

# APPENDIX A

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*CALFED Bay-Delta Program  
Appendices - Phase 1 Summary Report*

**DRAFT** *June 21, 1996*

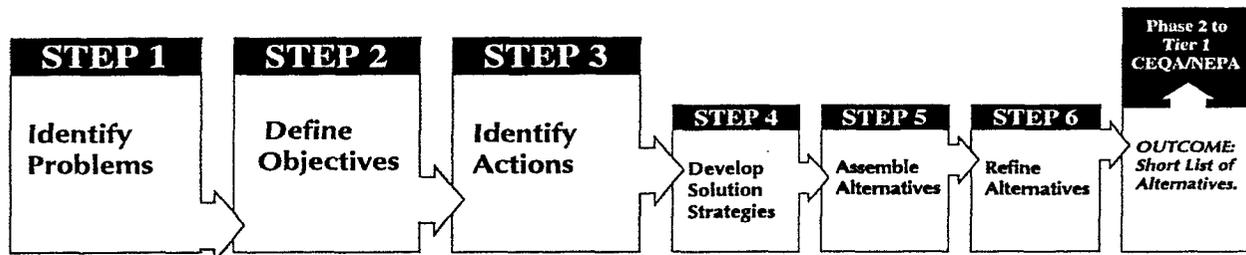
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# APPENDIX A - PROCESS FOR FORMULATING ALTERNATIVES

## REVIEW OF THE SIX STEP PROCESS

The CALFED Bay-Delta Program identified six important steps to develop a short list of alternatives for evaluation in Phase II. The following information describes the process.



### Step 1 Identify Problems

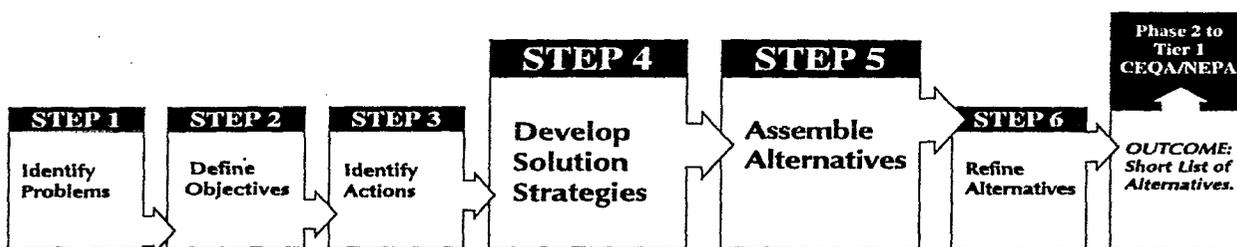
The first step in developing a solution for the Bay-Delta was to define the problems in the Bay-Delta system. Workshop 1 produced a specific list of problems clustered in four main areas: Ecosystem Quality, Water Supply Reliability, Water Quality and System Vulnerability. This list was refined by the Program team and used for the next step in the process. Appendix B includes a summary of the problems identified for the Program.

### Step 2 Define Objectives

Once problems in the Bay-Delta were defined, the next step was to define the objectives for addressing the problems. Detailed statements of objectives were produced in Workshop 2, to guide the development and refinement of alternatives. Fourteen primary objectives were used in Workshop 3 to evaluate action categories. Appendix B includes a summary of the objectives defined for the Program. Appendix C presents the Program Mission and a set of solution principles (fundamental guides for evaluating alternatives). The details for carrying out the mission are the objectives and solution principles. Appendix D provides the Program's strategy for meeting the objectives.

### Step 3 Identify Actions

With problems and related objectives identified, the next step was to identify the action categories that could help meet the objectives. During Workshop 3 participants discussed 50 different action categories, which group similar actions. Workshop participants observed that some categories were not specific enough to allow evaluation against objectives, so specific actions were subsequently identified within each category. Appendix E includes a list of actions considered for each action category. Some of these actions were considered as useful in all alternatives and a discussion of these "core actions" are included in Appendix F.

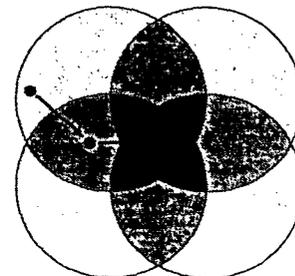


Steps 4 and 5 were the focus of Workshop 4.

The next steps, Step 4 (Solution Strategies), Step 5 (Preliminary Alternatives), and Step 6 (Refine Alternatives) are to construct and refine a number of viable, full fledged Bay-Delta alternatives for more detailed CEQA/NEPA analysis starting in 1996. Generating a comprehensive set of viable alternatives will not be easy. The process to generate the alternatives must simultaneously accomplish four purposes:

- Satisfy the solution principles: affordable; equitable; implementable; durable; reduces conflicts; and does not significantly redirect impacts
- Promote the ecosystem quality, water supply reliability, water quality, and system vulnerability objectives
- Consider a full range of alternatives to ensure that no viable solutions are overlooked
- Identify and select actions that accomplish multiple objectives

Theoretically, these purposes could be accomplished by examining all possible combinations of actions and removing those combinations that do not meet the objectives and solution principles. However, because there are a substantial number of potential actions,



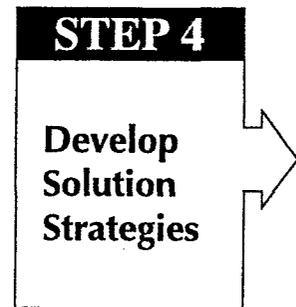
the number of possible combinations would number in the thousands, if not millions. Therefore, a more efficient method for developing a comprehensive set of viable alternatives is needed.

Because the Program team had to develop a set of alternatives that represent the full range of feasible alternatives and stakeholder and agency interests and values, the team identified a set of strategies to serve as starting points to guide the creation of preliminary alternatives in a logical and objective way. These preliminary alternatives can then be evaluated and improved by combining the best features of several preliminary alternatives. This improvement approach results in increased ability to accomplish multiple objectives efficiently and move toward the area of maximum overlap among interrelated problems.

## Step 4 Develop Alternative Formulation Strategies

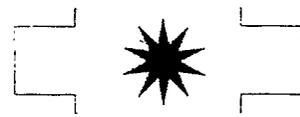
Alternative formulation strategies are guides for selecting actions to assemble into alternatives. Each strategy is intended to define a distinct approach to solving the Bay-Delta problems. Properly chosen, these strategies can force examination of various approaches to problem solving. They can also ensure comprehensiveness while encouraging creativity. The strategies used in the CALFED Bay-Delta Program were defined by three concepts: (1) primary conflicts; (2) approaches to resolve the conflict; and (3) level of conflict resolution.

In combination, the primary conflicts, approaches to resolve the conflicts, and the level of conflict resolution formed strategies, or starting points for assembling preliminary alternatives. These three concepts are discussed in more detail below.



### Identify Primary Conflicts

The Program seeks to define the most fundamental conflicts to be resolved in the Program. For example, one major conflict in the Delta appears to result from many beneficial uses relying upon a limited supply of water. The primary conflicts are based on the problems and causes identified by the Program and participants during Workshops 1 and 2. Actions that resolve these primary conflicts should be considered high priority for inclusion in alternatives. The four primary conflicts identified by the Program are summarized below and described in more detail, along with the primary causes of the conflicts, in Appendix G.



- |          |   |   |   |   |
|----------|---|---|---|---|
| <b>1</b> |  |  |  | <b>Fisheries and Diversions Conflict</b>                      |
| <b>2</b> |  |  |  | <b>Habitat and Land Use/Flood Protection Conflict</b>         |
| <b>3</b> |  |  |  | <b>Water Supply Availability and Beneficial Uses Conflict</b> |
| <b>4</b> |  |  |  | <b>Water Quality and Land Use Conflict</b>                    |

Resolving these these primary conflicts will solve most of the problems in the Bay-Delta system. Each conflict could be resolved by a number of different approaches. The Program team started with two approaches for each conflict as described below.

### **Define Alternate Approaches to Resolving Conflicts**

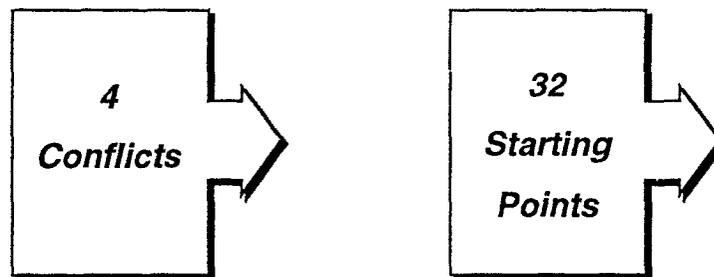
For each primary conflict, the program identified the two alternate approaches to resolving the conflict. These two approaches were intended to bracket the range of possible actions to resolve each conflict. For example, looking just at the conflict over water supplies and beneficial uses mentioned above, one approach would be to reduce the conflict by reducing the need for water supplies. The other approach would be to increase the available supplies of water. These differing approaches were used to define the starting points for assembling preliminary alternatives. Mixes of these approaches were used in later steps of the process.

### **Define Range of Conflict Resolution**

Each strategy also included guidance about the level of conflict resolution to be achieved. For example, the least intensive strategy might seek to resolve the conflicts among beneficial uses of water to the point that endangered species concerns are not a limiting factor. A more intensive solution strategy might go well beyond endangered species to promote major increases in ecosystem functions while also increasing water supplies.

### **Starting Points for Assembling Preliminary Alternatives**

These three concepts (primary conflicts, approaches for resolving the conflicts, and the range of conflict resolution) combine to create alternative formation strategies. Each strategy can be used as a starting point to guide the selection of actions to create a preliminary alternative. Each of these starting point included resolution of each of the four conflicts using one approach for each conflict. Thus, each starting point incorporated the concept of equity among beneficial uses by resolving all of the four primary conflicts.



The **4 conflicts** generate **32 starting points** for assembling preliminary alternatives:

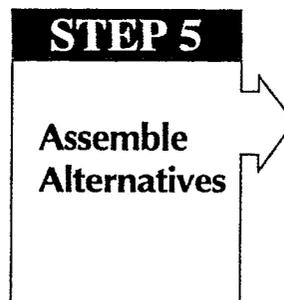
- 1) Identify **2 different approaches to resolve each conflict**
- 2) Identify **2 levels of conflict resolution** (least intensive and more intensive; say minimum and maximum for simplicity)

- 3) Each starting point uses one approach for each conflict and either a minimum or maximum conflict resolution
- 4) **All possible combinations yield 32 starting points** for assembling preliminary alternatives

These 32 starting points help to define the range of preliminary alternatives. Appendix H summarizes these 32 draft starting points.

## Step 5 Assemble Preliminary Alternatives Corresponding to Alternative Formulation Strategies

Based upon the 32 starting points (strategies) identified in Step 4 and summarized in Appendix H, the Program team generated preliminary alternatives. The preliminary alternatives bracket the possible outcomes of the CALFED Bay-Delta Program by reflecting a wide range of methods of resolving the primary conflicts. Because a starting point defines only one approach to resolving each conflict, the preliminary alternatives are not likely to be the most satisfactory alternatives to accomplish the objectives. The best alternatives are likely to include a mix of approaches to resolving the primary conflicts. However, evaluation of each preliminary alternative provided insight to the team and the public about the best ways to combine approaches and improve alternatives.



The Program team generated the preliminary alternatives by selecting actions and action categories from the results of Step 3 (and Workshop 3, Identify Actions). Each action and action category was reviewed for its ability to resolve the primary conflicts and its approach to resolving them. The Program team assembled at least one preliminary alternative for each of the starting points.

Building from the 32 "edge" alternatives, teams were formed to develop a wide variety of alternatives not strictly adhering to extreme approaches, but still maintaining a fairly narrow focus. In all, 100 alternatives were developed at this stage. The three teams were assigned one or more conflicts as follows:

- Team 1 - fisheries versus diversions,
- Team 2 - water supply versus demand, and
- Team 3 - habitat versus land use and water quality versus land use.

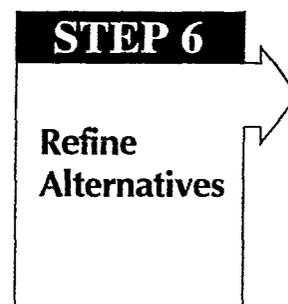
The teams began by breaking up the eight general approaches to solving each of these conflicts into many, more narrowly focused approaches. For example, the general approach of improving water quality by reducing pollutant discharges to the Bay-Delta system was expanded to include a variety of approaches such as improving water quality by treating agricultural wastewater, modifying agricultural land use patterns and practices, or treating municipal runoff and municipal and industrial wastewater.

These alternatives were developed by selecting actions that were consistent with the approach of the alternative. While these alternatives do represent legitimate solution strategies, they were developed using narrowly focused approaches and, thus, tend to be fairly unbalanced. The documentation of these alternatives consists of a brief discussion of the theme; descriptions of key, supporting and core actions included in the alternative; and a preliminary description of how well the alternative meets CALFED program objectives. Summaries of these 100 "single focus" alternatives are included in Appendix I.

## Step 6 Refine Alternatives

Although these 100 "single focus" alternatives represent ways of accomplishing the strategies, they may not be the "best" way to accomplish the Program objectives. To identify the best set of alternatives for environmental review, Step 6 included narrowing the number of alternatives to a logical list and refining the preliminary alternatives into more attractive alternatives.

The process used to refine the alternatives is discussed in detail in Appendix J and Appendix P.



## APPROACHES TO RESOLVING CONFLICTS

Step 4, as described above, provides a process to develop solution strategies. This process includes steps to identify primary conflicts, define alternate approaches to resolving conflicts, and define range of conflict resolution. These steps lead to the identification of starting points for assembling preliminary alternatives. This section describes the two alternate approaches that have been devised to resolve each of the four primary conflicts.

The CALFED Bay-Delta Program will achieve a comprehensive solution to Bay-Delta problems by resolving four primary conflicts between beneficial uses of the system's resources. In addition, the solution will address, to the extent practicable, other secondary conflicts among users of the system. The Program solution principles require that the comprehensive solution be affordable, equitable, implementable, and durable. A solution will not solve problems in the Bay-Delta system by redirecting significant negative impacts, when viewed in its entirety, in the Bay-Delta or other regions of California.

Many different approaches could be used in attempting to resolve each of the four primary conflicts between beneficial uses of the Bay-Delta system. To start the process, the Program emphasize dtwo significantly different approaches for each conflict. Number and letter designations are provided below so each approach to resolving conflicts is identified for later use. Each conflict has a number from 1 through 4. Each approach to resolving the conflict has an A or B designator. In this way, a designation 2B would indicate conflict resolution B for conflict 2.

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## **Fisheries and Diversions (Conflict 1)**

Actions to help resolve conflict between fish populations in the Bay-Delta system and effects of diversions on those populations can emphasize two different approaches. Viable program alternatives will likely include actions representing both of these approaches, but the starting points will rely heavily on one approach or the other.

**Fish Productivity Approach (1A).** One approach to resolving this conflict would encompass actions that increase or benefit the productivity of fish populations. This solution approach, for example, would include actions such as restoring upstream or Delta habitats to increase fish abundance, modifying upstream physical barriers to fish passage, acquiring water supplies to augment instream flows for fish, and improving fish hatchery operations. Actions representing this approach are similar in that they seek to boost fish productivity and population abundance.

**Diversion Modification Approach (1B).** A second emphasis in resolving this conflict would encompass actions that reduce impacts of diversions on fish populations by modifying diversion facilities or operations. This approach, therefore, includes actions such as changing diversion timing patterns, modifying the timing and volume of exports, modifying patterns of Delta channel flows, installing barriers to guide fish away from diversion locations, changing the locations of diversions (e.g. to upstream locations), increasing rates of diversion capacity (so that diversions could be reduced during critical periods for fish), installing fish screens, and improving fish salvage operations. Actions to improve water conveyance facilities, such as constructing isolated transfer facilities also could follow this approach of reducing diversion impacts on fisheries when linked with other actions. Actions following this approach are similar in that they would seek to eliminate or reduce the impacts of water supply diversions on fish populations.

## **Habitat and Land Use/Flood Protection (Conflict 2)**

The existing land use pattern and the existing flood protection system in the Delta resulted from reclaiming lands that formerly supported extensive aquatic and wetland habitats. The conflict between habitat and the existing land use/flood protection patterns may be resolved using actions that emphasize either of the following approaches. Viable program alternatives will likely include actions representing both of these approaches.

**Existing Land Use Pattern Approach (2A).** This approach would encompass actions that improve habitat quality and protect existing land uses in the Bay-Delta system in ways that do not entail converting existing land uses to other uses. This approach, therefore, would emphasize actions that focus on protecting and enhancing existing habitats to increase their value for Bay-Delta fish and wildlife (e.g. channel islands, riverine and riparian habitats associated with levees, existing agricultural fields, upstream anadromous fish habitats ). The approach also emphasizes actions to maintain the existing flood control system (e.g. establishing institutional mechanisms to fund and ensure levee maintenance is performed, modifying agricultural practices to reduce subsidence, and implementing uniform maintenance standards).

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**Modified Land Use Pattern Approach (2B).** Under this approach, conflicts between habitat and land uses/flood protection systems would be addressed by actions that increase habitat extent and stabilize levees to improve flood protection levels above that provided by the existing flood protection system and land use pattern. This approach might, therefore, entail acquisition of lands or easements to facilitate the associated land conversions. This approach would emphasize actions such as converting agricultural land and restoring that land to various types of habitats which may help reduce subsidence, removing livestock grazing from riparian areas, reusing urban wastewater effluent for constructed wetlands, relocating levees to establish floodways that combine habitat restoration with greater conveyance capacities, and establishing flood overflow areas to improve flood protection levels.

### **Water Supply Availability and Beneficial Uses (Conflict 3)**

Actions to help resolve conflict between the demand for water and the supply of water for beneficial uses can also emphasize two different approaches. The eventually selected CALFED solution program will likely include actions from both of these approaches.

**Demand Reduction Approach (3A).** This solution approach would emphasize actions that tend to reduce demands for water to be diverted from the Bay-Delta system in order to reduce conflict during times of year or during hydrologic cycles when competition for system supplies is greatest. This approach, therefore, includes all types of demand management in export use areas (e.g. water reclamation, water conservation, water pricing, land retirement) and actions to increase the predictability and flexibility of supplies in those areas (e.g. off-stream storage facilities, groundwater management and conjunctive use programs). This approach also includes actions to provide supplies for export use areas that do not entail additional diversions from the Delta (e.g. water transfers, construction of off-stream storage to allow carry-over of supplies from low-demand periods to high-demand periods).

**Supply Enhancement Approach (3B).** Under this solution approach, actions would seek to increase water supplies for the Bay-Delta system by enhancing supplies, water management flexibility, and Delta transport efficiency during times of highest competition for water supplies. Actions emphasized by this approach would include modification of upstream reservoir operations criteria, water conservation and groundwater management upstream of the Delta, improved channel capacity, modifying timing patterns for Delta inflows, and establishing a Delta watermaster. Other actions under this approach (e.g. construction or expansion of on-stream or off-stream storage upstream of the Delta or construction of storage in the Delta) would provide capabilities to store water during periods when flows were abundant and water was of relatively lower value to the Bay-Delta system. Thereby, the stored water could be made available for beneficial uses during periods of higher value for those uses. Actions might also include measures to reduce water quality impacts on supply.

## Water Quality and Land Use (Conflict 4)

Actions to help resolve conflict between in-stream water quality and land uses or land use practices can also follow two optional approaches. The eventually selected CALFED solution program will likely include actions from both of these approaches.

**Managing Quality of Delta Inflow Approach (4A).** Under this approach, actions would seek to reduce discharges of pollutants to the Bay-Delta system by changing land uses or land use practices to benefit in-stream water quality. For example, actions would be emphasized such as reducing agricultural drainage discharges containing pesticides, dissolved organic carbon, or salt to the San Joaquin River and Delta; modifying pest control practices; retiring lands with saline drainage problems; implementing source control regulations; diverting from higher quality sources or remediating abandoned mines with toxic drainage problems.

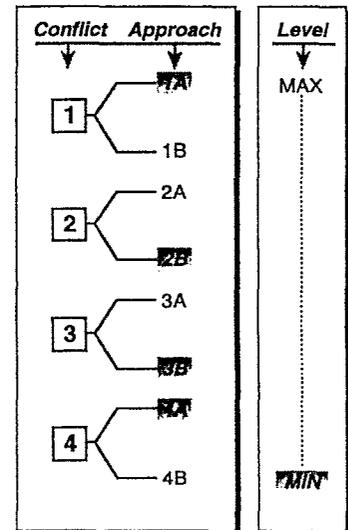
**Post-Discharge Management Approach (4B).** Actions under this approach would address the conflict between land uses and water quality by managing instream water quality characteristics after discharges to the Bay-Delta system had occurred. For example, use of stored water to dilute San Joaquin River inflows of poor quality, higher level of treatment of diverted water to remove constituents of concern (e.g. trihalomethane precursors), installing flow barriers to prevent salinity increases in South Delta channels, blending of water supplies at the point of use, and remediation of contaminated sediments in critical aquatic habitat sites would be emphasized by this approach.

## EXAMPLE ALTERNATIVE FORMULATION STRATEGY (One of 32 Starting Points)

Each of the approaches identified above for resolving conflicts between beneficial uses can be used as an initial starting point for formulating a Bay-Delta program alternative.

For this example, we have selected a starting point for assembling one preliminary alternative. One approach for conflict resolution was selected for conflict 1, one for conflict 2, and so on. The minimum, or basic level of conflict resolution was also selected. An initial set of actions (constituting a preliminary alternative) would be comprised of actions for resolving all four of the primary conflicts in combination. In our example, the set consists of actions selected from the following approaches and combining them into a preliminary alternative:

**Fish Productivity Approach (1A)** -- Using this approach, actions would be selected to emphasize increasing productivity of fish populations such as



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restoring upstream or Delta habitats to increase fish survival and abundance, acquiring water supplies to augment instream flows for fish, and improving fish hatchery operations.

**Modified Land Use Pattern Approach (2B)** -- Under this approach, actions would be emphasized that increase habitat extent and improve flood protection levels above that provided by the existing flood protection system and land use pattern. Actions to be emphasized would be those such as converting agricultural land and restoring that land to various types of habitats, reusing urban wastewater effluent for constructed wetlands, relocating levees to establish floodways with greater conveyance capacities, and establishing flood overflow areas to improve flood protection levels.

**Supply Enhancement Approach (3B)** -- Actions that enhance supplies and water management flexibility in the Delta such as modifying upstream reservoir operations criteria, groundwater management and conjunctive use upstream of the Delta, modifying timing patterns for Delta inflows, and constructing or expanding on-stream or off-stream storage upstream of the Delta or in the Delta would be selected for the preliminary alternative under this approach.

**Discharge Reduction Approach (4)** -- Actions that reduce discharges of pollutants to the Bay-Delta system by changing land uses or land use practices such as reducing agricultural drainage discharges to the San Joaquin River, retiring lands with saline drainage problems, implementing source control regulations, and remediating abandoned mines with toxic drainage problems would be selected for the initial solution package under this approach.

An initial solution package selected using this combination of the four approaches identified above must be evaluated, screened, and refined to become a true program alternative. For example, a comprehensive program alternative must meet the solution principles of being affordable, equitable, durable, and implementable. A true program alternative also cannot significantly redirect impacts to other resources or geographic areas. To meet these solution principles, actions would be selected and added to the preliminary alternative from all solution approaches in constructing a truly viable program alternative.

The following example has been prepared to demonstrate the process of assembling preliminary alternatives. It shows one set of action categories and actions that could be selected to address the above example alternative formulation strategy. This strategy is the starting point for assembling a preliminary alternative. Other preliminary alternatives could be developed with this same starting point. The Program team will prepare preliminary alternatives from the perspective of the 32 starting points and then prepare other preliminary alternatives that use mixes of the approaches to resolve conflicts.

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## EXAMPLE PRELIMINARY ALTERNATIVE

This example uses the example alternative formulation strategy (1A, 2B, 3B, 4A, with a minimum level of conflict resolution) presented above as a starting point for developing a preliminary alternative. It is presented here solely to demonstrate one set of action categories and actions that could be selected to start developing a preliminary alternative. Therefore, the example was prepared using professional judgement only, without conducting analyses that will be included later in the alternatives development process.

As with all preliminary alternatives, the assignment is to achieve the designated level (minimum or maximum) of benefits by choosing action categories and actions which resolve the four primary conflicts in particular ways. For this exercise, we may only choose action categories and actions which resolve the conflicts between:

1. Fisheries and diversions by boosting fish productivity. (1A)
2. Habitat and land use/flood protection by changing existing land use patterns to provide for additional habitat and better flood protection. (2B)
3. Water supply availability and beneficial uses by increasing the supply of water available during periods of severe competition. (3B)
4. Water quality and land use by reducing discharges of pollutants into the water system. (4A)

Each starting point was characterized by either a minimum or maximum level of conflict resolution. For this exercise, we have used a minimum level of conflict resolution to provide enough benefits to assure that:

- Winter run salmon and Delta smelt are not in danger of extinction.
- Water supplies do not face regulatory uncertainties caused by take limits.
- Additional species are not listed as threatened or endangered.
- The solution principle for equity is satisfied (i.e., benefits are fairly distributed across the range of objectives).

In response to this starting point, the CALFED Program team began with resolution of the first conflict, Fish Populations and Diversions, by selecting the following actions and action categories:

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## Improvement, Restoration of Habitat

Habitat restoration actions are appropriate since the starting point we are working with allows us to choose actions to boost fish populations and to convert existing land use into habitat. On the other hand, our selection of the minimum level of conflict resolution constrains us to only fixing the conflicts over endangered species. Therefore, we will focus habitat improvement/ restoration efforts on those habitats critical to winter run salmon and Delta smelt. The following actions are chosen for this example:

- Restoration of Delta shallow water (tidal) habitat. That is, create areas in the Delta that look like the shallows of Suisun Bay. These shallows are thought to be essential for production of Delta smelt and should also be of use to migrating salmon smolts.
- Restoration of delta riverine habitat. (Good for both species)
- Restoration of upstream fish habitat. In particular, manage releases from upstream reservoirs to assure that upstream water temperatures are cold during times critical to salmon spawning.

## Boost Environmental Flows

In particular, this alternative provides flow pulses designed to assist with the downstream migration of winter run (and spring run) salmon smolts in the fall and winter and increased spring outflows to assist with Delta smelt production. The particular starting point we are using requires that this water be acquired via increased water supplies, not demand reduction. This effectively means that new environmental supplies will be generated via the use of existing and new storage to capture flows during wet periods for use when water is short.

## Install Barriers

An effective way to protect migrating winter run salmon is to construct barriers to keep them out of areas that reduce their survival. Therefore, barriers along the Sacramento River (at the Delta Cross Channel and possibly Georgiana Slough) to keep down stream migrating salmon smolts in the main stem Sacramento River could be added for this example. Permanent barriers might shift impacts to resident Delta species such as smelt, so acoustic barriers would likely be selected. The use of these barriers could be reduced or discontinued in the future if the habitat restoration efforts reduce salmon mortality in the central Delta or if conflicts with other species are identified.

## Control Harvest

A significant portion of winter run salmon populations are probably taken by commercial fisherman in the Pacific Ocean. Therefore, one way to increase fish populations of winter run salmon is to reduce commercial harvesting of them. Therefore, this alternative would include new regulations to reduce the number of winter run salmon taken commercially.

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The action categories and actions just described were considered adequate, for this example, to resolve the Fisheries and Diversions conflict. The Program team then looked at additional action categories and actions that might be needed to resolve the second conflict, Habitat and Land Use/Flood Protection. The team felt that the above selections to resolve the Fisheries and Diversions conflict would also resolve the Habitat and Land Use/Flood Protection conflict.

The Program team then looked at additional action categories and actions that might be needed to resolve the third conflict, Water Supply Availability and Beneficial Uses. The team felt that additional action categories and actions, as shown below, were needed to provide basic conflict resolution.

### Create Storage

As discussed above, better regulation of high flows could be used to generate new water for the environment. One way to generate this water is through groundwater storage north and south of the Delta. Equity considerations may also dictate that some of the yield from this new storage go to the environment and some go to water users. However, while groundwater storage may be less expensive compared to surface storage, it has institutional problems. Therefore, changes in the law to assure that stored groundwater can be recovered is added for this example.

The Program team then looked at additional action categories and actions that might be needed to resolve the fourth conflict, Water Quality and Land Use. The team felt that the above selections to resolve the other conflicts would also resolve the Water Quality and Land Use conflict.

### Evaluation

In combination, this preliminary alternative has the potential to:

- Contribute to the recovery of winter run salmon and Delta smelt at relatively low cost.
- Reduce the uncertainty surrounding exports due to take limits.
- Provide general ecosystem benefits.
- Improve export yield.
- Maintain or improve water quality for all purposes.
- Improve flood control protection in the Delta, and improve the quality of some

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levees.

- Meet the solution principle of equity.

**The example preliminary alternative described above demonstrates how the 32 different starting points can be used to bracket the possible outcomes of the CALFED Bay-Delta Program. Because a starting point defines only one approach to resolving each conflict, the preliminary alternatives are not likely to be the most satisfactory alternatives to accomplish the objectives. The best alternatives are likely to include a mix of approaches to resolving the primary conflicts. The Program team prepared preliminary alternatives from the perspective of the 32 starting points and then prepared other preliminary alternatives that use mixes of the approaches to resolve conflicts.**