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A GUIDE TO WATER TRANSFERS

JULY 1999

D R A F T

DIVISION OF WATER RIGHTS
STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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A Guide to Water Transfers

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Lists of Acronyms

AB	Assembly Bill
CALFED	CALFED Bay-Delta Program
Ops Group	CALFED Operations Group
CEQA	California Environmental Quality Act
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DWR	California Department of Water Resources
ET	Evapotranspiration
ETAW	Evapotranspiration of Applied Water
SWP	State Water Project
SWRCB	State Water Resources Control Board
USBR	U.S. Bureau of Reclamation

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Foreword

This Guide to Water Transfers is intended to help parties understand the processes involved and the information needed to complete water transfers in California. It was produced to help foster voluntary transfers of water through a better understanding of the California Water Code and the existing regulations that govern water transfers. The observations made in this document reflect the current views of SWRCB staff. This information is provided in an effort to make information available to assist parties planning and reviewing proposed water transfers, and does not establish any rules or guidelines for water transfers. Each water transfer is evaluated on a case-by-case basis. As part of that evaluation, this document will not be considered binding or presumptively correct. Nor will this document be given any regulatory effect as applied to the SWRCB, its staff, or other parties proposing, opposing, reviewing or otherwise involved in water transfers.

The discussion and conclusions in this document regarding the definition of transferable water, determination of consumptive use, application of refill criteria, evaluation of water transfer impacts on groundwater and others are not supported by all of the parties that helped review this document. However, most of these parties have encouraged the SWRCB to publish this Guide to Water Transfers to help provide more information on the existing laws and regulations related to transfers and to focus the debate on the eventual resolution of issues for which there remains some disagreement. As the State processes more transfers and encounters all the possible variations discussed in this Guide, it will be revised to reflect SWRCB decisions, new legislation and regulations.

This Guide to Water Transfers is available on the Internet through the State Water Resources Control Board, Division of Water Rights web site at http://www.waterrights.ca.gov under water rights information. It can be viewed or printed from this location. Additional copies of this document are also available by contracting the Division of Water Rights at the address or phone number listed on the back cover.

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1. Introduction

This Guide to Water Transfers in California provides a common understanding of the procedures and rules related to developing and approving water transfers. What is a water transfer? A water transfer is a change in the way water is usually allocated among water users. Such changes occur every year. Some are as simple as reducing one user's contract allocation of water to allow an increase by a neighbor. Others can be as complex as reallocating water from reservoirs in northern California for use in southern California.

Water transfers are a permanent and necessary part of California's water picture. State law supports voluntary water transfers, and directs State agencies to encourage and facilitate voluntary transfers in a maner that protects existing water uses including providing technical assistance to parties to implement water conservation measures which will make additional water available for transfers (see e.g. Water Code section 109 and 475). Water Transfers are but one of a suite of measures needed to help meet California's water supply needs. However, the laws and rules that surround water transfers can be difficult to understand. By better understanding the existing procedures we can help improve the use of this tool in a voluntary reallocation of water from those who can make water available for transfer to those who have a need for this supply.

When one stands back from all the existing rules and regulations related to water transfers, a rather simple general rule emerges. "You can transfer water if it is your water and not somebody else's water, provided the transfer does not injure another water right holder or unreasonably affect instream beneficial uses". As with any general rule the definition of terms like water rights, injury and other water holder are important and in this case rather complex. However, keep in mind that the issues presented in this Guide to Water Transfers are not as complicated as they may seem at times.

The format of this Guide follows the layout shown in the Water Transfer Decision Tree (Figure 1). This decision pathway can help both water sellers and water buyers work their way through existing laws and regulations. It also shows those areas where approvals are not needed and circumstances where the law allows specific types of water transfers to receive expedited approval. Each section of this guide will focus on one aspect of the Decision Tree and provide more detail on the procedures related to the type of transfer illustrated. Chapter 2 presents an overview of the Decision Tree.

In order to appreciate the distinctions made between different types of transfers and the procedures set forth, one needs to understand a few basic principles of California water law. Chapter 3 provides a basic primer.

This Guide provides information to parties considering water transfers. It does not establish new legal requirements or presumptions that apply to any agency review of water transfers. It will be updated as new information is developed.

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2. Water Transfer Decision Tree

Overview

Figure 1 is the Water Transfer Decision Tree. The tree may seam a little complicated, but no one said transfers were easy. The tree was created to help better understand water transfers.

Note that the Water Transfer Decision Tree consists of large colored dashed bubbles with text inside. Each colored bubble represents the type of process used by the SWRCB to act on a water transfer. Red dotted bubbles represent transfers where no SWRCB approval is needed. Blue dotted and dashed bubbles indicate processes with expedited approval mechanisms as set forth in the California Water Code. Black dashed bubbles show those processes that follow the change petition process that have no special expediting procedures in the Water Code. This process includes normal notices, filing protests, typical environmental documentation and possible SWRCB hearings if the protests cannot be resolved.

Most water transfers do not require SWRCB approval. Many others have expedited processing procedures. Only long-term transfers have no special water right processing procedures.

The tree is a graphical representation of a decision matrix. At each juncture a label is presented. If the transfer in question fits the label, continue to move "up" the tree. If the label does not fit, backtrack until a label is found that does fit. An example would be the "Post-1914 water rights" label. Once it is known that the transfer involves surface water rights, the type of water right needs to be determined. If the transfer involves changes to post-1914 water rights, continue to follow this branch of the tree upward. If it does not, then choose between the pre-1914 rights and contract supply "branch".

In addition, the tree provides either definitions or processes that are to be followed for that transfer. These conditions apply to the transfer in question. They provide an understanding of how California water law is applied to the transfer in question. The rationale for these conditions will be discussed in the following chapters.

Getting Started

Imported vs. In-Basin Water Supplies

The first decision to be made is whether the transfer in question relates to water that originates within the watershed or is imported into the watershed. As we'll discover in Chapter 8, the water law related to preventing injury to other water users from a water transfer is quite different for water which originates within the basin versus water from an imported source. Southern California has a substantial amount of water imported from out-of-basin sources. Within the greater Sacramento Valley there is a substantial amount of water movement between watersheds. The protections afforded downstream users depend on whether the downstream user is part of the greater watershed where the water originates. (More on this in Chapter 8).

The key here is determining if the water is from an imported source. If it is, go to the small decision tree in the upper left-hand corner of Figure 1 and refer to Chapter 8. If the water is from in-basin sources, then the bulk of the Water Transfer Decision Tree applies.

Surface vs. Groundwater

The next decision is whether the water to be transferred is surface or groundwater. See Chapter 3 for the definition of surface and groundwater. Surface water is water flowing in a channel above the surface of the ground. Groundwater is a little more complicated. Let's preview information that is presented in Chapter 3.

While groundwater seems to be a simple concept. It is not that simple from a water right perspective. California water law distinguishes between groundwater that is part of an underground stream and water that is percolating into a groundwater basin.

Water flowing in a known and definite channel under the ground, and thus as a subterranean stream, is treated under the surface water rights system in California. The determination of whether groundwater is part of such a subterranean stream is determined on a case-by-case basis and includes a finding that underground bed and banks of relatively less permeable material restricts the flow of the underground stream. This type of groundwater is considered surface water for the purposes of this guide.

Water under the ground surface that is not part of a subterranean stream is considered percolating groundwater and is outside the laws that govern surface water. The courts and the SWRCB treat underground water as percolating groundwater unless there are data to support a finding that it is part of a subterranean stream. For the purposes of this guide, when the word "groundwater" is used, it refers to percolating groundwater.

If the water is groundwater, go to the right side of the Water Transfer Decision Tree and skip to Chapter 7. If it is surface water, continue on to Chapter 4.

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Figure 1

WATER TRANSFER DECISION TREE

STATE WATER RESOURCES CONTROL BOARD
Division of Water Rights

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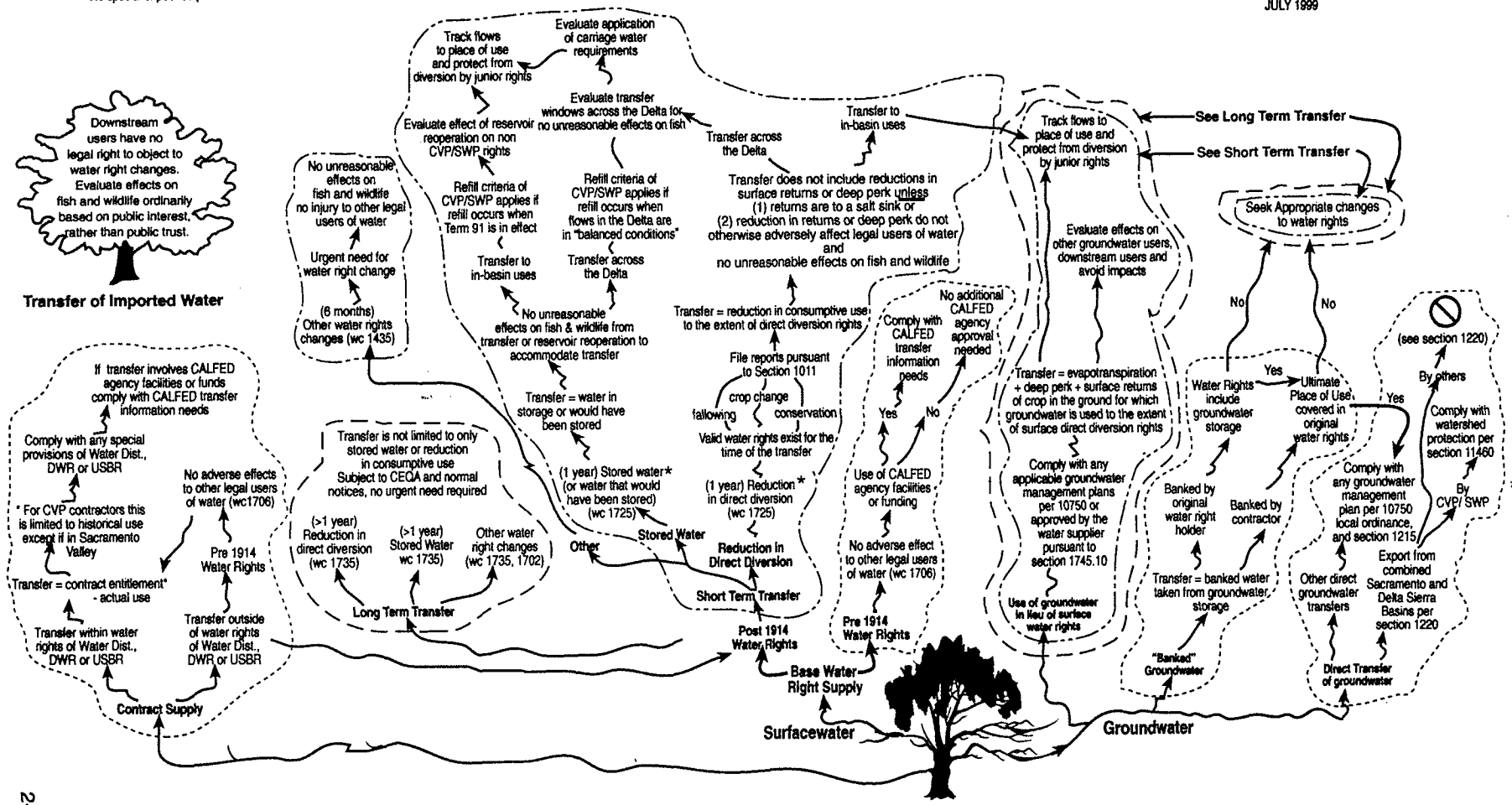

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3. Water Right Law Related to Water Transfers

A basic understanding of California water right law is essential to understand water transfers in California. This chapter contains only a brief summary of the basic principles of California water law related to water transfers. For readers who want a more in-depth review of California water right law, please reference the books cited at the end of this guide.

Types of Water Rights

From a water right standpoint there are two types of water: surface water and groundwater. Laws governing them are very different in California. Groundwater is basically treated as a local water supply and has little statewide regulation of its use. However, State law, as developed by the courts, defines the nature and extent of groundwater rights. Surface water, on the other hand, has a rather well-developed, if not complicated, set of statewide laws regulating its development and use. These laws related to surface water rights are administered by the SWRCB. In order to transfer water one must possess a right to the water in the first place. A water transfer is a special kind of change in these existing water rights.

All water use in California is governed by the State's constitutional provisions that prohibit waste and unreasonable use of water. The SWRCB can take action to halt or prevent waste and unreasonable use of water regardless of the source of the water.

Groundwater

As stated in Chapter 2 groundwater is not a simple concept from a water right perspective. California water law distinguishes between groundwater that is part of an underground stream and water which is percolating into a groundwater basin.

Water flowing in a known and definite channel under the ground, and thus a subterranean stream, is treated under the surface water rights system in California. Whether groundwater is part of such a subterranean stream is determined on a case-by-case basis and includes a finding that underground bed and banks of relatively less permeable material restricts the flow of the underground stream. This type of groundwater is considered surface water for the purposes of this guide.

Water under the ground surface that is not part of a subterranean stream is considered percolating groundwater and is outside the laws that govern surface water. The courts and the SWRCB treat underground water as percolating groundwater unless there are data to support a finding that it is part of a subterranean stream. For the purposes of this Guide when the word "groundwater" is used it refers to percolating groundwater.

Groundwater is shared by landowners who pump water for use on their lands that overlie the groundwater basin. They can use water to the extent of their reasonable and beneficial use of this water supply. In water short times they are expected to share the water equitably. Water may be taken to lands that are not owned by the person pumping the water or that does not overlie the groundwater basin provided the overlying landowners are not harmed.

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No state water right permits are required to pump groundwater. Each groundwater user can drill a well and pump groundwater without the need of a water right permit. However, there are often local ordinances that must be obeyed and there are statewide regulations governing well drillers related to recording of the wells they drill. In addition, some groundwater basins, mostly in southern California, have been adjudicated and many groundwater basins have local groundwater management plans adopted under Water Code 10750 et. seq. (also know as AB 3030 for the Assembly bill that enacted these statues) or other laws.

Surface Water

California has a "dual system" of water rights recognizing both riparian and appropriative water rights. How this right is quantified is important. In some western states the amount of the water right is set on the quantity of water consumptively used by the water right holder. This is not the case in California. In California, the measure of the water right is that amount of water diverted and put to beneficial use, including reasonable conveyance losses. This allows water right holders to conserve water and transfer the water conserved to other users consistent with provisions in the Water Code to protect other legal users of water.

Water transfers are not the initiation of a new right; they are a type of change to an existing water right. Water rights are granted for a given water source in the form of an annual quantity of water, a rate of diversion, a season of diversion, point(s) of diversion, purpose(s) of use, and place(s) of use. In addition, the type of diversion is also specified (i.e. storage or diversion direct to use). Non-consumptive water rights, such as those for hydroelectric power, are different from consumptive water rights. Projects will often have separate water right permits for consumptive and non-consumptive uses. Conditions are also typically placed on water right permits to ensure that prior rights are not harmed, public trust resources are appropriately protected and the public interest is preserved. Transfers often involve a change in the points of diversion, place of use or purpose of use. Changes to water rights for reasons unrelated to water transfers are also common.

An appropriative water right holder can seek changes in the purpose of use, place of use and points of diversion for any good reason. However, the water source, and water right quantities in terms of the annual amount, rate of diversion or season of diversion cannot be increased without applying for new water rights. In addition, a non-consumptive water right cannot be converted to a consumptive right through a change petition. If these types of additions are needed for a water project, new appropriative water rights must be obtained.

Contract Supplies

A common method to obtain the use of water is under contract. For example, an individual or group contracts with someone who has water rights and is allowed to use the water subject to the conditions specified in the contract. These contracts do not create an appropriative or other water right for either the buyer or the seller. Instead, they define the obligations and entitlements between the buyer and the seller to the extent the seller has a valid water right to divert water for beneficial use. This can be as simple as one land owner contracting with his neighbor or as complex as the State Water Project or Central Valley Project contracting with numerous water districts throughout the State who in turn contract with other districts or water companies. So long as the water moved within and between these water districts is within the original water rights granted for the project, no additional water rights or changes to the water rights are needed.

Riparian Rights

Riparian rights are an outgrowth of English common law. They are rights to the use of water by property owners with land abutting the stream or lake. Riparian rights attach to the land and can be lost if the property's connection to the stream is severed when ownership is changed. Riparian rights allow the landowner to take as much water as can be reasonably and beneficially used on riparian land in the watershed of the stream. These rights are subject to sharing with other riparians. Riparian rights do not allow water to be wasted or public trust resources to be unreasonably affected. Riparian rights extend only to the natural flow of the stream and riparian rights have the first call on natural flows. During times of water shortages riparians are to share equitably in the short supply of the natural flow of the stream.

Riparian rights do not extend to water that is "foreign" to the stream system either in time (due to storage and release by upstream users) or in place (due to the importation of water). Also, riparian rights do not allow the storage of water from times of water surplus to times of water shortage.

There is no State permit requirement for riparian rights. However, riparians (with some exceptions) are required to file statements of water diversion and use (Water Code section 5100) with the State documenting their water use. This also allows the State to inform them when applications for upstream water use are received so that they may file protests to protect their water rights.

Riparian rights cannot be lost through non-use and can be initiated or reactivated at any time. Since they attach to the land, riparian rights cannot typically be transferred. However, water not taken under riparian rights can be appropriated. In addition, under Water Code section 1707, a riparian user may request the SWRCB to approve a change whereby the riparian use could be dedicated to instream uses.

Appropriative Rights

Not all land in California abuts a stream or overlies useable groundwater. Also, provisions are needed to allow the storage of water in this arid state. California allows water to be appropriated for use provided certain Statewide "rules" are followed.

Appropriative water rights allow the use of natural flow of the stream provided riparian rights are satisfied. In addition to the diversion of water that is applied directly to beneficial use, appropriative rights may be used for the storage of water. Appropriators can also divert or store water that is "foreign" to the stream system in time or imported into the watershed.

Unlike riparians that share in the natural flow of the system, appropriators are entitled to their full entitlement based upon a priority system.

Pre-1914 Appropriative Rights

The laws governing appropriation prior to 1914 were easy to follow. Water was simply put to use. Notice could be posted near the proposed point of diversion. Water rights initiated in this manner before 1914 are considered pre-1914 appropriative rights. The priority date for pre-1914 water rights is based on the date of first use of the water (or in some cases the posting of notice before initiating the diversion). In times of water shortage, appropriators could be required to cease all diversion until wa-

ter under their priority became available. It is truly a "first come, first serve" system. Pre-1914 water rights are not under any statewide permitting authority. However, they are prevented from wasting or unreasonably using water or unreasonably affecting public trust uses. The water rights can be lost if they are not used over a period of years. Like riparians, pre-1914 water right holders are required to file statements of water diversion and use (Water Code section 5100).

Holders of pre-1914 rights can change the purpose of use, place of use or points of diversion without the need of notifying the SWRCB. However, such changes are precluded from causing injury to other legal users of water (Water Code section 1706). The SWRCB does not approve such changes in pre-1914 water rights. An injured person must bring a court action to halt a proposed transfer of water under a pre-1914 right. In addition, as a matter of good public policy, State and federal agencies should not assist in a water transfer that would violate this code section.

Post 1914 (Modern) Appropriative Rights

Water laws were changed in 1914 to provide more statewide oversight to appropriative water rights. At that time the courts were clogged with water cases, the technical aspects of which they were not equipped to handle. The modern appropriative water right system was enacted in 1914. It established an administrative process to issue water right permits and licenses and to oversee them.

Modern appropriative water rights are currently obtained by application to the SWRCB. Notices are published and downstream water users are notified of the proposed appropriation of water. Parties are allowed to protest the application. If the applicant and the protestants cannot resolve the protests, a hearing by the SWRCB is held in the case of large projects. If the application is approved by the SWRCB, a water right decision is issued. The water right decision sets forth the conditions under which the water may be appropriated. For small projects (less than 200 acre feet of storage or 3 cubic feet per second direct diversion) a field investigation is conducted and staff decision is issued.

Changes to modern water rights are allowed after public notice. As with pre-1914 water rights, these changes are not allowed if they would injure "any legal user of water" (see Water Code section 1702).

The priority for these rights is based on the date of the water right application filing with the SWRCB. As with pre-1914 rights, modern water rights can be lost through non-use (see Water Code section 1241). However, as seen below, special laws have been passed to protect these water rights if the reason for the non-use is water conservation, use of recycled water, or participation in of a conjunctive groundwater use program.

Other Rights

There are several other types of water rights including federal reserved rights, Pueblo rights, and others. However, these rights typically attach to the land from which they are derived and are not a major factor in water transfers in California. In addition, several areas of the State have had their rights adjudicated by the courts. Changes in the use of adjudicated rights may require review and approval of the courts.

Protection of Water Rights That Are Transferred

Water transfers do not undermine the rights that are the basis of the transfer. Indeed, by putting water to use pursuant to a transfer water right holders may protect themselves against forfeiture for non-use. Nevertheless, the Water Code sections 1010, 1011, 1011.5, 1244, 1440, 1731, and 1737, 1745.07 were specifically added to provide protection to water right holders who transfer water. The Governor's Commission on Water Rights report in 1976 made specific recommendations with regard to changing water use in California and the need to change specific water right laws to encourage better use of California's limited water supplies. These and other changes were made to the Water Code in the late 1970's and 1980's to protect the water right holders from losing their water rights simply because these rights were transferred.

Water right changes to accommodate a transfer are processed by the SWRCB to allow the water right holder to serve another place or purpose of use or use another point of diversion. No water rights are granted to the party receiving the water. All the water rights are held by the original water right holder. Water use within the new place of use is considered water use under the original permit or license. The water right holder has the discretion to serve water under the transfer. While the transfer of water requires SWRCB approval, the cessation of a transfer requires no such approval from the SWRCB. The water right change simply "allows" the transfer; it does not require it. Of course, the sellers may commit themselves by contract to deliver the water, but the delivery is required by contract law, not water right law.

Protection from Non-Use of Water

The Governor's Commission on Water Rights also recognized the need to protect the water rights of those who decrease water use though water conservation practices, use of recycled water or participation in groundwater conjunctive use programs. Water law that existed prior to 1977 posed a disincentive to those who wished to save their surface water supplies in creative ways. Water Code sections 1010, 1011, and 1011.5 allow a water right holder who saves water though the means set forth above to retain rights to the surface water that the water right holder does not use.

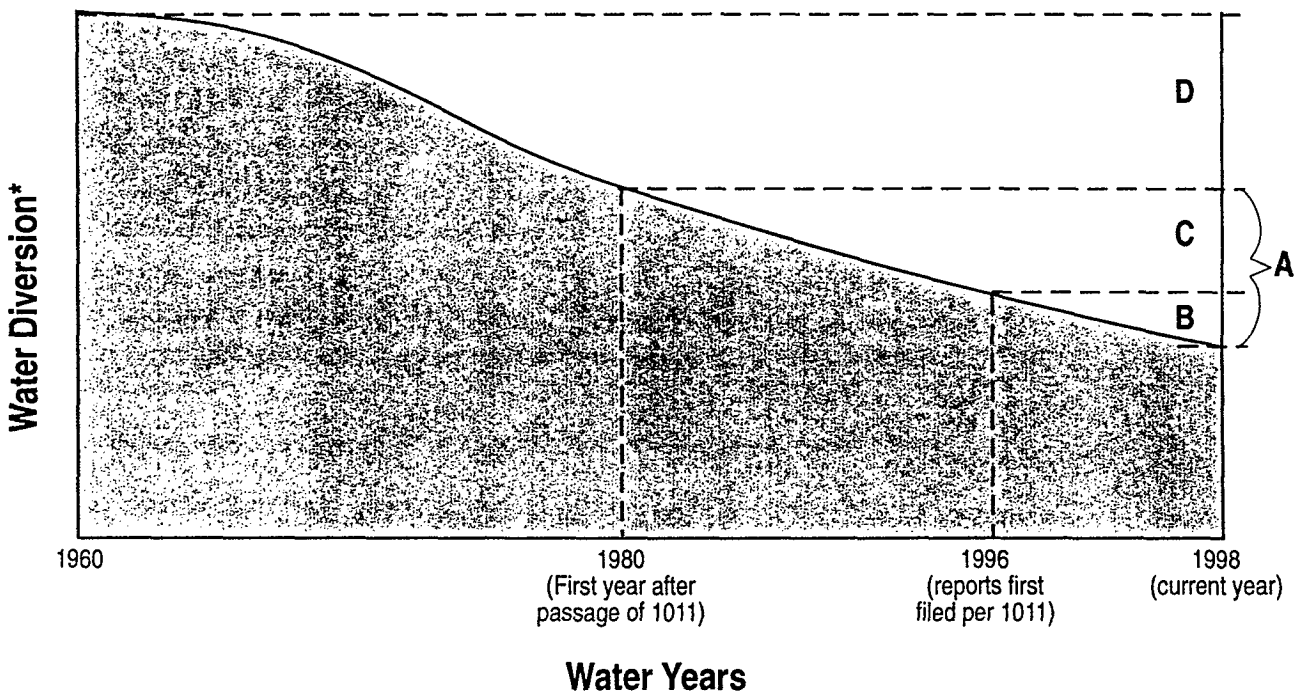
Water Code sections 1010, 1011 and 1011.5 make clear that the protections they provide are subject to the water right holder filing reports required by the SWRCB on the amount of surface water saved through the conservation effort, use of recycled water, or conjunctively used groundwater. In 1978 the SWRCB first revised its periodic reporting forms for permitees and licensees to allow reporting of the quantities called for in section 1010, 1011 and 1011.5 on these forms. Since these forms are required to be filled out by the permittee or licensee, parties wishing to obtain the protections under these code sections need to appropriately complete the portion of the form dealing with water savings under Water Code sections 1010, 1011 and 1011.5. The Statement of Water Diversion and Use forms for pre-1914 water users has recently been modified to add these reporting provisions.

Figure 2 shows a hypothetical example of how reporting the surface water quantities saved in any given year can be protected from claims of non-use. In this example, water use is declining over time due to water conservation efforts, use of reclaimed water or the conjunctive use of groundwater. Water saved before the water year 1980 (section 1011 became effective on September 28, 1979, the 1980 water year began on October 1, 1979) could have been lost through non-use. This is due to the fact that there were no specific provisions prior

Figure 2

Protections Under Water Code Section 1011 of Conserved Water From Claims of Non-use.

Example for Theoretical Water Right Holder



* Decrease in water diversions caused by water conservation efforts.

A = Water saved through water conservation efforts potentially subject to provisions of Water Code Section 1011

B = Water protected from forfeiture due to non-use because of water conservation efforts by operation of Water Code Section 1011

C = Water subject to forfeiture pursuant to Water Code Section 1241

D = Water possibly lost through non-use

to that time to protect this water from loss due to non-use (see part D of Figure 2). Water Code section 1241 states that a person entitled to use water may lose all or part of a water right if the water is unused for a period of five years. The reversion of water to the public occurs upon a finding by the SWRCB following notice to the water right holder and a public hearing if requested by the water right holder.

Water saved from 1980 through the first filing of reports with the SWRCB shown (in this example as 1996) is potentially transferable (subject to the other sections of the Water Code as seen in the Water Transfer Decision Tree). However, this water is also subject to claims of loss through non-use since the protections provided under 1010 and 1011 were not sought in these years because the appropriate forms were not filed (see part C of figure 2). However, once the forms are filed documenting the decline in surface water use through conservation, use of recycled water, or conjunctive use of groundwater, the water rights to the saved water are preserved under 1010 and 1011. The saved water is potentially transferable (subject to the other provisions of the Water Code) and protected from claims of non-use - (see part B of Figure 2).

Transferable Water

Not all surface water saved through the above programs is transferable to other users. There are specific provisions in the Water Code that protect other legal users of water and fish and wildlife from the possible adverse effects of water transfers.

As seen in the Water Transfer Decision Tree, there are at least four different definitions of transferable water depending on the nature of the water being transferred. The Water Transfer Decision Tree attempts to graphically portray these differences. This Guide attempts to explain why these differences exist. A better understanding of these transfer provisions should help facilitate future transfers.

These different definitions of transferable water all relate back to provisions of the Water Code dealing with concepts of the "no injury rule," " impacts to fish and wildlife," and "third party impacts." These issues are briefly discussed below.

No Injury Rule

The "no injury" rule is short-hand for several sections of the Water Code related to changes in existing water rights. A water transfer is one reason water right changes are sought. Water transfers are mentioned in several places in the Water Code. However, there is one general provision that applies to all water right changes. Water right changes cannot cause "injury to any legal user of the water involved." This condition applies to modern water rights through section 1702 and applies to pre-1914 water rights through section 1706. The SWRCB supervises changes to post-1914 water rights. The courts are the proper avenue to seek remedies if parties feel Water Code 1706 is violated.

Both section 1702 and 1706 date back to 1914. They codify rules first recognized by the courts in 1851. They provide a unique set of water right protections. California water law protects senior water users (those with the oldest water rights) from junior diverters while protecting junior water right holders from the expansion of senior water rights. Junior water right holders would be harmed if seniors could increase the amount of water they divert under their senior priority. Likewise, juniors could be hurt if seniors could

change their point of diversion, place of use or purpose of use in a manner that reduces the quantity or quality of water relied upon by juniors for their diversion. The "no injury" rule protects juniors right holders against this kind of harm from senior right holders.

Note that these sections refer to any legal user of water, not just prior users. This is significant because the Water Code is replete with wording that protects prior users. The term "any legal user" applies to any legal user of the water in question regardless of the priority of the right.

The existence of the "no injury" rule leads to some interesting contradictions. For example, a water user can recapture historic surface return flows from agricultural practices and apply it to land within the originally permitted place of use. While this might harm downstream users, such a change in operation would be permissible under the water right permit. However, if the same water user wanted to apply this saved water to a new place of use, as would be the case in a water right transfer, the "no injury" rule would apply to the requested change. In many cases, surface return flows are captured by downstream users. If the requested change for the purposes of the transfer would affect the availability of water for the downstream users regardless of the water right priority of those users, the water transfer would not be allowed under the "no injury" rule. However, as will be discussed later, the watershed protection statutes provide protection to in-basin users and modify this general rule as it relates to the impact of water transfers on the water rights held for the SWP and the CVP for out-of-basin use.

Many water users feel it unfair that the same basic instream effect allowed under the first case would not be permitted in the second. The idea behind the "no injury" rule is that changes that go beyond the original intent of the water right application and notice provided to the public should be held to a higher standard than those changes that take place totally within the authorized water right. As stated above, the "no injury" rule protects the junior water right holders from the actions of the senior water right holder that go beyond the limitations set forth in the existing water rights.

The term "any legal user of water involved" needs some defining. The SWRCB has held that not all users of water are legal users of the water involved in the transfer. For example, a riparian claims injury from a water transfer that results in less stored water released and formally abandoned by the water right appropriator during the summer. The riparian only has a legal right to the natural flow of the stream and has no claim on the storage releases. Therefore, a change in these storage releases due to a water transfer does not constitute an injury to the riparian because the riparian is not a legal user of the water involved in the transfer. However, it could result in injury to junior water appropriators downstream.

Also the term "legal user" is interpreted by the SWRCB to mean "other legal user" when read in context with the intent of the legislation and past court decisions. Some water right holders have many contractors. These contractors are users of water of the permittee, they are not "other" users. The SWRCB works with the water right holder when changes are sought to the water right permit. Disputes between contracting entities of the water right holder are best resolved within that group and not through the State's formal resolution process. The State's water right review process should be reserved for the resolution of disputes between other parties, not disputes among the water contractors of the permittee.

The term "others" or "other legal users of water" and has been argued by some to include instream beneficial uses of water to the extent these uses are protected by the public trust doctrine or other laws.

Effects on Fish and Wildlife

Several Water Code sections dealing with water transfers (1435, 1725 and 1735) require that the SWRCB make a finding that the transfer will not result in "unreasonable" effects on fish or wildlife or other instream beneficial uses. These code sections apply to specific types of water transfers related to post-1914 water rights, but do not apply to transfers related to pre-1914 water rights.

These code sections typically require the permitee to conduct an analysis of conditions with and without the proposed transfer. The "no unreasonable effect" test is not the same as the more common "no significant impact" test set up under California Environmental Quality Act (CEQA). The "no unreasonable effect" test allows the SWRCB to weigh the effects on fish and wildlife against the benefits of the transfer. In this case it is more similar to the balancing test the SWRCB typically uses when weighing the protections to be afforded public trust resources under the California Supreme Court ruling in the 1983 National Audubon case.

Although for some transfers there is no express requirement to avoid adverse effects on instream uses, these uses are protected by the public trust doctrine and other laws.

Third-Party Impacts

The term "third-party impacts" is not defined in the Water Code. Third-party impacts cover a host of issues related to parties other than the party conducting the transfer (party one) and the party receiving the transferred water (party two). They include concerns related to downstream water rights, adjacent groundwater users, fish and wildlife, recreation, economic impacts, etc. However, the Water Code has specific provisions that address the effects on downstream and adjacent water users and fish and wildlife. Therefore, for the purposes of this guide, the term "third-party impacts" will be used to refer to impacts other than those to legal users of water or fish and wildlife. These third-party impacts typically involve economic impacts in the area from which the water is proposed to be transferred.

The evaluation of economic impacts of water transfers is required under the Water Code in only two limited areas. Water Code section 382 provides alternative authority to the transfer of surplus water by local or regional agencies. Some of these agencies do not have the authority in their enabling legislation to transfer surplus water. This code section provides that authority. If an agency utilizes this code section and petitions the SWRCB for a water right change, the SWRCB is allowed to approve the change if, among other thing, the transfer does not unreasonably affect the overall economy of the area from which the water is being transferred (Water Code section 386). This is currently the only type of transfer where the SWRCB is required to specifically make findings regarding the economic effects of water transfers.

The other Water Code section requiring findings with regards to economic effects is Water Code section 1810. This code section applies to any state, local or regional public agency that owns a water conveyance facility. The section allows any person or public agency to utilize unused conveyance capacity under cer-

tain circumstances provided the use of the conveyance facility does not injure any legal user of water, unreasonably affect fish, wildlife or other instream beneficial uses and does not unreasonably affect the overall economy or the environment of the county from which the water is being transferred. This code section is applied in the use of the DWR's Delta pumping facilities and the California Aqueduct by other agencies. It has also recently been an issue regarding water transfers from the Colorado River involving the Metropolitan Water District of Southern California and the San Diego Water Authority.

The agency required to make the findings under Water Code section 1810 is the agency with the water conveyance facility. In those cases where the SWRCB approves the water transfer, the findings of the SWRCB regarding injury to legal users of water and the effects on fish, wildlife and other instream beneficial uses could be used by the owner of the water conveyance facility. No independent judgement by the water conveyance facility owner on the issues would be necessary. However, since most transfers do not require findings by the SWRCB related to economic impacts, the owner of the water conveyance facility would be required to make special findings related to these impacts as set forth in section 1810.

During 1997 and 1998, the CALFED water transfer workgroup of the Bay Delta Advisory Committee (BDAC) discussed third party impacts at length. The workgroup decided not to recommend additional legislation to deal with third party impacts. Instead the workgroup encouraged the State and federal agencies that either approve or participate in water transfers through funding or the use of their facilities to develop a standard set of information requirements that transferors must prepare to disclose likely third party impacts.

The CALFED agencies are in the process of working with interested parties to develop these analysis requirements for water transfers. The desired result would be that if any of the CALFED agencies approved or participated in a water transfer, a standard set of analyses would be performed to disclose possible third party impacts.

4. Surface Water - Contract Supply

Basically, two types of surface water supplies may be transferred. The first is a supply where the person holding the water right will transfer that supply or a portion of that supply. The second is the case where a person contracts for a water supply, but does not hold the underlying water right and wishes to transfer that supply or a portion thereof. This can be the case for contractors of the State Water Project (SWP), Central Valley Project (CVP), water districts, irrigation districts, etc. The rules for transferring the water within or outside the district boundaries are often set up by the contracting entity and may be modified to adapt to changing needs. One very typical rule is that the contracting entity with the underlying water right consent to the transfer by one of its contractors.

The far left branch of the Water Transfer Decision Tree deals with transfers of contract supplies. The first issue is to determine whether the transfer is within the conditions of the underlying water rights of the contracting entity. This is often most effectively accomplished by discussing the proposed transfer with the contracting entity. (Refer to the water right section in Chapter 3 for a description of the types of conditions that are placed on water rights.) For example, the SWP, the CVP and many irrigation or water districts, etc., have rather expansive places of use. Transfers within these places of use, using the permitted points of diversion for purposes of use authorized by the water right permit or license do not need any additional approval from the SWRCB.

Contract Supply Transfer Within Existing Water Rights

If the transfer is within the existing water rights of the contracting entity, then the left fork in the tree is taken. If not, then the right fork is taken, refer to the last two section in this Chapter.

The transfer of contract supplies typically equals the contract entitlement minus the actual use that year. For example, if a water supply contractor has a contract for 100 AF and this year for various reasons is projected to need only 60 AF, the amount available for transfer would be 40 AF. There are a few exceptions. As will be discussed in the following sections contractors with the U. S. Bureau of Reclamation (USBR) for CVP water, can transfer their contact entitlement limited to that portion which has been historically used. Further limitation on CVP transfers exist in dry and criticaly dry years according to contract provisions. A similar provision exists for the SWP contractors. For SWP contractors, the contract entitlement available for transfer is limited to that portion which has been allocated for use that year, but the contractor must utilize the "Turn-Back Pool Program" discussed below under the section titled Special Conditions for SWP Transfers.

A transferor must comply with any special provisions of the contracting entity. Various water supply districts, DWR and USBR have special conditions on contractors that want to transfer a portion of their contract water supply. Some of these conditions are set forth below.

Special Conditions for CVP Transfers

Section 3405 (a) of the Central Valley Project Improvement Act (CVPIA) (PL 102-575) establishes the conditions under which CVP water can be transferred. These provisions are further explained in the Bureau of Reclamation's "Interim Guidelines for Implementation of Water Transfers under Title XXXIV of PL 102-575," dated February 25, 1993 and the Final Administrative Proposal on Water Transfers dated April 16, 1998. Appendix 2 provides an overview of the CVPIA water transfer provisions.

In addition, the CVP water service (or repayment contracts), water settlement contracts, and exchange contracts may have provisions related to the transfer of water. These provisions are also presented in Appendix 2.

Special Conditions for SWP Transfers

The Department of Water Resources (DWR) operates the State Water Project (SWP). The 29 contractors that buy water from the SWP can sell water to each other provided certain conditions are met. All annual sales must be conducted through the "Turn-Back Water Pool." This program is available to contractors that have signed the Monterey Amendment. Water can be both purchased and sold from this pool. The "Turn-Back" pool is subject to Article 56 of the long-term water supply contracts. Water may be stored outside the purchasing contractor's service area for later use in the contractor's service area consistent with Article 56. Pool water that is not sold to other contractors may be purchased by DWR or by non-contractors. Rather than go into the details of this program in this document the reader is referred to the Department's Internet web page where this program is discussed. (See http://wwwswpao.water.ca.gov/contract/pool.html)

In addition, DWR conducts an Interruptible Water Program in years when extra water is available to the SWP system above the amounts allocated for delivery to the contractor that year. Delivery of Interruptible Water does not impact the allocation or delivery of entitlement water to contractors. It may be limited by operational capacity in SWP facilities or as a result of changed operational conditions. Details on this program can be found at DWR's Web site at: http://wwwswpao.water.ca.gov/interrupt/html.

The DWR also has operated the State's Water Bank in previous drought years. However, the discussion of the water bank is beyond the purpose of this document. For details on the Drought Water Bank the reader is referred to DWR's web site at http://wwwswpao.water.ca.gov/other/other.html.

From a water transfer standpoint, the DWR also helps facilitate transfers through the use of its facilities in the Delta. A special discussion on cross-delta transfers is presented in Chapter 9. The conditions for the use of SWP facilities are presented in Chapter 9.

Special Conditions for other Water Districts and Irrigation Districts etc.

California law allows various water districts to transfer water for use outside of their boundaries only if water is surplus to the needs within the district's boundaries. For example, districts formed under the Irrigation District Law are authorized to transfer surplus water under Water Code section 22259. Districts formed under the County Water District Law are authorized to transfer surplus water under Water Code section 31023. Districts formed under the California Water District Law are authorized to transfer surplus

water under Water Code section 35425. Districts formed under the Water Storage District Law are authorized to transfer surplus water under Water Code section 43001. Districts formed under special legislative acts have similar provisions. (See, for example, sections 5 and 5.2 of the Yuba County Water Agency Act.)

Included within the definition of "surplus water" for transfer purposes is water, the use of which is voluntarily foregone by a water user of the water district, upon terms that have been agreed to by the water user and the water district. (See, for example, Water Code sections 382, 383 and 1745 through 1745.1.1)

Generally, the water transfer procedures would be different depending upon whether the water user desires to transfer water supply entitlement for use within or outside the service area of the water district that holds the water rights from which the entitlement is derived.

Transfer of Entitlement for Use within the District's Service Area

Water districts generally consent to the transfer of entitlement from one water user to another for use within the water district, especially during seasons when there is a full water supply allocation to all water users within the district. During times when the water district does not have a full supply for use within the district, restrictions may be placed upon the ability of a water user to transfer entitlement to another water user within the district. Provided the transfer would be for use within the water district's boundaries and the place of use of the applicable water right permit, no change in the place of use for the water rights would be required to be processed by the SWRCB.

Transfer of Entitlement for Use Outside the District's Service Area

As stated above, the consent of the water district is required for a water user to transfer entitlement for use outside of the district's boundaries. If the area to receive the transferred water is not within the place of use under the water right, a change in place of use would be subject to approval of the SWRCB for post-1914 rights, and the transfer might require compliance with the California Environmental Quality Act. The process for reviewing and approving these changes is set forth in the Water Transfer Decision Tree and presented in detail Chapters 4 and 5.

Coordination of Information Needs

The state and federal agencies involved with the approval, funding or facilitation of a water transfer have similar information needs. However, they all have different reporting formats.

To allow more expedited approvals, these agencies have agreed to condense their information needs into one package that will allow the party wishing to transfer water to complete one set of analysis to satisfy all the agencies involved in the transfer. This would also assure that the same information is developed for each transfer regardless of the approvals needed. In this way parties that may be affected by transfers can review a standard set of impact analyses to determine if individual or cumulative effects to their interests are occurring.

This analysis package is being developed by CALFED as part of its water transfer program. Work on this task will intensify during the year 2000. Until that time, parties wishing to transfer water should work with the individual agencies that have a role in approving, funding or facilitating water transfers to better

understand the information needs of the agencies. Some of the principles that are used by these agencies are set forth in the above sections in this Chapter and in Chapters 9 and 10.

Contract Supply Transfers Requiring a Change in Pre-1914 Water Rights

If the water transfer is not encompassed within the existing water rights of the contracting entity, then a change to the underlying water right place of use, purpose of use or point of diversion will be needed. In these cases the right fork of this branch of the Decision Tree is taken. In order to determine the process for changing the water rights, a determination must to be made regarding the underlying water rights. If the contracting entity's water rights related to the water transfer are pre-1914 rights, the process is rather simple. As set forth in Chapter 3 related to water rights, the purpose of use, places of use and points of diversion of pre-1914 water rights can be changed without approval of the SWRCB. However, Water Code section 1706 allows that pre-1914 water right holders may make such changes "if others are not injured." The water right holder should take whatever steps are necessary to ensure that "others are not injured" by the proposed transfer. Section 1706 transfers have no specific CEQA exemption as do one-year transfers of post-1914 rights under Section 1729.

In addition, as a matter of good public policy, other public agencies that are funding, approving or facilitating the proposed transfer should not participate in the transfer if this section of the Water Code would be violated. Therefore, the party with pre-1914 rights proposing the transfer should develop information showing how the proposed transfer would affect "others." (See Chapter 3 for the definition of "other water users"). This may result in additional conditions on the transfer to protect these users from injury. The amount of water made available under the definition of transferable water for contract supplies discussed above could be reduced in order to protect these "other users" of water.

Contract Supply Transfers Requiring a Change in Post-1914 (Modern) Water Rights

If the proposed transfer requires a change in the contracting entity's modern water rights, then the Water Transfer Decision Tree shows a branch going to the right under post-1914 rights. How to follow this branch is explained in Chapter 6. Complying with the provisions presented in Chapter 6 may result in conditions on the transfer that restrict the definition of transferable water beyond that shown for contract supplies. In these cases the more restrictive definition of transferable water applies.

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5. Surface Water - Pre-1914 Water Rights

Some water transfers are conducted by water right holders that have pre-1914 water rights. Transfers that are not consistent with the place of use, purpose of use or points of a diversion of a pre-1914 right require changes to the water rights. Such changes can not increase the amount of water used under the pre-1914 water right. Water right holders that have pre-1914 water rights can change the purpose of use, place of use, or points of diversion provided such changes do not "cause injury to others" (Water Code section 1706). Chapter 3 provides a more complete definition of this term under the section titled "no injury rule". The reader is referred to this section for more detail on this subject.

SWRCB approval is not required for a change in pre-1914 water rights. Therefore, complying with section 1706 is the responsibility of the water right holder and, if challenged, the courts.

The state and federal agencies involved with approval, funding or facilitation of water transfers have similar information needs. However, they all have different reporting formats. Under the auspices of CALFED, the agencies are developing a common set of information and analyses formats to aid in the approval of water transfers. This process is discusssed in more detail in Chapter 4 Information Needs.

If the transfer does not involve approval, funding or use of facilities controlled by state or federal agencies, then the transfer can take place provided compliance with Water Code section 1706 is achieved.

Water transfers that involve pre-1914 water rights do not require SWRCB approval. However, if the transfer involves a dedication of water for instream purposes, the water right holder should seek to protect this water right by filing for a water right change under 1707 of the Water Code. This section allows water users including pre-1914 water right holders to make changes to their water rights for "preserving or enhancing wetlands habitat, fish and wildlife resources or recreation in or on the water". The benefit in seeking such a change is the protection of this water under the priority of the pre-1914 water right to help ensure it makes its way through the stream system for its intended purposes. Obtaining SWRCB approval will also protect the water right holder against forfeiture for non-use as might occur if the water right holder simply reduces the diversion to have more water in the stream.

Petitions for a Section 1707 change in pre-1914 water rights are made to the SWRCB under the provisions of Section 1702, 1435, 1725 or 1735. These provisions are discussed at length in Chapter 6 under the post-1914 water rights. The SWRCB may approve an instream flow petition provided the specific findings set forth in the appropriative processing provisions of the Water Code can be made (e.g. 1702, 1436, 1725, or 1735) and the SWRCB finds that the change "will not increase the amount the party is entitled to use, will not unreasonably affect any legal user of water and otherwise meets the requirements" of the Water Code.

6. Surface Water - Post-1914 Water Rights

This is perhaps the most complicated part of the Water Transfer Decision Tree. It is broken down into two major sections related to the time frame for the water transfer. Short-term transfers (those lasting less than one year) are discussed under short-term transfers below. Long-term transfers are discussed in a subsequent section.

Short-term Transfers

The Water Code provides for the expedited processing of short-term transfers of one year or less (see Water Code section 1725 and 1435). The reason for this is related to the fact that the effects are limited to one year minimizing the risk of potential impacts. For example, either an urgent need exist (1425), or they involve previously stored water or water made available through reductions in the consumptive use of water (1725). Also, many short-term transfers need rapid approval because they take advantage of specific water supply or water needs that develop in a given year and can be transient in nature. Compliance with the regular environmental review process under the California Environmental Quality Act (CEQA) would not be practical for many short-term transfers. Transfers under Water Code section 1725 are exempt from CEQA. The Water Code relies on notice to the affected parties and findings made by the SWRCB instead of the development of complex environmental documents under CEQA for short term transfers approved under Section 1725.

The SWRCB gives the processing of short-term transfers its highest priority. Staff makes every attempt to meet the time frames established in the Water Code and its regulations. In many cases, approvals are made in much shorter times. The key for rapid action by the SWRCB has been the development and disclosure of the likely impacts of the proposed transfer on other legal users of water and to fish and wildlife. The SWRCB must make specific findings related to these uses. Having the data in hand makes acting on these proposals more timely. In 1997 and 1998 the average time to approve a water transfer was less than two months. In some cases in the past the approval was achieved within hours of receiving the formal request. This was because there was a critical need for the transfer and the staff of the entity seeking the transfer provided early information to SWRCB staff regarding the need for and the likely effects of the transfer. All this took place while the formal transfer request was being prepared.

Short-term transfers are divided into three categories. The first are transfers where the water right is based on direct diversion of water to use. The second are the transfer of stored water or water that would have been stored except for the transfer. The third are other types of changes to water rights to facilitate water transfers. Each of these is discussed below in the following sections.

Table 1 is a summary of the code sections, findings required and procedural aspects related to temporary transfers.

Reduction in Direct Diversion

Water that is directly diverted to use can be transferred as a short-term transfer pursuant to Water Code section 1725. This code section allows such a transfer for a period up to one year. Valid water rights to directly divert water must exist at the time of the water transfer. For example, if the water transfer is to take place over the summer, then the underlying water right needs to have water available under its priority during the summer also. If water is available under the water right in question only during the winter and spring, then the period the water transfer can take place is only in the winter and spring. If short-term water availability is an issue, then water storage may be considered as a part of the transfer if the diversion to storage occurs on the same schedule the water would have been directly diverted. This would require the SWRCB to consider a change in a portion of the direct diversion right to a storage right. This is allowable in cases where the water right is not expanded and the other provisions of the Water Code are met.

The SWRCB may also make a determination of water availability in a particular year, i.e. critical year, that may be much different than the availability of water during a normal year under that right.

Water Code section 1725 allows a permittee or licensee to temporarily change the point of diversion, place of use, or purpose of use to a transfer or exchange of water rights. Such a change is allowed if the transfer would involve the amount of water that would have been consumptively used in the absence of the transfer. "Consumptively used" is defined in this section of the Water Code 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." Therefore, water saved through water conservation, or crop changes that result in a change in evapotranspiration, would be included under this definition.

Water can be transferred pursuant to Water Code section 1725 if the water would have been consumptively used in the absence of the proposed transfer and the SWRCB can make the following findings: (1) the proposed transfer would not injure any legal user of the water during any potential hydrologic condition and (2) the proposed temporary water transfer would not unreasonably affect fish, wildlife, or other instream beneficial use. If the SWRCB cannot make the above findings within 60 days, it is to notice and subsequently hold a hearing. The 60 day time period can be extended if approved by the permittee or licensee. The time required to hold a hearing would likely delay most temporary transfers to the point that they could not take place in the year proposed.

Prior to 1999, the SWRCB was presented with sufficient information by the transferors to make the required findings under section 1725 without the need for a hearing. The SWRCB has approved all but two of the over 110 water transfer requests it has received since 1982. Since 1990, the SWRCB has approved over 1.7 million acre feet of water transfers. Some transfers have been conditioned to ensure the SWRCB could make the above findings. Some others have not been pursued to completion due to the controversy involved and were withdrawn before the SWRCB acted.

Transferable Water Definition for Direct Diversion Transfers

Transferable water for short-term transfers involving water that is diverted directly to use is defined as

Table 1

California Water Code Requirements for Water Rights Changes and Transfers

	Temporary Urgency Change	Permanent Change	Temporary Change Involving Transfer	Long-Term Transfer
Water Code Section	1435	1700	1725	1735
Regulations Article (CCR Title 23)	16.5	15.	16.	17.
Required Findings Include:				
1. Urgent need for water	X			
2. No injury to other legal users of water	X	X	X	X
3. No unreasonable effect on fish or wildlife	X	X	X	X
4. Involves only water consumptively used or stored			X	
5. If part of long term action, show diligence in seeking a regular permit change	X		X	
Duration	180 Days (renewable)	Permanent	One year or less	More than one year
Compliance with CEQA				
1. Normal CEQA process	Required	Required	Exempt	Required
Comments				
1. Petition fees required. (Water Code 1547)	$100 per Application	$100 per Application	$100 or 25% of Application fee (out of basin transfers only.)	$100 or 25% of Application fee (out of basin transfers only.)
2. Board provides notice and opportunity for hearing; and review information from interested parties	Objection(s)	Protest(s)**	Objection(s)	Protest(s)*
3. Board hearing may be required to:	Consider objections and make required findings	Consider protests and objections	Consider objections & make required findings	Consider protests and objections

* California Code of Regulations Title 23. Waters. Division 3. State Water Resources Control Board.
** A water right hearing is required if there are unresolved protests on major projects (see Water Code 1704).

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the reduction in consumptive use of water to the extent of the direct diversion rights. From a practical standpoint, transferable water of agricultural direct diversions is the reduction in evapotranspiration of applied water and the savings in water that would not have been available for downstream use. Therefore, if crops are changed or land is fallowed, the resulting reduction in evapotranspiration of applied water could be transferred. Many water conservation efforts typically do not result in changes in evapotranspiration. They often reduce the amount of surface return flow or deep percolation. In most cases these return flows are used by downstream water users and the removal of these flows could adversely affect legal downstream users or fish and wildlife.

The short-term transfer of directly diverted water is limited in section 1725 to changes in consumptive use or water that has otherwise been removed from the downstream water supply.

Therefore, short-term water transfers involving conserved water do not include reduction in surface returns or reductions in deep percolation unless the returns are to a salt sink (or other unuseable source). Long term-transfer of conserved water can include reductions in returns or deep percolation provide such reductions do not otherwise adversely affect legal users of water and the reductions in returns do not result in unreasonable affect to fish, wildlife or other instream beneficial uses. The burden falls to the transferor to provide information that these conditions exist. In the absence of this information the amount of water available for transfer is limited to the amount of water no longer consumptively used.

If the transferor can make a credible case that the reduction in the deep percolation will not adversely affect other users of water and fish and wildlife, the SWRCB could approve a long-term transfer of this portion of the water saving. See the section on long-term transfers near the end of this chapter.

Determination of Consumptive Use

Once the source of the transferable water is identified by the transferor, the amount of water that would have been consumptively used in the absence of the transfer needs to be determined. As discussed above, consumptive use occurs by evapotranspiration, percolation underground to an unuseable source, or loss to beneficial use by downstream users. Claims of reductions in consumptive uses due to conservation measures must be carefully examined to determine if they generate water for temporary transfers. Not all conservation practices reduce consumptive use and produce transferable water.

For example, conservation measures generally such as laser leveling of fields, lining dirt ditches with concrete, or use of ultra-low flush toilets reduce the amount of water diverted from a river, but may or may not reduce the consumptive use of water and generate water for transfer. If the return flows or deep percolation flow to an area that is not hydraulically connected to downstream uses or flow to a saline sink, conservation generally measures produce water savings that could be transferred. However, if return flows or deep percolation normally flow directly downstream, or percolate to a groundwater aquifer available for downstream use by others, conservation measures do not reduce the consumptive use of water. However, they do contribute to more efficient agricultural practices such as lower pumping costs, reduced fish entrainment, increased crop production and improved water quality in return flows to the river system.

Fallowing land or shifting to low water use crops also reduces consumptive use and produces transferable water.

The consumptive use of water by crops is determined by calculating the evapotranspiration of applied water for the particular crop. Crop evapotranspiration (ET) is the combined process by which water is transferred from the soil surface and from the plant (from the leaf surface and through leaf pores) to the atmosphere (ambient air). Evapotranspiration of the applied water is a subset of the total crop evapotranspiration from all water sources including rainfall. Evapotranspiration of applied water is symbolized as ET and is a measure of the applied water transpired by plants, retained in the plant tissue, and evaporated from adjacent soil surfaces over a specific time period. ETAW is usually expressed in depth of water per unit area such as acre-feet per acre. The equation used by DWR to determine ET is a modified version of Penman's equation (see DWR's Web Page at http:// wwwdpla.water.ca.gov/cimis/cimis/hq).

If a change in cropping patterns is the basis for a claim of transferable water, the transferor needs to provide a history of crops grown. Anywhere from 5 to 20 years of crop history may be needed to evaluate a claim. Some rotation of crops is standard practice. A comparison of the crop history to the proposed cropping pattern needs to clearly demonstrate a reduction in consumptive use due to the crop change.

A water budget or water balance is a good method for analyzing all the sources and uses of water within an area in order to identify those components that can be modified through conservation measures to reduce consumptive use and provide water for transfers. A water budget simply labels all the supplies and sources of water in a prescribed area such as precipitation, groundwater and surface water and then balances them against uses such as evapotranspiration, conveyance losses, runoff, and percolation. From a thorough water budget each component can be evaluated to determine if conservation measures result in reduced consumptive use and produce transferable water.

One of the best ways to document the on-farm, or on-district, water budget is by methodically recording such parameters as crops grown, crop water demand, type of irrigation and distribution systems used, distribution system losses (if possible) and overall water deliveries on an annual basis through a water management plan. If the amount of water required for leaching, or cultural practices can be quantified, this is helpful in developing a detailed water budget. It is important to describe the devices used for measuring water deliveries and crop water demands since some devices are more accurate than others. Regular maintenance of measurement devices is also important to retain their accuracy. This maintenance should be chronicled in the water management plan.

Evaluation of Changes in Consumptive Use

The above information is needed to evaluate the effect of a given program to reduce consumptive use. Water Code 1725 (in part) defines transferable water for a short-term transfer as the amount of water that would have been consumptively used in the absence of the transfer. Water Code section 1725

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makes clear that conditions absent the transfer should be used as the base for determining water availability for transfer. In addition, Water Code section 1011 states that water, "the use of which has been ceased or been reduced as a result of water conservation *efforts*," may be transferred. Therefore, the program (or effort) could be a one-year program for the year of the transfer or it could be the result of a multi-year effort. In either case the key is to determine the difference between what would have occurred absent the program and what is expected in terms of consumptive use with the program in place for the year of the water transfer. The transferor needs to demonstrate that the program reduces consumptive use.

If the program is a water conservation effort that makes water use more efficient, then the transferor needs to demonstrate the increase in efficiency as it relates to reductions in consumptive use. If the program is as simple as a reduction in irrigated acres, the consumptive use resulting from the cropping pattern expected for the transfer year without the reduction program in place is compared to that with the reduction program in place. However, while Water Code 1011 defines water conservation to include land fallowing and crop changes, it requires that the reduced water use accomplish the same purpose of use allowed under the existing appropriative rights. Therefore, land conversion from agricultural use to urban use would typically not qualify as a water conservation effort under Water Code 1011.

This approach as set forth above requires the transferor to define the program that has been or will be put in place to reduce consumptive use. The transferor then needs to develop the data to show that program actually reduces or would reduce consumptive use in the transfer year compared to what would occur without the program.

Tracking In-basin Transfers

The next issue for short-term transfers is whether the transfer is for uses tributary to or exported from the Sacramento/San Joaquin Delta. If the transfers are for in-basin uses, then the parties should track the flows to their place of use and protect them from diversion by junior water right holders. The parties to the transfer typically calculate and track these flows.

The ability to protect the water from diversion by others needs to be evaluated as part of the transfer development process. For direct diversion transfers, the priority of the water being transferred carries the priority of the water rights from which it is derived. Water users downstream with a senior water right can legally divert water intended for transfer when water is in short supply. In these cases the transferor didn't have the rights to divert the water in the first place and therefore the water is not available for transfer. This highlights the need to ensure that the party wishing to transfer the water has valid rights to the water at the time the transfer is to take place. This point is shown as a first step in developing a water transfer in this branch of the Water Transfer Decision Tree.

If rights to the transferred water are sufficiently senior to protect it from legal diverters downstream, the next issue is to protect it from illegal diverters. This is usually not a problem. However, in some stream reaches it can be a significant issue. It should also be evaluated early in the transfer develop-

ment process. If the transferor believes the illegal diversion of the transferred water will be a significant issue, the enforcement authority of the SWRCB could be used to assist in protecting this water supply. The transferor would be asked to develop the water tracking methods and be willing to collect or pay for the collection of information needed for enforcement actions. SWRCB enforcement actions would be based on the quality of the information developed, the resources available to proceed with enforcement and the priority of this enforcement activity versus other water rights enforcement needs.

Transfers Across the Delta

Transfers across the Sacramento/San Joaquin Delta are perhaps the most complicated transfers of all. Therefore, the discussion of the issues related to cross Delta transfers is seperately presented in Chapter 9.

Stored Water Transfers

The second category of transfers is one which involves stored water. Water Code section 1725 allows a permittee or licensee to temporarily change the point of diversion, place of use, or purpose of use in order to transfer water if the transfer would involves the amount of water stored or would have been stored in the absence of the transfer. Like 1725 transfers that involve consumptively used water, stored water transfers are also exempt from the California Environmental Quality Act (CEQA). Instead the SWRCB is required to make specific findings related to the proposed transfer.

Water can be transferred pursuant to Water Code section 1725 if the SWRCB can make the following findings: (1) the proposed transfer would not injure any legal user of the water, during any potential hydrologic condition and (2) the proposed temporary water transfer would not unreasonably affect fish, wildlife, or other instream beneficial uses. If the SWRCB cannot make the above findings within 60 days, it is to notice and subsequently hold a hearing. The 60 day time period can be extended if approved by the permittee or licensee. The time required to hold a hearing would delay most temporary transfers to the point that they could not take place in the year proposed.

Transferable Water Definition for Stored Water Transfers

Transferable water under a 1725 stored water transfer is equal to the amount of water in storage that is dedicated to the transfer or the amount of water that would have been stored in the absence of the transfer. The first condition is easy to understand. Users that have water in storage beyond their projected needs can transfer a portion of the stored supply under section 1725. The second case is more complicated.

Some transfers involve a water storage project not storing water during a period when water would typically be stored and allowing that water to flow downstream. This can be the case with springtime water transfers for instream purposes or the bypassed of storage at a time when water diverters downstream have the capacity to divert the water. In these cases water that would have been stored is bypassed through the reservoir and the water is used or captured downstream. These types of transfers are allowed under section 1725.

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In order to make the findings regarding no injury to legal users of water and no unreasonable effects on fish and wildlife set forth above, the SWRCB may place conditions on the proposed transfer. For example, in some situations lowering of reservoir storage in connection with a transfer can lead to higher temperatures later in the year. This is due to a decrease in the cold water pool in the reservoir available at lower depths needed to help cool stream flows later in the summer or fall. In the past the SWRCB has established conditions on some transfers to avoid these types of impacts. Also, the timing of additional flows in the river for a stored water transfer can provide additional fish habitat. However, when the transfer is over, the subsequent lowering of flows can strand fish. Therefore, conditions are often needed on stored water transfers to minimize any adverse effects of the change in flows on fish and wildlife.

Refill Criteria for In-Basin Transfers of Stored Water

Transfers that serve in-basin needs versus those that require the water to be moved across the Sacramento/San Joaquin Delta (Delta) have different requirements. This subsection deals with transfers that do not involve movement across the Delta.

In these cases a determination needs to be made regarding the conditions under which the reservoir refill criteria of DWR and USBR apply. Reservoir refill criteria are a set of conditions to ensure that the transfer of stored water does not affect the storage and diversion capability of the SWP and CVP. The position of DWR and USBR is that stored water transfers in effect create vacated storage space that would not have existed in the absence of the transfer. The refilling of the vacated storage could affect the ability of the SWP and CVP to store or divert water the following winter if the winter is dry. In normal or wet years there may be sufficient water to allow the reservoirs to fill and spill. In these cases the effects of the transfer are literally washed out. However, the need to address refill criteria is a significant issue related to transfers. The DWR and USBR hold rights that could be affected by the proposed transfer and they have in the past claimed that without refill criteria they are injured under the "no injury" provision of 1725, 1735, 1702 and 1706.

The application of refill criteria has been controversial. As stated above the DWR and USBR have requested application of refill criterial to protect their water rights. Transferors believe that refill criteria is burdensome and unwarranted. The SWRCB staff has been working with the parties involved to review California water law to determine if it can help resolve this controversy. While the SWRCB has not adopted a water right decision related to refill criteria, the SWRCB staff has made the following observation as it relates to refill criteria.

Transfers that serve in-basin needs versus those that require the water to be moved across the Sacramento/San Joaquin Delta have different requirements. The operation of the Watershed Protection Statue has an effect on determining when refilling of vacated storage due to a water transfer creates "injury" in the case of water transfers that keep water within the basin of origin and do not involve the movement of water across the Delta.

The Watershed Protection Statues (Water Code 11460 et seq.) establish a priority for in-basin water uses over those of the CVP and SWP for export. For example, under the priority provided by the watershed protection statutes, the SWRCB would grant water rights to a new water storage project to store water in the winter for in-basin uses even if that storage would affect the storage or diversion of natural or abandoned flows by the SWP and CVP for export. If the watershed protection statute would provide such a priority for new water rights, it also would allow existing water right holders to change their water rights to accomplish the same net effect. Therefore, if a transfer of stored water is for in-basin use then the refill criteria of the SWP and CVP would only apply when the CVP or SWP were augmenting natural flows with their own stored water to meet in-basin demands including Delta outflow requirements.

The evaluation of whether storage of the CVP and SWP is being used to augment natural flows to meet in-basin needs is determined under the SWRCB's Standard Water Right Term 91. Term 91 tracks the storage releases and exports made by the CVP and SWP. Once the only water exported involves stored water and additional storage releases are needed to meet in basin needs including Delta outflow requirements, Term 91 is triggered. When this happens, new in-basin water diverters are required to stop their diversions of water because there is no longer enough natural flow in the system to meet current in-basin demands including that needed to meet Delta standards. Continued diversion would require additional releases of stored water by the CVP and SWP thus creating an injury under the Water Code even taking into consideration the application of the watershed protection statutes.

Therefore, for in-basin transfers, refill criteria related SWP and CVP operations would apply if refill due to a transfer would occur during conditions under which Term 91 is triggered or when the in-basin demands of the affected CVP or SWP reservoir would be impacted (as may be the case for some stored water transfers up-stream of Folsom or New Melones Reservoirs). The latter would be determined based on the conditions for the year in question. Term 91 has historically been triggered as early as May in the driest years and typically continues until early September. It normally begins in mid June. In the wettest years (like 1998) it was not triggered at all.

Refill Criteria of Out-of-Basin Transfers

Like the situation for the application of refill criteria for in-basin transfer, the SWRCB has not adopted a decision related to refill criteria and out-of-basin transfers. However, the SWRCB staff offers the following analysis.

For transfers that include the use of water outside the watershed of origin, a different test is used to determine the application of refill criteria. In these cases the transferor cannot utilize the watershed protection statutes because the use of water no longer involves the satisfaction of in-basin water demands. Therefore, any injury to the capability of DWR and USBR to divert natural flow would not be allowed and refill criteria would apply.

During wet periods of the year there is plenty of water to satisfy all needs for water. However, as the water supply diminishes and water demands increase, the CVP and SWP have the capability to control

the flows in the Bay/Delta system. In these "balanced conditions" the SWP and CVP are diverting and storing all the water they can and the only water going out of the system is water necessary to meet the Bay/Delta outflow requirements. For out-of-basin transfers refill criteria would apply when the flows in the Delta are in "balanced conditions." Balanced conditions are determined on a day by day basis by the operators of the CVP and SWP.

Balanced conditions occur much more often than conditions under Term 91. During dry years balanced flow conditions occur most of the year. In normal years balanced conditions flow occur about three quarters of the year.

In summary, refill criteria of the DWR and USBR applies in all stored water transfers. However, its application for a specific transfer is determined by when the refill occurs and whether the transfer involves in-basin uses or out-of-basin uses. For in-basin transfers, refill criteria applies if the refill occurs when standard Term 91 is in effect. For out-of-basin transfers refill criteria applies if the refill occurs when the flows in the Delta are in balanced conditions.

Effects on Non-CVP/SWP Rights Due to Reservoir Re-operation

As set forth in Chapter 3 under the discussion of the "no injury" rule, changes in stored water release can affect downstream users. However, claims of injury relate back to the nature of the underlying water rights. For example, riparians may have benefited from stored water releases at a time of year when natural flows are extremely low. However, riparian water rights do not extend to stored water. Therefore, riparians cannot claim injury under the Water Code when storage releases are changed as in a water transfer. In some cases downstream appropriators might be injured by such a change in historic releases of stored water. If they are affected, these affects should be mitigated to non-injury or the transfer would not be approvable under Water Code section 1725.

A reservoir re-operation study that shows likely conditions with and without the proposed transfer is often needed to evaluate the effects of a storage water transfer. The study should evaluate effects on reservoir levels, recreational impacts, flows downstream, temperature downstream, other water quality changes, and the likely biological effects of these changes.

Tracking Stored Water Transfers

Stored water releases are easier to track through the stream system than transfers of conserved water from direct diversions. Storage releases are not available for use by other users if the stream system is being used to transport these flows to authorized places of use. The purpose of the 1725 change is, in part, to add places of use to the water right permit for a limited time. The water transferor needs to identify the mechanism to be used to track the flows. As with transfers of direct diversion water, the enforcement authority of the SWRCB is available to help ensure that the transferred water gets to its intended place of use.

An interesting dilemma occurs with changes intended for instream uses under Water Code section 1707. If the purpose of the transfer is to increase flows above those currently required in a water right

permit, accounting for the extra water provided by the transfer becomes an issue. Without special accounting, the extra water intended to augment the instream flows could be taken by downstream users either in terms of reduced reservoir releases or additional diversions resulting in no increase in the instream flows. This would negate the purpose of the 1707 transfer. Therefore, special accounting of these flows is needed.

The additional flows made available by a 1707 transfer would not be counted towards the instream flow requirements of other water users for the segment of the stream sought by the transferor. The transferor would develop a tracking system for the additional flows. Water project operators would be advised of the timing and magnitude of these flows on a real time basis. For the purpose of determining compliance with flow requirements, these 1707 flows would be subtracted from the measured flows. For example, if 25 cubic feet per second (cfs) was added to the system from a 1725 transfer for the purpose of enhancing minimum flows under 1707, and the actual flow measured is 75 cfs, then for compliance purposes only 50 cfs would be counted towards meeting the minimum flow requirements set forth in the water right permit or other operating requirement.

This same type of flow tracking could be carried into the Delta if desired by the transferor. The additional flows from the instream flow transfer could be subtracted from Delta inflow and Delta outflow calculations. This would affect the determination of the percent of inflow diverted under the current operation conditions in the Delta. In this manner the flows intended to augment required instream flows would actually serve the purpose for which they are intended.

Other Changes

The Water Code also allows a permittee or licensee, who has an urgent need, to change a point of diversion, place of use, or purpose of use under section 1435. This type of change is good for only six months but can be renewed by filing another petition with the SWRCB. The SWRCB must be able to make the following findings related to the proposed change: (1) the permittee must have an urgent need to make the proposed change (2) the proposed change may be made without injury to any other legal user of water (3) the proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses and (4) the proposed change is in the public interest. "Urgent need" is defined to mean the existence of circumstances from which the SWRCB may in its judgement conclude it is necessary to further the constitutional policy that the water resources of the State be put to beneficial use to the fullest extent of which they are capable and that waste of water be prevented. It excludes cases when in the judgement of the SWRCB the petitioner has not exercised diligence, has previously petitioned for the proposed change, or has not diligently pursued such a change under the other change provisions of the water code.

Tempory urgency changes can be processed quickly. The SWRCB may approve a change under section 1435 prior to noticing if the required findings can be made. A notice is required as soon as practicable. The SWRCB retains continued authority over the temporary urgent change and can withdraw it at any time to protect legal users of water or instream beneficial uses.

Temporary urgency changes are subject to CEQA. Typically the nature of the changes requested have qualified these changes for exemptions under CEQA. However, this determination must be made on a case-by-case basis.

Temporary urgency changes are not always related to the transfer of water. However, they can be used to accomplish a transfer when the other sections of the Water Code do not directly apply. Section 1435 was written before section 1725. Section 1725 resolves some of the difficulty that was experienced with approving 1435 changes. The most notable was the requirement to comply with CEQA. If a proposed change did not qualify for an exemption there was little chance that a CEQA document could be circulated and approved in the time frame to accommodate the proposed change. Water Code section 1725 removes the requirement for a CEQA document but requires specific findings be made by the SWRCB before the proposed transfer can be approved.

Long-Term Transfers

Long-term transfers are governed by different sections of the Water Code (1735 et seq.) than short-term transfers (1725 et seq.). Because of the long-term nature of these transfers and their possible effects, the Water Code does not provide for the type of expedited processing that is provided for short-term transfers. Long-term transfers are all subject to the requirements of CEQA. They also must comply with the standard noticing and protest processes discussed in Chapter 3. If valid protests to the proposed change can not be resolved through negotiation between the parties, then a hearing must be held prior to the opproval or disapproval of the requested transfer.

The definition of transferable water for long-term transfers is broader than that for short-term transfers. The same findings related to no substantial injury to legal users of water and no unreasonable effects on fish and wildlife or other instream beneficial uses are necessary before the SWRCB can approve a long-term transfer. However, the specific requirements that only stored water or savings from reductions in consumptive use can be transferred are not found in Water Code section 1735. Therefore, any water can be transferred under a long-term transfer provided no substantial injury occurs to other legal users of water and fish, wildlife or other instream beneficial uses are not unreasonably affected. A good first approximation of transferable water for long-term transfers is to use the same tests as discussed in the short-term transfers section above recognizing that additional water may be transferable depending on whether injury or unreasonable effects occur.

Return Flows and Long-Term Transfers

One additional source of potentially transferable water for a long-term transfer not available to short-term transfers is the reduction of surface water return flows related to water conservation efforts. Water Code section 1010 and 1011 allows the transfer of this conserved water subject to other sections of the Water Code. Water Code section 1736 allows the long-term transfer of these water savings provided there is no substantial injury to any other legal user of water and it would not unreasonably affect fish, wildlife or other instream uses. The key is determining whether any of these injuries would occur due to the long-term transfer in question. Often, these return flows are used by water users downstream. Reducing these return flows and transfer-

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ring them to other users can lead to injury to the downstream users that relied on this water supply. The SWRCB has not yet adopted a water right decision related to long term transfers. The SWRCB staff offers the following analysis.

A good example of the transferability of surface return flows is the use of surface return flows in the Central Valley for export by the SWP and CVP from the Delta. The arguments related to the Watershed Protection Act (Water Code 11460) and the application of refill criteria for stored water transfers are applicable in this case. The SWRCB allows new applications for in-basin use of water to appropriate natural flows and return flows even when the CVP and SWP are using these flows to meet their export demands. This is allowed due to the priority given in the Watershed Protection Act to in-basin uses over those for export by the CVP and SWP. However, when these natural flows and return flows are no longer sufficient to meet in-basin demands including the Delta flow requirements, these new in-basin diverters are required to cease diversions because further diversions would require releases of stored water from the CVP and SWP. The mechanism for this is defined in standard water right Term 91 adopted by the SWRCB in Water Right Decision 1594.

Under the same watershed protection arguments discussed above, reductions in surface returns could be transfered for in-basin use during times when Term 91 is not in effect. Once Term 91 is triggered, the CVP and SWP could suffer an injury not contemplated under the Watershed Protection Act because the CVP and SWP would be required to the release additional stored water to make-up for the reductions in surface returns that were transferred. For out-of-basin transfers, to the transferor cannot receive protection from the Watershed Protection Act. Therefore, the transfer of reduced surface water return flows would result in injury when the Delta flows were in "balanced conditions." Since balanced conditions exist during the irrigation season of most years, the transfer of reductions in surface return flows due to water conservation to areas of export from the Delta would not occur except in wet years. For more discussion on this topic and the definition of terms used above see the section dealing with Short-Term Transfers of stored water and refill criteria.

Other Changes

There are no long-term urgency provisions in the Water Code that mimic Water Code 1435 for short-term changes. Water users wishing to make other changes to their water rights for a water transfer that do not fall under the provisions of section 1735 may apply for a water right change under 1702 of the Water Code. This code section is the section used for all types of long-term changes to water right permit. Section 1702 requires the same finding of no injury to legal users of water discussed for short-term transfers. However, the special provisions for temporany changes requiring avoidence of unreasonable effects on fish and wildlife are not found in Water Code section 1702. Instead, the SWRCB relies on its responsibility under the public trust doctrine to judge whether the approval of such a long-term change is in the public interest. (Some intrests argue that the public trust doctrine may provide instream beneficial uses protection as legal users of water under Water Code section 1702 - see Chapter 3). Also, the effects of a proposed change under Section 1702 are. disclosed in an appropriate environmental document prepared pursuant to CEQA.

7. Groundwater Transfers

There are three types of transfers that involve groundwater. They are: (1) use of groundwater in lieu of surface water, (2) use of "banked" groundwater and (3) direct transfer of groundwater. Each has its own unique properties that are addressed in the Water Transfer Decision Tree shown in Figure 1 and presented below.

Use of Groundwater in Lieu of Surface Water

In some areas of the State water users have access to both surface water and to usable groundwater. In these areas the use of surface water is often cheaper than pumping groundwater or the water quality of the surface water is better. Therefore, the surface water is often the preferable water source. However, the overall water supply of the system can be expanded if the surface and groundwater supplies are used together or conjunctively. In cases where groundwater is pumped in lieu of surface water, water users forego their surface water so it can be used by others while the original water users pump groundwater. In these cases the surface water is transferred to another user downstream and the transferor is compensated for the extra costs of pumping the groundwater. There can also be impacts to other groundwater users by such a practice that would not occur without the transfer.

Compliance with Groundwater Management Plans

The laws related to the regulation of groundwater are discussed in Chapter 3. These laws principally rely on local control of groundwater resources rather than statewide oversight. The Water Code establishes the development of local groundwater management plans. The composition of these plans can be found in various sections of the Water Code. Some of these code sections establish special local ground water management plans for specific areas of the State. Water Code section 10750 (also known for the legislation that established this code section: AB 3030) allows the general development of groundwater management plans.

The components of a section 10750 groundwater management plan may include: (1) the control of saline water intrusion (2) regulation of the migration of contaminated groundwater (3) the administration and management of wellhead protection and well destruction programs (4) mitigation of conditions of overdraft (5) replenishment of groundwater extraction by water producers (6) monitoring of groundwater levels and storage (7) facilitating conjunctive use operations (8) the construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects. (9) the development of relationships with state and federal regulatory agencies and (10) the review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination. The local agency is required to adopt rules and regulations to implement and enforce the groundwater management plan.

In some cases counties have developed groundwater management plans under their general local authorities. Also, some groundwater basins have been adjudicated and have local management plans to control the extraction and protection of groundwater sources.

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These groundwater management plans can be comprehensive. Therefore, a "groundwater in-lieu of surface water transfer" must comply with any relevant local groundwater management plans for the area.

In addition, Water Code section 1745.1 provides that a water user who transfers surface water pursuant to 1725 or 1735 (discussed in the short term and long term transfer section in Chapter 6) may not replace that water with groundwater unless the groundwater use is either of the following:

(1) Consistent with a groundwater management plan discussed above or;

(2) Approved by the water supplier from whose service the water is to be transferred and that the water supplier, if a groundwater management plan has not been adopted, determines that the transfer will not create, or contribute to, conditions of long-term overdraft in the affected groundwater basin.

Transferable Water

Transferable water for "use of groundwater in-lieu of surface water" is the entire amount of surface water that is replaced with groundwater. Transferable water is also limited to the extent of the surface water direct diversion rights of the water right holder at the time of the transfer. This assumes that the use of groundwater mimics the use of surface water in terms of losses. That is, the same ditch and tail water losses occur from the use of groundwater that occur with the use of surface water. To the extent there are less losses are due to the use of groundwater, the water transferor should either reduce the amount of water transferred or be prepared to show that such changes will not injure legal users of water downstream or unreasonably affect fish and wildlife.

Also, the transferor needs to show that the effect of this additional groundwater pumping will not injure other groundwater users. Groundwater users are legal users of water and effects on these users due to transfers is covered under the "no injury" provisions discussed in Chapter 3. If groundwater users would be injured, mitigation plans should be put in place to ensure that no injury occurs. This could include the deepening of water wells that are affected and the payment of additional pumping cost to the users. No injury does not necessarily mean no impact. Groundwater levels often fluctuate naturally and the correlative rights of overlying groundwater users needs to be evaluated when determining injury.

As with other transfers, the surface water forgone by a "groundwater in lieu of surface water transfer" needs to be tracked to the place of use and protected from diversion by junior water users.

Referral to Short-term and Long-term Surface Water Transfers

"Groundwater in lieu of surface water transfers" are in effect a special case of surface water transfers. Therefore, once the special conditions related to the groundwater aspect of this type of transfer have been satisfied, the surface water part of the Water Transfer Decision Tree needs to be consulted. However, the definition of transferable water stays as set forth above since in effect the surface supply has been replaced with a groundwater source.

Transfer of "Banked" Groundwater

Banked groundwater is water stored under the ground for later use. In most cases these water supplies are part of an overall groundwater management plan, but they do not have to be. Underground storage can be a localized practice of a small set of water users.

Transferable Water for "Banked Groundwater"

The amount of transferable water for a banked groundwater transfer is simply equal to the amount of "banked" groundwater that is taken from storage for the purpose of the transfer. This assumes that there are no natural losses of the banked groundwater. If such losses occur, then the amount of the transfer would be reduced by the transferor's share of these losses.

Water Rights to Store Groundwater

The next key issue is to determine who banked the groundwater to ensure that the appropriate provisions of the Water Code have been complied with. The storage of surface water in a groundwater basin is treated from a water right basis the same as surface water stored in an above ground reservoir. If the original water right holder banks the groundwater and maintains control over its eventual use, the water rights of this user must include groundwater storage. Water rights need to be sufficient to cover the quantity of water that is to be put into storage, including appropriate points of diversion and re-diversion.

The next test is to ensure that the place of use where the banked water is to be used is covered in the permits of the original water right holder. If they are, then the transfer must comply with any applicable groundwater management plan as set forth above. If the water rights either in terms of storage or place of use are not sufficient, then changes to the water right permit are needed and the users are referred to the short-term and long-term section of chapter 6.

The definition of transferable water for "banked" groundwater is the amount of water placed into storage and still available for use given any losses that may have occurred over time.

Direct Transfers of Groundwater

As presented in Chapter 6 the appropriation of groundwater is not regulated by the State except in a few instances set forth below. Some groundwater basins have been adjudicated and any transfer or change in groundwater use must be in conformance with the adjudication. Proposed changes that go beyond the adjudication would likely have to be approved by the courts.

Export of Groundwater from the Combined Sacramento and Delta-Sierra Basin

Water Code section 1220 addresses specifically the export of groundwater from the combined Sacramento and Delta-Central Sierra Basins as defined in Department of Water Resources Bulletin 160-74. Since this article of the Water Code does not apply to appropriations subject to the Watershed Protection Statutes (Water Code section 11460), it does not apply to the diversions of the Central Valley Project (CVP) or the State Water Project (SWP) to the extent they wish to directly pump groundwater outside of these basins. The CVP and SWP do not now divert groundwater from these basins nor do they currently have plans to divert groundwater. If they should propose the diversion of groundwater in the future, they would have to

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8. Transfer of Imported Water

The transfer of imported water is governed by the nature of the water being transferred. By definition imported water is foreign to the water basin it is imported into. Therefore, water users downstream from the imported water source have no water right claim on this water. While the SWRCB may grant a water right permit based on the availability of imported flows, such a water right permit does not bestow a right to have this imported supply continue. If the importer decides not to continue the importation of water or develops another use for the water that reduces its availability downstream, the water right permit holder has no recourse but to deal with a lower water supply.

The wording of the "no injury" rule discussed in Chapter 3 is critical to the above discussion. Water Code section 1702 deals with the injury of legal users "of the water involved." Since water users have no prior legal claim to imported water, they cannot be injured (in a legal sense) by its removal. Therefore, if the nature of the water supply is from an imported source, compliance with the no injury provisions of the Water Code is rather simple. If changes to the water right permit are needed the importer should seek such changes under a typical water right change under 1702. These changes can be of long term or limited duration based on the request of the permittee or licensee.

However, if the imported water is from a wastewater source, and a new use is to be made of this water, a wastewater change permit pursuant to Water Code section 1210 is needed. This code section is specific to waste water discharges. The concern is that many wastewater discharges, particularly in the arid portions of the State, provide important instream habitat. The removal of wastewater flows can adversely affect instream uses. This code section requires that the waste discharger file a wastewater change petition with the SWRCB. This is required regardless of whether the discharger has water rights from the SWRCB. In most cases they do not but, must still file the wastewater change petition. The petition for change is noticed and processed under the same procedures as a water right change. Parties are allowed to protest the change. Environmental documentation pursuant to CEQA is prepared. If the protests cannot be resolved, the SWRCB may hold a hearing on the change petition.

Effects on fish and wildlife resources related to the transfer of imported water are evaluated under the public interest provisions of the Water Code. There is some question whether the public trust doctrine applies to imported water supplies. Therefore, when evaluating the effects of changes to water right permits or to wastewater change petitions on fish and wildlife, the SWRCB has used the public interest provisions of the Water Code when it balances the needs of instream uses versus the needs of out of stream uses.

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regulatory restrictions in the Delta are more complicated than can be surmised from an operation study. The Biological Opinions have both "yellow and red light" conditions that are based on the actual numbers of fish caught at the pumping plants. When these conditions are triggered, additional restrictions are put in place. The SWP and CVP attempt to make up for the water supply impact of these conditions by pumping water during times of limited impacts to the fishery. These times coincide with the transfer windows discussed above. Also the recent listing of spring run salmon has led to modification of exports by the CVP and SWP with the "make-up" being pumped during previously available transfer windows. Further water project modification to facilitate improved conditions for fish and wildlife can affect the water transfer windows. These modifications include implementation of the Central Valley Project Improvement Act (CVPIA) actions for anadromous fish and the implementation of the Vernalis Adaptive Management Plan as was done in 1999.

In order to operate the CVP and SWP in the dynamic physical and regulatory environment that is the Delta, affected agencies have implemented the Operations Group (Ops Group) to advise the agencies on how to adaptively manage the Delta within the constraints set forth above. The Ops Group was established by the Framework Agreement in June 1994 among the USBR, National Marine Frisheries Service (NMFS), US Fish and Wildlife Service (USFWS), US Environmnetal Protection Agency (USEPA), DWR, State Department of Fish and Game (DFG) and SWRCB. The water contractors of the CVP and SWP and environmental interests have an opportunity for direct input to the Ops Group. This operations group has been performing successfully since 1994 and continues to provide a valuable integration between the water supply demands on and biological needs of the Delta.

Carriage Water

Carriage water has been defined as "the extra amount of Delta outflow required as a result of an increase in pumping to maintain a controlling Delta water quality standard." Historically, the DWR and USBR have assessed 20 to 30 percent of the water pumped in a north-to-south Delta water transfer to be dedicated to carriage water. This increment was assessed to mitigate for the impacts of the additional pumping caused by the transfer and thus prevent injury to the DWR or USBR who have to maintain the Delta standards at all times.

Some parties have expressed concern that the carriage water amounts (1) are too high, (2) should not be assessed at all because "carriage water" does not really exist (3) need to be revised given the current knowledge and the current nature of the standards. Carriage water has been a contentious issue. The Bay Delta Modeling Forum with the assistance of CALFED will be conducting a review of carriage water over late 1999 and early 2000. A recommendation on this important topic will be provided sometime during the middle of the year 2000.

Wheeling

Wheeling is the use of pumping and canal facilities to move water. As stated above, the SWP has most of the pumping and canal capacity to facilitate transfer through the Delta. The DWR's State Water Project Analysis Office (SWPAO) reviews and evaluates water transfer proposals involving the use of State Water Project (SWP) facilities and other transfers that may impact the SWP water supplies. SWPAO facilitates water transfers and promotes water marketing in accordance with provisions of the California Water Code. In addition, SWPAO serves as the primary contact with the public concerning transfers requiring the use of or having the

potential to impact the SWP. The following is general information that can be found on DWR's web site which has been edited by SWRCB staff related to jurisdictional issues (http://wwwswpao.water.ca.gov).

The DWR carefully evaluates water transfer proposals that require the use of SWP facilities for conveyance on a case-by-case basis to ensure that they meet the following criteria:

1. All proposals must contain the background information requested by DWR.

2. All technical and historical water use information submitted to the DWR must be in accordance with generally accepted engineering practices.

3. The use of SWP facilities for conveyance is subject to the availability of unused capacity as determined by the Department after considering operational restrictions and the priority and use by other agencies.

4. Water conveyed in SWP facilities must be covered by a valid water right or entitlement recognized under California law. This right or entitlement must allow transfers to occur as proposed. In addition, any changes in the water rights, point of diversion, place of use, or purpose of use required to facilitate the conveyance of water under post-1914 water rights must be approved by the SWRCB prior to the use of SWP facilities. Further, transfers proposals that do not fall under jurisdiction of the SWRCB need to demonstrate to the satisfaction of the DWR that no injury will occur to vested water right holders as a result of changes in point of diversion, place of use, or purpose of use required to facilitate the conveyance of transfer water through SWP facilities.

5. The conveyance of water must be in compliance with applicable federal and state laws, including, but not limited to, applicable environmental requirements included in the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA), and the Federal Endangered Species Act (FESA). Compliance with these laws is required prior to the Department's approval of the use of facilities.

6. The conveyance of water must not violate existing contracts.

7. The November 24, 1986 Coordinated Operation Agreement between the U.S. Bureau of Reclamation (Bureau) and the DWR establishes certain rights and obligations of those agencies with respect to the operation of the SWP and the CVP.

8. All non-SWP water transferred through SWP facilities must be "transferable." For purposes of evaluating requests, transferable water includes groundwater transferred without adverse impacts; that quantity of surface water that has historically been consumptively used under an established legal water right or entitlement recognized under California law; and water that would not otherwise be available to the SWP, CVP or any other legal water users in the absence of the proposed transfer.

10. Formulating a Water Transfer

This guide to water transfers focuses on the rules surrounding water transfers. Once a water user understands these rules, a water transfer can be developed. A key step in the successful development and execution of a water transfer is the early consultation with the parties involved with the transfer, regulatory agencies and affected parties. Such early consultation can expedite the approval of the transfer and lead to resolution of issues before they become controversial.

The Water Transfer Handbook (1996) has a good discussion on water transfers and the process needed to formulate water transfers. The following steps have been adapted with permission publishers of the handbook.

1. Determine authority and type of water right involved in the transfer.

2. Determine duration of transfer.

   a. Urgent
   b. Temporary
   c. Long-term

3. Determine availability of transferable water and wheeling capacity.

4. Negotiate transfer terms between buyer and seller.

   a. Quantity, rate, and schedule of flows
   b. Season of transfer
   c. Sales price
   d. Point of diversion
   e. Place of use
   f. Purpose of use
   g. Carriage water responsibility
   h. Mitigation water responsibility
   i. Wheeling
   j. Termination clause

5. Inform local customers of transfer.

6. Obtain preliminary wheeling agreement (if needed), contingent upon terms and conditions of SWRCB order.

   a. Export schedule
   b. Costs

7. Conduct pre-filing consultation.
   a. Legal users
   b. Department of Fish and Game
   c. U.S. Fish and Wildlife Service
   d. National Marine Fisheries Service
   e. Department of Water Resources
   f. U.S. Bureau of Reclamation
   g. State Water Resources Control Board staff
   h. Special interest environmental groups
   i. Regional Water Quality Control Board

8. Prepare CEQA/NEPA compliance documentation, if required.

9. Develop draft water transfer petition.
   a. Statutory authority
   b. Identify source of supply
   c. Change in point of diversion
   d. Change in place of use
   e. Change in purpose of use
   f. Quantity and rate of flow
   g. Period of transfer
   h. Formal consultation with Regional Water Quality Control Board and Department of Fish and Game
   i. Filing fee

10. Review petition with SWRCB staff.

11. Prepare information to supplement petition.
    a. Operations with and without transfer
    b. Environmental analysis of impacts of transfer
    c. Impacts on legal users

12. File petition with SWRCB.
    a. Notice of petition
    b. Period for objections
    c. Respond to comments
    d. Evaluation by SWRCB
    e. Conduct hearing (if required)
    f. Issue order

13. Obtain final wheeling agreement (if needed).

First step in this process needs to be done carefully. Determining the authority and the type of water involved in the transfer is not as straightforward a task as it would seem. Water transfers often result in several interlocking agreements. The key is to follow the water, not the agreements. Focus on the source of the actual water moving to the transferee. This is the water being transferred and will guide the types of changes in water rights that may be needed. Parties are strongly encouraged to seek assistance in the important first step in the water transfer process. The SWRCB is staff willing to provide assistance early in the process to help ensure the proper requests for changes in water rights related to transfers are made in the first instance.

SWRCB Petition Requirements

Specific information is necessary from the proponents of a transfer, if SWRCB approval is needed. These information requirements are set forth in the California Code of Regulations (CCR) in Title 23 section 794. These information requirements apply to all change petitions including both short-term and long-term changes for the purpose of transferring water. They are listed below:

A petition for change(s) submitted by a permittee or licensee must identify the amount(s) and holder(s) of the right(s) involved and include the following information and map(s):

(1) The amount(s) of water which would have been diverted, consumptively used, or stored under the water right in the absence of the proposed change(s), (a) during the period for which the change is requested, or (b) in a maximum year if the change is permanent;

(2) The amount(s) of water proposed for change, transfer or exchange;

(3) The existing and the proposed purpose(s) of use of water,

(4) The existing and the proposed point(s) of diversion and rediversion, and the existing and proposed location(s) of any return flow;

(5) The existing and the proposed place(s) of use of the water for various purposes of use;

(6) The existing and the proposed diversion, release and return flow schedules if stored water is involved or if the stream flow regime will be changed;

(7) Any changes in property ownership(s) involved, and the point(s) of diversion and place(s) of use of other known users of water who may be affected by the proposed change(s);

(8) Information identifying any effects of the proposed change(s) on fish, wildlife, and other instream beneficial uses;

(9) Information identifying any effects of the proposed change(s) on other known users of water, including identification in quantitative terms of any projected change in water quantity, water quality, timing of diversion or use, consumptive use of the water, reduction in return flows, or reduction in the availability of water within the streams affected by the proposed change(s);

(10) The parties involved in the proposed change, transfer or exchange;

(11) Map(s) prepared in accordance with Article 7, which describe the proposed change(s), delineate any additional information required by Items (4), (5), and (7) above, and show the hydrologic basin of origin and the streams which could be affected by the proposed change(s).

(12) The proposed place(s) of use for irrigation may be listed as net acreage(s) within gross area(s) shown on a map submitted with the petition.

Water right holders proposing a change in point of diversion, place of use or purpose of use must provide preliminary information and map(s) required above to, and shall request consultation with, the Department of Fish and Game and the appropriate Regional Water Quality Control Board regarding the potential effects of the proposed change(s) on water quality, fish, wildlife, and other instream beneficial uses.

Before approval of a change petition, any water right holder petitioning for a change in point of diversion, place of use or purpose of use, must also provide to the SWRCB all comments of the Department of Fish and Game and the Regional Water Quality Control Board in response to the request for consultation required above.

The petition for change(s) will not be accepted for filing unless it contains all of the above required information and proof that a copy of the petition has been served on the Department of Fish and Game.

Public Notice Requirements for Temporary Transfers

Section 804 of title 23 of the CCR provides for the processing of temporary changes to water rights for the purpose of a water transfer under Water Code section 1725. They are set forth below:

Within ten days after the receipt of a petition meeting the requirements of Section 801, the SWRCB will send notice of the petition or contact all legal users of water known to SWRCB who may be affected by the proposed temporary change(s).

Any interested person may file an objection to the proposed change(s) with the SWRCB not later than 15 days after the date of the notice. The objection shall indicate the manner in which service upon the applicant of a duplicate copy of the protest has been made. The SWRCB shall give prompt consideration to any objection, and may hold a hearing thereon, after notice to all interested persons known to SWRCB.

Notice of hearing on a proposed temporary change may be given by mailing notice to the water right holder, the Department of Fish and Game, and persons known to the SWRCB who might be affected by the proposed change, not less than 20 days before the date of hearing by certified mail or personal delivery.

The SWRCB has delegated to the Chief of the Division of Water Rights the ability to issue change orders pursuant to Water Code section 1725 and 1435 where the findings set forth in these sections can be made.

Petition Forms

The standard SWRCB forms for the filing of change petitions with the SWRCB can be obtained from the Division of Water Rights or printed from the Divisions web page at http://www.waterrights.ca.gov. Once completed, the forms should be sent to the Division of Water Rights at the address shown on the form.

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Appendix 1

References

Authority for Environmental Analysis of Water Transfers, c/o Bookman-Edmonston Engineering Inc. 1996. Delta Water Transfer Handbook. Guidelines for Temporary and Long-Term Transfers Through the Delta.

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Appendix 2

Special Conditions for Central Valley Project Transfers

Cental Valley Improvement Act (CVPIA)

The CVPIA provides that all individuals or districts who receive CVP water may transfer all, or a portion, of their supply for any purpose recognized as beneficial under State law, subject to certain terms and conditions described below. The CVPIA-mandated process requires approval or disapproval by USBR of proposed transfers within 90 days of receipt of a complete written transfer proposal. In the absence of such a decision within the 90-day timeframe, the transfer is deemed by law to be approved. USBR's decision is made in coordination with the U.S. Fish and Wildlife Service to ensure that there are no unreasonable impacts on fish and wildlife. A condition for approval is that the proposed transfer be in compliance with applicable Federal and State laws. Environmental documentation prepared pursuant to the National Environmental Policy Act must disclose any impacts, e.g. third party impacts, anticipated to result from the proposed water transfer.

The quantity of CVP water available for transfer in any year may be limited by contractual provisions. For example, if a CVP contractor would normally be able to transfer up to 1000 acre-feet (AF), hydrological conditions in a certain year may cause the imposition of 25 percent deficiencies on that contractor's CVP supply decreasing the amount of CVP water available for transfer to 750 AF. In addition, physical constraints such as pumping restrictions in the Delta may limit the eligible transferees for CVP water. All transfers must take place between willing buyers and willing sellers based on mutually agreeable terms and conditions.

Individuals who receive water from a CVP contractor may transfer all, or a portion, of their supply provided the transfer does not cause an unreasonable impact on the water supply, operations or financial conditions of that contractor. This CVPIA condition sunsets September 30, 1999, so the contractor's role in reviewing water transfers by individuals within their district is unclear after that date. However, in any event, if the proposed transfer involves more than 20 percent of a contractor's CVP water supply under long-term contract, the transfer is subject to a mandatory public review process with specific review authority for that contractor. Following is a description of some of the other conditions for approval of proposed transfers of CVP water. There must be sufficient conveyance and pumping capacity within the CVP system to allow for delivery of transferred water without impacting USBR's ability to deliver water to meet contractual and/or fish and wildlife obligations. Also, the transfer must not result in significant adverse impact on groundwater conditions in the transferor's service area. This last condition also sunsets September 30, 1999, so the requirement to safeguard groundwater conditions after that date is no longer a requirement under CVPIA.

The first point of contact for a prospective water transferor is generally USBR's local area office in the locality of the water transfer. The area offices are the approving entities for short-term transfers; long-term transfers are subject to approval by the regional office in Sacramento, but still originate in the area offices. The Northern California Area Office in Redding (phone number 530-275-1554) is responsible for the Sacramento River region. The Central California Area Office in Folsom (phone number 916-988-1707) is responsible for the American River, New Melones and the Bay Area regions. The South-Central California Office, with locations in both Fresno (phone number 559-487-5116) and Tracy (phone number 209-836-6201), has responsibility for the San Joaquin Valley and Delta regions.

Approval Conditions for Transfers between CVP Contractors wholly within the CVP's Place of Use

Transfers of CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts within the CVP's permitted water rights place of use are considered by the SWRCB to be internal actions to the CVP's service area. No action by the SWRCB is required in these cases. Many of the places of use in the water right permits for units of the CVP are limited to specific areas. A petition from the USBR is before the SWRCB to consolidate many of these different places of use into one. However, some CVP Units like those served form New Melones or Berryessa will continue to have places of use limited to the local watersheds. If Sacramento River water rights settlement contractors elect to transfer the prior right water or "base supply" water, as that term is defined under their contracts, such transfers of base supply need to be accomplished under their water rights pursuant to the water transfer provisions of State water law, as explained in other sections of this guidebook. "Base supply" represents what the USBR has agreed to recognize as water under some form of existing water right for the purposes of contracting. "Base supply" is not a quantification of the water right for use by the SWRCB or other agencies. Therefore, if a CVP contractor wishes to transfer a portion of its underlying water rights, these water rights will need to be on file with the SWRCB in sufficient form to allow the processing of change petitions filed by the water right holder.

USBR allows the use of CVP power to support CVP transfers from USBR facilities, whether or not such facilities are beyond the transferor's contractual point of delivery. CVP power cannot be used to support transfers of non-project base supply.

Most CVP water transfers fall into this category because the water delivered south of Delta generally originates north of the Delta with the exception of water delivered to the Friant and East-Side contractors from Millerton and New Melones reservoirs, respectively. Even north of the Delta and within the Friant and East-Side Divisions, not all of the contractors in a particular division are considered to be within the area of origin. For transfers outside of the area of origin, the following conditions apply:

- The water available for transfer is limited to the average of CVP water historically delivered to the contractor's district during the last three years of normal water delivery prior to the en actment of CVPIA on October 30, 1992. Unused contractual entitlements are not transfer able.

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- The water available for transfer is limited to water that would have been consumptively used, or irretrievably lost to beneficial use, during the year, or years, of transfer.

Transfers Within The Area Of Origin

Transfers between CVP contractors within counties, watersheds, or other areas of origin, as those terms are used under State law, may involve transfer of unused contractual entitlements beyond those historically used. In addition, the water made available for transfer is not limited to that water which would have been consumptively used, or irretrievably lost to beneficial use.

Approval Conditions for Transfers by CVP Contractors outside the CVP's Service Area or Water Rights Place of Use

Transfers outside of the CVP's service area, as that term is defined by CVPIA, are subject to a "first right of refusal" by entities within the CVP service area under the same terms and conditions as proposed for the transferee. Such entities must exercise their "first right of refusal" within 90 days of the date the proposed transfer is noticed. This provision sunsets in September 1999.

CVP water transfers outside the CVP's water rights place of use require prior approval by the SWRCB. In these cases, the "no injury rule" of State law does apply to changes to CVP water rights necessary to facilitate the transfer. Water made available for transfer in these situations is subject to the same conditions that apply to transfers outside of the area of origin described above.

These types of water transfers typically also require the purchase of non-CVP power for delivery of CVP water through non-federal facilities.

Approval Conditions for the Use of CVP facilities for the Conveyance/Storage of Non-CVP Water

The Warren Act, as updated by Section 305 of the 1991 Reclamation States Emergency Drought Relief Act, provides USBR with the authority to contract for the use of excess capacity in CVP facilities for the conveyance/storage of non-CVP water. Use of Federal facilities for these types of transfers is limited to "transferable" water, as defined by State law. Determinations of transferable water are made on a case-by-case basis. These transfers are only approved if they do not have an adverse impact on the CVP, intra-CVP transfers, or fish and wildlife resources. CVP power may not be used to support the transfer of non-CVP water through USBR facilities.

§482. Water transfer guide

The department shall prepare a water transfer guide which shall include, but not be limited to, all of the following:

(a) A review of existing and appropriate state and federal laws that pertain to water transfers, water markets, or water rights.

(b) A list of persons or public agencies throughout the state involved in water management who could be helpful to those seeking assistance to transfer water.

(c) Information and resources which could be used to identify potential third-party impacts and mitigation alternatives, including economic, environmental, and legal issues related to the transfer of water.

(d) A description of the services available to water users from the department.

§483. Coordination of activities with other state boards or agencies

The department shall consult and coordinate its activities with other state boards, departments, agencies, or offices whose assistance may be desirable or necessary in carrying out the purposes of this chapter.

§484. Temporary transfer of water or water rights

(a) The temporary transfer of any water or water right that otherwise would have been consumptively used or stored by the transferor in the absence of the temporary transfer, does not in anyway prejudice the transferor's right to the use of the water in the future.

(b) "Consumptively used," for purposes of this section, means 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.

§1005.1. Ground water; cessation or reduction in extraction; alternative supply; reasonable beneficial use; statement of amount used; definitions

Cessation of or reduction in the extraction of ground water by the owner of a right to extract, as the result of the use of an alternate supply of water from a nontributary source, shall be and is deemed equivalent to, and for purposes of establishing and maintaining any right to extract the ground water shall be construed to constitute, a reasonable beneficial use of the ground water to the extent and in the amount that water from the alternate source is applied to reasonable beneficial use, not exceeding, however, the amount of such reduction. Any such user of water from an alternate nontributary source who seeks the benefit of this section, shall file with the board, on or before December 31st of each calendar year, a statement of the amount of water from such source so applied to reasonable beneficial use pursuant to the provisions of this section during the next preceding water year (November 1st to October 31st),and such user cannot claim the benefit of this section for any water year for which such statement is not so filed.

"Ground water," for the purpose of this section and of Sections 1005.2 and 1005.4, means water beneath the surface of the ground, whether or not flowing through known and definite channels. The term "nontributary source," as used in this section, shall be deemed to include water imported from another watershed, or water conserved and saved in the watershed by a water conservation plan or works without which such water of the same watershed would have wasted, or would not have reached the underground source of supply of the owner relying upon this section.

§1010. Use of recycled, desalinated or polluted water as beneficial use; lapse, reduction or loss of rights; extension of permit; periodic reports; transfer of water or water rights

(a) (1) The cessation of, or reduction in, the use of water under any existing right regardless of the basis of right, as the result of the use of recycled water, desalinated water, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses, is deemed equivalent to, and for purposes of maintaining any right shall be construed to constitute, a reasonable beneficial use of water to the extent and in the amount that the recycled, desalinated, or polluted water is being used not exceeding, however, the amount of such reduction.

(2) No lapse, reduction, or loss of any existing right shall occur under a cessation of, or reduction in, the use of water pursuant to this subdivision, and, to the extent and in the amount that recycled, desalinated, or polluted water is used in lieu of water appropriated by a permittee pursuant to Chapter 6 (commencing with Section 1375)of Part 2, the board shall not reduce the appropriation authorized in the user's permit.

(3) The use of recycled, desalinated, or polluted water constitutes good cause under Section 1398 to extend the period specified in a permit for application of appropriated water to beneficial use to the extent and in the amount that recycled, desalinated, or polluted water is used. The extension by the board shall be granted upon the same terms as are set forth in the user's permit, and for a period sufficient to enable the permittee to perfect his appropriation, while continuing to use recycled, desalinated, or polluted water.

(4) The board, in issuing a license pursuant to Article 3(commencing with Section 1610) of Chapter 9 of Part 2, shall not reduce the appropriation authorized by permit, to the extent and in the amount that reduction in a permittee's use, during the perfection period, including any extension as provided in this section, has resulted from the use of recycled, desalinated, or polluted water in lieu of the permittee's authorized appropriation.

(5) The board may require any user of water who seeks the benefit of this section to file periodic reports describing the extent and amount of the use of recycled, desalinated, or polluted water. 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.

(6) For purposes of this section, the term "recycled water" has the same meaning as in Division 7 (commencing with Section 13000). (b) Water, or the right to the use of water, the use of which has ceased or been reduced as the result of the use of recycled, desalinated, or polluted water as described in

(d) Water, or the right to the use of water, the use of which has ceased or been reduced as the result of conjunctive use of surface water and groundwater involving substitution of an alternate supply, as described in subdivisions (b) and (c), 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.

(e) As used in this section, "substitution of an alternate supply"means replacement of water diverted under an appropriative right by the substitution of an equivalent amount of groundwater.

(f) This section does not apply to the Santa Ana River watershed.

(g) This section does not apply in any area where groundwater pumping causes, or threatens to cause, a violation of water quality objectives or an unreasonable effect on beneficial uses established in a water quality control plan adopted or approved by the state board pursuant to, and to the extent authorized by, Section 13170 or 13245, which designates areas where groundwater pumping causes, or threatens to cause, a violation of water quality objectives or an unreasonable effect on beneficial uses.

(h) This section shall not be construed to increase or decrease the jurisdiction of the state board over groundwater resources, or to confer on the state board jurisdiction over groundwater basins over which it does not have jurisdiction pursuant to other provisions of law.

(i) This section shall remain in effect only until January 1,2007, and as of that date is repealed, unless a later enacted statute, which is enacted before January 1, 2007, deletes or extends that date.

§1011.5. Conjunctive use of surface water and groundwater

(a) 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. The Legislature further declares that it is the policy of this state to encourage conjunctive use of surface water and groundwater supplies and to make surface water available for other beneficial uses. The Legislature recognizes that the substantial investments that may be necessary to implement and maintain a conjunctive use program require certainty in the continued right to the use of alternate water supplies.

(b) When any holder of an appropriative right fails to use all or any part of the water as a result of conjunctive use of surface water and groundwater involving the substitution of an alternate supply for the unused portion of the surface water, any cessation of, or reduction in, the use of the appropriated water shall be deemed equivalent to a reasonable and beneficial use of water to the extent of the cessation of, or reduction in, use, and to the same extent as the appropriated water was put to reasonable and beneficial use by that person. No forfeiture of the appropriative right to the water for which an alternate supply is substituted 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 state board may require any holder of an appropriative right who seeks the benefit

of this section to file periodic reports describing the extent and amount of the reduction in water use due to substitution of an alternate supply. To the maximum extent possible, the reports shall be made a part of other reports required by the state board relating to the use of water. Failure to file the reports shall deprive the user of water of the benefits of this section.

(c) Substitution of an alternate supply may be made only if the extraction of the alternate supply meets all of the following conditions: (1) Is from a groundwater basin for which the operating safe yield is not exceeded prior to the extraction of the alternate supply. (2) Does not cause the operating safe yield of the groundwater basin from which the alternate supply is obtained to be exceeded. (3) Conforms to all requirements imposed pursuant to any adjudication of the groundwater basin. (4) Is consistent with any applicable groundwater management plan. (5) Is approved by the water supplier whose service area the water is to be transferred from, if the groundwater basin has not been adjudicated or if a groundwater management plan has not been adopted.

(d) Water, or the right to the use of water, the use of which has ceased or been reduced as the result of conjunctive use of surface water and groundwater involving substitution of an alternate supply, as described in subdivisions (b) and (c), 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.

(e) As used in this section, "substitution of an alternate supply"means replacement of water diverted under an appropriative right by the substitution of an equivalent amount of groundwater.

(f) This section does not apply to the Santa Ana River watershed.

(g) This section does not apply in any area where groundwater pumping causes, or threatens to cause, a violation of water quality objectives or an unreasonable effect on beneficial uses established in a water quality control plan adopted or approved by the state board pursuant to, and to the extent authorized by, Section 13170 or 13245, which designates areas where groundwater pumping causes, or threatens to cause, a violation of water quality objectives or an unreasonable effect on beneficial uses.

(h) This section shall not be construed to increase or decrease the jurisdiction of the state board over groundwater resources, or to confer on the state board jurisdiction over groundwater basins over which it does not have jurisdiction pursuant to other provisions of law.

(i) This section shall become operative on January 1, 2007.

§1020. Term of lease; application of chapter

Water may be leased for a period not to exceed five years to assist water conservation efforts pursuant to the terms and conditions of this chapter. The terms and conditions of this chapter are not applicable to water leases or transfers governed by other provisions of law.

§1021. Water subject to lease

(a) The water subject to a water lease agreement shall be water that is subject to a water right of the lessor. The amount of water leased shall not exceed 25 percent of the water that would have been applied or stored by the lessor in the absence of the lease agreement in any given hydrological year.

(b) Each lease agreement shall include enforceable terms which will ensure that the water lease will not injure any legal user of water and will not unreasonably affect fish, wildlife, or other instream beneficial uses.

(c) This chapter applies only to surface water appropriated pursuant to the Water Commission Act (Chapter 586 of the Statutes of 1913, as amended) or this code, or to water appropriated prior to December 19, 1914.

§1022. Water held by water district or water company

If the water subject to the lease is held by a water district, a water company, or a mutual water company, hereafter collectively referred to as the district, the following provisions apply:

(a) The governing body of the district may, by a resolution adopted and entered in its minutes, determine that the district should lease water pursuant to this chapter, or, if otherwise required by law, determine that an election should be held to lease water pursuant to this chapter. The district shall administer any water lease and determine whether water is in excess of the needs of the district and is available for a lease.

(b) Any water lease administered by the district shall include provisions to achieve all of the following: (1) Establish a schedule for district water users to provide written notice of the intention to participate in a water lease. (2) Establish a minimum price for the water available for leasing to maintain the financial integrity of the district and enter into leases for that water at market values at or above the minimum price.

§1024. Sale of water right or modification of water rights or contract

(a) Nothing in this chapter authorizes the sale of any water right or the modification of any water right or contract.

(b) No right in any water, water contract, or water right shall be acquired by a use permitted under this chapter.

(c) (1) 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 and leases that conserved water under this chapter, any such cessation of, or reduction in, the use of the appropriated water that is leased is deemed equivalent to a reasonable beneficial use of water to the extent of that cessation of, 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 (Chapter 586 of the Statutes of 1913, as amended) or this code, or to water appropriated prior to December 19, 1914. (2) The state board may require any lessor of water who seeks the benefit of this chapter to 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 state board relating to the use of water. Failure to file the reports shall deprive the user of water of the benefits of this chapter. (3) For purposes of this chapter, "water conservation" means 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.

§1024.5. Review of lessee's use of leased water

This chapter does not limit any review of the lessee's use of the leased water.

§1025. Notice by water lessor

If the lessor or lessee is a water district, the water lessor shall file a notice with the state board of the water lease agreement and include in the notice all of the following:

(a) A copy of the lease agreement.

(b) Any water permit or license number.

(c) A description of the environmental conditions in the lease, permit, and license which protect fish and wildlife.

(d) A statement of how the lease will assist water conservation efforts of the lessor.

(e) An agreement undertaken by the lessor and the lessee which specifies how the environmental protection terms and conditions in the permit, license, or lease, and the applicable conditions established pursuant to Section 1029 for the permit, license, or other water right, will be complied with for the duration of the lease.

§1025.5. Private parties; application by lessor; approval of lease

(a) If both the lessor and lessee are private parties, the lessor shall file an application with the state board for approval of the lease agreement and shall include in the application both of the following: (1) The information and materials described in subdivisions (a) to(e), inclusive, of Section 1025. (2) Other information which the state board determines is necessary to review the application.

(b) The state board, after providing notice and opportunity for a hearing, may approve the lease if, in the judgment of the state board, the lease would not operate to injure the legal users of water or unreasonably affect fish, wildlife, or other instream beneficial uses.

§1025.7. Change of point of diversion

Water leases pursuant to this chapter are not subject to Chapter 10 (commencing with Section 1700) or Chapter 10.5 (commencing with Section 1725) of Part 2.

§1026. Written public notice of approval of water lease

The lead agency shall not approve a water lease until 30 days after the state board provides written public notice, including notice by personal delivery or registered mail to legal users of water which may be affected by the lease, as identified by the state board, the Department of Fish and Game, and any party requesting special notice of water leases pursuant to this chapter. The water lessor shall pay a reasonable fee, in an amount determined by the state board, for the cost of providing the notice.

§1027. Sacramento - San Joaquin Delta

(a) Any water lease agreement entered into pursuant to this chapter involving the transfer of water from the Sacramento-San Joaquin Delta shall provide outflow consistent with the carriage water requirements determined by the department to be necessary for the transfer of the water subject to the lease to maintain the water quality which would exist in the delta without the transfer undertaken in connection with the water lease.

(b) Any water lease agreement providing for the lease of water from a lessor north of the Sacramento/San Joaquin Delta to a lessee south of the Sacramento/San Joaquin Delta shall provide for an amount of water for delta salt water repulsion and environmental purposes as administratively prescribed by the state board in proportion to all similar requirements for delta exports.

§1028. Effects of water transfer pursuant to lease on legal users of water and on fish and wildlife; court determination of issues

In any proceeding pursuant to Section 1029, the court shall determine issues relating to the lease and the effects of the water transfer pursuant to the lease on the legal users of water and on fish and wildlife, but any request or petition to permanently change the water right which may be subject to the lease shall be heard in a separate proceeding.

§1029. Environmental quality

Division 13 (commencing with Section 21000) of the Public Resources Code applies to water lease agreements authorized by this chapter. For purposes of that division, the lessor is the lead agency, except that if the lessor is a private party and the lessee is a water district, the lessee is the lead agency. If both the lessor and the lessee are private parties, the state board is the lead agency.

§1030. Monitoring lease; enforcement

During the term of the water lease, the state board shall monitor the lease, as appropriate. The state board shall initiate proceedings, if appropriate, to enforce the terms and conditions of water leases, and permits and licenses or water use authority to ensure that the water lease does not operate to injure any legal user of the water or unreasonably affect fish, wildlife, or other instream beneficial uses.

§1215. Application of article; exporters of water from protected area

This article shall only apply to a water supplier exporting or intending to export water for use outside a protected area pursuant to applications to appropriate surface water filed, or groundwater appropriations initiated, after January 1, 1985, that are not subject to Section 11460.

§1215.5. 'Protected area' defined

(a) For the purposes of this article, "protected area" means all of lands which normally drain to the ocean, to a hydraulic sink, or to another state within any of the following, and only the following, river systems:

(1) The Sacramento River System.

(2) The Mokelumne River System.

(3) The Calaveras River System.

(4) The San Joaquin River System.

(5) The Mono Lake System.

(6) The combined Truckee, Walker, and Carson River Systems.

(7) The combined river systems which drain to the ocean from and

including the Russian River System northward to the California-Oregon border.

(b) The confluences of the Sacramento, Mokelumne, Calaveras, and

San Joaquin River Systems are within the delta, as defined in Section

12220, and the delta shall be considered to be within each of these protected areas.

§1215.6. 'Water user or users' defined

For the purposes of this article, "water user or users"within a protected area means an appropriator or appropriators, a riparian user or users, or a groundwater user or users of water on land owned or controlled by them within a protected area.

§1216. Depriving protected area of adequate supplies of water prohibited

A protected area shall not be deprived directly or indirectly of the prior right to all the water reasonably required to adequately supply the beneficial needs of the protected area, or any of the inhabitants or property owners therein, by a water supplier exporting or intending to export water for use outside a protected area pursuant to applications to appropriate surface water filed, or groundwater appropriations initiated, after January 1, 1985, that are not subject to Section 11460.

§1217. Water user's right to purchase water from exporters

(a) In addition to the right to obtain a water right which would have priority over the rights of an exporter, water users in a protected area shall have the right to purchase, for adequate compensation, water made available by the construction of any works by a water supplier exporting or intending to export water for use outside the protected area. Nothing in this section shall be construed to authorize export of water from a protected area to which users within the protected area are otherwise entitled, nor to require users within a protected area to pay for water to which they are otherwise entitled.

(b) At the request of a water user or users within a protected area, a water supplier exporting or intending to export water for use outside the protected area who is subject to Section 1216 shall meet and negotiate in good faith for the purpose of entering into contracts for the purchase of water as provided in subdivision (a).

(c) Any water user or users in a protected area may bring an action in the superior court to require compliance with the duty to meet and negotiate in good faith pursuant to this section. The court may issue a temporary restraining order, preliminary injunction, or permanent injunction, as appropriate, to secure compliance with this section.

(d) The meetings and negotiations required by this section may occur between the water supplier exporting water for use outside a protected area and any water user or users in a protected area, as determined appropriate by the parties. The meetings and negotiations shall not be subject to the provisions of Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code or Chapter 9 (commencing with Section 54950) of Part 1 of Division 2 of Title 5 of the Government Code.

(e) Nothing in this section shall be construed as a limitation on the authority of the board to establish water quality standards or to subject water right entitlements to terms and conditions for the protection of reasonable and beneficial uses consistent with the provisions of Section 2 of Article X of the California Constitution.

§1218. Estimate of amount of water to be purchased

Upon the request of an applicant for a permit to appropriate water for use outside a protected area, a county of origin shall cooperate with the applicant in estimating the amount of water that may be purchased within the county pursuant to subdivision (a) of Section 1217 and that may be developed or used within the county impacting the proposed project, including an estimated time schedule. The purpose of this section is to assist the applicant in planning the export project and to assist the counties of origin in their water planning.

§1219. Mediation

A water supplier exporting or intending to export water outside a protected area, or a water user or users within a protected area, may declare that an impasse has been reached between the parties in negotiations over matters within the scope of negotiations specified in Section 1217 and may request the director to appoint a panel of five disinterested persons from whom the parties shall select, by a process of elimination,

the mediator. After drawing lots to determine the order, the parties shall each, in turn, eliminate a name from the panel until there is only one person remaining on the panel, who shall be the mediator. The mediator shall meet forthwith with the parties or their representatives, either jointly or separately, and shall take such other steps as the mediator may deem appropriate in order to persuade the parties to resolve their differences and effect a mutually acceptable agreement. The services of the mediator, including any per diem fees, and actual and necessary travel and subsistence expenses, shall be provided by the parties. Nothing in this section shall be construed to prevent the parties from mutually agreeing upon their own mediation procedure, and in the event of such agreement, the director shall not appoint a mediator.

§1219.5. Compensation of exporter of water

The provisions of this article shall not require any water supplier exporting or intending to export water for use outside a protected area to furnish to any water user or users in a protected area claiming rights under this article, without adequate compensation therefor, any water made available for domestic, municipal, industrial, or agricultural uses by the construction of any works by the water exporter.

§1220. Pumping groundwater from combined Sacramento and Delta Central Sierra Basins

(a) No groundwater shall be pumped for export from within the combined Sacramento and Delta-Central Sierra Basins, as defined in Department of Water Resources' Bulletin 160-74, unless the pumping is in compliance with a groundwater management plan that is adopted by ordinance pursuant to subdivision (b) by the county board of supervisors, in full consultation with affected water districts, and that is subsequently approved by a vote in the counties or portions of counties that overlie the groundwater basin, except that water that has seeped into the underground from any reservoir, afterbay, or other facility of an export project may be returned to the water supply of the export project. For the purposes of this section, the county board of supervisors may designate a county water agency to act on its behalf if the directors of the county water agency are publicly elected and the county water agency encompasses the entire county. The county board of supervisors may revoke that designation by resolution at any time.

(b) Notwithstanding any other provision of law, a county board of supervisors whose county contains part of the combined Sacramento and Delta-Central Sierra Basins may adopt groundwater management plans to implement the purposes of this section. (c) A county board of supervisors shall not exercise the powers authorized by this section within the boundaries of another local agency supplying water to that area without the prior agreement of the governing body of that other local agency.

§1221. Groundwater regulation

This article shall not be construed to authorize the board to regulate groundwater in any manner.

§1222. Watersheds

Nothing in this article shall be deemed to diminish the rights and protections to watersheds of origin contained in existing law including, but not limited to, Part 4.5 (commencing with Section 12200) of Division 6.

§1700. Change of purpose

Water appropriated under the Water Commission Act or this code for one specific purpose shall not be deemed to be appropriated for any other or different purpose, but the purpose of the use of such water may be changed as provided in this code.

§1701. Application for change

At any time after notice of an application is given, an applicant, permittee,-or licensee may change the point of diversion, place of use, or purpose of use from that specified in the application, permit, or license; but such change may be made only upon permission of the board.

§1702. Injury to legal user of water

Before permission to make such a change is granted the petitioner shall establish, to the satisfaction of the board, and it shall find, that the change will not operate to the injury of any legal user of the water involved.

§1703. Notice of proposed change

After filing a petition for permission to make a change, the petitioner, in case the board so requires, shall cause notice thereof to be given or published in the manner prescribed by the board. In all cases the petitioner shall notify the Department of Fish and Game in writing of the proposed change.

§1704. Protest; hearing

If at any time prior to the granting of permission to make such a change a protest is filed with the board against allowance of the proposed change the board shall fix a time and place for the hearing of the petition and of objections thereto.

§1704.1. Field investigations

The Division of Water Rights shall conduct a field investigation of all minor protested petitions for change. The board shall notify the parties of the field investigation not less than 20 days prior to conducting the field investigation, to enable the parties to attend and present information to the board.

§1704.2. Right to request information in support of positions

The Division of Water Rights may request the parties to submit information in support of their positions. The Division of Water Rights may request information before, during, or after the field investigation. After the field investigation, the Division of Water Rights may conduct additional proceedings in accordance with Article 10 (commencing with Section 11445.10) of Chapter 4.5 of Part 1 of Division 3 of Title 2 of the Government Code.

§1704.3. Order acting on minor petition for change

Based upon the field investigation and any other information obtained under this chapter, the Division of Water Rights shall issue an order acting on the minor petition for change unless the board in its discretion

determines that additional proceedings should be conducted under Section 183. An order of the Division of Water Rights is subject to review as provided in Chapter 4 (commencing with Section 1120) of Part 1.

§1704.4. *Minor petition for change*

For purposes of this chapter, a minor petition for change shall mean any petition which does not involve direct diversions in excess of three cubic-feet per second or storage in excess of 200 acre-feet per year.

§1705. Action by board

After the hearing the board shall grant or refuse, as the facts warrant, permission to change the point of diversion, place of use, or purpose of use.

§1706. Persons entitled to make change

The person entitled to the use of water by virtue of an appropriation other than under the Water Commission Act or this code may change the point of diversion, place of use, or purpose of use if others are not injured by such change, and may extend the ditch, flume, pipe, or aqueduct by which the diversion is made to places beyond that where the first use was made.

§1707. Changes for purpose of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in or on water

(a) Any person entitled to the use of water, whether based upon an appropriative, riparian, or other right, may petition the board pursuant to this chapter, Chapter 6.6 (commencing with Section 1435) or Chapter 10.5 (commencing with Section 1725) for a change for purposes of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, or on, the water.

(b) The board may approve the petition filed pursuant to subdivision (a), subject to any terms and conditions which, in the board's judgment, will best develop, conserve, and utilize, in the public interest, the water proposed to be used as part of the change, whether or not the proposed use involves a diversion of water, if the board determines that the proposed change meets all of the following requirements: (1) Will not increase the amount of water the person is entitled to use. (2) Will not unreasonably affect any legal user of water. (3) Otherwise meets the requirements of this division.

§1725. Changes permitted

A permittee or licensee may temporarily change the point of diversion, place of use, or purpose of use due to a transfer or exchange of water or water rights 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. For purposes of this article, "consumptively used"means 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.

§1726. Notice

The permittee or licensee shall notify in writing the board and the Department of Fish and Game of a proposed temporary change. The notice shall contain information indicating the amount of water consumptively used by the permittee or licensee, the amount of water proposed for transfer, the parties involved in the transfer, and any other information the board by rule may prescribe.

§1727. Evaluation

(a) Upon receipt by the board of notification of a proposed temporary change, the board shall make an evaluation sufficient to determine both of the following: (1) The proposed temporary change would not injure any legal user of the water, during any potential hydrologic condition, through resulting significant changes in water quantity, water quality, timing of diversion or use, consumptive use of the water, reduction in return flows, or reduction in the availability of water within the watershed of the transferor. (2) The proposed temporary change would not unreasonably affect fish, wildlife, or other instream beneficial uses.

(b) Upon completion of the evaluation under subdivision (a), and finding that no injury or unreasonable effect would result, the board shall so notify the permittee or licensee, and those legal users of water identified pursuant to subdivision (a), of its finding and the order approving the temporary change by personal delivery or registered mail. The temporary change shall be effective five days after the order becomes effective.

(c) If the board cannot satisfy the requirements under subdivision(a) within 60 days following receipt of notification of a proposed temporary change or within any extension of that period approved by the permittee or licensee, or cannot make the finding under subdivision (b), it shall so notify the permittee or licensee and those legal users of water identified pursuant to subdivision (a), by personal delivery or registered mail, and shall fix a time and place for a hearing on the issues set forth in subdivi-sion (a).

§1728. Temporary change defined

For the purposes of this article, a temporary change means any change of point of diversion, place of use, or purpose of use involving a transfer or exchange of water or water rights for a period of one year or less.

§1729. Exemption

A proposed temporary change under this article shall be exempt from the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code.

§1731. Reversion of rights

Following the expiration of the temporary change period, all rights shall automatically revert to the original holder of the right without any action by the board.

§1732. Diligence in petitioning for changes

The board shall not approve a temporary change if the board, in its judgment, concludes, if applicable, that the petitioner has not exercised due diligence in petitioning for a change pursuant to provisions of this division other than this article.

§1735. Petition for long term changes

The board may consider a petition for a long-term transfer of water or water rights involving a change of point of diversion, place of use, or purpose of use. A long-term transfer shall be for any period in excess of one year.

§1736. Approval of petitions

The board, after providing notice and opportunity for a hearing, including, but not limited to, written notice to, and an opportunity for review and recommendation by, the Department of Fish and Game, may approve such a petition for a long-term transfer where the change would not result in substantial injury to any legal user of water and would not unreasonably affect fish, wildlife, or other instream beneficial uses.

§1737. Reversion of rights

Following the expiration of the long-term transfer period, all rights shall automatically revert to the original holders of the right without any action by the board.

§1740. Rights determined under court decrees

Any water right determined under a court decree issued pursuant to Chapter 3 (commencing with Section 2500) of Part 3, after January 1, 1981, shall be transferable pursuant to this chapter and Chapter 10 (commencing with Section 1700). The court having the appropriate jurisdiction over the decreed rights may enter a supplemental decree modifying any rights involved upon motion of the board or any party with a vested water right.

§1745. Definitions

As used in this article, the following terms have the following meanings:

(a) "Person" includes a public agency.

(b) "Water supplier" means a local public agency or private company supplying or storing water, or a mutual water company.

§1745.02. Reduction or elimination of use of water

A water supplier may, for a consideration to be specified in the contract, contract with persons entitled to service within the supplier's service area to reduce or eliminate for a specified period of time their use of water supplied by the water supplier.

(c) Any person or public agency that has a water service contract with or the right to receive water from the owner of the conveyance facility who has an emergency need may utilize the unused capacity that was made available pursuant to this section for the duration of the emergency.

(d) This use of a water conveyance facility is to be made without injuring any legal user of water and without unreasonably affecting fish, wildlife, or other instream beneficial uses and without unreasonably affecting the overall economy or the environment of the county from which the water is being transferred.

§1811. Definitions

As used in this article, the following terms shall have the following meanings:

(a) "Bona fide transferor" means a person or public agency as defined in Section 20009 of the Government Code with a contract for sale of water which may be conditioned upon the acquisition of conveyance facility capacity to convey the water that is the subject of the contract.

(b) "Emergency" means a sudden occurrence such as a storm, flood, fire, or an unexpected equipment outage impairing the ability of a person or public agency to make water deliveries.

(c) "Fair compensation" means the reasonable charges incurred by the owner of the conveyance system, including capital, operation, maintenance, and replacement costs, increased costs from any necessitated purchase of supplemental power, and including reasonable credit for any offsetting benefits for the use of the conveyance system.

(d) "Replacement costs" mean the reasonable portion of costs associated with material acquisition for the correction of unrepairable wear or other deterioration of conveyance facility parts which have an anticipated life which is less than the conveyance facility repayment period and which costs are attributable to the proposed use.

(e) "Unused capacity" means space that is available within the operational limits of the conveyance system and which the owner is not using during the period for which the transfer is proposed and which space is sufficient to convey the quantity of water proposed to be transferred.

§1812. Determination of amount and availability of unused capacity

The state, regional, or local public agency owning the water conveyance facility shall in a timely manner determine the following:

(a) The amount and availability of unused capacity.

(b) The terms and conditions, including operation and maintenance requirements and scheduling, quality requirements, term or use, priorities, and fair compensation.

§1812.5. Transfer of conserved water using war conveyance facilities of Metropolitan Water District of Southern California

(a) The Legislature finds and declares all of the following:

(1) This section is an extraordinary measure being taken only because the proposed transfer of conserved water from the Imperial Irrigation District to the San Diego County Water Authority is a matter of statewide interest in that it addresses a significant need for water in the southern-state through the conservation of water now being consumed there. The Legislature further finds and declares that this section is not to be regarded as setting a precedent for any other legislative action.

(2) California's use of Colorado River water is limited to its basic annual apportionment of 4.4 million acre-feet, plus one-half of any excess or surplus water from the Colorado River. However, California continues to use up to 5.3 million acre-feet by relying on surpluses and apportioned, but unused water within the Colorado River Basin, which is not a reliable water supply. The Secretary of the Interior has strongly urged California to develop a plan to enable it to live within its basic apportionment of 4.4 million acre-feet from the Colorado River.

(3) It is of vital state interest that every effort be made to ensure that the Colorado River Aqueduct continues to operate at its full capacity at fair and reasonable terms in order to minimize statewide disruptions from diminishing Colorado River supplies.

(4) Negotiations assisted by the director are underway in 1997 between the Metropolitan Water District of Southern California and the San Diego County Water Authority for the development of a long-term wheeling agreement whereby the San Diego County Water Authority would use the Colorado River Aqueduct to wheel conserved water from the Imperial Irrigation District.

(b) The director shall assist the Colorado River Board and the six California water agencies that derive water from the Colorado River in developing a plan to ensure that California can live within its entitlement of 4.4 million acre-feet of water annually and to ensure that the needs of southern California for Colorado River water are met.

(c) (1) Notwithstanding any other provision of law, with regard to the proposed transfer of conserved water from the Imperial Irrigation District to the San Diego County Water Authority, using the Metropolitan Water District of Southern California's water conveyance facilities, including the Colorado River Aqueduct, if the San Diego County Water Authority and the Metropolitan Water District of Southern California have not reached an agreement in principle on the terms and conditions of the transfer of conserved water using the Metropolitan Water District of Southern California's water conveyance facilities on or before August 15, 1997, the director shall issue a formal recommendation within 30 days from that date, with regard to the appropriate terms and conditions of the transfer.

(2) The director, in issuing a recommendation regarding appropriate terms and conditions of the transfer, shall make those determinations prescribed by Section 1812.

(3) If the director's recommendations prescribed by Section 1812 are unacceptable to either the San Diego County Water Authority or the Metropolitan Water District of Southern California, that party may request a formal mediation process. If both parties agree to participate in the formal mediation process, the parties shall commence mediation within one month after the mediation request is made. If the parties cannot agree on a mediator, the director shall appoint a mediator or the director may serve as mediator. The San Diego County Water Authority and the Metropolitan Water District of Southern California shall reimburse the state for any General Fund money used in mediation entered into pursuant to this paragraph.

(d) No action taken pursuant to this section shall injure any legal user of water, and there shall be no shifting of costs for actions taken pursuant to this section to water users in any county in the State of California.

(e) This section shall remain in effect only until January 1, 1999, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 1999, deletes or extends that date.

§1813. Findings by public agency

In making the determinations required by this article, the respective public agency shall act in a reasonable manner consistent with the requirements of law to facilitate the voluntary sale, lease, or exchange of water and shall support its determinations by written findings. In any judicial action challenging any determination made under this article the court shall consider all relevant evidence, and the court shall give due consideration to the purposes and policies of this article. In any such case the court shall sustain the determination of the public agency if it finds that the determination is supported by substantial evidence.

§1814. Application of article

This article shall apply to only 70 percent of the unused capacity.

11460. Prior right to watershed

In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein.

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