COMMENT

The Search for New Supplies: Salvaging the Remains of Agricultural Water Conservation in California

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INTRODUCTION

California agriculture currently utilizes over seventy-five percent of the state's developed water supply.[1] However, the amount of irrigated acreage in the state has declined in recent years.[2] Meanwhile, California's urban sprawl continues, and urban water demand is expected to increase dramatically.[3] Moreover, California's environmental interests seek more water to augment instream flows and repair riparian habitat.[4] Augmenting future water supplies by building new dams and reservoirs is not a political or financial reality.[5] Hence, the drive to make

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[1] *See* CALIFORNIA DEPARTMENT OF WATER RESOURCES, CALIFORNIA WATER PLAN UPDATE, EXECUTIVE SUMMARY, BULLETIN NO. 160-93, 12 (1994) [hereinafter CALIFORNIA WATER PLAN UPDATE].

[2] *See id.* at 19-22. Agricultural net water demand will likely decrease by about 1.9 million acre feet ("maf"), from 26.8 maf in 1990 to 24.9 maf in 2020. *See id.* at 22. The California Department of Water Resources ("DWR") expects irrigated agricultural acreage to decrease by 400,000 acres by the year 2020. *See id.* at 37. DWR predicts that agricultural water conservation, retirement of land, and shifts to high-value, lower-water-use crops will reduce agricultural water demand by almost two maf. *See id.*

[3] *See id.* at 30 (stating that DWR projects total water shortages from 3.7 to 5.7 maf by 2020 for average water years). Drought year shortages may reach seven to nine maf by 2020. *See id; see also* Kevin M. O'Brien & Robert R. Gunning, *Water Marketing in California Revisited: The Legacy of the 1987-92 Drought*, 25 PAC. L.J. 1053, 1053-57 (1994) (discussing water supply and demand in California after 1987-1992 drought).

[4] *See* O'Brien & Gunning, *supra* note 3, at 1057 (stating that trend toward allocation to instream uses will diminish water available for other uses); *see also* Paul Williams & Stephen McHugh, *Water Marketing and Instream Flows: The Next Step in Protecting California's Instream Values*, 9 STAN. ENVTL. L.J. 132, 133-34 (1990) (advocating legislative reform in California to encourage water conservation and reallocation to instream uses).

[5] *See* Matthew Levinson, *California Water: An Economic Consideration*, 12 UCLA J. ENVTL. L. & POL'Y 183, 185 (1993) (arguing that building new water projects in California is not feasible). Federal funding subsidized a majority of the cost associated with the water projects of the past. *See* George Gould, *Water Rights Transfers and Third Party Effects*, 23 LAND & WATER L. REV. 1, 2-3 (1988) [hereinafter Gould, *Water Rights*]. This funding is no longer available in our present era of federal deficits. *See id.*

California developed most of the optimal sights for water projects early on, making the financing of suboptimal sites even more difficult. *See id.* at 3. Environmental resistance to new water projects has increased dramatically since the first projects were built. *See id.* Instream flow laws, the Wild and Scenic Rivers Act, the Endangered Species Act, and the National Environmental Policy Act all contribute to preventing new projects. *See id.*

In comparison, transfers of conserved water are relatively less expensive than financing new water projects. *See* Levinson, *supra*, at 185. Transfers of water conserved by a senior appropriator also offer the dependability associated with these senior rights. *See* George Gould, *Transfer of Water Rights*, 29 NAT. RESOURCES J. 457, 458 (1989) [hereinafter Gould, *Transfer of Water*].

the most of our currently developed water is in full force with agricultural water a primary target for reallocation.[6]

The voluntary reallocation of agricultural water occurs through transfers of water from farmers and water districts to urban and environmental water users.[7] California was the first western state to enact a comprehensive statutory scheme to encourage voluntary conservation and transfers of agricultural water.[8] Commentators initially praised California's innovative approach as the best way to encourage water exports from the agricultural sector to areas of import with increasing water demands.[9] However, fewer transfers occur in California today than occur in most other western states.[10]

The lack of conserved agricultural water transfers in California may be the result of three uncertainties associated with section 1011 of the California Water Code.[11] First, section 1011, the provision governing these transfers, does not define the term "conserved water."[12] Second, although section 1011 states that

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[6] *See* Lawrence McDonnell & Teresa Rice, *Moving Agricultural Water to the Cities: The Search for Smarter Approaches*, 2 W.-NW. J. ENVTL. L. & POL'Y 27, 28 (1994) (addressing reallocation of agricultural water).

[7] *See id.* at 27-28.

[8] *See* CAL. WATER CODE §§ 109, 382, 1011 (West Supp. 1997) (providing for voluntary transfers of conserved water). Several other states followed California's lead, including Washington, Montana, and Oregon. *See* James D. Crammond, *Leasing Water Rights for Instream Flow Uses: A Survey of Water Transfer Policy, Practices, and Problems in the Pacific Northwest*, 26 ENVTL. L. 225, 262 n.203 (1996) (describing Washington, Oregon, and Montana statutes that encourage voluntary conservation). Colorado also attempted to codify a conservation incentive program. *See* Michael Gheleta, *Water Use Efficiency and Appropriation in Colorado: Salvaging Incentives for Maximum Beneficial Use*, 58 U. COLO. L. REV 657, 674-75 (1988) (describing proposed Colorado legislative initiatives for conservation that were ultimately rejected).

[9] *See generally* Gheleta, *supra* note 8, at 673-74 (using California's legislation as example of incentive based system for water reallocation).

[10] *See* NATIONAL RESEARCH COUNCIL, WATER TRANSFERS IN THE WEST: EFFICIENCY, EQUITY, AND THE ENVIRONMENT 213-14 (1992) [hereinafter WATER TRANSFERS] (stating that transfers in California have not occurred on major scale). *But see* O'Brien & Gunning, *supra* note 3, at 1053-54 (recognizing increase in transfers under Drought Water Banks of 1991 and 1992).

[11] *See* Kevin M. O'Brien, *Water Marketing*, 19 PAC. L.J. 1165, 1169, 1173-75 (1988) (specifying unanswered questions about marketing salvage water); *see also* WATER TRANSFERS, *supra* note 10, at 70-84 (discussing role of law in facilitating water transfers).

[12] *See* CAL. WATER CODE § 1011. Section 1011 provides in pertinent part:

> (a) When any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation

conservation is a "reasonable and beneficial use" of water, the State Water Resources Control Board ("SWRCB") has not interpreted this phrase consistently.[13] Lastly, section 1011 does not address harm to third parties that may occur from conservation measures that fallow agricultural land or reduce return flows.

The uncertainties associated with section 1011, particularly with regard to fallowing and return flows, result in two troubling consequences for potential conservers of agricultural water. First, water users who contemplate investing in conservation are unsure whether they will have the right to use or transfer all the water saved due to their efforts.[14] Second, transferors are uncertain whether they must account for any injuries to third parties that result from their conservation and transfer of agricultural water.[15]

This Comment explores the reasons why transfers of conserved agricultural water are not more prevalent in California and recommends a proposal to increase water conservation efforts by clarifying section 1011 of the California Water Code.[16]

> efforts, any cessation or reduction in the use of the appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of the cessation or reduction in use. . . . For purposes of this section, the term "water conservation" shall mean the use of less water to accomplish the same purpose or purposes of use allowed under the existing appropriative right. Where water appropriated for irrigation purposes is not used by reason of land fallowing or crop rotation, the reduced usage shall be deemed water conservation for the purposes of this section.
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> (b) Water, or the right to use water, the use of which has ceased or been reduced as the result of water conservation efforts as described in subdivision (a), may be sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights, including, but not limited to, provisions of law governing any change in point of diversion, place of use, and purpose of use due to the transfer.

Id.

[13] *See* CAL. WATER CODE § 1011.

[14] *See* McDonnell & Rice, *supra* note 6, at 52 (discussing need to provide certainty in rights to conserved water); Robert A. Young, *Why Are There So Few Transactions Among Water Users?*, AM. J. AGRIC. ECON. 1143, 1144-45, 1149 (1986) (listing desirable attributes of water allocation system); *see also* WATER TRANSFERS, *supra* note 10, at 70-84 (suggesting improvements in conservation and transfer laws).

[15] *See* Gould, *Water Rights*, *supra* note 5, at 27-30 (recommending water transfer policy methods that ameliorate third-party impacts).

[16] This Comment will limit its discussion of water transfers to transfers of conserved agricultural water in California. For a complete picture of California water transfer law, see generally WATER TRANSFERS, *supra* note 10 (presenting overview of transfers in West);

Part I describes the legal background of California's legislation affecting transfers of conserved water. Part II examines two case studies that illustrate how efforts to conserve and transfer agricultural water under section 1011 may conflict with existing water law. Finally, Part III recommends an alternative approach to agricultural water conservation pursuant to section 1011 that promotes efficiency without wholesale reallocation from rural areas.

I. BACKGROUND

A. California Water Rights Law

Most agricultural water conservation in California involves appropriative water rights.[17] A water user obtains an appropriative water right by diverting a specific quantity of water and putting it to beneficial use in a specific location.[18] Appropriative water rights obtained prior to 1914 are termed "pre-1914 appropriative rights" and are governed by common law principles of prior appropriation.[19] Water users seeking to

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Gould, *Water Rights*, *supra* note 5, at 19-25 (discussing importance of effects on third party when transferring water); Brian E. Gray, *The Modern Era in California Water Law*, 45 HASTINGS L.J. 249, 272-96 (1994) (discussing California's water transfer law); O'Brien & Gunning, *supra* note 3, at 1053-57 (presenting water transfers in retrospect of 1987-1992 drought).

[17] *See* ARTHUR L. LITTLEWORTH & ERIC L. GARNER, CALIFORNIA WATER, 27-63 (1995) [hereinafter CALIFORNIA WATER] (describing water rights in California). California is unique among the western states in that it allocates surface water through two systems of water rights. *See id.* at 30-32. Besides appropriative rights, California also uses riparian water rights to allocate water. *See id.* Riparian land is the smallest parcel in a single chain of title that is contiguous to a natural stream and within the watershed of that stream. *See* Rancho Santa Margarita v. Vail, 81 P.2d 533, 547 (Cal. 1938). California allocates riparian water rights based on ownership of riparian land and riparian owners cannot lose their rights through nonuse. *See id.* at 560-61; Miller & Lux v. Enterprise Canal & Land Co., 147 P. 567, 577-78 (Cal. 1915).

Beyond appropriative and riparian rights, California also recognizes groundwater rights, pueblo rights, and prescriptive rights. These rights do not contribute significantly to the transfer of conserved agricultural water and are beyond the scope of this discussion. For a sound overview of these rights, see generally CALIFORNIA WATER, *supra*, at 27-63 (describing water rights in California); WELLS A. HUTCHINS, THE CALIFORNIA LAW OF WATER RIGHTS, 256-62, 298-343, 418-514 (1956) (providing comprehensive discussion of all water rights in California).

[18] *See* CAL. WATER CODE § 1450 (West 1971); People v. Shirokow, 605 P.2d 859, 864 (Cal. 1980) (noting that historical roots of appropriation doctrine was diverting water and putting it to use).

[19] *See* CALIFORNIA WATER, *supra* note 17, at 40-43. In 1913, California passed the Water

acquire appropriative water rights after 1914 must petition the SWRCB for an appropriation permit.[20] All appropriative rights are allocated according to the priority system.[21]

The "first in time, first in right" rule governs the priority system of appropriative rights.[22] Thus, water users who are the first to obtain appropriative rights hold senior rights to use the water of a particular stream system.[23] Junior right holders must not exercise their rights to the detriment of senior right holders on the same system.[24] If senior appropriators cannot use their entire water right, however, the unused water must flow to those next in line according to priority.[25]

The doctrine of reasonable and beneficial use limits all water rights in California.[26] California law measures the extent of the appropriative right by the amount of water put to reasonable and beneficial use.[27] Evidence of waste or non-use of an appropriative right can lead to curtailment or forfeiture of the

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Commission Act which formed the basis for appropriative procedure in California after 1914. *See id* at 31.

[20] *See id.* Agriculturalists possessing both pre-1914 and SWRCB approved appropriative rights may transfer water. *See* O'Brien & Gunning, *supra* note 3, at 1072-74 (describing rights subject to transfer). Pre-1914 appropriative right holders may transfer water if there is no adverse impact on other legal users. *See* CAL. WATER CODE §§ 1725 (West Supp. 1997); O'Brien & Gunning, *supra* note 3, at 1072. Appropriative users holding rights established after 1914 may transfer water only with SWRCB approval of a change in purpose, place, use, or point of diversion. *See* CAL. WATER CODE § 1701 (West 1971).

[21] *See* Irwin v. Phillips, 5 Cal. 140, 147 (1855) (stating that if water has already been diverted, newcomers rights are secondary); CALIFORNIA WATER, *supra* note 17, at 40-43 (presenting priority for first diverters).

[22] *See Irwin*, 5 Cal. at 147.

[23] *See id.* (explaining operation of "first in time, first in right" rule).

[24] *See* San Bernardino v. Riverside, 198 P. 784, 793 (Cal. 1921) (affirming that prior appropriators prevail over junior appropriators in times of shortage).

[25] *See* CALIFORNIA WATER, *supra* note 17, at 40-43.

[26] *See* CAL. CONST. art. X, § 2. Section 2 states:

> The right to water or to the use or flow of water in or from any natural stream or watercourse in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be serviced, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of diversion of water.

Id., see also Irwin, 5 Cal. at 147 (stating appropriator has no right to water wasted).

[27] *See Irwin*, 5 Cal. at 147; California Pastoral and Agric. Co. v. Madera Canal and Irrig. Co., 167 Cal. 78, 85 (1914).

right.[28] Courts and the SWRCB share authority to enforce the reasonable and beneficial use provisions in California.[29]

In the current era of growing water demand and stagnant supply, appropriative right holders are under increasing pressure to make their water use more reasonable by improving the efficiency of their water use.[30] However, whether water conservation efforts actually improve net water use efficiency depends largely on what form of conserved water these efforts produce.[31]

B. Defining Conserved Water

Section 1011 of the California Water Code defines "water conservation" as a reduction in the amount of water used to accomplish the same beneficial purpose.[32] However, the legal community[33] has used a variety of terms to describe conserved

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[28] *See* CAL. WATER CODE §§ 275, 1241 (West Supp. 1997).

[29] *See id.* § 275; CLIFFORD LEE, STAFF PAPER NO. 3: LEGAL ASPECTS OF WATER CONSERVATION: BACKGROUND AND ISSUES, CALIFORNIA GOVERNOR'S COMMISSION TO REVIEW WATER RIGHTS LAW 7-14 (1977) (describing judicial enforcement of reasonable and beneficial use requirement).

[30] *See, e.g.*, CAL. WATER CODE §§ 10900-04 (West 1992); CALIFORNIA DEPARTMENT OF WATER RESOURCES, STATE WATER CONSERVATION COALITION AGRICULTURAL CONSERVATION TASK FORCE, POLICY STATEMENT ON EFFICIENT WATER MANAGEMENT FOR CONSERVATION BY AGRICULTURAL WATER SUPPLIERS AND EFFICIENT WATER MANAGEMENT PRACTICES FOR AGRICULTURAL WATER SUPPLIERS — ON-FARM PRACTICES, C-3 (1994) [hereinafter SWCC POLICY STATEMENT] (describing conservation practices and policy for farmers).

[31] *See* LEE, *supra* note 29, at 38 (explaining that water conservation may alter existing water use patterns and affect water rights of existing users).

[32] *See* CAL. WATER CODE § 1011. Some forms of conservation include installing lower flow irrigation systems, growing crops that use less water, and reducing conveyance losses. *See* SWCC POLICY STATEMENT, *supra* note 30, at D-15 to D-16. Conveyance losses refer to evaporation or seepage losses that result from transporting water. *See id.* at C-6. Lining earthen or wooden conveyance ditches with concrete, changing from open ditches to pipes, or covering canals can all help reduce conveyance losses. *See id; see also* Gheleta, *supra* note 8, at 658 (describing methods that increase agricultural water use efficiency); *infra* notes 82-90 and accompanying text (describing lining of Crawford Ditch to reduce conveyance losses).

[33] The legal community refers to all courts, legislatures and agencies that establish rules and regulations governing water transfers in California.

water.[34] Terms such as "salvaged water," "reductions in consumptive use," and "reductions in return flows" have been used interchangeably to describe conserved water.[35]

Salvaged water includes water that would otherwise be lost to any subsequent beneficial use if it were not saved by artificial efforts.[36] Thus, salvaging increases the total amount of water available in the system.[37] Also, salvaged water, by definition, is water that was previously inaccessible. A water right holder can salvage water and transfer it without causing injury to any pre-existing right.[38]

Similarly, reductions in consumptive use free up water that was otherwise inaccessible to other users.[39] The California Legislature has defined consumptively used water to include water that is removed from use in a downstream water supply through direct diversion.[40] Thus, many forms of salvaged water may also be considered reductions in consumptive use. For example, a farmer may consumptively use irrigation water that deep percolates[41] from the field to an unusable underground basin. If the farmer salvages this water by employing new irrigation techniques that reduce deep percolation, the water saved would be both salvaged water and a reduction in consumptive use.

An appropriator's water that is not consumptively used or lost to the system may eventually make its way downstream to other water users in the form of return flows.[42] Return flows include

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[34] *See* LEE, *supra* note 29, at 38. Courts use the terms salvaged water, return flow, waste water, and seepage water interchangeably. *See id.* The classification of the type of water at issue affects a court's decision. *See id.*

[35] *See id.*

[36] *See* HUTCHINS, *supra* note 17, at 384-85.

[37] *See id.*

[38] *See id.* at 383-85. Water saved by removing excess vegetation from waterways is an example of salvaged water that would otherwise have been used for evapotranspiration by the vegetation and unavailable to those with rights to the waterway. *See id.* Evapotranspiration refers to the amount of water used by the plant tissues and evaporated off of the plant and surrounding soil surfaces. *See* SWCC POLICY STATEMENT, *supra* note 30, at C-3 n.1.

[39] *See* CAL. WATER CODE §§ 484, 1725 (West Supp. 1997) (defining consumptive use).

[40] *See id.* Water that is consumptively used includes the amount of water that is used for evapotranspiration by plants or that percolates underground to an unusable basin. *See id.*

[41] *See* Alexander Rhodes, *Capacity Sharing: The Next Step in Florida's Evolving Water Economy*, 26 STETSON L. REV. 805, 810 (1997) (defining deep percolation as movement of water from surface through soil to groundwater).

[42] *See* CALIFORNIA WATER, *supra* note 17, at 268-69; *see also* LEE, *supra* note 29, at 51-60

excess water from an original appropriation that returns to a stream or percolates underground to be used by other water users at a later time.[43] California common law entitles downstream water users who rely on return flows to use them to help satisfy their water rights.[44] Agricultural conservers often reduce return flows by employing conservation techniques that reduce the amount of excess water that leaves the farming operation.[45]

Fallowing agricultural land in order to transfer the unused water can reduce consumptive use as well as return flows.[46] Some fallowing of marginal farmland with severe drainage problems is desirable.[47] However, permanent fallowing of productive agricultural land can cause adverse consequences for rural economies that depend on agricultural production. Lower levels of crop production in an area reduce both the tax base of the county and its gross agricultural production.[48] Fallowing can also cause a decline in the surrounding environmental quality of a rural area.[49] As a result of these concentrated local impacts,

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(offering thorough discussion of return flows).

[43] *See* Gould, *Water Rights*, *supra* note 5, at 13-14. Reduced return flows might result from water saving due to the installment of a lower flow irrigation system or a tail water recovery system. *See* SWCC POLICY STATEMENT, *supra* note 30, at C-7. A tail water recovery system allows a farmer to capture and reuse extra water running off a field. *See id.* Return flows may include water that returns to a ditch or stream from irrigated land and imported water applied to overlying land that percolates to the groundwater basin. *See* LEE, *supra* note 29, at 51.

[44] *See* Steven E. Clyde, *Adapting to the Changing Demand for Water Use Through Continued Refinement of the Prior Appropriation Doctrine: An Alternative Approach to Wholesale Reallocation*, 29 NAT. RESOURCES J. 435, 449 (1989). However, a downstream appropriator cannot compel an upstream user to continue wasteful practices that produce return flows. *See id.* Additionally, a user who imports water to a region does not have a duty to continue producing return flows to downstream users who rely on the excess flows of imported water. *See* Stevens v. Oakdale Irrig. Dist., 90 P.2d 58, 62 (Cal. 1939) (holding that importer was under no duty to continue excess flow to downstream user).

[45] *See* Clyde, *supra* note 44, at 448-50 (discussing return flow problems with conservation). A conserver who wishes to transfer conserved water must account for injury to downstream users who rely on return flows. *See* Gheleta, *supra* note 8, at 659 (describing return flows and no injury rule).

[46] *See* McDonnell & Rice, *supra* note 6, at 50 (explaining mechanics of fallowing land and transferring water saved).

[47] *See, e.g.*, CALIFORNIA WATER PLAN UPDATE, *supra* note 1, at 176 (describing San Joaquin Valley Drainage Program).

[48] *See* WATER TRANSFERS, *supra* note 10, at 45-48 (presenting problems with fallowing agricultural land).

[49] *See id.* at 48-49 (describing local impacts due to fallowing). For example, land fallowing in Fresno County caused native vegetation of tumbleweeds to take over barren

fallowing land often invokes strong political opposition to water transfers.[50] Commentators disagree as to whether the act of fallowing should be classified as water conservation for the purposes of encouraging transfers of conserved agricultural water.[51]

Despite the complex terminology used to define conserved water, the California Legislature first legislated in this area with relatively broad strokes. In response to several years of drought in the 1970s, agricultural water conservation and water transfers became hot legislative topics in the early 1980s.[52] Today, legislating in the area of agricultural water conservation remains a political thicket.[53]

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lands, contributing to dangerous dust storms. *See* Peter Larsen, *Sleepy Towns Thrust Into Spotlight After I-5 Pileup*, L.A. DAILY NEWS, Dec. 8, 1991, at N1 (describing dust storm on section of Interstate 5 surrounded by fallowed land covered with tumbleweeds which caused massive pileup); *see also* SWCC POLICY STATEMENT, *supra* note 30, at C-10 (noting that retiring land from irrigated crop production can result in weed and pest control problems and toxic soils). The aesthetic and environmental values associated with agricultural lands surrounding rural communities are termed green-belt values. *See* Young, *supra* note 14, at 1145 (explaining green-belt values). Proponents of transferring water saved by fallowing argue that the loss of green-belt values is not a significant consideration because only the least marginally productive land is fallowed, improving overall water use efficiency. *See* WATER TRANSFERS, *supra* note 10, at 45. Other studies suggest that this is not the case. *See id.* Rather, those seeking to purchase transfers of agricultural water prefer water rights with the highest priority. *See id.* at 45-46. These rights often attach to permanent, expensive crops due to the nature of the higher priority water right. *See id.* at 461; Gould, *Transfer of Water*, *supra* note 5, at 458.

[50] *See* WATER TRANSFERS, *supra* note 10, at 224 (explaining political pressures in San Joaquin Valley that inhibit transfers); *Running on Empty Rain Hasn't Helped Much to Slake State's Mighty Thirst*, OAKLAND TRIB., March 17, 1991, at A13 (portraying one farmer's distaste for environmental pressure to fallow agricultural land in California's Central Valley); *see also* Levinson, *supra* note 5, at 200 (describing adversity towards transfers due to agricultural communities non-market attachment to water).

[51] *See, e.g.*, SWCC POLICY STATEMENT, *supra* note 30, at C-10 (stating that if land is voluntarily retired, water supplier, rather than water user, should put water to alternate beneficial use).

[52] *See, e.g.*, STATE OF CALIFORNIA, GOVERNOR'S COMMISSION TO REVIEW WATER RIGHTS, FINAL REPORT 1-2, 33-47, 71-96 (1978) (explaining need for water efficiency after 1976-77 drought and proposing legislation to address issue); CALIFORNIA ASSEMBLY OFFICE OF RESEARCH, A MARKET APPROACH TO WATER ALLOCATION (1982) (proposing additional market based policies to encourage conservation and transfers).

[53] *See* CALIFORNIA WATER, *supra* note 17, at 268 (discussing political nature of agricultural water conservation law). Littleworth and Garner aptly describe the creation of agricultural water conservation law as a "political thicket." *See id.*

C. California's Conserved Water Transfer Legislation[54]

In 1980, the Legislature declared California's policy on water conservation in section 109 of the California Water Code.[55] Section 109 stresses the need for certainty in the definition of water rights and the need to facilitate voluntary transfers as one option to meet the state's growing water needs.[56] At the same time, section 109 states that water transfers should occur only when the transfer is consistent with the public welfare regarding the places of export and import.[57] Thus, the Legislature adopted the common law "no injury" rule in section 109.[58] The no

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[54] *See* CAL. WATER CODE §§ 380-387, 1010-1011 (West Supp. 1997) (addressing water transfers). A short history on how these laws came about is helpful. In 1977 the Governor's Commission to Review California Water Rights Law finished its analysis of California's water rights law. *See generally* STATE OF CALIFORNIA, GOVERNOR'S COMMISSION TO REVIEW CALIFORNIA WATER RIGHTS LAW, FINAL REPORT (1977). The Commission noted that the current law providing for forfeiture of an appropriative water right after three years of nonuse was a disincentive to conservation. *See id.* at 60. The Commission recommended a change in the law that would eliminate this disincentive. *See id.* at 71. In 1979, the first version of section 1011 of the Water Code became law. *See* CAL. WATER CODE § 1011.

Three years later, the California Assembly Office of Research presented a report to the legislature entitled *A Marketing Approach to Water Allocation*. *See* CALIFORNIA ASSEMBLY OFFICE OF RESEARCH, *supra* note 52 (proposing market approach to facilitate water transfers). The report stressed the need to provide stability in water rights and flexibility in the administration of those rights to maximize efficient use of California's scarce water supply. *See id.* at 38-39. Finally, the report recommended several amendments to the Water Code to encourage conservation and facilitate transfers of water throughout the state. *See id.* at 46-49.

[55] *See* CAL. WATER CODE § 109 (West Supp. 1997). Section 109 states:

> The Legislature hereby finds and declares that the growing water needs of the state require the use of water in an efficient manner and that the efficient use of water requires certainty in the definition of property rights to the use of water and transferability of such rights. It is hereby declared to be the established policy of this state to facilitate the voluntary transfer of water and water rights were consistent with the public welfare of the place of export and the place of import.

Id.

[56] *See id.*

[57] *See id.*

[58] *See* CAL. WATER CODE §§ 1702, 1707. To approve a petition for transfer, the SWRCB must determine that the transfer will not injure other water right holders or adversely affect fish and wildlife. *See id.*; O'Brien, *supra* note 11, at 1169-75 (discussing no injury rule and problem defining amount of water available for transfer). *See generally* George Gould, *Conversion of Agricultural Water Rights to Industrial Use*, 27 ROCKY MTN. MIN. L. INST. 1791 (1982) (offering thorough discussion of no injury rule). The rule simply means that transfers may not change the availability of water to other rightful appropriators by

injury rule requires that the transfer of water not reduce the amount of water or water-related benefits upon which others rely.[59]

From the start, California's legislative attempt to balance the no injury rule with incentives for agricultural water conservation created controversy.[60] Junior appropriators argued that incentives to conserve should not allow senior users to profit from past wasteful practices.[61] Senior appropriators countered that few water users would invest in conservation if their efforts could lead to forfeiture and the water they saved could not be transferred.[62]

To remedy the senior appropriators' fear of forfeiture and provide incentives for conservation, the California Legislature

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increasing consumption or decreasing return flows. *See* Kidd v. Laird, 15 Cal. 162, 181 (1860) (holding that transfer cannot result in injury to junior appropriators); Gould, *Transfer of Water*, *supra* note 5, at 460 (describing early development of no injury rule in California). The no injury rule is also commonly referred to as the rule that the junior appropriator takes the stream system as he finds it at the time the appropriation begins. *See* O'Brien, *supra* note 11, at 1170. Injured parties may include downstream junior users who rely on the reduced flows. *See* Gould, *Water Rights*, *supra* note 5, at 13-14. Other injured parties include rural communities who lose tax revenues and jobs if local agricultural production declines due to water transfers out of their area. *See* O'Brien & Gunning, *supra* note 3, at 1078. Adverse effects on local communities as a result of transfers are termed third-party impacts. *See* Gould, *Water Rights*, *supra* note 5, at 13-28 (providing overview of third-party impact problems); *see also* O'Brien & Gunning, *supra* note 3, at 1078-83 (discussing dispute over severity of socio-economic impacts associated with water transfers).

[59] *See* O'Brien, *supra* note 11, at 1169-75 (describing requirements of no injury rule).

[60] *See* CALIFORNIA RESOURCES AGENCY, DEPARTMENT OF WATER RESOURCES, ENROLLED BILL REPORT, SB 1042 (1979) [hereinafter ENROLLED BILL REPORT, SB 1042].

[61] *See* Gray, *supra* note 16, at 274-76. Professor Gray notes the inherent conflict in allowing water wasters to avoid forfeiture of their rights. *See id.* Gray describes the enactment of sections 1010, 1011, and 1244 of the Water Code as the Legislature's choice to encourage voluntary reallocation of water. *See id.* The Legislature chose to encourage voluntary reallocation rather than rely on the Board to enforce the constitutional requirement. *See id.* Gray notes that these provisions did not make supporters or opponents of the no forfeiture policy happy. *See id.* Potential transferors remain concerned that any conservation and transfer effort will initiate investigations into reasonableness. *See id.* Others fear that these provisions are rewarding water wasters by allowing them to profit from water that rightfully belongs to the system. *See id*; *see also* Letter from Lowell Weeks, General Manager, Coachella Valley Water District, to Assemblyman Jim Costa, Chairman, Assembly Water, Parks and Wildlife Committee (April 19, 1984) (on file with author) (opposing AB 2542).

[62] *See* ENROLLED BILL REPORT, SB 1042, *supra* note 60 (supporting need to eliminate risk of forfeiture to encourage conservation); *see also infra* notes 82-90 and accompanying text (describing loss of investment in Crawford Ditch).

passed section 1011 of the California Water Code.[63] Section 1011 provides an incentive to conserve by stating that anyone entitled to the use of water under an appropriative right can sell, lease, or transfer conserved water.[64] Section 1011 also states that the failure to use all or part of an appropriative water right due to conservation is a reasonable beneficial use of water to the extent of the reduction.[65] By declaring the nonuse of water a beneficial use, the Legislature sought to allay fears among agricultural water users that conservation would result in forfeiture of a portion of their water right.[66]

Despite the express language of section 1011 and the California Legislature's declaration of a policy to support conservation under section 109, several questions remain about the transfer of conserved water.[67] First, the Legislature's failure to define "conserved water" in section 1011 leaves open the question which form of conserved water can be transferred. Section 1011 does not define conserved water or distinguish between water saved due to salvaging, reductions in consumptive use, or reductions in return flows.[68] Yet, section 484 of the Water Code limits transferable water to reductions in consumptive use.[69] Thus, it remains unclear which forms of conserved water can be transferred under section 1011 and what the varying implications are of each.

Moreover, the U.S. Bureau of Reclamation ("USBR") and the California Department of Water Resources ("DWR"), the two agencies responsible for operating California's water conveyance facilities, impose their own limits on transfers of conserved water.[70] DWR uses the terms "new water" and "real water" to

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[63] *See* CAL. WATER CODE § 1011 (West Supp. 1997)

[64] *See id.* § 1011(b).

[65] *See id.* § 1011(a).

[66] *See* CALIFORNIA RESOURCES AGENCY, DEPARTMENT OF WATER RESOURCES, ENROLLED BILL REPORT, AB 2542 (1984) (discussing need to eliminate risk of forfeiture).

[67] *See* O'Brien, *supra* note 11, at 1169-75 (discussing problems with current policy on conserved water).

[68] *See* CAL. WATER CODE § 1011 (omitting definition for conserved water).

[69] *See id.* § 484 (West Supp. 1997).

[70] The DWR and the "USBR" refer to transferable water as temporary or irretrievable losses, a reduction in consumptive use, or real water. *See* BOOKMAN-EDMONSTON ENGINEERING, DELTA WATER TRANSFER HANDBOOK: GUIDELINES FOR TEMPORARY AND LONG-TERM WATER TRANSFERS THROUGH THE DELTA § 6.1.2 (prepared by Authority for

define what is transferable water.[71] USBR limits transfers to reductions in consumptive use or recovery of water previously irretrievably lost to subsequent beneficial use.[72]

Environmental Analysis of Water Transfers in association with The Bay-Delta Transfers Committee) (1996) [hereinafter HANDBOOK] (describing several terms used for definition of transferable water). DWR is the California state agency responsible for the State Water Project. *See id.* § 7.2.1.2. USBR is the federal agency that operates the Central Valley Project. *See id.* § 7.2.2.1. Both agencies obtained appropriative permits through the SWRCB and now contract with water suppliers throughout the state. *See generally* O'Brien & Gunning, *supra* note 3, at 1061-63, 1065-67 (discussing DWR's and USBR's influential role in water transfers). Legislation enacted in 1986 increased the involvement of DWR in water transfers. *See* CAL. WATER CODE §§ 480-483 (requiring DWR to facilitate voluntary water transfers and prepare water transfer guide).

[71] *See* HANDBOOK, *supra* note 70, at § 6.1.2.2. New water is water not previously available in the system created by reducing irrecoverable losses or flow to unusable water bodies. *See id.* Real water is transferable water that is not derived at the expense of another lawful water user. *See id.* Real water includes water saved by not planting and irrigating a crop that would otherwise be irrigated and stored water released unexpectedly. *See id.* Real water is not necessarily new water, but new water must, by definition, be real. *See id.* DWR's definitions are designed to prevent the transfer of "paper water." *See id.* Paper water is water for which a transferor may have a permitted right but which is actually being put to beneficial use somewhere else in the system. *See* WATER EDUCATION FOUNDATION, LAYPERSON'S GUIDE TO WATER MARKETING & TRANSFERS 10 (1996).

There is an important discrepancy between DWR's definitions and those in the Water Code. HANDBOOK, *supra* note 70, at § 6.1.2.2. Sections 484(b) and 1725 of the Water Code include water that has percolated underground as consumptively used water and, thus, transferable. *See* CAL. WATER CODE §§ 484(b), 1725. DWR's definitions do not reference water that has percolated underground, but DWR has stated that it reads the Legislature's definition to recognize the interconnected relationship between groundwater and surface water. *See* HANDBOOK, *supra*, at § 6.1.2.2. DWR believes that percolation would only be consumptively used when it was water that became irretrievable to any subsequent beneficial use due to the percolation. *See id.* In other words, the percolated water could not later be pumped for use or able to flow to a usable body of surface water. According to DWR, this interpretation is consistent with USBR's policy under P.L. 102-575. *See id.*

[72] *See* HANDBOOK, *supra* note 70, at § 6.1.2.3. USBR defines crop consumptive use as that amount of applied water that a crop uses for evapotranspiration. *See id.* USBR does not consider transportation (conveyance) losses, return flows, leaching, frost protection, or deep percolation to usable groundwater basins as part of crop consumptive use. *See id. But see* SWCC POLICY STATEMENT, *supra* note 30, at C-3 (including leaching requirement as part of crop water use). The crop leaching requirement is the amount of water required to flush enough accumulated salts from the root zone downward to maintain full crop productivity. *See id.* The Policy Statement also suggests that agricultural water used for cultural practices relating to crop production, such as water applied to prevent frost damage, is part of the intended crop water use. *See id.* at C-1; *see also* Steven J. Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483, 489 n.24 (1982) (using frost control as example of useful function of irrigation other than crop consumptive use). O'Brien & Gunning criticize DWR and USBR's definitions of transferable water as more restrictive than the definitions in the Water Code. *See* O'Brien & Gunning, *supra* note 3, at 1067-72.

Beyond the definitional concerns of section 1011, agricultural water conservation efforts raise two important policy issues. First, if the new method is more efficient, was the previous method wasteful? Second, if the previous method was wasteful, who should have a right to the conserved water?

The first policy issue involves California's constitutional requirement of reasonable beneficial use. Section 1011 suggests that conservation is only considered a beneficial use when it reduces the level of use that an appropriator is entitled to under an appropriative water right.[73] However, under California law, courts must determine the validity and extent of an appropriative water right using the reasonable and beneficial use standard.[74] Reasonableness is a subjective test determined on a case-by-case basis.[75] Therefore, section 1011 is problematic because few farmers or water agencies can afford to seek court determinations of their water rights before deciding whether to invest in conservation.

The second policy issue involves how conservation under section 1011 should interact with the law of prior appropriation. The possibility that a farmer or water agency will lose water rights after investing in expensive conservation measures is contrary to the California Legislature's intent to encourage voluntary investments in conservation under section 1011.[76] Yet, under the priority system, if conserving parties cannot put their

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[73] *See* CAL. WATER CODE § 1011(a). Section 1011(a) states:

> when any person *entitled to the use of water under an appropriative right* fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of the appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of the cessation or reduction in use . . . .

Id. (emphasis added).

[74] *See supra* notes 26-29 and accompanying text (explaining operation of California's reasonable and beneficial use requirement).

[75] *See* Joslin v. Marin Mun. Water Dist., 429 P.2d 889, 894 (Cal. 1967) (finding that reasonable use of water depends on circumstances of each case). In determining waste or reasonable use, courts often defer to local custom. *See, e.g.*, Tulare Irrig. Dist. v. Lindsay-Strathmore Irrig. Dist., 45 P.2d 972, 997, 1009-10 (Cal. 1935) (finding that ditch losses around 40% consistent with losses in other local ditch systems).

[76] *See* ENROLLED BILL REPORT, SB 1042, *supra* note 60 (explaining need to encourage conservation); *see also* McDonnell & Rice, *supra* note 6, at 41 (explaining that Legislature enacted section 1011 to modify law so conservers could benefit from conservation investments).

entire appropriative right to beneficial use, the unused portion flows to those with junior priorities.[77] Therefore, whether the reasonableness of a conserving party's appropriative right is measured before or after implementing conservation measures is critical.

The costs associated with overcoming local opposition to transfers and measuring injury to those who rely on return flows are high.[78] Additionally, there are no reported California cases involving the transfer of conserved water that interpret section 1011.[79] As a result, it is unclear exactly what conserved water is, who owns it, how to quantify the amount that can be transferred, and who to protect from external injuries that may result from the transfer.[80] The few transfers of conserved water that have occurred under section 1011 have had to confront each of these issues.[81]

II. STATE OF THE LAW

Two contrasting case studies illustrate the results of California's current policy on transfers of conserved water. The first describes how the lining of Crawford Ditch in El Dorado County resulted in curtailing the ditch owner's water right. The second study explains the conservation practices of the Imperial Irrigation District ("IID") and the controversy surrounding IID's proposed transfer of conserved water to the San Diego County Water Authority ("SDCWA").

A. Two Transfer Scenarios: Crawford Ditch and IID

The Crawford Ditch scenario involves an appropriative water right held by the El Dorado Irrigation District ("EID").[82] In

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[77] *See* CALIFORNIA WATER, *supra* note 17, at 40-43.

[78] *See* Clyde, *supra* note 44, at 441-43 (describing inhibitive costs associated with conservation effort due to uncertainty of rights to conserved water); WATER TRANSFERS, *supra* note 10, at 222-24 (describing high transaction costs associated with potential transfers).

[79] *See generally* Levinson, *supra* note 5, at 190-92 (illustrating cases dealing with non-beneficial use of water but not transfers of conserved water within section 1011).

[80] *See id.* at 187 (noting uncertainties in current transfer policy).

[81] *See infra* notes 82-100 and accompanying text (describing Crawford Ditch and Imperial Irrigation District scenarios).

[82] *See* STATE WATER RESOURCES CONTROL BOARD, MEMORANDUM FROM VIRGINIA DONG

1991, the SWRCB issued a staff report that responded to complaints regarding excessive conveyance losses from Crawford Ditch.[83] In response to a conservation program mandated by an earlier SWRCB decision,[84] EID had spent $5.4 million to improve Crawford Ditch to conserve water that was seeping from the earthen ditch.[85] Responding to complaints of downstream users, EID argued that its conservation efforts should not result in a curtailed water right under section 1011 of the Water Code which expressly declares conservation a beneficial use.[86] The SWRCB did not agree. The SWRCB felt that previous seepage losses exceeding eighty percent indicated that the district was wasting water.[87] In the SWRCB's view, this waste constituted a departure from the terms of the district's appropriative water right and, hence, EID had forfeited the amount of water that seeped from the ditch in excess of reasonable conveyance losses.[88] The SWRCB emphasized that section 1011 only applied

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TO FILES (Nov. 19, 1991) (on file with author) [hereinafter STAFF REPORT]. EID is located in El Dorado County in Northern California. *See id.* at 1. EID holds a pre-1914 right to appropriate water from the North Fork of the Consumnes River. *See id.* at 4. EID claims pre-1914 appropriative rights to divert fifteen cubic feet of water per second for irrigation and domestic use eight months out of the year. *See* STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 96-028 DISMISSING COMPLAINTS ON CRAWFORD DITCH 2 (1996) [hereinafter RESOLUTION 96-028]. EID's appropriated water travels to the district through diversion works, including Crawford Ditch. *See* STAFF REPORT, *supra*, at 4-6. Crawford Ditch was constructed in the gold rush era and was originally used for mining purposes. *See* RESOLUTION 96-028, *supra*, at 1.

[83] *See* STAFF REPORT, *supra* note 82, at 1 (stating complaints against EID and scope of staff investigation). Conveyance losses refer to evaporation or seepage losses that result from transporting water. *See* SWCC POLICY STATEMENT, *supra* note 30, at C-6.

[84] *See* STAFF REPORT, *supra* note 82, at 2 (referring to SWRCB Decision 1587).

[85] *See SWRCB Staff Concludes El Dorado Irrigation District Lacks Rights for Full Diversion into Crawford Ditch*, CAL. WATER L. & POL'Y REP., Jan. 1992, at 93-94 [hereinafter CAL. WATER L. AND POL'Y REP.] (describing Crawford Ditch investment). The district spent approximately $5 million in 1990 and 1991 to repair breaks in portions of the ditch and reduce seepage losses. *See* RESOLUTION NO. 96-028, *supra* note 82, at 1. The SWRCB found that these losses ranged from 80 to 95% prior to the improvements on the ditch. *See id.* at 1 n.1.

[86] *See* STAFF REPORT, *supra* note 82, at 17 (outlining EID's arguments under § 1011).

[87] *See id.* at 17-19 (rejecting EID's claims under section 1011).

[88] *See id.* at 15-19; *see also id.* at 15 (finding that conveyance losses around 25% would be reasonable). The SWRCB did not make a final determination on the issue but practitioners often view the Staff Report as the Board's view on conservation under the priority system. *See* RESOLUTION 96-028, *supra* note 82, at 2 (dismissing complaints filed against EID). Commentators note that the staff report alone produced a chilling effect on conservation investment by other Northern California irrigation districts. *See* Interview with Paul M. Bartkiewitz, Attorney for El Dorado Irrigation District, in Sacramento, Cal. (Nov. 1,

to conservation of water that a person is entitled to under an appropriative right.[89] In the staff's view, EID was not entitled to excessive seepage losses making section 1011 inapplicable to the recovery of these losses.[90]

In a contrasting example, IID, located in the arid Imperial Valley of Southern California, has a colorful history of water conservation success.[91] In 1988, IID and the Metropolitan Water District of Southern California ("Metropolitan") negotiated a historic water conservation agreement.[92] The agreement stemmed from a SWRCB threat of forfeiture if IID did not cease

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1996); *see also* CAL. WATER L. & POL'Y REP., *supra* note 85, at 94 (noting chilling effect of staff report).

If the seepage from Crawford Ditch had not become usable return flows, the result in the case might have been different. *See* McDonnell & Rice, *supra* note 6, at 38 (comparing losses in EID to unrecoverable losses). USBR and DWR hold water contracts with all of the water districts in California that receive water that flows through the Delta. *See* O'Brien & Gunning, *supra* note 3, at 1063 (explaining role of DWR and USBR in water deliveries). Some commentators have speculated that the staff report reflected fears of DWR and USBR that recognizing rights under section 1011 for conservation efforts such as lining Crawford Ditch would eventually operate to their detriment. *See* Interview with Paul M. Bartkiewitz, Attorney for El Dorado Irrigation District, in Sacramento, Cal. (Nov. 1, 1996).

By recognizing EID's ditch lining as a conservation effort under section 1011 of the Water Code, the SWRCB would have effectively given a green light to all other Northern California water districts to conserve water. *See id.* Conserving districts would have a right to transfer or use the water they conserved under section 1011. *See* CAL. WATER CODE § 1011 (West Supp. 1997). The net result may be a reduction in the amount of water available in the Delta to fulfill federal and state contracts. *See* O'Brien & Gunning, *supra* note 3, at 1063 (explaining biased interest of DWR and USBR to preserve yield of respective water projects). By refusing to recognize rights in EID under section 1011, the staff report conveyed a message to other districts that not all conservation measures would fall under the protective veil of section 1011. *See* Interview with Paul M. Bartkiewitz, Attorney for El Dorado Irrigation District, in Sacramento, Cal. (Nov. 1, 1996).

[89] *See* STAFF REPORT, *supra* note 82, at 17-18.

[90] *See id.*

[91] *See* Gray, *supra* note 16, at 296-306 (describing IID's conservation deals with Metropolitan Water District). IID's water rights involve appropriative rights and federally contracted rights to Colorado River water. *See* AGREEMENT OF COMPROMISE BETWEEN IMPERIAL IRRIGATION DISTRICT AND COACHELLA VALLEY COUNTY WATER DISTRICT 2, 6 (1934). The contracts provide that rights attach only to water put to beneficial use inside the district's boundaries. *See id.* at 5. Under the contracts and the priority system, water that IID does not beneficially use moves to those next in line, namely Coachella Irrigation District and Metropolitan Water District. *See id.*

[92] *See* Gheleta, *supra* note 8, at 674 (discussing cooperative conservation agreement between IID and Metropolitan). Metropolitan is the water supplier to most of the urban water users in Southern California. *See* CALIFORNIA WATER, *supra* note 17, at 13-15 (describing Metropolitan's inception and current role in water delivery).

what the SWRCB believed were wasteful water management practices.[93] Under the negotiated agreement, Metropolitan financed canal lining and other conservation measures within IID that reduced excess flows to the Salton Sea.[94] In return, Metropolitan received the conserved 106,000 acre-feet of water per year.[95]

Currently, IID is considering a new proposal to lease as much as 500,000 acre-feet of conserved water to the SDCWA.[96] Similar to the Metropolitan agreement, SDCWA's lease fees will finance the conservation measures necessary to free up the conserved water.[97] In contrast to the Metropolitan agreement, however, the water saved and transferred to SDCWA would not all be

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[93] *See* CALIFORNIA STATE WATER RESOURCES CONTROL BOARD, DECISION 1600, IN RE ALLEGED WASTE AND UNREASONABLE USE OF WATER BY IMPERIAL IRRIGATION DISTRICT (1984) [hereinafter DECISION 1600].

[94] *See* CALIFORNIA WATER, *supra* note 17, at 271 (describing 1988 IID-Metropolitan Agreement). The Salton Sea is a salt sink. *See* McDonnell & Rice, *supra* note 6, at 37. Water that flows into the Salton Sea is unusable. *See id.*

[95] *See id.*; Gray, *supra* note 16, at 296-306 (describing 1988 IID-Metropolitan Agreement).

[96] *See The Well Won't Go Dry if San Diego and Imperial Agencies Agree, It Could Solve Our Water Problems*, SAN DIEGO UNION-TRIB., Sept. 14, 1995, at B10 [hereinafter *The Well Won't Go Dry*]. The proposal between IID and the San Diego Water Authority may be as large as 500,000 acre-feet per year for a duration of over 100 years. *See* Steve LaRue, *Imperial, San Diego Embark on Farm-to-City Water Deal*, SACRAMENTO BEE, Sept. 21, 1995, at B3. The purchase of IID's Colorado River water offers a win-win situation for the city and the district. *See The Well Won't Go Dry*, *supra*, at B10. IID is first on the priority list of lower Colorado River users while the City of San Diego is not on the list at all. *See id.* The security of IID's right would help San Diego plan for its future urban growth with confidence in its water supply. *See id.* The district will also benefit from the proposal. *See id.* IID currently pays about $12 per acre-foot for water and would be able to sell it to San Diego at a market price in excess of $400 per acre-foot. *See id.* IID plans to use this money to finance the local conservation projects and compensate farmers who choose to sell their water. *See id.* IID's projects will conserve the 500,000 acre-feet per year to transfer to the city. *See id.* The district claims this deal will not injure the local agricultural economy. *See id.*

[97] *See* LaRue, *supra* note 96, at B3. The proposed transfer has led to a debate over whether the federal contractual priority system governs the distribution of conserved Colorado River water or whether section 1012 of the Water Code controls. *See* CAL. WATER CODE § 1012 (West Supp. 1997). Section 1012 is the equivalent of section 1011 for those California water users with federally contracted water rights to the Colorado River. *See id.* Section 1012 provides:

> Notwithstanding any other provision of law, where any person, public agency, or agency of the United States undertakes any water conservation effort, either separately or jointly with others entitled to delivery of water from the Colorado River under contracts with the United States, which results in reduced use of Colorado River water within the Imperial Irrigation District, no forfeiture, dimi-

salvaged from the Salton Sea. Rather, proponents of the plan suggest that fallowing and other reductions in consumptive use will create the 500,000 acre-feet of water savings within IID.[98]

In both the EID and IID scenarios, the districts initiated their conservation programs in response to SWRCB orders to reduce waste.[99] And in both cases, the districts tried to invoke section 1011 of the Water Code to validate their rights to conserved water.[100] The SWRCB did not agree that section 1011 covered EID's conservation of excessive seepage. Only IID was able to successfully transfer the water it conserved.

The inconsistent outcomes of these two cases may be the result of differences in the types of water conserved in each instance. The water EID saved by lining Crawford Ditch was water upon which downstreams relied — return flows. Conversely, water saved by IID was previously lost to any further beneficial use, namely reductions in consumptive use or salvaged water.[101]

In light of the new proposal between IID and the SDCWA, Metropolitan and other junior priority right holders continue to argue that section 1011 does not prohibit them from having a right to IID's conserved water.[102] The SDCWA proposal has al-

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nution, or impairment of the right to use the water conserved shall occur, *except as set forth in the agreements between the parties and the United States.*

Id. (emphasis added).

The emphasized portion of section 1012 made the legislation effectively worthless in solving conflicts between IID and junior right holders on the river. *See* Letters to Michael Clinten, General Manager of Imperial Irrigation District and Maureen Stapleton, General Manager of San Diego County Water Authority from N. Gregory Taylor, General Counsel for Metropolitan (including Preliminary Comments of Metropolitan Water District of Southern California Re Cooperative Water Conservation and Transfer Proposal Summary of Draft Terms) 4-5 (Sept. 1996) (on file with author) [hereinafter Metropolitan's Preliminary Comments] (contesting ability of IID to transfer conserved water without recognizing Metropolitan's right to water under federal contracts).

[98] *See* Steve LaRue, *supra* note 96, at B3.

[99] *See generally* DECISION 1600, *supra* note 93 (requiring IID to stop wasteful practices); STAFF REPORT, *supra* note 82, at 15 (explaining previous SWRCB order requiring EID to reduce waste before SWRCB would grant new permits).

[100] *See* McDonnell & Rice, *supra* note 6, at 37-38 (explaining use of Water Code incentives in EID's and IID's conservation programs); STAFF REPORT, *supra* note 82, at 17-18 (describing EID's claims under section 1011).

[101] *See* STAFF REPORT, *supra* note 82, at 17-19 (rejecting EID's claims under section 1011).

[102] *See* Metropolitan's Preliminary Comments, *supra* note 97, at 4-5 (contesting ability of

so ignited protest from communities within IID who fear that water saved due to fallowing land will adversely affect their local economy.[103] As evidenced by these two cases, the various types of conserved water and the inconsistencies between section 1011 and the priority principles of the appropriation doctrine result in uncertainty for potential conservers.

B. The Priority System and Its Implications

Three important uncertainties to potential conservers arise from the interaction of section 1011 and California's traditional water law. First, while section 1011 declares conservation a reasonable beneficial use, traditional water law allows the SWRCB to curtail an appropriator's right to the conserved water if the appropriator had previously wasted the same water. Second, even though section 1011 appears to allow conservers to keep or transfer the water they conserve, general principles of the prior appropriation doctrine allow junior users to benefit from senior users' reductions in waste. Third, the no injury rule requires that transferring parties address the costs of injury to other water users and adversely affected third parties if their conservation efforts reduce return flows or cause economic harm. However, the no injury rule is not expressly addressed in section 1011.

The first uncertainty arising from California's water conservation policy involves the doctrine of reasonable and beneficial use. All appropriators must comply with Article X, Section 2 of the California Constitution which requires that all water use be reasonable and beneficial.[104] The SWRCB or a court can curtail an appropriative right if users exercise it unreasonably or wastefully.[105] Section 1011 attempts to address appropriators'

IID to transfer conserved water without recognizing Metropolitan's right to water). The controversy continues as Metropolitan has expressed that it does not think the priority system allows IID to transfer conserved water to SDCWA. *See id.* at 5-6. *But see* JOHN PENN CARTER & PAUL D. ENGSTRAND, MEMORANDUM REGARDING THE WATER RIGHTS OF IMPERIAL IRRIGATION DISTRICT 20-29 (1995) [hereinafter IID MEMORANDUM] (rebutting junior's argument of entitlement to water conserved in IID).

[103] *See* Kaven Brandon, *Texas Bass Brother May Make Another Fortune in Water*, SAN ANTONIO EXPRESS-NEWS, July 21, 1996, at 1.

[104] *See supra* note 26 (presenting text of constitutional requirement of reasonable and beneficial use of water).

[105] *See* CAL. WATER CODE § 1243 (West Supp. 1997). The Board may enforce

concerns that conservation efforts could be used to evidence prior waste, leading to forfeiture of water rights.[106] In both the EID and IID scenarios, however, the SWRCB found that the districts' prior losses constituted waste.[107] The SWRCB did allow IID to conserve and transfer the previously wasted water.[108] Yet, the SWRCB did not allow EID to use the water it conserved by lining Crawford Ditch.[109] These two different interpretations of section 1011 have left practitioners at a loss as to what conservation efforts will result in a transferable water right.[110]

The second uncertainty arising from California's water conservation policy involves the priority system associated with appropriative rights. An appropriative water right in California extends only to the amount of water diverted and put to beneficial

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California's constitutional requirement that all waters of the state be put to reasonable and beneficial use, pursuant to sections 1243, 1243.5 and 1257 of the Water Code. *See* CAL. WATER CODE §§ 1243, 1243.5, 1257.

[106] *See* CAL. WATER CODE §§ 1010, 1011, 1244. One commentator noted that while these sections may prevent the transfer of conserved water from being used as evidence of waste, they do not expressly provide that a water-waster who offers conserved water for transfer can avoid forfeiture. *See* Gray, *supra* note 16, at 267-77. Professor Gray explains that by offering to conserve and transfer wasted water, the conserver is still subject to SWRCB inquiry for unreasonable use. The SWRCB could investigate the conserver's pre-transfer practices and divest a portion of the appropriative right if the Board feels these practices were unreasonable. *See id.* Thus, only a pre-conservation transfer agreement can prevent an inquiry for unreasonable use. *See id.*

[107] *See* RESOLUTION 96-028, *supra* note 82, at 2; DECISION 1600, *supra* note 93.

[108] *See* McDonnell & Rice, *supra* note 6, at 37.

[109] *See* STAFF REPORT, *supra* note 82. The deficiencies of section 1011 became apparent after the SWRCB's staff report in Crawford Ditch. In denying EID the right to the water it conserved, the staff report distinguished between conservation measures that saved water already beneficially used and those measures that saved historically wasted water. *See id.* (describing staff's opinion that EID did not meet reasonable use requirement).

An attempt was made to revise section 1011 in response to the staff report. *See* A.B. 2014, 1993-94 Reg. Sess. (Cal. 1993). The head of the Assembly Water Committee, Assembly Member Cortese, sponsored the bill, but it was later withdrawn under political pressure by DWR and USBR. *See* Interview with Paul M. Bartkiewitz, Attorney for El Dorado Irrigation District, in Sacramento, Cal. (Nov. 1, 1996). The amended bill would have prevented forfeiture of appropriative rights to water conserved because of nonuse even if nonuse exceeded the statutory period for forfeiture. *See id.* The amendment to section 1011 attempted to address the loss of investment problems that EID experienced by lining Crawford Ditch. *See id.*

[110] *See* Interview with Paul M. Bartkiewitz, Attorney for El Dorado Irrigation District, in Sacramento, Cal. (Nov. 1, 1996).

use.[111] Water that is not put to beneficial use or wasted by a senior appropriator may revert to a junior appropriator under the prior appropriation doctrine.[112] Senior appropriators who can conserve are hesitant to do so for fear that junior appropriators will claim a right to any conserved water that was previously wasted.[113]

By limiting section 1011's application to water someone is entitled to under an appropriative right, the California Legislature left open the issue of when the entitlement of such a right is measured. If the reasonableness of use is measured retroactively, the water conserved may have to remain in the stream to satisfy junior rights. If the reasonableness of use is measured after conservation, the conserved water remains under the control of the conserver. Thus, it is unclear under section 1011 whether forfeiture can apply retroactively to the benefit of junior appropriators and to the detriment of those who invest in conservation to cease wasteful practices. Consequently, Metropolitan, who has a water right junior to IID, continues to protest the proposed IID transfer to the SDCWA.

The third uncertainty arising from California's conservation policy involves the no injury rule. Potential conservers must account for claims by junior appropriators and third parties harmed by conservation efforts.[114] If a junior appropriator can show injury due to the transfer of conserved water, the no injury

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[111] *See* Irwin v. Phillips, 5 Cal. 140, 147 (1855).

[112] *See* HUTCHINS, *supra* note 17, at 139 (explaining California law requiring reasonable and beneficial use to maintain appropriative right).

[113] *See* O'Brien, *supra* note 11, at 1173-74 (discussing junior appropriators' argument that senior appropriators cannot transfer conserved or salvaged water). In the case of IID, Metropolitan and Coachella Irrigation District own water rights junior to IID. *See* IID MEMORANDUM, *supra* note 102, at 37-38 (explaining priorities established under Seven Party Agreement). Metropolitan and Coachella Irrigation District argue that the contractual agreements aligning these priorities govern and any water IID conserves should revert to those next in line. *See* Metropolitan's Preliminary Comments, *supra* note 97, at 4-7. IID argues that the Water Code overrides the language of these contracts and that IID has a right to use or transfer any water it conserves. IID MEMORANDUM, *supra* note 102, at 25-29. Specifically, IID points to section 1012 which states that no forfeiture, diminution, or impairment of the right to use water shall occur as a result of IID's conservation efforts. *See id.* Inherent in IID's argument is the assumption that state law, rather than federal law, governs the extent of IID's right to Colorado River water. *See id.*

[114] *See* Gould, *Transfer of Water*, *supra* note 5, at 463-64 (explaining who is protected by no injury rule).

rule applies.[115] Thus, junior appropriators who rely on return flows from senior appropriators as part of their water right can use the no injury rule to contest proposed transfers of conserved water that reduce return flows.[116] Adversely affected rural communities can also use the rule to contest reallocation of agricultural water that causes economic harm.[117] Harm to third parties due to conservation depends on the type of conserved water at issue. The no injury rule is not expressly addressed in section 1011 and it did not play a significant role in either case study.

The reasonable and beneficial use requirement, the priority system, and the no injury rule are all legal rules that raise important questions about the transfer of conserved water. If left unanswered, these questions will inhibit the incentive-based approach to water conservation that the California Legislature envisioned with section 1011. California needs a clearer and more detailed policy regarding water conservation to address these issues.

III. MODEL SOLUTION

As the IID and EID scenarios illustrate, section 1011 does not ensure that those who conserve will receive the fruits of their labor. Nor does section 1011 conform to the appropriation doctrine's requirement that senior appropriators must forfeit wasted water and junior priority users should receive the benefit

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[115] *See* CAL. WATER CODE § 1702 (West 1971).

[116] *See* STAFF REPORT, *supra* note 82, at 12-13. The SWRCB staff report responded to the complaint of a riparian right holder located downstream of EID's diversion for Crawford Ditch. *See id.* The complaint alleged that EID had lost part of its appropriative right from waste and nonuse and that demand of downstream riparians exceeded the flow of the river. *See id.* The staff report noted that much of the water that seeps from the ditch makes its way back into the North Fork of the Consumnes River, and downstream right holders have relied on this return water as it returned to the stream below. *See id.* at 9. The SWRCB staff viewed the downstream users' complaints as a prima facie showing of access to and injury from reductions in return flows due to the lining of Crawford Ditch. *See id.*

[117] *See* Gould, *Transfer of Water*, *supra* note 5, at 465. Although commentators agree that the no injury rule is a significant impediment to facilitating wide-spread water transfers, few argue that it should be eliminated. *See id.* One of the largest criticisms of the rule is that it is too broad, allowing very insignificant injuries to block advantageous transfers. *See id.* Defining exactly what constitutes injury in the Water Code may help narrow the effect of the rule as an obstacle to transfers. Some commentators have also suggested requiring a substantial showing of injury to invoke the rule. *See* O'Brien, *supra* note 11, at 1171-73.

of a senior's waste. Finally, section 1011 does not address third party impacts that may result from fallowed land or how the various types of conserved water should affect the water right of the conserver, transferor, or transferee. The California Legislature should revise section 1011 to remove current uncertainties among potential conservers by taking a more detailed and comprehensive approach to agricultural water conservation.[118]

The California Legislature should revise section 1011 to incorporate the following policies. First, the Legislature must define what type of water saving it intends to encourage in order to eliminate the confusion associated with the term "conserved water." For clarity, section 1011 should give preference to water saving methods that salvage water. The Legislature should define "salvaged water" to include water saved by reducing consumptive use or by otherwise recovering water previously lost to the system.[119] Water saved by permanent fallowing of agricultural land should not qualify as salvaged water.[120]

Second, appropriators who salvage water should receive the benefit of their investment without risk of forfeiture.[121] Salvaged water must retain the same priority as the original right and be transferable.[122] By definition, other water users cannot

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[118] *See* Appendix to this Comment [hereinafter Appendix] (proposing text for section 1011).

[119] *See* Appendix, at [proposed] § 1011(a)(1). By limiting credit for conservation to reductions in consumptive use and irretrievable losses, the proposed solution prevents a conserver from profiting at the expense of other rightful water users. *See* McDonnell & Rice, *supra* note 6, at 52 (recommending that return flows relied upon by downstream users not be transferable); *see also* Steven Shupe et al., *Western Water Rights: The Era of Reallocation*, 29 NAT. RESOURCES J. 413, 433 (1989) (recommending that conservers of irretrievable losses should be allowed to salvage and market this portion of their water right).

[120] *See* Appendix, at [proposed] § 1011 (a)(3), (a)(6). The proposed solution allows water saved due to fallowing to be transferred upon mitigation of any substantial third party injuries. *See* O'Brien & Gunning, *supra* note 3, at 1081 (allowing transfers of water saved from fallowing as long as negative impacts are considered and reduced).

[121] *See* Appendix, at [proposed] § 1011 (a)(4), (b). *See* McDonnell & Rice, *supra* note 6, at 52 (stating that incentives to owner of water right must insure that right to use saved water retains same priority and may be used or transferred). Note also that proposed section 1011 (a)(1), (a)(2), and (a)(3) contemplates water saving efforts that reduce use or loss. Unlike the current section 1011, the proposed section allows appropriators to reduce losses and subsequently retain rights to this recovered water, even if the prior loss was wasteful.

[122] *See id.*

rely on salvaged water.[123] Thus, these forms of water saving need not be subject to the no injury rule.[124]

Third, water saving methods that improve efficiency but reduce return flows upon which downstream users rely must be subject to heightened scrutiny under the no injury rule.[125] The no injury rule requires that water users account for injuries to other water users and third parties caused by water transfers. Thus, a water user who reduces return flows will experience higher transaction costs than a salvaging party.[126] Additionally, a water user who reduces return flows will not benefit by taking water away from another rightful user.[127]

These proposed revisions to section 1011 achieve three important goals. First, the proposal to clearly define what will constitute salvaged water increases the certainty associated with rights to water saved by salvaging efforts. Second, the proposed solution clearly addresses forfeiture for misuse of water under the priority system. Third, the proposal to subject reductions in return flows to the no injury rule promotes water use efficiency without ignoring third party impacts.

The proposal to clearly define what will constitute salvaged water promotes a better balance between stable water rights for salvaged water users and protection of other water users and third parties than that accomplished by current statutory language. Providing a detailed and comprehensive approach to all forms of water saving in one statutory provision will increase certainty and better enable potential conservers to predict the return on their water saving investments.[128] These proposals

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[123] *See supra* notes 32-53 and accompanying text (defining consumptive use and salvaged water).

[124] *See* Appendix, at [proposed] § 1011 (b).

[125] *See id.* Levinson, *supra* note 5, at 197 (endorsing limited use of no injury rule). Levinson notes that the nature of water implies that all appropriator's water rights are interconnected. *See id.* Thus, to allow appropriators to transfer conserved water without regard for injury to other appropriators ignores the nature of all appropriative rights. *See id.*

[126] *See* Appendix, at [proposed] § 1011 (b) (excluding water saving efforts that salvage water from no injury rule inquiry).

[127] *See* McDonnell & Rice, *supra* note 6, at 52 (recommending that return flows relied upon by downstream users not be transferable).

[128] *See* Appendix, at [proposed] § 1011 (defining two types of conserved water); *see also* McDonnell & Rice, *supra* note 6, at 52 (recommending policies that increase certainty in water conservation investments).

also provide transferees of salvaged water increased certainty that financial commitments to salvaging are worth their time and money.[129]

This Comment's proposed solution also strives to address the concept of forfeiture for misuse of an appropriative right.[130] Currently, if the SWRCB or junior users choose not to act to limit waste by senior users, wasteful practices simply continue.[131] With the proposed no forfeiture policy, wasteful practices are likely to decline because of increased water saving efforts that target reductions in loss as well as reductions in use.[132] Thus, the proposed solution provides junior users an incentive to act quickly to levy unreasonable use claims against wasteful seniors in hope of improving their own water rights.[133] Similarly, the proposed solution provides the state with an increased incentive to challenge waste in order to augment instream flows and cushion the DWR's water supply obligations.[134]

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[129] *See* Appendix, at [proposed] § 1011 (giving appropriators credit for reduction in use or irretrievable losses; *see supra* note 85 and accompanying text (describing loss of investment in EID due to post hoc determination of waste).

[130] *See* Appendix, at [proposed] § 1011 (a)(4) (providing for no forfeiture of water saved under § 1011).

[131] *See* Gray, *supra* note 16, at 276-77 (explaining that Legislature enacted § 1011 to counter lack of enforcement of unreasonable use provisions by SWRCB, DWR, and courts).

[132] *See* Appendix, at [proposed] § 1011 (a) (providing no forfeiture for water saved under § 1011). A recent group study promulgated a Model Water Transfer Act for California ("Model Act") that also addresses transfers of conserved water. *See* A MODEL WATER TRANSFER ACT FOR CALIFORNIA *reprinted in* 4 W.-NW. J. ENVTL. L. & POL'Y 1, 4-22 (1996). The Model Act does recognize the various forms of conserved water. *See id.* at 10-11. However, the Model Act does not cure the uncertainty associated with water saving efforts that target waste. *See id.* (limiting transfers of conserved water to water transferor is legally entitled to use). Thus, under the Model Act, an appropriator could implement water saving efforts that recover excess seepage losses without injuring any other water user and still not be able to use or transfer the recovered water if the SWRCB found that the previous losses constituted waste. The Model Act also continues to include water saved by fallowing land in the definition of conserved water. *See id.* Finally, the Model Act fails to repeal the current section 1011. *See id.* at 22.

[133] *See* Clyde, *supra* note 44, at 448-49 (explaining interrelationship of return flows between junior and senior appropriators). If, under the proposed solution, a junior knows that a senior receives full credit for reductions in use, the junior will be spurred to initiate an unreasonable use claim. *See* Appendix, at [proposed] § 1011 (a)(4) (providing clear no forfeiture policy for conservation).

[134] *See* Clyde, *supra* note 44, at 446-48 (arguing that state needs to take active role in facilitating conservation perceived to benefit public interest uses).

Finally, the proposed solution attempts to promote true efficiency by targeting waste but not reused water. By giving maximum credit to water saving efforts that salvage water, the proposed solution gives preference to water saving that does not reduce return flows upon which downstream appropriators rely.[135] By providing for heightened scrutiny of fallowing and reduced return flows, which almost always impact third parties, the proposed solution provides less incentive for these types of water saving.[136] In addition, adversely affected third parties remain protected under the no injury rule.[137]

CONCLUSION

Few commentators disagree that agricultural water users in California can improve their water use efficiency and that the water saved will help meet growing urban and environmental water demands.[138] The more difficult questions are: what level of agricultural water conservation is socially optimal and how will we achieve it? California's prior attempt to encourage transfers of conserved water with a relatively brief and broad law has proven unsuccessful. Uncertainty as to the extent of the transferor's right and the level of mitigation the transferee must provide for third-party impacts are real obstacles to facilitating

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[135] *See* Appendix, at [proposed] § 1011 (b) (limiting full credit for conservation to salvaged water).

[136] *See* Appendix, at [proposed] § 1011 (b) (providing heightened scrutiny for fallowing or conservation that reduces usable return flows); *supra* notes 42-45 and accompanying text (discussing return flow problem with conservation); Appendix, at [proposed] § 1011 (a)(1) (limiting full credit for conservation to reductions in consumptive use or salvaged water). The lower standard of review for conservation that reduces only consumptive use or irretrievable losses provides incentives for agricultural operations to conduct this kind of conservation first. *See supra* note 78 and accompanying text (discussing high costs of return flow issues). Thus, farmers can avoid the prohibitive costs and delays of the no injury rule and return flow problems for these transfers. *See id.*

[137] *See* Appendix, at [proposed] § 1011 (b) (subjecting fallowing and reductions in return flows to no injury rule inquiries under § 1702).

[138] *See* Levinson, *supra* note 5, at 183 (advocating more efficient water use by agriculture to satisfy new demands of urban areas and environment); McDonnell & Rice, *supra* note 6, at 27-28 (explaining need to continue reallocation of water from agricultural areas in less harmful manner); O'Brien & Gunning, *supra* note 3, at 1078-83 (describing recent reallocation from agricultural uses to urban and environmental uses).

transfers. Political opposition in rural communities that fear wholesale reallocation of agricultural water also hinders successful conservation and transfers.

This Comment's proposed solution addresses these obstacles, recognizes the limits to transferring agricultural water, and provides a framework for improving agricultural water use efficiency. Further efforts to squeeze new water supplies out of the agricultural sector should focus on reducing consumptive use and recovering water previously lost to the system. To facilitate the transfer of this water, the California Water Code must clearly define what will constitute salvaged water.[139] Transfers of salvaged water should receive an expedited administrative review.[140] In order to provide the necessary incentive for these efforts, the Code must also expressly provide that those who salvage water will not be subject to forfeiture.[141]

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[139] *See* Appendix, at [proposed] § 1011 (a)(6).

[140] *See* Appendix, at [proposed] § 1011 (b) (recommending priority treatment for transfers of salvaged water).

[141] *See* Appendix, at [proposed] § 1011 (a)(4).

APPENDIX

§ 1011.[142] Appropriated water rights; cessation or reduction in use; forfeiture; transfer; reversion of rights

(a) When any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of such appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of the reduction in use. No forfeiture of the appropriative right to the water conserved shall occur upon the lapse of the forfeiture period applicable to water appropriated pursuant to the Water Commission Act or this code or the forfeiture period applicable to water appropriated prior to December 19, 1914.

The board may require that any user of water who seeks the benefit of this section file periodic reports describing the extent and amount of the reduction in water use due to water conservation efforts. To the maximum extent possible, the reports shall be made a part of other reports required by the board relating to the use of water. Failure to file the reports shall deprive the user of water of the benefits of this section.

For purposes of this section, the term "water conservation" shall mean the use of less water to accomplish the same purpose or purposes of use allowed under the existing appropriative right. Where water appropriated for irrigation purposes is not used by reason of land fallowing or crop rotation, the reduced usage shall be deemed water conservation for the purposes of this section.

(b) Water, or the right to use water, the use of which has ceased or been reduced as the result of water conservation efforts as described in subdivision (a), may be sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights, including, but not limited to, provisions of law governing any change in point of diversion, place of use, and purpose of use due to the transfer. (c) Notwithstanding any other provision of law, upon

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[142] CAL. WATER CODE § 1011 (West Supp. 1997).

the completion of the term of a water transfer agreement, or the right to the use of that water, that is available as a result of water conservation efforts described in subdivision (a), the right to the use of the water shall revert to the transferor as if the water transfer had not been undertaken.

[Proposed] § 1011.[143] Appropriated water rights; cessation or reduction in use; forfeiture or loss; transfer reversion of rights

(a)*(1)* When any person ~~entitled to the use of water under~~ *with* an appropriative right ~~fails to use all or any part of the~~ *salvages* water because of ~~water conservation~~ *water saving efforts,* ~~any~~ *the* ~~cessation or reduction in the use of such appropriated~~ *water saved from reduction in consumptive use or irretrievable losses* shall be deemed equivalent to a reasonable beneficial use of water to the extent of such ~~cessation or~~ reduction in use *or recovery of otherwise irretrievable loss.* ~~No forfeiture of the appropriative right to the water conserved shall occur upon lapse of the forfeiture period applicable to water appropriated pursuant to the Water Commission Act or this code or the forfeiture period applicable to water appropriated prior to December 19, 1914.~~ *Water salvaged pursuant to this subdivision retains the same priority as the original right.*

(2) When any person with an appropriative right reduces the use or loss of water because of water saving efforts in a manner which results in reducing usable return flows, the reduction in the use or loss of such appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of such reduction, subject to subsection (b). The water saved pursuant to this subdivision retains the same priority as the original right, subject to any mitigation requirements for reductions in usable return flows.

(3) When any person with an appropriative right reduces the use or loss of water because of land fallowing for more than one consecutive calendar year, the reduction in the use or loss of appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the

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[143] [Proposed] CAL. WATER CODE § 1011. Italicized text indicates proposed text to be added, and strikeout text indicates proposed deletions of text currently included in section 1011.

extent of such reduction in use, subject to subsection (b). The water use foregone pursuant to this subdivision retains the same priority as the original right, subject to any mitigation requirements for reduction in usable return flows and substantial injuries to third parties.

(4) No forfeiture of the appropriative right to the water saved pursuant to subdivisions (a)(1), (a)(2), or (a)(3) shall occur upon lapse of the forfeiture period applicable to water appropriated pursuant to the Water Commission Act or this code or the forfeiture period applicable to water appropriated prior to December 19, 1914.

(5) The board may require that any user of water who seeks the benefit of this section file periodic reports describing the extent and amount of the reduction in water use *or loss* due to water *saving* efforts. To the maximum extent possible, the reports shall be made a part of other reports required by the board relating to the use of water. Failure to file the reports shall deprive the user of the benefits of this section.

(6) *Definitions:* For purposes of this section, the term "water saving efforts" shall mean the use of less water to accomplish the same purpose or purposes of use allowed under the existing appropriative right. *Fallowing agricultural land for more than one consecutive calendar year is not a water saving method for the purposes of this section.* ~~Where water appropriated for irrigation purposes is not used by reason of land fallowing or crop rotation, the reduced usage shall be deemed water conservation for the purposes of this section.~~ *For purposes of this section, "salvaged water" shall include reductions in consumptive use that do not affect usable return flows or instream water uses, including recovery of otherwise irretrievable losses. For purposes of this section, the term "irretrievable losses" shall include flow, seepage or deep percolation to an unusable water body or unusable aquifer and evaporation losses. For purposes of this section, "usable return flows" include seepage or excess surface water that makes its way to, and is put to beneficial use by, another legal user of water.*

(b) Water, or the right to use water, the use *or loss* of which has been reduced as the result of water *saving* efforts as described in subdivision (a) may be sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights, including, but not limited to, provisions of law governing any change in point of diversion, place of use, and purpose of use due to the transfer. *The transfer of water saved in subdivision (a)(1) shall be subject to expedited admin-*

istrative review by the board. Transfers pursuant to subdivision (a)(1) are not subject to section 1702 of this code. The transfer of water saved in subdivisions (a)(2) and (a)(3) shall be subject to a heightened administrative review by the board and must satisfy section 1702 of this code.

(c) Notwithstanding any other provision of law, upon the completion of the term of a water transfer agreement, or the right to the use of that water, that is available as a result of efforts described in subdivision (a), the right to the use of the water shall revert to the transferor as if the water transfer had not been undertaken.