SUMMARY OF COMMENTS RECEIVED ON THE CALFED WATER QUALITY TECHNICAL PROGRAM

As of January 31, 1997

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D-033306

Comments on CALFED Water Quality Program

Topic	Comment	Person	Date
Analytical Plan	Supplement this study plan with a timeline and budget.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Linkages	It is not clear how all the programs and reports mentioned on this page relate to one another. Nor is it clear from where and how (i.e., various ways) projects/studies or action items will be submitted to the WQTWG. How were and who originated the "studies currently planned as part of the Common Water Quality Program"?	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Modeling Approach	With regards to the modeling technical support team - it is important that any water quality models which are developed be thoroughly validated with real-life monitoring data.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Process	I would caution that before the process gets too far down the road, due consideration be given to the development of a broader based approach to developing potential solutions to many problems of water quality in the Bay-Delta as opposed to the development of narrowly defined steps that may not be practical or achievable.	Walter Ward *Modesto Irrigation District*	11/26/96
Process	I think it would be helpful to have written guidelines for each homework assignment.	Jeanette Thomas	11/26/96
Process	To effectively design and implement remediation measures, it is necessary to identify and quantify sources of acid mine drainage (AMD). However, data and models alone will not improve the health of the Bay-Delta system. Perform mathematical modeling only as necessary or feasible. Moderate control measures including surface water diversions, waste rock covers, and anoxic limestone can be constructed without extensive modeling.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Process	Need to identify where the most technical knowledge is in a particular domain, and request that these people develop technical issues related to that domain.	Ted Roefs	12/4/96
Reference List	The San Joaquin Valley Drainage Program report should be used and added to our reference list.	Ted Roefs	12/4/96

Stakeholder Involvement	I recommend contacting additional representatives from active and inactive mining interests. The CALFED process could benefit significantly from additional expertise.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Stakeholder Involvement	Will input from mining experts be sought in the development and evaluation of proposed control measures for mine drainage remediation?	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Stakeholder Involvement	Ciba Crop Protection would like to be involved in this process, as one of our products, diazinon, is listed in your "Parameters of Concern".	Dennis Kelly *Ciba-Geigy Corporation*	12/4/96
Stakeholder Involvement	It is the District's understanding that only a very few members of the Agricultural Water Quality Workgroup were available to participate in the composite ranking process due to scheduling conflicts. Given the importance of full and complete input from this group and our concerns, the District requests this group be reconvened and their input obtained upon CALFED's completion of the changes delineated above.	David Orth *Westlands Water District*	12/6/96

Comments on CALFED Water Quality Parameters of Concern

Topic	Comment	Person	Date
Addition	Monocyclic aromatic hydrocarbons (MAHs) should be added based on Spies work with starry flounder and the Cooperative Striped Bass Study.	Phyllis Fox	9/22/96
Addition	Arsenic should be added. Arsenic water quality exceedences are reported in: Metals Implementation Project: Metals Monitoring of Central Valley Reservoir Releases: 1991-1992 (Goetzl and Stephenson, 1993). That report shows that 3 out of 4 samples collected from the upper Sacramento River at Dunsmuir and Delta and 2 out of 4 samples collected from the Pit River at Highway 299 and Bend exceeded the water quality objective of 5 µg/l. Frequent exceedences have also been reported in the lower watershed in the Coordinated Water Quality Monitoring Program.	Phyllis Fox	9/22/96
Addition	Simazine (also known by the trade name Princep) should be considered by the Ecosystem Water Quality Group as a parameter of concern. We understand Simazine was considered by the Group for inclusion because it is widely detected, but that it was dropped because detected concentrations are less than the LC 50's for aquatic species. While we understand and agree with the basic logic, we believe the Group's consideration is incomplete. Our concern is with the potential impact of Simazine on aquatic plants which are an integral part of the ecosystem and have, in many instances, declined significantly in and upstream of the Delta for undetermined reasons. While we understand this situation may not have been considered to date, we feel it warrants thorough evaluation and inclusion on the list until such time this can be scientifically ruled out.	David Orth *Westlands Water District*	12/6/96
Addition	Chlorine should be considered by the Ecosystem Water Quality group as a parameter of concern. We understand the Group may not have fully considered chlorine in its deliberations. Chlorine is acutely toxic to many aquatic organisms at very low concentrations and is widely used as a disinfectant in wastewater treatment processes. The District believes the Group should reconsider this matter.	David Orth *Westlands Water District*	12/6/96

Addition	The District believes bacteria and viruses should be reconsidered by the Group and left on the list until such time as they can be conclusively ruled out as a parameter of concern. Recent efforts by UCD to evaluate Delta smelt and the captive broodstock program for winter-run salmon at Bodega Marine Laboratory have experienced significant, in some cases near total, mortality as a result of various water-borne diseases in Delta and tributary waters.	David Orth *Westlands Water District*	12/6/96
Addition	We believe boat exhaust was not even considered by the Group. Given the byproducts of gasoline emission can be toxic and carcinogenic, this parameter should be added to the list until such time as detailed evaluation can eliminate it.	David Orth *Westlands Water District*	12/6/96
Carbofuran, Chlorpyrifos	Carbofuran is listed as an urban pesticide pollutant, whereas it is a restricted material and is not available to urban users. Chlorpyrifos, is available for domestic use. Please correct the documentation in question.	John Sanders *Dept. of Pesticide Regulation*	1/20/97
Process	I don't think each subteam used the same criteria for developing parameters of concern. Why are there no parameters of concern for salinity, chlorides, nutrients, and SAR for the San Joaquin and Sacramento rivers? They don't only cause problems for the Delta and the problems don't start in the Delta.	Jeanette Thomas	11/26/96
Process	My suggestion would be to look at the parameters in 2 groups: Basin Plan Parameters and Non-Basin Plan Parameters. This group could accept the basin plan parameters. A discussion should take place on those parameters included on this table, but not included in a basin plan and consensus reached on its inclusion for this table. Then this group needs to identify any areas which were not addressed (such as salinity for the San Joaquin River).	Jeanette Thomas	11/26/96
Process	The process needs to better integrate the parameters of concern from the 3 separate subgroups in such a way that does not allow a bias of a particular subgroup to outweigh the others input. I would suggest that the CALFED staff use information provided by the 3 subgroups and develop a standardized review of each item instead of attempting to develop a "top ten list". There is probably no equitable method of weighting the scores from each group, especially if individuals within each group ranked the list from a different direction, i.e. some with their group "hat" on and others "hatless".	Walter Ward *Modesto Irrigation District*	11/26/96

Process	We do not agree with the approach used to identify the Parameters of Concern.....A comprehensive process is now in place to both identify currently used pesticides associated with the surface water concerns and establish numeric targets, including water quality objectives, if appropriate. This is described in detail in the Management Agency Agreement between the DPR and the SWRCB. In our opinion, the draft listings of Parameters of Concern and Acceptable Ranges do not meet the standards of process or science that already exist for that purpose and are appropriate for these pesticides.	Bryan Stuart *DowElanco*	1/10/97

Comments on CALFED Water Quality Ranges

Topic	Comment	Person	Date
Title	Agree with changing title from "Acceptable Ranges" to "target".	Jeanette Thomas *Stockton East Water District*	11/26/96
Title	The District is happy to hear that the title of this table will be changed, because it would have serious concerns with the words "Acceptable Ranges".	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Title	Change the title to "Target Levels" or "Criteria and Guidelines".	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Title	CUWA recommends that CALFED not use the term "acceptable ranges" and suggests that "desirable targets" more adequately describes the values presented for each parameter of concern.	Byron Buck *CUWA*	12/4/96
Title	The title states "ranges", but the document frequently lists specific, singular, numerical values. In some instances such a value may be appropriate, such as a threshold water quality concentration for chronic or acute aquatic toxicology. In other instances, such as dissolved oxygen levels, a singular value may be desirable as a "target" although some lower value my be acceptable, e.g. dissolved oxygen levels of 6000 µg/l from Turner Cut to Stockton on the San Joaquin River is desirable but 4000 µg/l is acceptable (although not necessarily consistently attainable) for adult salmon passage.	David Orth *Westlands Water District*	12/6/96
General	I have concerns about using numerical parameters that are not in the basin plan. I need a better understanding of how these parameters will be used before I could consider accepting them.	Jeanette Thomas *Stockton East Water District*	11/26/96
General	I have concerns about using MCLs specified in Title 22 of the California Code of Regulations which apply to drinking water (after treatment in the case of surface water) for raw water parameters. I agree that the closer the raw water is to the MCL the easier it is to produce drinking water that meets these criteria. With treatment, water above these criteria can also be acceptable.	Jeanette Thomas *Stockton East Water District*	11/26/96

General	The Ag Sub-Team wanted the ag water parameters set for the most sensitive crop grown in the region. The ag parameters are for the Delta only. Ag parameters need to be detailed for San Joaquin and Sacramento rivers.	Jeanette Thomas *Stockton East Water District*	11/26/96
General	It is too early in the process and probably not the charge of CALFED to develop numeric standards. The outlined approach is too specific. At this point in the planning process it would be better to capture a broad range of parameters and not identify specific concentrations.	Walter Ward *Modesto Irrigation District*	11/26/96
General	The water quality parameters of concern should be refined into goal and objective statements, not "shall not exceed" language for specific parameters or ions.	Walter Ward *Modesto Irrigation District*	11/26/96
General	In addition, and perhaps more importantly, the water quality parameters will have to be measurable in order to weigh various alternatives against one another and must be practical and achievable in the field. Otherwise, the work is too detailed to be implemented and it will be very difficult to achieve concurrence with the group.	Walter Ward *Modesto Irrigation District*	11/26/96
General	Many of the values listed in the table are not legally adopted objectives and, as such, have not been deemed acceptable from a legal, scientific or policy perspective. The process of adopting legally enforceable objectives forces consideration of numerous factors, including but not limited to scientific validity and/or uncertainty, risk level, attainability and economic effect. First footnote in the table should clearly state which values are legally enforceable objectives and which are not. The footnote should also state that values which are not objectives should not be used to imply beneficial use impairment or adverse water quality impacts.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
General	CUWA also believes that all values in the table should be expressed as less than or equal to the subject number (except pH and DO).	Byron Buck *CUWA*	12/4/96
General	CALFED should adopt concentration-based water quality objectives instead of load-based objectives for salts, boron, and other constituents with the exception of the bioaccumulative constituents.	Manucher Alemi *San Joaquin Valley Drainage Implementation Program*	12/4/96
General	Under footnote x, a clarifying sentence, namely H = ln hardness should be added.	Carol Atkins *State Water Resources Control Board*	12/4/96

General	The District is concerned with the language in many of the footnotes linked to the "ranges" in the list. In many instances these footnotes state "shall not be greater than". This is an absolute term and does not express the flexibility of a "range". The District requests such absolute language be removed unless it only applies, and is so noted, to the lower limits of acceptable ranges to be determined.	David Orth *Westlands Water District*	12/6/96
General	We do not agree with the approach used to identify the Parameters of Concern or the search for Acceptable Ranges for different pesticides. The Regional Board Basin Plan expressly provides toxicity standards which eliminate some of the potential misinterpretations mentioned above.	Bryan Stuart *Dow Elanco*	1/10/97
General	After extensive comment and deliberation between several State agencies, a comprehensive process is now in place to both identify currently used pesticides associated with surface water concerns and establish numeric targets, including water quality objectives if appropriate. This is described in detail in the Management Agency Agreement between the DPR and the SWRCB.	Bryan Stuart *Dow Elanco*	1/10/97
General	In our opinion, the draft listings of Parameters of Concern and Acceptable Ranges do not meet the standards of process or science that already exist for that purpose and are appropriate for these pesticides. While this concern may not be applicable for potential sources of toxicity that lack a specific science based regulatory infrastructure or proprietary ownership by a registrant, it is an objections we feel compelled to reemphasize.	Bryan Stuart *Dow Elanco*	1/10/97
General	Acceptance of interim water quality standards, even those characterized as "targets", without a flexible mechanism to further assess and update such values creates final water quality criterion by default.	John Jachetta *Dow Elanco*	1/10/97
Hardness Equations	Footnote c is incorrect. Hardness concentrations in mg/l should read: $Cu = e^{(0.905)(\ln \text{hardness}) - 1.62} \times 10^{-3}$ $Zn = e^{(0.830)(\ln \text{hardness}) - 0.289} \times 10^{-3}$ $Cd = e^{(1.160)(\ln \text{hardness}) - 5.777} \times 10^{-3}$	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Hardness Equations	Under footnote c, the hardness equations for cadmium, copper and zinc appear to be written incorrectly. Namely, the subtraction should occur in the superscript of the exponential and multiplication should be by 10 to the minus 3 power. The equations should read as follows: $Cu = e^{(0.905)(\ln \text{hardness} - 1.612)} \times 10^{-3}$ $Zn = e^{(0.830)(\ln \text{hardness} - 0.289)} \times 10^{-3}$ $Cd = e^{(1.160)(\ln \text{hardness} - 5.777)} \times 10^{-3}$	Carol Atkins *State Water Resources Control Board*	12/4/96

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EPA values	The EPA criteria shown in the table are not legally enforceable in the Sacramento, San Joaquin or Delta at the present time. Such criteria are expected to be proposed in 1997 by EPA as part of the California Toxics Rule. Enforceable standards based on these EPA criteria will not be adopted in California until late 1997 or 1998.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
EPA values	It is not clear what "general EPA guidelines" means. The Federal Register (May 4, 1995) standards are applicable nationwide, while the Great Lakes criteria are currently only applicable to Great Lakes states. There, however, does not seem to be a reason why the recalculated criteria should not be considered for acceptable ranges.	Carol Atkins *State Water Resources Control Board*	12/4/96
Boron	For values on the San Joaquin River, see water quality objectives on page III-3.00 of the Basin Plan.	Chris Foe, Rudy Schnagel	11/21/96
Boron	What is the rationale for not using the boron objective in the CVRWQCB Basin Plan?	Carol Atkins *State Water Resources Control Board*	12/4/96
Bromide	There are a number of uncertainties in the estimate of the bromide concentration limit, which is assumed to correspond to a bromate concentration of 0.005 mg/l in the treated water. The relationship between bromate concentration in the treated water and bromide concentration in the source water is quite variable, even among different CUWA facilities using the same source water. There are also very little data at low bromide concentration.	Richard Denton *Contra Costa Water District*	1/14/97
Cadmium, Copper, Zinc	It is not clear where the ranges for cadmium - below Hamilton City, cadmium-San Joaquin River, cadmium-Delta, copper-San Joaquin River, and Zinc-San Joaquin River.	Carol Atkins *State Water Resources Control Board*	12/4/96
Chlordane	Basin Plan says no detectable chlorinated hydrocarbons in water. Please change.	Chris Foe, Rudy Schnagel	11/21/96
Chloride	State Board has salinity objectives for delta waters.	Chris Foe, Rudy Schnagel	11/21/96
Chloride	CUWA recommends that CALFED adopt a desirable target for chloride of a 10 year average of 55 mg/L and a monthly average of 110 mg/L. This will comply with the State Water Project (SWP) contract objective.	Byron Buck *CUWA*	12/4/96

Chlorpyrifos	CALFED should recognize that any Water Quality Acceptable Range for chlorpyrifos developed at this point in time is provisional and may need adjustment as the database is clarified.	John Jachetta *Dow Elanco*	1/10/97
hlorpyrifos	Chlorpyrifos is subject to rapid dissipation in the aquatic environment. In the case of chlorpyrifos, the short half-life and sporadic pattern of detection in the Sacramento and San Joaquin Rivers may support an acute criterion; however, the establishment of interim chronic values, in the absence of freshwater data or exposure information is not supportable.	John Jachetta *Dow Elanco*	1/10/97
Chlorpyrifos	DowElanco ecotoxicologists, using a comprehensive database and stringent interpretation of USEPA Tier I guidance, have developed a chlorpyrifos FAV of 0.129 µg/L. We do believe that the development of water quality standards using the probabilistic approach outlined by the Aquatic Risk and Mitigation Dialogue Group is more consistent with current science and may be considered as an alternative goal for the CALFED Water Quality Team. Such an approach develops a more realistic risk assessment by looking at probable exposure in addition to potential effect. In addition, the development of a more proactive plan, such as that proposed by the Western Crop Protection Association for the Univ. of Calif. system Best Management Practice research, education, and outreach program may be a more productive use of CALFED resources. If, however, CALFED chooses to use a USEPA Tier I standard, we suggest that the 0.129 µg/l value be adopted as the interim WQAR for chlorpyrifos.	John Jachetta *Dow Elanco*	1/10/97
hlorpyrifos	The CALFED Water Quality Team appears to have chosen the interim freshwater Water Quality Criteria developed by the CDFG to define the proposed acceptable ranges for chlorpyrifos. Although these guidelines provide a method for the determination of both acute and chronic criterion, DFG developed an interim chronic value only; this value was described as interim because of insufficient data. While the short half-life of chlorpyrifos (>90% degradation within 48 hours) and sporadic pattern of detection in the Sacramento and San Joaquin Rivers may support an acute criterion, the establishment of a chronic value, in the absence of exposure information, is not supportable.	John Jachetta *Dow Elanco*	1/10/97

Copper, Cadmium, Zinc	Adjust the acceptable ranges downstream of Hamilton City. Currently, the EPA guideline for these metals are applied to the delta, San Joaquin River, and Sacramento River downstream of Hamilton City, while CVRWQCP limits are applied upstream of Hamilton City. As a result, acceptable cadmium concentrations are an order of magnitude higher downstream of the Highway 32 bridge than upstream of the bridge. Should use a less arbitrary and more digital application of these standards to better reflect the beneficial uses of the bay-delta system.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
DDT	Basin Plan says no detectable chlorinated hydrocarbons in water. Please change.	Chris Foe, Rudy Schnagel	11/21/96
Mercury	Consider use of the FDA action level of 1.0 mg/kg for mercury in fish tissue.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pathogens	To balance disinfection requirements for controlling pathogens with the production of disinfection by-products, sources of pathogens should be located away from drinking water intakes. Desirable targets of less than 1 oocyst/100L for *Giardia* and *Cryptosporydium* in raw water supplies should be used by CALFED in evaluating actions.	Byron Buck *CUWA*	12/4/96
Pathogens	Due to the possibility of more stringent future regulations on both pathogens removal (especially Cryptosporidium) and disinfection by-products, urban water agencies might be required to turn to ozonation, and a source water concentration as low as 0.050 mg/l bromide might be required to meet these future regulations.	Richard Denton *Contra Costa Water District*	1/14/97
pH	There are objectives in the Basin Plan.	Chris Foe, Rudy Schnagel	11/21/96
Salinity	State Board has salinity objectives for delta waters. See agriculture and other uses in Basin Plan, Table III-5 for Sacramento and San Joaquin Rivers.	Chris Foe, Rudy Schnagel	11/21/96
Sediment Values	Consider use of ERMs or other sediment values in lieu of ERLs. If ERLs are shown, show a range consisting of ERL to ERM sediment values.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Selenium	Selenium Action Level for SFWQCB = 0.06 - 1.1 µg/l	Phyllis Fox	9/20/96

elenium	The water quality objectives for North and South of the Merced River on the San Joaquin River are not final. They are subject to Office of Administrative Law (OAL) approval. Approval by the OAL is expected within the next few weeks.	Chris Foe, Rudy Schnagel	11/21/96
DS	CUWA recommends that CALFED adopt a desirable target for TDS of a 10 year average of 220 mg/L and a monthly average of 440 mg/L. This will facilitate local wastewater reclamation and conjunctive use projects and comply with the SWP contract objective.	Byron Buck *CUWA*	12/4/96
emperature	The document proposes a standard of < 56°F for the river reach from Keswick Dam to Hamilton City. The 1993 Winter Run Salmon Biological Opinion issued by NMFS for operation of the Central Valley Project contains temperature control criteria between Keswick and Red Bluff Diversion Dam--many miles upstream of Hamilton City. ..... Since 1992 it has been demonstrated time and again that it is impossible to consistently achieve, much less maintain < 56°F even at RBDD. ..... The proposed criteria is unattainable and should be deleted, and the 1993 Biological Opinion should be cited as the appropriate level of temperature control on the upper Sacramento River.	David Orth *Westlands Water District*	12/6/96
emperature	Temperature standards farther downstream on the Sacramento River are even farther beyond the control of the state and federal water projects than that described above. Again, temperature in the lower river, such as I Street Bridge and Freeport are a function of climate and natural hydrology. Any temperature standards are completely beyond the ability of the projects to control or regulate and therefore arbitrary and capricious and should be eliminated in their entirety.	David Orth *Westlands Water District*	12/6/96
emperature	For the San Joaquin River temperature standard at Vernalis we restate our comments above. The State Water Resources Control Board has determined in the past that it is unreasonable to try to control temperature in the lower San Joaquin River.	David Orth *Westlands Water District*	12/6/96
emperature	The temperature differential standard for the area west of Antioch Bridge, providing for a maximum allowable differential of discharge waters of <5°C (11°F) may be inadequate. Several aquatic species, such as Delta and long fin smelt, are extremely sensitive to thermal shock as demonstrated in studies at UCD. The District recommends that an allowable differential be set at <3°C (5.4°F) to provide adequate protection of sensitive native species at critical life stages.	David Orth *Westlands Water District*	12/6/96

Toxaphene	Basin Plan says no detectable chlorinated hydrocarbons in water. Please change.	Chris Foe, Rudy Schnagel	11/21/96
Turbidity	CUWA recommends 50 NTU as a desirable target for turbidity to improve treatment reliability. Use of the maximum contaminant level of 0.5 or 1.0 NTU is not appropriate for raw water supplies.	Byron Buck *CUWA*	12/4/96

Comments on CALFED Water Quality Actions

Topic	Comment	Person	Date
Action Addition	An action for mining and urban specific to mercury should be added to the list.	Chris Foe	12/5/96
Action Addition	Add an action for sediment transport into major reservoirs. Look at ways to decrease sediment transport into reservoirs so that the longevity of the dam and reservoir is maintained.	Chris Foe	12/5/96
Action Addition	There needs to be a separate action that addresses mercury.	Frank G. Zalom *University of California, Davis*	12/8/96
Action Addition	There needs to be a separate action for pesticides and salt.	Frank G. Zalom *University of California, Davis*	12/8/96
Action Addition	Here is a suggested write-up for a pesticide action. The integrated pest management action should be included under this action. *Reduce surface water concentrations of pesticides that are present at levels that have reasonable potential to cause or contribute to adverse impacts to aquatic communities.* *Study steps:* 1. *Summarize existing data to establish water quality conditions in the Delta and principle tributaries.* 2. *Determine which pesticides are present at levels that need to be reduced.* 3. *Establish a program to develop and evaluate practices that can be implemented to reduce pesticide levels.* 4. *Establish a program to assure that appropriate practices are, in fact, implemented.* 5. *Establish a monitoring program to 1) evaluate the success of implemented management practices in reducing levels of pesticides of concern, and 2) determine whether other pesticides are present at levels that warrant attention.*	Frank G. Zalom *University of California, Davis*	12/8/96

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Action Description	Reduce Urban Pollutant Loadings by Source Control. The description of this action refers only to urban stormwater runoff loadings, not urban loading in general. The title should be revised.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Action Description	Reduce Urban Pollutant by Better Planning of New Construction. Use of the words "better planning" presents that current efforts are deficient. The District suggests substituting the words "Implementation of Additional Control Measures for New Construction".	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Action Description	Reduce Urban Pollutant by Better Planning of New Construction. Information on the water quality benefit to be achieved through changes in control measures for new construction is lacking. Again, the prioritized list will be weakly supported.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Action Description	For pesticide reduction by source control, include the SWRCB in points #5, 6, and 7.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Action Description	CUWA recommends that the action statement for Mine Drainage Remediation be rewritten as follows: "Reduce tributary and Delta heavy metals loadings by implementation of moderate onsite mine drainage remediation/control measures using relevant on-going and pending control programs as guides. Fund remediation through pollution-credit trading e.g., reduce loadings from mines in lieu of more costly, but less effective, wastewater treatment plant upgrades or other means".	Byron Buck *California Urban Water Agencies*	12/4/96
Action Description	CUWA recommends that the action statement for Undertake Toxicity Bioassay and Identification Testing be rewritten as follows: "Reduce pollutants adversely impacting aquatic resources by using toxicity test measurements to target point and non-point source control efforts".	Byron Buck *California Urban Water Agencies*	12/4/96

Action Description	We recommend that item 4 in the study steps be rewritten as follows: "Conduct toxicity identification/reduction evaluations (TI/REs) at those locations at which unacceptable toxicity is measured. Develop appropriate control programs based on TI/RE results".	Byron Buck *California Urban Water Agencies*	12/4/96
Action Description	We understand the need to provide more information on each of the Actions but we urge you to forge ahead with more detailed analysis of high priority actions.	Byron Buck *California Urban Water Agencies*	12/4/96
Action Description	The descriptions of proposed actions are in some cases vague, incomplete, inaccurate, overly broad and inclusive of multiple actions. This makes assessment and prioritization difficult at best and in many cases impossible. It is our understanding that CALFED is in the process of compiling more concise descriptions of proposed actions. It is the District's position that such descriptions, modified as delineated above should be completed and circulated to the committee for reevaluation of all rankings prior to finalization of this process.	David Orth *Westlands Water District*	12/6/96
Action Description	In "study step" #4, I would really like to see UC research and extension staff mentioned specifically as among the integrated pest management experts that should be consulted.	Frank G. Zalom *University of California, Davis*	12/8/96
Action Description	The mine remediation action should focus on abatement at abandoned mine sites. Following is a suggested rewrite of the action. *Reduce tributary and Delta heavy metals loadings by implementing moderate remediation measures at abandoned mine sites (i.e., sites that do not have responsible parties) that contribute significant loads to the Delta or cause significant impacts to aquatic resources associated with the Delta ecosystem (i.e., salmon, steelhead, striped bass). Pollution - credit trading should be used to facilitate remediation.*	Frank G. Zalom *University of California, Davis*	12/8/96
Action Description	Under Section D, Watershed Coordination, in your December 18, 1996 memorandum, item #4 should read "Implement recommendations" rather than "Utilize recommendations". CALFED should encourage active implementation of source reduction actions.	Richard Denton *Contra Costa Water District*	1/10/97

Action Description	Surface Drainage Source Control Agricultural Drainage. The introduction to this section suggests implementing Integrated Pest Management (IPM) "especially for parameters of concern." In fact, the three currently used pesticides listed as parameters of concern are often employed as IPM tools for pest control. A more accurate statement of the project objective would be to implement BMPs within an IPM strategy to mitigate concerns related to pesticide use, off-site transport and aquatic toxicity. These BMPs should not be focused on Parameters of Concern, rather they should target agronomic practices which lead to aquatic toxicity endpoint of concerns.	Bryan L. Stuart, Ph.D. *DowElanco*	1/10/97
Action Description	This section suggests that the project "should result in reduced pesticide loads applied to land." This would be true if implementation of an improved IPM approach eliminated unnecessary pesticide use (an outcome we would welcome). However, in some cases, the opposite may be true. In a highly targeted necessary application, a greater percentage of that application remains on the field rather than being lost by off-site transport into the aquatic environment.	Bryan L. Stuart, Ph.D. *DowElanco*	1/10/97
Action Descriptions	May of the action items need to be re-written in order to better define intent. It appears that several of the items could be consolidated into a single action item of a common concern. For example, action items 1 through 16 are all related to the agricultural drainage problem on the west side of the San Joaquin Valley.	Walter Ward *Modesto Irrigation District*	11/26/96
Action Descriptions	During the 11/20 meeting concerns arose while the agricultural water quality sub-team was ranking the action items. The ag group did suggest some revisions.	Jeanette Thomas	11/26/96
Action Modification	The linkage between the individual sub-groups water quality problem statements and objective statements seems to have broken down when compared to what has been compiled into the proposed 32 action items.	Walter Ward *Modesto Irrigation District*	11/26/96
Action Modification	Overall, the District feels the outcome of this effort is sufficiently important to warrant modifying the list, taking the extra steps described above and recirculating for additional review and reconsideration.	David Orth *Westlands Water District*	12/6/96
Action Prioritization	Source Control By Watershed Management. Prioritization of watershed management projects will be very subjective.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96

Action Prioritization	I want to emphasize the importance of keeping Action Items #31, 11, and 32 in the priority list. For the SWRCB, these are extremely critical actions which our budget cannot currently cover.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Action Prioritization	The District is concerned with the emphasis on San Joaquin River and the general composition of the list of actions in the current form. We are also concerned with the "top ten" actions initially targeted for recommendation to CALFED.	David Orth *Westlands Water District*	12/6/96
Action Prioritization	Action item rankings can vary significantly by region. The listing should be restructured regionally as Sacramento Valley, in-Delta, east bay, north bay, south bay, San Joaquin Valley east side, and export area, in many instances	David Orth *Westlands Water District*	12/6/96
Action Prioritization	Prioritization as low, moderate, or high can be affected by the time frame in which an action is contemplated. The District recommends the list be restructured and recirculated with three prioritization time frames: 1-2 years, 3-5 years, 5-10 years, and 10-24 (year 2020) years.	David Orth *Westlands Water District*	12/6/96
Action Prioritization	The action list and prioritization does not explicitly address technical or financial feasibility or probability of success. These factors should be included in a reassessment of the list. The District suggests that technical feasibility and probability of success be ranked numerically, say 1-5, and financial feasibility include some degree of cost analysis leading to a unit cost for the action to enable comparison and feasibility assessment.	David Orth *Westlands Water District*	12/6/96
Approach	The action plans need to be conceptual in their framework and focus more upon "what to achieve" as opposed to "how to achieve" a desired goal as the plans are now formulated. I believe that too much emphasis is placed on agricultural drainage issues without identifying the broader concern which is to keep the dissolved salts out of the San Joaquin River in the first place. In general, it is runoff resulting from all types of land uses that contributes to the pollution of the Bay-Delta.	Walter Ward *Modesto Irrigation District*	11/26/96
Data Limitations	Pesticide Reduction by Land Fallowing. Due to data and information limitations, it is doubtful whether a prioritized list of land to be retired can be developed which will withstand critical review, especially where the findings are contentious. This seems to be overstepping the capability of current knowledge.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96

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Data Limitations	Reduce Urban Pollutant Loadings by Source Control. Again, the summary and analysis of stormwater discharge data and associated receiving water data for all communities in the Central Valley is a very large effort. It may be necessary to select several programs with the best data, prepare estimates for those areas, and extrapolate the results through the valley.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Data Limitations	Reduce Urban Pollutant Loadings by Source Control. Information on the effectiveness of stormwater BMP's is lacing. Progressive programs are just now developing this information, in pieces.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Data Limitations	Reduce Urban Pollutant Loadings by Source Control. The prioritization of stormwater source control measures will be compromised by data limitations.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Data Limitations	Source Control By Watershed Management. Many watershed management programs are now in the developmental stage. Hard information from these programs regarding water quality and ecological resources will be rare. Information on control measures and effectiveness has typically not been developed yet.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Data Limitations	Undertake Toxicity Bioassay and Identification Testing. Little data using sound QA/QC procedures exists, and most of that will have been obtained in the past few years. Consequently, the significant data gaps will likely be very large.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Data Limitations	Undertake Toxicity Bioassay and Identification Testing. Great care will have to be taken in identifying appropriate methods for assessing toxicity in water, and especially in sediment.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96

Diazinon, Chlorpyrifos	Several folks suggested that holding agricultural drain waters and urban runoff would allow chlorpyrifos, diazinon, and other pesticides to degrade. While this is certainly true, I question whether it would necessarily reduce toxicity because the degradation byproducts themselves are often toxic. I suggest that toxicity of transformation of byproducts be added as an issue of concern for these actions.	Phyllis Fox	9/20/96
Integrated Pest Management (IPM)	Incentives other than financial (e.g. good stewardship) should be included in this action item.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Mine Drainage Remediation	Mine Drainage Remediation--The description for this action implies that such remediation will be largely financed through pollutant trading, funded primarily by publicly owned treatment works (POTW). Such trading agreements are complex and have little or no track record. While trading may work in some instances, its role should be significantly de-emphasized in this document.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Mine Drainage Remediation	The data which is essential to the evaluation of control measures is very limited. Results from this analysis will be very approximate and may not be adequate for prioritization of control measures.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Mine Drainage Remediation	Data limitations will also hamper water quality modeling efforts. What models are proposed for use in this effort? Are they suitable for prediction of downstream changes in levels of trace metals?	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Mine Drainage Remediation	Despite the mention of pollutant trading in the description, the study steps do not refer to trading as a financing option. The District believes this position to be wise, and prefers that pollutant trading also be eliminated from the description.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96

Pesticide Reduction by Land Fallowing	This action also includes mineral salts and microbial agents.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Land Fallowing	Agricultural interests at the 11/20 meeting raised significant concerns regarding the description of this action. In addition, agricultural groups have raised these and similar concerns at public meetings during Phase I of the CALFED Program, as well as at the Bay-Delta Advisory Council meetings. Appropriate responses and modifications should be made to address those concerns.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Land Fallowing	Data on water quality, particularly for pesticides, in rivers and drainage waters is limited.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Land Fallowing	Once severe drainage problems have been defined, is available information adequate to identify such problems throughout the Central Valley?	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Land Fallowing	Study Step 5 refers to an assessment of toxic element and organic carbon reductions as a result of land fallowing. This appears to be an expansion of the scope of this item, which is aimed at pesticides, salts, and pathogens.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Source Control	This action must include the development of new alternative agricultural practices. Alternative practices involving the non-use of pesticides should be included in this item. So, include development, evaluation of success (in terms of pest control and water quality protection), and outreach of alternative agricultural practices designed to reduce offsite movement of pesticides. Inclusion of outreach is essential!! Furthermore, outreach must incorporate notification of growers, irrigators, pesticide advisors, applicators, etc. that there ARE pesticide-caused water quality problems.	Victor de Vlaming *State Water Resources Control Board*	12/2/96

Pesticide Reduction by Source Control	The action description and several of the Study Steps refer to reductions in salts and microbial agents, while the title refers only to pesticides.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Source Control	The scope of this study effort is enormous, given the magnitude and diversity of the agricultural practices, crop types, soil types, pesticide uses, and water management practices in the Central Valley. Is there enough existing information to undertake these steps?	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Pesticide Reduction by Source Control	Data limitations will again significantly limit the ability to evaluate various control measures. The results of this effort will be highly approximate.	Jerry Troyan *Sacramento Regional Wastewater Treatment Plant*	11/27/96
Process	I feel any comments on individual action items in the Draft Analytical Plan must wait until the revisions have been made and accepted by the Group.	Jeanette Thomas	11/26/96
Process	Source Control By Watershed Management. Identification of projects which will or will not need CALFED financial support will probably not be possible.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Process	Financial Incentives for Integrated Pest Management for Agriculture. In general, the District believes that the efforts proposed by the CALFED plan should be qualified appropriately based on known limitations regarding data and simplifying assumptions which will have to be made.	Jerry Troyan *Sacramento Region Wastewater Treatment Plant*	11/27/96
Source Control by Watershed Management	This action should be coordinated and integrated with source control of pesticides and financial incentives for IPM for agriculture.	Victor de Vlaming *State Water Resources Control Board*	12/2/96

Source Control by Watershed Management	Outreach must be a component of this action item. See my comments on outreach under source control for pesticides. Alternative practices have little or no potential for success unless interested and affected parties comprehend that current practices are resulting in water quality problems. At this time, affected parties do not have this comprehension.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Storage of Agricultural Drainage	Disagree with drainage storage, pointing out that Kesterson was conceived for this purpose.	Ted Roefs	12/4/96
Toxicity	It is toxicity testing which has and will determine compliance with Regional Water Quality Control Board toxicity water quality standards. It is TIEs which have been and will be so successful in identifying the chemical causes of toxicity in toxic water quality samples.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Toxicity	Toxicity tests are the only relatively rapid integrative measure of all directly acting toxic chemicals in a water sample. All other tests/measures are chemical specific (i.e., do not measure additivity). Toxicity tests are the only measure of aquatic organism response to water samples and the only means of measuring bioavailability of chemicals.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Toxicity	It is imperative that this action item be a high priority so that improvements (or further degradation) in water quality due to actions taken be assessed.	Victor de Vlaming *State Water Resources Control Board*	12/2/96
Toxicity	Toxic testing should be focused on testing specific hypotheses. Also need to take into account available methodologies.	Ted Roefs	12/4/96

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Comments on CALFED Water Quality Projects

Topic	Comment	Person	Date
Project Selection	Consider expanding the review process to include additional mine remediation projects. MRRC owns several inactive copper and zinc mines in the West Shasta Mining District.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Project Selection	The District urges CALFED to give high priority to programs that would reduce pollutant loads from agricultural drainage and wastewater discharges. This includes implementation of best management practices on pesticide applications such as the Integrated Pest Management (Action 11, 32B) to reduce the use of pesticide within the Sacramento-San Joaquin River watershed. Other drainage programs such as reconstructing subsurface drainage systems (Action 11) and improved land use management should also be accorded high priority. These projects need to be coordinated with efforts by EPA to set up source water protection assessment guidelines as part of the Safe Drinking Water Act Amendment of 1996.	Richard Denton *Contra Costa Water District*	1/10/97
Project Selection	The District also supports the pilot projects proposed by DWR's MWQI Program to explore different approaches to treat agricultural drainage on-site and to use real-time monitoring of Delta water quality to coordinate agricultural drainage discharges. Toxicity monitoring, including bioassays, should also be included in this monitoring program.	Richard Denton *Contra Costa Water District*	1/10/97
Project Selection	The emphasis should be on funding projects that take positive steps towards actually reducing contaminant loadings and improving water quality. Basic research studies (except for pilot studies) should be given lower priority.	Richard Denton *Contra Costa Water District*	1/10/97
Project Selection	Some proposed projects need to be reviewed to see if they create other environmental problems. For example, No. 5 in the category "Surface Drainage Source Control" of "High Priority Projects" in your December 18, 1996 memo proposes to store agricultural drainage in open surface reservoirs. This could be an attractive nuisance and expose wildlife, particularly waterfowl, to high concentration of selenium.	Richard Denton *Contra Costa Water District*	1/10/97

Projects	Consider funding pilot studies to evaluate new technologies.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
rojects	3b This study step is not clearly written.	Linda Mercurio *Mining Remedial Recovery Company*	11/27/96
Watershed rojects	The Selenium Total Maximum Monthly Load for the San Joaquin River is not really a watershed program.	Joe Karkowski *USEPA*	12/31/96
Vatershed rojects	The San Joaquin NAWQA Program is not really a watershed program because there is no stakeholder involvement.	Joe Karkowski *USEPA*	12/31/96
Watershed Projects	The Salinity Management Program for the San Joaquin River may not have begun yet.	Joe Karkowski *USEPA*	12/31/96