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QA workplan
CALFED
8/96

Workplan for Developing Water Quality Common Program

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Purpose:

The purpose of the work proposed in this workplan component is to develop a detailed description of the actions contained in the water quality common program, to set criteria for evaluating water quality actions and to determine the range of combinations of actions which accomplishes the water quality objectives at the highest level consistent with cost effectiveness evaluations.

General Approach:

The urban water interests have been meeting for some time on this issue and have proposed water quality constituents and the associated criteria to be used in evaluating the performance of alternatives from the urban drinking water perspective. Similar efforts will be taken on the agricultural water quality and ecosystem water quality areas. Key representatives have been identified in the Ag water districts to come together in a technical team to review the technical work previously performed in this area, as supplemented by the consulting team. There is much less previous work available for ecosystem water quality. Key ecosystems water quality experts from EPA, USF&WS, California Fish and Game, and DWR have been asked to serve on a task force to identify criteria for evaluating water quality actions.

As a general approach, the following tasks will be performed and the findings documented and reviewed by the technical teams:

- Identify the water quality parameters of importance to the water quality area that is the focus of the sub-team. Evaluate constituent concentrations that have consequences ranging from no observable effect to maximum anticipated impact. Describe the impacts.
- Identify actions to address water quality problems that may be included in a common water quality program.
- Identify benefits and impacts/costs to the user resulting from different water quality levels.
- Identify reasonable ranges of water quality parameters that the CALFED may use in impact/benefit analysis of the alternatives. These may vary by geographical location, hydrology, and time of year.
- Document and evaluate the assumptions and rationale for selection and quantification of water quality criteria to be used. Define and document the process and data that were used to develop the goals, criteria, and proposed actions, so the other teams can follow and analyze the products of the sub-team.

- Produce summaries of the goals, actions, and criteria to promote understanding with the other sub-teams.

Once these recommendations are identified in each of the three sub-teams, representatives of each team will be convened to resolve any conflicts among criteria. Many of the criteria may be common to all three areas. CALFED will document and summarize the resulting criteria to test the actions of the common program and alternatives to meet water quality objectives.

The linkage with ecosystem health will be handled through joint evaluation criteria while the linkage to the storage/conveyance component will require a separate evaluation of the storage/conveyance requirement to satisfy water quality criteria.

Workplan for the Remainder of 1986

The remainder of 1986 will be devoted to refinement of the water quality common program. The specific tasks which will be completed under the water quality component refinement include:

- Review existing literature and identify the existing studies which propose water quality improvements in the Bay-Delta.
- Prepare a list of the water quality constituents of concern in the Bay-Delta system.
- Prioritize the water quality constituents by order of importance and categorize by constituents that affect agricultural water quality, urban water quality, and ecosystem water quality.
- Starting with the list of actions identified in the Phase I alternatives, identify additional actions and categorize each action as to the actions which affect the various constituents of importance.
- Utilizing the prioritized list of constituents, prioritize the list of actions by importance and by the water quality resource area.
- Analyze the effectiveness of each action on the prioritized list of actions.
- Rank each action by effectiveness within the prioritization scheme of constituents.
- Analyze the cost effectiveness of the actions identified as most technically effective for each of the priority constituents of importance.
- Review the list of constituents of importance with the technical review teams.
- Review the prioritized list of actions with the technical review teams.

- Review the technical assessment and cost effectiveness assessment of the prioritized actions with the technical review teams.
- Utilizing the input of the technical review teams on the list of actions prioritized by technical effectiveness, cost effectiveness and constituents of importance, formulate a water quality program staged over time which maximizes the technical effectiveness in improving Ag water quality, urban water quality, and ecosystem water quality in a balanced fashion and in the most cost effective manner.
- Review the formulated water quality program with the Program Coordination Team, the Bay-Delta Advisory Council, and the CALFED Management Team
- Develop the linkages of the actions in the water quality program with the sizes and operational plans of the storage conveyance component of each alternative.
- Develop the linkages between the actions in the water quality common program and the actions in the habitat restoration common program.
- Customize the water quality common program to conform to the geographic and operational differences of each of the three main alternatives and any sub alternative.
- Evaluate positive and negative impact of conveyance and storage operations on the water quality programs.
- Prepare evaluations (model run) of the water quality consequences of each of the actions and the common water quality program as customized for each alternative.
- Refine the water quality programs as required to better meet program objectives.
- Review the water quality evaluations with the water quality technical team.
- Prepare a year by year program implementation plan for the water quality program.
- Prepare a prefeasibility report on the water quality common program.

Workplan for 1997

The first quarter of 1997 will be devoted to impact analysis and reformulation of the water quality common program. The second quarter through the end of the calendar year will be devoted to prefeasibility evaluation of the water quality common program.

Impact Analysis

- Prepare an impact analysis of the water quality common program as it has been modified by combining it with the other common programs and storage and conveyance components.
- Assess the results of the impact analysis and reformulate the water quality program as indicated by this assessment (The purpose of this reformulation is to reduce impacts, improve benefit, and take advantage of the linkages to other components of the alternatives).
- Prepare a second impact analysis of the reformulated program.
- Reformulate as indicated by the results of the second round of impact analysis.
- Prepare the final impact analysis of the water quality program.

Prefeasibility Analysis

- Utilizing the common program for water quality developed for the programmatic EIR/EIS, develop the site specific information needed for a site specific EIR/EIS and feasibility report.
 - For the Ag drainage management program element develop a GIS layer which identifies the properties which are discharging poor water quality into salt and mud sloughs.
 - Identify the required water quality in the last toe ditch from these properties.
 - Identify incentives program which will encourage attainment of these water quality goals.
 - Identify potential locations for wetlands treatment facilities for agricultural drainage in the grasslands area.
 - Prepare a feasibility level design of an underground retention/detention system for agricultural drainage from the grasslands area.

- Prepare a feasibility level plan for recycling water through the Delta Mendota canal into the grasslands area to improve water quality in grasslands and in the receiving water.
- Prepare feasibility level cost estimates of each of these elements of the drainage management plan.
- Prepare feasibility report on the drainage management plan.
- Similar tasks will be performed for all of the major elements of the water quality common program.

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Water Quality Component Work Plan

Task Description

The major tasks associated with the general approach outlined above include:

<u>Task Description</u>	<u>Responsible Team Member</u>	<u>Start Date</u>	<u>Target Completion Date</u>
Component Refinement		7/1/96	10/1/96
• Complete review of literature and existing studies	CT ¹	7/1/96	7/10/96
• Identify representatives for Ag W.Q. Tech Team and Ecosystem Tech Team	PT ²	7/1/96	7/5/96
• Prepare "straw" proposal for W.Q. Program staged over time utilizing Phase I analysis (Preliminary W.Q. Program)	CT	7/1/96	7/25/96
• Prepare "straw" proposals for Ag W.Q. and Eco. WQ Constituents, Criteria and W.Q. Program	CT	7/1/96	7/10/96
• Ag W.Q. Tech review "straw" Ag W.Q. Constituents Criteria, and W.Q. Program	PT	N/A	7/25/96 and 8/8/96
• Ecosystem W.Q. Tech Team review "straw" Eco. W.Q. Constituents, Criteria and W.Q. Program	PT	N/A	7/25/96 and 8/8/96
• Meet with State Board, Reg. Board & EPA staff to review Prelim. W.Q. Program	PT & CT	7/25/96	8/19/96
• Develop linkages of W.Q. Program actions to conveyance/storage	CT	7/25/96	8/19/96
	Responsible	Start	Target

¹CT = Consultant Team

²PT = Program Team

<u>Task Description</u>	<u>Team Member</u>	<u>Date</u>	<u>Completion Date</u>
• Prepare evaluations (model runs) of actions identified in W.Q. Program to determine ability to meet objectives (criteria prepared by Tech Teams) and rank	CT	7/25/96	9/2/96
• Reformulate W.Q. Program as appropriate	CT	8/19/96	9/2/96
• Prepare cost estimates of actions and rank by cost effectiveness	CT	8/26/96	9/2/96
• Review modeled W.Q. achievement and cost effectiveness of W.Q. Program	PT & Tech Teams	9/3/96	9/12/96
• PCT Review & Discuss W.Q. Program	PCT	9/11/96	9/18/96
• Evaluate positive and negative impacts of conveyance/storage options on W.Q. Program	CT	9/2/96	9/16/96
• Prepare year by year program implementation W.Q. Program scheduled by W.Q. achievements, cost effectiveness and customized by alternatives	CT	9/16/96	10/1/96
• Prepare Pre-feasibility Report on W.Q. Program	CT	10/1/96	10/31/96

Impact Analysis and Reformulation (10/1/96 to 3/30/97)

<u>Task Description</u>	<u>Responsible Team Member</u>	<u>Start Time</u>	<u>Target Completion Date</u>
• Impact Analysis of W.Q. Program	CT	10/1/96	1/30/97
• Reformulate W.Q. Program to reduce impacts and take advantage of linkages to other components	CT & PT	2/1/97	2/14/97
• Additional impact analysis	CT	2/15/97	2/27/97
• Reformulation as required	CT & PT	3/1/97	3/15/97
• Final Impact Analysis	CT	3/16/97	3/30/97

(Prefeasibility Analysis (4/97 through 12/97))

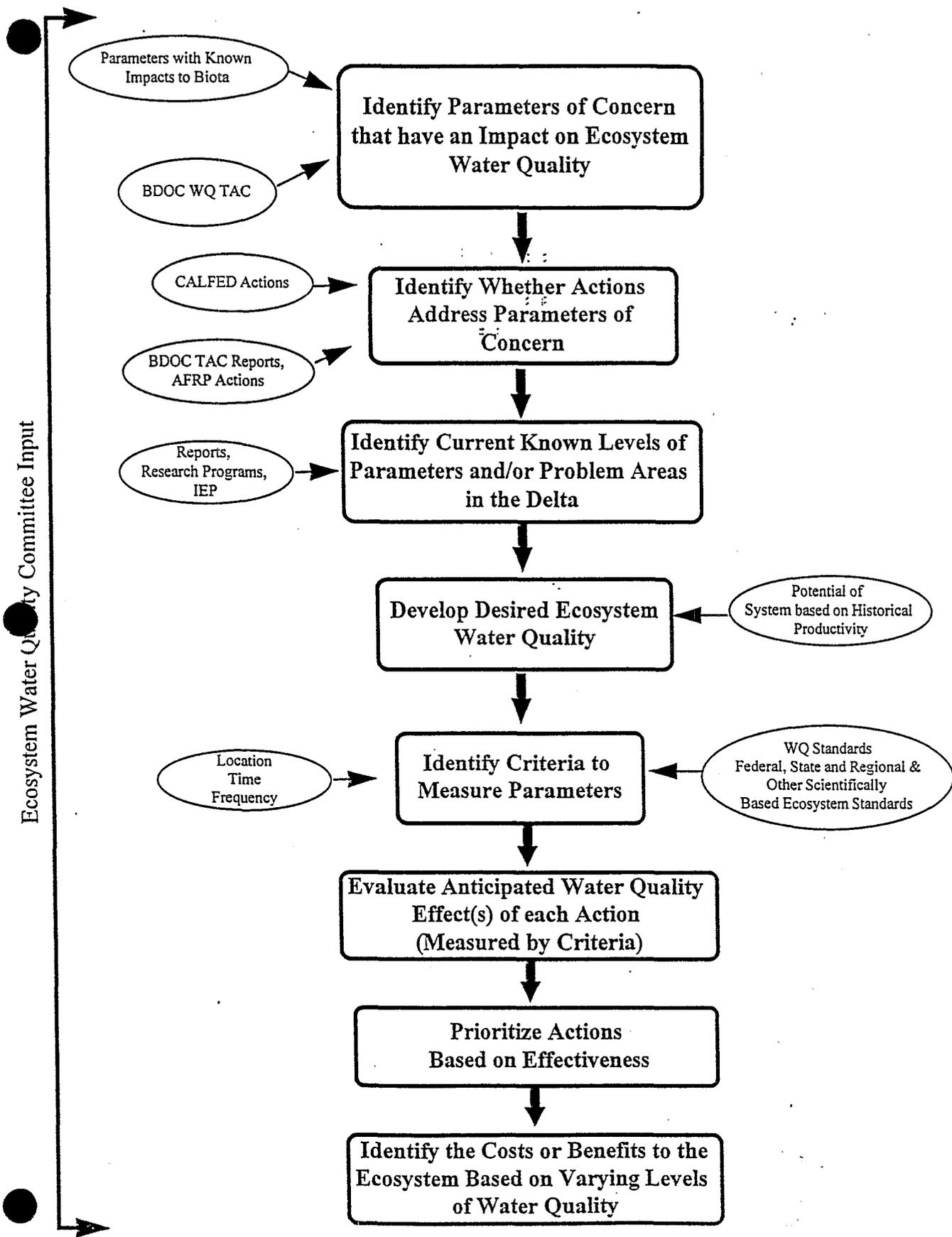
- Develop feasibility level GIS layers for drainage management elements CT 4/97 6/97
- Identify target water quality from drainage management areas CT 4/97 6/97
- Prepare prefeasibility level design of drainage retention systems, wetland treatment systems and recycling system CT 6/97 9/97
- Prepare prefeasibility level assessment of land conversion trust program CT 6/97 9/97
- Prepare prefeasibility level cost estimates and economic analysis of drainage management plan CT 10/97 12/97
- Prepare prefeasibility report on drainage management plan CT 11/97 12/97
- Prepare prefeasibility report on other elements of the Water Quality Common Program CT 4/97 12/97

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CALFED Bay-Delta Program Workplan Schedule - Water Quality Component Refinement for 1996

Task Name	Duration	Start	Finish	June	July	August	September	October	November	December	January	February	March
Component Refinement	89d	7/1/96	10/31/96	[Gantt bar spanning from July 1 to October 31]									
Literature Review	8d	7/1/96	7/10/96	[Gantt bar from July 1 to July 10]									
Form Technical Teams	5d	7/1/96	7/5/96	[Gantt bar from July 1 to July 5]									
Prepare Straw Proposals on Ag W.Q. Constituents & Crit	19d	7/1/96	7/25/96	[Gantt bar from July 1 to July 25]									
Prepare Straw Proposals on Eco W.Q. Constituents & Crit	8d	7/1/96	7/10/96	[Gantt bar from July 1 to July 10]									
Ag W.Q. Tech Team reviews straw proposals Ag W.Q.	11d	7/25/96	8/8/96	[Gantt bar from July 25 to August 8]									
Eco W.Q. Tech Team reviews straw proposals Eco W.	11d	7/25/96	8/8/96	[Gantt bar from July 25 to August 8]									
Meet w/ SWRCB, RWQCB, EPA to rev. prelim W.Q. Progr	18d	7/25/96	8/19/96	[Gantt bar from July 25 to August 19]									
Develop Linkages of W.Q. Actions to conveyance/storage	18d	7/25/96	8/19/96	[Gantt bar from July 25 to August 19]									
Evaluate Water Quality Actions Against Objectives & Crit	28d	7/25/96	9/2/96	[Gantt bar from July 25 to September 2]									
Reformulate W.Q. Program as appropriate	11d	8/19/96	9/2/96	[Gantt bar from August 19 to September 2]									
Prepare Pre-Feasibility Cost Estimates of Actions	6d	8/26/96	9/2/96	[Gantt bar from August 26 to September 2]									
Program Team & Tech Teams Review W.Q. Evaluations	8d	9/3/96	9/12/96	[Gantt bar from September 3 to September 12]									
Program Coordination Team (PCT) Review W.Q. Progra	6d	9/11/96	9/18/96	[Gantt bar from September 11 to September 18]									
Evaluate Linkages to Storage / Conveyance	11d	9/2/96	9/16/96	[Gantt bar from September 2 to September 16]									
Prepare Detailed Description of W.Q. Program	12d	9/16/96	10/1/96	[Gantt bar from September 16 to October 1]									
Prepare pre-Feasibility Report on W.Q. Program	23d	10/1/96	10/31/96	[Gantt bar from October 1 to October 31]									
Impact Analysis and Reformulation	129d	10/1/96	3/30/97	[Gantt bar from October 1 to March 30]									
Impact Analysis of W.Q. Program	88d	10/1/96	1/30/97	[Gantt bar from October 1 to January 30]									
Reformulate W.Q. Program reduce impacts/consider link	10d	2/3/97	2/14/97	[Gantt bar from February 3 to February 14]									
Additional impact analysis	5d	2/17/97	2/27/97	[Gantt bar from February 17 to February 27]									
Reformulation as required	10d	3/3/97	3/15/97	[Gantt bar from March 3 to March 15]									
Final impact analysis	10d	3/17/97	3/30/97	[Gantt bar from March 17 to March 30]									

A Process to Address the Ecosystem Cost or Benefit of Different Water Qualities in the Delta



A Process to Address the Agricultural Cost or Benefit of Different Water Qualities in the Delta

