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Editors: Rodney T. Smith and Roger Vaughan

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Aftermath of Congressional Water War: Restructuring the CVP

On October 30, 1992 when he signed H.R. 429 into law, former President Bush ended the Congressional battle over the crown jewel of California's water resources, the federal Central Valley Project (CVP). Like raiders in a hostile corporate takeover of the 1980s, supporters of reform proposed restructuring the CVP — refocus project purposes and operations, reallocate water, change contracting and pricing policies, and reform the rules governing water transfers. Like incumbent

management, CVP water and power users and supporters first declared reform lacking in sensitivity to the economic destiny of communities that rely on CVP operations and then offered counter-proposals. In the end, proponents of reform prevailed.

While enactment of H.R. 429 will transform the CVP, the saga also warrants study by all with interests in western water. The legislative process and outcome provides a first-hand glimpse into the realities of the new era of western water policy in which environmental considerations, fiscal concerns, and the economics of water reallocation rise in prominence relative to the traditional objectives of reclamation policy. The forces that shaped CVP reform know no state boundaries.

In this article, *WS* reviews the major provisions of the CVP legislation, *The Central Valley Project Improvement Act* (Title XXXIV of H.R. 429). To understand what approaches are politically viable and which are not (at least for now), the discussion highlights how the provisions included in the final legislation differ from alternatives rejected during the legislative process. It also identifies key issues to follow during the law's implementation. Until regulations are promulgated and policies and agreements implemented in practice, the "end-game" on CVP reform has yet to be played.

BACKGROUND

To understand the pressures for CVP reform and the stakes in the legislative outcome, consider key facts about the CVP before H.R. 429, the criticisms, and the legislative process.

THE CVP. Before the enactment of H.R. 429, the CVP represented 20 percent of the state's dependable water supplies. The major CVP facilities have a storage capacity of 11.921 million af, of which the Shasta Dam on the Sacramento River accounts for 4.552 million af and the Trinity Dam on the Trinity River accounts for 2.448 million af. Annual water deliveries for irrigation, municipal, and industrial uses between the years 1981 and 1989 averaged 5.2 million af, with 95 percent of the water used for irrigation. The project serves about 3.2 million acres on 25,000 farms. The California Department of Water Resources expected growth in CVP supplies to account for 57 percent of the growth in California's statewide supplies from the late 1980s through the year 2010.

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"Aftermath of Congressional Water War" reviews the major provisions of the *Central Valley Project Improvement Act*, which provides a first-hand glimpse into the realities of the new era of western water policy. Like a successful hostile takeover, reformers may find restructuring the CVP more difficult in practice than in theory. The act may reduce substantially the trading value of CVP water, which may become demoted to the status as a short-term, unreliable source of water. The law of unintended consequences may once again prevail.

The "1992 Annual Transaction Review" summarizes the trends from the 146 water transactions reported during 1992 in *Water Intelligence Monthly*. The drought continues to stimulate contractual innovation.

"Denver Negotiates Win-Win Water Deal" describes the complex agreements used by west slope interests and Denver to resolve disputes over Dillon Reservoir and to finance the construction of Wolford Mountain Reservoir.

"Finance Update" reviews the results from the 145 bonds issued to raise \$2.7 billion in the fourth quarter of 1992.

"Litigation Update" reviews a federal district court decision interpreting the 1935 Globe Equity Consent Decree concerning the water rights of the Apache and other Indians on the San Carlos Indian Reservation.

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The Bureau of Reclamation delivered CVP water under 40-year contracts. A total of 294 CVP contractors hold contracts for the delivery of up to 8.986 million af per year—see Table 1. The 140 Sacramento Water Rights contractors are water users who had rights to use Sacramento River water before construction of the CVP. The four San Joaquin Exchange Contractors diverted water from the San Joaquin River before construction of Friant Dam, primarily pursuant to riparian rights.

CRITICISMS. Recently, criticisms of CVP policies and operations reached a crescendo. Three topics dominated the debate: finances, environmental effects, and water allocation.

Critics found CVP finances to be a significant fiscal drain on the federal government. Because the bureau extended the project's repayment period each time it completed a new facility, full repayment has been deferred until the year 2030. As of September 30, 1990, irrigators have repaid 5.1 percent of their \$1 billion repayment obligation. Municipal and industrial users have repaid 6.2 percent. Over 75 percent of capital repayment has been deferred past the year 2010. The present value of project repayment has been estimated at \$203 million, or about 5 percent of the \$3.766 billion present value of construction costs.

Critics also argued that the CVP's operations have severely damaged fish and wildlife resources. Shasta Dam is believed to have blocked the access of salmon to hundreds of miles of spawning area. The timing and temperature of water releases from Shasta are believed to be incompatible with fishery survival. Other dams and diversions are believed to block or delay upstream migrating adult salmon and expose downstream migrating juveniles to predation. And the drafting of project water across the Delta by the State Water Project and the CVP reverses waterflow, resulting in salt water intrusion into critical habitat. As a result, the winter-run chinook salmon of the Sacramento River was declared in 1989 "threatened" under the federal Endangered Species Act. Other species, CVP critics predict, are destined for listing. In addition, critics argue, the Central Valley's wildlife refuges lack water. And contaminants from agricultural runoff results in water of insufficient quality to protect aquatic life in Central Valley rivers.

Finally, the CVP's contract and transfer policies, the critics

argue, are failures. Bureau policy perpetuates water allocation based on historical political values and out-dated economic demands for CVP water. CVP policies ignore the rising demand to allocate CVP water for environmental and urban uses. The bureau, for example, is believed to short-change wildlife refuges in its water allocation decisions. And the reallocation of CVP water from agricultural to urban use is caught between the pincers of bureau policy. Critics believe that the bureau's contract renewal policy freezes water in agricultural use and its nascent transfer policy does not provide the framework for long-term transfers. By the year 2010, for example, annual urban water uses in California are expected to be 29 percent higher than they were in 1985, while annual agricultural water uses are expected to be 1 percent lower. California cannot afford, these critics argue, for the state's major water project to continue to be locked up in agricultural uses.

LEGISLATIVE PROCESS. As might be expected, legislation drafted by proponents of reform differed from legislation drafted by representatives of CVP water and power users. Senator Bill Bradley (D-NJ) and Representative George Miller (D-CA) introduced CVP reform bills. Reform proponents proposed changes in the authorized purpose of the project and bureau policies toward operations, contracting, transfers, conservation, and water allocation. Finding the reform proposal's "unbalanced," CVP water and power users proposed alternative legislation that placed greater emphasis, in their view, on the economic consequences of addressing long-standing criticisms of the CVP. Former Senator John Seymour (R-CA) and Representative Cal Dooley (D-CA) introduced the bills containing the counter-proposals.

The legislative process became known for heated rhetoric and emotional testimony. The controversy was perhaps unavoidable. The competing bills addressed contentious policy issues in fundamentally different ways.

PROJECT PURPOSES

Before H.R. 429, the CVP's purposes followed traditional reclamation law. According to a 1937 act reauthorizing the CVP under reclamation law, the CVP's dams and reservoirs "shall be used, first for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and third, for power." In 1954, Congress extended the purposes of the CVP to be "also for the use of waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under (earlier law)."

H.R. 429 amends the purposes of the CVP in significant ways. It amends the 1937 act to include "mitigation, protection, and restoration of fish and wildlife" as a project purpose. It includes "fish and wildlife mitigation, protection, and restoration purposes" as a second priority of project operations, placing these purposes on a par with irrigation and domestic uses. It also includes "fish and wildlife enhancement" as a third

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WATER CONTRACT CATEGORY	NUMBER OF CONTRACTORS	TOTAL AMOUNT (MIL. AF PER YEAR)
Agricultural	130	5.100
Urban	20	0.946
Sacramento River Water Rights*	140	2.100
San Joaquin Exchange Contractors	4	0.840
Total	294	8.986

* 1.8 million af per year ("pre-project water rights");
0.3 million af per year ("project water")

Table 3
Fourth Quarter Comparisons: Western States
(Volumes in \$ millions)

	4th Quarter 1992	4th Quarter 1991
Number of Issues	145	111
Gross Volume	2,696.2	2,862.7
% Revenue	88	89
% Competitive	10	36
% Insured	39	39
Average NIC (%)	6.09	6.34
Bond Buyer GO Index (%)	6.34	6.70
Average Spreads (\$)	18.07	15.19

Source: From Securities Data Co. Listings, supplemented by Stratecon, Inc.
Water bonds include those sold for water, sewer and flood control.

Bond Characteristics

Eighty-eight percent of bond proceeds, 101 out of 145 issues, and eighteen of the twenty largest issues were raised through revenue bonds. Revenue bonds averaged NICs of 13 basis points above those of GOs — 6.15 percent versus 6.02 percent. The 21 largest revenue bond issues accounted for \$1.92 billion — nearly three-quarters of the total — and paid an average NIC of only 5.82 percent. Spreads on revenue bonds were far below spreads on GOs — \$14.03 versus \$27.32.

Competitive offerings accounted for about ten percent of the money borrowed, only 29 out of 145 issues, and only 2 of the twenty largest issues (Vallejo, California and the North Texas Municipal Water District). They paid an NIC of 6.29 percent, above the 5.90 percent paid on negotiated issues. And they paid spreads of \$26.11 compared with \$16.87 on negotiated issues.

Underwriting

First Boston topped the *WS Underwriter Top Ten* based on underwriting only two issues — including the quarter's largest (see Table 4). Smith Barney came in second with six issues raising \$291.78 million — including two large California issues. And Lehman was third, with seven issues raising \$256.31 million. As usual, Rauscher Pierce Refsnes worked the hardest, underwriting 12 issues for a total of \$138.50 million, putting it at number seven. □

Table 4
Market Share of Top 10 Lead Underwriters
Fourth Quarter 1992 (Percent)

First Boston	24.4
Smith Barney, Harris Upham	10.8
Lehman Brothers	9.5
Kidder, Peabody	8.9
Stone & Youngberg	5.9
Stifel, Nicolaus	5.4
Rauscher Pierce Refsnes	5.1
Donaldson, Lusk & Jenrette	2.7
Prudential Securities, Inc.	2.7
Westhoff Martin	2.6

Source: Compiled by Stratecon, Inc. from Securities Data Co. Listings.

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priority of project operations, placing this purpose on a par with the generation of power.

To assure that mitigation occurs concurrently with actual or potential losses of fish and wildlife from the CVP, H.R. 429 provides:

The mitigation for fish and wildlife losses incurred as a result of construction, operation, or maintenance of the Central Valley Project shall be based on the replacement of ecologically equivalent habitat and shall take place ... concurrent(ly) with any future actions which adversely affect fish and wildlife populations or their habitat but shall have no priority over them.

To assure that extending the purposes of the CVP does not result in federal preemption of state law, the law states: "Nothing in this title shall affect the State's authority to condition water rights permits for the Central Valley Project." As described below, the law requires the Interior Secretary to undertake a variety of actions for fish, wildlife, and habitat restoration. The deference to state law effectively establishes a "federal floor" for actions to be taken to address environmental concerns about the CVP.

After the enactment of H.R. 429, environmental mitigation, protection, or restoration stand on an equal footing with irrigation and domestic interests. Both retrospectively and prospectively, the construction and operation of the CVP for the delivery of water for traditional consumptive uses must not have adverse environmental consequences. The Seymour-Dooley bill did not contain comparable provisions. The reformers stood firm throughout the legislative process in their determination to redefine project purposes as part of CVP reform.

ENVIRONMENTAL ACTIONS

H.R. 429 establishes general environmental goals and directs the undertaking of specific actions to address environmental concerns over the CVP. Its provisions include fish and wildlife restoration activities, requirement of a plan for the San Joaquin and Stanislaus Rivers, and actions for the Central Valley Refuges and Wildlife Habitat Areas.

FISH & WILDLIFE RESTORATION. The act requires the Secretary to develop and to implement within three years 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, on a long-term basis, at levels not less than twice the average levels attained during the period of 1967-1991.

The act defines anadromous fish to include salmon (including steelhead), striped bass, sturgeon, and American shad "that ascend the Sacramento and San Joaquin Rivers and their

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exercised unless these sources cannot release sufficient water. This will allow Denver to transport up to 30,000 af/year (but 45,000 af over three years) of water from Dillon Reservoir through the Roberts Tunnel — although the firm yield will average 15,000 af/year.

Third, Denver will provide 920 af of water to Grand County, Winter Park, Fraser, and Granby, and will be repaid with these participants' shares in the Wolford Mountain Reservoir — increasing the potential of water releases from Wolford to avoid the need for the Green Mountain call. Ski areas in Summit County will be allowed to divert the inflow into Denver's Dillon Reservoir in the winter to make snow, returning the water to Dillon in the spring when the snow melts. Any deficit in the snow melt will be made up out of water stored in the Clinton Gulch Reservoir. The Reservoir was purchased by a consortium of western slope water users from Climax Molybdenum for \$8.4 million. The consortium includes Summit County, Breckenridge Ski Corp., Copper Mountain Inc., Keystone Resorts Inc., Winter Park Recreation Association, and the towns of Breckenridge, Dillon, and Silverstone.

Finally, parties to the agreement have agreed to withdraw opposition to Denver's application for Blue River water rights, filed during the 1960s and 1970s after the court had ordered Denver to obey the Green Mountain call.

LESSONS

Western water deals are getting more complicated. By sorting out the tangle of issues and claimants in this series of agreements, Colorado water suppliers learned several lessons from which other regions could benefit. In an interview with *WS* editors, Hamlet "Chips" Barry III, Manager of the Denver Water Board, offered the following ingredients for successful negotiations. First, he urged, educate all the participants about all the complex issues that must be resolved — don't take any shortcuts with over-simplified assumptions. Second, keep all participants together through all negotiations — as soon as discussions break down into a series of bilateral negotiations, all leverage is lost. Third, open negotiations by setting a clear bottom line for all participants — in this case, it was agreed that there would be no loss of current yields for anyone. Fourth, whenever a participant seems unhappy with the course of the discussions, mediate to ensure they stay in. Fifth, be honest throughout. And, Chips concluded, keep lawyers away from discussions of technical issues!

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tributaries and the Sacramento-San Joaquin Delta." The act's goal shall not apply to the San Joaquin River between Friant Dam and the Mendota pool, which is subject to a separate program (see below). Meeting this goal is deemed to satisfy the mitigation, protection, restoration, and enhancement purposes of the CVP. The Secretary shall also make all reasonable efforts to address other environmental impacts of the CVP not specifically enumerated in the law.

The goal of doubling the natural production of anadromous fish was widely debated during the legislative process. Proponents of reform viewed the goal to be a critical element of restoration activities. Opponents feared the goal unreasonable and, perhaps, unachievable. Reasonable or not, meeting the goal would create a major change in the status of California's fisheries. As the State Water Resources Control Board recently noted in its draft water rights Decision 1630 on the Bay-Delta, "public trust resources (e.g., fisheries) are in a state of decline."

The act also directs the Secretary to modify CVP operations to provide flows of suitable quality, quantity, and timing to protect all stages of anadromous fish (except for water dedicated to fish, wildlife, and habitat restoration). Moreover, the Secretary is directed to manage 800,000 af per year of CVP yield for the "primary purpose of implementing fish, wildlife and habitat restoration purposes and measures (of the act)" and to assist California in protecting the Bay-Delta. The act defines project yield as "the delivery capability of the Central Valley Project during the 1928-1934 drought period after fishery, water quality, and other flow and operational requirements imposed by terms and conditions in licenses, permits, and other agreements" existing at the time of enactment.

In effect, the 800,000 af per year dedicated for fish, wildlife, and habitat restoration represents an allocation of firm yield. However, the Secretary may temporarily reduce by up to 25 percent deliveries of water for those purposes whenever at least as large reductions are imposed on agricultural deliveries of CVP water. If all of the 800,000 af per year of water is not needed for the fish, wildlife, and habitat restoration purposes of the act, the Secretary is authorized to make the unneeded water available for other project purposes.

The act also directs the Secretary to undertake specific actions for fish and wildlife restoration — see Table 2 insert. Actions fall into two broad categories: (1) installation of devices and (2) modification of project operations. The former category requires expenditures financed under the cost-sharing provisions specified in the table; the most common provision calls for 37.5 percent reimbursed as main project features, 37.5 percent nonreimbursable federal expenditure, and 25 percent paid by the State of California. The latter category will result in an unspecified reduction in the yield from project operations.

If it desired, California's State Water Resources Control

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Board could incorporate virtually any and all of the actions in the terms and conditions of CVP permits. In fact, interested parties have often suggested that the board do so. In effect, H.R. 429 imposes conditions that the board has yet to decide are in the public interest of California. Because the act does not "affect the State's authority to condition" CVP water permits, Congress has decided that actions listed in Table 2 represent the "floor" for addressing environmental concerns about the CVP.

Finally, the act allows the Secretary to develop a program under which farmers receive incentives to keep fields flooded for the creation and maintenance of waterfowl habitat and for CVP yield enhancement. The annual incentives may not exceed \$2 million, either through direct payments or through credits against other contractual obligations. This provision terminates by the year 2002.

SAN JOAQUIN AND STANISLAUS RIVERS. No later than September 30, 1996, the Secretary must develop a comprehensive plan to address fish, wildlife, and habitat concerns on the San Joaquin River. The plan shall include improvements of stream-flow, channels, riparian habitat, and water quality. Until Congress authorizes the plan, the Secretary shall not, as a measure to implement the act, make releases for the restoration of flows between Gravelly Ford and the Mendota Pool. Until flows of sufficient quantity, quality, and timing are provided for anadromous fishery needs identified in the plan, entities who receive water from the Friant Division shall be assessed a \$4/af surcharge for all project water delivered on or before September 30, 1997; a \$5/af surcharge for project water delivered after September 30, 1997 and on or before September 30, 1999; and a \$7/af surcharge on all project water delivered thereafter.

The act also instructs the Secretary by no later than September 30, 1996 to prepare the Stanislaus River Basin and Calaveras River Water Use Program EIS.

WILDLIFE HABITAT. The act requires the Secretary to provide firm water supplies of suitable quality to maintain and improve wetland habitat areas of wildlife refuges and state wildlife management areas. In a first stage, upon enactment of H.R. 429, the quantity and delivery schedules shall be in accordance with level 2 of the "Dependable Water Supply Needs" for habitat areas identified in the Refuge Water Supply Report and identified two-thirds of the water supply needed for full habitat development for areas identified in the San Joaquin Basin Action Plan/Kesterson Mitigation Action Plan Report. The Secretary shall provide the water directly or through long-term contractual agreements. The Secretary shall diversify sources of supply to minimize possible adverse effects on CVP contractors. All costs are reimbursable pursuant to existing law.

In a second stage not later than 10 years, the quantity and delivery schedules shall meet "level 4" needs of habitat areas

and the full amount of the water needed for full habitat development. The Secretary shall acquire water to supplement the amount provided directly "in cumulating increments of not less than ten percent per annum through voluntary measures which include water conservation, conjunctive use, purchase, lease, donations, or similar activities." The incremental costs associated with implementation of the second stage will be fully allocated as 75 percent nonreimbursable federal expenditure and 25 percent to the State of California.

From the beginning, environmental actions were included in all bills. There were three striking differences, the last two of which were critical. First, both sides advocated virtually the same actions — all the actions specified in the Seymour-Dooley bill were also contained in the Miller bill that passed the House, but the Miller bill contained additional actions.

Second, almost half the actions in the Seymour-Dooley bill were "additional actions" which would be implemented only if the actions were subsequently found to meet statutory criteria. Based on the Miller bill, H.R. 429 contains no comparable provisions. Therefore, reform proponents specified actions that would be implemented. The Seymour-Dooley alternative need not.

Finally, the sides differed on whether the actions specified in federal legislation represented "floors" or "ceilings" on environmental actions. As already described, H.R. 429 creates floors for action. In contrast, the Seymour-Dooley bill contained language suggesting that the actions specifically provided in the bill would resolve the fish and wildlife impact of the CVP. In the end, proponents of reform prevailed.

CONTRACTING

H.R. 429 places limits on new contracts and contract renewals. The practical consequence may be indefinite delay in the issuance of new contracts and reduced economic value of amended contracts for water service.

NEW CONTRACTS. Except for exceptions described below, the Secretary may not enter into any "new, short-term, temporary, or long-term contracts or agreements for water supply from the Central Valley Project for any purpose other than fish or wildlife" until the following conditions are met:

- 1) fish, wildlife, and habitat restoration provisions of the act are met;
- 2) the State Water Resources Control Board concludes its Bay-Delta hearings and receives approval of decision from the Administrator of the Environmental Protection Agency;
- 3) the Secretary reports to Congress.

Exceptions from this limit include contracts executed pursuant to the *Emergency Drought Relief Act of 1991* (allowing the impounding, storage, and carriage of nonproject water for domestic, municipal, fish and wildlife, industrial, and other beneficial uses), a 1990 law (directing the Secretary to enter

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into three contracts for a total of up to 50,000 af per year for municipal and industrial needs in Sacramento and El Dorado counties), one-year contracts for delivery of surplus flood waters, or two-year contracts for delivery of Class II water in the Friant Unit.

Development and implementation of the act's fish, wildlife, and habitat restoration provisions may take at least three years. EPA continues to disapprove of the State Board's proposed Bay-Delta protections (see *WIM February 1993*). Meeting the second condition should not be taken for granted. There may be indefinite delay in the issuance of new CVP contracts.

Such delay will undoubtedly disappoint water agencies. In response to a bureau request in the mid-1980s, 84 agencies requested additional water service of 3.3 to 3.4 million af per year. In December 1988, the bureau announced proposed allocations of 953,200 af per year for agricultural uses, 203,200 af per year for municipal and industrial uses, and 391,650 af per year for wildlife refuges. As to be expected when requests exceed available supplies by a ratio of 4.0 to 1.5, the proposed allocations proved controversial. By spring 1989, the bureau delayed its marketing program until an additional EIS was completed. In effect, H.R. 429 further suspends the marketing program. And given the act's fish, wildlife, and habitat provisions, it is unclear whether there will be any significant amount of water available for new contracts.

Throughout the legislative process, all versions of reform bills had included another exception to the contract limitation. The Secretary would have been instructed to make available 100,000 af per year of CVP water for municipal and industrial purposes under contracts not to exceed 20 years. The provision was dropped in conference committee.

CONTRACT RENEWALS. H.R. 429 significantly changes the applicable law for CVP contract renewals. Notwithstanding general reclamation law, the Secretary may renew CVP contracts for only up to 25 years and for successive periods of up to 25 years each. Under general reclamation law, contract renewals may be up to 40 years.

However, no CVP contract renewals are authorized until the completion of "appropriate environmental review." The Secretary must prepare and complete within three years a programmatic EIS "analyzing the direct and indirect impacts and benefits of implementing (the law), including all fish, wildlife, and habitat restoration actions and the potential renewal of all existing Central Valley Project water contracts." The cost of the EIS will be treated as a capital expense in accordance with Reclamation law. If a contract expires before the EIS is completed, it may be renewed for "an interim period not to exceed three years in length and for successive interim periods of not more than two years." Interim contracts shall comply with existing law, including the provisions of H.R. 429.

To encourage early contract renewals after the completion of the EIS, the Secretary shall impose a 50 percent surcharge on mitigation and restoration payments required under H.R. 429 (see below). The surcharge would be levied beginning in every year between October 1, 1997 or January 1 of the year following the completion of the EIS (whichever is sooner) and ending on the effective date of the renewed contract. The surcharge is not levied on (1) contracts renewed after January 1, 1988 and before the enactment of H.R. 429, or (2) if EIS not completed by October 1, 1997, to any holder of a contract in existence on the date of enactment who entered into a binding contract prior to October 1, 1997 to renew its contract immediately upon completion of the EIS.

The Secretary shall "administer all existing, new, and renewed contracts in conformance with the requirements and goals" of H.R. 429. Presumably, the EIS concerning contract renewals will guide the Secretary in his interpretation of this statutory requirement.

Contract reform was a key objective for CVP reformers. Water use under CVP contracts is now under more frequent and increased environmental scrutiny. Before H.R. 429, CVP users received water service under 40-year contracts that would be presumably renewed for the same quantity of water. After H.R. 429, this need no longer be the case.

TRANSFERS

H.R. 429 authorizes "all individuals or districts who receive Central Valley Project water . . . to transfer all or a portion of the water . . . to any other California water users or water agency, State or Federal agency, Indian tribe, or private nonprofit organization for project purposes or any purpose recognized as beneficial under applicable State law." All transfers are subject to the review and approval of the Secretary. Transfers involving more than "20 percent of the Central Valley Project water subject to long-term contract within any contracting district or agency shall also be subject to review and approval by such district or agency."

The act specifies that approvals are guided by the following twelve conditions (* denotes a provision that does not apply to transfers executed after September 30, 1999):

Maximum Annual Quantity: average amount delivered during last three years of normal delivery before act.

Applicable Rates: if transferred to non-CVP contractor before act, repay at greater of full-cost or cost of service rates (irrigation) or at greater of cost of service or municipal and industrial rates (M&I).

Voluntary Transactions: Secretary will not approve transfers unless between willing buyers and sellers under mutually agreed terms and conditions.

Consistency with State Law*: no transfer approved unless consistent with state law, including state Environmental Quality Act.

Beneficial Use: all transfers deemed beneficial use under

section 8 of 1902 Reclamation Act.

Right of First Refusal*: all transfers outside CVP service area subject to right-of-first refusal, in which entities within CVP service area may obtain the water under the terms and conditions specified in the transfer agreement (if right exercised, transferee compensated for total costs associated with development and negotiation of transfer).

Supplemental or Additional Benefits: no transfer considered supplemental or additional benefit under federal law.

Conveyance and Pumping Capacity: transfer not approved unless Secretary determines transfer will not violate provisions of act or other federal law and "will have no significant adverse effect on the Secretary's ability to deliver water pursuant to the Secretary's Central Valley Project contractual obligations or fish and wildlife obligations (under the act) because of limitations in conveyance or pumping capacity."

Water Subject to Transfer: "limited to water that would have been consumptively used or irretrievably lost to beneficial use during the year or years of the transfer."

Groundwater Conditions*: transfer not approved unless Secretary determines it will have "no significant long-term adverse impact on groundwater conditions in the transferor's service area."

Impact on District/Agency/Other Water Users*: transfer not approved unless Secretary determines it will have "no unreasonable impact on the water supply, operations, or financial conditions of the transferor's contracting district or agency or its water users."

Water Supplies for Fish & Wildlife: transfer not approved unless Secretary determines it would not result "in a significant reduction in the quantity or decrease the quality of water supplies currently used for fish and wildlife purposes, unless the Secretary determines . . . such adverse effects would be more than offset by the benefits of the proposed transfer." If the latter determination is made, "the Secretary shall develop and implement alternative measures and mitigation activities as integral and concurrent elements of any such transfer to provide fish and wildlife benefits substantially equivalent to those lost."

For transfers between CVP contractors within counties, watersheds, or other areas of origin, they shall be deemed to meet the conditions concerning "maximum annual quantity" and "water subject to transfer."

All decisions by the Secretary and, if required, by a contracting district or agency shall be rendered within 90 days of receiving a written transfer proposal that provides all "reasonably necessary information." All transfers subject to district or agency review shall be reviewed in a public process "similar to that provided for" by federal law (Section 226 of P.L. 97-293). To disapprove a transfer, the Secretary or the contracting district or agency shall inform the transferee and transferor in writing of the reasons for disapproval and "what alternatives, if any, could be included so that the transfer would reasonably comply with the requirements" of the act. If no action is taken within 90 days of receiving a "complete written proposal," the

transfer shall be deemed approved.

In sum, the transfer provisions codify for the CVP Interior's policy of water marketing and clarify the primary role of fish and wildlife considerations during Interior's review of proposed transfers (for background on Interior's policy, see "Interior's Policy of Voluntary Water Transactions," *WS January 1991*).

For the issue of the role of district approval of transfers, a contentious issue during the legislative process, the final provisions reflect the views of proponents of reform. Reformers argued that intransigence by districts is a key obstacle to trading CVP water. In comparison to the Seymour bill, the act limits the role of district approval. Where the Seymour bill would have prohibited exports beyond 20 percent of a district's supply, H.R. 429 uses a 20 percent threshold to trigger district or agency approval of a transfer under the criteria specified in the act. The condition concerning the "impact on district/agency/other water users" is a variant of a provision in the Seymour bill.

By limiting the role of districts in water transactions, the enactment of H.R. 429 may result in buyers being able to acquire CVP water at lower prices than would be the case if districts act as agents for their landowners/water users (for a discussion of how district control may enhance the trading value of water, see "The Economic Value of Board Control," *WS April 1993*).

FISCAL PROVISIONS

H.R. 429 establishes a "Restoration Fund" to finance the act's fish, wildlife, and habitat restoration provisions. Not less than 67 percent of all funds are authorized "for habitat restoration, improvement and acquisition (from willing sellers) provisions" of the act. Not more than 33 percent of all funds are authorized for the environmental actions specified in Table 2. As necessary, up to \$50 million per year (October 1992 price levels) is authorized for appropriation. Once the actions mandated under the act are completed, the authorized annual appropriations will be reduced to \$35 million.

In addition to donations from any source, the revenue sources for the Restoration Fund are: (1) the 50 percent surcharge for not renewing contracts after the completion of the EIS, (2) revenues from tiered water pricing (see *WIM October 1992*) or the increase in water rates related to the transfer of water, (3) the surcharge levied on entities who receive water from the Friant Division after September 30, 1997, and (4) mitigation and restoration payments.

The annual mitigation and restoration payments equal the difference between actual appropriations from the Restoration Fund and the revenues from all other sources. For fiscal year 1998 and thereafter, the Secretary shall impose charges, subject to limitations, so that \$50 million (October 1992 price levels) is collected annually from all sources on a three-year rolling basis. The limits are: (1) payments by water and power users

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Restructuring the CVP

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shall not exceed \$30 million (October 1992 price levels) on a three-year rolling basis — when the actions mandated under the act are completed, the maximum annual payments will decline to \$15 million; (2) annual payments shall not exceed \$6/af for agricultural water and \$12/af for municipal and industrial water (both October 1992 price levels); and (3) the charge imposed on agricultural water shall be reduced, if necessary, to reflect the ability to pay by agricultural water users. In addition, the Secretary shall impose an additional annual charge of \$25/af (October 1992 price levels) for CVP project water sold or transferred to any entity that had not previously been a CVP contractor and uses the water for municipal and industrial purposes.

The allocation of mitigation and restoration payments between CVP water and power users, "taking into account all funds collected" under the act, shall be assessed in the same proportion as the ten-year rolling average of their allocations for repayment of the CVP. As of September 30, 1990, the repayment obligation was \$1.6 billion for water users and \$0.2 billion for power users.

The legislative debate focussed on who should be financially responsible for the environmental consequences of the CVP and whether the interest subsidy in water pricing should be reduced. Proponents of reform prevailed. "Project users pay" was a key principle underlying the fiscal provisions of H.R. 429.

CONSEQUENCES AND LESSONS

Like a target firm after a successful hostile takeover, the CVP will be restructured. But like raiders who find management of a firm more difficult in practice than in theory, reformers may encounter a similar fate. The passage of H.R. 429 only heralds the beginning of reform.

Now, the act must be interpreted, regulations promulgated, and administrative decisions rendered — all daunting tasks. For example, consider: What criteria will be used to determine when the provisions for fish and wildlife restoration have been met? What constitutes reasonable efforts to restore anadromous fisheries? During review of water transfers, what criteria will be used to determine whether the adverse effects on water supplies for fish and wildlife are "more than offset by the benefits of the proposed transfer" and to determine whether "alternative measures and mitigation activities . . . provide fish and wildlife benefits substantially equivalent to those lost"? How will the 20 percent threshold that triggers district/agency review of transfers be defined (e.g., may parties devise a sequence of transactions, each below the 20 percent threshold)?

Perhaps the greatest unknown is the practical effect of H.R. 429 on the trading value of CVP water. The act's environmental

actions are expected to reduce project yield significantly — Interior has estimated that if H.R. 429 were in place in 1990 and 1991, it may have had to suspend deliveries to agricultural users. The shortening of contract duration may also mean that, in the marketplace, CVP water will not be viewed as a long-term supply. With a diminished yield from a CVP contract, in terms of both quantity and duration, H.R. 429 may substantially reduce the trading value of CVP water. Ironically, the greatest beneficiaries of H.R. 429 may be holders of non-CVP water rights and permits, who find a potential competitor in the marketplace — CVP water users — demoted to the status of providers of short-term, unreliable water supplies.

While the end-game of CVP reform has yet to be played, there are two lessons for western water interests. First, bureaucratic failure, in the long-run, does not serve any interest. For critics of CVP operations, both state and federal agencies have failed to protect valuable environmental and wildlife resources in the Central Valley. One can only suspect that CVP reform would not have been on Congress's agenda, if state and federal agencies had acted differently.

Second, legislative solutions also become a forum for the creation of new problems. To provide "comprehensive" solutions, bills become complex. Understanding the bills becomes a major feat of analysis. Predicting what the law may mean in practice is a new discipline in forecasting. The law of unintended consequences — where well-intentioned policies generate unexpected effects with consequences at least as dire as the original problem — may once again prevail. □

Annual Transaction Review

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result of limits on interbasin transfers enacted in 1991 and the growing financial problems of the CAP project.

PUBLIC TRUST

Eight of the sixteen transactions completed for public trust purposes involved acquisitions by chapters of The Nature Conservancy — three acquisitions in Nebraska, two purchases

Table 2
Number of Transactions By State and Purpose, 1992

State	Total	Municipal	Agriculture	Public Trust
Arizona	3	3	0	2
California	26	12	11	3
Colorado	72	50	20	2
Idaho	8	0	8	0
Kansas	2	2	0	0
Montana	1	0	0	1
Nebraska	3	0	0	3
Nevada	5	4	0	1
New Mexico	8	4	1	3
North Dakota	1	1	0	0
Oklahoma	1	1	0	0
Texas	8	7	0	1
Utah	4	2	2	0
Washington	2	1	1	0
Total	146	87	43	16