

---

# Phase II Report

## Responses to Comments

---

## PHASE II REPORT RESPONSES TO COMMENTS

### 0. General Responses

PH2:0-1

The CALFED Bay-Delta Program (CALFED Program) is committed to the application of sound economic principles in the selection, refinement, and implementation of the Preferred Program Alternative.

PH2:0-2

This comment enumerates tasks that will be essential before implementation of actions but not necessarily by the time of the Record of Decision (ROD). CALFED will develop a Water Management Strategy at the programmatic level by the time of the ROD and, of course, documents pertaining to the ROD will be completed when a ROD is issued. Site-specific environmental documentation, including details of monitoring plans, will be completed after the ROD in conjunction with planning for site-specific actions. Continuing refinement of the Water Management Strategy also will take place during the CALFED implementation phase.

PH2:0-3

CALFED conducted consistency reviews and considered public comments to correct inconsistencies in Program documents.

PH2:0-4

Please see common response 13.

PH2:0-5

Flood control outside the CALFED problem area is not a primary responsibility of CALFED. CALFED actions will be carried out in a manner mindful of the need to prevent flooding and limit flood damage. Where CALFED actions would exacerbate flood risk, this risk will be avoided or mitigated. Where CALFED objectives can be met in concert with flood control objectives, CALFED will work to coordinate efforts in order to produce synergistic multiple benefits. CALFED actions are being coordinated with the San Joaquin and Sacramento River Basins Comprehensive Study. The mission of this study is to develop a systemwide, comprehensive flood management plan for the Central Valley in order to reduce flood damage and integrate ecosystem restoration. The comprehensive study is being conducted by the U.S. Army Corps of Engineers (Corps) and the California Department of Water Resources (DWR) Reclamation Board. Both the Corps and DWR are CALFED agencies.

PH2:0-6

It would be a simplistic misrepresentation of the CALFED Program to assert that it aims to improve the ecosystem and acquire water supplies by converting agricultural resources. The Program will provide many benefits to agriculture. The Water Transfer Program element will improve the current situation by helping to

disclose impacts on agricultural resources from proposed transfers, so that these impacts can be avoided or mitigated. The Ecosystem Restoration Program element will improve the current approach to restoration—first by explicitly examining restoration opportunities on public lands, then through conservation easements, and only then through acquisition of lands that may currently be used for agriculture. The Water Management Strategy, including Storage and Conveyance, will improve water supply reliability for all beneficial uses, including agriculture. The primary resource protected by the Levee System Integrity Program is agriculture. Finally, water acquired for ecosystem restoration beyond regulatory requirements will be acquired through means such as willing-seller transfers.

PH2:0-7

CALFED has designed programs that rely, whenever possible, on voluntary, cooperative, cost-effective actions. This effort to maintain private ownership and productivity will continue as detailed implementation planning commences.

PH2:0-8

This comment is contradicted by the elements of the CALFED Program. CALFED agencies have worked to secure substantial funding for local conservation and recycling projects through California Propositions 204 and 13. DWR and the U.S. Bureau of Reclamation (Reclamation) have committed to sharp increases in the levels of technical assistance and planning assistance that they provide with respect to water conservation and water recycling. The CALFED approach to programmatic compliance with Clean Water Act (CWA) Section 404 is expected to result in commitments for water conservation, water recycling, water transfers, and other alternatives before project-specific permits could be sought for new or expanded surface water storage. Please also see common response 10.

PH2:0-9

Water supplies for northern California are protected by area-of-origin statutes. To the extent that dollars for water conservation and water recycling can be spent cost effectively in southern California, CALFED programs are intended to help assure that such funding is available. Please also see common response 13.

PH2:0-10

Each of the three CALFED alternatives includes total or partial maintenance of the common Delta pool. The dual-Delta conveyance approach would involve reduced, but not eliminated, reliance on a common Delta pool. The Preferred Program Alternative relies entirely on a common Delta pool, with all export supplies drawn from Delta channels.

PH2:0-11

California water policy has been fraught with disagreement and decision-making gridlock for decades. Decisions that are not based on broad consensus are blocked by those who believe that their interests will be harmed. The CALFED consensus-based decision process is slower than some previous attempts to chart California water policy, but may ultimately be more successful if consensus can be built around a CALFED plan.

PH2:0-12

This is outside the scope of CALFED.

PH2:0-13

CALFED actions are intended to improve water supply reliability, including reliability for export areas—not create an impact that must be mitigated. This includes increasing flexibility so that it is possible to meet export needs and also comply with endangered species protections. This increased flexibility may also help provide alternative water supplies for the 800,000 acre-feet (800 TAF) per year designated for environmental purposes under the Central Valley Project Improvement Act (CVPIA). However, it is not the responsibility or purpose of CALFED to identify specific water sources to replace Delta water that cannot be exported due to compliance with the state and federal Endangered Species Acts (ESAs) or the CVPIA.

PH2:0-14

Elements of the CALFED Program are described at a programmatic level. Some parts of the program, such as governance and finance, will require action by other entities such as the California Legislature or Congress; these actions therefore will not be finalized at the time of a Final Programmatic Environmental Impact Statement/Environmental Impact Report (EIS/EIR). Please see common response 1.

PH2:0-15

One CALFED Program element, the Ecosystem Restoration Program, includes a Strategic Plan for Ecosystem Restoration (Strategic Plan) bound as a separate document. For other Program elements, strategic planning is imbedded in the program plans. CALFED is continuing to develop its Water Management Strategy, which will serve as a strategic plan for water management.

PH2:0-16

Please see common response 10.

PH2:0-17

Several linkages and parts of the CALFED Program will assure comparable progress in all Program resource areas. First, CALFED was created out of the recognition that the diverse problems of the Bay-Delta system cannot be solved individually because they are interrelated; this recognition will be carried forward into a comprehensive and integrated implementation plan. Implementation during Stage 1a includes progress on all CALFED problem areas. An integrated CALFED governance structure is being developed that will help assure integrated implementation; balanced implementation will be a key function for this oversight entity. This governance structure is expected to include a commission that includes representatives of state and federal agencies as well as stakeholders, providing diverse viewpoints. Finally, the CALFED Program includes a Multi-Species Conservation Strategy (MSCS) that identified measures to compensate for CALFED Program impacts and to benefit species and habitats.

## 1. Introduction

PH2:1-1

One of CALFED's solution principles states that solutions will not solve problems in the Bay-Delta system by redirecting negative impacts, when viewed in their entirety. Although impacts to the ecosystem will result from implementing certain actions, impacts will be mitigated. Further, when viewed in its entirety, the Program will provide ecosystem benefits.

PH2:1-2

CALFED has produced an unprecedented level of cooperation and coordination among state and federal agencies. However, certain CALFED agencies continue to have independent regulatory responsibilities that cannot be abrogated.

PH2:1-3

These principles closely match the process CALFED is taking, guided by its solution principles and implementation plan.

PH2:1-4

Please see common response 20.

PH2:1-5

Please see common response 12. One of CALFED's solution principles states that solutions will not solve problems in the Bay-Delta system by redirecting negative impacts, when viewed in their entirety. Although impacts on agriculture will result from implementing certain actions, impacts will be mitigated. Further, when viewed in its entirety, the Program will provide benefits to agriculture. Among the most important are major improvements in water supply dependability due to the Program's actions to improve the status of endangered species; reduce the likelihood of new ESA listings; and increase water management flexibility through improved operations, such as the joint point of diversion (JPD) for the State Water Project (SWP) and the Central Valley Project (CVP). New surface and groundwater storage could provide additional water for agriculture, urban uses, and the environment. Levee stability actions will protect Delta agricultural land from flooding due to levee failures and protect irrigation water exports from saltwater intrusion. Improved water quality and reliability for export will allow greater crop flexibility, shifting to higher value crops, increased yields, and lower production costs. A more flexible water transfer market will provide farmers the ability to receive cash to expand operations or to receive water to produce higher value crops. The Program also will provide financial and technical assistance to assure efficient agricultural water use. A substantial proportion of the Ecosystem Restoration Program will include long-term conservation easements that will allow farmers to continue farming, thus paying farmers to keep agricultural land from being converted for urban development or other incompatible uses. Finally, the Program is not proposing a wholesale reallocation of water rights or the use of regulatory authority to meet Program purposes. Instead, the Program uses increased efficiency, improved coordination, and willing seller transactions to accomplish its objectives.

PH2:1-6

A variety of Delta interests are well represented in the CALFED process. The South Delta Water Agency and the Delta Protection Commission both are represented on the Bay-Delta Advisory Council (BDAC). Delta interests have participated in many BDAC subcommittees and CALFED technical advisory bodies. CALFED has conducted numerous informal workshops and formal public hearings in Delta communities.

PH2:1-7

CALFED has produced an unprecedented level of cooperation and coordination among state and federal agencies. However, certain CALFED agencies continue to have independent regulatory responsibilities that cannot be abrogated. All CALFED agencies make independent decisions regarding their own responsibilities and authorities, whether related to CALFED or any other matter.

PH2:1-8

Through the U.S. Environmental Protection Agency, one of the CALFED agencies, CALFED has an existing structure in place to encourage partnerships between environmental justice groups and other entities, and can help provide funding to support such partnerships. In addition, CALFED has already initiated activities to heighten and strengthen urban environmental justice activities in the Watershed Program. The Watershed Program has made a commitment to embrace urban watershed issues into its overall program activities.

PH2:1-9

Chapter 1 in the Programmatic EIS/EIR provides CALFED objectives in summary form, stating that one objective for water supply reliability is to “improve export water supplies to help meet beneficial use needs.” The full objective was published in a CALFED document entitled Draft Problem/Objective Definition, March 1996. The full text of the objective states, “Improve Bay-Delta system export water supplies and timing to help meet reasonable existing and future short-term and long-term needs.”

PH2:1-10

The proposed revision to the CALFED mission statement is a more detailed aspect of improvement in water management, which is already included generally in the mission. The more detailed aspect is included in the water management goals described in the Phase II Report.

PH2:2.1-13

The commentor refers to a general discussion of water supply reliability problems that led to creation of the CALFED Program. This overview paragraph is not intended to describe every problem related to water supply reliability. For a more complete enumeration of problems, see Problem/Objective Definition, CALFED Bay-Delta Program, March 1996.

PH2:2.1-14

The Program’s mission statement and water supply reliability objective, which focus on beneficial uses, meet the commentor’s suggestion to focus on benefits of water supply reliability.

## 2.1 Bay-Delta Problems/Objectives

PH2:2.1-1

The CALFED agencies believe that they have developed a Preferred Program Alternative that meets Program solution principles and achieves Program mission and goals, including those for water quality, water supply reliability, ecosystem restoration, and levee and channel system integrity.

PH2:2.1-2

The CALFED goal of improved water supply reliability is not limited to export areas, but includes all areas of the state that can receive improved water supply reliability through changes in water management in the Bay-Delta system. Please also see common response 13.

PH2:2.1-3

The CALFED goal for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and other beneficial uses dependent on the Bay-Delta system. Supply needs of Delta exporters will be met from a variety of sources and strategies, not just Delta exports.

PH2:2.1-4

CALFED established objectives during Phase I of the Program, consistent with the programmatic nature of the Program. Primary objectives are included in the Phase II Report.

PH2:2.1-5

During Phase I of the Program, CALFED developed extensive statements of problems in the Bay-Delta system, and from these problems developed Program objectives and a geographic scope for the solution area. Northern California is part of the solution area because some of the problems of the Bay-Delta system occur in northern California: water diversions that entrain fish and alter flow patterns, uses of land and water that impair water quality, dams and land uses that reduce the amount or quality of spawning and rearing habitat for fish species—to name a few. For these reasons, northern California is appropriately included as part of the solution area.

PH2:2.1-6

CALFED's water supply reliability goal is broadly worded in recognition that many tools are available to carry out a water management strategy. In some cases, a particular tool may not be appropriate, such as when a transfer would result in adverse third-party impacts or a water conservation measure would deprive a downstream user of a water source. CALFED has recognized these types of cases in its Program documentation. However, in many cases, water transfers and water conservation are appropriate tools to be used along with potential new surface water storage. It would be inappropriate to prematurely remove any potential tool from consideration.

PH2:2.1-7

CALFED has developed a goal and objectives for water supply reliability that are not quantified, for several reasons. First, it is not necessary to set a single acre-foot target in order to begin making improvements in water supply reliability. Second, any quantification would be widely disputed and would lead to more divisiveness rather

than consensus. Third, a quantification would rely on many assumptions that would be subjective or open to dispute. CALFED is developing an approach based on programmatic compliance with the CWA Section 404 that will guide and enable a demonstration of need for new surface water storage.

**PH2:2.1-8**

The Program will provide improvements in water supply reliability and water quality. It will not provide all the improvement that every interest might want. In a Bay-Delta system with finite limits, the CALFED plan provides equitable improvement for each sector but probably less than any sector might desire.

**PH2:2.1-9**

It is implicit in the CALFED mission statement that CALFED will attempt to determine how much water is available from the Bay-Delta system. This will not be done by specifying a quantity but by specifying actions needed to restore ecosystem health, including flow-related actions, and by specifying broad operating conditions that would constrain any new water development project. Fair distribution of the water is governed by California water rights law and is therefore under the jurisdiction of the SWRCB, which issues water rights permits.

**PH2:2.1-10**

During Phase I of the Program, CALFED developed extensive statements of problems in the Bay-Delta system, and from these problems developed Program objectives and a geographic scope for the solution area. Southern California is part of the solution area because some of the solutions to Bay-Delta system problems can occur in southern California: water conservation can reduce demand, and water recycling can offer a new water supply. For these reasons, southern California is appropriately included as part of the solution area.

**PH2:2.1-11**

The CALFED objective for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system. CALFED has identified several water management tools to help achieve this objective, including water use efficiency, recycling, transfers, conjunctive use, and surface storage. Among these, water conservation and water recycling may create “new” water, that is, water that would otherwise have been discharged to a salt sink and been unavailable for any other beneficial use. New or expanded surface storage upstream from the Delta would change the timing of flow in the system, reducing Delta outflow at times when the impact would be low and making water available at other times for flow augmentation or diversion from the system.

**PH2:2.1-12**

The Trinity River watershed, from which flows are diverted into the Bay-Delta system, is a part of the CALFED solution area because actions in this watershed could help solve Bay-Delta problems without redirecting impacts. For example, changes in watershed management in the Trinity River basin could augment base flows in the Trinity River without making equivalent reductions in diversions to the Sacramento River system.

**PH2:2.1-15**

The State Water Resources Control Board (SWRCB) is responsible for setting in-stream flow requirements. CALFED will follow these requirements. Please also see common response 8.

## 2.2 Fundamental Program Concepts

PH2:2.2-1

Adaptive management is a fundamental concept of the Program. The principle of adaptive management, and a programmatic level of detail regarding its application, are described in the Phase II Report and in the Strategic Plan.

PH2:2.2-2

Adaptive management involves more than simple trial and error. It includes implementation of actions for which certainty exists and formulation of testable hypotheses, followed by structured pilot-scale implementation or research to meet other objectives where certainty of action does not exist.

PH2:2.2-3

The fraction of Delta inflow that is diverted varies according to water-year type and amount of inflow, as depicted in the figures entitled "Water Management in California" (pages 20 and 21 in the June 1999 Revised Phase II Report). CALFED actions are expected to allow more water to remain in streams during critical periods, reducing the fraction of water diverted during these periods.

PH2:2.2-4

A governance structure is still being developed, as described in the Phase II Report. The structure is expected to include a chief scientist and a governing body, including representation by state and federal agencies as well as stakeholders.

PH2:2.2-5

The concept of time value of water is reflected in many aspects of water management in the Bay-Delta system, such as existing reservoir operations and varying flow standards at different times of the year. Time value will remain a concept that is fundamental to CALFED and many other aspects of Bay-Delta water management.

PH2:2.2-6

CALFED recognizes that the statements oversimplify and has modified the text to reference more details as provided in the Water Transfer Program Plan.

### 3.1 Overview of the Preferred Program Alternative

PH2:3.1-1

The Preferred Program Alternative does not include any action to divert Eel River water for any Program purpose. Furthermore, the Eel River is outside the Program solution area.

**PH2:3.1-2**

The complexity of the CALFED decision process reflects the complexity of the problems that CALFED is charged with solving. There is no simple solution.

**PH2:3.1-3**

The Preferred Program Alternative does not include an isolated conveyance facility or dual-Delta conveyance. CALFED's strategy is to develop a through-Delta conveyance alternative based on the existing Delta configuration with modifications as needed, evaluate its effectiveness, and add additional conveyance and/or other water management actions if necessary to achieve CALFED goals and objectives. The initial through-Delta conveyance will be continually monitored, analyzed, and improved to maximize the potential of the through-Delta approach to meet CALFED goals and objectives, consistent with the CALFED solution principles. If the through-Delta conveyance fails to meet the CALFED goals and objectives, the reasons and the need for additional Delta conveyance and/or water management actions will be reassessed. Please also see common response 16.

**PH2:3.1-4**

The Preferred Program Alternative is intended to be general in nature. Greater specificity regarding actions can be found in the Implementation Plan and Phase II Report. Greater specificity regarding impacts will be developed in subsequent project-specific environmental documents. Please also see common response 1.

**PH2:3.1-5**

CALFED Program elements emphasize the use of incentives. Due to the programmatic nature of the CALFED Program, specific incentives may not be described in Program plans at this time. Examples of the use of incentives may be found in the program plans for water use efficiency, watersheds, and ecosystem restoration.

**PH2:3.1-6**

CALFED's approach will vary according to the Program element for which property is acquired. The Ecosystem Restoration Program will acquire land only after appropriate opportunities for restoration on public lands and restoration on lands covered by conservation easements are pursued. Then, acquisition will be from willing sellers at fair market value. Other Program elements such as Storage may acquire land through condemnation, also at fair market value.

**PH2:3.1-7**

There has not been a major shift in Program organization since its inception. CALFED was formed to address four interrelated problem areas: ecosystem quality, water quality, water supply reliability, and levee system integrity. These four problem areas have not changed since the Program was founded. In 1996, the Program prepared objectives for solving problems in these four areas. During Program development, it became clear that many different actions could contribute to the solution of these problems. CALFED refers to each category of actions as a Program element. Originally, there were six Program elements: ecosystem restoration, water quality, levee system integrity, storage, conveyance, and water use efficiency. Subsequently, two additional Program elements were added: watersheds and water transfers. This Program organization, with eight Program elements, was in place prior to the first Phase II Interim Report published in March 1998.

PH2:3.1-8

An isolated Delta conveyance facility is not part of the Preferred Program Alternative; therefore, there is no time line for constructing such a facility. Please also see common response 16.

PH2:3.1-9

Development of the three CALFED programmatic alternatives included extensive work to optimize the alternatives. Please see common response 5.

### 3.2 A Comprehensive Resource Management Program

PH2:3.2-1

Every CALFED Program element contributes, to some degree, to improved water supply reliability. The Water Management Strategy, Environmental Water Account (EWA), and Integrated Storage Investigation all contribute to improved water supply reliability for Delta exporters.

PH2:3.2-2

The CALFED Watershed Program was established in recognition that planning the solution of problems in the Bay-Delta must include a watershed perspective. However, planning and implementation of solutions must be coordinated with individuals and all levels of government to be most successful.

### 3.3 Ecosystem Restoration Strategy

PH2:3.3-1

Restoring the timing and magnitude of critical in-stream flows and restoring habitats are both programmatic actions described in the Phase II Report and in the Ecosystem Restoration Program Plan.

PH2:3.3-2

Fish screening received funding under CALFED early implementation. Where screening achieves CALFED objectives and has a sufficient priority to be funded, screening will continue to be a part of CALFED implementation.

PH2:3.3-3

Many Ecosystem Restoration Program actions will improve water quality, resulting in benefit to the environment and also to other water users. Some Ecosystem Restoration Program actions, such as wetland restoration in the Delta, may increase total organic carbon (TOC) in Delta water. Monitoring will document the extent to which this occurs; mitigation will occur on a site-specific basis and may include reducing other sources of TOC. Augmentations in streamflow will be accomplished through water transfers and other cooperative measures, and will therefore usually not reduce reliability for other water users. The EWA is expected to help maintain water supply reliability for Delta water exporters while protecting Delta fish species. Please also see common response 1.

PH2:3.3-4

The specific goals and targets for species recovery are elaborated in the three volumes of the Ecosystem Restoration Program Plan. The process for scientific review and adaptive management is described in the Strategic Plan.

PH2:3.3-5

The general statement in the Phase II Report is correct: reduction in demand may reduce the diversion of water from the Bay-Delta system. Clearly, this is not always the case, but it is not the point of this paragraph to examine every benefit and limitation of water use efficiency. The point here is that an ecosystem benefit may be associated with water use efficiency: a reduction in demand may lead to reduced entrainment of fish.

### 3.4 Water Quality Improvement Strategy

PH2:3.4-1

Pollution reduction, salinity management, and additional treatment are all identified for action in the Phase II Report and in the Water Quality Program Plan.

PH2:3.4-2

The Phase II Report and Implementation Plan describe a CALFED drinking water quality improvement strategy that will pursue actions to reduce bromide levels, monitor for bromide, and recommend additional actions if necessary. Please also see common response 14.

PH2:3.4-3

Authority to set and enforce Delta water quality standards resides with the SWRCB as a responsibility separate from CALFED.

PH2:3.4-4

CALFED has developed a drinking water quality improvement strategy appropriate for the programmatic nature of the document, to be carried out under the scrutiny of a Delta Drinking Water Council and guided by periodic expert panel review. This strategy will help assure continued focus on water quality improvement.

PH2:3.4-5

CALFED has maintained since the beginning of the Program that it will not pursue resolution of salinity problems in the San Joaquin Valley through an out-of-valley drain since it is outside the scope of the Program (please see common response 1). However, the Water Quality Program does include actions to help reduce salt loads from the San Joaquin Valley. Comments concerning the potential drain would be best taken to Reclamation.

PH2:3.4-6

The Programmatic EIS/EIR is intended to establish an overall framework within which detailed project planning and implementation will go forward. It is therefore appropriate and necessary that detail should be lacking from the programmatic document, although broad linkages among Program elements are described. CALFED

recognizes that ecosystem restoration, water quality, water supply reliability, and levee system integrity actions must be closely linked and integrated for the Program to meet its objectives. Because individual projects have not yet been identified or studied, it is not presently possible to establish detailed linkages among Program elements. CALFED is, however, committed to developing and publicly disclosing these linkages as the Program moves into its implementation phase. Watershed activities of many types offer possibilities to prevent, reduce, or control pollution while enhancing ecosystem functions and accomplishing other CALFED objectives. CALFED is committed to thoroughly researching these possibilities and to supporting projects that optimize benefits in all categories of CALFED activity.

CALFED will evaluate a screened diversion facility on the Sacramento River of up to 4,000 cubic feet per second (cfs) determine whether it is needed to improve water quality in the Delta and at the export facilities in order to meet the drinking water quality objectives that are enunciated in the Phase II Report. CALFED's long-term water quality objectives for drinking water are for a TOC concentration of 3.0 mg/L and a bromide level of 50 µg/L, or an equivalent level of public health protection to be provided by a cost-effective combination of alternate source water, source control, and treatment. CALFED is committed to the principle of continuous improvement in the water quality of the Bay-Delta estuary until these waters are of good quality to support all beneficial uses, including drinking water supply. CALFED is also committed to ongoing stakeholder involvement in planning and implementing effective water quality improvement actions, and invites active participation of all stakeholders.

PH2:3.4-7

Two responses are consolidated under this response. Please read the entire text of this response for an answer to your comment.

CALFED's primary drinking water goal is public health protection. Meeting current and future drinking water standards, and exceeding those standards where feasible, is the mechanism through which public health protection will be assured. This goal will be met through cooperative efforts among agencies supplying drinking water and CALFED to implement measures that will protect the quality of Delta drinking water sources, provide alternate source waters, and upgrade treatment as required.

The source control actions planned for Stage 1 will certainly reduce pollutants in the Delta waters and will result in continued improvement of water quality as actions proceed. Depending on what new disinfection and disinfection by-product regulations are adopted, and depending on the success of new treatment technologies and CALFED source control actions, it is conceivable that treating Delta waters to affordably produce safe drinking water could prove difficult or impossible in the future in the absence of physical changes to the system. For that reason, CALFED intends to simultaneously evaluate a screened diversion facility on the Sacramento River of up to 4,000 cfs to determine whether this facility is needed in order to improve water quality in the Delta and at the export facilities and whether the facility can be constructed and operated without adverse effects on fish. A simultaneous assessment will be made of the combination of alternative source waters, source control, and treatment technologies and the assessment of facilities to determine whether CALFED is meeting its long-term water quality objectives.

The Phase II Report is a summary document and does not contain the same level of detail as the program plans and other Program documents. Evaluation of organic carbon releases is described in the Implementation Plan. This evaluation, which will increase understanding of the sources, amounts, and characteristics of organic carbon discharges, must precede any pilot programs. Pilot programs are expected later in Stage 1 of implementation, pending the outcome of evaluations. Please also see common response 14.

Two responses are consolidated under this response. Please read the entire text of this response for an answer to your comment.

Salinity is an important determinant of the feasibility of wastewater recycling and groundwater conjunctive use as elements of a broad-spectrum water management approach to resolving the water supply problems associated with the Delta estuary. This is especially true for southern California, where the relatively high cost of fresh water supply makes recycling and conjunctive use projects attractive as alternatives. The Delta Drinking Water Council that is being formed by CALFED is charged to evaluate and recommend needed intermediate and long-term water quality targets, and will be asked to consider the need for a salinity target to increase water management options, particularly in southern California. The Council will also be asked to consider the need for other actions designed to reduce salinity in water supplies diverted from the Delta. The CALFED Program is not expected to cause an overall increase in the salinity of water diverted from the Delta and should not, therefore, cause negative impacts on groundwater quality that would require mitigation. If other measures prove inadequate, the scope of the Program allows for consideration of facilities to improve water quality.

The Implementation Plan and Phase II Report now describe in greater detail many actions scheduled for implementation during Stage 1 that will improve drinking water quality. Additional actions, such as new or expanded surface storage and Delta conveyance modifications, may be constructed—pending additional evaluation and approvals. Please also see common response 14.

Two responses are consolidated under this response. Please read the entire text of this response for an answer to your comment.

CALFED intends to publish Delta Drinking Water Council findings on drinking water quality improvements. The Phase II Report text has been revised to reflect this intention.

“Veale/Byron Tract Discharge Management” is described in detail in the Implementation Plan.

A number of different alternative scenarios are being examined to support the Integrated Storage Investigation. Several of the alternative scenarios explicitly include devoting a portion of new facility storage to water quality improvement in the Delta. However, these efforts are still in the process of being completed and will not be ready for incorporation into the Final Programmatic EIS/EIR. CALFED’s intent is to demonstrate tradeoffs between storage, water quality, water supply, and export curtailments for fisheries improvements.

### 3.6.1 Developing a Water Management Strategy

The table in the Phase II Report is intended to show general, not precise, contributions to water supply reliability. The relative contribution of agricultural water conservation to water supply reliability is based on the estimate of water that could be made available for other uses through conservation. Please also see common responses 2 and 11.

**PH2:3.6.1-2**

Water acquisitions from fallowing or groundwater substitution would be conducted with willing local participants, and CALFED's proposed water transfers clearinghouse would facilitate disclosure and understanding of potential impacts. Water acquisition through land acquisition in the Sacramento Valley is not proposed in any CALFED alternative.

**PH2:3.6.1-3**

CALFED will continue to refine its Water Management Strategy during Stage 1. There will be opportunities for public comment at forums such as public meetings of the CALFED Policy Group as this process moves forward. Please also see common responses 1 and 5.

**PH2:3.6.1-4**

Discussion of the Water Management Strategy includes watershed management, reflecting the contribution that watershed management makes to overall water management.

**PH2:3.6.1-5**

The Water Management Strategy assumes that local and regional water suppliers will take advantage of a range of options to match supply and demand, including local water supply and watershed activities.

**PH2:3.6.1-6**

Development and refinement of the Water Management Strategy, including examination of new storage, is a public process with many opportunities for advice and comment. Many stakeholders have been involved in CALFED's economic analysis of water management alternatives and refinement of the Water Management Strategy. Proposals for long-term CALFED governance also include representation from outside the state and federal agencies.

**PH2:3.6.1-7**

Water conservation is only one of the tools that contribute to the Water Management Strategy. Conservation programs will focus on areas where conservation measures have not been fully implemented and additional opportunities exist.

**PH2:3.6.1-8**

As mentioned in the Phase II Report, CALFED conducted an Economic Evaluation of Water Management Alternatives. This evaluation looks at the array of water management tools available to each region and places them in order from least to most expensive. This analysis acknowledges the uncertainties associated with various tools. In many cases, some amount of water conservation is the most cost-effective tool for a given region. However, not all increments of water conservation are equally cost effective. This information will be presented, along with other evaluation information, as the Integrated Storage Investigation continues. Desalination (please see common response 18) is included in the evaluation but currently proves to be among the most expensive of the available tools; future technological advancements may make desalting more cost effective. Please also see common responses 4 and 6.

**PH2:3.6.1-9**

CALFED will continue to refine its Water Management Strategy during Stage 1. However, the overall objective of improving water supply reliability does not include commitments for systemwide water targets or specific water deliveries to any water district or region. CALFED is looking to increase the flexibility of delivering water through the Delta. The Preferred Program Alternative improves water supply reliability compared to the No Action Alternative. CALFED has no regulatory authority. Please also see common responses 1, 4, 16, and 22.

**PH2:3.6.1-10**

As part of the Ecosystem Restoration Program (and under study in the Integrated Storage Investigation), some obstructions to fish passage (such as small dams) are being considered for modification or removal to restore anadromous fish access to critical spawning habitat.

**PH2:3.6.1-11**

CALFED must look for a solution that balances all needs of all water users depending on the Delta. Eliminating or significantly reducing Delta diversions would violate CALFED's own purpose, solution principles, and water supply reliability objective. At present, a high level of uncertainty is associated with future environmental water requirements. Therefore, CALFED modeled a range of conditions that could lead to lower or higher Delta exports for the No Action Alternative and the Program alternatives. The Criterion A assumption set (see Attachment A to the Programmatic EIS/EIR) defines the highest environmental water requirements and lowest Delta exports considered in this analysis. For example, modeling using Criterion A without new reservoirs resulted in lower Delta exports than under existing conditions. The impact analysis includes the effects of this reduced Delta export relative to existing conditions.

**PH2:3.6.1-12**

The SWRCB is in the process of deciding how Delta water quality standards will be met. Please also see common response 22.

**PH2:3.6.1-13**

CALFED agrees that the amount of willing sellers and cost required to acquire water are uncertain; cost will influence the amount of water available from willing sellers. CALFED conducted an Economic Evaluation of Water Management Alternatives that looks at the array of water management tools available to each region and places them in order from least to most expensive. New storage is one of the water management tools included in the array. Storage is considered necessary to meet Program objectives. The Implementation Plan and the Phase II Report contain additional detail on storage actions CALFED will pursue in Stage 1. Please also see common responses 4 and 16.

**PH2:3.6.1-14**

The Preferred Program Alternative does not include an isolated facility. Returning the Delta salinity to "pre-dam" conditions is beyond the scope of the CALFED Program and would require changes in standards. Please also see common responses 1, 4, 5, and 16.

PH2:3.6.1-15

CALFED has always had a strong commitment to public involvement and has encouraged partnership. These elements will become even more important as the Program moves into implementation involving storage.

PH2:3.6.1-16

CALFED conducted preliminary investigations of the potential benefits from hydroelectric facility reoperation and found relatively small benefits toward CALFED's objective of water supply reliability. Reoperation likely could provide more local water supply benefits than CALFED systemwide benefits.

PH2:3.6.1-17

An enlargement of Shasta Dam, from 6 to 8 feet and by approximately 300 TAF additional capacity, is one of the surface water storage sites retained by CALFED for additional evaluation and one which will be pursued during Stage 1. See the Phase II Report.

PH2:3.6.1-18

This linkage is evident in the proposed CALFED process for determining a future course of action with respect to a screened diversion facility on the Sacramento River, but the linkage to water quality will be mentioned along with other conveyance linkages.

PH2-3.6.1-19

CALFED is continuing work on the Water Management Strategy and more detailed evaluation criteria for each Program element, including water quality. The Preferred Program Alternative includes an evaluation of how water suppliers can "best" provide a level of public health protection equivalent to Delta source water quality of 50 parts per billion bromide and 3 parts per million TOC. The most important part of CALFED's drinking water strategy is the goal of "continuous" improvement in source water quality to meet public health needs. The Phase II Report, under "Water Management Tools: Storage," points out that cost effectiveness is a necessary part of developing this criteria:

CALFED's specific target for providing safe, reliable, and affordable drinking water in a cost-effective way is to achieve either: (a) average concentrations at Clifton Court Forebay and other south and central Delta drinking water intakes of 50  $\mu\text{g/L}$  bromide and 3.0 mg/L total organic carbon; or (b) an equivalent level of public health protection using a cost-effective combination of alternative source waters, source control, and treatment technologies. CALFED has not adopted a specific numeric target for salinity (other than meeting existing Delta standards) but does have a preliminary objective of reducing the salinity of Delta supplies.

PH2-3.6.1-20

Both the Integrated Storage Investigation and the Economic Evaluation of Water Management Alternatives will continue into Stage 1. CALFED will continue to coordinate these evaluations as they become more refined.

PH2-3.6.1-21

There is not a single program called “water supply reliability,” but there are programs for the various parts of water supply reliability. The programs for water use efficiency (water conservation and recycling), water transfers, conveyance, and storage are all designed to improve water supply reliability. Other programs such as watersheds and water quality also can contribute to water supply reliability. CALFED will continue to refine the Water Management Strategy to determine the best way that these tools can be used together to improve water supply reliability. This work on the Water Management Strategy serves the same purpose as a single program for water supply reliability.

PH2:3.6.1-22

CALFED has no legal authority over the management of groundwater supplies, nor does any CALFED agency exercise the authority over groundwater that exists in California water rights law governing surface water supplies. Therefore, CALFED and the CALFED agencies have taken a different approach, emphasizing voluntary local action such as Assembly Bill 3030 groundwater management plans and focusing on cooperative conjunctive use projects in which CALFED agencies work together with local entities. However, CALFED will support legislation that supports groundwater management at the basin level.

PH2:3.6.1-23

CALFED documents necessarily discuss water operations at a programmatic level of detail because many project-level details will affect water operations and these project-level decisions will be made in the future. Some examples of these decisions include the exact configuration of conveyance modifications in the Delta and the size, location, and nature of water storage projects. CALFED proposes continuation of a process and structure to coordinate operations of the water projects in order to resolve conflicts and maximize benefits to water supply reliability, ecosystem restoration, and water quality objectives. Currently, the CALFED Operations Group (Ops Group) is the coordination group for Delta water operations and includes state and federal agencies with an interest in water operations. The Ops Group, or a similar body, should continue in the long term as the public forum for discussing water operations. The group should include state and federal agency representatives at the highest levels with an interest in water operations. Those operational agencies should include DWR and Reclamation, which operate the projects; the Department of Fish and Game, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, which regulate the projects under the ESA requirements; and the SWRCB and the U.S. Environmental Protection Agency, which regulate water quality in the Delta; and the EWA manager responsible for environmental water operations and management. Resolution of operational issues and conflicts should be resolved at the lowest level of the operational agencies but elevated quickly if the issues cannot be resolved.

PH2:3.6.1-24

The statement on page 57 in the June 1999 Revised Phase II Report has been changed to read:

“...Urban water conservation will directly reduce per capita water use and may reduce the total urban demand for water.”

PH2:3.6.1-25

CALFED seeks to achieve its water supply reliability goals in a number of differing ways. None presumes a reallocation of existing water rights or modification of the water rights statutes. The Phase II Report describes CALFED’s broad objective for water supply reliability. The report defines the goal of “reduc[ing] the mismatch

between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system” to mean: (1) increasing the utility of available water supplies (making water suitable for more uses and reuses); (2) improving access to existing or new water supplies, in an economically efficient manner, for environmental, urban, and agricultural beneficial uses; and (3) improving flexibility of managing water supply and demand in order to reduce conflicts between beneficial uses, improve access to water supplies, and decrease system vulnerability. None of these goals nor the program elements designed to achieve them presents a conflict with the Delta Protection Act. During implementation of the Program, any project-level proposal will undergo environmental review prior to implementation.

PH2:3.6.1-26

The CALFED Water Management Strategy is intended to be a long-term decision-making framework for evaluating the success of implementation efforts and for selecting additional tools needed to achieve CALFED objectives. Thus, the strategy will not be “completed” prior to Stage 1 of implementation. Rather, the Water Management Strategy will continue to guide the selection of actions for implementation. Adaptive management will help shape future implementation. The Water Management Strategy recognizes that meeting CALFED objectives for water supply reliability will require implementation of many different water management tools that provide different benefits. A commentor suggests excluding major infrastructure projects during Stage 1 of implementation, but there may not be any comparable or suitable alternatives to water management tools that involve significant infrastructure.

PH2:3.6.1-27

CALFED will make additional water supplies available for environmental purposes through a variety of means. The Ecosystem Restoration Program will acquire water from willing sellers to augment streamflow and improve the timing of flows. Some of this water will be available for outflow, and some may be diverted at downstream locations to meet other beneficial uses. Assets available to the EWA will include water developed through improved system flexibility and water acquired from willing sellers for environmental purposes, primarily to protect Delta fish from the impacts of Delta exports. In addition, new or expanded surface storage may be constructed to store water and make it available for beneficial uses, including environmental uses. One CALFED strategy with respect to storage is to divert water at times when flows are high and the impact of diversions is low, and to release water for environmental purposes at times when the net benefit would be higher. Releases might be made at times when temperature control is needed or at low-flow periods when more water is needed to facilitate fish migration. This strategy will allow diversions to be maintained or increased while simultaneously making environmental improvements. Finally, a variety of other water management tools, such as water conservation and water recycling, will be pursued aggressively so that, to the extent practicable, water demands can be met without additional diversions from the Bay-Delta system.

PH2:3.6.1-28

The Water Management Strategy evaluates many different water management tools, each of which offers different benefits. For example, storage offers more flexibility in timing of needed flows than water conservation can provide. Surface storage offers greater flexibility than groundwater storage. A relative comparison of water management tools and their contribution to meeting water supply reliability goals and objectives is found in the Phase II Report.

### 3.6.2 Water Management Strategy Tools: Water Use Efficiency

PH2:3.6.2-1

The information in the Phase II Report is a summary of the Water Use Efficiency Program. The Water Use Efficiency Program Plan describes institutional, regulatory, cost, and public perception barriers that must be overcome.

PH2:3.6.2-2

These constraints are discussed in the Water Use Efficiency Program Plan. These constraints make it important for state and federal funding that water recycling is included in the plan.

PH2:3.6.2-3

The success of some water agencies in reducing per capita water use demonstrates the significant potential for water conservation. That is why water use efficiency is a major element of the CALFED Program; and why CALFED agencies intend to emphasize their efforts to provide technical, planning, and funding assistance to agencies that can achieve conservation savings.

PH2:3.6.2-4

Concerns over public acceptance and complex regulatory processes can affect the development of water recycling projects, as discussed in the Water Use Efficiency Program Plan.

PH2:3.6.2-5

Water recycling provides an additional supply of water that might not otherwise be available, thereby improving water supply reliability for some users. Recycled water is not suitable for all purposes. CALFED has not proposed any specific requirement or policy regarding the use of recycled water for agricultural irrigation. The Agricultural Water Management Council (AWMC) was formed as a forum for environmental organizations and irrigation districts to reach agreement on appropriate water conservation and management methods for districts. The AWMC could consider the issue of recycled water use if it chooses, although the technical, biochemical, public health, and soil chemistry issues involved might be more appropriately considered by other forums.

PH2:3.6.2-6

California laws, including the California Water Code and the California Constitution, prohibit waste and unreasonable use. However, there is no precise description of beneficial use in the law. Institutions such as the California Urban Water Conservation Council and the AWMC provide forums for various interests to reach consensus on appropriate water use efficiency measures. One reason these groups were created was to provide an alternative to unilateral interpretation of the law by the SWRCB.

PH2:3.6.2-7

CALFED proposes to restrict access to any new water supplies available from CALFED facilities to those who demonstrate that existing supplies are being used efficiently. This is not a control on existing water use but an appropriate condition for access to new water supplies. CALFED has not proposed the adjudication of any groundwater basins that are not presently adjudicated or any permit system for adjudicated basins.

**PH2:3.6.2-8**

Efficiency measures such as water conservation and water recycling can contribute to ecosystem health by reducing demand for water diverted from the Delta. However, rights to conserved water generally are retained by the water rights holder that implements the efficiency measure. As a result, conserved water may be used to meet other demands south of the Delta and not result in a reduction in Delta diversions. One mechanism for efficiency measures in export areas to translate directly into reduced Delta pumping would be for CALFED to pay for efficiency measures in return for some or all of the yield of the efficiency measure.

**PH2:3.6.2-9**

The Phase II Report lists several benefits of water use efficiency, including “can reduce demand for Delta exports, and can reduce related entrainment effects on fish when exports are reduced.” The text has been revised to state “reduces fish entrainment related to reduced pumping or diversion.”

**PH2:3.6.2-10**

The proposed Water Use Efficiency Program is largely incentive based. Where conservation measures are cost effective from a statewide perspective but not from a local perspective, CALFED proposes partial funding to make these measures feasible.

**PH2:3.6.2-11**

CALFED does not propose any change in water rights law. The California Constitution and the California Water Code currently prohibit waste and unreasonable use of water. The Water Use Efficiency Program will provide incentives to encourage implementation of efficiency measures that provide benefits, such as improvements in water quality or timing of flows, or measures that leave more water in a stream throughout certain stream reaches. In some cases, this will be accomplished by encouraging improvements in irrigation efficiency. In other cases, improvements in irrigation efficiency may not yield sufficient multiple benefits to merit investment in the necessary irrigation improvements. CALFED will support legislation that supports groundwater management at the basin level.

**PH2:3.6.2-12**

CALFED recognizes that many of the tools available to carry out a Water Management Strategy are complementary, performing better or differently when used in concert with one another. The importance of new storage is reflected in the CALFED Integrated Storage Investigation and the Preferred Program Alternative.

**PH2:3.6.2-13**

CALFED has used the term “measurable objective” to refer to technical objectives related to agricultural water conservation or water management. CALFED recognizes the difficulties associated with measuring the results of urban water conservation programs and the impediments associated with implementation of water recycling programs. Urban conservation actions are focused on increased technical and financial incentives and assurances that feasible conservation practices will continue to be implemented. Recycling actions are focused on assistance and removal of impediments. Any objectives in these areas should be related to readily measurable actions, such as installation of conservation devices or provision by state and federal agencies of access to sufficient funds and financing mechanisms for recycling programs to be successfully implemented.

### 3.6.3 Water Management Strategy Tools: Water Transfers

PH2:3.6.3-1

CALFED has not proposed changes in water rights laws. In fact, CALFED proposes to work with the California Legislature and stakeholders to determine whether additional legislation is necessary to protect water rights, including area-of-origin priorities. CALFED will support legislation that supports groundwater management at the basin level. Also see the Water Transfer Program Plan and common response 13.

PH2:3.6.3-2

CALFED proposes a groundwater assistance program to gather groundwater data.

PH2:3.6.3-3

The Water Transfer Program is intended to facilitate transfers and groundwater substitution where they provide local benefit, and to disclose potential impacts through a water transfers clearinghouse. Please also see common responses 13 and 20.

PH2:3.6.3-4

Water transfers alone cannot achieve the CALFED objective for water supply reliability. The Water Management Strategy includes water transfers and many other water management tools.

PH2:3.6.3-5

CALFED has not proposed any new or stricter environmental regulations related to augmentation of in-stream flows, so no redirected impact would occur from such regulation. Where augmented flows or altered flow timing would benefit aquatic resources and help meet CALFED objectives, CALFED proposes to work cooperatively with landowners and water rights holders to accomplish these actions. CALFED proposes to work with stakeholders to develop appropriate protection provisions for water transferred for in-stream uses, so that water acquired for environmental purposes will stay instream as intended. In some cases, however, environmental water needs in upstream areas may not coincide with water needs or outflow needs in the Delta. At these times, it may be most beneficial for the Ecosystem Restoration Program to arrange for upstream releases and then allow diversion of the water downstream in the Delta.

### 3.6.4 Water Management Strategy Tools: Conveyance

PH2:3.6.4-1

The CALFED mission is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. Many of the conflicts in the Bay-Delta system today are due to incompatibility between ecosystem restoration and water management. The CALFED Program is a group of actions that, taken together, would meet the Program mission even though some of these actions, considered separately, might diminish ecosystem health or impair water management. Although implementation of the CALFED Program could lead to increased diversions from the Delta, the Preferred Program Alternative does not specifically call for an increase in diversions but rather an increase in the capacity to divert water. An increase in permitted pumping capacity at the SWP Banks Pumping Plant is included in the

Preferred Program Alternative. This increase in capacity will increase flexibility, so that diversions can be shifted more to times of low environmental impact.

**PH2:3.6.4-2**

Please see common response 16.

**PH2:3.6.4-3**

The description of north Delta channel modification included in the “Program Implementation” chapter in the Phase II Report is slightly different from, and more refined than, the description of this proposed action in the “Draft Implementation Plan” chapter in the December 1998 Revised Phase II Report. The June 1999 report, while retaining language stating that CALFED will “evaluate opportunities,” places more emphasis on achieving synergistic benefits from these actions—including resolution of local flood concerns and creation of tidal wetlands and riparian habitats. What has not changed is the intention to proceed only after additional evaluation is conducted.

**PH2:3.6.4-4**

The CALFED’s alternatives analysis evaluated dual-Delta conveyance, including an isolated conveyance channel. Based on the analysis, CALFED selected a Preferred Program Alternative that includes through-Delta conveyance incorporating modifications of existing Delta channels.

**PH2:3.6.4-5**

CALFED has continued to refine the conveyance strategy since the publication of the December 1998 Revised Phase II Report. A complete discussion of conveyance strategy may be found in common response 16.

**PH2:3.6.4-6**

For the initial screening leading to the surface storage sites retained for additional CALFED consideration, CALFED did not use economic and water yield criteria. The prospective reservoirs could serve many purposes, of which urban water supply is one. CALFED has prepared draft evaluations to compare prospective reservoir sites as sources for urban water supply but did not use this information for the initial screening. See the storage section in the Phase II Report for projects CALFED will pursue during Stage 1.

**PH2:3.6.4-7**

The current and earlier versions of the Phase II Report include an isolated facility under Alternative 3. While the isolated facility would provide marked improvements in the quality of water exported from the Delta, it also somewhat improves water quality in some areas of the Delta because of reduced pumping directly from the south Delta channels. The Preferred Program Alternative does not include an isolated facility. However, it does provide for evaluation of up to a 4,000-cfs screened diversion facility on the Sacramento River to move fresher water into the central Delta.

**PH2:3.6.4-8**

The diversion facility on the Sacramento River would not significantly reduce obstacles to construction and operation of an isolated facility. The historical emphasis has been on a screened diversion at Hood on the

Sacramento River. This and other potential sites will be considered as part of the evaluation. The evaluation of the diversion facility on the Sacramento River was not added to the Preferred Program Alternative as a first step toward an isolated facility but was included to make the system work without an isolated facility. CALFED will consider an isolated facility in the future only if the through-Delta conveyance with the other Program elements cannot meet CALFED goals and objectives. For an isolated facility to be considered in the future, it would need to be the most cost-effective and least environmentally damaging measure to correct this deficiency in meeting the goals and objectives. If an isolated facility is found necessary in the future, it would need to withstand its own rigorous environmental review and permitting, separate from that included in this Programmatic EIS/EIR.

PH2-3.6.4-9

The dual-Delta conveyance would provide additional flexibility. The March 1998 Phase II Interim Report provided a summary of how each alternative would perform against 18 distinguishing characteristics, including operational flexibility. This comparison showed that Alternative 3, the dual-Delta conveyance alternative, would provide the most operational flexibility of all alternatives. Impacts associated with dual-Delta conveyance, both positive and negative, are evaluated in Chapters 5 through 7 in the Programmatic EIS/EIR. The Program has not selected Alternative 3 as the Preferred Program Alternative. The Program complexity, coupled with the broad scope and number of actions needed to implement the Program, the implementation period of 30 or more years, the need to test hypotheses, and resource limitations, make it necessary to implement the Program in stages. Consequently, the Preferred Program Alternative provides for implementation of the Program in a staged manner and establishes mechanisms to obtain the necessary additional information to guide the next stage of decision making. Therefore, the CALFED agencies propose to begin with through-Delta modifications. In the event that the through-Delta conveyance facilities in the Preferred Program Alternative cannot meet the Program objectives—particularly for water quality and fisheries—the Preferred Program Alternative includes a process for determining the conditions under which any future additional conveyance facility actions—including those in Alternative 3—would be taken. Until additional information is available to determine whether water quality objectives and fish recovery goals can be met and which, if any, additional actions will be necessary to achieve the Program goals and objectives, the Preferred Program Alternative is the best alternative to achieve overall project purposes and objectives.

PH2:3.6.4-10

The Preferred Program Alternative describes the process for new conveyance facilities to be considered as part of the CALFED Program and for those that might be considered in the future. Please also see common responses 14 and 16.

PH2:3.6.4-11

CALFED has not decided to construct a screened diversion on the Sacramento River at Hood. As part of the Preferred Program Alternative, CALFED will study and evaluate a screened diversion facility on the Sacramento River, with a range of diversion capacities up to 4,000 cfs, as a measure to improve drinking water quality. The historical emphasis has been on a screened diversion at Hood on the Sacramento River. This and other potential sites will be considered as part of the evaluation. This evaluation will proceed simultaneously with implementation of other Water Quality Program measures, including reoperation of the Delta Cross Channel. Before construction of a diversion facility on the Sacramento River could proceed, project-level environmental analysis under CEQA and NEPA would be conducted, including analysis of a range of alternatives to meet project purposes. Please also see common response 16. Monitoring conducted by CALFED and CALFED agencies during Stage 1 of implementation will provide information on issues such as those listed by the commentor, relating to

entrainment, salvage, predation, and Delta hydraulics. This information will guide future decisions regarding Delta conveyance.

### 3.6.5 Water Management Strategy Tools: Storage

PH2:3.6.5-1

New or expanded storage, including surface storage and groundwater storage, can increase flexibility and reliability and can reduce conflicts over water at certain times. Therefore, the Preferred Program Alternative includes new storage predicated on complying with all Program linkages. Linkages are listed in the Preferred Program Alternative. Please also see common response 4 and the storage section in the Phase II Report.

PH2:3.6.5-2

The CALFED Integrated Storage Investigation includes examination of the potential of hydropower reoperation to contribute to the CALFED solution. Please also see common response 4.

PH2:3.6.5-3

Decisions regarding new storage will be guided by CALFED's Integrated Storage Investigation, as described in the Phase II Report and the Implementation Plan. Please also see common response 4.

PH2:3.6.5-4

The Program commitments related to new storage are vital assurances that all parts of the Program will be implemented together and that new storage will meet permitting requirements under the CWA Section 404. These commitments are essential to a successful, implementable CALFED Program.

PH2:3.6.5-5

In-Delta storage is one of the storage options that CALFED will pursue during Stage 1 under the Integrated Storage Investigation. Please also see common response 4.

PH2:3.6.5-6

Millerton Lake enlargement is one of the reservoir sites that continues to be considered in the Integrated Storage Investigation. Please also see common response 4.

PH2:3.6.5-7

CALFED recognizes the critical role of local government agencies in protecting and managing groundwater resources and will actively pursue cooperative partnerships with local agencies.

PH2:3.6.5-8

One advantage of groundwater storage or conjunctive use programs is that they facilitate reliance on surface water supplies in wetter years and provide an alternative groundwater source when surface supplies are curtailed.

PH2:3.6.5-9

CALFED agrees that off-stream storage on the west side of the Sacramento Valley could provide indirect flood control benefits and could supply west-side water needs, providing greater flexibility on the river.

PH2:3.6.5-10

The potential for increasing TOC loading is a concern associated with in-Delta storage. Revisions have been made to reflect this concern.

PH2:3.6.5-11

CALFED's approach to conjunctive use projects is to pursue cooperative partnerships with local agencies. CALFED has received expressions of interest regarding eastern San Joaquin County and will continue to evaluate projects in this area.

PH2:3.6.5-12

The comment appears to be referring to urban stormwater management. This topic requires site-specific analysis and is beyond the scope of the Program. On a broader scale, however, the Integrated Storage Investigation will consider natural and artificial recharge of groundwater on a regional basis. Please also see common response 1.

PH2:3.6.5-13

Generally, the capacity of a pumping plant and the accompanying canal system are designed for a specific capacity; if the pumps are enlarged, the canal must be enlarged. However, the SWP system has a physical capacity larger than the permitted capacity. CALFED is working toward increasing the permitted pumping capacity of the SWP Banks Pumping Plant together with the JPD. This has a similar effect of increasing the capacity of the federal pumps.

PH2:3.6.5-14

CALFED's Integrated Storage Investigation (please see common response 4) is currently looking at the role of surface water and groundwater in an overall Water Management Strategy. As stated in the Phase II Report under "Water Management Tools: Storage," CALFED is developing guiding principles for conjunctive use programs to ensure that local concerns and potential impacts are fully addressed. Formal agreements will be required and prepared for the implementation of each conjunctive use/groundwater banking development. In addition, site-specific environmental documentation will be required for each project. Please also see common responses 6, 13, and 19.

PH2:3.6.5-15

As stated in the Phase II Report under "Water Management Tools: Storage," CALFED is developing guiding principles for conjunctive use programs to ensure that local concerns and potential impacts are fully addressed. Formal agreements will be required and prepared for the implementation of each conjunctive use/groundwater banking development.

PH2:3.6.5-16

By its nature, new surface storage development takes considerable time and funding. The \$70,000,000 shown in the June 1999 Revised Phase II Report for the Integrated Storage Investigation is an initial amount primarily for planning and feasibility work related to both groundwater and surface water storage. Development of facilities will require more funding. Since the June 1999 Revised Phase II Report, CALFED has revised budgets to reflect a more aggressive Program schedule. For example, the budget for storage now includes facility construction in Stage 1. See the Phase II Report for revised budgets. Please also see common response 4.

PH2:3.6.5-17

The Phase II Report includes a list of surface reservoir sites that are retained for additional CALFED consideration. This list includes Los Vaqueros Reservoir expansion with local partners as part of a Bay Area water quality and water supply initiative. CALFED acknowledges the Contra Costa Water District (CCWD) principles and will carefully consider them as evaluations are refined in the future.

PH2-3.6.5-18

CALFED began an initial screening of 52 potential surface reservoir sites. The initial screening was conducted to reduce the number of sites to a more manageable number for additional future screening. The screening eliminated sites that clearly violated CALFED's solution principles or objectives and those that were under 200 TAF capacity. CALFED has prepared draft documentation (December 22, 1999 *Draft Initial Surface Water Storage Screening*) on this initial screening that led to the 12 potential sites in the Phase II Report. CALFED expects that many of the 12 remaining sites will also be eliminated when more detailed screening is completed. The Phase II Report and the Implementation Plan explain how CALFED will proceed with site-specific evaluation of surface and groundwater projects. CALFED will continue to compile available information on environmental concerns, land use restrictions, and other information for project-specific analyses.

PH2:3.6.5-19

Because specific reservoir sites are not identified in the Programmatic EIS/EIR, the impact analysis used representative sites and sizes to bracket the potential range of impacts for surface storage projects. The impact analysis in the Programmatic EIS/EIR (please see Section 2.1.2) evaluates up to 6 million acre-feet (MAF) of surface water and groundwater storage. This amount was thought to be near an upper limit of storage potential for the Program based on modeling results. The CALFED agencies consider the impact analysis to be legally satisfactory. More detailed information, with ample opportunity for public review and comment, will be developed as CALFED proceeds with the actions in Stage 1—including site-specific environmental review. Please see common response 1.

PH2:3.6.5-20

CALFED prepared an inventory of potential storage in the March 7, 1997 report, *CALFED Bay-Delta Program Storage and Conveyance Component Inventories*. The inventory was based on information in reports prepared over the last 40 years by federal, state, and local agencies. The inventory included facilities with the potential to significantly contribute to the Program's objective of improving water supply reliability in the Bay-Delta system by increasing water supply and/or improving operational flexibility. Smaller reservoirs (less than 100 TAF) were not included in the inventory. Later screening eliminated those sites less than 200 TAF since these smaller reservoirs do not significantly contribute to meeting CALFED objectives. CALFED staff believes that the smaller reservoirs are best left as candidates for potential development by local entities to meet specific local needs. Three

San Joaquin County reservoir sites were on the initial inventory: Duck Creek Reservoir, Farmington Reservoir enlargement, and South Gulch Reservoir. The sites were all eliminated due to their small sizes.

PH2:3.6.5-21

In using up to 3 MAF of new Sacramento River surface storage and up to 2 MAF of off-aqueduct surface storage in its impact analysis, CALFED was setting an upper limit for evaluation purposes and not as a statement of water demands. Future site-specific evaluations, environmental review processes, and permit applications will be coordinated under CALFED's Integrated Storage Investigation. Storage may provide some secondary benefits for flood control along the downstream river segments. However, flood control beyond the Delta itself is not part of the CALFED purpose.

PH2:3.6.5-22

CALFED will continue working on the Water Management Strategy to guide future decisions on the use of various water management tools. However, CALFED has identified linkages and conditions for surface water and groundwater storage that include a need for a demonstrated commitment to finance by the beneficiaries. Please see common responses 4 and 22.

PH2:3.6.5-23

DWR will not progress with an EIR before the CALFED ROD. An initial draft DWR work plan may have anticipated an earlier optimistic start date, but that assumption was not correct.

PH2:3.6.5-24

The existing reservoirs operated by DWR, Reclamation, and others serve many purposes and operate under many constraints. In general, water can be stored if adequate flood control space remains and other downstream environmental, water quality, and water demand needs are met. Depending on the timing of inflows to the reservoirs and the timing of the downstream constraints, the reservoirs do not fill in some years. Please take the earthquake comment to the Corps.

PH2:3.6.5-25

In California Public Resources Code Section 5093.542, the Legislature specifically mentions the potential of raising Shasta Dam and provides for the DWR to participate in studies of that potential raise:

Except for participation by the Department of Water Resources in studies involving the technical and economic feasibility of enlargement of Shasta Dam, no department or agency of the state shall assist or cooperate with, whether by loan, grant, license, or other wise, any agency of the federal, state, or local government in the planning or construction of any dam, reservoir, diversion, or other water impoundment facility that could have an adverse effect on the free-flowing condition of the McCloud River, or on its wild trout fishery.

CALFED agrees that the full Redbank storage project would not be consistent with CALFED goals and objectives. However, of the 12 reservoirs retained for additional CALFED consideration, the Schoenfield Reservoir portion of the Redbank project could provide unique fishery benefits to the Program. While diversion of water to Schoenfield Reservoir would be required, the Dippingvat Reservoir would not be considered. The concept involves using the reservoir early in the irrigation season to serve demands of the Corning and Tehama-

Colusa Canals and, in turn, leaving the gates on the Red Bluff Diversion Dam open (benefitting fish passage) longer since diversions from the Sacramento River would be unnecessary during this period. Studies for the Pinoche project have not progressed far enough to determine whether it should be removed for ESA reasons. These reservoir sites appear to have less potential for providing benefits during Stage 1 or soon thereafter; consequently, CALFED does not anticipate investing substantial resources in these reservoirs during Stage 1. See the storage section in the Phase II Report.

PH2:3.6.5-26

Development of North Coast rivers is beyond the scope of the Program and against the CALFED policy of not developing new on-stream reservoirs.

PH2:3.6.5-27

The \$370,000,000 in the June 1999 Revised Phase II Report was an estimate based on the storage-related actions proposed for Stage 1. Not all the \$370,000,000 is for the Integrated Storage Investigation. The Integrated Storage Investigation is still under development, and cost estimates will continue to be refined. Since the June 1999 Revised Phase II Report, CALFED has revised budgets to reflect a more aggressive Program schedule. For example, the budget for storage now includes facility construction in Stage 1. See the finance section in the Phase II Report for revised budget amounts.

PH2:3.6.5-28

CALFED has been working to better define river flows necessary to maintain river processes (fluvial geomorphology). Early in the process, CALFED estimated that a flow of 60,000 cfs may be necessary, but work is continuing on defining operational guidance for diversions. No modeling with this daily flow has been conducted since DWRSIM is a monthly model. The modeling with DWRSIM considered a range of river flow limits (up to 20,000 cfs monthly) before diversion to storage can be made. See Attachment A to the Programmatic EIS/EIR.

PH2:3.6.5-29

Preliminary evaluations indicate that in-Delta storage could significantly improve system flexibility, especially for the EWA. In-Delta storage remains on CALFED's list of surface storage sites retained for additional consideration and will be pursued during Stage 1. More detailed evaluations will be required on the potential effects of in-Delta storage on adjoining islands and design measures to protect them. See common response 4.

PH2:3.6.5-30

A physical connection to in-Delta storage and the pumping plants is within the range of potential solutions covered by the programmatic evaluations. In-Delta storage remains one of the 12 potential surface reservoirs for additional CALFED consideration. The continuing work on the development of the EWA recognizes the value of the physical connection. More detailed site-specific work, including the potential of the connection, will be conducted as in-Delta storage is evaluated.

PH2:3.6.5-31

While new storage volume to meet CALFED objectives might be obtained by the combined effect of several small reservoirs, the cumulative costs and environmental impacts of building many smaller dams would be too high.

The smaller reservoirs (less than 200 TAF) are best left as candidates for potential development by local entities to meet specific local needs. In addition, CALFED eliminated on-stream reservoirs as a matter of policy due to environmental impacts and implementability reasons. Other reservoirs were eliminated based on conflict with CALFED solution principles and objectives. The Phase II Report includes information on how CALFED will proceed with evaluation of storage. Please also see common response 4.

PH2:3.6.5-32

Groundwater storage and surface storage are not exactly equivalent and do not provide exactly the same benefits. Groundwater storage is generally more environmentally benign but fills more slowly and can be drawn down more slowly than surface storage. For this reason, groundwater storage is often operated in conjunction with surface storage—where water can be stored quickly until such time as it can be placed in an aquifer. There is also the potential for local water supply and environmental impacts associated with groundwater storage. For this reason, CALFED will proceed with groundwater storage projects only in conjunction with a local project proponent.

PH2-3.6.5-33

CALFED has not computed cost/benefit ratios for potential surface storage. CALFED has conducted an initial screening of potential reservoir sites to eliminate sites providing less than 200 TAF of storage and those that conflicted with CALFED solution principles, objectives, or policies. Development of North Coast rivers is beyond the scope of the Program and against CALFED's policy of not developing new on-stream reservoirs. Due to environmental concerns, CALFED does not propose new on-stream storage (such as the Dos Rios project). CALFED has, however, retained in-Delta island storage as one of the potential surface reservoirs remaining for additional CALFED consideration. Please also see common response 4.

PH2-3.6.5-34

Merced County is the correct location for Montgomery Reservoir. This change has been made in the Phase II Report.

PH2-3.6.5-35

CALFED agrees that off-stream storage can result in serious environmental problems. However, off-stream storage generally results in fewer environmental impacts than new on-stream storage. The off-stream sites, filled primarily by diversion, are generally located on small or intermittent drainages where the impacts on the aquatic environment are much smaller than those associated with on-stream reservoirs located on major rivers or tributaries. Mitigation costs are anticipated to be substantially less with the off-stream reservoirs, which will make the on-stream reservoirs infeasible. CALFED recognizes the need for peak flows and sediment transport to maintain the river channels and recognizes the effect of diversions. This fact has been a key reason that CALFED eliminated some potential reservoir sites from additional consideration in its initial reservoir screening investigations. CALFED is evaluating the effects of diversions on the channel geomorphology and the fish. For its programmatic evaluations, CALFED considered diversions up to 5,000 cfs from the Sacramento River; a smaller diversion may be appropriate. More detailed studies of geomorphology and environmental needs will be conducted as evaluations proceed. Please also see common response 4.

Surface water and groundwater storage are not treated unequally. Each method has different benefits and impacts that must be considered as CALFED makes decisions. A full array of water management tools, including new groundwater and surface storage, needs to be included in the Water Management Strategy. New groundwater and/or surface storage will be developed and constructed, together with aggressive implementation of water conservation, recycling, and a protective water transfer market, as appropriate to meet CALFED Program goals. Due to potentially fewer environmental impacts, groundwater projects could be implemented sooner than surface storage. Future site-specific evaluations, environmental review processes, and permit applications will be coordinated under CALFED's Integrated Storage Investigation.

CALFED will pursue new storage projects that best help meet CALFED goals for water supply reliability and ecosystem restoration. All of the potential new or expanded storage projects will require detailed studies, environmental documentation, and permitting before they can be built. In addition, CALFED has committed to balanced progress in all Program areas, as stated in the Preferred Program Alternative:

... CALFED will annually review the status of implementation of all actions, the progress toward achievement of all goals and objectives, and compliance with Program schedules and financing agreements pertaining to the CALFED Program. In all Program areas, funds for implementation of the Program will continue to be available only if implementation of all actions, progress toward achievement of all goals and objectives, and compliance with schedules and financing agreements are occurring in a balanced manner. In the event that either the Governor or the Secretary of the Interior determines that the Program has not substantially adhered to this balanced implementation, then the Governor and the Secretary will develop and approve a revised program schedule and budget to achieve balanced implementation.

In addition, the general principle of "beneficiaries pay" applies to all parts of the Program including new storage. CALFED conducted an Economic Evaluation of Water Management Alternatives that looked at the array of water management tools available to each region and placed them order from least to most expensive. In many cases, some amount of water conservation is the most cost-effective tool to use for a given region. However, not all increments of water conservation are equally cost effective. This information will be presented, along with other evaluation information, as the Integrated Storage Investigation continues. CALFED has evaluated each alternative, including the Preferred Program Alternative, with and without new storage. Please also see common response 4.

CALFED agrees that the Integrated Storage Investigation is only one component of the comprehensive effort required to develop a Water Management Strategy. CALFED will continue to refine its analysis of other water management tools, including water transfers, conservation, recycling, watershed management, and water quality improvement actions. Our ongoing economic evaluations will help characterize the relative implementability of various water management tools under a variety of assumptions. The Integrated Storage Investigation will help to refine the appropriate operational policies, costs, benefits, and impacts.

Responses to specific comments in Attachment 5 to the commentor's letter are included elsewhere in this document. Please see the specific comment of interest in Attachment 5 for the location of the response.

**PH2-3.6.5-39**

Any new storage will require safeguards to provide adequate protection for fisheries, water temperature, geofluvial process, and downstream flow requirements. CALFED has evaluated each alternative, including the Preferred Program Alternative, with and without new storage. CALFED agrees that the issue of whether or not storage can provide ecosystem benefits remains very controversial. However, work underway by CALFED to explore the potential operation of an EWA has demonstrated the value of storage in shifting the timing of upstream releases and Delta diversions. It appears that real-time monitoring together with utilization of dedicated storage could provide significant protection to fisheries without diminishing water supply reliability. Other CALFED investigations have demonstrated the potential for new storage to provide the pulse flows proposed in the Ecosystem Restoration Program to benefit anadromous fish. Ultimately, these potential benefits must be weighed against the costs of storage and considered in the context of other environmental impacts. The Integrated Storage Investigation will continue to further define the potential environmental impacts and benefits to assist in guiding these broad decisions. However, a thorough evaluation of the environmental impacts and benefits can be conducted on a site-specific basis.

**PH2-3.6.5-40**

All work under the Integrated Storage Investigation is intended to facilitate programmatic decisions. It is impossible to develop the economic, financing, and environmental information without some measure of site-specific investigation. In fact, a thorough evaluation of the environmental impacts and benefits can be conducted on a site-specific basis. Future site-specific evaluations, environmental review processes, and permit applications will be coordinated under CALFED's Integrated Storage Investigation.

**PH2-3.6.5-41**

CALFED agrees with the observations regarding the ROD and programmatic findings. A Water Management Strategy with a full array of tools is an important part of the solution.

**PH2-3.6.5-42**

CALFED disagrees with the statement that the Program has confused quantity with water reliability. CALFED, together with stakeholders, has set broad goals for water supply reliability. None of these goals mentions water quantity. Goal A is to increase the utility of available water supplies (making water suitable for more uses and reuses). Goal B is to improve access to existing or new water supplies, in an economically efficient manner, for environmental, urban, and agricultural beneficial uses. Goal C is to improve flexibility of managing water supply and demand in order to reduce conflicts between beneficial uses, improve access to water supplies, and decrease system vulnerability. Continuing work on the Water Management Strategy will better define measurable performance measures and how the array of water management tools can work together to improve water supply reliability for all water users, including the environment.

**PH2-3.6.5-43**

The requirements for environmental water, such as in-stream flows, temperature control, and Delta standards, are current considerations in reservoir carryover storage targets for water use in subsequent years. In addition, CALFED's evaluations for the EWA include carryover of environmental water assets between years. CALFED's development of a long-term water acquisition strategy for environmental water acquisitions for the Ecosystem Restoration Program and the EWA can further facilitate making ecosystem water available in different water-year

types. Environmental participation in new storage, if any, could make additional environmental water available for carryover from year to year.

#### PH2-3.6.5-44

CALFED has continued to work on refining the Program since originally receiving the November 8, 1998, Blueprint for an Environmentally and Economically Sound CALFED Water Supply Reliability Program. The essence of many of the "Blueprint" concepts currently are included in the Program. This is evidenced, for example, by the wide variety of water management tools included in the Preferred Program Alternative. CALFED has recommended several improvements to the existing water market structure that would enable water transfers to play an integral role in statewide water management. In addition, CALFED has included an aggressive Water Use Efficiency Program directed at incentives and assurance mechanisms for more efficient use of existing water supplies. However, the actual savings that will result cannot be accurately estimated. Thus, values presented by the "Blueprint," especially with limited documentation on their derivation, are not very useful to the Program at this time. Furthermore, CALFED staff believe their conservation estimates to be reasonable. The Summary Report by the Independent Review Panel on Agricultural Water Conservation Potential (January 29, 1999) identified many necessary refinements that could be made to CALFED's agricultural estimates, but also stated that these programmatic-level estimates were "reasonable initial estimates of overall agricultural water conservation potential." Please see common response 10 for discussion on the water supply baseline.

CALFED, together with stakeholders, has set broad goals for water supply reliability for all water users. None of these goals mentions water quantity. Goal A is to increase the utility of available water supplies (making water suitable for more uses and reuses). Goal B is to improve access to existing or new water supplies, in an economically efficient manner, for environmental, urban and agricultural beneficial uses. Goal C is to improve flexibility of managing water supply and demand in order to reduce conflicts between beneficial uses, improve access to water supplies, and decrease system vulnerability. Continuing work on the Water Management Strategy will better define measurable performance measures and how the array of water management tools can work together to improve water supply reliability for all water users, including the environment.

CALFED will pursue new storage projects that best help meet CALFED goals for water supply reliability and ecosystem restoration. All of the potential new or expanded storage projects will require detailed studies, environmental documentation, and permitting before they can be built. In addition, CALFED has committed to balanced progress in all Program areas, as stated in the Preferred Program Alternative:

... CALFED will annually review the status of implementation of all actions, the progress toward achievement of all goals and objectives, and compliance with Program schedules and financing agreements pertaining to the CALFED Program. In all Program areas, funds for implementation of the Program will continue to be available only if implementation of all actions, progress toward achievement of all goals and objectives, and compliance with schedules and financing agreements are occurring in a balanced manner. In the event that either the Governor or the Secretary of the Interior determines that the Program has not substantially adhered to this balanced implementation, then the Governor and the Secretary will develop and approve a revised program schedule and budget to achieve balanced implementation.

In addition, the general principle of "beneficiaries pay" applies to all parts of the Program including new storage. CALFED conducted an Economic Evaluation of Water Management Alternatives that looked at the array of water management tools available to each region and placed them in order from least to most expensive. In many cases, some amount of water conservation is the most cost-effective tool to use for a given region. However, not all increments of water conservation are equally cost effective. This information will be presented, along with

other evaluation information, as the Integrated Storage Investigation continues. CALFED has evaluated each alternative, including the Preferred Program Alternative, with and without new storage. Please also see common response 4.

CALFED recognizes that estimates of water demand can vary widely. Therefore, its modeling assumptions do not use a single water demand (DWR or others) but uses a range from 1995 demands to estimated 2020 demands. The modeling using the 1995 demands assumes that water demands do not increase over existing levels, even in year 2020. Using the 1995 water demands requires assuming that any increase in water demands will be met from other non-Delta sources such as water conservation and water recycling. This is not a policy decision but is for the purpose of modeling a range of potential conditions. Using one estimate of water demands or the other does not change CALFED's conclusion on the Preferred Program Alternative. Due to uncertainty, the modeling assumptions also included a range of environmental assumptions that would lead to different flow requirements. While the Ecosystem Restoration Program estimated flows required for environmental restoration, work continues to define how the EWA can best be used for environmental enhancement/protection in a balanced way with other water uses.

Another recommendation of the "Blueprint" is for a water pricing structure that reflects the economic and environmental value of water. While CALFED has no authority to set water pricing structure nor change Reclamation law (water pricing for the SWP is more cost based than for the CVP), the Program does include actions and policies that move closer to a market-based pricing of water. Improvements to the existing water market structure will enable water transfers to play an integral role in statewide water management and encourage the efficient use of water. An aggressive Water Use Efficiency Program directed at incentives and assurance mechanisms will encourage more efficient use of existing water supplies. Financing, including broad-based diversion or user fees, could help account for some of the environmental costs. In addition, CALFED's general principle of "beneficiaries pay" provides for water users to pay the full cost of construction, mitigation, and operation of new facilities.

PH2:3.6.5-45

Two responses are consolidated under this response. Please read the entire text of this response for an answer to your comment.

The Integrated Storage Investigation consists of a number of coordinated elements with a variety of time frames. The Integrated Storage Investigation includes site-specific studies of surface water storage, groundwater storage, and power facility reoperation; and a comprehensive assessment of the potential for removing or modifying critical fish migration barriers. In addition, assistance will be provided to local agencies for study and implementation of groundwater conjunctive use programs. Some of these efforts will be completed during the first years of implementation. Other efforts, such as the ongoing investigations of new surface storage, will require several more years to complete the necessary engineering and environmental analyses and the required environmental review and permit application processes. All information derived from these Integrated Storage Investigation investigations, along with updated information from other CALFED Program elements addressing water use efficiency, water recycling, and water transfers, will be considered as CALFED refines its Water Management Strategy. Surface water or groundwater storage opportunities that can contribute to CALFED Program objectives and solution principles and are consistent with the Water Management Strategy will be recommended for implementation. Construction of some recommended projects will begin by the end of Stage 1 when willing project participants are identified, site-specific environmental documentation is completed, and required permits are obtained.

The concern related to water quality impacts is noted in the Phase II Report as suggested. There is uncertainty regarding the amount and type of organic carbon that might be discharged from such storage, and uncertainty regarding potential water quality impacts of storage versus potential benefits related to new operational flexibility provided by the storage. Detailed analysis and disclosure of potential water quality impacts related to in-Delta storage atop peat soils are most appropriately discussed in the context of a project-specific environmental document.

PH2:3.6.5-46

The Phase II Report explains how CALFED will proceed with evaluation of storage projects in Stage 1. CALFED will address assurances during the project-specific stage.

PH2:3.6.5-47

CALFED has carried out a reservoir screening effort, narrowing the range of reservoir sites under consideration from 52 to 12. Enlargement of Lake Shasta remains on the list of 12 sites still under consideration. No technical or planning information was available to CALFED on the enlargement of Lake Oroville. Because there was no existing basis for analysis, the site was not considered during reservoir screening. The configuration of the existing Oroville Dam would appear to be difficult and expensive to enlarge.

### 3.6.6 Water Management Strategy Tools in Action: The Environmental Water Account

Responses PH2:3.6.6-1 through PH2:3.6.6-100 have been consolidated into the following text. This text also can be found in the “Common Responses” section of Volume I, under common response 21.

The EWA is part of CALFED’s Water Management Strategy, designed to improve fisheries protection and recovery while providing improvements in water quality and water supply reliability. The EWA will rely on more flexible management of water based on real-time needs of the fishery resources. The EWA functions primarily by changing the timing of some flow releases from storage and the timing of water exports from the south Delta pumping plants to coincide with periods of greater or lesser vulnerability of various fish to Delta conditions. The EWA will be established to provide water for protection and recovery of fish beyond water available through existing regulatory actions related to project operations.

**EWA Versus Prescriptive Standards.** The EWA is based on the concept that flexible management of water will achieve fishery and ecosystem benefits more efficiently than a completely prescriptive regulatory approach. By managing EWA “assets” (such as water, storage, money, and operation rights) on a real-time basis, the overall cost of environmental protection can be lower than under a purely prescriptive approach. This would help to attain water supply reliability objectives for other water users and improve fisheries conditions. In addition, by managing the EWA in close coordination with other parts of the Water Management Strategy, multiple benefits may sometimes be achieved from the use of EWA assets. For example, the EWA may at times release water to achieve both fishery enhancement and water quality benefits.

The EWA concept and traditional prescriptive standards represent fundamentally different approaches to natural resource protection, and both have strengths and weaknesses. Compared to prescriptive standards, an EWA allows for more creative, flexible, and adaptive responses to real-time developments in the environment. In addition, by requiring EWA managers to budget EWA assets, the EWA encourages a more efficient use of environmental water supplies. At the same time, however, the EWA must have adequate assets and must rely on a functional water market to effectively translate EWA assets into environmental protection measures. Inefficiencies in the water

market can translate into an inefficient EWA. In addition, the EWA's reliance on real-time information about resource responses requires an extensive, and expensive, monitoring program.

Compared to an EWA, prescriptive standards have certain advantages. Whereas the EWA approach focuses on protecting targeted species, prescriptive standards can provide broad ecosystem protection to a wider range of species. Prescriptive standards generally provide a greater assurance of the intended protection, in that they do not rely on real-time decisions by asset managers. Nevertheless, prescriptive standards can be rigid and inefficient; they can be overly broad, in which case they are an inefficient use of natural resources (water); or they can be overly narrow, in which case they do not adequately protect the natural resources.

These considerations suggest that the optimum approach would include a combination of prescriptive standards and an EWA. The prescriptive standards would be used to provide the broad baseline level of ecosystem protection, and to address specific species needs that are well established and predictable. The EWA can then be used to "fine-tune" ecological protection, reallocating EWA assets to provide additional protection to targeted species as indicated by real-time events.

**EWA Development.** To gain insight into whether and how an EWA could improve fish conditions while protecting water quality and water supply benefits, a group including CALFED agency staff and stakeholders have simulated numerous EWA /CVPIA operations scenarios. These EWA gaming exercises allowed project operators, fishery agency biologists, and stakeholders to work together to simulate operational decisions to react to the changing hydrological and biological conditions typical of the Sacramento-San Joaquin watersheds and the Delta. The gaming allowed them to see how the system may respond to potential configurations and applications of EWA assets.

The group conducted a number of gaming simulations to better understand how an EWA might have been operated in "real time" if it had existed during the 1981 through 1994 water years. This period included a variable hydrologic sequence of wet years and dry years to test the EWA but does not reflect all the variation that EWA management could encounter. In each simulation, the EWA had access to a different collection of facilities, contracts, rights, and income. Differing assumptions also were made about the application of water under CVPIA Section 3406 b(1) and b(2). For example, one game was run solely to determine how much water would be required to achieve "adequate" biological protection from the point of view of the fishery agencies. In some games, the EWA had access to new storage and/or new export pumping capacity. In all games the EWA had access to unused project capacity and the right to allow variances in application of the export/inflow standard in order to generate environmental water. In some games, the EWA had a budget for water purchases.

Changes in operations were simulated using a set of assumed EWA and historical hydrology and fish salvage records, starting from a model representation of project operations with current regulatory conditions. The group then could evaluate the effects of their decisions on fish resources, water quality, water supply reliability, and the EWA account.

**EWA Structure.** During Stage 1, the EWA would work from a foundation of the existing regulatory regime. The EWA would not be a substitute for existing prescriptive standards but would supplant potential new standards. The EWA will be established to provide water for the protection and recovery of fish beyond water available through existing regulatory actions related to project operations. The EWA will benefit water users by providing additional water for fish without the need to reduce project deliveries. The EWA will be authorized to acquire, bank, transfer, and borrow water and to arrange for its conveyance. EWA assets will be managed by the state and federal fishery agencies (USFWS, NMFS, and DFG) in coordination with project operators and stakeholders, through the CALFED Operations Group. Initial acquisition of assets for the EWA will be made and funded by federal and state agencies (Reclamation and DWR). Subsequently, it is anticipated that acquisitions

and cost allocations among beneficiaries will be made pursuant to a public process that may take advantage of other agencies or third parties to acquire assets.

To provide regulatory stability during the initial period of Stage 1, the CALFED agencies will provide a commitment, subject to legal requirements, that for the first 4 years of Stage 1, there will be no reductions, beyond existing regulatory levels, in CVP or SWP deliveries from the Delta resulting from measures to protect fish under the federal and state ESAs. This commitment will be based on the availability of three tiers of assets. Tier 1 is baseline water, provided by existing regulation and operational flexibility. The regulatory baseline consists of the biological opinions on winter-run chinook salmon and delta smelt, 1995 Delta Water Quality Control Plan, and 800 TAF of CVP Yield pursuant to CVPIA Section 3406(b)(2). See the EWA section in the Phase II Report for more detail on the regulatory baseline.

Tier 2 consists of the assets in the EWA combined with the benefits of the Ecosystem Restoration Program and is an insurance mechanism that will allow water to be provided for fish when needed without reducing deliveries to water users. Tier 1 and Tier 2 are, in effect, a water budget for the environment and will be used to avoid the need for Tier 3 assets. It is unlikely that assets beyond those in Tier 1 and Tier 2 will be needed to meet ESA requirements. However, if further assets are needed in specific circumstances, a third tier will be provided. Tier 3 is based on the commitment and ability of the CALFED agencies to make additional water available should it be needed. In considering the need for Tier 3 assets, the fishery agencies will consider the views of an independent science panel. Tier 3 assets may include additional purchases from willing sellers or consensual “borrowing” of water (beyond assets borrowed in the implementation of the EWA).

The ESA commitment will be in effect for 4 years based on Ecosystem Restoration Program implementation and the assets available in that period. It is anticipated that sufficient assets, either from existing sources or from supply augmentation, will be available for the protection of fish beyond the first 4 years, and that the commitment will be extended. The only exception to this commitment would arise in the extremely unlikely event that, despite the utilization of all measures available in the three tiers, a determination is made that a situation of jeopardy to a listed species nevertheless is likely.

The EWA would need to make use of all of the water management tools as shown. Especially in its first few years of operation, a substantial portion of the assets needed for an EWA will come from access to existing project flexibility, new changes in project flexibility (for example, the joint point of diversion and export/inflow ratio flexibility) and through voluntary purchases (estimated at \$50 million annually) on the water transfer market. Given these market-based water transfers, the EWA will affect the cost and availability of water transfer capacity. See the EWA section in the Phase II Report for more detail on EWA assets.

On average, the EWA will cause export timing shifts of approximately 380 TAF annually; somewhat higher amounts are anticipated after the first year. These timing shifts will not reduce the volume of exports except for water under some voluntary market transactions. CALFED’s analysis of the EWA shows that the EWA “performance” increases as the EWA’s access to surface and groundwater storage increases. Flexibility in project operations and improvements in conveyance facilities can both help deliver environmental water at the desired place and time and can help to create new EWA “assets.” This flexibility is essential for the EWA for it must be operated in tandem with [[Section 3406]] b(1), b(2), and b(3) water provided under the CVPIA. Finally, the EWA cannot function without the comprehensive monitoring program envisioned in CALFED’s Science Program.

Water quality concerns also must be considered in managing the EWA. Operational changes to enhance the protection of aquatic resources and maintain export supplies have the potential to affect water quality, either positively or negatively. Management of the EWA must be coordinated closely with operation of the state and

federal water projects and the Water Quality Program to assure that EWA operations do not adversely affect the Program's ability to meet its water quality goals.

The EWA will provide fisheries protection and recovery while providing improvements in water supply reliability primarily by changing the timing of some flow releases from storage and the timing of water exports from the south Delta pumping plants. These real-time operational changes will be dependent on assessment of and response to varying conditions. For example, water exports from the Delta may be reduced at times when certain fish species are most vulnerable to this pumping and may be increased when the fish are less vulnerable. The timing of operational changes would vary from year to year depending on many factors such as hydrology and real-time monitoring that shows the movement and presence of fish. Examples of how the EWA may use its assets follows:

- If additional export reductions are needed to protect Delta smelt during late May and June, the EWA could use EWA water already pumped into San Luis Reservoir to provide water to state and federal project water users. If the EWA had not previously stored water in San Luis Reservoir, it would temporarily borrow stored state and/or federal water in San Luis Reservoir to provide water to the state and federal project water users.
- Since the EWA is not allowed to cause any new delivery reductions, it must pay back most or all of the borrowed water to avoid impact on the following year's allocations.
- The EWA would repay the loan using various available assets. It might:
  - Use EWA groundwater supplies in the export area.
  - Invoke water purchase contracts in the export area.
  - Invoke agreements with local agencies in the export area requiring the agencies to rely on local storage rather than San Luis Reservoir water until after the low point is reached.
  - Ask the projects to shift additional water from upstream reservoirs into San Luis Reservoir before the end of August, either using EWA upstream supplies or taking on new upstream debts.
  - Relax the export/import ratio standard to move more water to the export area.
- If the San Luis low point could be passed without the repayment of all the debt, the EWA might carry the debt into the next winter in the hopes that high Delta inflows would allow San Luis Reservoir to refill without additional EWA expenditures. EWA water stored in San Luis Reservoir will help to keep the reservoir higher and avoid water quality problems associated with the San Luis low point.
- Another result of export reductions to protect Delta smelt might be lower releases and higher storage in State and federal reservoirs upstream of the Delta (because Delta outflows can now be sustained with lower Delta inflows). Just as the EWA would be responsible for paying back the reduction in San Luis storage, it would gain control over the increased upstream storage. Releases from this upstream storage could be used to improve in-stream conditions below the reservoir in fall, and then either pumped into the export system to pay off the debt in San Luis Reservoir or left in the river to increase Delta outflow.

For the interim, the CALFED Program will coordinate with EWA implementing agencies (DFG, USFWS, and NMFS) to ensure CALFED objectives are being met and are balanced between ecosystem and water management objectives. Policy and funding decisions regarding the EWA will need to be reviewed by the CALFED Policy Group. Coordination and consultation efforts among the CALFED Operations Group, project operations, ESA management agencies, the program manager for the Ecosystem Restoration Program, and stakeholder groups are intended to ensure that the environmental water acquisitions are consistent with the CALFED Program goals and objectives, and that conflicts with ESA requirements and project operations are minimized or avoided.

The long-term management of the EWA has not been determined at this time. CALFED expects that the regulatory assurances provided during the first 4 years of Stage 1 will be extended throughout Stage 1. Early in Stage 1, CALFED will develop rules for storing, conveying, and borrowing EWA water. At the same time, CALFED will develop an accounting process to track EWA water. Like other parts of the CALFED Program, the EWA will be adaptively managed as experience is gained with its use and effectiveness. In the future, the EWA may gain additional assets as new facilities are implemented or operational changes are made. How the EWA will share in these will be determined as these are developed.

### 3.7 The Preferred Program Alternative

PH2:3.7-1

Many elements of the Preferred Program Alternative offer improvements in water supply and water delivery, including water use efficiency (water conservation and water recycling) and water transfers.

PH2:3.7-2

The Preferred Program Alternative is expected to include an EWA and a decision regarding new or expanded surface storage as well as conjunctive use.

PH2:3.7-3

The nine actions cited by the commentor all continue to be developed, and most will be completed by the time of the ROD.

PH2:3.7-4

Some of the linkages are not appropriate for ecosystem restoration because they apply specifically to storage (conduct an Integrated Storage Investigation, monitor and model groundwater). Other linkages are related to CWA Section 404 permitting for new storage (commitment in pursuing alternatives to new storage). Where linkages are appropriate, they will apply to ecosystem restoration just as they do to storage (comply with environmental review and permitting requirements).

PH2:3.7-5

Please see common response 16. It definitely is not the intent of CALFED to set a water quality constraint for the purpose of ensuring construction of the isolated facility. The bromide and TOC target is to provide a goal for public health protection. CALFED will also investigate providing an equivalent level of public health protection using a cost-effective combination of alternative sources of water and water operations, source control, and alternative treatment technologies. For example, investigation of ozone as part of the treatment technology may reduce the concern over bromide concentrations. Many questions remain to be answered concerning health effects

of constituents found in Delta waters, effectiveness of source control actions, feasibility and cost effectiveness of advanced treatment technologies, and ability to comply with future drinking water regulations. Consequently, determining whether existing through-Delta conveyance will be an adequate solution to the problems associated with using the Delta as a source of drinking water presently cannot be done. Therefore, CALFED will simultaneously proceed with evaluation of a screened diversion facility on the Sacramento River. The water quality objectives do not predispose toward or against facilities but preserve the option if the problems cannot be solved through other approaches.

PH2:3.7-6

Prescriptive standards, such as those governing X2, are expected to remain a part of Bay-Delta water management, in combination with more flexible operations. A change in the X2 standard would be made only if the same or greater level of protection could be achieved at a lower water cost.

#### 4.1 Stage 1 Actions

PH2:4.1-1

South Delta improvements, including barriers and other actions to maintain water levels and access to water supplies, are included in the first stage of CALFED implementation.

PH2:4.1-2

The Preferred Program Alternative presents actions that will take 30 years or more to implement. The greatest specificity is provided for Stage 1 actions because their implementation is imminent. Subsequent actions will be guided by adaptive management—what we learn from initial implementation.

PH2:4.1-3

CALFED has identified actions to be implemented during Stage 1, the first 7 years of implementation, and a more specific list of actions to be implemented during Stage 1a, the first 2 years of implementation. Additional specificity will be developed with input from public fora, such as meetings of the CALFED Policy Group.

PH2:4.1-4

It is essential that balanced progress be made in all program areas. Actions for Stage 1 of implementation (the first 7 years) and Stage 1a (the first 2 years) provide for balanced implementation. Language in Proposition 204 also provides linkage that progress will occur in all areas. Other linkages may be developed that bind Program elements together, such as agreements among implementing agencies.

PH2:4.1-5

Increasing the permitted Banks pumping capacity is part of the Preferred Program Alternative. Based on existing Delta channel configurations, CALFED staff believes that the permitted capacity could be increased to 8,500 cfs immediately following the ROD. Increasing permitted pumping capacity to the full 10,300 cfs will require modifications to channels, construction of a new screened intake, and other actions (such as flow barriers and dredging and extending diversions) that could take longer than Stage 1 to complete. The main benefit of these actions is increased system flexibility, which can further be increased with the JPD and an intertie between the CVP and SWP. Reclamation already has petitioned the SWRCB to allow the JPD, and determining the feasibility

and conducting an environmental study of interties are priorities of Stage 1 implementation. Increasing the permitted pumping capacity of the SWP does not affect senior upstream water rights. Permit conditions and operational constraints associated with increased pumping capacity will be determined at the time permits are issued. It is expected that operations will need to conform to conditions and constraints that include Corps permit conditions, Delta water quality standards that state and federal water projects bear some responsibility to meet, Delta export/inflow standards, ESA constraints such as take limits, and export curtailments under the Vernalis Adaptive Management Plan.

PH2:4.1-6

The CALFED plan for Stage 1 includes actions that will improve source water quality and water supply reliability. Additional detail is contained in the Implementation Plan.

PH2:4.1-7

South Delta improvements, including establishment of a JPD for the SWP and the CVP, permits to use full SWP pumping capacity of 10,300 cfs, and other actions, are proposed for implementation in Stage 1. Full project-specific evaluation under NEPA and CEQA, including opportunities for public comment, will occur for these and any other CALFED projects as required by law before implementation can proceed.

PH2:4.1-8

Watersheds, water use efficiency, ecosystem restoration, and local water quality improvement are all activities that have already received funding under early implementation or are proposed for early action during Stage 1 implementation.

PH2:4.1-9

CALFED Stage 1 actions provide for an evaluation of this flow circulation. (please see “South Delta Improvements” in the Phase II Report) However, CALFED anticipates that the evaluation will require at least 2 years to complete.

PH2:4.1-10

CALFED Stage 1 actions provide for an evaluation of this flow circulation (please see “South Delta Improvements” in the Phase II Report).

PH2:4.1-11

Please see the Phase II Report for Stage 1 actions during the first 7 years of the Program. Please also see common response 14.

PH2-4.1-12

The Phase II Report discusses CALFED’s plan for Stage 1 (approximately the first 7 years of implementation), which includes development of locally managed groundwater and conjunctive use projects with a total of 500 TAF to 1 MAF of additional capacity.

Given that the EIS/EIR is a programmatic document, no specific projects or local participation have yet been identified. This identification will require additional work to develop partnerships with local entities. While CALFED has not identified specific projects, the Phase II Report includes a list that shows local requests for CALFED grants. This list includes potential projects in San Joaquin County. Please also see common response 1.

PH2-4.1-13

The section of the CMARP referred to in the comment is a conceptual model of how monitoring and research could contribute to overall understanding of groundwater. CALFED plans to conduct feasibility studies and to identify local sponsors of groundwater projects in Stage 1A. Please see Section 3.0. in the Implementation Plan. The Phase II Report (please see "Storage") identifies CALFED's plan for baseline monitoring and modeling during Stage 1. In addition, the Financing Plan in the June 1999 Revised Phase II Report identifies plans for \$300 million investment in groundwater studies and implementation during Stage 1. See the Phase II Report for revised budget amounts.

PH2-4.1-14

CALFED does not yet know how effective the diversion facility on the Sacramento River will be. The Stage 1 actions for the north Delta include study and evaluation of a screened diversion structure on the Sacramento River. The overall objective of improving water supply reliability does not include commitments for systemwide water targets or specific water deliveries to any water district or region. CALFED is looking to increase the flexibility of delivering water through the Delta. However, the overall objective of improving water supply reliability does not include commitments for systemwide water targets or specific water deliveries to any water district or region. CALFED acknowledges the CCWD principles and will consider them as evaluations are refined in the future. Any site-specific investigations of in-Delta storage will need to include thorough evaluation of potential water impacts, including disinfection by-product precursors and other contaminants. Future site-specific evaluations, environmental review processes, and permit applications will be coordinated under CALFED's Integrated Storage Investigation.

PH2-4.1-15

Based on existing Delta channel configurations, CALFED staff believes that the permitted capacity could be increased to 8,500 cfs immediately following the ROD, but complete operating conditions may take a few years to develop. Increasing permitted pumping capacity to the full 10,300 cfs will require modifications to channels and other actions (such as flow barriers or extensive dredging) that could take longer than Stage 1 to complete. CALFED is in the process of refining its Water Management Strategy. However, the overall objective of improving water supply reliability does not include commitments for systemwide water targets or specific water deliveries to any water district or region. CALFED is looking to increase the flexibility of delivering water through the Delta.

PH2:4.1-16

State and federal officials agreed in December 1999 to extend the 1994 Bay-Delta Accord until state and federal approval of the CALFED Program's Final Programmatic EIS/EIR, but no later than September 15, 2000. The Accord established the primary framework for the CALFED Program. The ROD, certification, and accompanying documents are expected to replace the Accord.

PH2:4.1-17

CALFED has included implementation of the JPD as an initial action for Stage 1 implementation and is committed to this important operational change.

#### 4.2 Governance Plan

PH2:4.2-1

Currently, an Operations Group deliberates on Delta operations. It is expected that this or a similar forum would exist under long-term Program implementation.

PH2:4.2-2

Decisions on some aspects, such as long-term governance, may not be completed by the ROD because decisions will be made by legislative entities, outside the CALFED agencies.

PH2:4.2-3

Balanced implementation is a key function for a CALFED oversight entity. Interim and long-term governance plans include provisions for balanced stakeholder and agency input.

PH2:4.2-4

CALFED is developing a governance plan, including a balanced oversight entity and a chief scientist, that will assure objective and public policy deliberations that are guided by credible science.

PH2:4.2-5

The current proposal for CALFED governance includes an oversight entity, which would help to ensure that all Program elements are properly coordinated.

PH2:4.2-6

A CALFED governance structure, including an oversight entity such as a commission, currently is being developed. An important function of the governance structure and oversight entity will be to maintain continuity of policy through a permanent staff and commission with stable membership.

PH2:4.2-7

CALFED agrees that the public and interested stakeholders should participate in the CALFED decision-making process. Under the current structure, many processes are in place to provide for public involvement in the CALFED Program. In addition to the Federal Advisory Council Act (FACA) advisory group, stakeholders and the general public can participate in decisions through the Ecosystem Roundtable, Drinking Water Council, and numerous other work groups and technical teams. To increase public participation in the decision-making process, CALFED agencies are proposing the creation of a new commission with state, federal, tribal, and public members. This change would require state and federal legislation. Until legislation is passed, final decisions related to CALFED programs will continue to rest with the individual agency in which the program and funding has been

legally assigned. Under the current legal structure, the CALFED agencies as a group do not have authority over programs or funding, or the authority to make final decisions.

PH2:4.2-8

CALFED agrees that the interim structure is inadequate for long-term Program implementation. CALFED agencies are proposing the creation of a new commission with state, federal, tribal, and public members to coordinate and provide Program direction over all CALFED actions. In the interim and under a new commission, It is considered appropriate to rely on existing state and federal agencies to implement many of the CALFED actions where the agency has the necessary program and project management expertise.

#### 4.3 Financing Plan

PH2:4.3-1

CALFED has adopted a principle of “beneficiaries pay.” Thus, different parts of the Program will be paid for by different entities. Water users will pay for improvements in water supply reliability, while all Californians will be asked to help pay for ecosystem restoration. Benefits such as flood control also benefit everyone, because flood control protects public as well as private resources. The Program is far more likely to succeed if those asked to pay can recognize benefits for themselves. Please see common response 9.

PH2:4.3-2

Please see common response 9.

PH2:4.3-3

Funding amounts included in the Phase II Report for Program elements such as ecosystem restoration and water use efficiency include substantial implementation of actions. Costs for surface storage include only planning and feasibility as part of the Integrated Storage Investigation. Implementation costs are not included and would be substantially more than the amount shown. Figures in the Phase II Report are thus not comparable to one another.

PH2:4.3-4

A preliminary estimate of costs for Stage 1 implementation is included under “Financing Plan” in the Phase II Report. This cost estimate will be refined over time. CALFED has adopted a principle of “beneficiaries pay” rather than trying to identify responsible parties for all the problems of the Bay-Delta system. It is not always possible to identify the cause of Bay-Delta problems or the responsible parties. Many of the problems in the system can be traced to activity that occurred more than a century ago, as a result of mining practices or other activity. For these problems, there is no longer a responsible party to charge for Program costs.

PH2:4.3-5

Urban users can usually afford to pay more for water than agricultural users, but this does not mean that agriculture will be eliminated. First, since agriculture uses more than 80% of California’s developed water supply, it is clear that urban users could not completely displace agricultural users unless the state’s population increased five-fold. Second, where agricultural users have water rights, their reasonable and beneficial uses are protected unless they choose to transfer some of their water. In the many situations throughout California where

agricultural water delivery systems have long since been paid for, agricultural users enjoy very low water rates. In the case of new or expanded surface storage, it is appropriate for beneficiaries to pay the full cost of new water supplies. Otherwise, they might demand more water and cause greater environmental degradation. In addition, if beneficiaries do not pay the full cost of the water, they would not be inclined to implement water use efficiency measures that would otherwise be cost effective for them.

PH2:4.3-6

Please also see common response 20.

The CALFED Program has been developed with an unprecedented level of local public input. Every aspect of the CALFED Program will be coordinated closely with elected officials or their appointees. CALFED is guided by a solution principle stating that solutions will not solve problems in the Bay-Delta system by redirecting significant impacts, when viewed in their entirety, within the Bay-Delta or to other regions of California. Some may pay more than others for implementation of the CALFED Program, but only commensurate to the benefits received. The CALFED policy of “beneficiaries pay” and the solution principle of no significant redirected impacts are intended to assure fairness to every region of California, even though some decisions on water and environmental policy must be made through the democratic process at the state or national level.

#### 4.5 Comprehensive Monitoring, Assessment, and Research Program

PH2:4.5-1

The CMARP, including its chief scientist, are intended to guide the Program using sound scientific principles.

PH2:4.5-2

CALFED has developed a CMARP that describes the role of scientific monitoring and adaptive management in CALFED Program implementation.

#### 4.6 Adaptive Management

PH2:4.6-1

The concept of adaptive management is introduced in the Phase II Report. There is a longer discussion of adaptive management in the Strategic Plan. These documents contain an appropriate level of detail for a programmatic document.

PH2:4.6-2

Adaptive management is described in the Phase II Report and in the Strategic Plan. Adaptive management is also inherent in the structure of the CALFED Program. The CMARP will play an integral part in the implementation and adaptive management of each Program element by monitoring the results of program implementation and assessing the program’s success and effectiveness. This assessment will form the basis of adaptive management, alerting the public and decision makers of success and failure so that appropriate program modifications can be made throughout implementation. The CALFED Water Management Strategy is intended to be a long-term decision-making framework for evaluating the success of implementation efforts and for selecting additional tools needed to achieve CALFED objectives. Substantial evaluation of alternative water management alternatives, or

tools, has been conducted to help inform implementation decisions. Please see *Economic Evaluation of Water Management Alternatives, Screening Analysis and Scenario Development*, October 1999.

## 5. Regulatory Compliance

PH2:5-1

Linkages between storage and water use efficiency or transfers should be structured in a way that prompts water use efficiency measures where they are appropriate and feasible, not as universal requirements. Please also see common response 2.

### 5.1 Multi-Species Conservation Strategy

PH2:5.1-1

CALFED is committed to compliance with the federal and state ESAs and the California Natural Community Conservation Planning Act. Water supply reliability and ecosystem health are not incompatible.

PH2:5.1-2

The MSCS provides a framework for compliance with laws such as the state and federal ESAs. This will provide a measure of certainty that implementation will occur and anticipated program benefits will be provided.

### 5.3 Clean Water Act Section 404

PH2:5.3-1

The Corps is working with other CALFED agencies to draft a memorandum of understanding (MOU) regarding the CWA Section 404 permitting process. The MOU will provide a mechanism for integrating information developed at the programmatic level into site-specific decisions on Section 404 permits. The MOU will document the commitments to pursuing alternatives (for example, water conservation and recycling) to storage.

PH2:5.3-2

Water management alternatives such as water conservation and recycling will be implemented gradually over time as urban areas expand and new customers for recycled water are identified. It would not be necessary to achieve specific acre-foot targets or implement measures for a specified number of years before planning for storage could proceed. Planning for new or expanded storage will commence immediately. Before a storage project could be permitted, it would be necessary to demonstrate that: (1) institutional mechanisms are in place to support water management alternatives, (2) there are assurances of continued implementation and continued funding, and (3) there is demonstrated willingness for beneficiaries to pay the cost of new supplies. The agreement on programmatic compliance with the CWA Section 404 now being prepared by the CALFED agencies takes this approach.

PH2:5.3-3

The agreement on programmatic compliance with the CWA Section 404 now being prepared by CALFED agencies draws a distinction between new surface storage for water supply reliability and storage for other purposes, such as water quality. If other water management tools such as water conservation cannot achieve the

legitimate water quality purpose of a new reservoir, that reservoir should not be conditioned on achievement of targets for water conservation.

**PH2:5.3-4**

The Corps must determine that CALFED has selected the least environmentally damaging practicable alternative (LEDPA) that meets project purposes to issue a permit under the CWA Section 404. The CALFED program purpose, as described in the Programmatic EIS/EIR, includes improving water supply reliability. The LEDPA need not include a decrease in Delta exports. CALFED is developing an approach for programmatic compliance with the CWA Section 404 that will also provide commitments to pursue water management tools such as water conservation and water recycling.

**PH2:5.3-5**

An important aspect of the agreement regarding programmatic compliance with the CWA Section 404 is a provision that requires financing provisions assuring that beneficiaries pay the full cost of any water derived from new or expanded surface storage. Adherence to this “beneficiaries pay” principle, along with provisions for the implementation of alternatives to surface water storage, will ensure that the CALFED plan is the LEDPA and that water users are not seeking to develop additional surface water supplies because a subsidy shelters them from the full cost of the water.