

CALFED Issue Paper
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Issue statement: Assumptions regarding water use efficiency and water available for transfer.

Some stakeholders and agencies are concerned that the CALFED Program (especially the Water Use Efficiency Component Technical Appendix) currently reflects a limited assessment of potential benefits of water use efficiency.

Additionally, analysis of transfer potential appears to be based on a questionable calculation of water available for transfer.¹ For example, the CALFED documents may underestimate the extent to which conservation measures can result in water supplies available for transfer (i.e., "reallocable" water).

Action: The Management Team is asked to place immediate, higher priority on additional work efforts (including workshops and use of an expert panel) to improve analysis of potential benefits of water use efficiency measures.

Background: The Water Use Efficiency Component Technical Appendix, in its discussion of the potential for water use efficiency measures, appears to rely on a number of basic assumptions which skew the analysis. Examples of these assumptions are:

(1) Only changes in the amount of irrecoverable water ('new water') constitute an improvement in water "supply" that would be available for other beneficial uses, including water transfers.² The premise that recoverable water cannot be reallocated to other beneficial uses assumes existence of full, legitimate use of the water returned "downstream" or to groundwater supplies. This premise overlooks the possibility that downstream users of return flows do not have legal rights to the water and are enjoying 'free' benefits. For example, analyses based on this assumption fail to distinguish between re-use of native (in-basin) water and imported water.³

Additionally, some critics believe that there is need for better documentation of the types, timing, quantities, and other aspects of water use/ reuse within a basin. For example, more needs to be known about the various ways in which specific water use efficiency actions would in fact impact other beneficial uses within a basin through changes in water quality, instream flows, number and timing of diversions, and so forth.

(2) Failure to consider the significance of evaporation associated with current irrigation methods.⁴

As a practical matter, water managers contemplating making conservation investments to save and sell water will consider whether there are 'downstream' users able to establish a right to continued secondary use, and whether there are institutional or technical barriers to transferring that water. From the broader (e.g., CALFED) perspective, the significant

considerations are circumstances in which reallocations constitute unacceptable redirected impacts (i.e., addressing external effects of transfers).⁵

Solution options:

Water use efficiency assumptions and analyses:

1. CALFED should sponsor immediate efforts (including public workshops and an expert panel) to examine the assumptions regarding water use efficiency measures in both the urban and agricultural sectors from a legal, institutional and technical perspective. Products of this work would be to identify additional information needs and strategies to obtain the information.
2. For Phase II and Program implementation phases, CALFED should develop more complete information on water reuse in the agricultural sector. Limitations of information available for the Phase II document should be disclosed. In the absence of complete information, CALFED should represent the potential benefit of agricultural water use efficiency (currently estimated at 160,000 af) as a minimum.

Transferable water:

3. The CALFED documents should delete any text suggesting that the Program assumes that recoverable water cannot be reallocated. It would be appropriate to discuss differing views regarding this issue in the context CEQA/NEPA responses to comments and disclosure of issues.

Endnotes:

1. See, for example, Water Use Efficiency Component Technical Appendix Table 1.2, page 1.7.
2. This assumption appears to underlie much of the analysis of the TA. See, for example, pages 1-4 to 1-8 and p. 4-1.
3. For example, there are cases finding that subsequent users' rights to reuse imported water are more limited, in that the importer of water retains more rights in subsequent uses for that water. See *City of Los Angeles v. City of San Fernando*, et al, 14 Cal. 3d 199 (1975) and SWRCB Decision 1638 (1997).
4. In current computations for determining consumptive use, the crop evapotranspiration is considered a fixed value regardless of irrigation methodology. The relationship between evaporation and transpiration could be segregated; reductions in evaporation (associated with irrigation methods which "save" water) could produce additional, transferable supplies.
5. In modifying the assumptions, CALFED could also emphasize that direct and indirect (including socio-economic/ third party) impacts of transfers must be identified and addressed through appropriate mitigation or other compensation. Work within the economic analysis team can establish scenarios which include water transfers for impact scenarios. The economic analysis should link to related environmental and socio-economic impacts and should shed light on potential transfers impacts; iteratively, impact analysis should help define bounding conditions for transfers.