DWR, *supra* note 12, at 221-222. See also, FINAL REPORT, *supra* note 16, at 21.

23. ARVIN-EDISON WATER STORAGE DISTRICT, THE ARVIN-EDISON WATER STORAGE DISTRICT WATER RESOURCES MANAGEMENT PROGRAM, (May 1993).

24. See *City of Los Angeles v. city of San Fernando*, 14 Cal. 3d 199, 260-261 (1975).

whether it is native or imported and, if imported, whether the secondary user pays part of the cost of importation? Under this distinction, where a local water agency or grower takes steps to reduce the deep percolation or return flow of imported water, that salvaged water would be transferable irrespective of the effect on "free-rider" secondary users. The transferability would depend only on a showing that surface water applications or conveyance losses were reduced through measures implemented by the transferor and that the source of the imported water is hydrologically disconnected from the groundwater basin.

NHI recommends that the law create a rebuttable presumption, as outlined above, where the water is supplied by the state and federal water projects and where district members pay the district nothing for groundwater recharge. We further recommend that all surface water applied in the area declared by the San Joaquin Valley Drainage Program to be a "drainage impacted area" enjoy a presumption that deep percolation does not return to usable groundwater, thus allowing water efficiency improvements to generate transferable water.

This approach would not deprive "free-rider" groundwater users of the recharge water on which they have historically relied. However, it would require them to pay for it in market transactions instead of receiving it as a free good. This change would benefit the growers and urban users who can afford to pay market rates for water, but would disadvantage farmers who rely exclusively on groundwater within the CVP service area. The net effect would be to make much more water available for transfer than under the Model Act (or the current regime) and therefore would significantly lower the price. NHI believes that this is a net social benefit, particularly when combined with the next policy proposal.

We hasten to add, however, that secondary environmental uses of imported water may have to be treated differently than secondary consumptive uses. Whereas it is reasonable to require profit-generating uses, such as farms, to pay for their secondary uses of imported water (which they now receive for free), the same does not hold for the environment. Whatever incidental benefit aquatic environments may receive in the import area has usually been paid for at a high environmental cost in the export area. Thus, NHI support the Model Act's provisions limiting the transfer of "non-conserved" water to situations which would not unreasonably affect fish, wildlife, or other instream beneficial uses²⁵ and contends that a similar provision should protect the environment from transfers of "conserved" water.²⁶ Moreover, NHI finds shortcomings in the procedures for Board approval and judicial review of water transfers. These shortcomings are discussed below.

25. MODEL ACT §§ 404(a)(2), (b)(2).

26. The provision would apply to sections 502 and 503 of the Model Act. "Conserved" water is broadly defined by the Model Act which creates a fundamental problem with the expedited transfers under Part E. See MODEL ACT § 501. See discussion *infra* Part V(C).

IV. Protecting Groundwater Resources

Whether or not recharge water is made eligible for transfer, it is important that surface water transfers not be allowed to contribute to groundwater depletion. Where irrigators have access to both ground and surface water, substitution between them is automatic, routine, and widespread.²⁷ To protect groundwater tables from additional depletion, liberalized surface water transfer rules must assure that out-of-basin surface water transfers do not result in groundwater substitution. This is particularly important if recharge water originating from the CVP and SWP is made eligible for transfer, as it should be. With this limitation, liberalized transfers would not contribute to net groundwater depletion.

Therefore, we support the Model Act's provision that surface water transfers in areas of critical overdraft should not be permitted if the transferred surface water is replaced with groundwater, except in specified circumstances,²⁸ and would broaden that protection to cover all overdrafted aquifers so that transfers do not exacerbate groundwater depletion. We would also clarify this section to make clear that groundwater substitution is not prohibited if part of a conjunctive use program that is operated to ensure no long-term net depletion of groundwater.

V. Expediting Approvals of Transfers

Perhaps the greatest encumbrance on a functioning water market is the multiple approval checkpoints under California and federal reclamation law. These particularly bedevil the very types of transfers with the greatest potential to resolve the most serious water reallocation needs of the state: that is, long-term or permanent transfers across district boundaries for new uses. Often these are subject to at least three approval processes: by the district of origin, by the Bureau of Reclamation and by the Board.²⁹ If water transfers are to fulfill

27. Personal communication to Gregory A. Thomas, Westlands Water District staff.

28. MODEL ACT § 208.

29. CVPIA section 3405(a) states that:

All transfers to Central Valley Project water authorized by this subsection shall be subject to review and approval by the Secretary under the conditions specified in this subsection. Transfers involving more than 20 percent of the Central Valley Project water subject to long-term contract within any contracting district or agency shall also be subject to review and approval by such district or agency under the conditions specified in this subsection . . .

CVPIA Pub. L. No. 102-575, § 3405(a), 106 Stat. 460 (1992). California Water Code section 1727 specified that the State Board, upon receipt of notification of a proposed temporary change in point of diversion, place of use, or purpose of use, make an evaluation sufficient to determine that the proposed change would not injure any legal user of water, and that it would not unreasonably affect fish, wildlife, or other instream beneficial uses. CAL. WATER CODE § 1727 (West 1996). A similar requirement is mandated by section 1736,

their potential for improving the social benefits derivable from a limited water supply, water transfer reforms must include an expedited approval process for those categories of transfers that pose no appreciable potential for adverse impacts on other water users or the environment.

While acknowledging the importance of expediting approvals, we fear that the Model Act sweeps too broadly in its specification of the types of transfers that would be eligible for fast-track treatment and, by purporting to codify a detailed administrative review process, may be overly pre-emptive of the Board's prerogative and judgment on these inherently administrative matters. We first summarize the process reforms proposed in the Model Act, which give us pause, and then suggest an alternative that would entrust to the Board's rulemaking the specification of the types of transfers that would be eligible for summary approval, as well as the appropriate process for doing so, under objectives and criteria that would be enshrined in the water code.

A. The California Environmental Quality Act

One method by which the Model Act attempts to expedite approval of water transfers is by exempting short-term transfers requiring Board approval from the California Environmental Quality Act (CEQA).³⁰ Short term transfers (defined by the Model Act as those whose term is two years or less³¹) are already exempt from the requirement for preparation of an environmental impact report (EIR) under CEQA if they are environmentally benign. However, since any change in the water regime may result in some localized reduction in flows, we suggest a more practical test for EIR exemption than avoidance of any significant environmental impact. NHI believes that transfers eligible for expedited approval should be confined to those that produce a net environmental benefit. Thus, no EIR would be required if the initial evaluation under CEQA establishes that the transfer will result in a net environmental benefit, in which event the transfer should be entitled to a mitigated negative declaration. The Model Act does not include this important qualification on eligibility for EIR exemption.³² One way to assure net environmental benefit is by creating an impact mitigation fund financed by recapturing excess profits from water transfers. If established, as proposed by NHI below, this device could automatically satisfy the net benefit test and, hence, exempt the transfer from the EIR requirement.

upon petitions for long-term transfers. *Id.* § 1736. Notably, State law under Water Code sections 1726 and 1736 also requires that the Department of Fish and Game be notified of a proposed change for both temporary or long-term water transfers. *Id.* §§ 1726, 1736. This frequently will add yet a fourth layer of administrative review to the approval process.

30. MODEL ACT § 209.

31. *Id.* § 204.

32. *See generally* § 209.

B. General Standards and Procedures Governing Water Transfers under Part D

Part D of the Model Act sets forth the general procedures governing the Board's review and approval of water transfers.³³ This Part substantially expedites the water transfer approval process for all transfers, both short-term and long-term. The approval procedures are strictly compressed, and only parties that file a timely protest will be heard. If this streamlined process is to ensure that all interested parties will have an opportunity to be heard, it is imperative that the notification procedure be ample. Publication in one local newspaper and issuance of a general notice by the Board is not sufficient. At a minimum, the Board should be required to maintain a list of potentially interested parties and require the transferor to provide initial written notice to these parties. Thereafter, service should be required only on those who file a notice of intent to participate.

The Model Act restricts standing to protest a proposed transfer to "water users that may be affected by the proposed transfer and other interested parties," without specifying that environmental organization qualify as "interested parties."³⁴ If environmental organizations do not have standing to file a protest, this would have very serious implications since the Model Act only requires the Board to give notice and an opportunity to be heard to protestants, and only protestants are permitted to seek judicial review of the Board's decision to approve or deny a transfer.³⁵

While we are sympathetic to the need to streamline the transfer approval process, in many cases the time periods within which the Board must review and approve a transfer under the Model Act may prove to be unreasonably short. For short-term transfers, the Board must complete its investigation and prepare a written analysis of the proposed transfer no later than thirty days after the investigation is commenced.³⁶ For long-term transfers, this review and analysis must be completed within ninety days.³⁷ These time periods may prove insufficient for the Board to complete an adequate and comprehensive investigation and written analysis of complex transactions which may have many interrelated and potentially adverse impacts on other water users and the environment.

With respect to short-term transfers (which are exempt from CEQA review under the Model Act³⁸), the short time period for Board investigation is particularly problematic, since this is the only time such transfers will be subject

33. See generally *id.* §§ 401-406.

34. *Id.* § 403(d).

35. See generally *id.* §§ 401-406.

36. *Id.* § 403(e). The investigation must be commenced within ten days of the Board's receipt of a transfer petition. See *id.* § 403(c).

37. *Id.* § 403(e).

38. *Id.* section 209.

to any environmental analysis at all. With respect to long-term transfers (which are not exempt from CEQA review under the act³⁹), the unreasonably short time period for Board review of transfers is inconsistent with that statute, since it will often be impossible for the CEQA process to be completed within the ninety day time period, even if only a negative declaration is prepared. Unrealistically short processing periods are likely to give short shrift to the environmental consequences of proposed transfers.

Moreover, petitioners are only given twenty days to respond to the Board's analysis of the proposed transfer.⁴⁰ Only parties who have filed written protests are permitted to comment.⁴¹ The Board must hold a hearing on a long-term transfer petition within thirty days of completing its analysis; no hearing need be held on short-term transfer proposals.⁴² Lastly, the Board is given only twenty or thirty days, respectively, to render a decision on a proposed short-term or long-term transfer.⁴³ These time frames are unrealistic for proper public review of a transfer petition. And, it is unclear, particularly in light of the extremely expedited process for transfers of "conserved" water (see below), why it is necessary to streamline the review and approval process for all other transfers to this degree.

The standards by which the Board must review and approve a proposed transfer might insufficiently protect the environment. For short-term transfers, the Board must approve a proposed transfer unless it finds the transfer would result in significant injury to any legal water user or would unreasonably affect fish, wildlife or other instream beneficial uses. Moreover, the petitioner only has the burden of producing prima facie evidence that the proposed transfer would comply with these standards. Thereafter, the burden of proof shifts to any petitioner to prove, by a preponderance of evidence, that the transfer would violate the above standards.⁴⁴

C. Standards and Procedures for Specially Expedited Transfers of "Conserved" Water under Part E

Part E of the Model Act establishes an even more expedited process for review and approval of transfers of "conserved" water.⁴⁵ Under the Part E procedures, a transferor need only file a notice of intent to transfer and a declaration verifying the water transfer quantities with the Board. For water conserved through changes in acreage or type of crop irrigated, the calculations must be made in accordance with a statutorily-prescribed table rather than

39. *Id.*

40. *Id.*

41. *Id.*

42. *Id.* sections 403(g)-(h).

43. *Id.* section 403(h).

44. *Id.* section 404(a).

45. *See generally id.* §§ 501-507.

hydrologic analysis in the field.⁴⁶ Within thirty days, the Board must approve the proposed transfer if the transferor's calculations of the proposed quantity of water to be transferred are accurate.⁴⁷ If the Board fails to act on a proposed transfer of conserved water within thirty days, it shall be deemed approved.⁴⁸ Finally, although any "interested party" (again, this term is not defined) may submit written comments on the proposed transfer, the Model Act contains no requirement or authority for the Board to consider them.⁴⁹ In fact, the Board has no power to deny a proposed transfer on environmental (or any other) grounds. The only types of transfers expressly excluded from this part are long-term transfers of conserved water based upon land fallowing or retirement, which must undergo the relatively more rigorous procedures in Part D. Thus, under the Model Act, most water transfer transactions will be subject to almost no analysis, mitigation and public comment at all.

If "conserved water" is confined to water that does not otherwise return to beneficial use, including environmental uses, and to transfers that confer a net environmental benefit, as NHI has recommended, then, by definition, no party can be harmed by the salvage and transfer of that water.⁵⁰ This limitation must be patent, however, for quite commonly wetlands and instream flows depend upon water that is over-applied for irrigation. Establishing that the "conserved" water is not available for subsequent beneficial uses must be a sine qua non of eligibility for expedited approval. The fundamental problem is that the definition of "conserved water" in the Model Act is not so delimited. It would be far better to confine the category of transfers eligible for expedited treatment to those that do not jeopardize legitimate competing interests than to jeopardize the effort to streamline the approval process by attempting to sweep too broadly.

Finally, under the Part E process for transfers of conserved water, only the transferor is entitled to judicial review of the Board's decision.⁵¹ Standing to seek review should also be accorded to environmental interests, or alternatively, the right to compensation should be extended to environmental interests.⁵²

D. NHI's Proposal

In contrast to the approach of the Model Act, NHI suggests that the water code command the Board to exercise its rulemaking authority to develop a fast-

46. *Id.* § 503(a).

47. *Id.* §§ 504(d)-(e).

48. *Id.* § 504(f). *Id.* § 504(c).

49. *Id.* § 504(c).

50. The Act defines "conserved water" to include water conserved changes in acreage or type of crops irrigated, land fallowing or retirement, changes in operations, substitution of reclaimed water, pricing changes and other conservation measures. MODEL ACT § 501.

51. MODEL ACT section 504(h).

52. *See id.* § 504(l).

track approval process, under criteria codified by the statute.⁵³ The Board would determine which categories of transfers are sufficiently innocuous from the standpoint of protected legal interests (including the environment) to be eligible for expedited approvals, including exemption from CEQA. NHI suggests that the statutory criteria confine expedited transfers to environmental water transfers under section 1707 of the Water Code and transfers that confer a net benefit on the aquatic environment.⁵⁴ This could be accomplished through an environmental restoration or mitigation fee that would allow the net environmental benefits to be achieved through the operation of the water market. For instance, water might be purchased for areas with inadequate streamflows through an impact compensation fund, described *infra*, in Section VI.

The Board rules would also prescribe the "fast-track" approval process for those eligible categories of transfers. For these transfers, the Board would determine which type of hearing, if any, would be conducted, what kind of environmental documentation will be required, what manner of protest will be permitted, and how burdens of proof would be allocated.

VI. Third Party Economic Impacts

Section 404(c) of the Model Act is potentially quite troublesome. Disallowing long-term transfers based on land fallowing that would cause "substantial harm" to the local economy might be highly inhibitory of the very type of transfers that public policy should be encouraging. It is clear that the water that should move out of agriculture to meet other needs is the water that is being used least productively in that sector. Fully 20% of the water used in agriculture produces less than 5% of its profits.⁵⁵ This 20% would more than meet anticipated urban and environmental needs, such as the delta inflow standards.⁵⁶ NHI's research shows that if this water is tapped, the economic costs of meeting the new delta standards would be an order of magnitude less

53. We assume that by conferring fast-track approval authority, the water code would not change or enlarge the jurisdiction of the Board over, for example, pre-1914 or (adjudicated) riparian water rights. However, transfer by such water rights holders may be authorized to avail themselves of the CEQA exemption if the proposed transaction otherwise satisfied fast-track approval requirements.

54. See CAL. WATER CODE § 1707 (West 1996).

55. Sunding, et al., *The Costs of Reallocating Water from Agriculture*, 6 (July 1994) (unpublished research paper prepared under a cooperative agreement with the U.S. Environmental Protection Agency).

56. The water supply impacts of the 1995 water quality control plan were estimated in the environmental impact report at approximately 400,000 acre-feet as an annual average and up to 1.1 million acre-feet in critically dry years. See STATE WATER RESOURCES CONTROL BOARD, ENVIRONMENTAL REPORT, APPENDIX 1 TO WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN DELTA ESTUARY, Chapter VII (May 1995).

than if that water is taken pro rata out of existing agricultural uses. There are other areas where land retirement may be very desirable on environmental grounds, including the drainage impacted area on the west side of the San Joaquin and delta agriculture. These low productivity crops are largely found in particular pockets in California. In short, uneven impacts on local agriculture are both a likely and desirable result of a functioning water market.

The problem with meeting unmet water needs is that the water is already tied up in a vested rights system. The solution is to encourage water to move from existing beneficiaries to new ones, not to create additional rigidities. Granting local economies something in the nature of a vested right to retain water now used there is the opposite of the direction the state should go.

Rather than freezing agricultural water use into its existing pattern, as section 404 would do, it would be far more preferable to provide an impact compensation scheme. The Model Act's scheme and NHI's alternative proposals are discussed in the next sections.

VII. Third Party and Environmental Compensation and Mitigation

The Model Act features a \$5.00 per acre-foot "security deposit" on transfers of conserved water to be placed into an environmental and third party compensation fund.⁵⁷ NHI has proposed an alternative scheme for endowing the compensation fund and for its use. We favor creating an impact compensation fund by "recapturing" the excess profits when and where they accrue in water transfers. Profits may be regarded as excessive when the differential between the cost of water (including the cost of conserving or salvaging it) to the seller and the sales price less the "transaction costs" exceeds the level necessary to motivate the transfer. This can be ascertained by analyzing the value of that same block of water in other applications. The potential for excessive profits in water transfers is substantial in light of the facts that: (1) water is appropriated without payment to its original owner, the people of the state; (2) water is often delivered at highly-subsidized rates; and (3) large needs for water within the state remain unmet. If these excess profits were recaptured progressively (i.e., the percentage recaptured increases as the profit increases above a specified threshold) marginally profitable transfers would not be encumbered by a security assessment. Yet, the potential fund that could be created for impact mitigation and environmental restoration might be quite appreciable over time.

We would also suggest that the fund not be treated as a "security" fund where compensation would be limited to the amount collected as part of that particular transaction, but rather as an insurance fund that would compensate the full amount of "damage" caused to either the environment or other third party interests (limited in the case of economic injury as per section 506(b)(2) and further limited to transactional assistance). Environmental water transfers should not be subject to the profit recapture because this use of water does not

57. MODEL ACT § 505.

lead to environmental impacts that need to be mitigated and is not revenue generating.⁵⁸ The profits recaptured should be remitted to a non-governmental custodian to avoid the possibility of being diverted to the general fund by the legislature through its appropriation processes. Environmental water transfers should not be subject to a security deposit (see discussion *supra*), nor should they be subject to an excess profit recovery scheme.

VIII. Transfers of Water to Instream Uses

NHI supports the provisions of the Model Act concerning transfers to instream flows. We are particularly encouraged by the inclusion of a cumulative flow provision which helps ensure that such dedications will in fact be "wet" water; in other words, that water transferred to instream flow will not just serve to alleviate the pre-existing instream flow obligations of other water users. Without such a provision, the incentive to transfer water to instream flow is greatly reduced, since, instead of improving the status quo, such transfers simply substitute for current regulatory obligations.⁵⁹

However, we believe that the Model Act could provide even greater protection to voluntary dedications to instream flow through the simple and highly cost-effective device of an "instream flow registry." This computer database would be established and maintained by the Board. It would track all voluntary dedications and regulatory reservations applicable to a given stream segment in a cumulative manner, unless the parties to a particular transfer agreement expressly state their intention to use the transferred water to satisfy pre-existing regulatory obligations. The registry would thus ensure that environmental water transfers are truly additive to flows otherwise required by regulatory actions. In addition, the registry would make all instream flow reservations and dedications transparent so that all affected interests would know how much water is required to flow past particular diversion points and measuring stations at a given time. The net effect of this arrangement will be to encourage voluntary water transfers to instream flow, which will result in a substantial economic savings to the state.

We therefore strongly recommend that the Model Act be amended to include provisions establishing such an instream flow registry. For the past three years, NHI has sponsored legislation to codify the instream flow registry concept,⁶⁰ which has been co-sponsored by the Metropolitan Water District and

58. Note that section 505 of the Model Act does not exempt environmental transfers from the assessment of a security deposit. The Model Act also fails to specify in section 506 that parties contracting for environmental water transfers are entitled to file claims for compensation when that interest is injured. These sections should be amended to eliminate these problems. *See id.* §§ 505, 506.

59. Thomas, *supra* note 21.

60. Currently, the bill is AB 1533 (Cortese), introduced in the 1995 Legislative Session.

the Association of California Water Agencies. This legislation could be used as a template for similar provisions in the Model Act.

In addition, the Model Act fails to specify when and whether Water Code section 1707 changes are included within the term "water transfer." This creates serious ambiguities in that with section 1707 approvals, the underlying water right is not transferred.⁶¹ Rather, a change in use is effected. Clarification on this point would be desirable throughout the Model Act.⁶²

IX. Through Delta Transfers

The Model Act provides that no transfer of water through the Sacramento-San Joaquin Delta shall cause a violation of state and federal water quality standards.⁶³ It further requires the Board to promulgate regulations to implement this section within 180 days of the effective date of the Model Act.⁶⁴ Finally, as part of this rulemaking, section 206 authorizes the Board to require through-Delta transfers to include carriage water.⁶⁵

180 days is insufficient time within which to promulgate regulations adequate to protect Delta water quality standards. Section 206 itself requires the Board to consult with the California Department of Water Resources, California Department of Fish and Game, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the U.S. Environmental Protection Agency.⁶⁶ In addition, the Model Act requires the regulations to be peer-reviewed by academic experts in the fields of hydrology, marine biology, water supply engineering, water quality, water rights, and related disciplines.⁶⁷ Further, such regulations must undergo review pursuant to the California Environmental Quality Act and the Administrative Procedures Act.⁶⁸ All of this cannot possibly be accomplished in six months.

NHI recommends that the regulations assure that transfers through the delta in all cases result in a net environmental benefit. The Board could implement that objective by promulgating a table that specifies the additional amount of carriage water that must accompany each transfer within or through the Delta for various hydrologic conditions and types of water transfers.

61. See CAL. WATER CODE § 1707 (West 1996).

62. See *e.g.*, the Water Registry Provision of the Model Act.

63. MODEL ACT § 206.

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.*

68. CAL. PUB. RES. CODE §§ 21000-21172 (West 1996).

X. Conclusion

Water transfers have great potential as a mechanism for expanding beneficial use, reallocating limited supply, and improving the efficiency and productivity of water use. As California's population grows and water becomes an increasingly scarce resource, voluntary water markets must play a more prominent role in meeting the state's changing water supply needs. Beginning in 1979, the California Legislature enacted a series of statutes specifically directed at facilitating voluntary market transfers of water on a regional and statewide basis. These reforms narrowly focused on changes to the common law and statutory rules defining transferable interests in water, but failed to establish a functional water market. Relatively speaking, few interregional market reallocations have occurred in California, especially considering the sheer volume of water used and transported in the state. The bulk of the state's water supply remains tied to a legacy of "first in time is first in right," with large blocks dedicated to inefficient and often environmentally damaging uses. The result is that in drier years, other needs, arguably more valuable from a social and economic standpoint, frequently go unmet.

The Model Water Transfer Act represents an important step in the state's evolutionary progress toward a more effective water market. Its provisions would improve incrementally on the existing transfer regime, chipping away at several of the legal barriers which have traditionally stifled market transactions. The protection it provides groundwater resources and the assurance it would bring to environmental dedications represent important advancements in the development of sustainable transfer policy. Ultimately, however, the Model Act sweeps too broadly in its efforts to streamline approval procedures. By effectively removing important third-party protections, the Act unnecessarily compromises environmental and other public values. The Act also ignores potential actions which could ameliorate some of the more subtle but challenging obstacles to transfer activity. This would include an incentive structure encouraging user-initiated transfers and enhancing the role of water districts in the movement of water across district boundaries. The same applies to the impediment that arises at the interface of surface water transfers and groundwater management in California. Until the consumptive use limitation is revisited to better reflect principles of natural law and changing social values, a large portion of the developed water supply will remain outside the transfer market. In our view, these and other hurdles must be overcome before a functional water market can take hold. But as pointed out earlier, previous efforts stalled attempting a more comprehensive set of reforms, and perhaps incremental progress is the more prudent course. In any event, it is here that the Model Act holds its greatest value. It maintains momentum on positive transfer reform, while positing a sound initial framework from which an active market might operate.