

# CALFED Bay-Delta Program Approach To Impact Analysis

## **Introduction**

This report summarizes the approach the CALFED Bay-Delta Program (CALFED) will use to determine the impacts of alternatives. The report is divided into sections, each of which describes the assessment methods that will be used to assess changes in each resource area. Each section discusses, in general terms, the types of effects that CALFED alternatives are likely to have on the resource being discussed, lists the changes to that resource that will be used to measure impacts of the alternatives and provides brief discussions of the methods CALFED proposes to use to conduct the programmatic impact analysis. The relationships between the analysis of the various resource areas are described briefly at the end of each section.

## **Background**

The CALFED Bay-Delta Program (CALFED) began in June 1995 as a collaborative effort to address a declining ecosystem, uncertain water supplies, imperiled water quality, and unstable levees in California's Bay-Delta region, where the San Francisco Bay meets the Sacramento/San Joaquin River Delta.

CALFED has divided its work into three phases. During Phase I, from June 1995 to September 1996, CALFED identified the problems, developed a mission

statement and several guiding principles (the "solution principles"), and designed three programmatic alternatives as possible solutions to Bay-Delta problems. In Phase II, from June 1996 to fall 1998, CALFED will conduct a broad-based environmental review of the three programmatic alternatives and will identify the single preferred program. Upon completion of Phase II and during Phase III, the preferred alternative will be implemented.

Each of the three programmatic alternatives is designed to address Bay-Delta problems comprehensively. The alternatives share common program objectives that include water-use efficiency, ecosystem restoration, water quality protection, and levee system improvements. The alternatives include a range of water storage options and differing conveyance configurations. Alternative 1 uses the existing system of Delta channels, alternative 2 uses the existing system with significant channel modifications, and alternative 3 uses both the existing system with significant changes and an isolated facility.

The environmental changes associated with each CALFED programmatic alternative will be analyzed in a Programmatic Environmental Impact Report/ Environmental Impact Statement (EIR/EIS) during Phase II. The primary purpose of the Programmatic EIR/EIS is to

inform decision makers about the environmental consequences of the alternatives and to identify a preferred alternative. Changes in resources, such as air quality, recreation, and cultural resources, will be analyzed to distinguish relative detrimental and beneficial impacts of each alternative.

### **Programmatic Impact Analysis and Assessment Methods**

Impact analyses are used to assess the potential beneficial and detrimental impacts of each alternative by evaluating important changes to resources. Assessment methods are the tools that will be used to evaluate these important changes. The results will be used in the programmatic impact analysis to determine the effects of CALFED actions, components, and alternatives.

Assessment methods may include:

- **qualitative descriptions**: general narratives or written hypotheses, assembled from existing information, that provide a reasonable scientific basis for predicting environmental impacts and benefits;
- **quantitative indices**: quantitative estimates that provide a relative measurement of impacts and benefits; and
- **models**: series of interacting or complex relationships, variables, and weighting factors that provide a quantitative measurement of impacts and benefits.

Qualitative descriptions based on existing studies, historical data, and expert opinion will be used when no specific quantitative method exists, when the relationships between program actions and assessment variables are not easily quantifiable or well known, or when the available data is insufficient for more complex analysis.

In many cases, potential changes to resources are complex or difficult to measure. In these situations, impacts will be analyzed by measuring changes to related elements known as assessment variables. The results of the analyses of changes to individual assessment variables might be combined to determine the overall affect on the resource category. Table 1 lists the resource categories, assessment variables to be evaluated, and related information to be measured for use in the Programmatic EIR/EIS.

CALFED staff has discussed potential assessment methods with resource experts from agency and stakeholder groups. Feedback from these experts and subsequent communication on a variety of resource categories have helped form the programmatic assessment process to be used in the Programmatic EIR/EIS.

The remainder of this document provides a summary of the proposed assessment methods that will be used for many of the resource categories.