DRAFT

CALFED Bay-Delta Program
Phase II Completion Work Plan

This work plan describes the activities to be completed by the CALFED Bay-Delta Program to refine program components, select the preferred program alternative, finalize the EIS/R, and prepare a Program Implementation Plan for the preferred program alternative. These activities will complete Phase II of the program and further define the Phase III activities. Figure 1 is a generalized diagram of the work plan showing the major activities, their timing, and the primary interrelationships between activities.

The work plan consists of three principal elements: (1) Program Implementation Planning; (2) Refine Components; and (3) Prepare Environmental Documentation. Each of these elements is described below along with the individual activities and tasks included in each element.

Selecting the Preferred Program Alternative - Distinguishing Characteristics and Program Refinements

Each program alternative consists of essentially the same six common programs, a storage program that differs slightly among the alternatives, virtually identical north and south Delta programs, and Delta conveyance component. The principal difference among the program alternatives is the configuration of Delta conveyance. The Program identified 18 distinguishing characteristics that have guided the evaluation of the program alternatives. The Phase II Interim Report concluded that nine of the distinguishing characteristics, in fact, do not vary significantly among the three program alternatives, and that consideration of a preferred program alternative rests on the following nine most significant distinguishing characteristics:

- In-Delta Water Quality
- Export Water Quality
- Diversion Effects on Fisheries
- Delta Flow Circulation
- Water Supply Opportunities
- Operational Flexibility
- Risk to Export Water Supplies
- Assurances
- Consistency With Solution Principles

This work plan describes the tasks required to evaluate and display the sensitivity of program alternative choice to each of these factors.

The work plan also describes other tasks needed to better describe the common programs applicable to the program alternatives and to support site specific planning, environmental documentation, design, and implementation in Phase III. Tasks needed to support selection of a preferred program alternative are designated as "*Critical Task.*"

Possible need for new analyses.

Public comments on the programmatic EIS/R, and input received through the Program's continuing public involvement activities, may identify other issues that will require additional technical analysis to support selection of a preferred program alternative. These analyses, if any, will be scheduled and staffed as they arise.

Element 1- Program Implementation Planning

I. Implementation Strategy. Prepare a program-wide implementation strategy that incorporates the implementation plans for the individual program elements and with assurances, ESA compliance and financing.

(A) Program-wide implementation plan - The task is to collect the individual program implementation plans and incorporate them into a single program-wide implementation plan. In addition, the plan will include proposals for addressing implementation issues that affect more than one program element (operations, for example, affects water supply reliability, water quality and ecosystem).

A majority of the initial work will be conducted by individual program managers under Stein Buer's direction. However, the plans need to be created with assurances in mind. Therefore, assurance staff will coordinate with the individual program managers and Buer to assure the program specific assurance issues are addressed within each implementation plan.

Each program element implementation plan should include the following:

A detailed and complete description of the program;

The goals, objectives and targets of the program;

The priority in which actions should be taken;

A schedule for implementing;

A detailed description of necessary monitoring;

Descriptions of the measures of success; and

Any other necessary information.

The program-wide implementation plan will include proposals for addressing implementation issues that affect more than one program element, and thus cannot be developed in isolation. Operations, as well as coordinated monitoring and research are examples of these kind of overarching implementation issues.

Lead - Stein Buer (CALFED)
Identified Agency Input and Staffing - CALFED Agency staff are directly involved as lead on ESA Conservation Strategy (see below) and attend the Assurances and Finance Work Groups where all aspects of the implementation plan will be discussed. Harry Seraydarian advising.
Review - Full public review of the developing stages of the implementation plan will occur at future BDAC Work Group meetings and at BDAC. Special care will be taken to notice the public when implementation strategy drafts and issues will be agenda topics. Iterative drafts will be brought before the Policy Group and issues discussed at the BDAC Assurances Work Group, BDAC and the Management Team.
Schedule - Draft plan to be completed by _____

(B) Assurances - The task is to create a strategy that assures the long-term Bay-Delta solution will be implemented and operated as agreed. This requires a multi-faceted effort that concludes with a proposed package of assurances prior to the release of the final programmatic environmental impact statement and report (programmatic EIS/R). The lead staff person for assurance-related issues is Sue Lurie.

The assurance components include:

1. Governance - The program-wide implementation plan describes what is to be implemented. The assurances package will help sort out the question of who will implement the program.

To date, stakeholders have placed a great deal of emphasis on who will implement the ecosystem restoration program. This governance questions cannot be addressed in isolation, however. For example, questions regarding water system operations and instream flows affect water supply reliability, water quality and ecosystem restoration efforts. In order to meet each of these program objectives, any governance decision regarding ecosystem restoration requires

addressing water facility operations and instream flow. Therefore, the question of who implements the ecosystem restoration plan must be discussed in the broader context of implementing the entire Bay-Delta Program.

Finally, stakeholders seek to have timely, meaningful input into the implementation process. Determining what form this involvement takes is necessarily a portion of the overall governance question.

Initial work on this task has included examining a number of differing implementing entity options that span the spectrum from existing entities working within existing authorities and relationships to entirely new entities; studying the lessons learned from the governance of other complex natural resources management efforts; and discussing the benefits and concerns raised by the varying governance options in an effort to focus future discussions on a relatively few options that meet the would be implementable, durable and stable.

Additional staff time is needed to refine these options, explore the agencies and stakeholders' issues and concerns regarding governance, and refine the proposal once the program-wide implementation plan (including each program element implementation plan) is more fully outlined.

Lead - Sue Lurie (CALFED)
Identified Agency Input and Staffing - Mary Scoonover (AG's office) will advise and assist with overall development of the Assurances package; Tom Hagler (EPA) ???
Review Process - The BDAC Assurances Work Group will continue to meet regularly to discuss all aspects of this work effort.
Schedule -

2. Staging (including linkages) - Regardless of which alternative is selected, the Program must determine how to implement the program over approximately 30 years. Specifically, this task includes:

Identifying discrete stages;

Specifying actions or portions of actions to be completed in each stage;

Listing the schedule for stages and actions within each stage;

Describing milestones and consequences of failing to meet milestones; and

Specifying the triggers for activating the contingency planning process.

Lead - Stein Buer (CALFED), Ron Ott (CALFED Consultant)
Identified Agency Support - Pat Leonard (FWS)
Review Process - Staging
Schedule - The concepts in this effort will be developed in an iterative manner throughout the remainder of Phase II.

3. Contingency Response Process - The contingency response process is necessary to address unforeseen circumstances, identify categories of contingencies, and specify appropriate responses including the protocols and procedures to be used to address these contingencies.

Lead - Sue Lurie (CALFED)
Identified Agency Support -
Review Process - BDAC Assurances Work Group
Schedule -

4. Conservation Strategy (California and federal endangered species act compliance) - Although the FWS is taking the lead on preparing a conservation strategy, because of the significance of the issues to overall program assurances, the assurances staff is playing an active role in its development.

The conservation strategy will link the ecosystem restoration program and other programs with beneficial effects on endangered species with those program actions that may have a detrimental effect on endangered species. The strategy will describe the priorities for beneficial actions and the limitations on potentially detrimental actions.

Lead - Mike Fris (FWS), Marti Kie (CALFED)
Identified Agency Support - FWS, Tom Hagler (EPA)
Review Process -
Schedule -

3. Clean Water Act compliance and other permitting issues - This issue will be addressed by individual program managers as well as by the assurances staff. Work is progressing on complying with §404 of the Clean Water Act through the EPA, USACE and CALFED staff. Whether and how the Program reaches agreement with these agencies on the appropriate methods of complying with 404 raises concerns on the likelihood of successfully implementing the program.

The assurances staff work is primarily one of coordinating with ongoing staff work on this effort.

Lead - Stein Buer (CALFED)
Identified Agency Support - Jim Monroe (USACE), Barrol, Yocum (EPA)
Review Process -
Schedule -

(C) Financial Strategy - The CALFED Bay-Delta Program will involve capital projects and resource management initiatives requiring investments of several billion dollars or more over time. The financial strategy to be included as part of the Program Implementation Plan will describe how, and by whom, these investments will be financed.

1. Develop Financial Strategy - Develop a strategy for financing program implementation. Describe financing and funding mechanisms and display likely cost allocation scenarios. Identify and describe financial policies and principles to serve as the foundation for funding and cost recovery for the preferred program alternative. Develop and present a cost allocation methodology and apply the methodology to each program alternative to illustrate how costs would be recovered, i.e. who pays and how much, for each program alternative. Identify the combination of funding sources and financing mechanisms to be implemented to recover program costs. **Deliverable - Interim report for incorporation into the Program Implementation Plan.**

Lead - Zach McReynolds (CALFED consultant)
Identified Agency Support - Mike Myatt (Corps); Yale (EPA)
Review Process - BDAC Finance Work Group
Schedule - Principles will be discussed at May 1 Policy Group meeting.

(D) Integrate Component Implementation Plans - The Program Implementation Plan will supplement the final EIS/R with more specific information describing the proposed program; its physical features; operations criteria; how actions will be implemented, in sequence, over time; statutory features enabling and limiting the program; contracts required to finance, implement, and operate the program; institutional arrangements for overseeing and coordinating program

implementation and operation; a program for continued stakeholder involvement, and the program's permitting requirements.

1. Prepare Program Implementation Plan - Prepare a document that summarizes and integrates Phase II findings and conclusions.

a. Prepare Draft Program Implementation Plan - Incorporate the results of Tasks 1.A through 1.C into an integrated Program Implementation Plan. The general outline of the Program Implementation Plan is included below.

1. Introduction
    - A. Program Features
    - B. Expected Program Accomplishments
    - C. Program Costs
2. Program Overview
    - A. Physical and Management Features
    - B. Assurances
        1. Staging and Linkages
        2. Governance
        3. Contingency Response Plan
        4. Conservation Strategy
        5. Permits and Approvals
    - C. Financing Strategy
    - D. Opportunities for Continuing Stakeholder Involvement
    - E. Adaptive Management and Monitoring
3. Program Components
    - A. Levee and Channel Integrity
        1. Physical and Management Features and Staging
        2. Expected Accomplishments
        3. Costs
    - B. Water Quality
        1. Physical and Management Features and Staging
        2. Expected Accomplishments
        3. Costs
    - C. Water Use Efficiency
        1. Physical and Management Features and Staging
        2. Expected Accomplishments
        3. Costs
    - D. Storage and Conveyance
        1. Physical and Management Features and Staging
        2. Expected Accomplishments
        3. Costs
    - E. Ecosystem Restoration Program Plan
        1. Physical and Management Features and Staging
        2. Expected Accomplishments
        3. Costs
    - F. Watershed Management Strategy
    - G. Water Transfer Policy Framework

Deliverable - Draft Program Implementation Plan

b. Finalize Program Implementation Plan - Incorporate review comments and finalize the program implementation plan. **Deliverable - Final Program Implementation Plan.**

Lead - Stein Buer (CALFED)
Identified Agency Support - Early PCT review and input
Review Process - Management Team/Policy Group - Iterative Review; and Public Review and Discussion at BDAC Assurances Work Group and BDAC Meetings.
Schedule - Draft Implementation Plan for Agency Plan by —, for public review by —

Stein Buer is responsible for coordinating the Element 1 activities leading to completion of the Program Implementation Plan. He will work closely with each of the component technical teams to coordinate the flow of component implementation plan information to the Program Implementation Plan and coordinate closely with the work of the Assurances Work Group and the ESA Conservation Strategy.

Element 2 - Refine Components

The seven program components; Levee and Channel Integrity, Water Quality, Water Use Efficiency, Storage and Conveyance, the Ecosystem Restoration Program Plan, Watershed Management, and Water Transfers, have been developed to varying degrees of detail. One or more critical issues associated with each component have arisen that must be resolved in order to finalize the component descriptions. Tasks described below are designed to resolve these critical issues to the degree required to select and adequately describe a preferred program alternative. Also, as noted above, an implementation plan will be developed for each component.

(A) Levee and Channel Integrity - Major issues to be resolved to further develop this component include further refinement of the component description, and further defining seismic vulnerability of the levees.

Critical Task **1. Refine Component** - Refine the existing component description to concisely describe what is being proposed in terms of actions, priority sequencing of levee improvement actions, and costs. Working with the existing Levees and Channels Technical Team, identify the levees and channels to be improved. Describe the improvements proposed for each levee. Incorporate the findings of the seismic vulnerability task described below. Display the estimated costs of the proposed actions. **Deliverable - Technical appendix to the final EIS/R.**

2. Delta Subsidence - The extent to which Delta islands may subside in the future is controversial. This task will develop a common understanding of the likely consequences of future subsidence and any protective or reactive measures that are merited. Quantify how subsidence could affect Delta levees over the next 20 to 30 years. Recommend next steps. **Deliverable - Memorandum on findings and conclusions.**

Lead - Rob Cooke (CALFED)
Identified Agency Support - Ramsbotham, O'Leary (Corps); Hatfield (EPA) ??
Review Process - Existing Levees & Channels Tech Team will meet regularly
Schedule -

3. Improve Emergency Response - This task will build upon existing State, Federal, and local agency emergency management responsibilities to improve protection of Delta resources in the event of a disaster. Working with the existing Levees and Channels Technical Team, coordinate with OES, FEMA, COE, and DWR to identify and recommend improvements to the existing emergency response system for the Delta. **Deliverable - Memorandum on findings and conclusions.**

Lead - Rob Cooke (CALFED)
Identified Agency Support - Ramsbotham, O'Leary (Corps), OES, FEMA, DWR
Review Process - Existing Levees and Channels Technical Team
Schedule -

4. Seismic Vulnerability - This task will evaluate the potential performance of the existing levee system during seismic events and recovery actions and accessibility following a seismic event. Convene an expert panel to develop an opinion regarding the risk of damage to the Delta levee system from a seismic event, and the consequences of a seismic event. Describe ways to decrease the risk and present the costs associated with reducing the risk. **Deliverable - Memorandum for incorporation into technical appendix to the final EIS/R.**

Lead - Rob Cooke (CALFED)
Identified Agency Support - DWR (DOE, OSWPP), ???
Review Process - Expert Panel
Schedule -

5. Develop General Order Waste Discharge Permits for Dredging in the Delta - Work with the Central Valley Regional Water Quality Control Board to develop General Order Waste Discharge permits for dredging in the Delta. At least two CALFED program components will need dredging permits from the Central Valley Regional Board. Also, coordinate with studies funded by Restoration Coordination program designed to generate sediment constituent data needed to satisfy the Board's permitting requirements. **Deliverable - General Order Permits**

Lead - Gwen Knittweis (CALFED)
Identified Agency Support - Central Valley Regional Water Quality Control Board
Review Process - Existing Levees and Channels Technical Team
Schedule -

6. Implementation Plan - Develop and present a strategic plan for implementing the features of the Levee and Channel Integrity Component. Describe the physical features and programs to be implemented as part of this component. Describe implementation sequencing requirements and possibilities. Identify prerequisites for and conditions that would trigger implementation of the various features and initiatives. Display estimated capital and recurring costs. Circulate draft plan for review and comment. **Deliverable - Draft report for incorporation into the Program Implementation Plan.**

Lead - Rob Cooke (CALFED)
Identified Agency Support - Ramsbotham, O'Leary (Corps)
Review Process - Levees and Channels Technical Team
Schedule -

(B) Water Quality - The Water Quality Program will be further developed, and the significance of bromide and organic carbon sources to drinking water supply will be explored.

Critical Task **1. Refine Component** - Increase the detail of the descriptions of water quality actions to be implemented, and costs and benefits associated with the actions consistent with the level detail of the programmatic EIS/R, given limitations on available information. Working with a Water Quality Technical Team, describe in increased detail the water quality pollution prevention and remediation actions of the water quality component. Display the estimated costs of the proposed actions. Consider linkages between the water quality component and the restoration programs and display and quantify the benefits expected to be realized from the identified actions to the extent possible recognizing the uncertainties associated with many of the proposed actions. Recommend priorities for implementation of the various actions. **Deliverable - Draft report for incorporation into the Program Implementation Plan.**

Lead - Rick Woodard (CALFED)
Identified Agency Support - Louis, Macler (EPA), RWQCB
Review Process - Ad hoc agency/stakeholder working team
Schedule -

Critical Task **2. Drinking Water Quality (Bromides)** - Explore the significance of bromide and organic carbon in Delta export water supplies with respect to drinking water beneficial uses. Working with the agency/stakeholder team assembled to refine the water quality component, identify individuals (perhaps 3 to 5) to serve as an expert panel to review water quality data and model predictions of bromide and organic carbon concentrations to be expected following implementation of the CALFED program alternatives. Working with the agency/stakeholder team, present relevant information to the expert panel. Charge the panel with the following;

- Help ensure that CALFED is characterizing the issues and tradeoffs fully,

- Develop observations and questions regarding Delta water quality which may be useful to the EPA national review process, and
- Ensure that the CALFED decision making process neither overstates the potential for bromides to be a significant decision factor, nor eliminates opportunities to respond effectively to potential future drinking water standards and protect public health.

Direct the panel to review estimated costs for treating waters containing the predicted concentrations of bromides and organic carbon, considering a range of regulatory limits on disinfection byproducts that could be implemented in the future; and prepare a paper evaluating likely effects on human health, cost and uncertainty associated with implementing each of the program alternatives, with respect to bromide and organic carbon considerations. **Deliverable - Report of expert panel.**

Lead - Rick Woodard (CALFED)
Identified Agency Support - Macler, Metzger (EPA); SWRCB; DHS
Review Process - Expert Panel, Water Quality Technical Group
Schedule -

3. Implementation Plan - Develop and present a strategic plan for implementing the features of the Water Quality Component. Working with the agency/stakeholder team, define the process by which the water quality component will evolve from the programmatic level of detail to specific investigations (including monitoring, research, prefeasibility, and feasibility evaluations), environmental documentation, pilot scale implementations, full scale project implementations, project performance assessment, and adaptive management mechanisms. Define the general roles and responsibilities of participants, including stakeholders, and describe where and how participants will, have opportunities to participate in the development and implementation of the water quality component. **Deliverable - Report for inclusion in the Program Implementation Plan.**

Lead - Rick Woodard (CALFED)
Identified Agency Support - Louis, Macler (EPA)
Review Process - Agency/Stakeholder Team, Water Quality Technical Group
Schedule -

(C) Water Use Efficiency - This work plan describes tasks to refine assurances and develop CALFED agency assistance programs related to water use efficiency. Assurances will include mechanisms related to urban water conservation, agricultural water conservation, water recycling, and management of water on refuges and wildlife areas. CALFED agency programs will include expansion of existing programs to deliver planning assistance, technical assistance, and funding assistance. New CALFED programs will include promotion of local water management changes that improve ecosystem health or improve water quality and may include new funding programs for water recycling.

I. Refine Specific Assurances for Water Use Efficiency

Specific assurance mechanisms will provide an opportunity for water suppliers to demonstrate efficient use, provide information to CALFED agencies for most effective targeting of assistance programs, and allow the identification of water suppliers that may face sanctions for failure to integrate water use efficiency into their water management planning.

Task 1. Refine Specific Assurances for Urban Water Conservation

The Urban Water Management Planning Act (UWMPA) (State Water Code), requires urban water suppliers to prepare and adopt urban water management plans, including elements related to long range planning, water recycling, water shortage contingency planning, and

implementation of Best Management Practices for urban water conservation. DWR reviews water management plans and provides feedback to water suppliers on the adequacy of plans. Since 1991 the voluntary consensus-based California Urban Water Conservation Council[1] has maintained and updated a list of BMPs and has gathered information on water suppliers' implementation status.

CALFED has proposed a two-part assurance mechanism for urban water conservation, with DWR certifying water suppliers' compliance with the long-range planning and water shortage contingency planning elements of the Urban Water Management Planning Act, and the CUWCC certifying water suppliers' compliance with the terms of the MOU. On April 8, 1998 the CUWCC voted to accept, in principle, the role as certifying entity for water suppliers' implementation of BMPs contingent upon its approval of a final certification process framework and partial funding support from CALFED.

Subtask 1a. Development of DWR Review and Certification Process

The DWR review of water management plans has historically been an advisory role. A more formal certification process will demand careful attention to evaluation criteria and the review process. Staff from DWR and CALFED will work together, with significant stakeholder input, to develop a review and certification process.

Lead - Rick Soehren (CALFED)
Identified Agency Support - Greg Smith (DWR)
Review Process - Planning on ad hocs - DWR is convening a series of stakeholder meetings; will consider a public meeting/workshop on this for Summer 1998.
Schedule: Completion by early 1999

Subtask 1b. Refinement of CUWCC Certification Process

The CUWCC has agreed in principle to accept the role of certifying entity for BMP implementation, but the details of a certification process must be refined to the satisfaction of large and small water suppliers including both retailers and wholesalers, public interest and environmental groups, and CALFED. In addition, the institutional framework to accommodate the certification process (need for legislation, identification of funding sources, etc.) must be developed.

Lead - Rick Soehren (CALFED)
Identified Agency Support - Greg Smith (DWR), Marsha Prillwitz (BOR)
Review Process - CUWA and EWC (CUWCC holds public meeting)
Schedule: Completion by early 1999

Task 2. Refine Specific Assurances for Water Recycling

The UWMPA requires urban water suppliers to include an evaluation of the feasibility of recycled water use, but planning requirements for water recycling are generally not as extensive or as stringent as requirements for water conservation planning and implementation. Certification of urban water management plans by DWR would assure a basic level of analysis by local and regional agencies. Some interests have suggested the consideration of stronger assurances for water recycling. The California Urban Water Agencies and the WaterReuse Association are developing a guidebook describing methods for the evaluation of recycling

[1]The CUWCC is composed of 136 retail and wholesale water suppliers and 17 environmental and public interest groups that have signed a Memorandum of Understanding committing them to work together on refinement, analysis, and implementation of BMPs.

projects, which CALFED agencies could use as the focus of their technical and planning assistance. This guidebook could also provide the framework for more rigorous local and regional planning requirements.

CALFED staff will work with CALFED agencies and stakeholders to consider additional refinement or expansion of water recycling assurances. (This effort will be closely tied to possible development of special incentives for water recycling. See Section II below.)

> ***Lead - Rick Soehren (CALFED)***
> ***Identified Agency Support - Susan Tatayon (DWR), Steve Kasower, Deborah Braver (BOR), Nancy Yoshikawa (EPA)***
> ***Review Process - Interested stakeholder groups, WateReuse Assn., exact nature of public review unclear.***
> ***Schedule: Completion by fall 1998***

Task 3. Refine Specific Assurances for Agricultural Water Conservation

There are currently no statutory requirements for California agricultural water suppliers to prepare and adopt water management plans.[2]

CALFED proposed in March 1997 that the new Agricultural Water Management Council (AWMC) serve as endorser or certifier of agricultural water management plans in order to provide a specific assurance for agricultural water conservation. At that time, CALFED proposed acreage and planning criteria that the new AWMC would need to meet in order to provide adequate assurance of efficient agricultural water use. It appears that the AWMC will not meet these criteria. In addition, there is a low level of consensus supporting the AWMC: only three environmental organizations have signed the MOU that established the AWMC.

In order to move toward development of an assurance mechanism that meets CALFED needs and has adequate stakeholder support, CALFED will convene one or a series of carefully facilitated focus groups composed of representatives of various stakeholder groups. These groups are intended to clarify stakeholder interests, distinguish interests from positions, and identify areas of agreement and disagreement among stakeholders. Building on this information, the focus groups or CALFED can develop alternatives for providing specific assurance of agricultural water use efficiency and select specific assurances that meet the needs of CALFED and stakeholders.

> ***Lead - Rick Soehren (CALFED)***
> ***Identified Agency Support - Steve Shaffer (DFA), Tracy Slavin (BOR), Ed Craddock (DWR)***
> ***Review Process - Start facilitated focus group(s) - take out into larger workshop. Exact nature of outreach and review will depend upon focus group discussion.***
> ***Schedule: Completion in 1999 (Selection of specific assurance mechanisms for agricultural water use efficiency will be completed by September 1998. Refinement of the mechanisms and development of details sufficient for implementation will be completed in 1999.)***

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[2]In 1997 the voluntary consensus-based Agricultural Water Management Council was formed to provide a forum for the consistent analysis of agricultural water conservation measures and the endorsement of agricultural water management plans that meet standards contained in the MOU that established the AWMC. The AWMC is currently composed of 31 agricultural water suppliers and 3 environmental groups.

Task 4. Refine Specific Assurances for Refuge Water Management

Water diverted for environmental uses such as management of wildlife refuges accounts for three percent of water diversions in California. Although the percentage is small, careful management of this water is viewed as an important equity issue by other diverters. Three CALFED agencies, CDFG, USFWS, and USBR have been working with the Grassland Resource Conservation District to develop an Interagency Coordinated Program (ICP) for optimum water use planning for wetlands of the Central Valley. In March 1998 these agencies released a draft report proposing that each refuge prepare an *Effective Water Use Plan* by June 1999 and update the plan annually thereafter. The draft report also identifies 14 Effective Water Use Practices that should be evaluated by each refuge manager.

CALFED staff will continue to work with the Interagency Coordinated Program to suggest ways that refuge water management planning can be made consistent with urban and agricultural water management planning, and ways that the planning process carried out by refuge managers can provide comparable and adequate assurances.

> ***Lead - Rick Soehren (CALFED)***
> ***Identified Agency Support - DFG, FWS, BOR, ICP, working with grasslands RCD***
> ***Review Process - A series of public meetings has been ongoing through the ICP - expect these to continue***
> ***Schedule: Final ICP Report Summer 1998***

II. Develop Implementation Plans for Water Use Efficiency

Most water use efficiency measures are implemented at the local or regional level. A primary function for CALFED agencies will be to provide planning assistance, technical assistance, and financing assistance so that lack of funding assistance is not an impediment to the implementation of cost-effective measures at the local level. Some of these assistance programs will be expansions of existing efforts of CALFED agencies, while additional new programs may be designed and implemented to meet new CALFED objectives.

Task 1. Develop Implementation Plan for CALFED Assistance Programs

Certain CALFED agencies, in particular DWR and USBR, have existing programs to provide water use efficiency assistance to local agencies. Building on these existing programs, CALFED staff and agencies will draft a long-term plan that identifies the types of assistance that may be needed in the future, the array of agencies best suited to deliver this assistance, and the funding levels necessary to carry out these long-term assistance programs.

Subtask 1a. Draft a CALFED Plan for Water Use Efficiency Assistance

CALFED staff will work with CALFED agencies to scope the nature and extent of assistance programs, and prepare a draft assistance plan.

> ***Lead - Rick Soehren (CALFED)***
> ***Identified Agency Support - Ed Craddock (DWR), Julie Spezia (BOR)***
> ***Review Process -***
> ***Schedule: Draft Assistance Plan by Summer 1998***

Subtask 1b. Build Stakeholder Support and Consensus for a CALFED Assistance Plan

Many stakeholders see the need for strong CALFED assistance programs as an assurance issue. They want assurance that funding for assistance programs will continue throughout the CALFED Program implementation period.

CALFED staff will work with CALFED agencies to gather stakeholder input on the draft implementation plan and revise it as appropriate. Input may be through initial focus groups and public workshops

Lead - Rick Soehren (CALFED)
Identified Agency Support - DWR, BOR, ??
Review Process - Focus groups and workshops in Spring and Summer
Schedule: Final Assistance Plan by fall 1998

Task 2. Develop Program to Implement Water Use Efficiency for Multiple Benefits

Some improvements in local water management, such as improvements in a farm's irrigation system, may not be cost-effective from the grower's perspective. However, these improvements may yield water quality improvements or improvements in ecosystem health. Thus, it may be appropriate for entities such as CALFED to fund some of the cost of actions that improve local water management. This possible CALFED program will require considerable additional development before implementation, and close coordination with CALFED programs for ecosystem restoration, water quality, and watershed management.

Subtask 2a: Review Existing Programs and Develop Alternatives

Many existing programs seek to identify and encourage local water management measures that protect, conserve, or improve resources. A review of these programs will provide information on opportunities, potential partnering, and models for assistance programs. Early and extensive stakeholder involvement will be essential in structuring a program that is accepted and successful.

Lead - Rick Soehren (CALFED)
Identified Agency Support - Frank Wernette (DFG), Steve Shaffer (DFA)
Review Process - CUWA?, Stakeholder involvement may take the form of one or a series of focus groups, and/or an advisory committee.
Schedule: Draft Report on Related Programs and Alternatives for Action by Summer 1998; Conduct Stakeholder Forums by Summer 1998

Subtask 2b: Draft Program to Implement Water Use Efficiency for Multiple Benefits

Using information on existing programs and stakeholder input, draft a proposal for implementing a program to identify, prioritize, fund, and implement local water management improvements that yield multiple benefits.

Lead - Rick Soehren (CALFED)
Identified Agency Support - ???
Review Process -
Schedule: Draft program by Fall 1998

Task 3. Refine Programs for Water Recycling Financial Assistance

Water recycling offers significant opportunities for making use of water supplies that would otherwise be discharged to the ocean and lost. However, there are many impediments to the implementation of recycling projects including financial impediments. Recycling projects have very high capital costs that may be difficult for local or regional entities to finance. In addition, the unit cost of recycling may exceed the marginal cost of other water supplies even though recycling may offer other benefits that are difficult to quantify in economic terms.

CALFED staff will work with CALFED agencies and water recycling stakeholder groups to explore the need and rationale for additional financial assistance for water recycling projects.

Lead - Rick Soehren (CALFED)
Identified Agency Support - (same)
Review Process - WateReuse Assn.
Schedule: Water Recycling Financing Plan by Fall 1998

(D) Storage and Conveyance - Major issues include further refinement of the component description including a narrowing of the list of potential reservoir sites; an initial, programmatic Clean Water Act, Section 404(b)1 alternatives analysis and a number of other technical activities needed to evaluate various aspects of the storage and conveyance component.

1. Refine Component - The CALFED Bay-Delta Program has identified numerous potential surface reservoir sites and issues associated with operations, and component configurations. These tasks will narrow the range of surface reservoir sites to be considered and further develop technical details associated with the storage and conveyance component.

Critical Task **a. Finalize List of Reservoir Sites** - Meet with agencies having Endangered Species Act and Clean Water Act Section 404 permitting responsibilities to review the range of reservoir sites and to informally discuss issues and concerns associated with the various sites. Prepare cost estimates for the various reservoir options, resolving differences of opinion with stakeholders and with regulatory agencies regarding mitigation cost assumptions. Estimate a range of potential water supply yields for each option. Convene a surface water storage screening committee to consider the various sites, formulate evaluation criteria based on CALFED solution principles, objectives, and goals, and narrow the list of sites to the most promising for further consideration in Phase 3. Generally evaluate non-reservoir alternatives such as conjunctive use, demand management, and Colorado River supplies as potential less environmentally damaging, practicable alternatives to new surface storage. Describe the CALFED approach to identifying and implementing conjunctive use opportunities.

Evaluate the likely range of least cost combinations of structural and non-structural water supply alternatives. **(Please see draft write up on page 24??? re demand management/water transfer evaluation.)** Finalize the list of promising reservoir sites and prepare descriptions of each site, potential reservoir capacities, operational opportunities and constraints, costs, and likely implementation issues. Describe how any reservoir option that will be considered further will undergo site-specific environmental review and 404 analysis in Phase III. Describe information and tools developed in Phase II that will be available for subsequent site-specific 404 analysis in Phase III. **Deliverable - Draft Section 404 Initial Compliance Report for incorporation into the Program Implementation Plan.**

Lead - Mark Cowin (CALFED)
Review Process - Surface Water Storage Screening Committee
Schedule -

Critical Task **b. Conveyance Option Equivalency Analysis** - Each of the three program alternatives would have particular effects on Delta flow patterns as displayed in the programmatic EIS/R, and Phase II Interim Report. For each program alternative, identify the reduction in Delta export pumping that would result in roughly the same effect on Delta flows and Delta export water quality. Describe and characterize the range of consequences associated with the reduction in Delta export pumping identified for each of the program alternatives.

Lead - Mark Cowin (CALFED)
Review Process - Surface Water Storage Screening Committee
Schedule -

C. Component Refinement Activities - Complete the following activities to more fully describe the features, configuration, costs, operations, and benefits of the storage and conveyance component:

Design Studies
Sacramento County conjunctive use prefeasibility evaluation;
San Joaquin County conjunctive use prefeasibility evaluation;
South Delta screened intake cost and feasibility analysis;
Critical Task South Delta water quality fix for Alternative 3 configurations;
South Delta flood solution;
Service to East Delta ag from isolated facility;
Finalize existing prefeasibility reports for inclusion in final EIS/R;
Critical Task Evaluate South Fork Mokelumne enlargement for through-Delta risk assessment (deferred to Phase III).

Recreation Studies
Identify and evaluate issues, opportunities, and interaction with CALFED Program alternatives (deferred to Phase III).

Groundwater/Conjunctive Use Outreach Program
Critical Task Implement process for meeting with individual agencies to explore conjunctive use opportunities.

Delta and System Modeling Studies
Document and consolidate completed work;
Conduct sensitivity analysis;
Incorporate Artificial Neural Network into DWRSIM and complete sensitivity analyses for incorporation into the final EIS/R;
Critical Task Establish North Delta flood modeling capability and evaluate ERPP, storage and conveyance options, coordinate activities with the Corps of Engineers, Sacramento, and San Joaquin Counties;
Support model verification process;
Support development of a new DWRSIM engine (deferred to Phase III);
Critical Task Support the fishery diversion effects technical effort with analytical results; and
Refine and document operating assumptions.

EIS/R Support
Critical Task Assist with formulating responses to comments; and
Participate in public outreach, meetings, and work shops as needed.

Deliverables - Various.

Lead - Mark Cowin (CALFED)
Identified Agency Support - ???
Review Process - Storage and Conveyance Technical Team
Schedule -

2. Implementation Plan - Develop and present a strategic plan for implementing the features of the Storage and Conveyance Component. Recapitulate goals and objectives. Identify, develop, and refine conceptual models of system function. Describe basic resource enhancement strategies. Describe the physical features and resource management initiatives

including adaptive management strategies and methods for assessing achievement to be implemented as part of this component. Describe implementation sequencing requirements and possibilities. Identify prerequisites for and conditions that would trigger implementation of the various features and initiatives. Design a peer/scientific review process to support adaptive management implementation. Display estimated capital and recurring costs. Circulate draft plan for review and comment. **Deliverable - Draft report for incorporation into the Program Implementation Plan.**

Lead - Mark Cowin (CALFED)
Identified Agency Support - ???
Review Process - Storage and Conveyance Technical Team
Schedule -

E. Restoration Programs - Major issues to be resolved to further develop this component include evaluation of fish diversion effects, development of strategic plan for ERPP implementation, development of a conservation strategy to support subsequent development of a habitat conservation plan and consultation pursuant to the Endangered Species Act, and continued coordination with other ongoing restoration programs, including Category III.

1. Fish Diversion Effects - The extent to which diversion effects in the South delta can or cannot be offset by major positive responses of target species to habitat improvements and other changes may significantly affect the choice of a preferred program alternative. Can target species recover while export pumping remains at 6 to 6.5 MAF/yr from the south Delta? What is the likelihood that target species will recover with through-Delta conveyance systems or with a dual conveyance system? While many believe that diversion effects are a major cause of fishery declines, others argue that diversion effects are not the primary cause. This task is intended to illuminate this issue to the extent possible.

For the draft EIS/R, operating criteria were developed to reasonably represent conditions with and without program alternatives in place in order to evaluate the potential impacts of the alternatives. Additional refinement and definition of these criteria by the following subtasks is required to more fully evaluate the alternatives.

Critical Task **a. Evaluate Fish Diversion Effects -** Prepare a white paper describing the operations criteria assumed in the EIR/S and identifying the issues implied by the choice and definition of each individual operations criterion. Describe the time value of water concept as manifested by the operations of each program alternative. Identify and describe issues associated with establishing interim operations criteria for the period following completion of the final EIS/R. Consider extension of the Bay-Delta Accord, reliance on existing regulatory mechanisms, and potential new approaches. Submit the white paper to the Ops Group for consideration and reaction. **Deliverable - White paper for consideration by the Ops Group and expert panel.**

Lead - Ron Ott (CALFED)
Identified Agency Support - EPA (Herbold), ???
Review Process - Ops Group
Schedule -

Critical Task **b. Expert Panel Review -** Convene an expert panel to review the status paper on fishery diversion effects prepared by Program staff, along with the white paper on interim operational criteria. Charge the panel with developing a summary of what is known and not known relative to this issue. Charge the panel with framing the issue in terms of policy and risk tradeoffs. **Deliverable - Report of findings and recommendations.**

Lead - Ron Ott (CALFED)
Identified Agency Support - EPA (Herbold), ???
Review Process - Expert Panel
Schedule -

2. Refine Ecosystem Restoration Plan - Refine and revise the Ecosystem Restoration Program Plan based on comments received from reviewers of the draft Plan and the draft EIS/R.

Lead - Dick Daniel (CALFED)
Identified Agency Support - EPA (Herbold, Hatfield)
Review Process -
Schedule -

3. ERPP Strategic Plan - The ERPP Strategic Plan will describe an integrated planning and scientific framework by which to successfully implement and evaluate restoration of the large and complex Bay-Delta ecosystem. The Strategic Plan will provide a comprehensive plan of action that will guide proposed restoration actions during development, revision, implementation, and post-implementation periods. The Strategic Plan will provide a clear restoration strategy supported by continuously improving scientific information that will be tested and modified through adaptive management.

Working with a consultant core team and scientific review panel develop a strategic plan for implementing the Ecosystem Restoration Program. Prepare an initial problem statement and identify solution strategies. Develop guiding ecological principles, goals, and objectives. Prepare a summary ecosystem description, refine the initial problem statement and solution strategies, and develop hypotheses and conceptual models of the ecosystem. Define an adaptive management framework, recommend solution strategies and refine the overall management and implementation strategy. **Deliverable - Strategic plan.**

Lead - Dick Daniel (CALFED)
Identified Agency Support - CDFG, ??
Review Process - Science Core Team, Ecosystem Restoration Work Group
Schedule - Complete strategic plan by August 15

4. Science Program - Identify and assemble a team of local experts and experts outside of the Bay-Delta to provide independent scientific review and input on the development of the ERPP Strategic Plan and other CALFED activities. Charge the team with reviewing and commenting on monitoring and research findings, indicators, models and testable hypotheses, species conservation strategies, adaptive management strategies, and other Core Team efforts.

Lead - Dick Daniel (CALFED)
Identified Agency Support - EPA (Herbold), ???
Review Process -
Schedule -

5. Restoration Coordination - The December 15, 1994 Bay-Delta Accord included a commitment to fund non-flow related ecosystem restoration actions to improve the health of the Bay-Delta ecosystem. This commitment is now embodied in the CALFED Restoration Coordination program. Factors to be addressed by the Restoration Coordination program include unscreened diversions, waste discharges and water pollution prevention, fishery impacts due to harvest and poaching, land derived salts, exotic species, loss of riparian wetlands, and other causes of estuarine habitat degradation. Funding sources for Restoration Coordination program include Proposition 204, stakeholder contributions, and federal appropriations. CALFED has established a two-step process for evaluating and selecting proposed actions to be implemented under Restoration Coordination program. This process also coordinates funding from other sources.

With direction from the Integration Panel, experts from the scientific review panel, and the Ecosystem Roundtable; update and revise restoration priorities, identify resulting actions in each ecoregion, integrate actions into an overall implementation plan, identify potential funding mechanisms, and match actions with funding sources. Select and implement actions annually and provide project-specific input on the development of the monitoring program to be presented in the Strategic Plan. **Deliverable - Action Plan identifying actions to be implemented and associated funding sources.**

Lead - Cindy Darling (CALFED)
Identified Agency Support - Schwinn, Herbold, Sam Ziegler (EPA); Ron Brockman, Liz Howard (BOR); Silva, Riveria (BOR temporary staff)
Review Process - Ecosystem Roundtable, Integration Panel, 1998 Tech Team
Schedule - Solicitation package out early May, public information meeting in late May, proposals due July 2

6. Continuing IEMRP Activities - Design an environmental monitoring program based on an inventory of existing monitoring programs that identifies gaps. Select monitoring elements, develop processes for data management, interpretation, and reporting, and establish a process for monitoring the performance of approved Restoration Coordination projects. Identify primary research questions and develop a focused research program and review process. Develop recommendations regarding the institutional structure and arrangements necessary for effective implementation of the monitoring program.

Lead - Rick Woodard, Bellory Fong, Cindy Darling, Leo Winternitz
Identified Agency Support - IEP, USGS, EPA (Herbold), FWS
Review Process -
Schedule -

7. Watershed Management - These tasks are intended to develop an efficient mechanism for coordinating the large number of existing, individual, widely separated, locally implemented watershed management efforts consistent with CALFED objectives and goals.

a. Conduct Stakeholder Workshops - During the Spring of 1998, conduct a series of focused workshops with local watershed management groups, including local government agencies, watershed councils, stakeholders, and local communities and community groups to identify watershed management efforts that could significantly further CALFED objectives and goals. Identify how CALFED can effectively involve and communicate with local watershed groups. **Deliverable- Stakeholder workshops.**

Lead - Judy Heath (CALFED)
Identified Agency Support - EPA (Ziegler), ???
Review Process -
Schedule -

b. Formulate Watershed Management Strategy - Based on the results of the stakeholder workshops, prepare a paper describing the CALFED watershed management strategy. Describe a coordination framework for integrating watershed management efforts, developing partnerships between key agencies and local, stakeholder entities, and fostering local watershed management efforts through education and outreach. **Deliverable - Revised Position Paper on watershed management.**

Lead - Judy Heath (CALFED)
Identified Agency Support - EPA (Ziegler), ???
Review Process -
Schedule -

G. Water Transfers - These tasks will develop a water transfer policy framework intended to resolve the following major issues that currently limit the efficiency of a water transfer market: providing environmental, economic, and water resource protections; establishing consistent technical, operational, and administrative rules; and establishing transportation rules (e.g. wheeling and facility access). In addition, a strategy for implementing the recommended resolutions will be provided, including recommended assurance measures.

1. Water Transfer Policy Framework - These tasks will clarify CALFED Program policy regarding the role of water transfers in the Bay-Delta solution and provide recommended solutions to unresolved issues.

Critical Task **a. Prepare a Water Transfer Policy White Paper** - Prepare a white paper describing recommended solution options for resolving identified issues currently limiting an efficient and protected water transfer market. The solution options may include the use of a water transfer 'clearinghouse' that would provide public disclosure as well as actively participate in information collection and analysis regarding specific transfers. Solution options may also be in the form of recommended legislative or regulatory changes. The BDAC Water Transfer Group, along with the Transfer Agency Group, will be actively involved with the development of recommended solution options. Working drafts of the white paper will be presented to both groups for their continual review and comment. The Transfer Agency Group will concentrate on developing potential solution options for technical, operational, and administrative rules. Solution options developed by the Transfer Agency Group will also be discussed and refined with the BDAC Water Transfer Work Group. **Deliverable - White paper to support water transfer public workshop on policy framework.**

b. Water Transfer Public Workshop on Policy Framework - Convene a public workshop to present the water transfer policy framework white paper and elicit public comment. Focus on informing the public of the recommended economic and resource protection solution options, and recommended approach to developing an accepted definition of 'transferable water.' **Deliverable - Report of findings and recommendations.**

c. Implementation Strategy - With input and advice from the Transfer Agency Group and the BDAC Water Transfer Work Group, develop a strategy for implementing the recommended solution options. **Deliverable - Draft report for incorporation into the Program Implementation Plan.**

Lead - Greg Young (CALFED)
Identified Agency Support Needs - Jerry Johns (SWRCB)
Review Process - BDAC Water Transfers Group, Transfer Agency Group
Schedule -

NOTE: The following section reflects current status of ongoing discussions on how best to approach least cost analysis evaluations. This element is undergoing refinement.

2. Demand Management/Water Transfer Evaluations - To provide the agencies and stakeholders with information regarding the hydrologic and economic effects of specific water management activities, propose a water management evaluation that focus on the hydrologic and economic consequences of specific water management actions. This evaluation could determine the environmental, agricultural land use, and water supply price consequences of various water management scenarios, including their effects on the CALFED Bay-Delta Program conveyance alternatives and equivalents to additional surface water supplies.

The first step is to research the most recent demand management and water transfer studies, such as the State Drought Water Bank, CVPIA-PEIS, Bulletin 160-98, existing CALFED analyses, and the YCWA Settlement Agreement. These previous efforts can provide some basis for many assumptions and analytical procedures necessary in a water management evaluation of the CALFED Program Alternatives.

Following a background research process, several demand management and water transfer scenarios could be applied to the CALFED Program alternatives. Each scenario would estimate the hydrologic, economic and environmental impacts/benefits resulting from changes or reductions in Delta exports patterns related to Delta conveyance and new storage for the following resource areas:

- Estimated water supplies available to Agricultural/Urban Sectors
- Estimated relative statewide economic effects
- Described environmental effects for fisheries (Delta, In-stream, On-farm tailwater), in-delta water quality, export water quality, and terrestrial impacts
- Described and determine third party impacts
- Described social effects

A summary of the proposed water management scenarios pertaining to specific CALFED conveyance and storage considerations is outlined below.

Delta Conveyance
Scenario 1. Base – No New Storage/Existing Transfer Market
Scenario 2. No New Storage/CALFED Water Use Efficiency Measures/Enhanced Transfer Market (Resulting in increased San Joaquin Valley land retirement)
Scenario 3. New Storage/CALFED Water Use Efficiency Measures/Existing Transfer Market
Scenario 4. New Storage/CALFED Water Use Efficiency Measures/Enhanced Transfers market

Storage Considerations
Scenario 1. Base – No New Storage/Existing Transfer Market
Scenario 2. No New Storage/CALFED Water Use Efficiency Measures/Existing Transfer Market
Scenario 3. No New Storage/CALFED Water Use Efficiency Measures/Free Transfer Market
Scenario 4. New Storage/CALFED Water Use Efficiency Measures/Existing Transfer Market
Scenario 5. New Storage/CALFED Water Use Efficiency Measures/Free Transfers Market

Lead - Gary Bardini (CALFED)
Identified Agency Support - Carolyn Yale (EPA)
Review Process -
Schedule -

Element 3 Select a Preferred Program Alternative and Prepare Environmental Documentation

A. Finalize EIS/R - These tasks will select a preferred program alternative and complete the programmatic environmental impact report (EIR), and the programmatic environmental impact statement (EIS) for the CALFED Bay-Delta Program.

Critical Task **1. Comment Period** - Receive, catalog, and summarize comments on the draft EIS/R and prepare responses to comments. Identify any new issues that require additional technical analysis in order to select a preferred program alternative. Schedule and staff any needed additional technical analyses, assess schedule impacts if any, and adjust the schedule as required. **Deliverable - Response to comments.**

Lead - Rick Breitenbach (CALFED)
Identified Agency Support - Various, depending on nature & extent of comments received. Specific staff requested for assistance.
Review Process -
Schedule -

Critical Task **2. Select Preferred Program Alternative** - Based on the contents of the draft EIS/R, the comments received and the responses to comments, the individual program component implementation plans, the assurances development, and the developed understanding of the various relevant issues (e.g. bromides, seismic risk, fish diversion effects, etc.), evaluate the program alternatives with respect to the solution principles and identify a preferred program alternative for implementation. Identify triggers and conditions for implementing or limiting various portions of the preferred alternative based on the observed performance of preceding portions, changed conditions, or improved understanding of technical or policy issues. Document the process of selecting this program alternative. **Deliverable - Description of the preferred program alternative and rationale for its selection for inclusion in the final EIS/R.**

Lead - Lester Snow (CALFED)
Identified Agency Support - Various
Review Process - Policy Group/Management Team
Schedule -

3. Prepare Administrative Draft Final EIS/R - Prepare a final EIS/R containing the response to comments and describing the preferred program alternative for CALFED agency review and comment. **Deliverable - Administrative Draft EIS/R printed and distributed.**

4. Final EIS/R - Prepare a final EIS/R containing the response to comments and describing the preferred program alternative. **Deliverable - Final EIS/R.**

Lead - Rick Breitenbach (CALFED)
Identified Agency Support - PCT
Review Process - Policy Group/Management Team
Schedule -

5. Prepare Mitigation/Monitoring Plan - Prepare a plan for developing and implementing the mitigation and monitoring commitments identified in the final EIS/R. **Deliverable - Mitigation/Monitoring Plan.**

Lead - Rick Breitenbach (CALFED)
Identified Agency Support - ???
Review Process -
Schedule -

6. Prepare Findings, Record of Decision, and Notice of Determination - Document the findings of the lead agencies, Record of Decision, and Notice of Decision per NEPA and CEQA respectively. Submit for lead agency review and comment.

7. Finalize Findings, and Final Record of Decision and Notice of Determination - Based on agency comments and review of other comments on the final EIS/R, finalize the findings, Record of Decision, and Notice of Determination. Arrange for appropriate filing and publication.

Lead - Rick Breitenbach (CALFED)
Identified Agency Support - ???
Review Process - Policy Group/Management Team/PCT
Schedule -

Issue	Agencies/Stakholder Groups for whom it is an issue	When does resolution need to be achieved?			Type of Resolution		Work Efforts		
		Pref Alt	Final	Phase III	Discrete Decision	Process to Achieve Resolution	Current Workplan Efforts	Additional Workplan Efforts	Participating Agency Personnel

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