SEARCHING FOR THE ZONE OF REASONABLENESS

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INTRODUCTION

In the fall of 1992, President George Bush signed into law the Central Valley Project Improvement Act (CVPIA).[1] For the first time in the fifty-five year history of the Central Valley Project (CVP), environmental water uses were equal with agricultural and municipal uses.[2] To guarantee water for fish and wildlife, the CVPIA allocated 800,000 acre-feet of water annually to the environment. On November 20, 1997, the Bureau of Reclamation (Bureau) issued a final draft of its Administrative Proposal (Proposal) concerning management of the 800,000 acre-feet of water.[3] This article examines the Proposal and concludes that it is a reasonable exercise of administrative discretion.

I. POINTS OF CONTROVERSY

The two principal groups interested in the water allocation issues are the water contractors and the environmental groups. The water contractors are agricultural water districts and municipal water districts. These organizations have long-term contracts with the Bureau

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The author realizes this article addresses controversial issues in the agricultural and environmental arena. Therefore, any responses are encouraged and welcome. *San Joaquin Agricultural Law Review* fosters the publication of all positions on controversial topics. Submissions may be sent to San Joaquin College of Law, 901 5th Street, Clovis, California 93612-1312, attention: Executive Editor.

[1] The Central Valley Project Improvement Act, PUB. L. No. 102-575, § 3401, 106 Stat. 4706, 4600-4769 (1992).

[2] For an overview and general analysis of the Act, *see* Douglas E. Noll, *Analysis of Central Valley Project Improvement Act*, 3 SAN JOAQUIN AGRIC. L. REV. 3-34, (1993).

[3] The full text of the draft Proposal is downloadable from the Internet: <http://www.mp.usbr.gov/pub/800k1120.exe>. The Bureau of Reclamation CVPIA website is: <http://www.mp.usbr.gov/cvpia.html>.

for project water. They have been represented in discussions by organizations such as the San Joaquin River Coalition, the Friant Water Users Authority, and the Kings County Farm Bureau.[4] The environmental groups have been represented in discussion groups by the Natural Resources Defense Council in San Francisco and Save San Francisco Bay.[5] The interests of the water contractors and the environmentalists have been divergent. Understanding their positions is useful in analyzing the Proposal.

Water contractors see the 800,000 acre-foot allocation as a direct loss of water otherwise available for agricultural use.[6] The water contractors balance the benefits of agricultural production against less tangible environmental benefits. This is expressed in the "No water, no jobs" slogan or the "Water = Food and Fiber" bumper stickers frequently seen in the central San Joaquin Valley.[7]

Challenges to this mind-set have been unsettling to many growers. Water contractors do not see themselves as arrogant, but as solid, law-abiding citizens, who want to be left alone by the government.

On the other side, environmental interests view implementation as a sorely needed remedy for sixty years of environmental neglect and abuse over a huge geographic area. The water contractors hotly dispute that water development has led to environmental degradation. They point to the wetlands created by rice farms, the air-cleansing effect of tens of thousands of trees, and the open spaces created by agriculture as benefitting the environment.[8]

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[4] *See* CVPIA website, *supra* note 3 (listing team members on the 800,000 Acre-Feet of Project Water).

[5] *Id.*

[6] *See, e.g.*, JENNIFER LOMBARDI, WATER POLICY IN TRANSITION: A STRUGGLE OF INTERESTS, FARM WATER REPORT (Jan./Feb. 1995) "The Central Valley Project Improvement Act of 1992 marked a fiery policy battle. A total of 800,000 acre-feet of water was reallocated for habitat conservation. It limited further the number of fish taken or killed at the federal pumps, and made out-of-basin transfers legal. For the first time since the project's christening, fish took precedence over people."

[7] The California Farm Water Coalition, a non-profit agricultural educational and awareness organization based in Sacramento, California, sponsors its Farm Water "Works!" public outreach program. Large banners and bumper stickers are co-sponsored by the Coalition and other organizations. These banners are posted along major highways to educate the public about farm water issues. The Coalition website is http: <\\www.cfwc.com>.

[8] CALIFORNIA FARM WATER COALITION, WATER FACT BOOK [hereinafter FACT BOOK].

Environmentalists understand the economic implications to agriculture, but contend that a balance must be struck between environmental exploitation and protection.

Water contractors exercise substantial influence in local and state politics and administration. They exercise substantially less influence in federal politics and administration.[9] Congress no longer favors big projects favoring local interests with minimal payback to a substantial federal deficit. Additionally, the western water projects have always been disfavored by midwestern and eastern representatives and senators.[10] Finally, the California Congressional delegation does not speak with one voice on water and environmental issues.[11]

Public perception has changed as well. Environmentalists' fight against the New Melones Dam and the Peripheral Canal in the late 1970's awakened the public to the nature of big water projects.[12] Environmental disasters like the Kesterson National Wildlife Refuge selenium poisoning demonstrated weaknesses in the water projects.[13] Projects proposed by water contractors were defeated in Congress.[14]

Critics of farm water policy point out that violations of acreage limitations under the Reclamation Act have reduced water contractor credibility.[15] As a result, western water contractors are viewed by some as beneficiaries of governmental corporate welfare.[16] On the other hand, the economic output of Central Valley agriculture is prodigious. The water contractors point out that farm subsidies consist of less than

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[9] Michael Doyle, *Tony Coelho's Departure Signals New Times In Water Politics*, CALIF. JOUR., Aug. 1990, at 5-7.

[10] GENE ROSE, SAN JOAQUIN—A RIVER BETRAYED 126 (1992) [hereinafter ROSE]; NORRIS HUNDLEY, JR., THE GREAT THIRST 265 (1992) [hereinafter HUNDLEY].

[11] George Miller, D-Martinez, is an opponent of the water projects and was the principal sponsor of the CVPIA. Other Central Valley Congressional representatives strongly favor water interests. In 1995, Congressmen Doolittle, Fazio, Pombo, Radanovich, Thomas, Dooley and Condit introduced H.R. 1906 (which became H.R. 2738). This bill was drafted by the Central Valley Project Water Association and would have eviscerated the CVPIA. The bill was withdrawn pending completion of the Bureau's administrative proposals.

[12] ROSE, *supra* note 10, at 129; HUNDLEY, *supra* note 10, at 309-30.

[13] ROSE, *supra* note 10, at 124-26.

[14] ROSE, *supra* note 10, at 129. In 1986, Richard Lehman, D-Fresno, successfully opposed construction of the Rodgers Crossing Dam, promoted by the Kings River Water Association and Kings River Conservation District. The dam would have flooded the upper Kings River Canyon to a point just below the Kings Canyon National Park.

[15] ROSE, *supra* note 10, at 127-29; HUNDLEY, *supra* note 10, at 314-15. Marc Reisner, *Farmers vs. Cities*, CALIF. JOUR., May 1995, at 2.

[16] ROSE, *supra* note 10, at 127; HUNDLEY, *supra* note 10, at 271-72.

one percent of total farm income.[17] Total farm output exceeds $20 billion, annually. While water contractors acknowledge that water projects have been somewhat subsidized, they argue that the subsidies have been for the general good of the public, much like highways or airports.[18]

The Bureau consequently faces the thorny problem of how to allocate and manage 800,000 acre-feet of CVP water in the least disruptive way possible.

II. B2 WATER

This section examines the statutory definitions and requirements underlying the 800,000 acre-foot water allocation.

The CVPIA defines three categories of project water available for fish and wildlife restoration. Section 3406(b)(1) states:

> As needed to achieve the goals of this program, the Secretary is authorized and directed to modify CVP operations to provide flows of suitable quality, quantity, and timing to protect all life stages of anadromous fish, except that such flows shall be provided from the quantity of water dedicated to fish, wildlife, and habitat restoration purposes under paragraph (2) of this subsection; from the water supplies acquired pursuant to paragraph (3) of this subsection and from other sources which do not conflict with the fulfillment of the Secretary's remaining contractual obligations to provide CVP water for other authorized purposes.

The Bureau considers this B1 water to be water available from increased operational efficiencies. It is referred to as "reoperational water." The primary sources of B1 water are from modifications to project operations, the 800,000 acre-foot allocation (B2 water, described next), and purchased water (B3 water, described following).

Section 3406(b)(2) provides the actual allocation of 800,000 acre-feet, stating:

> [U]pon enactment of this title dedicate and manage annually 800,000 acre-feet of Central Valley Project yield for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes and measures authorized by this title; to assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento San Joaquin Delta Estuary; and to help to meet such obligations as may be legally imposed upon the Central Valley Project under state or federal law following the date of enactment of this title, including but not limited to additional obligations under the federal Endangered Species Act.

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[17] FACT BOOK, *supra* note 8.

[18] *Id.*

This section requires the Secretary of the Interior to dedicate 800,000 acre-feet of water annually for three purposes. First, the water is to be used for fish, wildlife, and habitat restoration purposes and for measures specifically described in the statute. Second, the water is to be used for San Francisco Bay and Sacramento-San Joaquin Delta water quality attainment. Finally, the water may help meet other statutory obligations, such as those imposed by the Endangered Species Act (ESA). The statute defines the 800,000 acre-feet in terms of CVP *yield.* This concept will be discussed later.[19]

Section 3406(b)(3) is the last category of CVPIA water. The subsection states:

> [The Secretary shall] develop and implement a program in coordination and in conformance with the plan required under paragraph (1) of this subsection for the acquisition of a water supply to supplement the quantity of water dedicated to fish and wildlife purposes under paragraph (2) of this subsection and to fulfill the Secretary's obligations under paragraph 3406(d)(2) of this title. The program should identify how the Secretary intends to utilize, in particular the following options: improvements in or modifications of the operations of the project; water banking; conservation; transfers; conjunctive use; and temporary and permanent land fallowing, including purchase, lease, and option of water, water rights, and associated agricultural land.

This section requires the government to acquire water in addition to the 800,000 acre-feet allocation. The water can be acquired through improved operational efficiency, water conservation, water transfers, water banking,[20] conjunctive use,[21] and land fallowing.[22]

III. Sources Of B2 Water

Generally, B2 water will come from the Sacramento River drainage, the Trinity River, and the San Joaquin River below the Mendota Pool. The upper San Joaquin River is specifically excluded from contributing to the 800,000 acre-foot allocation. Water contractors taking water

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[19] *See* discussion *infra* Part IV.

[20] Water banking is storing surplus water in a wet year for use in a dry year.

[21] Conjunctive use is using water to meet two or more purposes at once. For example, water flowing down the Sacramento River for ultimate use in the Westlands Water District also provides instream flows for fish habitat. This is a conjunctive use. The major problem with conjunctive use is that the needs of the fish and wildlife for water are high when the needs of agriculture are low and vice versa.

[22] Land fallowing is nothing more than taking land out of agricultural production and allocating the water to other uses. As water prices increase and specific crop subsidies are eliminated by Congress, economic forces will force economically marginal crops, such as upland cotton, out of production.

from Friant Dam, in the foothills northeast of Fresno, California, do not contribute water to the 800,000 acre-foot allocation.

The Friant Unit of the CVP diverts Upper San Joaquin River water into the Madera Canal for east side Madera County and into the Friant-Kern Canal. The Friant-Kern Canal runs down the east side of the San Joaquin Valley. The canal supplies water to farms in Fresno, Tulare, and Kern counties. The Upper San Joaquin River water is therefore diverted far from its original watershed and is not available for discharge into the Delta.

When Friant Dam was completed in 1947, a major lawsuit was filed by Everett G. Rank, a downstream riparian landowner, challenging the ability of the Bureau to divert water from the upper San Joaquin River without a permit from the state.[23] Ultimately, Rank lost. The coalition of the Bureau and its clients, the water contractors, were able to divert water out of the San Joaquin River over the objections of downstream private landowners, the California Department of Fish & Game, and the United States Fish & Wildlife Service.[24] The effect was to dry out the river for fifty miles and destroy a major salmon and steelhead fishery. In addition, the flows from the upper San Joaquin River were no longer available to maintain Bay-Delta water quality.

Since that time, the Friant Water Users Authority[25] has adamantly opposed any suggestion that the dry section of the San Joaquin River between Gravelly Ford and the Mendota Pool be re-watered to restore salmon and steelhead runs. Originally, the CVPIA required river restoration in the San Joaquin River above the Mendota Pool. The Friant users were able to insert a provision in the CVPIA that consigned the idea to a feasibility study concerning restoration of salmon and steelhead migrations in the San Joaquin.[26] No water may be returned to the river channel without an act of Congress.[27] The trade off was money; the Friant users have to pay a special surcharge on every acre-foot of

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[23] Dugan v. Rank, 372 U.S. 609 (1963).

[24] ROSE, *supra* note 10, at 101-05.

[25] The Friant Water Users Authority is composed of water districts and water contractors using water from either the Friant-Kern Canal or the Madera Canal.

[26] [The Secretary of the Interior shall] develop within three years of enactment and implement a program which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable . . . [p]rovided, [t]hat this goal shall not apply to the San Joaquin River between Friant Dam and the Mendota Pool . . . . CVPIA, PUB. L. NO. 102-575, § 3406(b)(1), 106 Stat. 4706 (1992).

[27] CVPIA, PUB. L. NO. 102-575, § 3406(c), 106 Stat. 4706 (1992).

water taken from Friant Dam.[28] This money is paid into the Restoration Fund[29] to be used for fish and wildlife restoration and enhancement measures. Even today, the Friant users are fighting to avoid this surcharge.[30]

Because the Friant users are treated differently, potentially significant conflicts may arise between the segments of the water contractors.[31] Downstream contractors are required to put water into the San Joaquin River as part of the 800,000 acre-foot allocation. In addition, westside water contractors who receive Sacramento River water from

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[28] CVPIA, PUB. L. No. 102-575, § 3406(c), 106 Stat. 4706 (1992) (providing for payments of $5 per acre-foot between September 30, 1997 and September 30, 1999, and $7 per acre-foot thereafter).

[29] CVPIA, PUB. L. No. 102-575, § 3406(c), 106 Stat. 4706 (1992).

[30] A Congressional hearing on the effects of the CVPIA was held in Fresno, California on April 16, 1998. As reported by the Fresno Bee, Fresno, California, the House Subcommittee on Water and Power took testimony from Richard Moss, general manager of the Friant Water Users Authority. Mr. Moss, testifying about the CVPIA pricing, stated "It's cheaper for farmers to pump ground water than to buy the [flood] water."

[31] Minutes of CVPIA Monthly Public Forum 13 (Feb. 28, 1996) (on file with the *San Joaquin Agricultural Law Review*). The following illustrates the point:

> Q (Hoffer) Last time I attended one of these forums, I raised the question whether the San Joaquin drainage should be included in the forum process, I have been told that the quality of the water in the San Joaquin River is not relevant. And I would just like to bring up the fact that Mr. Garamendi and some of the Bureau people here have said they are not responsible for fish in the San Joaquin River. And I think I heard that correctly. I could not believe this, because the San Joaquin River ends in the Delta. I do not know where the San Joaquin River fish requirements start and where they end. If they are not required anywhere in the San Joaquin River, then why are we required to dump water for fish in the Stanislaus River at Vernalis. I know this is a loaded question, but by God, if you guys are gonna create these things for us, by God, I am going to ask them, and I am going to find out what the answers are.
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> A (Patterson) Our position is that we are not authorized to take water from the Friant Division and put it down the San Joaquin River. We have certain responsibilities in the San Joaquin that we intend to meet. We have certain requirements under the Bay-Delta standards. And we intend to work as part of Dale Brogan's group on habitat improvements other than taking water from the Friant Division to improve the situation for fishery. We are committed to that. We are going to do that.
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> Q (Hoffer) What gave you the authority to take it out of the Stanislaus, and out of New Melones?
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> A (Patterson) The law specifically says that we cannot take water from the Friant Division to the San Joaquin River absent Congress authorizing us to do that.

the Delta are profoundly affected by allocation of B2 water. If water flowing down the San Joaquin River were available to westside contractors, they could import less Delta. On the other hand, Friant users do not contribute any water and the water is diverted up to 140 miles south, well outside the San Joaquin River watershed.

The other dysfunction involves non-CVP projects. Major tributaries of the San Joaquin River are dammed, but do not contribute to downstream flow. These are the California State Water Project dams at Don Pedro reservoir on the Tuolumne River, Lake McClure on the Merced River, and Commanche Reservoir on the Mokelumne River. The 800,000 acre-foot allocation will not come from these units, despite being within the watershed.

Finally, the Kings River Water Association and Kings River Conservation District control the Army Corps of Engineers dam at Pine Flat Reservoir on the Kings River. The Pine Flat project was originally intended to be a CVP project. However, in the late 1940's Kings River interests maneuvered in Congress to avoid inclusion in the Reclamation Act acreage limitations.[32] The dam was built and today is operated by the Corps of Engineers rather than the Bureau. Water rights are administered by the Kings River Conservation District and the Kings River Water Association. In wet years, the Kings River would overflow into the San Joaquin as well as head south to the Tulare Lake Basin. Salmon used to run sporadically up the Kings River from its confluence with the San Joaquin River. However, none of 1.2 million acre-feet of water available from the Kings River in a normal year shares the burden of the 800,000 acre-feet CVPIA allocation.

IV. YIELD

Section 3406(b)(2) allocates 800,000 acre-feet of the CVP yield to environmental purposes. The section defines *yield* as follows:

> For the purpose of this section, the term "Central Valley Project yield" means the delivery capability of the Central Valley Project during the 1928-1934 drought period after fishery, water quality, and under applicable State or Federal law existing at the time of enactment of this title have been met.

Yield is a term of art describing the amount of reliable water availa-

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[32] *See* Turner v. Kings River Conservation District, 360 F.2d 184, 195-96 (9th Cir. 1966) (describing how both the Corps of Engineers and the Bureau of Reclamation recommended to Congress that "local interests" be allowed to control the Kings River irrigation water).

ble for delivery.[33] It comes from the original planning of the CVP. The Bureau decided that water deliveries from Shasta Dam would be very reliable. To assure reliability, Bureau planners started with the worst drought in recorded California history, the 1928-1934 drought. They assumed it was all the water available. From this minimum assumed water, other obligations were deducted. The obligations included minimum fishery flow requirements downstream of Shasta Dam, minimum flow requirements at Wilkens Slough for navigation, water requirements of senior water rights holders in the Sacramento River Basin and salinity control in the San Francisco Bay Delta. What remained was available for water contractors.

Thus, the 800,000 acre-foot allocation is made from the water that would have been available during the 1928-1934 drought after other fishery, water quality and other flow and operational commitments in existence in October 1992, were fulfilled. The meaning of "other flow and operational requirements imposed by terms and conditions existing in licenses, permits, and other agreements pertaining to the Central Valley Project" is unclear. One report, produced by a private consultant retained by water contractors,[34] assumed the following:

- State Water Resources Control Board water rights decision 893, which imposes minimum flows on the American River below Nimbus Dam east of Sacramento.
- An agreement between the Bureau of Reclamation and the California Department of Fish & Game regarding minimum flows below Keswich Dam.
- The Whiskeytown Dam minimum flow requirements.
- Annual fishery releases below Lewiston Dam on the Trinity River of 340,00 acre-feet.
- State Water Resources Control Board water rights decision 1485, imposing San Francisco Bay Delta water quality standards on the CVP and the State Water Project.
- An estimate of the inflow into the Delta from the San Joaquin River measured at Vernalis.
- State Water Resources Control Board 1991 decision imposing temperature control requirements on the upper Sacramento River.

The statute does not define the specific obligations. Since the Bureau rejects an accounting methodology for dealing with the B2 water, its Proposal does not discuss this issue. The water contractors will most

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[33] *See* S. REP. NO. 99-265, at 5 (1986), *reprinted in* 1986 U.S.C.C.A.N. 5096, 5097.

[34] SURFACE WATERS RESOURCES, INC., CVP YIELD CALCULATION (1997).

certainly challenge the Bureau on this issue.[35]

V. THE BUREAU OF RECLAMATION'S APPROACH TO THE ISSUES

This section describes the philosophy of the Bureau toward use of the B2 water, the management principles used to implement the philosophy, and the Proposal[36] derived from the philosophy and management principles.

The Bureau's basic philosophy toward management of B2 water is stated in three premises.[37] First, the CVP should be operated, if possible, to provide water flows for fish and wildlife restoration at minimum or no expected impact to the water contractors.[38] Second, B2 water should support the Anadromous Fish Restoration Program mandated by the CVPIA.[39] Finally, the Bureau should acquire B3 water when fish and wildlife needs cannot be met through water available by reoperation (B1 water) or B2 water.[40]

This philosophy will be implemented through seven management principles.[41] The first principle is that B2 water will be available every year, dry or wet. Since the CVPIA mandates this, the Bureau sees availability of B2 water to protect fish and wildlife as a first principle.

The second principle states that the federal share of the Bay Delta Accord (Accord)[42] water will be counted against the B2 allocation. Under the Accord, the CVP contributes approximately 280,000 acre-feet of Sacramento River water for discharge into San Francisco Bay through the Sacramento-San Joaquin River delta and estuary system.

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[35] San Luis & Delta Mendota v. United States, No. CV-F-97-6140 OWW DLB (E.D. Cal. filed Nov. 21, 1997) (contending that the Bureau's Administrative Plan uses more than 800,000 acre-feet of Central Valley Project yield).

[36] CENTRAL VALLEY PROJECT IMPROVEMENT ACT § 3406(b)(2) (Bureau of Reclamation, Mid-Pacific Region, Administrative Proposal-Management Water (800,000 Acre-Feet) Draft 1997) [hereinafter Proposal].

[37] Wayne White, Presentation at CVPIA Monthly Public Forum 2-3 (Feb. 28, 1996) (minutes of the CVPIA Monthly Public Forum on file with the *San Joaquin Agricultural Law Review*).

[38] *Id.*

[39] *Id.*

[40] *Id.*

[41] Frank Dimick, Presentation at the CVPIA Monthly Public Forum 3-4 (Feb. 28, 1996) (minutes of the CVPIA Monthly Public Forum on file with the *San Joaquin Agricultural Law Review*).

[42] *See* Karen L. Mathes, Comment, *Section 303 of the Clean Water Act -Will It Hold Water in the Delta?*, 4 SAN JOAQUIN AGRIC. L. REV. 51, (1994) (discussing the issues of the Principles of Agreement on the Bay-Delta Standards, December 15, 1994).

The Accord was reached after years of litigation, both administrative and judicial.

The third principle is that streamflow targets and operational modifications will vary with different water conditions. In dry years, the B2 water will help the fish survive. In wet years, the B2 water will help the fish flourish.

The fourth principle is that statutory fish and wildlife goals should be met through reoperation of the CVP without affecting users and use of B2 water and acquired water (B3 water).

The fifth principle is that the Bureau will not use the 800,000 acre-feet B2 water if statutory goals can be met without it (e.g., because in a wet year more water is available). The Bureau does not intend to discharge B2 water into the Delta simply because it has the water available.

The sixth principle is that acquired water (B3 water) will be used to supplement reoperation of the system and the use of B2 water. B3 water is water acquired voluntarily by the Bureau from willing sellers. The Bureau does not intend to force any sales of water.

The seventh principle is if statutory fish and wildlife purposes can be met through a combination of B1 water and B2 water so that the project effect equals or is less than an equivalent of 800,000 acre-feet, the requirements of B1 and B2 will be deemed to have been met. In other words, if the needs of fish and wildlife are being met by other means, water deliveries will not be reduced by 800,000 acre-feet.

The Proposal discusses eight major issues raised by interested groups. Each issue is identified in the Proposal, followed by the Bureau's decision.

The first and most important issue concerns dedicating and managing the B2 water. The water contractors have expressed a need to know how much water they will receive annually. In addition, they have expressed a need to understand clearly how the B2 water will be managed. These needs have resulted in a focus on accounting for the water. In public meetings, the water contractors have raised numerous accounting questions.[43] How is B2 water to be accounted for? Is the B2 water in addition to the ESA water required for minimum flows to protect salmon? Is the B2 water in addition to water storage requirements in Shasta reservoir for temperature control? What is the cumulative impact of CVPIA, ESA, Fish & Wildlife requirements on water deliveries to contractors? Will the Bureau analyze and evaluate biolog-

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[43] *See* Minutes of CVPIA Monthly Public Forum 4-8 (Feb. 28, 1996) (on file with the *San Joaquin Agricultural Law Review*).

ical, hydrologic, operational and economic implications of B2 water? How is the B2 water to be allocated among various units? What happens in dry and critically dry years? From the water contractors' perspective, B2 water is another "taking" that reduces their water. Therefore, they wish to know how devastating the "taking" will be.

The water contractors will be disappointed by the Proposal. Other than some hypothetical modeling, the Proposal is silent on how the allocation and use of B2 water will affect water deliveries.

The Proposal rejects accounting for B2 water, declaring that the effect on water deliveries is neither the goal nor the measure of the B2 water.[44] The Proposal states:

> Interior continues to believe that a significant part of the disagreement over the (b)(2) provision is caused by separating the (b)(2) "measurement" issue (an aspect of dedication) from the (b)(2) "actions" issue (how the water is managed to accomplish the purposes of the Act). Interior believes that (b)(2) water measurement definitions cannot take place in a vacuum isolated from the process of defining the actual environmental restoration actions that will be accomplished through the use of (b)(2) water. Interior also believes that much of the controversy over the (b)(2) water arises from concern over the potential impact of a method of dedication that is based on a given "accounting" system. Stakeholders have also expressed a desire for certainty, and a desire to clearly understand how the water will be managed and what the impact will be to other uses.[45]

The Bureau therefore recognizes the "accounting" argument as an expression of the need for certainty. To meet this need, the Bureau modeled the expected effects of the environmental measures on water deliveries for various hydrologic conditions. The models predict that the effect of the environmental measures on water deliveries will naturally vary with the hydrologic year.[46] The Bureau's proposal therefore specifically avoids the accounting issue.

The Proposal does not specify how much water will be allocated from where or when. The Proposal simply states that it will use an adaptive management approach, declaring that an accounting approach is inappropriate.

Adaptive management is a relatively new concept in natural resource management. The concept arises from the inherent scientific

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[44] Proposal, *supra* note 36, at 5.

[45] Proposal, *supra* note 36, at 4.

[46] The model results are Appendix B of the Proposal. The model applied the environmental measures to historical year types. The decrease in water delivered to water contractors ranged from 148,000 acre-feet in wet years to 1,138,000 acre-feet in dry, but not critically dry, years.

uncertainty in natural resource management.[47] Science recognizes that the complexity of an ecosystem does not allow for reduction to rules and principles that order its management.[48] Therefore, a more flexible approach to natural resource management has evolved. As applied to instream flows, adaptive management works as follows. First, conservative (i.e., protective) standards should be set based on whatever information is available, but with explicit recognition of their deficiencies.[49] Second, a monitoring program should be established. The monitoring program should permit the interim standards to serve as experiments.[50] Third, the interim standards should be subject to a formal review process in light of information gained from monitoring the standards.[51] Finally, standards should be revised, if appropriate, to reflect the experience to date.

An adaptive management approach has two benefits for the Bureau. First, water hydrology is uncertain from month to month and year to year. Therefore, a flexible management approach is probably best for restoring and improving fish and wildlife. Second, without having to specify where the particular water is coming from, the Bureau avoids direct conflict with specific water contractors.

Examples of adaptive management are described in Appendix A to the Proposal. The appendix discusses the various environmental measures developed under the Anadromous Fish Restoration Plan, for which B1, B2, and B3 water is allocated.[52] Each action is stated as an experiment designed to test hypotheses about fish propagation, migration, and survival.[53] Many of the actions are implemented by environmental triggers. For example, Delta Action 5: Ramping of San Joaquin River Flows,[54] would maintain higher flows at Vernalis. The higher flows are triggered by the presence of salmon at Mossdale and reaching the "yellow-light"[55] limit on take of delta smelt at the pumps. If the stated conditions are not met, the flows are not ramped up. This protocol demonstrates a flexible, real-time management approach to

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[47] Daniel T. Castleberry, et al., *Uncertainty and Instream Flow Standards*, CAL. TROUT STREAMKEEPER'S LOG, Fall 1997, at 8-9.

[48] *Id.*

[49] *Id.*

[50] *Id.*

[51] *Id.*

[52] Proposal, *supra* note 36, at app. A.

[53] *Id.*

[54] Proposal, *supra* note 36, at app. A. 6-7.

[55] This occurs when migrating delta smelt are sucked into the pumps instead of making their way out to the Delta.

the resource. Rather than simply allowing water to flow down river, the Bureau will time the releases to provide the maximum benefit to salmon.

After water management, the most controversial aspect of the Proposal concerns shortage provisions for B2 water. The CVPIA gives the Secretary of the Interior discretion to reduce the B2 water allocation by twenty-five percent whenever drought conditions exist. In critically dry years, the Bureau will reduce B2 water to the greater of 600,000 acre-feet or the percentage of deliveries to agricultural service contractors.[56] Inaccurate measurement of water-type years is, however, a fundamental problem. Water years are categorized into five types: wet years, above normal years, below normal years, dry years, and critically dry years. Nevertheless, categorizing a year can be misleading. As pointed out in the Proposal, 1997 was considered a wet year due to the early floods. The rest of the year was a near-record drought.[57] Thus, the total water year does not account for when the water comes. The Bureau believes that its environmental measures incorporate triggers that more accurately reflect real time hydrological and biological conditions.[58] Consequently, the developing hydrology of a year will not be the basis for water allocation or use.

The Proposal evades the problem of critically dry years. The Bureau clearly has discretion to reduce B2 allocations, but how will the discretion be exercised? And if discretion is exercised and challenged, who has the burden of justification? Do environmental interests have the burden of proving the need for additional water? Do water contractors have the burden of proving that water dedicated to environmental restoration is not based on sound science and therefore is not reasonable? Furthermore, conflicts within water contractor groups may arise over allocation and management of B2 water. The San Joaquin River Exchange Contractors[59] and Sacramento River Settlement Contractors

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[56] Proposal, *supra* note 36, at 11.

[57] *Id.*

[58] *Id.*

[59] A group of riparian land owners (the Firebaugh Canal Water District, Central California Irrigation District, San Luis Canal Company and Columbia Canal Company, known collectively as the "Exchange Contractors") settled with the Bureau of Reclamation in 1939. They received priority rights to CVP water exported from the Sacramento River in exchange for giving up their senior riparian rights to San Joaquin River water impounded by Friant Dam. Consequently, approximately 50 miles of river went dry. If the Bureau cannot meet this priority, the Exchange Contractors have the right to water released from Friant Dam. This prospect is unsettling to the Friant Water Users Authority, who have fought to keep the riverbed dry. Reestablishing

have a priority right to CVP water from the Sacramento River. If the Bureau does not supply the water, the San Joaquin River Exchange Contractors and the Friant Water Users Authority will be in conflict.[60] Similarly, Sacramento River basin contractors may receive less water because of instream need. However, once the water accomplishes instream flow requirements, it can potentially be exported south to the westside San Joaquin Valley contractors. Conflicts between these two groups are also possible.

The Bureau recognizes that environmental needs are now co-equal with consumptive uses[61] and will exercise discretion when reducing the B2 allocation to 600,000 acre-feet. The trigger will be a dry period shorter than the 1928-1934 drought, but will be at the prerogative of the Secretary of the Interior. The Bureau has stated that 600,000 acre-feet would still be available for the ESA and water quality purposes,[62] even though some contractors may not receive any water. Thus, environmental needs will not be subordinate to the water contractors' needs. On the other hand, neither will environmental needs be superior, as 600,000 acre-feet in a critically dry year will not be sufficient to sustain habitats at normal levels.

Finally, the availability of B3 water during a drought has cost implications. If B3 water is acquired by the Bureau in a dry year, it could increase the cost of water to interim contractors. Restoration Fund money will be available to purchase water at a higher price, setting the potential for a bidding war. Therefore, B3 water acquisitions could, through market forces, reduce availability of low cost water.

The Proposal also examines alternative water management practices. The Bureau recognizes that the CVP is a part of the system, not the entire system. Therefore, a possibility for enhancing water supplies system-wide exists. The Department of the Interior states that it is

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flows could permit salmon or steelhead upriver, which would make dewatering the river later almost impossible.

[60] The last drought, from 1986 to 1993, saw litigation that foreshadowed the potential dispute. Westland Water District sued the Bureau for injunctive and declaratory relief, seeking a priority allocation of scarce water. Both the Exchange Contractors and the Friant Water Users Authority intervened. In an insightful, but unpublished, memorandum opinion on the conflicts, United States District Judge Oliver Wanger granted the government's motion to dismiss without leave to amend. Westland Water District v. United States, No. CV-F-92-5212 OWN (E.D. Cal. Nov. 3, 1992) (unpublished memorandum opinion) (regarding defendants' Motion to Dismiss; Intervenors' Motion for Judgment on the Pleadings and Order).

[61] Proposal, *supra* note 36, at 1.

[62] *See* Minutes of CVPIA Monthly Public Forum 4-5 (Feb. 28, 1996) (on file with the *San Joaquin Agricultural Law Review*).

committed to full cooperation with all parties to improve water supplies.[63] However, its willingness to cooperate should not be implied as a link to environmental measures. In other words, environmental protection is not proportionally or temporally linked to water supply improvements.

Appendix C to the Proposal discusses four potential tools to improve water supplies. The first tool is improving a joint point of diversion operations to increase the capacity to export water from the Delta south to the San Joaquin Valley.[64] By constructing a connection between the Delta-Mendota Canal and the State Water Project Aqueduct, the CVP can take advantage of State Water Project facilities to move water efficiently during December through March. The average increase in export capacity is expected to be 250,000 acre-feet.

The second tool is land retirement.[65] The CVPIA Land Retirement Program is limited to willing buyer/willing seller transactions with a preference for drainage-impaired lands in the CVP service area. Land retirement purchases will either be purchases of land and water, with the water being made available as B3 water for the environment, or purchases of land only. In the latter case, the water would remain with the water district, but would not be available for use on poorly drained lands.

The third tool is water purchases on Sacramento River tributaries.[66] Approximately 150,000 acre-feet of water is expected to be acquired through ground water pumping, reservoir storage, and land fallowing. The water will be used for anadromous fish needs.

The final tool, which is still under study, is the water reserve account.[67] The water reserve account will store water in above-normal and wet years for environmental use in normal and dry years. The water reserve account provides environmental benefits by storing water south of the Delta for later use. The water in the reserve accounts could count toward environmental water that would otherwise have to be exported. Consequently, more export capacity would exist for the water contractors with water reserves in place.

The toolbox concepts raise another controversy. If more water is made available to the system through these tools, is the water to be devoted to the environment? If the Restoration Fund is used to

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[63] Proposal, *supra* note 36, at 8.

[64] Proposal, *supra* note 36, at app. C.

[65] *Id.*

[66] *Id.*

[67] *Id.*

purchase land or improve the infrastructure, arguably the water recovered should be dedicated to environmental purposes. Environmental interests may challenge improvements to CVP operations funded from the Restoration Fund if the improvements benefit the water contractors. Section 3407, establishing the Restoration Fund, is not, however, explicit:

> Not less than 67 percent of all funds made available to the Restoration Fund under this title are authorized to be appropriated to the Secretary to carry out the habitat restoration, improvement and acquisition (from willing sellers) provisions of this title. Not more than 33 percent of all funds made available to the Restoration Fund under this title are authorized to be appropriated to the Secretary to carry out the provisions of paragraphs 3406(b)(4)-(6), (10)-(18), and (20)-(22)[68] of this title.

The Restoration Fund may be used to purchase and retire land, for example. What happens to the water made available from land retirement? Section 3406(b)(3) suggests that the water is to supplement B2 water. Whether acquired water is available to the water contractors is nevertheless an open question.

In summary, the Proposal manages B2 water through an adaptive management plan. The Bureau is less concerned with accounting issues than with management issues. Finally, the Bureau recognizes the inherent conflicts between using project water for environmental purposes and irrigation or municipal purposes. It deals with the conflict by declaring that the B1, B2, and B3 water available for environmental purposes will be used for environmental purposes without regard to the effects on deliveries to water contractors. At the same time, the Bureau is sensitive enough to the water contractors' need for certainty to provide models showing the effects of environmental measures on water deliveries. Finally, the Bureau is open to participating in system-wide developments to improve water storage and transportation capacities for the benefit of all users.

CONCLUSION

The CVPIA removes ten percent of the water available to water contractors. The Bureau will manage this water separately from water dedicated to consumptive use. From the water contractors' perspective, the water is simply gone. However, water contractors should not assume that water deliveries will automatically be reduced by 800,000 acre-feet each year. The Bureau models show that B2 water affects consumptive water deliveries differently depending upon the hydrology

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[68] These subsections describe specific remediation measures within the Project.

of the year. In normal to wet years, B2 water's effect on deliveries is slight. In dry, but not critically dry years, the effect is significant.

Environmental interests should focus on management of the B2 water for anadromous fish restoration and Bay-Delta water quality maintenance. The first major conflict will arise when the next drought occurs.

In the meantime, the Bureau seems to take its statutory charge to restore the environment seriously. Its proposed management plan appears reasonable and consistent with statutory purpose. If Congress leaves the CVPIA alone for five years, all parties will have a better understanding of the Act's functionality. Whether Congress will allow the process to develop is a political question that only time will answer. In the meantime, to its credit, the Bureau of Reclamation seems to have found a zone of reasonableness in managing the inherent conflicts imposed by the CVPIA.