DRAFT DISCUSSION PAPER

GEOGRAPHIC SCOPE
~~**AUGUST 14, 1995**~~
October 3, 1995

Introduction

The appropriate scope of analysis and action for the CALFED Bay-Delta Program (**Program**) has been under discussion for the past several months. Establishing an appropriate geographic and issue scope is essential to the success of the Program. A scope that is too narrow, while expedient, may result in issues not being addressed in a comprehensive fashion. A scope that is too large may result in an overly complex planning process causing difficulty in developing implementable solutions.

An approach which has evolved through both technical and public forum discussions is to use a tiered geographic scope focusing on the Bay-Delta system for purposes of problem definition, while allowing solution generation over a much broader area. Specifically, the CALFED Bay-Delta Program proposes to address problems which are manifest in or closely linked to the Suisun Bay/Suisun Marsh and Delta area. However, the scope of possible solutions to those problems would encompass any action which can be implemented or influenced by the CALFED agencies to address the identified problems, regardless of whether its implementation takes place within the Delta/Suisun Bay/Suisun Marsh area (see figure 1).

This approach to problem and solution scope has raised some concerns. In particular, questions have been raised about whether the Program will address (1) interactions between the Delta and San Francisco Bay and (2) South of Delta water management (e.g., water conservation). With respect to San Francisco Bay, outputs from the Bay-Delta problem area (e.g., flow or sediments) needed to protect the rest of the Bay are within the scope of the Program. However, problems which originate outside the problem area (e.g., toxic discharges into the South Bay) are not. With respect to South of Delta water management, the output of water from the problem area into the export pumps has been identified as a problem. Part of the solution to that problem may be changes in the way water is managed South of the Delta.

Geographic and Issue Scope for Problems

The geographic scope for the CALFED Bay-Delta Program will consist of the legally defined Delta, Suisun Bay (extending to the Carquinez Strait) and Suisun Marsh. For purposes of this Draft Discussion Paper, this geographic area will be simply called the "Bay-Delta".

Any problem currently associated with (1) the management and control of water or (2) the beneficial use of water within the Bay-Delta[1] (including both environmental and economic uses) is within the purview of CALFED Bay-Delta Program provided that at least part of the problem is manifested within or closely linked to the Bay-Delta. This general definition can be further broken down into two general (and overlapping) perspectives: (1) the Bay-Delta as a region in its own right; and (2) the Bay-Delta as one piece of a complex and interconnected water/ biological system. Taking each perspective in turn:

The Bay-Delta as a region in its own right. Viewed without reference to the outside world, the Bay-Delta has numerous characteristics which fall under the aegis of the Program. For example: ~~Delta~~ habitat; ~~Delta~~ farming; ~~Delta~~ recreation; ~~Delta~~ resident fish, ~~Delta~~ plant species and wildlife; ~~Delta diversity;~~ Within-Delta municipal and industrial uses; and Delta infrastructure

~~Note that the Program is not committed to solving problems and providing benefits within each of these categories. Rather, as noted above, the Program will only address problems within these categories associated with (1) the management and control of water or (2) the beneficial use of water. However, as discussed in more detail below, the Program will identify impacts on each of the categories from the proposed solutions and propose mitigation for any impacts.~~

The Bay-Delta as one piece of an interconnected water/ biological system. Many things, from water and water quality constituents to fish and birds, move across the boundaries of the Bay-Delta, whether into the Bay-Delta, out of the Bay-Delta, or across the Bay-Delta. Problems with these various "inputs" and "outputs" fall under the aegis of the Program, provided that at least part of each problem is manifested in or closely linked to the Bay-Delta. Examples of Bay-Delta inputs and outputs which might trigger the identification of a problem within the purview of the Program include:

INPUTS	OUTPUTS
Inflow patterns	Delta outflow patterns
Toxic inflows	Toxic outflows
Salinity inflows	Salinity outflows
Nutrient inflows	Nutrient outflow
In-migrating fish	Out-migrating fish
In-migrating birds	Out-migrating birds

[1] The California Code of Regulations, Title 23, Sections 660 - 674, lists a number of beneficial uses of water in California. Beneficial uses which are relevant to the identification of Delta problems are: Domestic Uses; Irrigation Uses; Municipal Use; Industrial Use; Fish and Wildlife Preservation and Enhancement Use; Aquaculture Use; Recreational Use; Water Quality Use; and Heat Control Use.

E-011391

Temperature inflows

Temperature outflows
Water diversion patterns
Water quality constituents in diversions
Entrainment of biota in diversions

Examples of problems which would be outside the purview of the CALFED Bay-Delta Program because they fail to qualify from either perspective include:

- Problems caused by discharges from wastewater treatment plants in the South Bay.
- Land subsidence in the Central Valley.
- Populations of fish in reservoirs.

Geographic and Issue Scope for Solutions

In contrast to the PROBLEM SCOPE, which excludes problems not manifested within or closely linked to the Bay-Delta, the SOLUTION SCOPE is quite broad, potentially including any action which could help solve identified problems. Thus, the geographical scope for solutions would expand to include at least the Central Valley watershed, the Southern California water system, and the Pacific Ocean.

An expanded solution scope is necessary because many problems related to the Bay-Delta are caused by factors outside the Bay-Delta. Moreover, an expanded solution scope is desirable from a planning point of view because more benefits may be generated at lower cost if solutions are not limited to the geographic Bay-Delta. For example, the problem of salmon populations is linked to the Bay-Delta because of high salmon mortality during salmon migrations. However, the problem of salmon populations goes far beyond the Bay-Delta. One response would be to reduce salmon mortality during salmon migration through the Bay-Delta. However, it might be less expensive or ecologically preferable to promote greater salmon production upstream.

Similarly, if water-borne organic carbon generated within the Bay-Delta is deemed to be a problem because it may form carcinogens during water treatment processes, one solution would be to reduce the production of organic carbon within the Bay-Delta or to shift the diversion point. Alternatively, water exporters may be able to improve water quality in a more cost-effective or ecologically preferable manner through new treatment technologies.

Solution Priorities

The Program cannot fully solve every ~~possible~~ problem ~~which falls~~ within its purview. Therefore, the Program will need to assign priorities to various problems. The Program will give highest priority to problems (as defined above) which are acute, of broad concern, ~~and~~ closely related to the Delta as a region or as an element in an interconnected water/biological

E-011392

system, and implementable by the Program or the CALFED agencies. Other problems will receive lower priority.

For example, the Bay-Delta is an ecological zone of major importance and a major element in an interconnected biological system (e.g., it is a migration corridor). Therefore, the problem of the Bay-Delta's environmental health, including inputs to and outputs from the Bay-Delta, will receive high priority. Similarly, the Bay-Delta is a key element in the water supply system. Therefore, problems with unsatisfactory water diversion patterns (volume and quality) will receive high priority.

~~On the other hand, the problems associated with of reduced pulse flows in San Francisco Bay would receive a lower priority (assuming it is within the problem scope) because the problem is only marginally related to the Delta (The Delta passes water released from above the Delta into the Bay, but is not a primary cause of reduced pulse flows.).~~

Dealing with the Impacts of Possible Solutions

The Program is charged with developing solutions to a number of identified Bay-Delta problems. Each possible solution to Bay-Delta problems, in turn, may have additional impacts, both within and outside the Bay-Delta (whether positive or negative). The Program will analyze carefully the possible negative impacts of various Bay-Delta solutions as part of the environmental review process and will take those impacts into consideration in the development of viable alternatives. Where impacts remain, the Program will develop mitigation measures as required by the environmental review process.

Integration with Other Processes

The CALFED Bay-Delta Program is not operating in isolation. Numerous other programs already exist to address some of the problems and solutions within the purview of the Program, particularly in the upstream areas. The Program will assess the degree to which existing processes are successfully dealing with problems from the perspective of the Program. Where existing processes are adequate, the Program may simply establish a linkage. Where existing processes are inadequate because of lack of funding or other institutional constraints, the Program may need to include recommendations to improve existing processes, include new actions in its various alternatives, or mobilize the CALFED agencies to advance the existing processes. In this way, the CALFED Bay-Delta Program will provide a framework to show how new and existing programs should be coordinated to achieve a comprehensive and lasting solution.