CALFED
BAY-DELTA
PROGRAM

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Memorandum

Date: November 18, 1997

To: CALFED Policy Group

From: Lester A. Snow, Executive Director
CALFED Bay-Delta Program

Subject: Adequacy of CALFED Approach to Agricultural Water Use Efficiency

Summary

There is continuing concern over the adequacy of the CALFED approach to agricultural water use efficiency and lack of consensus on whether it is rigorous enough to ensure efficient water use by the agricultural sector. CALFED's proposed program relies on the Agricultural Water Management Council and the agricultural MOU. Specific concerns are that the approaches to water measurement and conservation pricing in the MOU are too weak (the agricultural MOU and CVPIA take different approaches to these actions) and that CALFED's reliance on the agricultural MOU results in inadequate assurance of efficient agricultural water use.

The current draft CALFED approach to agricultural water use efficiency calls for CALFED to provide an opportunity for the voluntary AWMC to provide demonstration and assurance of efficient use. The draft approach further proposes that:

> "If an acceptable majority of agricultural water suppliers have not prepared, adopted, received Council endorsement, and begun implementation of their agricultural water management plans by January 1, 1999, then legislative and regulatory mechanisms will be triggered. An acceptable majority includes irrigation districts that serve water to at least two-thirds of the total acreage served by districts in the CALFED solution area, including the Imperial Valley. [This is approximately 5.5 million acres.] A period of two years from development of the CALFED water use efficiency approach was selected because it accommodates a two year planning cycle as described in the agricultural MOU, and it is short enough so that adequate assurances mechanisms can be put in place before Phase III of the CALFED Bay-Delta Program is initiated."

The legislative and regulatory mechanisms would include:

"...an Agricultural Water Management Planning Act patterned closely after the existing Urban Water Management Planning Act and policies of CALFED agencies, as well as additional assurance mechanisms patterned after those that are applied to urban agencies as part of the Bay-Delta Program. These assurance mechanisms will need to be enacted before any CALFED Phase III water supply activities can begin."

In addition, CALFED has proposed conditions to receive program benefits:

"CALFED and the CALFED agencies will implement three general policies to provide assurance of efficient use. Demonstration that appropriate water management planning is being carried out and that cost-effective efficiency measures are being implemented will be necessary prerequisites for an agency to be eligible to:

- receive any "new" water made available by a Bay-Delta solution,
- participate in a water transfer that requires approval by any CALFED agency or use of facilities operated by any CALFED agency, and
- receive water through the DWR Drought Water Bank (this is already a policy of DWR).

Action Item

The Policy Group will be asked to advise CALFED staff on the refinement of the approach to agricultural water use efficiency:

- Should CALFED continue to base the approach to agricultural water use efficiency on the Agricultural Water Management Council? What other actions should be included, either in addition to or in place of the current approach?

- Should CALFED consider strengthening the "conditions to receive program benefits," including the transfers strategy, to address general concerns?

These questions may be answered through discussion by the full Policy Group. Additional focused discussion by representatives of a few CALFED agencies may also be a productive way to develop consensus.

Background

This section includes two items: a description of the CALFED agricultural water use efficiency program as it was proposed in March 1997, and a comparison of different approaches to agricultural water measurement and pricing.

CALFED Agricultural Water Use Efficiency Program

The agricultural approach recognizes a clear standard for voluntary agricultural water management planning and a balanced process for recognition of adequate programs of planning and implementation. The approach is supported by planning and technical assistance, financing assistance, and proposed assurances.

1. Water Management Planning and Implementation

Purpose: Provide a uniform, verifiable, locally directed process for agricultural water management planning. Provide a balanced process for review and endorsement of water management plans. Identify and implement opportunities for improved local water use management and efficiency with a focus on water conservation at the water supplier level.

This action is based on the *Memorandum of Understanding Regarding Efficient Water Management Practices by Agricultural Water Suppliers in California* (Agricultural MOU). This MOU is an agreement between signatory agricultural water suppliers and signatory environmental organizations. It was developed by an advisory committee formed pursuant to California State legislation in 1990. The bill number of the legislation was AB 3616, so the MOU and the process that produced it are sometimes referred to by this bill number. The agreement calls for signatory water suppliers to prepare water management plans and submit these plans to a Council composed of representatives of all MOU signatories, including water suppliers and environmental organizations. This Council endorses, or withholds endorsement, of each water management plan. Signatory water suppliers also agree to submit annual implementation progress reports to the Council. The MOU calls for water suppliers to implement certain measures called Efficient Water Management Practices, and to evaluate other Efficient Water Management Practices according to a specified analysis method, implementing those found to be feasible and cost-effective.

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The CALFED Program proposes that all agricultural water suppliers should prepare, adopt, and implement water management plans. This is consistent with public policy, state law, and public comments made during scoping for the CALFED Bay-Delta Program. The Agricultural MOU provides a uniform, verifiable, locally directed process for agricultural water management planning.

In addition, the Agricultural MOU provides a process for balanced review and endorsement of plans and implementation progress reports that meet the standards of the MOU. All agricultural water suppliers should submit plans and implementation reports to the Agricultural Water Management Council formed under the terms of the Agricultural MOU for endorsement. Plans may be those prepared by signatory or non-signatory water suppliers which meet the terms of the Agricultural MOU, or conservation plans prepared by Central Valley Project contractors pursuant to the Water Conservation Criteria prepared by the U.S. Bureau of Reclamation.

This part of the water use efficiency common program is supported by proposed assurances. Please see Action 5 below.

2. Technical and Planning Assistance

Purpose: Ensure that lack of technical and planning expertise does not impede implementation of cost-effective measures by providing easily accessible assistance for planning and implementing local water use management and efficiency improvements.

Technical and planning assistance is vital to the successful achievement of agricultural water use efficiency. Assistance can be directed either at *identification* of opportunities (water management planning, guidebook development, conservation program planning) or at *implementation* of opportunities (short courses, CIMIS irrigation schedules, mobile labs, technical review). Currently, both DWR and USBR provide this kind of assistance directly to their contractors as well as to other water suppliers. Agencies such as the Cooperative Extension and the U.S. Department of Agriculture also provide assistance, including programs directed at water management and efficiency improvements. Under this action, both DWR and USBR will continue to provide technical and planning assistance. Assistance programs will be expanded as necessary to ensure that lack of technical and planning expertise does not impede implementation of cost-effective measures.

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Additional assistance may be provided through local programs operated by Resource Conservation Districts, commodity groups, the Agricultural Water Management Council, or water districts themselves.

3. Funding Assistance

Purpose: Ensure that lack of financing ability does not impede implementation of cost-effective measures. Provide easily accessible funding for planning and implementing local water use management and efficiency improvements.

Funding assistance is an integral part of the successful achievement of agricultural water use efficiency. CALFED will facilitate the implementation of local water use management and efficiency improvements by making available flexible funding assistance programs. Funding assistance for water suppliers and end-users, such as existing programs available through DWR, USBR, EPA and others, will continue under this action. Determination of most appropriate programs and levels of funding will be made in coordination with CALFED agencies, consistent with the principle that lack of financing ability should not impede implementation of cost-effective measures. Examples of funding programs include low interest loans, grants, direct financing, rebate programs, and bond pooling.

Funding assistance may be made available directly through State or federal agencies or through regional cooperative groups (e.g. Resource Conservation Districts, Cooperative Extensions, commodity boards), to local water suppliers or individual water users.

4. Management Improvements to Achieve Multiple Benefits

Purpose: Help to meet CALFED objectives, including those related to ecosystem quality and water quality, by encouraging districts to identify opportunities for improvement when preparing water management plans, and creating incentives for implementation.

The planning process described in the Agricultural MOU includes completion of a net benefit analysis which, among other things, will help districts identify environmental benefits and impacts associated with the implementation of Efficient Water Management Practices. Use of the net benefit analysis creates an opportunity for districts to simultaneously identify other local water use management and efficiency improvements which might meet CALFED objectives by improving water quality or ecosystem health. In many instances, it is not cost-effective for local suppliers or water users to implement or even identify opportunities that

address these benefits. Yet, from a regional or statewide perspective, implementation of these types of actions can be justified. If additional technical and planning assistance could be provided to districts while they are conducting the net benefit analysis, it would offer an excellent chance to identify additional actions that might improve water quality or ecosystem health.

Incentive payments could be used to encourage implementation of practices that meet CALFED objectives and yield environmental, water quality, or water supply benefits but which are not cost-effective at the local water supplier or water user level. The amount of the incentive payment would need to be sufficient to make the practice cost-effective for the implementing individual or district. For example, incentives could be offered to encourage installation of on-farm measures to improve water quality, or for district level measures to vary the timing of diversions in ways that benefit fish species.

CALFED will take steps to further develop a proposed program to implement management improvements to achieve multiple objectives. These steps may include the following. First, similar programs will be identified and examined. If it appears appropriate, an advisory committee will be established to help define the most effective program. Once a program is better defined, CALFED agencies will assist with implementation, perhaps by developing a guidebook to help districts and interested parties identify opportunities. CALFED agencies may also provide planning or financial assistance to help districts use the guidebook and identify opportunities. Finally, CALFED will provide financial incentives to make identified opportunities cost-effective for local suppliers or users when these opportunities help meet CALFED objectives and priorities. Development of this program will require close coordination with other parts of the CALFED Bay-Delta Program including ecosystem quality, water quality, financing, and assurances.

5. Assurances for Agricultural Water Use Efficiency

Purpose: Provide assurance that agricultural water supplies are used at highly efficient levels.

The CALFED approach to agricultural water use efficiency is based on irrigation districts' cooperation with a voluntary program of planning, analysis, and implementation. While this approach is most desirable from the perspective of water users, it does not provide strong assurance that planning, analysis, and implementation of cost-effective measures will be pursued. Therefore, two categories of assurances are proposed: general assurances, and additional assurance mechanisms tailored to the proposed CALFED approach for agricultural water use efficiency.

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The general mechanisms provide assurance that appropriate water management planning is carried out by local agencies and that cost-effective efficiency measures are implemented. Demonstration of appropriate planning and implementation will be necessary prerequisites for an agency to be eligible to receive any "new" water made available by a Bay-Delta solution, participate in a water transfer that requires approval by any CALFED agency or use of facilities operated by any CALFED agency, or receive water through the DWR Drought Water Bank (this is already a policy of DWR).

In addition to these general assurances, another mechanism (described below) is proposed to provide this assurance. This proposed agricultural assurance mechanism will be considered together with all other Program assurance needs in developing a final package of assurances.

If an acceptable majority of agricultural water suppliers have not prepared, adopted, received Council endorsement, and begun implementation of their agricultural water management plans by January 1, 1999, then legislative and regulatory mechanisms will be triggered. An acceptable majority includes irrigation districts that serve water to at least two-thirds of the total acreage served by districts in the CALFED solution area, including the Imperial Valley. A period of two years from development of the CALFED water use efficiency approach was selected because it accommodates a two year planning cycle as described in the agricultural MOU, and it is short enough so that adequate assurances mechanisms can be put in place before Phase III of the CALFED Bay-Delta Program is initiated. Technical analysis to support the Council's decision of endorsement will be provided by DWR.

If a voluntary program of planning, analysis, and implementation does not meet the criteria described above, then CALFED agencies will work to establish legislative and regulatory policies for agricultural water users that are patterned after those that apply to urban water users. This includes an Agricultural Water Management Planning Act patterned closely after the existing Urban Water Management Planning Act and policies of CALFED agencies, as well as additional assurance mechanisms patterned after those that are applied to urban agencies as part of the Bay-Delta Program. These assurance mechanisms will need to be enacted before any CALFED Phase III water supply activities can begin.

Approaches to Agricultural Water Measurement and Pricing

The *Memorandum of Understanding Regarding Efficient Water Management Practices by Agricultural Water Suppliers in California* requires each water supplier to "measure or calculate the volume of water delivered within a reasonable range of accuracy,"

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and to "undertake a net benefit analysis" of water measurement. A water supplier's "current form of implementation will suffice if the supplier demonstrates that no other form of measurement or calculation will improve net water management benefits over current practice." Regarding pricing, the Ag MOU requires water suppliers to include pricing or other incentives "in some form in the Water Management Plan." A supplier's "current form of implementation will suffice if the supplier demonstrates that no other form of pricing and incentives will improve net water management benefits over current practice."

On the other hand, the CVPIA *Criteria for Evaluating Water Conservation Plans* require districts to "measure, with a maximum error of 6%, the volume of water delivered by the District to customers" and "implement pricing and billing procedures that provide incentives for more efficient use and management of water and reduced drainage."