

10/7/96

CALFED AERT MEETING - October 2, 1996

Topic: Time Value of Water

Attendance

See attached Attendance List.

Introduction

A meeting was held of the CALFED AERT to discuss the Time Value of Water. Dick Daniel introduced the meeting and the subject of Time Value. He stated that he had received considerable comment on the Technical Memo distributed on the subject. He reiterated that the tool was not intended for comparisons of alternatives, but was developed primarily for refining components in Phase II process. He acknowledged that it could be used to compare alternatives.

Purpose and Objectives

Time Value of Water serves three objectives:

1. support for developing flow targets of the Ecosystem Restoration Component
2. support for developing Storage and Conveyance Components
3. means for prescribing allocations of ecosystem water provided by Ecosystem Restoration and Storage Components.

Overhead Presentation

Dick Daniel presented a series of overheads on the Time Value methodology. His first slides introduced the subject with examples of hydrographs for Delta outflow, the Yuba River, the Tuolumne River, and the Sacramento River near Red Bluff. The hydrographs were offered as a place to start when determining the time value of flow at specific locations in the basin.

The second group of slides were on the Time Value work sheets and how time values are developed, along with several examples. Dick introduced two time value concepts: one for eco-value of net flow at a location, and one for eco-value of water diverted at a diversion point.

Comments and Questions

George Barnes suggested that the method had a fundamental flaw in that it ignores natural variations in hydrology and should not be used to set or target minimum flows. He suggested that the value of flow at any specific location depends on the recent history of flows not just the flow at that time. Dick Daniel responded by stating the method would not be used to set minimum flows in rivers, rather to develop habitat targets.

Alice Low asked whether the CALFED 400 TAF of ecosystem water was CVPIA water or new water. Dick Daniel responded that it may be new water.

Alice further noted that the methodologies used by CALFED were quite different than those devised for the CVPIA Water Management Plan (WMP). Methods used to determine so-called b(3) water - purchase of non-CVP water - involved setting priorities on each block of water above that already provided for the streams baseline. Dick noted that the methods seemed very similar. Alice stated that the Time Value method was too quantitative being numerical, whereas the WMP method simply set a priority and not a value. She further stated putting numbers in the boxes (increments of flow in a stream) would be dangerous. Biological judgement on priorities would be difficult to translate into numerical value.

Steve Ford stated that he felt that he had no problem with the basic concept with setting values for the water, but he did have a problem with setting monthly weights and weights among the various resource values at a location. He felt the values set would be very sensitive to changes in the weighting scheme, and that the process of gaining consensus on the weighting factors would be very difficult.

Liz offered that there is nothing inherently wrong with setting values in terms of numbers, as long as the values could later be adjusted as part of the adaptive management process that used results of the restoration program and real-time monitoring.

Sharon Gross thought the problem some people had with the Time Value concept was one of perspective, and that the Time Value approach had the added benefit of being reproducible.

Rick Britenbach suggested that if the WMP approach works, then why not try it. People may be more likely to come to consensus on a non-quantitative approach.

Pete Chadwick thought that the CVPIA-WMP process may not be supportable since the CVPIA-AFRP process led to flow targets that were simply far too high for stakeholders to support. Dick Daniel added that CALFED is trying to improve upon the CVPIA process.

George Barnes was unsure whether Time Value is measurable or quantifiable. He applauds the effort, but there are too many tradeoffs to be made - the mix of resources competing for the water makes it a difficult process that will be difficult to defend. For example, there should be some potential value of carrying over storage and saving water

10/7/96

DRAFT CALFED AERT MEETING 10/2/96
STAFF NOTES

for dry years¹. He is OK with the time value of exported water, but feels assumptions are incorrect.

Larry Puckett offered that a different approach by CALFED could lead to trouble for CVPIA-WMP. He is concerned about the difficulty in explaining the more complicated CALFED methodology. It appears to him that we are all fighting over the same bone. Dick suggested that the Time Value concept was complimentary to the CVPIA process.

Steve Ford also supported the time value of export water at different diversion locations and suggested involving Dan Odenweller and Daryl Hayes.

Pete Chadwick noted that the weighting factors for export values must also be carefully developed and simply using historical salvage numbers was not sufficient for weighing factors. He stated that he was most intuitively more comfortable with the empirical approach.

Stein Buer related that preliminary model runs indicated that a 3 MAF storage facility west of Chico Landing could provide up to 900 TAF of yield per year. The problem was a lack of carry-over storage in extended drought periods. When you really need water there is usually none left in storage for release.

Dick Daniel felt that water supply reliability should increase during a drought with such new available storage.

Where Do We Go From Here - Action Items

Larry Puckett suggested coordinating development and implementation of Time Value concept with FWS CVPIA-WMP and PEIS.

Steve Ford stated that going ahead with the Time Value development would be something along the lines of a HEP study including consensus building and buy-ins on the process. He added that there would be a need to determine the range of uncertainty for time values. He further added that helping others to fully understand the Time Value methodology will be necessary in the future.

Sharon Gross stated that the Time Values were simply a stated set of hypotheses developed for later testing and refinement through the adaptive management process.

Dick Daniel stated that we would continue trying to build consensus on time values, and that it would be a realistic tool if we could get buy-in.

¹ The original time value concept included maintaining ecovalues for each increment of storage in the reservoirs.