



An
LAO
Report

Background

Issues

LAO Recommendations

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Environmental Water Account

Need for Legislative Definition and Oversight

The multiagency “CALFED”—established to address water problems in the state’s Bay-Delta region—has recently begun to implement the “Environmental Water Account” (EWA) program. The objective of the program is to acquire water for endangered species protection and recovery and to hold this water in reserve to use when endangered species need it most. The goal is to reduce the likelihood of fishery agencies placing new restrictions on the operations of state and federal water projects that could reduce water deliveries to agricultural and urban users.

The EWA is a new concept, and a number of important policy and operational issues remain unresolved. We think that it is premature to establish the program until these issues are resolved:

- ❖ The costs and benefits of EWA, and the program’s impacts on the water transfer market and groundwater resources.
- ❖ The appropriate state role in EWA, particularly in terms of funding.
- ❖ Operational issues including governance, acquisition and use of water by EWA, and scientific review.
- ❖ How to facilitate the water transfers and provide the storage capacity necessary for EWA to work well.
- ❖ How to hold the program accountable to the Legislature.

We recommend that the Legislature hold oversight hearings to evaluate CALFED’s proposal for EWA. If the Legislature approves the concept, we recommend that legislation be enacted to create the program and to specify how the program will be governed, funded, operated, and held accountable. Funding should be governed by the “beneficiary pays” principle; the Legislature may also wish to consider enacting a tax credit to encourage donations of water to the account. In addition, statute should require scientific peer review of EWA as well as monitoring of the program’s impacts. Finally, in order to facilitate the transfer of water for EWA purposes, we recommend that the state’s water transfer laws be clarified and updated.

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WATER PROBLEMS IN THE BAY-DELTA

Over the years, a number of interrelated water problems have developed in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the “Bay-Delta”). These problems include deteriorating water quality, declining fish and wildlife populations, eroding levees, and uncertain and unreliable water supplies. To address these problems, a collaborative state-federal process called the Bay-Delta Program (CALFED) was formed. As one of its many proposed solutions to Bay-Delta water problems, CALFED recently began to implement a program referred to as the “Environmental Water Account” (EWA).

COMPETING USES FOR BAY-DELTA WATER

Bay-Delta Is Key Component in California’s Water Supply Picture. The Bay-Delta is a 700 square-mile region of waterways, sloughs, and islands where the San Francisco Bay meets the state’s two largest rivers (Sacramento River and San Joaquin River). The Bay-Delta serves a number of important purposes, each of which depends on the quantity and quality of water in the area.

Specifically, the Bay-Delta supplies some or all of the water needs for two-thirds of the state’s homes and businesses and over 7 million acres of agricultural land. Water moves through the Bay-Delta’s system of canals and channels, and is transported to cities and farms in the Bay Area, the San Joaquin Valley, and most of Southern California by the State Water Project (SWP) and the federal Central Valley Project (CVP). The region’s

productivity as an agricultural region depends on flood-protecting levees and freshwater releases to counter the intrusion of salty seawater.

In addition to its role in supplying water for agricultural and urban uses, the Bay-Delta is perhaps the state’s most important fishery and wildlife habitat. The ecological health of the Bay-Delta is dependent on a certain quantity and quality of water being used for “environmental” purposes, such as for wetland habitats and fisheries. In fact, the most recent *California Water Plan Update*—a planning document in which the Department of Water Resources (DWR) projects water supplies and demands—explicitly recognizes the environment as the largest user of water in the state.

Ecological Health of Bay-Delta Has Deteriorated. The ecological health of the Bay-Delta is substantially impacted by the operation of the water supply infrastructure, which includes dams and pumps that pump water from the Bay-Delta to the aqueducts for transport to other geographical areas. Over the past many years, this diversion of water from the Bay-Delta, together with other factors such as water pollution, has resulted in the deterioration of the ecological health of the region and reduced the region’s role as a fish and wildlife habitat. As a result, fish and wildlife populations have declined to the point where some species have been classified as threatened or endangered under state and federal endangered species acts.

Implementation of Species Protection Laws Impact Water Supplies for Other Users. To

protect fish populations and their habitat, water deliveries from the Bay-Delta for urban and agricultural users have had to be curtailed. For example, in the spring of 1999, both SWP and CVP significantly reduced pumping of water in order to reduce the number of Delta smelt (a threatened species) killed as a result of being sucked into the pumps. While alternative water supplies may be available, such as by drawing down reservoir supplies, accessing such alternative supplies is not without consequences. For example, because SWP water is contractually paid

for by contracted agencies (typically, water districts) regardless of the actual amount of water delivered to them, purchasing alternative supplies adds to the costs of the water to these agencies. Also, reducing reservoir supplies to too-low levels can adversely impact the quality of the remaining water in the reservoir.

CALFED CREATED TO BALANCE COMPETING WATER INTERESTS

In recognition that the various water problems in the Bay-Delta were all interrelated, CALFED was created in 1994. As shown in Figure 1, CALFED

encompasses 18 federal and state agencies with regulatory authority over water and resource management responsibilities in the Bay-Delta. Currently, the program is housed in DWR.

The objective of CALFED is to address Bay-Delta problems in a coordinated fashion, balancing the needs of the competing water users. Since 1995, CALFED has been developing a planning framework. On August 28, 2000, the lead state and federal CALFED agencies approved the final environmental review documents for the framework with the signing of a "Record of Decision"

Figure 1

CALFED Agencies

State	Federal
Fishery Agencies	
<ul style="list-style-type: none"> • Department of Fish and Game 	<ul style="list-style-type: none"> • Fish and Wildlife Service^a • National Marine Fisheries Service^a
Water Project Operators	
<ul style="list-style-type: none"> • Department of Water Resources 	<ul style="list-style-type: none"> • Bureau of Reclamation^a
Flood Control Agencies	
<ul style="list-style-type: none"> • State Reclamation Board 	<ul style="list-style-type: none"> • U.S. Army Corps of Engineers^a
Environmental Protection (Water Quality) Agencies	
<ul style="list-style-type: none"> • State Water Resources Control Board • Secretary for Environmental Protection 	<ul style="list-style-type: none"> • U.S. Environmental Protection Agency^a
Land Management/Agricultural/Other Agencies	
<ul style="list-style-type: none"> • Delta Protection Commission • Department of Food and Agriculture • Secretary for Resources^a 	<ul style="list-style-type: none"> • Bureau of Land Management • U.S. Geological Survey • Natural Resources Conservation Service^a • U.S. Forest Service • Western Area Power Administration

^a Lead agency.



(ROD). It is anticipated that it will take at least 30 years to carry out programs and construct projects to implement the framework, at a cost of about \$8.5 billion for the first seven years. The state will likely be called on to bear a significant portion of these costs. The signing of the ROD also triggers the availability of certain state funds, including bond funds and the General Fund provided in the *2000-01 Budget Act* for CALFED projects.

When specific projects are constructed or particular programs implemented under CALFED, they must meet the broad parameters set out in the ROD. Anticipated projects—which will be subject to more detailed project-specific environmental review—include installing fish screens to divert fish from water pumps, making levee improvements, and developing water storage capacity. Planned programs include those that promote water conservation and facilitate water transfers.

BAY-DELTA SOLUTION INCLUDES ENVIRONMENTAL WATER ACCOUNT

CREATION OF EWA

Purpose of EWA. One of the many components of CALFED’s framework is the creation of EWA. The EWA is a water management strategy designed primarily to address two problems—declining fish and wildlife populations and unreliable water supplies. While CALFED plans many other programs and projects to address these problem areas, some at substantially greater cost than EWA, the program is nonetheless viewed by CALFED as an important component of its overall solution to Bay-Delta problems.

The purpose of EWA is to increase the reliability of water supplies to urban and agricultural users while assuring that sufficient water will be available for the protection and recovery of endangered and threatened species in the Bay-Delta. The EWA would accomplish this by making available a supply of water that can be used for fish protec-

tion, on a “real-time,” as needed basis. This is in contrast to the less flexible regulatory requirements currently imposed on the state and federal water projects under endangered species laws.

In general, the current requirements place operational restrictions on water projects based on “typical” fish behavior. These requirements control matters such as the timing and amount of water that can be pumped into aqueducts or released from storage. Because these requirements are based on typical fish behavior and circumstances, they can result in too much or too little water being provided for fish protection at any point in time. Instead, EWA’s focus on providing water in response to actual circumstances and needs for fish protection should result in Bay-Delta water being used more efficiently.

The creation of EWA would not override current endangered species laws, and would not

prevent listings of threatened and endangered species in future years. Nor would EWA eliminate any existing operational requirements (referred to as the "regulatory baseline") placed on the state and federal water projects to protect fish. Rather, the goal is to reduce the potential for *additional* restrictions on the state and federal water projects in future years that curtail water deliveries to agricultural and urban users. If this objective is met, water supplies should become more reliable.

HOW EWA WOULD WORK

The CALFED currently plans to operate EWA as a four-year program, after which time the program would be evaluated to determine whether and how it should continue. The EWA is analogous to a bank account. Water "deposited" into the account will be acquired largely through purchases from willing sellers. Water could also be borrowed or be freed up for the account by making changes in how water is delivered from the state and federal water projects. Water in the account will be withdrawn when existing restrictions and requirements on the state and federal water projects (the regulatory baseline) do not provide sufficient water to protect fish at a particular time.

Based on estimates made by the state and federal fishery agencies, CALFED has determined that 380,000 acre-feet of water is needed in the account annually. (An acre-foot of water supplies about two three-person households for a year.) The CALFED also proposes that an additional 200,000 acre-feet of groundwater be stored as a contingency reserve. Water used from this reserve

would be replenished so as to maintain a 200,000 acre-feet reserve.

The CALFED plans that the program will be managed by the three state and federal fishery agencies, in "coordination" with the two state and federal water project operators and other stakeholders. Details of how these five agencies and "other stakeholders" will have input into EWA's management and make decisions have yet to be worked out. Initial acquisitions of water for the account will be made by DWR and the federal Bureau of Reclamation. The process for making acquisitions in future years, however, has yet to be determined.

FUNDING FOR EWA

The CALFED has estimated average annual costs of \$50 million for each of the four years to purchase water for EWA, in addition to the costs for power generation and to manage the program. The CALFED does not yet have a plan to finance EWA. However, the five fishery and water project agencies have agreed that EWA be funded jointly by the state and federal governments and that there would not be increased costs to parties contracting for SWP and CVP water delivery.

For 2000-01, CALFED anticipates that state funding of \$60 million for EWA will come from the \$135 million General Fund appropriation in the *2000-01 Budget Act* for CALFED programs and projects. However, these funds are available only if legislation is enacted that certifies that the planned use of funds is consistent with the approved environmental documents for the CALFED



program framework. At the time this analysis was written, the Legislature had not enacted this legislation. Federal funds to support EWA have not been appropriated in federal fiscal year 2001.

The CALFED plans to initially fund EWA by borrowing from Proposition 204 bond funds and repaying the Proposition 204 account with General Fund monies when they become available. We think that such borrowing is contrary to the Legislature's intent that General Fund expenditures for CALFED purposes await the enactment of legislation. Therefore, we recommend that the Legislature direct the administration not to authorize this borrowing by CALFED.

The *2001-02 Governor's Budget* proposes \$30 million (mainly bond funds) for EWA. Federal funding to support EWA in 2001-02 is uncertain at this time.

PLATTE RIVER ENDANGERED SPECIES PARTNERSHIP: A SIMILAR CONCEPT

Although EWA would be a new program for California, our review found that a somewhat similar concept is currently being tested in Colorado, Wyoming, and Nebraska. These three states, along with the U.S. Department of the Interior,

formed the *Platte River Endangered Species Partnership* to address water needs of four threatened and endangered species in the Platte River Basin. The partnership's objective is to implement a recovery program for the four species, while enabling water deliveries for existing and new water users to proceed without additional operational restrictions on water projects that negatively impact water deliveries. The partnership includes the operation of an "Environmental (Water) Account."

It is too early to assess the effectiveness of this account, as it has been operational for about a year. However, it is instructive to consider how this account works, as summarized in Figure 2.

As shown in Figure 2, the account is overseen by a committee that includes representatives from a broad group of stakeholders. The amount of water needed by the account is determined through independent peer review and by monitoring the impact of the account on endangered species protection and recovery. Water supplied to the account, and funding for the account's operation, come from a variety of sources.

ISSUES FOR LEGISLATIVE CONSIDERATION

The EWA represents an entirely new program for the state. As shown in Figure 3 (see page 8), EWA raises a number of policy and operational issues, as well as issues about the program's impacts and accountability. Many of these issues have yet to be resolved by CALFED. We think that

the Legislature should evaluate the major issues in determining whether an EWA ought to be established and before potentially substantial state funds are committed to its operation. If the Legislature finds that the concept of EWA has merit, we recommend that the Legislature enact legislation

to define EWA and to provide for oversight of its operation.

In the sections that follow, we discuss the major policy and operational issues raised by EWA.

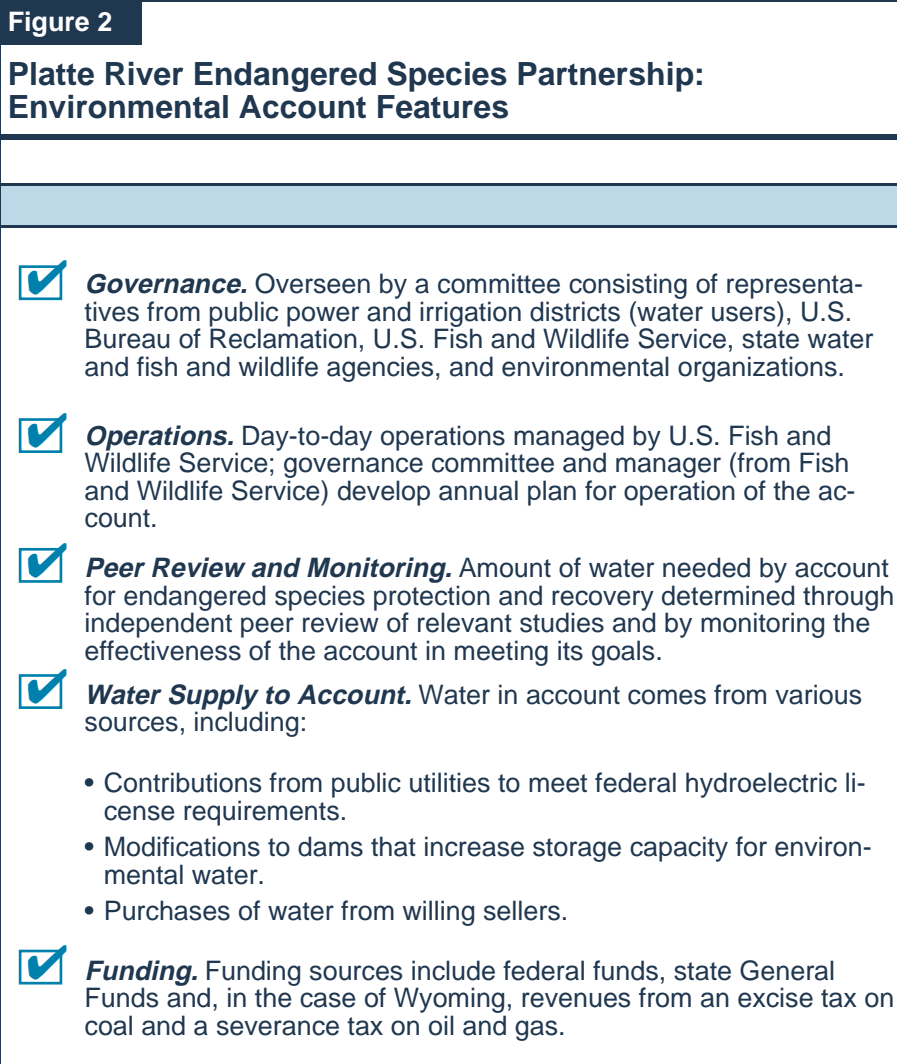
POLICY ISSUES

Should There Be EWA in the First Place? For the Legislature to assess the merits of EWA, the costs, benefits, as well as other potential impacts,

of such a program should be examined. As discussed further below, at the present time EWA's costs are uncertain and the anticipated benefits of the program depend on uncertain assumptions, particularly regarding the amount of water needed for fish protection and the amount of water available for purchase from willing sellers. The Legislature will need substantially more information than is currently available before it can make a full evaluation.

In addition to better information on costs and benefits, the Legislature should also have information on various potential impacts of the program, including the impact on private market water transfers and groundwater resources. Specifically, buying and transferring water to EWA could potentially "crowd out" other non-EWA-related transfers. Information on the potential impact would be needed for the Legislature to determine the priority of EWA transfers versus non-EWA transfers in accessing any available capacity of an aqueduct or storage facility.

An unknown portion of EWA water would likely be





stored in and pumped from groundwater basins. Storing and pumping groundwater for EWA purposes could reduce groundwater quality, cause soil subsidence, as well as raise conflicting claims on groundwater. Such potential impacts should be evaluated. Additionally, because groundwater use is currently managed through a patchwork of local ordinances and groundwater management plans, it is not certain to what extent adverse impacts of EWA on groundwater could be mitigated. The Legislature would have to determine the extent of mitigation and to assure adequate monitoring of the program's impact on groundwater.

What Is the State's Role, Particularly in Terms of Funding? If the Legislature approves the creation of EWA, it should also determine the appropriate state role to implement it. In particular, the Legislature should determine the extent state funding should be provided.

In addressing funding for EWA, the Legislature will need to consider both the level and source of funding. As regards funding source,

there are reasons to fund EWA from both the General Fund and fees. Given that there is a *statewide* interest in ensuring reliable water supplies for all beneficial uses (including agricultural, urban, and endangered species protection/recovery purposes), some General Fund support for EWA would be appropriate. Some fee-based

Figure 3

Environmental Water Account: Issues for Legislative Consideration

Policy Issues

- Should there be an Environmental Water Account (EWA) program?
 - Costs, benefits, and impacts (on water transfer market, groundwater resources, et cetera) need to be evaluated.
- What is role for state? To what extent should state provide funding for EWA?
- Should regulatory "commitments" of fishery agencies regarding EWA's operation be put in statute?

Operational Issues

- How should EWA be governed?
- For what purposes should EWA water be used?
- How much water does EWA need? Can this amount reasonably be acquired from willing sellers and other sources?
- What is role for scientific review and how should it be structured?
- How can water transfers—a fundamental component of the EWA—be facilitated?
- How can EWA's water storage needs be met?
- How can EWA be held accountable to Legislature? Is there a role for scientific review to monitor the effectiveness of EWA?

support from water users contracting with the state and federal water projects would also be appropriate since EWA directly benefits these water users. This is because, in the absence of EWA, additional operating restrictions that potentially reduce water deliveries could be placed on the water projects to address endangered species concerns. Since compliance with endangered species laws is a responsibility of the state and federal water projects, EWA in effect reduces the compliance burden for these projects.

The CALFED appears to have conflicting views about how EWA should be funded. On one hand, CALFED has adopted “the beneficiary pays” as the guiding principle to fund its programs overall. (In other words, those who benefit from a program should pay for the program.) On the other hand, the five fishery and water agencies set to administer EWA have agreed that the account’s operation will not result in an increase in costs to parties contracting for SWP and CVP water. This is so even though these contracting parties would benefit from EWA’s making water deliveries more certain.

We think that “the beneficiary pays” is an appropriate principle to guide the funding of environmental regulatory programs. Applying this principle to EWA, we think that the water project operators (and their customers) should bear at least some of the costs for the EWA. As mentioned above, EWA helps water project operators meet their regulatory responsibilities under endangered species laws.

In evaluating funding alternatives, the Legislature might also consider enacting a tax credit for

the donation of water (or water rights) that increases in-stream flows to protect fish and wildlife. Similar tax credits in other states, including Oregon, have resulted in substantial increases in water dedicated to protect fish and wildlife.

Should the Regulatory Commitments Be Put in Statute? As part of ROD, the three fishery agencies have agreed that, for the first four years of EWA, they will *not* impose additional regulatory requirements for endangered species protection (beyond the existing regulatory baseline) that curtail CVP/SWP water deliveries. This “commitment,” however, is contingent upon funds being provided for EWA. The three agencies have agreed that as water needs arise for fish protection, all available measures—including water purchases by EWA—will be taken to make water available in ways that do not reduce contracted SWP/CVP water deliveries. However, as a last resort, SWP and CVP would potentially reduce water deliveries if EWA and other measures fail to produce the water needed to prevent harm to the fish.

Proposed federal legislation which has not been enacted would put in statute the commitment of the *federal* fishery agencies regarding future endangered species-related regulatory actions. Likewise, the Legislature may wish to consider whether to put the commitment of the *state* fishery agency in statute.

We think that putting the regulatory commitment in statute has both advantages and disadvantages. For example, putting the commitment in statute would provide greater certainty that future water deliveries would not be reduced. As a result,



parties may be more willing to sell water to EWA today. On the other hand, by putting the commitment in statute, the Legislature may feel obligated to fund EWA in future years at levels that allow the commitment to be met. This may limit the Legislature's flexibility to determine its future funding role, given that it has yet to evaluate the outcomes and impacts of an operational EWA.

OPERATIONAL ISSUES

How Should EWA Be Governed? The governance structure identified by CALFED for EWA is vague. It is not clear how the five fishery and water agencies will cooperatively manage the account among themselves and with an unspecified number of stakeholders. The involvement of so many parties in EWA's management could make decision making cumbersome.

We think that more details on the proposed governance structure should be provided to the Legislature. After evaluating CALFED's proposal, the Legislature should statutorily specify the governance structure. We think that the Legislature should consider assigning management responsibility to a smaller, rather than larger, number of entities to create a more efficient and accountable decision making process.

For What Purposes Should EWA Water Be Used? Some parties have expressed concern that water deposited in the program's water account might also be leased or sold to meet growth in water demand by agricultural and urban users, rather than as a means to address environmental water needs. We think that the Legislature should

specify the eligible uses for water deposited in the program's water account. For example, the Legislature might specify that EWA water be used solely for the benefit of threatened or endangered species and their habitat. Alternatively, the Legislature might provide some flexibility, for example, by authorizing EWA water to be transferred to nonenvironmental users in exchange for habitat improvements.

What Amount of Water Is Needed to Make EWA Work, and Can the EWA Acquire This Amount? A number of parties have questioned whether CALFED's estimate of an annual need of 380,000 acre-feet of water for EWA is the "right" number. This issue is particularly important because the five fishery and water agencies designated to implement EWA have committed to purchase additional water if the 380,000 acre-feet amount proves insufficient for fish protection. As a result, the funding needs for EWA are uncertain.

Even if the 380,000 acre-feet amount turns out to be sufficient for fish protection, it is questionable whether this amount would be available for purchase from willing sellers. If this amount of water is not available for purchase, then EWA is unlikely to meet its goal of avoiding additional future reductions in state and federal water project deliveries. Thus, prior to determining whether EWA merits state creation and funding, we recommend that CALFED be directed to provide information to the Legislature to support its assumptions about the amount of water likely to be available for purchase by EWA.

What Is the Role for Scientific Review, and How Should It Be Structured? At recent congressional hearings on Central Valley water management, some legislators expressed concern about the lack of scientific peer review of the EWA proposal. While CALFED proposes that a scientific panel be established, there are few details on how the panel would conduct its review. We think that a scientific panel could serve an important role in determining such fundamental matters as how much water should be in the account to protect fish species. Additionally, the scientific panel could assess the effectiveness of EWA in improving endangered species protection and recovery and water supply reliability. We think that the Legislature should define the panel, by identifying its composition and responsibilities, how it will be funded, and how the panel's input should be incorporated into the operations of EWA.

How Can Water Transfers Be Facilitated? The acquisition of water by EWA would involve "water transfers"—the sale or lease of water rights or of contractual rights to be supplied water. However, as described in our September 1999 report, *The Role of Water Transfers in Meeting California's Water Needs*, there is a need for clearer, more consistent water transfer laws in order to facilitate water transfers in the state. In particular, there is a need to clarify and/or strengthen laws governing:

- ◆ Access to and the cost of utilizing water conveyance facilities, such as aqueducts, for purposes of water transfers.

- ◆ Protection afforded "third parties," including local economies, that are impacted by transfers.

Since water transfers must be facilitated for EWA to operate, these issues must be addressed if the program is to work effectively.

How Can Water Storage Capacity Needs Be Met? For EWA to work well, it must be flexible enough to release water in a timely manner to meet fish protection needs efficiently. This would require adequate capacity to store water transferred into the account as well as to access that water. With or without EWA, the Legislature will increasingly be called upon to address needs for increased water storage in light of projected growth in total water demands.

Accountability. Most parties view EWA as an "experiment." However, there is currently no mechanism through which this new program would be held accountable to the Legislature.

If EWA proceeds, we recommend that the Legislature require CALFED to periodically report to the Legislature on the actions taken under EWA, and to provide an in-depth evaluation after the program's initial four years. Specifically, the reports should include information on the (1) amount, cost, and source of water deposited to date in the program's water account; (2) extent to which EWA has prevented additional endangered species-related requirements for water projects that reduce water deliveries; (3) impact of EWA on endangered species protection and recovery; (4) impacts of EWA on the water transfer market-



place and groundwater resources, and any other observed adverse impacts that need addressing; (5) breakdown of funding sources to date, and projected future funding needs for EWA; and (6) any recommended statutory changes to improve EWA's effectiveness. We think that this

information would enable the Legislature to evaluate EWA's effectiveness in creating more flexibility and reliability in the water supply system while providing sufficient water for fish protection and recovery.

RECOMMEND LEGISLATIVE HEARINGS

The EWA has a potentially important role in meeting the CALFED goals for ecosystem restoration, water supply reliability, and water quality, and is generally favored in concept by most stakeholders. However, we believe that many of the practical questions listed above need answers before the Legislature can be assured that EWA is an effective solution to the problems it is designed to address.

Therefore, we recommend that the Legislature hold oversight hearings to evaluate CALFED's proposal for EWA. At such hearings, the Legislature will be able to assess CALFED's progress in dealing with these issues, and to determine the appropriate role for the Legislature in setting parameters for the creation and implementation of EWA.

One opportunity for the Legislature to evaluate EWA this coming session will be when it considers legislation to authorize the expenditure of the General Fund appropriation in the *2000-01 Budget Act* for CALFED programs. In the interim, we recommend that the Legislature direct the administration not to authorize CALFED to borrow from Proposition 204 bond funds to support EWA. Instead, funding for EWA should await the enactment of legislation that would authorize the use of General Fund support for various CALFED programs. Additionally, the Legislature will be called upon to evaluate EWA as part of its review of the Governor's 2001-02 budget proposal.

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