

# **APPENDIX F**

## **RESPONSES TO COMMENTS MARCH 1998 DRAFT OF THE WATER QUALITY PROGRAM PLAN TECHNICAL APPENDIX TO THE EIR/EIS**

# Responses To Comments

The following are responses to comments received on the March 1998 Draft of the Water Quality Program Plan (Technical Appendix to the Draft EIR/EIS). The Water Quality Program received more than a thousand of comments. The following comments have been homogenized from several similar comments. These comments were selected because they were thought to encompass the most critical thoughts posed by the readers.

## Bioaccumulation

### Issue

CALFED should get a UC Davis professor to work on using reeds and sedges for filtration of toxins

Use of seabird tissues as indicators of toxic pollution

### Response

Control of toxic substances that bioaccumulate is included among the actions planned for the CALFED water quality program element. This work is being planned through the Water Quality Technical Group, the body of technical stakeholders who provide advice to the program. This concept of asking University staff to develop plans for potential use of plants for toxin removal will be brought forward to the WQTG for their consideration.

It is envisioned that tissue monitoring will be included in the CALFED Monitoring program. The staff developing the program will be provided with the suggestion that tissues of seabirds are appropriate matrices for evaluating the presence of bioaccumulatory toxicants. A tissue study in Mergansers (a fish eating water fowl) is proposed in mercury assessments.

## Blending of Exported Water

### Issue

lower salinity water is needed for So. Cal. Exports to enhance blending capability with Colorado R. water

### Response

Studies conducted by CALFED indicate that both Alternatives 2 and 3 would provide substantial improvement in the mineral quality of exported water, as compared to the No Action Alternative and Alternative 1. According to modeling predictions made by CALFED in May 1998, the electrical conductivity (a measure of salinity) at Clifton Court Forebay resulting from implementation of Alternatives 1, 2, and 3 would average 564, 363 and 224 uS/cm, respectively. The choice among alternatives does, therefore, offer the possibility of enhancing opportunities to blend Delta exports with other source waters.

## Bromide

### Issue

bromide concentrations at exports

### Response

According to model predictions made in May 1998, Alternatives 1, 2, and 3 would result in average bromide concentrations of 0.330mg/L, 0.151mg/L and 0.028mg/L, respectively, measured at Clifton Court. At the Contra Costa Canal intake on Rock Slough, bromide concentrations resulting from the alternatives is estimated to average 0.484, mg/L, 0.211 mg/L, and 0.366 mg/L for Alternatives 1, 2, and 3.

## CALFED WQ Program

### Issue

The Water Quality Common Program falls far short of articulating a comprehensive vision to improve water quality - what we are doing about it.

### Response

Until release of the CALFED Draft EIS/EIR, development of the water quality program element had been at a general programmatic level. The work embodied in the draft included identification of water quality constituents of concern, water quality targets, and programmatic actions, such as storm water source control, that would improve water quality in the system. It was not intended that program-level actions identified through this process would be at a sufficient level of detail to enable implementation.

Immediately on completion of the draft document in March 1998, the Water Quality Technical Group, the body of technical stakeholders and agency staff who provides technical advice to the program, proceeded with detailed planning to facilitate the program.

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Some of the additional detailed information now being developed may be appropriate for use in the programmatic environmental document. Such information will be incorporated into the document.

The environmental, urban and agricultural stakeholders, along with agency staffs are heavily influencing the developmental work through their participation in the Water Quality Technical Group. This group will continue to influence the program throughout its duration.

Development of the CALFED water quality program element

The Water Quality Program has a scope of work that will address many issues related to public health and the environment. Resources devoted to this program will be balanced with other programs and the CALFED Program as a whole. CALFED will try to achieve improvements in water quality through actions in CALFED and other agencies and through changes in procedures of water users and dischargers.

The water use efficiency program element is intended to maximize efficiency of water use, and includes water conservation as a major strategy. The water quality program element includes actions to reduce pollution from a number of sources including urban storm water runoff, abandoned mines, urban waste water discharges, agricultural and industrial discharges and other sources. These program elements are being developed through close interaction with stakeholders and the public, who are invited to participate in the continuing development and refinement of these program elements.

As a first priority, CALFED will recognize and support existing efforts to improve the quality of the waters of the Bay-Delta estuary. Educational outreach and development appears to have great potential for forming successful partnerships that benefit water quality and the participants. Water Quality Program actions have been revised. Included are more detailed descriptions of water quality problems, more detail of potential actions that can be taken to reduce impacts, and discussions on what studies or monitoring is necessary to determine which water quality actions are necessary.

CALFED is committed to avoid impacts that would affect the ability to meet Basin Plan objectives. However, specific actions of the CALFED program have not been determined and are not covered under this Draft Programmatic EIS/EIR. Specific impacts of individual CALFED actions will be addressed in individual project EIS/EIR's as required by law. Prior to adopting an individual project EIS/EIR, CALFED will examine the impacts on beneficial uses and impacts on permitted discharges in the project area. Actions taken by other entities will not be subject to control by the CALFED program. It is the intention of CALFED management to coordinate as closely as possible with other entities to assure maximum harmony among the various activities that will occur in the Delta estuary. This coordination function will be a key part of the CALFED watershed management program element that will utilize a watershed-wide approach to source control measures. Should the City of Tracy's discharge permit compliance be compromised by an individual project, mitigation measures will be negotiated.

### CALFED Coordination

#### Issue

Balancing water quality issues with other CALFED issues

Ability of CALFED to coordinate actions among its member agencies

#### Response

The Water Quality Program has a scope of work that will address many issues related to public health and the environment. Resources devoted to this program will be balanced with other programs and the CALFED Program as a whole.

As the CALFED organization includes regulatory agencies, a great opportunity does exist to coordinate regulatory activities to enhance the effectiveness of the CALFED program. Coordination and cooperation among these agencies is envisioned as a key element of the CALFED watershed management strategy, which will employ a watershed-wide perspective in addressing water quality problems. Coordination with the activities of other entities will also be an important feature of monitoring, assessment, and research activities undertaken by CALFED.

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Importance of coordinating with regional plans

The Draft EIS/EIR will be amended to acknowledge the importance of coordination of water planning with regional plans, and the importance of using appropriate regional growth forecasts in the planning and design of water and wastewater

benefits on water quality from other program elements, and potential negative impacts

To the extent possible, the benefits accruing from fresh water outflow, ecosystem restoration, watershed management, reservoir protection, pollution prevention and ground water conjunctive use have been quantified as part of the CALFED analysis of alternatives. Some factors, such as the improvement in water quality due to pollution prevention cannot be quantified at the current stage of analysis, as project-specific planning is not within the scope of the Programmatic EIS/EIR. However, actions to prevent and control pollution are contained within the water quality program element, and will have significant beneficial impacts on the quality of waters in the Bay-Delta estuary. Some activities, such as ecosystem restoration projects, may have negative impacts on water quality; however, these cannot be quantified either until specific projects are proposed during the implementation phase (Phase III) of the program. Detailed environmental documentation on the effects of these projects will be created at that time.

### CALFED Water Quality Goals

#### Issue

CALFED water quality goal

#### Response

The CALFED goal is to provide improved water quality for all beneficial uses. This goal will be attained consistent with the need to meet equally important objectives for ecosystem restoration, Delta levee system integrity, and water supply reliability.

### Dilution

#### Issue

Dilution is illegal

#### Response

The statement in the CALFED Water Quality Program Appendix has been critically reviewed and is being amended to more accurately indicate that dilution actions can be contrary to policy and law, but that there are instances where entities having regulatory responsibility may require dilution measures.

Appropriate use of dilution within CALFED program, not specific to San Joaquin River

Increased flows in the Sacramento and San Joaquin Rivers could have the effect of reducing concentrations of constituents presenting water quality concerns. However, the Water Quality Technical Group, the advisory body of technical stakeholders and agency staff who are helping to develop the water quality element of the CALFED program, have recognized that dilution is generally a poor substitute for prevention and control of pollution sources, and have recommended against CALFED providing funding support for such practices under normal circumstances. Funds earmarked for water quality improvement will generally be invested in pollution prevention and source control actions.

In cases where flows are required to support ecosystem functions, it may be possible to achieve additional water quality advantages, and CALFED may consider modifying plans in ways to achieve secondary water quality advantages while achieving the primary goal of ecosystem improvement.

Appropriateness of dilution actions

The Water Quality Technical Group, the advisory body of technical stakeholders and agency staff who are helping to develop the water quality element of the CALFED program have recognized that dilution is generally a poor substitute for prevention and control of pollution sources. Storm water discharges are specifically targeted for CALFED actions that may include construction of collection and treatment systems to clean up storm water discharges affecting the Sacramento-San Joaquin Bay-Delta estuary.

Evaluations performed by CALFED staff have indicated that the San Joaquin River is a significant factor affecting the quality of water both in south Delta channels and in project diversions. Although dilution of San Joaquin River flows with upstream releases has the capacity to improve the quality of river water, use of this methodology generally will not be supported by CALFED except in emergency circumstances. This policy decision was made in support of a recommendation by the Water Quality Technical Group, the agency and

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stakeholder body advising CALFED on development of the water quality program element. CALFED does not, however, have regulatory authority and cannot dictate the actions of agencies having that authority. The State Water Resources Control Board could rule on the necessity for dilution releases from reservoir storage in the basin.

### Dissolved Oxygen (DO)

#### Issue

Oxygen depletion in Old River and near Stockton.

#### Response

A study of contributors to oxygen depletion in Old River would be in order should the selected alternative modeling show that there is a reduced flow in Old River. Should studies reveal that the certain discharges are the sole or primary source of oxygen depleting substances, mitigation measures will reflect options CALFED could take to reduce the negative impacts on dissolved oxygen.

The Water Quality Technical Group has been investigating sources of oxygen depleting substances in the south Delta, particularly around Stockton; a known area of low dissolved oxygen. The Water Quality Program is committed to correction of problems that affect beneficial uses in the Bay-Delta. While domestic water supply is one beneficial use, others such as recreation; freshwater habitat; wildlife habitat; migration; spawning; and navigation are also considered. Low dissolved oxygen affects fish migration and freshwater habitat the most. Because of this, dissolved oxygen in the receiving waters needs to be maintained. Following further study of impacted areas; CALFED will recommend Water Quality Actions to be taken to correct low dissolved oxygen levels in the south delta.

### Drinking Water

#### Issue

ability of Delta water to meet drinking water standards

#### Response

Under current law, municipalities supplying drinking water are required to furnish annual water quality reports to their consumers. These reports demonstrate that drinking water produced from the Delta reliably meets drinking water standards, though improvement of source water quality is always desirable, and is planned through the CALFED program. Chlorine compounds are often used to maintain safe disinfection in the distribution piping serving customers. A negative aspect of this practice is the ability of some customers to taste and smell the disinfectant, although disinfectant residuals are not believed to be harmful. Some entities treating Delta water are incorporating the capability to use other disinfectants that do not produce objectionable tastes or odors.

CALFED should improve quality of drinking water supplies taken from the Delta

The water pollution prevention and control actions planned under the water quality program element will result in greater protection of drinking water supplies taken from the Delta. Also, the Watershed Management program element will result in improved source water protection through watershed activities such as creation of buffer strips and erosion control actions. Alternatives 2 or 3, if implemented, would result in reduction of salt concentrations in water supplies taken from the Delta making the water more suitable for recycling. Concentrations of bromide, a salt of particular concern in drinking water supplies, would also be reduced under these alternatives.

water quality actions related to source control

Improvement of water quality for all beneficial uses, included drinking water supply, is the objective of the CALFED program. While the treatment provided by municipal users of Delta water provides a high level of protection to the health of consumers, control or prevention of water quality degradation at the source provides important additional barriers to disease and to diminished usability of water supplies. Source control and prevention actions also offer the possibility of reducing treatment costs. For these reasons, the CALFED water quality program element includes numerous actions to prevent or control sources of pollution.

Improved source water quality can be met, in part, through implementation of source prevention and control actions geared toward discharges of toxic and pathogenic materials. The choice of conveyance alternatives has important implications for the quality and treatability of exported water.

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Actions are being planned to control pollutant discharges from abandoned mines, urban storm water runoff, agricultural drainage, industrial and municipal wastewater discharges, and recreational uses of the Bay-Delta estuary. The general approach will be to identify harmful components in discharges, trace their sources, and initiate control actions. The types of controls being planned include reducing waste generation in the first place; recycling and reuse of waste materials; and, treatment and removal of waste substances from discharges. Actions will include education of potential dischargers, such as homeowners using pesticides.

The Water Quality Common Program will lead to source control and prevention activities that will improve water quality for all beneficial uses, including those within the jurisdictions of SCAG agencies. Additionally, Alternatives 2 and 3 have the potential for substantially reducing salinity of water supplies taken from the Delta. As the CALFED organization includes regulatory agencies, a great opportunity does exist to coordinate regulatory activities to enhance the effectiveness of the CALFED program. Coordination and cooperation among these agencies is envisioned as a key element of the CALFED watershed management strategy that will utilize a watershed-wide approach to source prevention and control. Coordination and cooperation among agencies is will also be an important feature of monitoring, assessment, and research activities undertaken by CALFED.

CALFED actions to deal with health concerns related to Delta water supplies). Effects of alternatives on export bromide Concentrations.

Concern for the health of all Californians using water supplies taken from the Sacramento-San Joaquin is appropriate. Recent studies indicate there is reason for concern about some disinfection byproducts. Further studies will be conducted over the next few years and drinking water regulations will be re-evaluated to assure they adequately protect the health of consumers. CALFED actions to improve water quality, and the choice among CALFED alternatives, have the potential to improve the quality of drinking water supplies from the Delta. But, according to CALFED's basic Solution Principles, this and other CALFED objectives must be met without redirecting significant impacts to others. Human health concerns and costs associated with drinking water treatment are being carefully evaluated. Officials of the California Department of Health Services recently presented recent findings on human health effects of disinfection by-products to the CALFED Water Quality Technical Group. This advisory body of technically oriented stakeholders and agency staff, who are helping to develop the water quality element of the CALFED program, continue to maintain high interest in the latest studies. The choice of storage and conveyance alternatives will have pronounced effects on concentrations of bromide, a salt of seawater origin that reacts to form harmful chemical byproducts in drinking water. Reduction in this constituent would enable drinking water producers to more readily, and perhaps less expensively, provide safe drinking water that meets drinking water regulations.

### Drinking Water - Disinfection Byproducts

#### Issue

Effect of Alternative 3 for reducing organic carbon

#### Response

Conveyance facilities included within Alternative 3 would result in a greater reduction in organic carbon concentrations from Delta island drainage, as compared to the conveyance associated with Alternatives 1 and 2. CALFED staff predict the dissolved organic carbon concentrations in water taken through Banks Pumping Plant resulting from implementing alternatives 1, 2, and 3 would be about 3.7 mg/L, 3.3 mg/L and 3.0 mg/L, respectively. However, control of organic carbon is also an element of the Water Quality Common Program that will be implemented in conjunction with the selected alternative. Treatment of Delta island drainage from peat soils is being studied as a potential means of reducing organic carbon loading within the Delta. This approach appears to have potential for improving all of the alternatives with respect to reduction of organic carbon. Source control may, therefore, offer a suitable alternative to costly downstream treatment facilities to meet regulatory requirements, irrespective of the choice of conveyance alternatives.

Health concerns over disinfection byproducts in drinking water from Delta, and CALFED actions.

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few years and drinking water regulations will be re-evaluated to assure they adequately protect the health of consumers. CALFED actions to improve water quality, and the choice among CALFED alternatives, have the potential to improve the quality of drinking water supplies from the Delta

### Drinking Water - Bromide Panel

#### Issue

plans for bromide expert panel

#### Response

CALFED commissioned a panel of experts to evaluate treatment among the options for controlling harmful constituents in drinking water supplies taken from the Delta. The panel report was considered in the selection of a Preferred Alternative.

To the extent possible, the benefits accruing from fresh water outflow, ecosystem restoration, watershed management, reservoir protection, pollution prevention and ground water conjunctive use have been quantified as part of the CALFED analysis of alternatives. Some factors, such as the improvement in water quality due to pollution prevention cannot be quantified at the current stage of analysis, as project-specific planning is not within the scope of the Programmatic EIS/EIR. However, actions to prevent and control pollution are contained within the water quality program element, and will have significant beneficial impacts on the quality of waters in the Bay-Delta estuary. Some activities, such as ecosystem restoration projects, may have negative impacts on water quality; however, these cannot be quantified either until specific projects are proposed during the implementation phase (Phase III) of the program. Detailed environmental documentation on the effects of these projects will be created at that time.

### Drinking Water Treatment Technology

#### Issue

Should CALFED commit to supporting development of treatment technology that will produce high quality drinking water, reducing the importance of high quality source water.

#### Response

Future advances in drinking water treatment technology has important implications for producing safe drinking water from the Delta. CALFED will encourage and support these advances, and is taking potential treatment opportunities into account in selecting a Preferred Alternative.

### Growth

#### Issue

water quality impacts from growth in San Joaquin Valley

#### Response

Predictions of water quality impacts on the Delta estuary resulting from future growth in the San Joaquin Valley will be included in the analysis of water quality changes to be expected in the watersheds of the Delta, and will be included in the No Action Alternative. It is intended that source control actions of the water quality program element be implemented to reduce impacts from urban runoff.

water quality changes due to future

The No Action Alternative will be amended to include predictions of water quality population growth impacts resulting from population increases through the year 2020, the CALFED planning horizon. These impacts will occur irrespective of the existence of the CALFED program, nor is the program specifically directed at addressing water quality impacts due to future growth; however, source control actions that are part of the water quality program element will reduce current and future loadings of some pollutants and, thereby, reduce the overall impact of growth on water quality in the estuary.

Studies conducted by CALFED indicate that, under Alternative 1, mineral content of exported water would not be significantly different than would be the case for the No Action Alternative.

CALFED must address impacts associated with population growth induced by additional water availability

Numerous studies have indicated that infrastructure, such as water supply, has limited ability to either induce or restrict population growth. Since the incremental addition to the State's water supply resulting from CALFED actions will be modest, the growth inducing impacts of the incremental supply are expected to be less than significant.

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Relationship of CALFED to population growth control

As a non-regulatory entity, CALFED cannot directly control development and population growth, and must defer to agencies having these responsibilities. However, it is within the purview of the CALFED program to encourage good planning and wise decision making in areas affecting the quality and quantity of the waters of the Bay-Delta. It is intended that CALFED invest in good growth and development planning practices in order for durable solutions to the problems of the Bay-Delta estuary to be effected.

### Levees

#### Issue

Impacts on water quality of breaching levees for habitat

#### Response

Consistent with the level of information appropriate to a Programmatic document, the CALFED Draft EIS/EIR has not identified the specific locations where levees might be opened to re-introduce tidal action. Proposed locations will be identified in the early stages of the implementation phase (Phase III) of the CALFED program when an alternative has been selected for implementation and the exact location of project facilities, if any, are identified. Proposed changes to be made in the configuration and operation of the Delta will be subject to project-specific environmental documentation that will be completed in Phase III prior to project implementation. Evaluation of the full range of effects of reopening the Delta to tidal action will be among the features receiving close attention and thorough evaluation.

### Mercury

#### Issue

mercury actions and human health

#### Response

Testing has shown that mercury concentrations in some fish taken from the Delta can exceed guidelines for human consumption. Among the actions planned under the water quality element of the CALFED program is improved control over discharges of mercury from abandoned mines in the watersheds of the Delta. These actions, along with actions to control inputs of other toxic chemicals are expected to result in reduced accumulation into fish tissues.

reduction of toxicity due to mercury

Testing has shown that mercury concentrations in some fish taken from the Delta can exceed guidelines for human consumption. Among the actions planned under the water quality element of the CALFED program is improved control over discharges of mercury from abandoned mines in the watersheds of the Delta. These actions, along with actions to control inputs of other toxic chemicals are expected to result in reduced accumulation into fish tissues.

Under current law, municipalities supplying drinking water are required to furnish annual water quality reports to their consumers. These reports demonstrate that drinking water produced from the Delta reliably meets drinking water standards, though improvement of source water quality is always desirable, and is planned through the CALFED program. Chlorine compounds are often used to maintain safe disinfection in the distribution piping serving customers. A negative aspect of this practice is the ability of some customers to taste and smell the disinfectant, although disinfectant residuals are not believed to be harmful. Some entities treating Delta water are incorporating the capability to use other disinfectants that do not produce objectionable tastes or odors.

### Mine Remediation

#### Issue

acid mine drainage in Shasta area, remediation by flooding and sealing.

#### Response

Acid mine drainage is a serious problem in the Shasta Area. Most of what leaches is metals that are dissolved by low pH water. A sulfur compound, usually pyrite, is oxidized when it comes in contact with oxygen and water, thus producing sulfuric acid. One method of reducing acidic reactions is to store pyretic mine tailings underwater and sealing them off. This is not always a good solution because of fragmented rock that might leak the floodwater from within the mine. In the case of raising lake levels, hydrostatic pressure may be more equalized. Specific mine remediation methods are not discussed in this Programmatic DEIS/EIR, but would be discussed in a project specific EIR/EIS, should that option materialize.

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### North Bay Aqueduct

#### Issue

Improvement of North Bay Aqueduct quality

#### Response

CALFED studies indicate North Bay Aqueduct water quality will be unaffected by the choice of storage and conveyance alternatives selected by CALFED. However, storage and conveyance represent only two facets of the program, and not necessarily the most important with respect to the North Bay Aqueduct contractors. Relocation of the North Bay Aqueduct intake would be required to significantly reduce salinity within the program. It is understood that some CALFED actions, such as habitat restoration activities, can affect the quality of water obtained by drinking water suppliers, and could have the potential of constraining project operations. The Water Quality Program provides for source control actions to reduce watershed loads of organic carbon, which is a problem in the North Bay Aqueduct watershed. These actions are contemplated irrespective of the choice among conveyance alternatives. The impacts of CALFED actions, along with alternatives to reduce or eliminate these impacts, will be evaluated in project-specific environmental documentation required in Phase III of the program for project implementation.

Watershed approach to solving problems for North Bay Aqueduct

The Water Quality Program provides for source control actions to reduce watershed loads of organic carbon, which is a problem in the North Bay Aqueduct watershed.

### Pesticides

#### Issue

Scientific knowledge is inadequate to determine significance of impairments due to presence of pesticides

#### Response

Reduction of toxicity due to the presence of certain pesticides in waters of the Delta and its tributaries is among the actions planned for the CALFED water quality program element. A primary emphasis will be to reduce the presence of these materials in the aquatic environment. Much remains to be known concerning the environmental and human health significance of the presence of trace concentrations of these chemicals. Accordingly, an important element of the CALFED water quality program will be to develop knowledge that will enable the significance of the presence of these materials in the environment to be better understood.

### Petrochemicals

#### Issue

Effects of petrochemicals on estuary

#### Response

It is the case that petrochemical products are frequently detected in the rivers and bays of the state. While reducing the number of internal combustion machines is beyond the scope of the CALFED program, actions to reduce chemical pollution from watershed sources, such as storm water drainage, are included in the program. These actions will provide significant reductions in petrochemical discharges, while larger structural changes in the state's transportation systems evolve.

### Recreation

#### Issue

impacts of CALFED program on recreational values in the Sacramento River upstream to Rio Vista

#### Response

Any changes envisioned within the CALFED program would have less than significant effects on natural resource and recreational values along the County's Sacramento River frontage upstream to Rio Vista. CALFED does plan on developing appropriate recommendations from the discharge of wastes from watercraft.

### Regulatory

#### Issue

Support of regulatory programs

#### Response

CALFED intends to support local and state regulatory programs where appropriate. CALFED has already funded studies that local agencies are using to control non-point source pollution. CALFED remains a non-regulatory agency.

CALFED role as a non-regulatory entity

As a non-regulatory entity, CALFED has no authority to assess the appropriateness of regulations or to modify regulations. The primary mechanism by which CALFED plans to succeed is through cooperation and partnerships with local and regional entities, and this approach will be reflected in CALFED investments. In making its investments, the CALFED

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intent is to employ the most practical and least costly means of achieving benefit, as compared to spending large sums on small improvements.

### Regulatory Control of Non Point Sources

#### Issue

Regulatory responsibility for nonpoint source control

#### Response

The State Water Resources Control Board, a CALFED member agency, has responsibility for non-point source control in California. The Board, as do the other CALFED agencies, retains its role and regulatory authority independent of CALFED. Non-point source control actions taken by CALFED will be through the appropriate agencies and will not create an independent or duplicative program. Rather, the CALFED objective is to promote, encourage, and invest in non-point source control activities through the appropriate bodies, including local partners. CALFED has already begun investing in local non-point source programs through its funding program for ecosystem restoration.

CALFED supports the State Water Resources Control Board's three-tier Nonpoint Source Management Plan. Support for this plan is consistent with the CALFED watershed management approach of supporting, facilitating, and enhancing the success of existing programs.

### Regulatory Water Rights

#### Issue

CALFED should require urban and ag users to pay full cost, including environmental cost, of using publicly provided water, including costs for resulting drainage.

#### Response

The cost of taking water from the Delta through the State Water Project is borne by the agencies contracting for the water, and is not a public cost. The same is true for withdrawals of Delta water by Contra Costa Water District. While construction of the federal Central Valley Project was subsidized, users of this water are paying an increasing share of the costs. According to state law, entities and individuals have certain rights to use the water supplies of the state in beneficial and reasonable ways. The regulation of water rights is a function of The State Water Resources Control Board, which restricts or conditions water rights as necessary to protect the aquatic resources and the beneficial uses, such as ecological functions, that depend on these resources. The water rights proceedings of the State Board are public, and public participation in this process is the appropriate means of causing needed changes.

### Regulatory Flow

#### Issue

CALFED should establish Delta flow requirements

#### Response

As CALFED is a non-regulatory entity, establishing flow requirements is not within the scope of the program. Determination of flow requirements to support beneficial uses of the waters of the Bay-Delta estuary is the province of the State Water Resources Control Board. A public process exists through which decisions of this nature are made, and those who have views on flow and water rights matters are requested to participate in the Board process.

### Sacramento Regional Wastewater Treatment Plant

#### Issue

Impact of Regional Waste Water Treatment Plant on CALFED alternatives

#### Response

CALFED Alternative 3, incorporating a new canal, would substantially improve the quality of drinking water produced from the Delta, particularly with respect to salts and avoidance of negative influences on water quality present in the Delta. The discharge from the Sacramento Regional wastewater treatment facility is upstream of one proposed point of intake of a new canal. Relocation of the Regional treatment facility discharge to a location that would not impact the quality of drinking water supplies taken through a new canal could be studied if Alternative 3 is to be implemented. Use of Alternative 3 is not currently proposed. Protection of public health and reduction of fish losses are critical objectives of the program and will strongly influence the decision among alternatives.

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### Salinity

#### Issue

Inclusion of desalination in CALFED program

#### Response

Desalination of brackish water, such as that entering the Delta from agricultural operations in the watersheds of the Delta, is definitely included among the potential tools for addressing environmental and water quality problems within the CALFED program. Continuing technological advancements in this area are improving the prospects for successful projects to treat and reuse brackish water. Such projects have high potential for making better use of available water supplies and, thus, reduce conflicts in the Bay-Delta system.

Increased salinity of Delta channels resulting from alternative implementation is unacceptable

CALFED evaluations have predicted that, given the model assumptions, some increases in the salinity if Delta channels may result from implementing Alternative 3. These results are not, however, intended to imply that such an alternative would be implemented without addressing any salinity problems to avoid adverse impacts on beneficial uses of the waters.

Salinity in the San Joaquin River should not be increased

CALFED water quality actions directed at salinity reduction should reduce salt concentrations in the San Joaquin River. CALFED does not plan to implement actions that would significantly increase salinity levels in the River.

Salinity improvements of Delta exports due to alternatives

Improvement of water quality for all beneficial uses is the primary objective of the water quality element of the CALFED program. The concentration of salt constituents is the most important determinant of the usability of water supplies taken from the Delta, including uses such as drinking water supply, agricultural water supply, ground water recharge, blending with waters from other sources, and enhancement of water recycling opportunities. Accordingly, the CALFED alternatives are being evaluated with respect to their ability to reduce salt concentrations in Delta water supplies, and this effect will be taken into account in the CALFED decision, along with other critical factors.

Studies conducted by CALFED indicate that both Alternatives 2 and 3 would provide substantial improvement in the mineral quality of exported water, as compared to the No Action Alternative and Alternative 1. The mineral quality of source water is indeed an important determinant of reuse capability, and has an important bearing on the ability to conjunctively manage ground water supplies and multiple water sources in general.

Salinity impacts of alternatives on Delta

CALFED studies using salinity effects as an indicator predict concentrations of channels. Maintenance of "common pool" water quality constituents in Delta channels resulting from operation of a new canal bypassing the Delta may increase modestly, depending on the relative sizes of the through-Delta and bypass flow components, and upon operational characteristics. Alternative 3 as proposed, is a dual system, relying both on Delta channels and on a new canal as sources of the water supplies that would be taken from the Delta. These studies do not suggest tremendous impacts are to be expected. Therefore, this alternative does not abandon the "common pool" concept, though reliance on south Delta pumping would be reduced. Alternative 3 is not currently considered the preferred program alternative.

CALFED actions within WQ and WUE program elements to address salinity in export water

Many of the problems associated with reuse are tied to salinity and TDS. Some of the CALFED water quality actions specifically address reduction of salt in export water for municipal and agricultural purposes. Storage and conveyance alternatives also address reductions in salt in export water. Both the Water Quality Program and the Storage and Conveyance Program intend on delivering higher quality water for use within the delta and for export from the delta.

### Salinity - San Joaquin River/Valley

#### Issue

Should CALFED commit to long term salt management in the San Joaquin River watershed?

#### Response

CALFED recognizes the San Joaquin Valley Drainage Implementation Program as the venue through which long term salt management strategies will be implemented. CALFED intends to fully support this process, including possible provision of funding assistance.

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need to address water quality effects of agricultural drainage

Actions to reduce water quality effects of agricultural drainage are included in the CALFED water quality program element. Planned actions include investigating the feasibility of treating to remove constituents of concern, such as organic carbon that adversely affect the use of Delta water as a drinking water source. In addition, best management practices will be developed to reduce salt loadings and the presence of agricultural chemicals in drainage water entering the Bay-Delta estuary and its tributaries.

CALFED must address salt problems entering the Delta through the San Joaquin River

Actions to reduce water quality effects of agricultural drainage are included in the CALFED water quality program element. Best management practices will be developed to reduce salt loadings and the presence of agricultural chemicals in drainage water entering the Bay-Delta estuary and its tributaries, including the San Joaquin River. While these actions can be expected to reduce salinity problems in the San Joaquin River, long term salt management in the watershed is beyond the scope of the CALFED program. CALFED recognizes the San Joaquin Valley Drainage Implementation Program as the venue through which long term salt management strategies will be implemented. CALFED intends to fully support this process, including possible provision of funding assistance for implementing the program.

Actions to reduce salt in San Joaquin River watershed

Actions being planned within the water quality element of the CALFED program include reduction of salt concentrations through various management actions within the San Joaquin Valley watershed. These actions should provide reductions of salinity concentrations both in the San Joaquin River and southern Delta, but will not eliminate salt problems in the Valley. Ultimate solutions to these problems are beyond the scope of the CALFED program. However, CALFED actions will be coordinated with efforts to effect long term solutions.

The CALFED water quality program element is being developed in close cooperation with the San Joaquin Valley Drainage Implementation Program. The potential of marketing salt constituents is among the opportunities being evaluated for implementation during Phase III of the CALFED program. Advance work to refine implementation plans has begun, and these plans will continue to be developed in cooperation with the SJVDIP. However, because detailed research and development efforts will be required in order to determine the potential for marketing salt components, a full development of this potential is beyond the scope of the Programmatic EIS/EIR, and will be detailed in project-specific environmental assessment documents during Phase III of the program.

From what source does salinity in the San Joaquin River stem?

Salinity enters the San Joaquin Valley in waters exported from the Delta and through imports for municipal and industrial use. The salinity of the export water is strongly influenced by the degree to which fresh water outflows from the Delta repel saline ocean water. Success in salinity repulsion depends heavily on fresh water outflow volumes from the Delta. When water is used for agricultural purposes in the San Joaquin Valley evaporation and crop transpiration cause the salt in the irrigation water to be concentrated, and these concentrated salts move as agricultural drainage to the San Joaquin River, where it returns to the Delta. The balance between freshwater inflows from rivers and intrusion of brackish water from San Francisco Bay does, therefore, have a direct bearing on salinity problems of the San Joaquin River.

### Salinity and Wetland Development Issue

How can salt emission remain constant while concentrations increase, associated with wetland development?

### Response

A given volume of water will contain a certain number of pounds of salt. If something is done to cause water to be lost while leaving the salts behind, the result will be an increase in salt concentration while the number of pounds of salt remains constant. Increasing evaporation by increasing the surface area of a water body in relation to its volume, and introducing plants that transpire water to the atmosphere are examples of phenomena that can produce this effect. Therefore, it is entirely feasible to cause salt concentrations to increase in a pool of water while at the same time not increasing the amount of salt in the system.

## Appendix F - Responses to Comments

### Santa Clara

#### Issue

How CALFED program will benefit Santa Clara County drinking water

#### Response

Residents and industries of Santa Clara County, and other users of Delta waters deserve safe, clean, high quality water. The CALFED objective of improving water quality for all beneficial uses can, and will, be attained through actions to reduce and control sources of water quality degradation. Additionally, the choice of a conveyance alternative will have important implications for water quality improvement. The CALFED goal is to maximize water quality benefits of the program; consistent with the need to meet equally important objectives for levee system integrity, ecosystem restoration, and water supply reliability.

### Seawater Intrusion

#### Issue

If Alternative 3 is built, what will guarantee adequate dilution flow in the Delta? Response is non-specific to Alt 3

#### Response

Flow requirements to repel seawater and maintain salinity levels in Delta channels are presently ordained by the State Water Resources Control Board, consistent with its regulatory authority. When a CALFED alternative is implemented, the State Board will continue to have the responsibility for protecting all designated beneficial uses of the waters of the Bay-Delta estuary. Therefore, depending on what alternative is implemented, it may be that modified Delta protection standards will be required, but protection of the beneficial uses of the water will certainly continue to be the objective of the Water Quality Program.

### Selenium and Land Retirement

#### Issue

actions to reduce selenium problems short of land retirement

#### Response

Constituents in drainage water, including sodium sulfate and selenium, have the potential of becoming economic assets with regard to enhancing the environmental quality of the Bay-Delta estuary. The prospect of being able to market agricultural products from drainage-affected areas is consistent with the objective of the water quality program element to minimize changes in land use and ownership, while solving the problems stemming from selenium discharges. It is likely that other economic prospects exist that should be explored and developed. However, because detailed research and development efforts will be required in order to determine the economic potential of possible actions, a full development of this potential is beyond the scope of the Programmatic EIS/EIR. CALFED will coordinate with agricultural interests and with the San Joaquin Valley Drainage Implementation Program in exploring this potential early in Phase III of the program. This prospect will be further developed as implementation planning moves forward in the preliminary stages of program implementation.

CALFED is supporting regulatory authorities to address water quality issues associated with several different problems, among which is agricultural drainage impacts on surface and ground water. Some of the studies that CALFED is funding will assist the Regional Water Quality Control Board in establishing Total Maximum Daily Loads for certain constituents. Other studies will establish toxicity criteria or best management practices. Water quality actions planned for the implementation phase of the Program include control measures, monitoring to evaluate problem sources and water quality trends, and evaluating drinking water treatment technologies.

CALFED plans for land retirement for selenium reduction

To correct water quality problems associated with selenium from agricultural drainage in the San Joaquin River watershed, we currently envision that a maximum of 37,000 acres could be subject to retirement, but only after having exhausted other management options. This number is based on the report of the San Joaquin Valley Drainage Program entitled A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley, published in September 1990 (commonly referred to as the "Rainbow Report"). Page 93 of the report contains Table 15, which shows 37,400 acres of the Grasslands Sub-area have selenium concentrations in the shallow ground water greater than 200 ug/L (parts per billion). These figures were developed for the Rainbow Report to identify lands that should be considered for retirement. The Rainbow Report went on to determine how much of the identified acreage has the poorest quality soil, and determined that about 3,000 acres fit both criteria. The CALFED number does not take soil quality into account

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because we believe other actions to reduce selenium concentrations, described below, will be more influential in determining the amount of land that may ultimately be retired.

The CALFED program priority will be to maintain affected agricultural lands in production and under private ownership by working cooperatively with land owners to investigate and implement land and water use practices that contribute to solving the problem

Land Retirement for water quality improvement in San Joaquin River watershed

Under the CALFED water quality program element, it is expected that some San Joaquin Valley acreage affected by selenium will need to be retired. However, retirement will be accomplished under the guiding principles that wherever possible, land will remain under existing ownership; opportunities for solving selenium problems through locally managed land and water use changes will be provided before the land retirement option will be exercised. When land retirement is done, it will be voluntary and compensated and any water saved through land retirement will remain under the control of the local water management entity.

Approach to controlling selenium with land retirement as last resort

Selenium control is a priority for CALFED. Control measures can include land retirement, but land retirement is currently seen as a final measure in controlling selenium. Irrigation practices and release strategies are some of the methods being put into practice now. Other methods of control are included in the water quality implementation document. The Draft of the Programmatic EIS/EIR does mention land retirement as an option to control problems associated with irrigation drainage from the west side of the valley.

### Solano Project and the State Water Resources Control Board Regulatory Authority

#### Issue

CALFED plans with regard to releases from Solano Project, and SWRCB is the appropriate regulatory authority

#### Response

In producing a Bay-Delta Water Quality Control Plan, the State Water Resources Control Board is exercising its regulatory mandate. While this process is separate from the CALFED program, the State Water Resources Control Board is a member of the CALFED organization and it is intended that the decisions of the Board be coordinated with the CALFED program, once the program has evolved. CALFED does not have regulatory authority and cannot dictate operations of the Solano Project. Releases from the Solano Project for water quality improvement are not among the actions of the water quality program element are not planned as part of the CALFED program, although CALFED may identify flow quantities that would adequately support aquatic species dependent on the Delta. The Board may take these recommendations into account in exercising its regulatory mandate.

### Source Water Quality

#### Issue

Source control actions to improve source water quality

#### Response

Improved source water quality can be met, in part, through implementation of source prevention and control actions geared toward discharges of toxic and pathogenic materials. The choice of conveyance alternatives has important implications for the quality and treatability of exported water.

### Toxic Hot Spot

#### Issue

Why did CALFED not use respondent's data on toxic hot spot between Freeport to Hood

#### Response

The Water Quality Technical Group is the body of stakeholders who provide technical advice in the formation and content of the CALFED water quality program element. All who have water quality data or related technical information that should be considered by CALFED are encouraged to make this information available to the WQTG and to participate in that group. Toxic HotSpot information was provided by the Regional Water Board and used in the latest version of the program element.

## Appendix F - Responses to Comments

### Transport

#### Issue

Need to minimize waste water and enhance recycling and reuse

#### Response

Actions planned as part of the water quality program element will improve the quality of water available for recycling and reuse. Also, Alternatives 2 and 3, if implemented, will substantially reduce salt content, which is the primary barrier to wastewater reuse. These alternatives would also help to reduce the volume of wastewater produced

### Urban Stormwater Runoff

#### Issue

storm drain discharges

#### Response

Improved control of discharges from storm drains is among the actions planned under the water quality program element. The types of actions contemplated include identification of sources of toxic chemicals, along with actions to prevent and reduce discharges. Actions to improve the quality of storm drainage will be taken in cooperation with the municipalities having jurisdiction, and will be coordinated with the appropriate regulatory bodies, including regional water quality control boards. Control of urban storm water is suggested in the proposed control of oxygen depleting substances, urban pesticides, and trace metals.

### Wastewater

#### Issue

Under the CALFED program, should any region of the state become the recipient of waste water from another region?

#### Response

Activities to control pollution sources, reduce waste discharges, and promote water recycling are included as critical elements of the CALFED program. However, we believe it would be inappropriate to establish a principle that wastewater should, under no circumstances, be moved from one area to another. Though the CALFED Program will not support the transfer of water quality problems from one area to another as being generally appropriate, water recycling and reuse opportunities will be greatly enhanced by the existence of a robust water transfers market that can turn present day waste water into useable supplies that reduce demands on the Bay-Delta estuary system. Accordingly, under some circumstances, the ability to move recycled wastewater may be consistent with CALFED objectives and Solution Principles, and may be encouraged.

### Water Quality Technical Group development

#### Issue

Function of Water Quality Technical Group in program development

#### Response

The Water Quality Technical Group, the advisory body of stakeholders who are developing the CALFED Water Quality Program, have proven invaluable in developing workable plans that will encourage cooperative efforts to meet CALFED water quality objectives. It is intended that this group continue to function throughout the years of CALFED program implementation, and it is expected that this group will continue to have a strong influence in maintaining the cooperative spirit and practical approach that has characterized the early development of the program.

### Water Reuse/Recycling

#### Issue

Should waste water be moved from one area to another?

#### Response

We believe it would be inappropriate to establish a principle that waste water should, under no circumstances, be moved from one area to another. Though the CALFED Program will not support the transfer of water quality problems from one area to another as being generally appropriate, water recycling and reuse opportunities will be greatly enhanced by the existence of a robust water transfers market that can turn present day waste water into useable supplies that reduce demands on the Bay-Delta estuary system. Accordingly, under some circumstances, the ability to move recycled wastewater may be consistent with CALFED objectives and Solution Principles, and may be encouraged.

Appropriateness of using graywater to reduce demand

Graywater regulations are set by the Department of Health Services (DHS). The Water Quality Technical Group has several Health Services representatives actively involved. Your comment will be forwarded to DHS for their consideration. Use of graywater is an excellent reuse of water, where the use is appropriate.

## Appendix F - Responses to Comments

### Watershed Source Control

#### Issue

watershed-wide approach to source

#### Response

As the CALFED organization includes regulatory agencies; a great opportunity does exist to coordinate regulatory activities to enhance the effectiveness of the CALFED program. Coordination and cooperation among these agencies is envisioned as a key element of the CALFED watershed management strategy that will utilize a watershed-wide approach to source prevention and control.

### Water Use Efficiency

#### Issue

Implementation of water use efficiency measures before facilities

#### Response

Aggressive water conservation and water recycling are included in the CALFED program. These activities have the potential to stretch existing water supplies and generally can be implemented much more quickly, with less environmental impact, and at lower cost than is the case with construction of new facilities. In the CALFED program, the concept is that opportunities for conservation and other water use efficiency must be thoroughly exploited prior to development of new facilities. CALFED studies do indicate, however, that even with a strong water use efficiency program there may be a need for new facilities to successfully reduce conflict in the Delta estuary. Ecosystem restoration projects would be among the beneficiaries of new facilities, if they are justified. A determination as to whether new storage and/or conveyance facilities are, in fact, required will be made during the Implementation Phase of the program after water use efficiency actions are taken and evaluated.

### Wetland

#### Issue

Is shallow flooding of land surfaces desirable for water quality?

#### Response

Inundation of land surfaces in connection with wetland habitat creation has the potential for greatly enhancing ecological functions, enriching the soils with nutrients, recharging aquifers, improving infiltration rates on the affected lands, reducing channel sedimentation by capturing and holding storm water runoff, and accretion of cool ground water. However, discharges from wetlands can contribute nutrients that promote eutrophication, organic carbon that is a problem for drinking water supply, and increased temperatures in receiving waters. CALFED intends to implement pilot scale experiments to determine how best to attain the benefits of wetlands to ecological resources and agricultural lands while minimizing adverse effects on the quality of Bay-Delta estuary waters. When these factors are sufficiently understood, full-scale implementations are planned.