

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WR 99 - 012

In the Matter of Licenses 1050, 2814, 3109, 3110, 9794, and 9989
(Applications 534, 1056, 1203, 1413, 15572, and 22309, Respectively),
NATOMAS CENTRAL MUTUAL WATER COMPANY,
Petitioner.

SOURCE: Sacramento River
COUNTIES: Sacramento and Sutter Counties

**ORDER APPROVING IN PART AND DENYING IN PART
PETITION FOR TEMPORARY WATER TRANSFER**

1.0 INTRODUCTION

In this order, the State Water Resources Control Board (SWRCB) approves in part a petition by Natomas Central Mutual Water Company (Natomas) for a temporary change pursuant to Water Code section 1725 in order to transfer water to the Santa Margarita Water District in Orange County, California. Natomas proposes to transfer water it is not using as a result of conservation measures that it has employed since the mid-1980s that reduce its diversion and use of water from the Sacramento River.

The SWRCB concludes that, pursuant to Water Code section 1725, Natomas may transfer the right to use the amount of water that Natomas would have consumptively used but for Natomas's conservation efforts. A reduction in diversions that does not reduce consumptive use cannot be transferred pursuant to section 1725. Thus, for example, conservation efforts that reduce diversions from the stream and return flows to the stream by equal amounts would not result in a consumptive use savings that may be transferred pursuant to section 1725.

The SWRCB finds that Natomas has reduced its consumptive use by 1,995 acre-feet (ac-ft). Therefore, Natomas's petition is approved to the extent of 1,995 ac-ft, subject to certain

conditions specified below. The transfer of 1,995 ac-ft of water will not injure any legal user of the water to be transferred or unreasonably affect fish, wildlife, or other instream beneficial uses, because the water would have been consumptively used had it not been conserved. Natomas's petition is denied to the extent that it seeks to transfer more than the reduction in consumptive use of 1,995 ac-ft that has been established based on evidence in the record.

The record indicates that due to its conservation efforts Natomas has reduced its diversions, as distinct from its consumptive use, by approximately 16,144 ac-ft. This reduction in diversions is conserved water under Water Code section 1011. Under that section, Natomas's right to use the amount of water conserved is protected from forfeiture for non-use. The water saved may be used as authorized under Natomas's water rights if needed in the future. The water may also be transferable pursuant to other transfer provisions in the Water Code, provided that the requirements of the particular transfer provision relied upon are met. As stated above, one requirement for temporary changes proposed under section 1725 is that the transfer be limited to the amount by which consumptive use or storage is reduced. Transfers proposed under other provisions are not subject to this limitation, although it may be necessary to limit the amount of water transferred in order to ensure that the transfer will not injure any third party water right holder, or unreasonably affect fish, wildlife, or other instream beneficial uses.

2.0 FACTUAL AND PROCEDURAL BACKGROUND

Natomas is a California corporation owned by 250 shareholders, all of whom are landowners within its service area. Natomas filed the subject transfer petition on April 26, 1999, in cooperation with Western Water Company (WWC). Natomas proposed to transfer the right to use an amount of water that it claimed to have conserved under Water Code section 1011. Natomas asserted that it had conserved water as a result of conservation efforts implemented during the period between 1981 and 1986. Natomas's claimed conservation efforts included water recirculation and improved water management, crop shifts, laser leveling of fields, canal lining, and weed control.

Originally, Natomas proposed to transfer the right to use 30,000 ac-ft of water, the amount by which Natomas claimed to have reduced its diversions. By letters dated June 21, 1999, and

July 20, 1999, however, Natomas revised its proposal to 8,860 ac-ft, the amount by which Natomas claimed to have reduced its consumptive use. At the hearing, Natomas again revised its proposal, claiming that in the year of the transfer its transferable consumptive use savings would be 14,000 ac-ft. Natomas petitioned to transfer water during 1999 or 2000, depending on the timing of SWRCB action on the petition. Due to the date of this order, the transfer will take place in the year 2000.

Natomas holds several licensed rights, used primarily for irrigation purposes: Licenses 1050, 2814, 3109, 3110, 9794, and 9989 (Applications 534, 1056, 1203, 1413, 15572, and 22309). The licenses are for direct diversion from the Sacramento River. The authorized season of diversion under each license varies. Collectively, the season of diversion extends from March 1 to October 31. The combined maximum amount that may be diverted is 135,448 ac-A per year. The permissible rate of diversion under each license varies. The authorized place of use under Natomas's licenses is an area of 51,091 acres, which is located in the Natomas Basin. The Natomas Basin is bounded on the west by the Sacramento River, on the south by the American River, on the east by a drain called the East Main Drain, and on the north by a canal called the Natomas Cross Canal. Attachment 1 is a table summarizing the parameters of Natomas's licensed rights. In addition to its licensed rights, Natomas has a contractual right to water under Contract No. 14-06-200-885A with the United States Bureau of Reclamation (USBR).

The proposed transfer entails an expansion of the existing place of use under Natomas's licenses to allow use of water in Santa Margarita Water District's (District) service area, located in the southeastern corner of Orange County, California. Natomas has secured a commitment from the District to purchase up to 10,000 ac-ft of water. In addition, the transfer entails a change in the existing purposes of use to include municipal and industrial uses.⁷ The new point of diversion is located at the State Water Project's Harvey O. Banks Pumping Plant.

The SWRCB issued public notice of Natomas's petition on May 17, 1999. Three parties -- the State Department of Water Resources (DWR), the USBR, and the State Water Contractors --

⁷ Most of Natomas's licenses include these purposes of use, but only for use within the Sacramento International Airport. Accordingly, the transfer requires a change in Natomas's licenses to allow for the use of water for municipal and industrial purposes within Santa Margarita Water District's service area.

filed timely objections to the proposed transfer. DWR and the USBR own and operate the State's two largest water supply projects: the State Water Project and the Central Valley Project, respectively. The State Water Contractors represent 27 public agencies that receive water from the State Water Project.

DWR objected on the grounds that (1) Natomas did not timely file periodic reports describing the amount of reductions in water use due to water conservation efforts as required by section 1011, (2) the requirements of section 1725 had not been met, and (3) Natomas's water rights were not adequate to support the transfer. The USBR objected on the grounds that (1) Natomas had not shown that it had reduced its consumptive use, (2) the transfer would deplete the water supply available for the Central Valley Project, and (3) the transfer could affect fish, wildlife or other instream beneficial uses. The State Water Contractors objected on the grounds that (1) a transfer of water that had never been consumptively used could impact State Water Project supplies and therefore injure the agencies who rely on the State Water Project for their water supply, (2) Natomas had not met the requirements of section 1011, including the reporting requirements, and (3) the petition did not separate Natomas's water rights from its contractual rights.

Natomas petitioned to transfer water pursuant to Water Code section 1725. Section 1725 allows a temporary change in point of diversion, place of use, or purpose of use, for a period of one year or less, for the transfer of water that otherwise would have been consumptively used or stored. Water Code section 1727 delineates the procedure for reviewing a transfer proposed to be made pursuant to section 1725. Under section 1727, the SWRCB must initially evaluate whether the proposed transfer will injure any legal user of the water proposed to be transferred, or unreasonably affect fish, wildlife, or other instream beneficial uses. (Wat. Code, § 1727, subd. (a).) If the SWRCB finds that the transfer will not injure other legal users or unreasonably affect fish, wildlife, or other instream beneficial uses, then the transfer may be approved. (Wat. Code, § 1727, subd. (b).) If, on the other hand, the SWRCB is unable to make those findings, then the matter is to be set for hearing. (Wat. Code, § 1727, subd. (c).) A transfer made pursuant to section 1725 is exempt from the requirements of the California Environmental Quality Act (CEQA). (Wat. Code, § 1729.)

Upon initial evaluation, the Chief of the Division of Water Rights (Division), acting pursuant to power delegated by the SWRCB, was unable to make the findings required under section 1727. By letter dated July 12, 1999, the Division Chief explained that it appeared that the water conservation efforts undertaken by Natomas resulted in a significant decrease in the amount of water diverted, but did not result in a reduction in consumptive use. Approval of the transfer could therefore lead to an overall increase in consumptive use, which could in turn injure other legal users, or unreasonably affect fish, wildlife, or other instream beneficial uses. Because the Division Chief was unable to make the requisite findings, a hearing before the SWRCB was scheduled on Natomas's petition. The SWRCB conducted the hearing on August 16, 17, and 25, 1999.

3.0 NATOMAS'S RIGHTS ARE ADEQUATE TO SUPPORT THE TRANSFER

A threshold issue is the adequacy of Natomas's water rights to support the transfer.

As set forth above, the maximum amount that Natomas may divert under its licenses is 135,448 ac-ft per year. The USBR challenged the adequacy of Natomas's rights to the extent that they exceed 98,200 ac-ft per year, the so-called base supply quantified in Natomas's contract with the USBR. (See Natomas Exhibit 5b, Contract Between the United States and Natomas Central Mutual Water Company, Diverter of Water from Sacramento River Sources, Providing for Project Water Service and Agreement on Diversion of Water, Exhibit A.) The base supply is the amount of water that Natomas may divert under the contract without charge. Under the contract, Natomas may purchase an additional 47,800 ac-A, which is labeled project water supply, for a combined total of 146,000 ac-ft.² (Ibid.)

Although the USBR did not contend that Natomas's water rights were necessarily limited to the base supply under the contract, the USBR did assert that the amount of the base supply was based on studies, including the 1956 Cooperative Study Program, which estimated the amount of natural flow available to satisfy Natomas's water rights. (USBR Exhibit 1, Testimony of Gale Heffler-Scott, at pp. 6-9.) In essence, the USBR argued that any water that Natomas diverts

² At the hearing, Mr. Donald A. Bultema, witness for the USBR, testified that the contract has been amended to reduce the amount of additional water that may be purchased from 47,800 ac-ft to 22,000 ac-ft, for a combined total of 120,200 ac-ft per year. (R.T. 403: 13-25; 404: 1-2.)

in excess of 98,200 ac-ft might be Central Valley Project water released from storage, and not natural flows which Natomas may divert under its licensed rights. (See USBR Exhibit 2b [chart purporting to show that the proposed transfer would increase Natomas's demand over the base supply, thereby increasing Natomas's demand for project water].)

The transfer will entail changes in point of diversion, place of use, and purposes of use under Natomas's licenses, which are for direct diversion from the natural flow of the Sacramento River. Natomas cannot transfer the right to use water to the extent that natural flows are not available to satisfy the right during the period of the transfer. The USBR presented no evidence, however, that showed that natural flows in the Sacramento River are inadequate to fully satisfy Natomas's licensed rights during the transfer period. The USBR did not introduce into the record in this proceeding the studies relied upon in calculating Natomas's base supply, or any other data concerning the availability of Sacramento River water. (See R.T. 536: 1 1-25; 537; 538: 1-5.) Although the parties to the contract may have set the base supply based on their estimates of the natural flows available for diversion by Natomas, they agreed to a base supply for purposes of establishing the amount of water for which Natomas must pay under the contract. For purposes of water right administration, the base supply under the contract does not and could not establish the amount of water that Natomas is entitled to divert under its licenses.

The availability of unappropriated water is a prerequisite to the issuance of a permit (Wat. Code, § 1375, subd. (d)) which, in turn, is a prerequisite to the issuance of a license. A finding that unappropriated water is available, for purposes of issuing a water right permit, does not necessarily establish that water is available for appropriation in any given year throughout the season of diversion authorized under the permit. Where it is in the public interest, the SWRCB may issue a permit that allows water to be diverted during a period of relative abundance, with appropriate conditions to prevent water from being diverted during periods when supplies are scarce and unappropriated water is not available. Nevertheless, the issuance of permits and licenses to Natomas gives at least some indication that unappropriated water is available, and nothing in the record indicates that the natural flows available during the period of the proposed transfer are insufficient to fully satisfy Natomas's licensed rights. The SWRCB concludes that Natomas's rights are adequate to support the proposed transfer. This finding is

made solely for the purposes of acting on Natomas's pending petition. The SWRCB could reach a different conclusion in a future proceeding, depending on the evidence presented in that proceeding.³

4.0 NATOMAS HAS CONSERVED WATER IN ACCORDANCE WITH WATER CODE SECTION 1011

Having considered the adequacy of Natomas's rights to support the transfer, the next issue is whether Natomas has conserved water in accordance with Water Code section 1011. The SWRCB concludes that it has. Section 1011 provides in pertinent part as follows:

“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. 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.

“... ”

“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 purposes of this section.

“Water, or the right to the use of 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.”

(Emphasis added.)

³ In an ongoing proceeding, the SWRCB is addressing the issue of the obligations of existing water right holders in the Central Valley to bypass natural flows needed to meet water quality standards in the San Francisco Bay and Sacramento-San Joaquin Delta Estuary. The outcome of this proceeding could affect water availability under Natomas's licensed rights.

Section 1011 preserves an appropriative water right when less water is used under the right due to water conservation efforts. Essentially, section 1011 requires water to be treated as though it were used, when in actuality the water is conserved. Any reduction or cessation in use due to conservation efforts is "deemed equivalent to a reasonable beneficial use" Thus, the right to use the amount of water conserved is not subject to forfeiture for nonuse. The right thereby protected from forfeiture may be used later if needed. The right to use the water conserved may also be transferred pursuant to other provisions of law authorizing transfers."

The purpose of section 1011, subdivision (a) was to eliminate the disincentive to conserve water that was created by the forfeiture doctrine, by protecting the portion of an appropriative right that is not exercised due to conservation efforts from forfeiture for nonuse. Section 1011, subdivision (a) was adopted upon the recommendation of the Governor's Commission to Review California Water Rights Law. The language of subdivision (a) was taken from proposed legislation contained in the Commission's Final Report, dated December 1978. (Exhibit C of the State Water Contractors, Final Report, Governor's Commission to Review California Water Rights Law, pp. 80-8 1.)' The Commission explained the need for subdivision (a) as follows:

"The forfeiture doctrine discourages water conservation because an appropriator who uses less water than his entitlement may lose his right to the extent of the nonuse. The doctrine thus deters conservation by encouraging an appropriator to use the full amount of the right. The Commission suggests modification of the doctrine to allow an appropriator to retain the full amount of the right where he has not used the full amount due to water conservation efforts."

(Final Report, *supra*, at p. 60.)

⁴ DWR questioned the constitutionality of section 10 11 to the extent that it preserves the right to use conserved water indefinitely, and does not require conserved water to be reapplied eventually to beneficial use. A requirement that the right to use conserved water be exercised at some point cannot be read into section 10 11. Pursuant to article III, section 3.5 of the California Constitution, the SWRCB has no authority to declare section 1011 to be unconstitutional, or to refuse to give the section full effect on that basis.

⁵ The State Water Contractors have asked the SWRCB to take official notice of this report, along with several Other documents, all of which were submitted as Exhibits A-E of the State Water Contractors. The S WRCB hereby takes official notice of Exhibits A-E. Official notice is taken pursuant to California Code of Regulations, title 23, section 648.2 (authorizing the SWRCB to take official notice of matters that may be judicially noticed), and pursuant to Evidence Code section 452 subdivision (c) (authorizing judicial notice of the official acts of the legislative, executive, and judicial branches of the State).

Natomas probably has conserved approximately 18,144 ac-ft due to its conservation efforts. Natomas's diversions from the Sacramento River have dropped significantly since it implemented its conservation efforts in the period 1981-1986. The average amount of water diverted by Natomas per acre during the period 1979-1984 was 4.31 ac-R, and the average amount diverted per acre during the period 1986-1998 was 3.54 ac-ft. (Natomas Exhibit 15.) The difference is a reduction in diversions of 0.77 ac-ft per acre.⁶ Natomas estimated that it would irrigate 23,563 acres in 1999. (Natomas Exhibit 15.) Using that figure for purposes of comparison, Natomas's total diversions have been reduced by approximately 18,144 ac-ft. This decrease likely is the result of Natomas's recirculation system, which is discussed in greater detail in section 7.5.1, below. Under section 1011, this reduction in diversions is conserved water. Natomas's right to use the amount of water conserved is protected, and that right may be used as a basis for transfers, provided that the requirements of applicable transfer provisions are met.

4.1 Reporting Requirements

DWR and the State Water Contractors argued that Natomas failed to comply with the reporting requirements that are contained in section 1011. The Report of Licensee forms originally submitted by Natomas did not report its conservation. Natomas later amended its Report of Licensee forms to reflect information concerning its conservation efforts. The SWRCB finds that, under the circumstances of this case, the reporting requirement has been satisfied by the amended reports and the substantial documentation in the record confirming that Natomas reduced its diversions by approximately 17,200 ac-ft due to deliberate conservation efforts.

⁶ The year 1985 was excluded from this calculation because Natomas's recirculation system was partially implemented during that year. Natomas argued that the year 1983 should also be excluded. As explained in section 7.3, *infra*, the SWRCB eliminated 1983 from its comparison of Natomas's total, annual consumptive use figures because Natomas's water use dropped dramatically that year due to a significant decrease in rice production. In order to estimate the amount by which Natomas has reduced its diversions, however, the SWRCB has compared the average amount of water diverted per acre, not Natomas's total diversions. Natomas's water use in 1983 on a per acre basis was not remarkably different from other years, and therefore 1983 was not excluded from the SWRCB's analysis.

In any event, the *exact* amount by which Natomas has reduced its diversions is not central to this proceeding because the proposed transfer is limited to Natomas's consumptive use savings. Accordingly, the finding that Natomas has reduced its diversions by approximately 0.77 ac-ft per acre should not be considered a definitive determination of the amount of water that Natomas has conserved for purposes of future proceedings.

Section 10 11 provides:

“The [SWRCB] 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 apart 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.”

(Emphasis added.)

Since 1980, the SWRCB has required permittees and licensees to document their conservation efforts. Consistent with the statutory language, the SWRCB has incorporated the section 1011 reporting requirements into its Report of Licensee form. Licensees must complete and submit this form once every three years. (Cal. Code Regs., tit. 23, §§ 847, 848.) The form asks licensees to describe their conservation efforts, and “[I]f credit toward beneficial use of water ... for water not used due to a conservation effort is claimed under Section 1011 ...,” to set forth the amount of water conserved in the three years of record.

Following implementation of its water conservation efforts in the period 1981-1986, Natomas submitted Report of Licensee forms with the section concerning conservation left blank. The reports were signed under penalty of perjury. In 1996, Natomas filed amended forms that describe its conservation efforts and set forth the amount of water that Natomas claims to have conserved.

Although it is clear that the filing of the reports was mandatory, the form did not expressly state that filling out the section on conservation was mandatory if the filing party wished to receive the protection of section 1011 for any conserved water. In this instance, Natomas's failure to do so may be excused on that basis. Natomas has maintained excellent records on its water use and conservation savings. Accordingly, failure to complete the section on conservation may have been an administrative oversight. In order to avoid any question in the future as to whether tilling out that section is mandatory, the Division is directed to amend the Report of Licensee form and the Progress Report by Permittee form. The forms shall be amended to make clear that

filling out every section of the form is mandatory, if applicable, and that failure to fill out the section regarding water conservation will deprive the licensee or permittee of the benefits of section 1011. The Division is directed further to create a database containing those permittees and licensees who report that they have conserved water. The database should reflect conservation reported beginning in the year 2000. It will be useful to consolidate this information and make it accessible to SWRCB staff and to the public.

It also merits note that Natomas's failure to report conservation efforts in a timely manner called into question the credibility of its claim to have conserved water. Late reporting raises the question whether the nonuse of water was in fact due to conservation efforts, or if the water user is attempting to characterize nonuse that occurred for some other reason as water conservation in order to obtain the protections of section 1011. Conversely, reporting water conservation in a timely manner, while insufficient in itself to prove water conservation, would tend to support a claim that the nonuse of water was the result of water conservation efforts. For this reason, it is in every water user's best interest to report water conservation efforts in a timely manner. In this case, however, Natomas has overcome the credibility problem posed by its failure to timely report its conservation efforts by submitting convincing evidence in a public hearing that it has in fact conserved water due to water conservation efforts.

5.0 THE TRANSFER MUST CONFORM TO THE SUBSTANTIVE REQUIREMENTS OF SECTION 1725

Having established that Natomas has conserved water in accordance with Water Code section 1011, the next question is what amount of the water conserved may be transferred pursuant to Water Code section 1725. Some parties, including Natomas and the San Joaquin River Group Authority, have suggested that section 1011, subdivision (b) allows for the transfer of conserved water without regard to all of the substantive requirements of the transfer provision that is relied upon by the transferor. The SWRCB disagrees. For the reasons explained more fully below, the SWRCB concludes that all of the requirements for standard water transfers apply to conserved water transfers. Therefore, whether conserved water is transferable depends on the transfer provision that is relied upon and the circumstances of the case. The SWRCB concludes further that in this case, section 1725 allows for a transfer of the amount of water that,

but for Natomas's conservation efforts, would have been consumptively used during the transfer period.

At the outset, it is important to recognize the significance of the question whether a conserved water transfer must conform to the substantive requirements of the transfer provision relied upon. The question is critical because the transfer provisions contain protections for third party water right holders and the environment. All of the transfer provisions require a finding that the transfer will not injure other legal users of water, and most of the provisions require a finding that the transfer will not unreasonably affect fish, wildlife, and other instream beneficial uses. (See Wat. Code, § 1021, subd. (b) [water leases]; Wat. Code, §§ 1702-1703, 1706 [changes in point of diversion, place of use, or purpose of use]; **Wat.** Code, § 1725 [short-term, or "temporary" transfers]; Wat. Code, § 1736 [long-term transfers]; Wat. Code, § 1740 [decreed rights] Wat. Code, § 1745.04 [transfers by water suppliers].)⁷

The requirement that a transfer not injure other legal users is a codification of the common law "no injury rule." The no injury rule, a fundamental tenet of water rights law, protects a junior right holder from injury due to a change in the exercise of a senior water right. Thus, for example; the no injury rule generally would operate to bar a change in place of use that reduces the return flow relied upon by a downstream user. As set forth above, the no injury rule applies to water transfers that involve a change in point of diversion, place of use, or purpose of use under the transferor's rights.

The argument that the rules governing the transfer of the right to use water that has been conserved are different from the right to transfer a fully exercised right is inconsistent with the plain meaning of section 1011, subdivision (b). Subdivision (b) expressly provides that conserved water may be transferred "pursuant to any provision of law relating to the transfer of water or water rights" The plain meaning of "pursuant to" is "conforming to; in accordance

⁷ A finding that instream beneficial uses will not be unreasonably affected may be required even when the applicable Water Code sections do not expressly state such a requirement. (See SWRCB Order WR 95-9 at p. 29.)

with.” (2 The New Shorter Oxford English Dictionary (1993) p. 2422.) Accordingly, a conserved water transfer must meet all of the requirements of the applicable transfer provision.

Legislative history also supports this interpretation. As explained earlier, the purpose of section 10 11, subdivision (a) was to promote water conservation by protecting from forfeiture the portion of an appropriative right that is not exercised due to conservation efforts. The purpose of section 1011, subdivision (b), which was added to section 1011 in 1982, was to promote water transfers by, clarifying that the right to use water that has been conserved may be transferred, pursuant to other transfer provisions. Subdivision (b) was based on the recommendations of a report prepared by the California State Assembly Office of Research (AOR) in response to a request by Assemblyman Katz. (See Exhibit B of the State Water Contractors, California State Assembly Office of Research, A Marketing Approach to Water Allocation, p. 1.) The legislation that became subdivision (b) originally was proposed by AOR’s report, and later was incorporated into Section 4 of AB 3491 (Katz). (See AOR Report, *supra*, at p. 46; Exhibit C of the State Water Contractors, AB 3491 (Katz) 3/12/82 version, pp. 6-7.)

According to AOR’s report, the legislation was designed to facilitate transfers by clarifying that under existing law such transfers could take place. (AOR’s report, *supra*, at pp. 4, 46.)

Taken together, the legislative history for subdivisions (a) and (b) of section 1011 indicates that the Legislature intended merely to place those who conserve water on a par with those who continue to fully exercise their rights. Nothing in the legislative history suggests that the Legislature intended to place those who conserve water in a better position than those who continue to fully exercise their rights by allowing the wholesale transfer of conserved water without regard to the provisions that govern water transfers generally.

In fact, the drafters of subdivision (b) expressly stated that conserved water transfers would be subject to the no injury rule, which was then and remains now a critical component of all transfer provisions. The AOR report stated at page 49: “Current law requires findings that no third party will be injured prior to permitting transfers. The proposed legislation would have no effect on this policy, and in fact provides safeguards for maintaining these rights.” In addition, in a statement made on April 14, 1982, before the Assembly Water, Parks & Wildlife Committee,

Assemblyman Katz said that his bill "would provide an additional flexibility by allowing for transfers without jeopardizing the water right, providing there is no harm to other users."

(Exhibit E of the State Water Contractors, p. 1.) If the Legislature did not intend for subdivision (b) to supersede the no injury rule, it follows that the Legislature did not intend to supersede the other components of the various transfer provisions either.

6.0 A CONSUMPTIVE USE SAVINGS MAY BE TRANSFERRED PURSUANT TO SECTION 1725

The transfer provisions under which Natomas has petitioned to transfer water in this case are the short-term transfer provisions contained in sections 1725-1732. Section 1725 permits a temporary transfer of water "if the transfer would only involve the *amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change*, would not injure any legal user of the water, and would not unreasonably affect fish, wildlife, or other instream beneficial uses." (Emphasis added.)

Section 1725 defines 'consumptively used' as "the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion."

By its terms, section 1725 allows only for the transfer of water that the transferor would consumptively use or store, but for the transfer. This language has generated considerable confusion in this proceeding because presumably Natomas will continue to conserve water whether or not the transfer is approved. Under section 1011, however, a reduction or cessation in use due to conservation efforts is deemed to be the equivalent of reasonable, beneficial use. Thus, for purposes of section 1725, water that would have been consumptively used but for water conservation efforts pursuant to section 1011 should be deemed to be the equivalent of water that would have been consumptively used in the absence of the transfer. Accordingly, water may be transferred pursuant to section 1725 if it would have been consumptively used in the absence of the transfer, but for the transferor's conservation efforts. In short, a consumptive use savings may be transferred pursuant to section 1725, provided that the other requirements contained in sections 1011 and 1725 are met.

This interpretation finds further support in recently enacted legislation, SB 970 (Costa), effective January 1, 2000. (Stats. 1999, ch. 938, § 11.) SB 970 replaces Water Code section 1726 with a new section 1726. Subdivision (e) of the new section 1726 specifies that the SWRCB is to investigate whether a proposed short-term transfer would involve water that “would have been consumptively used or stored . . . in the absence of the proposed transfer *or conserved pursuant to Section 1011.*” (Emphasis added.) This language expressly recognizes that conserved water may be the subject of a short-term transfer pursuant to sections 1725-1732, provided that the water involved would have been consumptively used or stored had it not been conserved.⁸

Sections 1725-1732 provide for the expedited review of temporary transfers. The benefits of a transfer under these provisions include an exemption from the requirements of the California Environmental Quality Act. (See Wat. Code, § 1729.) Several of the parties have pointed out that this expedited review procedure is justified because the transfer of water that otherwise would be consumptively used or stored is unlikely to injure other legal users of the water, or unreasonably affect fish, wildlife, or other instream beneficial uses. On the other hand, the transfer of water that historically has been conserved could have a real-world impact on the stream system. If such a conserved water transfer is approved, water that had been left in the stream system due to conservation efforts would be diverted by the transferee.

The impact must be measured, however, relative to the transferor’s water use prior to undertaking water conservation efforts. Section 1011 specifies that a reduction in use as a result of conservation efforts shall be deemed equivalent to the use of the water. If water that has been conserved were not treated as though it were actually used, the protections afforded to the transferor by section 1011 would be eviscerated. Just as section 1011 preserved Natomas’s right to use the amount of water that it has conserved, section 10 11 has preserved Natomas’s right to

⁸ Although SB 970 will not be effective until January 1, 2000, it merits note that the SWRCB’s disposition of Natomas’s petition would not be different if the SWRCB were to render this decision after SB 970’s effective date. SB 970 did not repeal section 1725, so the substantive requirements for a transfer pursuant to that section remain unchanged. SB 970 also amended section 10 11, but only to add an elaboration on the definitions of “land fallowing” and “crop rotation.” SB 970 does contain a number of new procedural requirements, mainly concerning the notice to be given of a short-term transfer petition, and the opportunity to comment on such a petition. Those requirements likely would not apply to Natomas’s petition, however, consistent with the general rule that legislation operates prospectively, absent clear legislative intent to apply the legislation retroactively. (*Evangelatos v. Superior Court* (1988) 44 Cal3d 1188, 1207-1209 [753 P.2d 585, 596-598, 246 Cal. Rptr. 629, 639-642].)

transfer the amount of water that it has conserved. Even though the stream system would be impacted, no legal user could claim injury if Natomas were to resume using the amount of water that it has conserved. (Natomas underscored this point by threatening to cease its conservation efforts and resume its historic water use if its transfer petition is not approved. (Natomas Exhibit 5a, Written Testimony of Peter J. Hughes, pp. 4, 7.)) Similarly, no legal user can claim injury if Natomas transfers water that would have been consumptively used in the absence of the transfer, but for conservation efforts. Of course, prior to undertaking water conservation efforts, Natomas could not effectuate a transfer that would injure another legal user of the water, and Natomas cannot do so after having undertaken such efforts. Thus, for example, Natomas could not transfer a savings in the quantity of its diversions to the extent that historic return flows would be reduced in a manner that would injure another legal user of those flows.

7.0 NATOMAS HAS REDUCED ITS CONSUMPTIVE USE BY 1,995 ACRE-FEET

Natomas has demonstrated that for the last eight to ten years, it has reduced its consumptive use by 1,995 ac-ft by controlling weed growth along the canals within its service area. This savings will be discussed in greater detail below. First, Natomas's claim to have reduced its consumptive use by more than 14,000 ac-ft is addressed.

7.1 Natomas's Water Balance Approach

Natomas's method of calculating consumptive use savings was to perform a water balance. For the reasons explained below, however, Natomas's analysis based on its water balance did not establish that Natomas's water conservation efforts have led to a consumptive use savings.

Natomas's water balance entailed subtracting total outflow from the Natomas Basin from total inflow. (Natomas Exhibit 1 a, Written Testimony of Marc Van Camp, at p. 4.) The result of the water balance analysis was a total consumptive use value in ac-ft for each of the years from 1979 to 1998. Natomas asserted that its calculation of consumptive use included water that had been consumed through use by crop evapotranspiration (ET), that had percolated underground; or that had otherwise been removed from use in the downstream water supply. (*Id.* at p. 8.)

In order to measure the consumptive use savings that resulted from its conservation efforts, Natomas used as a baseline the average of the three highest years of consumptive use from the period 1979 (the year when Water Code section 1011 was enacted) to 1985 (the year when Natomas completed implementation of its conservation efforts). The average of the three highest years (1979, 1981 and 1984) was 104,328 ac-ft. Natomas compared this average to a performance standard of 89,000 ac-ft. The performance standard is roughly equivalent to its average consumptive use, as measured by its water balance, for the period 1986-1998. The difference between 104,328 ac-ft and 89,000 ac-ft is 15,328 ac-ft. Based on this difference, Natomas increased the amount of its proposed transfer from 8,860 to 14,000 ac-ft.⁹

7.2 The Average of the Three Highest Years is Not the Proper Baseline

Comparing the average consumptive use for the three highest years before implementation of conservation efforts to the average year after implementing conservation efforts is not a valid way to measure the water savings due to those efforts. By definition, there will always be a difference between the highest years and the average, regardless whether any conservation efforts were made. To make a fair comparison, average consumptive use for the period prior to implementation of conservation efforts should be compared to average consumptive use for the period following implementation of conservation efforts.

In support of its approach, Natomas argued that the proper baseline for measuring a consumptive use savings could be the year of highest consumptive use. Natomas reasoned that an entire water right is potentially transferable, and the year of highest use is used to measure a water right for licensing purposes. This argument does not take into account the fundamental difference between determining the maximum amount that Natomas may divert under its licenses, and measuring Natomas's consumptive use savings for purposes of a transfer pursuant to Water Code section 1725. For purposes of measuring the extent to which Natomas's conservation efforts

⁹ Natomas subtracted 800 ac-ft from 15,328 ac-ft to account for the fact that its current consumptive use might be reduced due to urbanization, and an additional 528 ac-ft so that the proposed transfer would not exceed its water rights. (R.T. 59:3-25; 60:1-5.)

Although the increase in Natomas's proposed transfer amount is unimportant in light of our decision in this case, we note that the approval of a transfer involving more than 8,860 acre-feet would raise significant due process concerns. The SWRCB hearing notice in this proceeding stated that Natomas proposed to transfer the right to use 8,860 acre-feet of water. Some parties may have opted not to participate in this proceeding because it involved a transfer of 8,860, not 14,000.

have reduced its consumptive use, a fair comparison must be made between Natomas's water use prior to undertaking conservation efforts, and its water use after having undertaken conservation efforts. Measuring a three-year high against an average does not result in an accurate measurement of consumptive use savings.¹⁰

7.3 Natomas's Water Balance Does Not Demonstrate That Natomas's Conservation Efforts Have Reduced Its Consumptive Use

Using Natomas's consumptive use figures, the difference between Natomas's average consumptive use for the period 1979 to 1985, and Natomas's average consumptive use for the period 1986 to 1998, is 7,456 ac-ft ($96,619 - 89,163 = 7,456$). (1983 was eliminated from this calculation because it was a clear anomaly. In 1983, the Payment-In-Kind (PIK) program was implemented. Essentially, the program paid farmers not to grow rice. Due to the program, Natomas's water use dropped dramatically in 1983.) The 7,456 acre-foot reduction¹¹ is attributable to a corresponding reduction in irrigated acreage, however, and, as discussed below, Natomas did not claim to have reduced its irrigated acreage in order to conserve water.

Natomas's average annual irrigated acreage fell from 25,600 acres for the period 1979- 1985 (again, excluding 1983), to 23,100 acres for the period 1986 to 1998; a reduction of 2,500 acres. In order to determine whether Natomas's reduction in consumptive use is attributable to the reduction in acreage, the average consumptive use per irrigated acre was calculated for each period by dividing the average annual consumptive use by the average annual number of irrigated acres. The resulting average consumptive use per acre for the period 1979-1985 (excluding 1983) was 3.77 ac-ft per acre. The average consumptive use per acre for the period 1986-1998 was 3.85 ac-ft per acre." This indicates that the reduction in consumptive use between the two periods is attributable to a reduction in total irrigated acreage. For example, 3.85 ac-ft per acre multiplied by 2,500, the number of acres that have been reduced between the

¹⁰ In addition, although an entire water right is potentially transferable, it might not be possible to divert the maximum amount that may be diverted under the right, depending on the hydrologic conditions in the year of the transfer.

¹¹ This slight increase in consumptive use per acre is not significant. (SWRCB Staff Exhibit. A, July 22, 1999 Memorandum from Gerald A. Johns, Assistant Division Chief, to Harry M. Schueller, Division Chief, at p. 3; Figures 1 & 2.)

two periods, equals 9,625 ac-ft. This figure is in excess of the drop in average consumptive use between the two periods of 7,456 ac-ft.¹²

Any reduction in Natomas's water use attributable to a reduction in irrigated acreage, however, was not the result of any conservation action undertaken by Natomas, and therefore cannot be counted as part of Natomas's consumptive use savings. Section 1011, subdivision (a) protects a right to use water to the extent of a reduction in use "because of water conservation efforts." Section 1011, subdivision (b) provides further that water conserved "as a result of water conservation efforts" may be transferred. The purpose of section 1011 is to encourage water users to conserve water. Therefore, the SWRCB concludes that a water user who claims to have conserved water must present some evidence of a deliberate effort to save water.

In this case, Natomas has expressly disavowed that it did anything to cause acres to be removed from production in order to conserve water. In response to the question whether Natomas had any program during the period between 1988 and 1998 that encouraged farmers to take land out of production, Natomas's general manager, Peter J. Hughes replied, "Absolutely not." (R.T. 204:21-25; 205: 1-16.) According to Natomas, whether to take land out of production is a decision that is made by the farmers within its service area. (R.T. 204:21-25; 205; 206: 1-13.) The record contains no evidence concerning the reason or reasons why the farmers themselves took land out of production.

Natomas has taken the position that any activity that happens to reduce water use constitutes a "water conservation effort," irrespective of the water user's intent. This interpretation is inconsistent with the plain language of section 1011, as it effectively deletes the words "water conservation" from the phrase "water conservation efforts." In addition, to reward those who

¹² In support of its water balance, Natomas submitted an analysis of evapotranspiration of applied water (ETAW). ETAW is a way of measuring the applied water needs of crops. Natomas claimed that the majority of the consumptive use savings shown by its water balance was due to reductions in ETAW. As might be expected, however, the reduction in ETAW is attributable to the reduction in irrigated acreage.

Natomas estimated what its ETAW would be in 1999, and compared this figure to the average of the three years with the highest ETAW values (1979, 1981, and 1984). The result is an apparent reduction in ETAW of 6,100 acre-feet. (Natomas Exhibit 14, Attachment 12.) The corresponding reduction in acreage between the average of the three high years and 1999 was 2,184 acres. The average ETAW per acre for the three highest years was 2.85 acre-feet. This indicates that the apparent savings of 6,100 acre-feet is attributable to a reduction in acreage. (2,184 x 2.85 = 6,224.4.)

reduce their water use for reasons other than saving water would do nothing to further the purpose of section 1011, which is to encourage water conservation. Finally, as the State Water Contractors correctly noted, Natomas's interpretation would effectively repeal the forfeiture statute, Water Code section 124 1, as any reduction in water use would be considered conservation, and therefore would be protected from forfeiture for nonuse.

In the context of a conserved water transfer, another reason why it is important that water conservation be deliberate is that it provides assurance that the effort will be made and the water conserved in the year of the transfer. If Natomas and its farmers have never deliberately reduced irrigated acreage in order to conserve water, and do not propose to do so in the year of the transfer, then there is no guarantee that any consumptive use savings in previous years that was attributable to a reduction in irrigated acreage will be realized in the year of the transfer. In summary, absent any evidence that land was taken out of production in order to save water, the SWRCB cannot find that any savings associated with a reduction in irrigated acreage constitutes conservation within the meaning of Water Code section 10 11.^{13 14}

7.4 The 89,000 Acre-Feet Performance Standard

This leads to another problem with Natomas's approach. Natomas asserted that it would meet a consumptive use performance standard of 89,000 ac-A in the year of the transfer, without clearly identifying the conservation efforts it intends to make in the year of the transfer, and the associated water savings. Natomas's average consumptive use for the period between 1986 and 1998 is roughly equivalent to 89,000 ac-R, but Natomas's consumptive use has fluctuated

¹³ An additional problem with considering Natomas to have conserved water by reducing irrigated acreage is that, viewed over the long-term Natomas's irrigated acreage has not changed. (SWRCB Staff Exhibit A, Figure 9 [graph comparing average irrigated acreage for the period 1965-1982 to average irrigated acreage for the period 1983-1998].)

¹⁴ In light of the SWRCB's finding that Natomas's water balance does not demonstrate that Natomas's conservation efforts have reduced its consumptive use, the SWRCB need not address the USBR's criticism of some of the assumptions underlying the water balance.

considerably from year to year. Accordingly, the SWRCB cannot assume, absent more information, that Natomas's consumptive use in the year of the transfer will be average.¹⁵

Natomas's special projects manager, Thomas A. Barandas, testified that, at the time of the SWRCB's hearing, Natomas's Board of Directors had done nothing more than direct its staff to develop a plan in order to meet the performance standard of 89,000 ac-ft in consumptive use. (R.T. 217:22-25; 218:1-15.) Mr. Barandas stated that, in addition to "intensifying" conservation measures that have already been implemented, such as weed control, on-demand delivery, and minimization of spillage, he was considering the development of some type of price incentive to encourage farmers within Natomas's service area to switch to less water-intensive crops. (R.T. 218:7-25; 219:1-13; Natomas Exhibit 6a, at p. 6.) He added that he hoped that there would be a high level of voluntary participation in such an incentive program. (R.T. 219:13-22.)

Natomas's initial plans on a staff level do not adequately establish that the performance standard will be met. Natomas has not quantified the water savings associated with "intensifying" its current conservation efforts. Similarly, Natomas has not given adequate assurance that Mr. Barandas's proposed price incentive program will have the intended result. This is a particular concern given that, throughout this proceeding, Natomas has consistently stressed that its shareholders, the farmers within its service area, are the ones who make the decisions regarding both the numbers of acres to farm, and the types of crops to grow. (R.T. 204:21-25; 205; 206:1-13.)

Given that Natomas pledged to meet a performance standard equivalent to its current average consumptive use, it appears that Natomas has attempted to establish a historic consumptive use savings. Another approach would have been to identify the conservation efforts to be implemented in the year of the transfer, and calculate the associated consumptive use savings. A savings due to crop shifts could have been calculated by specifying what changes in the anticipated cropping pattern would be made in order to save water. The consumptive use savings associated with the changes would have been transferable, provided that the cropping pattern

¹⁵ The State Water Contractors expressed a similar concern with regard to Natomas's comparison of pre- and post-conservation averages. The State Water Contractors pointed out that the difference between averages might not [footnote continues on next page]

against which the changes were measured was consistent with historic patterns, and was not inflated in order to exaggerate the savings. With the exception of Natomas's weed control program, however, it is difficult to ascertain, based on the record in this proceeding, what conservation efforts will be made in the year of the transfer, whether they will in fact be implemented, or what the water savings associated with those efforts will be.

7.5 Analysis of Natomas's Conservation Efforts

In support of its water balance, Natomas provided limited information on the specific conservation efforts that it has undertaken in an attempt to reduce consumptive use. As stated earlier, Natomas has pledged to continue these efforts in the year of the transfer. With the exception of its weed control efforts, however, Natomas did not present sufficient evidence that its various conservation efforts have reduced its consumptive use. The information contained in the hearing record on Natomas's various efforts is examined below.

7.5.1 *Recirculation System and Improved Water Management*

During the mid- 1980s, Natomas implemented a number of water conservation measures. Perhaps the most significant measure was a recirculation system. Natomas recaptures water it accumulates in the southern part of its service area and pumps it back north, approximately 20 miles, and releases it to flow south again. Natomas utilizes 84 pumps in 44 locations.

Natomas installed the recirculation system in order to save water and reduce expenses. (Natomas Exhibit 5a, p. 3.) Another reason for installing the recirculation system was complaints about odors in the drinking water diverted from the Sacramento River. Those who complained surmised that the odors were a result of agricultural chemicals in the tailwater being released by Natomas. (*Id.* at p. 3.) Natomas may also maintain the recirculation system in order to comply with water quality requirements imposed by the Regional Water Quality Control Board. (R.T. 206: 19-25, 207: 1-3.) Since completion of the recirculation system in 1986, Natomas's diversions from the river have decreased significantly. Its discharges back into the river have decreased significantly as well. (Natomas Exhibit 1a, Attachment 6.) Natomas

reflect the savings to be realized in the year of the transfer if the transferor's consumptive use in the year of the transfer is greater than average.

claimed that the recirculation system has also stabilized water levels in ditches and canals, which allows Natomas to supply water to its farmers on demand. Accordingly, incidental losses to groundwater percolation and evapotranspiration may have been reduced. (Natomas Exhibit 1 a, at pp. 12-13.)

Natomas has also made changes to policies and water payment requirements. Natomas adopted a policy in the mid-1980s that addressed excessive spillage or dumping of water into the drains to avoid drain level fluctuations. (Natomas Exhibit 6a, at p. 3.) In 1985, Natomas adopted a policy of charging its shareholders per water order, in an effort to reduce unnecessary water use. (Natomas Exhibit 6a, at p. 3.)

Natomas has reduced its diversions from the Sacramento River by recycling its tailwater, and the SWRCB commends Natomas for its efforts. However, Natomas did not demonstrate what reductions in consumptive use, if any, have occurred as a result of its recirculation system or other improved water management practices. In the words of Natomas's expert witness Marc Van Camp, "[I]t is difficult to quantify the reductions in consumptive use that have occurred in Natomas as a result of [Natomas's] improved water management activities." (Natomas Exhibit 1a, p. 12.) In addition, Assistant Chief of the Division of Water Rights, Gerald E. Johns, who testified at the hearing, questioned whether implementation of a recirculation system or simply recycling tailwater would lead to a reduction in consumptive use. (R.T. 246: 13-20.)

7.5.2 Changing Varieties of Rice and Other Crop Shifts

Natomas argued that a shift in rice varieties from an older long stature variety to a newer short stature variety has taken place which resulted in a reduction in consumptive water use. The long stature rice takes 165 days to reach maturity, whereas the short stature variety takes 140 days to reach maturity. On an annual basis, the shift in varieties may save 0.3 ac-A per acre. (Natomas Exhibit 1a, p. 11.) Based on the assumption that 5,000 to 10,000 acres were shifted from long to short stature rice, Natomas estimated a consumptive use savings ranging from 1,500 to 3,000 ac-ft. (Natomas Exhibit 1a, at p. 11; R.T. 62: 16-17.)

Natomas did not provide any concrete evidence, however, in support of its assumption that 5,000 to 10,000 acres were converted from the old to the new variety of rice after 1979, the year when section 1011 was enacted. Natomas based its assumption on conversations with rice growers that indicated that some unspecified amount of acres was planted with the old variety in the mid-1980s. (R.T. 158:7-25; 159:1-4.) Mr. Van Camp admitted that at least some farmers may have changed varieties in the early 1970s. (R.T. 159:5-9.) Thus, while Natomas's consumptive use may have been reduced due to a shift in rice varieties, the SWRCB cannot quantify what Natomas's consumptive use savings might have been without firmer evidence of the number of acres that were converted to the new variety of rice, and when the conversion took place.

As for other types of crops grown within Natomas's service area, the data submitted by Natomas show that the percentage of the total irrigated acreage that has been planted with each type of crop has not changed significantly since 1979. (Natomas Exhibit 15 [California Irrigated Information Management System data submitted on diskette].) (The data submitted by Natomas do not distinguish between the different varieties of rice, and therefore do not reflect any changes from the older to the newer variety.)

Finally, as was the case with the reduction in irrigated acreage, Natomas did not submit any evidence that any past changes in rice varieties or other crops were part of a deliberate effort to conserve water. Both Mr. Hughes and Mr. Van Camp admitted that any past decision to switch to less water intensive crops was made by the farmers, and was not encouraged by Natomas. (R.T. 159: 10-13; 167:6-11; 205: 17-25; 206: 1-13.) No evidence was submitted concerning the farmers' reason or reasons for changing crops.

7.5.3 Laser Leveling of Fields

Over the last fifteen years, the farmers within Natomas's service area have undertaken extensive laser leveling of their fields. Natomas estimated that over ninety-percent of the rice acreage within the Natomas Basin has been laser leveled during this time. Laser leveling can reduce the amount of water required to irrigate a field. (Natomas Exhibit 6a, at p. 4) Mr. Johns testified that laser leveling of fields could also reduce consumptive use through improved distribution uniformity. (R.T. 3 13 : 16-25; 3 14: 1-1 9.) According to Mr. Johns, improved distribution

uniformity can reduce deep groundwater percolation, which can be a consumptive use savings “[d]epending on where you are in the state” (R.T. 3 13: 16-20.) John Renning, a witness for the USBR testified, however, that improved distribution uniformity can actually increase consumptive use. (R.T. 553 : 1 1-23 .) Mr. Renning explained that improved distribution uniformity can lead to a better crop that uses more water. (R.T. 553: 15-23.)

In summary, Natomas presented evidence that laser-leveling fields can in theory reduce consumptive use, but submitted insufficient evidence to determine whether and to what extent laser leveling has created any consumptive use savings in this case.¹⁶

7.5.4 Canal Lining and Bank Compaction

Since 1990, Natomas has concrete lined 5,276 linear feet of its canals located in sandy soils to reduce seepage. (Natomas Exhibit 6a, at p. 4.) When possible, Natomas has lined canals in soil types where greater than normal losses occur. (Natomas Exhibit 5a; at p. 5.) Natomas provided no evidence, however, concerning the amount of water that has been saved by these activities. (R.T. 148: 1-10.)

7.5.5 Reductions in Deep Percolation

A number of the conservation efforts identified by Natomas, including laser leveling of fields, and canal lining and bank compaction, could reduce deep percolation past the plant root zone and into the groundwater. A reduction in irrigated acreage could also account for reductions in deep percolation (R.T. 13 1: 13-25; 13 1: 1-4), although Natomas has not identified a reduction in irrigated acreage as one of its conservation efforts. Natomas took the position that any reduction in deep percolation constituted a consumptive use savings. The record does not indicate, however, to what extent, if any, deep percolation has been reduced. Moreover, any reduction in deep percolation may have been offset by increased groundwater recharge from the Sacramento River.

¹⁶ Like reduced acreage and crop shifts, laser leveling was undertaken by the farmers, not Natomas, and Natomas presented no evidence that the fields were laser leveled as part of a deliberate effort to conserve water.

Mr. Van Camp testified that, based on his review of groundwater elevations, the Sacramento River is a losing stream in the reach of the Natomas Basin, meaning the river is recharging the groundwater. (Natomas Exhibit 1 a, at p. 8.) The groundwater gradient in the Natomas Basin slopes away from the river towards a depression near McClellan Air Force Base, which is useable groundwater. Joseph C. Scalmanini, a witness for Natomas, concluded that when the groundwater enters the subsurface after being applied for irrigation or otherwise distributed within Natomas's service area, the water deep percolates through an unsaturated zone to the groundwater system and cannot re-enter the surface system. (R. T. 71:8-25. j

The record suggests that any reduction in deep percolation due to Natomas's conservation efforts has been inappreciable. The groundwater elevations have remained essentially constant throughout the Natomas area. (Natomas Exhibit 2a, at p. 4; R.T. 129:4-8.) (One possible exception is the southeast portion of Natomas, where there has been a recent decline in groundwater elevations over the last 20 years, most likely influenced by the pumping depression to the east, (R.T. 69:11-18.)) Moreover, it is possible that any reduction in deep percolation has been offset by increased seepage losses from the Sacramento River. (R.T. 130: 13-25; 13 1: 1-25; 131:1-11.) If this were the case, any reduction in deep percolation does not result in a net savings to the surface water system. In summary, Natomas has not demonstrated a consumptive use savings in the form of a reduction in deep percolation. Therefore, the SWRCB need not address the question whether a reduction in losses to a usable groundwater basin constitutes a savings in consumptive use, as defined in Water Code section 1725.

7.5.6 Weed Control

To improve water management and conserve water, Natomas commenced a weed control program in 1984. Natomas currently kills weeds by spraying approximately 567,000 linear feet of canal banks and roadways. (Natomas Exhibit 6a, at p. 2.) Natomas estimated that approximately 665 acres of lands within its boundaries utilize weed control. Natomas assumed those weeds would otherwise consume through evapotranspiration between 1-3 ac-ft per acre, which results in a reduction in consumptive use of 665 to 1,995 ac-R per year. (Natomas Exhibit 1a, at p. 12.) Mr. Van Camp testified that a report by the Food and Agriculture Organization supports the higher number, 1,995 ac-ft. (R.T. 163: 11-15.)

Mr. Van Camp's testimony was not refuted and is sufficient to conclude that Natomas has reduced its consumptive use by 1,995 ac-ft through weed control. Provided that Natomas continues its weed control efforts in the year of the transfer, this savings may be transferred pursuant to Water Code section 1725.

8.0 TIMING OF THE TRANSFER

The transfer must be carried out in a manner consistent with Natomas's water rights. The amount of water diverted by Natomas and the amount of water transferred cannot exceed the maximum amount that Natomas may divert under its licenses. The transfer should also be carried out after the savings have been realized, at a rate that is consistent with the rate at which the water would have been consumptively used, but for Natomas's conservation efforts, and within Natomas's diversion season. Otherwise, the transfer could result in a change in Natomas's consumptive use pattern, which could injure other legal water users, or unreasonably affect fish, wildlife, or other instream beneficial uses. For example, the transfer of 1,995 ac-ft at the beginning of the diversion season, or the transfer of the entire amount instantaneously, would constitute marked changes from the consumptive use pattern that Natomas would follow in the absence of the transfer.

The rate at which weeds would otherwise consume the water to be transferred would be spread out over the course of the season. Accordingly, the transfer should be carried out during the course of Natomas's diversion season between March 1 and October 31, and at a rate that is consistent with the rate at which the water would have been consumed by weeds.

The SWRCB recognizes that limiting the transfer in this manner may render the transfer impractical. Moreover, given the amount of water involved, it is unlikely that the instantaneous transfer of the entire 1,995 ac-ft would have a significant impact on the operations of the State Water Project or the Central Valley Project, or unreasonably affect instream beneficial uses. Therefore, with the written consent of DWR and the USBR, Natomas may carry out the transfer at a time and rate that deviate from the time when and the rate at which the savings accrue, provided that the transfer is completed within one year from the date of this order.

9.0 POLICY IMPLICATIONS

Natomas and other parties to this proceeding argued that approval of Natomas's petition would create an incentive to conserve water, and that denial of its petition would create an incentive to use water inefficiently. To the extent that the parties would have the SWRCB approve the transfer without regard to the requirements of Water Code section 1725 or the no injury rule, the parties would place a premium on water conservation beyond that envisioned by the Legislature when it enacted Water Code section 1011. The purpose of section 1011 was to eliminate a disincentive to conserve water that was created by the forfeiture doctrine, not to reward those who conserve water at the expense of third party water right holders or the environment.

It should also be noted that, unlike transfers pursuant to section 1725, transfers pursuant to other provisions of law are not limited to water that otherwise would be consumptively used.

(See, e.g., Wat. Code, §§ 1700-1705 [changes in point of diversion, place of use, or purpose of use]; §§ 1735-1737 [long-term transfers]; §§ 1745-1745.11 [transfers by water suppliers].) Of course, in order to transfer water pursuant to another provision, it would still be necessary to demonstrate compliance with the no injury rule and other applicable requirements. Limiting a transfer to water that otherwise would be consumptively used would help make that demonstration, but doing so would not necessarily be required.

In addition, other incentives to conserve water exist besides the prospect of a transfer. For instance, Natomas's recirculation system allows Natomas to reduce its diversions of fresh water from the Sacramento River and so reduce the amount of polluted tailwater that returns to the river. (See Natomas Exhibit 5a, at p. 3.) The resulting benefits to water quality likely assist Natomas in complying with water quality requirements. (R.T. 206: 19-25; 207: 1-3.)

By conserving water under section 1011, a water user also can preserve the right to the water saved. If additional water is needed for uses consistent with Natomas's licensed rights, Natomas may increase its diversions, up to an amount that includes the right that it has preserved by conserving water, without obtaining SWRCB approval. Finally, by reducing its diversions Natomas may reduce the amount it must pay the USBR for water deliveries under its contract.

As for any disincentive to conserve water, while Natomas's conservation efforts may not have resulted in a consumptive use savings that may be transferred pursuant to section 1725, it bears emphasis that Natomas is not in a worse position than it would be in if it had not conserved water. The SWRCB has not adopted DWR's position that water that has been conserved due to past conservation efforts is not transferable pursuant to section 1725 because the water would not be consumptively used in the absence of the transfer. This approach would create a disincentive to conserve water in years prior to the year of a proposed temporary transfer pursuant to section 1725, or to invest in a conservation effort that takes more than a year to implement. The SWRCB has avoided such a disincentive by recognizing that, under section 1011, a reduction in use due to conservation efforts is deemed to be the equivalent of reasonable, beneficial use. Therefore, water that would have been consumptively used but for the transferor's conservation efforts may be transferred pursuant to section 1725.

10.0 NATOMAS'S TRANSFER IN 1995 TO THE MOJAVE WATER AGENCY

In support of its petition, Natomas pointed out that the Division, acting pursuant to authority delegated by the SWRCB, approved its 1995 petition to transfer conserved water to the Mojave Water Agency. The previous transfer involved the same conservation efforts identified in the present petition. (Natomas Exhibit 1f, Order Approving Temporary Changes, dated August 30, 1996, at p. 3.) Although the earlier transfer involved only 2,000 ac-R, approximately the same amount approved by this order, the Division found in its order that Natomas may have established a consumptive use savings in excess of that amount. (*Id.* at p. 4.)

The Division's previous order was not adopted by the SWRCB at a public meeting, and therefore cannot be relied on as a precedent. (SWRCB Order WR 96-1 at p. 17, fn. 11; Gov. Code, § 11425.60, subd. (a).) It also merits note that Natomas's previous petition involved less water than the present petition, and, although the USBR did submit comments on the earlier petition, no party objected to it. The SWRCB has reviewed the present petition much more thoroughly, in light of the fact that parties have objected to the present petition, an evidentiary hearing has been held, and a substantial record has been developed.

11.0 THE TRANSFER WILL NOT INJURE ANY LEGAL WATER USER OR UNREASONABLY AFFECT FISH, WILDLIFE, OR OTHER INSTREAM BENEFICIAL USES

The transfer of 1,995 ac-R, with the conditions specified in this order, will not injure any legal user of the water, or unreasonably affect fish, wildlife, or other instream beneficial uses. As measured against Natomas's water use prior to implementing its weed control program, the transfer of 1,995 ac-ft will have no effect on the amount of water in the Sacramento River. DWR stated that the transfer should be subject to the so-called Special Delta Term. The Special Delta Term was developed in another water right proceeding in order to protect DWR and the USBR, as operators of the State Water Project and Central Valley Project, respectively, from injury due to changes in the flow regime of the Sacramento-San Joaquin Delta. The Special Delta Term is unnecessary in this case, however, because the transfer of Natomas's consumptive use savings will not affect the flow regime of either the Sacramento River or the Delta.

DWR also argued that the SWRCB could not find that the transfer would not unreasonably affect fish, wildlife, and other instream beneficial uses because Natomas had not adequately identified the intended place and purpose of use. DWR's concern appears to stem at least in part from Natomas's failure to identify a transferee in its original petition. By letter dated June 21, 1999, however, Natomas confirmed that it proposes to deliver the water, using DWR's existing conveyance facilities, to Santa Margarita Water District for municipal and industrial purposes of use within the District's service area. The transfer will be conditioned accordingly. The record contains no evidence that the use of 1,995 ac-ft of water within the District's service area for the purposes specified will unreasonably affect fish, wildlife, or other instream beneficial uses.

Finally, in order to ensure that fish, wildlife, or other instream beneficial uses are not unreasonably affected by the timing of the transfer, or the use of the Harvey O. Banks Pumping Plant, the transfer will be conditioned on compliance with the California and federal endangered species acts. The transfer will also be conditioned on compliance with requirements designed to protect beneficial uses in the Delta, including, but not limited to, the requirements contained in SWRCB Decision 1485, SWRCB Order WR 98-9, and the SWRCB's 1995 water quality control plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

12.0 CONVEYANCE CAPACITY AND CARRIAGE LOSSES

DWR questioned whether there would be sufficient capacity in DWR's conveyance facilities to accommodate the transfer. DWR's witness, Larry Gage, testified that, although he did not know for certain, he expected that sufficient capacity would not be available from April 15 to November 15. (R.T. 590:4-22.) DWR also questioned whether the use of DWR's facilities to effectuate the transfer could impact DWR's compliance with the federal and state endangered species acts.

The SWRCB is not required to make a finding on the issue of available conveyance capacity prior to approving a transfer. In addition, the record contains little or no evidence that bears on the question of conveyance capacity or the possibility of an impact to DWR's ability to comply with endangered species act requirements. These issues are best resolved between DWR and Natomas in the form of a wheeling agreement developed in accordance with Water Code sections 18 10- 18 14. Presumably, a wheeling agreement would also address reasonable carriage losses and the permissible timing of the transfer. Accordingly, prior to transferring water in accordance with this order, Natomas must enter into a wheeling agreement with DWR and submit a copy of the agreement to the Chief of the Division of Water Rights.

13.0 CONTRACTUAL ISSUES

The USBR also raised several issues concerning Natomas's contractual obligations. The USBR argued that, under the contract between the USBR and Natomas, Natomas must obtain the USBR's permission to transfer any water. This is a purely contractual issue, not a question of state water rights law. As such, this issue is best resolved between the USBR and Natomas, not by the SWRCB.

The USBR also argued that the proposed transfer would impair the USBR's contractual right to Natomas's return flows. (See USBR Exhibit 1, at pp. 9-10.) Again, whether and to what extent the transfer may be effectuated consistent with Natomas's contract with the USBR are issues that should be resolved between the USBR and Natomas.¹⁷

¹⁷ Of course, the question of the USBR's rights under the contract is distinct from the question of the USBR's right, as another legal water user, to be protected under state law from injury due to the transfer.

14.0 CONCLUSION

Natomas has conserved a considerable amount of water since the mid-1980s. By reducing its diversions from the Sacramento River, Natomas has benefited its shareholders, and it probably has benefited downstream water quality as well. Not all of the water conserved by Natomas, however, reflects a reduction in consumptive use, and therefore not all of the water conserved may be transferred pursuant to Water Code section 1725.

Natomas's water balance did not demonstrate that Natomas's conservation efforts have resulted in a consumptive use savings. In addition, Natomas did not quantify the savings associated with each of the conservation efforts that it had identified, with the exception of its weed control program. As a result of its weed control program, Natomas has reduced its consumptive use by 1,995 ac-ft per year. Provided that Natomas continues to implement this program in the year of the transfer, the right to use this amount of water is transferable pursuant to Water Code section 1725. The transfer of Natomas's consumptive use savings will not injure any legal user of water, or unreasonably affect fish, wildlife, or other instream beneficial uses.

The transfer is to be carried out during Natomas's season of diversion, at a rate that is consistent with the rate at which Natomas's water savings due to weed control accrue, unless DWR and the USBR agree in writing to a deviation from these limitations. Prior to effectuating the transfer, Natomas must enter into a wheeling agreement with DWR. In order to ensure that the transfer is carried out in accordance with this order, after the transfer is completed Natomas will be required to submit a report to the Chief of the Division that describes the amount of water that was transferred, the timing of the transfer, and the weed control program that Natomas implemented during the year of the transfer.

ORDER

IT IS HEREBY ORDERED:

1. Natomas's petition to transfer the right to use 8,860 to 14,000 acre-feet of water under Licenses 1050, 2814, 3109, 3110, 9794, and 9989 (Applications 534, 1056, 1203, 1413,

15572, and 22309) is approved to the extent of 1,995 acre-feet. Natomas's petition to transfer the remaining amount is denied. The transfer must be completed within one year of the date of this order.

2. For purposes of this transfer, Natomas's licenses are changed temporarily to include (1) the State Water Project's Harvey O. Banks Pumping Plant as a point of diversion, (2) municipal and industrial purposes of use, and (3) the Santa Margarita Water District's service area as an authorized place of use.
3. The right to transfer water in accordance with this order is subject to Natomas's continued implementation of its weed control program, as that program is described in this order.
4. The transfer shall be carried out between March 1 and October 31, at a rate that is consistent with the rate at which Natomas's savings due to weed control accrue. With the written consent of DWR and the USBR, Natomas may transfer the savings at a time and rate that deviate from the time when and the rate at which the savings accrue, provided that the transfer is completed within one year of the date of this order.
5. Prior to transferring the right to use water in accordance with this order, Natomas shall enter into a wheeling agreement with DWR, and submit a copy of the agreement to the Chief of the Division of Water Rights.
6. Within 90 days of completing a transfer in accordance with this order, Natomas shall submit a report to the Chief of the Division of Water Rights. The report shall document the amount of water that was transferred, and the timing of the transfer. The report shall also describe the weed control program that Natomas implemented during the year of the transfer.
7. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine, the right to transfer water in accordance with this order is subject to the continuing authority of the SWRCB to protect public trust uses and prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water.

8. The right to transfer water in accordance with this order is conditioned on compliance with requirements designed to protect beneficial uses in the Delta, including, but not limited to, the requirements contained in SWRCB Decision 1485, SWRCB Order WR 98-9, and the SWRCB's 1995 water quality control plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.
9. This order does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 2050-2116) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531-1544). If a "take" will result from the transfer authorized by this order, Natomas shall obtain an incidental take permit prior to carrying out the transfer.

CERTIFICATION

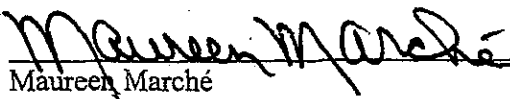
The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on December 28, 1999.

AYE: James M. Stubchaer
Mary Jane Forster
John W. Brown
Arthur G. Baggett, Jr.

NO: None

ABSENT: None

ABSTAIN: None


Maureen Marché
Administrative Assistant to the Board

Attachment (Attach. 1, Summary of Water Rights Involved in Proposed Temporary Transfer)

Attachment 1
Summary of Water Rights Involved in Proposed Temporary Transfer
Natomas Central Mutual Water Company

Application #	License #	Season of Use	Direct Diversion Rate(cts)	Purpose of Use	Place of Use (acres)	Points of Diversion
534	1050	April 1 - Oct. 1	42'	Irrigation(d)	5,903 net within 51,091 gross	#1, 2, 3, 6, A, and B
1056	2814	March 15 - Oct. 15	38'	Irrigation(d)	3,543.64 net within 51,091 gross	#1, 2, 3, 5, 6, 7, A and B
1203	3109	May 1 - Oct. 31	160(a)	Irrigation(d)	11,298 net within 51,091 gross	#1, 2, 3, 6, A, and B
1413	3110	May 1 - Oct. 1	120(e)	Irrigation(d)	11,298 net within 51,091 gross	#1, 2, 3, 6, A, and B
15572	9794	April 1 - June 30	131(b)	Irrigation(d)	29,000 net within 51,091 gross	#1, 2, 3, 6, A, and B
22309	9989	March 1 - June 30, Sept 1 - Oct. 31	14(c)	Irrigation	30,480 net within 51,091 gross	Three movable points of diversion(e)

Calculation of annual acre-feet allowed under water licenses

Application #	License #	Number of Days												Total Days	Max CFS	CFS*Days	AFA
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct								
534	1050	0	30	31	30	31	31	30	0	0	0	0	183	42	7,686	15,245	
1056	2814	15	30	31	30	31	31	30	15	15	30	30	213	38	8,094	16,054	
1203	3109	0	0	31	30	31	30	31	31	30	30	31	184(a)	160(a)	29,440	58,393	
1413	3110	0	0	31	30	31	30	31	31	30	30	0	153	110(a)	16,830	33,382	
15572	9794	0	30	31	30	30	30	0	0	0	0	0	91	131	11,921	11,846(b)	
22309	9989	31	30	31	30	30	30	0	0	30	30	31	183	14	2,562	2,627(c)	
																	137,547

• diversion rate may be temporarily increased if there is no injury to other vested rights

(a) The actual right under A1413 is 120 cubic feet per second (CFS), however the maximum amount diverted under A1203 and A1413 is limited to 270 CFS.

(b) The maximum amount of use under A15572 is limited to 11,846 AFA

(c) The maximum amount of use under A22309 is limited to 2,627 AFA

(d) Additionally Municipal, Industrial, and Domestic for use only within the Sacramento International Airport and diverted from POD #3

Also a maximum of 10,000 AF may be diverted under these licenses and Permit 19400 between October 1 and April 1.

(e) Located along the Reclamation District 1000 East Drain, West Drain, and Main Drain (PODs not noted in petition).