Workshop 4 Summary

CALFED
BAY-DELTA
PROGRAM

B-001338

SUMMARY OF WORKSHOP #4

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SECTION I: INTRODUCTION AND BACKGROUND

Meeting Purpose and Goals

On Monday, December 4, 1995, the CALFED Bay-Delta Program held its fourth public workshop. Two primary goals were set for the workshop. The first was to inform participants about the overall Phase I project plan of action and describe the alternatives formulation approach. The second goal was to generate participant input on alternative formulation by involving the participants in a facilitated alternative formulation exercise. Stakeholder input is critical for generating and refining alternatives and enhances the CALFED Program Team's ability to develop a short list of comprehensive alternatives by May 1996 for inclusion in the Phase 2 EIS/EIR.

Workshop Agenda

The workshop was broken into three sections. The first section was a formal presentation by the Program Director, Lester Snow, describing the current status of the Program, previous Program activities, and alternatives formulation process. Mr. Snow responded to questions about the CALFED Program and the alternatives selection process.

The cornerstone of the workshop was a facilitated exercise to develop alternatives. Four participant break-out groups were formed. Participants were led by CALFED Program facilitators through a process to generate alternatives by combining a range of possible program actions. In the breakout groups there was extensive discussion on the alternative assembly process, specific actions, solution principles, and objectives to guide the alternatives formulation process.

Four outcomes were targeted for the exercise. Each group was to address the advantages and disadvantages of the example Preliminary Boundary alternative, describe that group's improvements to the example alternative provided by CALFED, assess the group's experience with the alternatives generation process, and provide recommendations about assembling alternatives.

The four breakout groups reconvened for a final large group discussion. Representatives for the four groups presented the results of each group's activities. A question and answer period followed where participants discussed conclusions from the breakout groups and recommended approaches to assembling actions. The Program Director then described the next steps in the alternative assembly process.

Workshop Participants

Approximately 130 people attended the workshop, and participants represented a wide range of public and private interests. State and federal water and resource management agencies, CALFED Program staff, regional and local utility districts, Delta and Central Valley water and irrigation districts, local and regional governments, farming and agriculture interests, power companies, environmental groups, and private consultants were represented.

Format of the Report

This report is divided into three sections. Section I, Introduction and Background, describes the workshop purpose and goals, agenda, and participants. Section II, Conclusions on Assembling Alternatives, summarizes each group's recommendations to the Project as well as discussion and evaluation of the example alternative. A summary of comments made during the workshop introduction is found in Attachment 1. Breakout group summaries, which include conclusions, recommendations, and individual comments, are provided in Attachment 2.

SECTION II:
CONCLUSIONS ON ASSEMBLING ALTERNATIVES

Major Recommendations to the Program

Several overarching recommendations on elements of the alternatives formulation process were common among the breakout groups. A number of other recommendations were made by individual breakout groups, while other common themes were expressed by individuals across breakout groups. The following discussion highlights major recommendations on key elements of the alternative assembly process.

Actions

- Breakout groups unanimously agreed that the actions need more specificity. Without more information on the intent, scope, level of implementation, cost, and timing and phasing, it is difficult to assemble actions into alternatives. Thus more detail will be needed to assess proposed alternatives developed by the Program.

- Two groups felt that setting goals or targets for the actions would facilitate better understanding of how they can be assembled to achieve particular aims.

- One group suggested that mitigations must be identified for the actions which have negative impacts so that their net effect is clearly understood.

- One group recommended that adaptive management be adopted as a methodology for evaluating action implementation.

- One group felt the master list of actions should include a rating of each action to aid in determining its benefit to an alternative.

Many recommendations for modifying existing or adding new actions were made. Refer to the breakout group summaries in Attachment 2 for individual comments and recommendations.

Core Actions

Participants agreed that core actions could be identified as critical elements of any alternative and so should be included in all proposed alternatives. Participants concurred that habitat restoration/management and demand management should be considered as core action categories. Levee management was also a commonly identified core action category. Core action categories were seen as starting points for building other actions; they can act as catalysts for formulating alternatives. Many participants felt they were given too many actions and too much information. By using core action categories, the total number of remaining actions is reduced, and the assembly process can be streamlined, making it less confusing and more efficient. As a

first step in developing the core action concept, it was recommended that the Program create core action definition criteria.

Alternatives Assembly Process

- Groups generally felt that their involvement in the alternative assembly process should be simplified. The process is too preliminary at this point. The Program should come back to the participants with a set of viable alternatives for consideration.

- To understand and package actions, the tradeoffs between them must be clear. A higher level of detail on the actions is needed to facilitate this understanding.

- Two groups suggested the need to provide clear goals, identify desired outcomes, and clarify the process for assembling actions.

- Two groups noted that the focus on conflicts should be changed. Issues should be framed as an effort to meet mutual interests. Emphasis on the negative makes process more difficult.

- Two groups recommended formulating alternatives based on specific themes. One methodology would focus on representing stakeholder/user interests. Actions that facilitate the theme (i.e. urban water users) would be emphasized, then other stakeholders' needs would be met by adding other actions. The interests being emphasized would need to be clearly stated. The second approach would build alternatives around specific solution approaches such as prioritizing water quality, water supply, or habitat restoration.

- One group suggested that the linkages identified in Workshop #3 be used to evaluate actions and develop performance measures.

Alternatives

- All groups concurred that a balanced approach to assembling alternatives is needed. Actions must be combined to ensure that the alternative is comprehensive.

- Two groups suggested that minimum alternatives should be assessed in light of the objectives and solution principles. The minimum alternative approach should be clarified; an acceptable minimum alternative is difficult to identify because interests and goals vary and the approach is not adequate to meet the Program's Primary Objectives.

GROUP DISCUSSION OF ASSEMBLING ALTERNATIVES

Evaluation and Discussion of the Example Preliminary Boundary Alternative

The purpose of the Preliminary Boundary alternative was to serve as each group's starting point for assembling an alternative. Each group evaluated the example Preliminary Boundary alternative and made recommendations for modifications. The following is a summary of each group's discussion.

Red Group

The group first discussed the objectives and solution principles, and one member suggested that actions should be filtered through the objectives and solution principles. The group felt that only those actions consistent with the objectives and principles should be considered in building alternatives.They determined that actions should be added to the example alternative to address ecosystem quality and durability principles. Terrestrial/riparian habitat restoration actions were key additions needed to satisfy these principles and should be a part of any solution. They recommended that more information on the proposed actions would help in evaluating the example alternative.

The group did not attempt to modify the example alternative. Instead, participants formulated a new alternative. Discussion focused on key elements or actions needed as a foundation for a new alternative. Members debated the positive and negative effects of a variety of candidate actions as well as the interrelationships between them. The group felt that actions need to be integrated to form a strong base of complementary core actions. Developing and scrutinizing goals, then tying action parameters to those goals was seen as a key to more effective alternative formulation.

The group used the guidance for a minimum alternative included in the workshop packet as a catalyst for developing an alternative (protection of winter-run chinook salmon and delta smelt, water supply not limited by fish take limits, no new threatened or endangered species listings, and satisfaction of the equity principle).

Twelve action/categories were included in the proposed alternative. Levee management, water conservation, and source control of pollutants were defined as critical core actions. Conjunctive use and groundwater banking were noted as potential core actions. Fish barriers and screens, demand management, on-demand storage, shallow aquatic habitat, harvest management, water transfers, and meander belts were also added.

Orange Group

The group concluded that the sample alternative required additional actions to satisfy all of the solution principles and objectives and to make it more comprehensive. A minimum alternative should address each objective and solution principle to ensure that "pain" and benefits of any

solution are equitably distributed. The group suggested that the objectives be expanded to include economic and community needs issues.
The group felt that the minimum alternative concept did not provide enough direction. Group members developed a list of seven criteria for evaluating the minimum acceptability of an alternative: 1) winter-run salmon and Delta smelt are not in danger of extinction; 2) water supply and fisheries do not face regulatory uncertainties caused by take limits; 3) additional species are not listed as threatened or endangered; 4) the solution principle for equity is satisfied; 5) water quality meets present and future requirements; 6) drinking water quality standards are met; and 7) system integrity is maintained – the threat to water availability is reduced.

The group then discussed the actions – including the action content, effectiveness, interrelationship with other sample actions – effectiveness relative to other potential actions, and potential to generate indirect benefits or impacts. Some participants thought that setting goals for actions would enable them to be assembled in a more effective way. They saw incorporating a larger base of actions as necessary to improve the example alternative's comprehensiveness. They noted the reasonableness of the proposed actions and any added actions as a key criterion for packaging alternatives.

The group recognized that some actions should be common to all alternatives. Participants identified habitat-related actions as core activities.

The group recommened an alternatives assembly strategy. Action packages should be developed to meet the needs of key stakeholders. Other actions could then be added to the initial package to meet the needs of other interests and balance the alternative.

The group recommended several modifications to the example alternative. They discussed three potential core actions: demand management, habitat protection and restoration, and levee management (construction and protection of integrity). Five other actions were recommended: shape fisheries management to minimize impacts on protected species, develop water research data and information-management capability, create an institution for integrated long-term water management, develop long-term funding, and develop an integrated habitat plan.

Green Group

Much of the group's discussion focused on the actions included in the example alternative and on those that should be added. Participants wanted more information on the definition, intent, scope, and scale of the actions to help facilitate their evaluation of the example alternative.They also wanted a fuller understanding of each action's impacts and the outcomes of interactions between them.

The group suggested that the example alternative could be made more comprehensive. Additional actions besides those oriented towards reducing fisheries decline through diversion and related actions would be beneficial. Key action approaches must be added to create a balanced alternative; balanced approaches were felt to be optimal and efficient. Decisions to add

actions to the alternative were based on assessment of the included actions' individual effects and whether they could be integrated with and could enhance other actions.

Legal and management considerations were important issues. The need for alternatives to be consistent with environmental laws such as the Endangered Species Act was noted as a critical consideration in generating an acceptable minimum alternative. Creating an institutional organization to manage the implementation of a Bay-Delta solution was suggested.

The group's modified alternative contained a number of key elements including: improved conveyance across the Delta, watershed restoration above dams, flood control, habitat restoration and diversity, demand management, control of introduced species, fish screens, and water transfers. It was suggested that all alternatives include habitat restoration and demand management.

Blue Group

Initial discussion focused on the example alternative's weaknesses and on the minimum alternative approach to alternative formulation. The group noted that additional actions were needed to create a balanced alternative. Participants also wanted information on selected actions to more fully understand their effects. The example alternative needed actions to restore fish habitat, improve system vulnerability and reliability, improve water quality for urban supplies, and manage demand.

The minimum alternative approach was found to be problematic because the group did not also receive information on the reasons for formulating the alternative. The group spent time modifying and making additions to the minimum approach strategy. Their revised objectives for a minimum alternative consisted of: 1) winter-run chinook and Delta smelt are not in danger of extinction; 2) water supplies do not face regulatory uncertainties caused by take limits; 3) additional species are not listed as threatened or endangered; 4) the solution principles for equity are satisfied; 5) the level of system vulnerability is not decreased beyond existing levels (i.e., levees are maintained to at least current levels of protection); and 6) water quality for urban, agriculture, and fish and wildlife uses will be maintained or improved relative to existing levels.

Considerable discussion took place on the process and reasoning behind developing the example and the boundary alternative approach. It was felt that CALFED should present more viable alternatives for consideration; the alternative presented was too preliminary.

The group was able to package ten actions into an alternative: diversion screens, habitat restoration and management, pollutant discharge reduction, demand management and land use/water supply planning, levee protection and maintenance, institutional mechanisms to ease water transfers, increased storage capacity, subsidence reduction, control of introduced species, and an emergency response system. They also identified the need for additional research in the following areas: criteria for species protection, hatchery production for reestablishing fisheries, appropriate level of levee protection, adaptive management and monitoring, and linkage and

support to complementary programs. The group's goal was to improve the example alternative by increasing the number and implementation level of actions selected to achieve the primary objectives of the program. Therefore, the actions they chose reflect the group's consideration of core actions.

Attachment 1

COMMENTS MADE DURING THE WORKSHOP INTRODUCTION

The following comments, made during Director Snow's introduction, reflect some of the participant's concerns and ideas about alternatives and their formulation:

- It is artificial to illustrate the 32 starting points as being of equal character. Some may be more feasible than others.
- There is some confusion about the starting points. They don't appear to be alternatives but rather strategies. This needs to be clarified.
- Will the alternatives do what the Program believes they'll do? A phased approach to alternatives needs to be considered. Lack of knowledge about whether alternatives will perform as the Program believes makes decisions about them more difficult.
- Do the performance measures affect how alternatives are assembled or are they applied to formulated alternatives?
- The alternative formulation strategy needs to deal with the idea that solutions must be combined to resolve conflicts.
- The level of detail in analysis of alternatives could be problematic. Alternatives could be very diverse and require varying levels of detail, making it difficult to compare them at the same level of detail.
- Conflicts are dynamic and vary over time. How does the process address this?
- Will the final alternatives differ significantly or just be shades of the same idea?
- Who makes the decision on selecting the final alternative?

Attachment 2

BREAKOUT GROUP SUMMARIES

RED BREAKOUT GROUP
Facilitators: Dick Daniel and Ron Ott

I. Summary and Conclusions

A. Alternative Developed by the Group

Twelve action categories were decided on as the basis for the alternative generated, including:

1. Barriers to Keep Fish Out of Harm: These barriers would include appropriate Delta Cross-Gate closures to coincide with migrating anadromous fish, and perhaps acoustic barriers at Georgiana Slough and at the head of Old River.
2. Demand Side Management: This category would generally include such things as conservation, water reclamation/recycling, and other specific actions to reduce export demand.
3. Conservation (unilateral with respect to geography and beneficial use): The group felt that conservation should be a core action and should be unilaterally encouraged both within the Delta watershed and in export areas.
4. Levee Management: The group felt that levee management should be a core action and that the level of implementation would vary, depending upon the purpose of certain levees (e.g., fish screening, conveying export volumes of varying quantities, etc.).
5. South-of-Delta Storage for Multiple Purposes: The group selected south-of-Delta storage as a means of providing water for agricultural, environmental, municipal, and industrial beneficial uses as appropriate.
6. Shallow Aquatic Habitat: The group felt that much of the shallow aquatic habitat had been deteriorated in the Delta and that an aggressive effort to convert candidate areas to shallow habitat would be beneficial.
7. Harvest Management: This category was included because it was consistent with the goals of increasing fish productivity by enhancing survival chances for all fish.
8. Source Control of Pollutants: The group felt that this category should be a core action, especially as pollutants, both chemical and heat, can contribute to degraded water quality in the Delta.
9. Water Transfers: This category was considered valuable in facilitating as much operational flexibility as possible and could include through-Delta conveyance and other measures that could eventually lead to more water in the Delta at critical supply and life-cycle periods.
10. Fish Screens: This category was included because it was consistent with the goals of increasing fish productivity by enhancing survival chances for all fish.

11. Delta Water Plan Outflows: This term refers to the group's agreement that the flow regime included in the December 15 accord should be included as part of the alternative.
12. Meander Corridor: The group felt that this action category could achieve significant benefits in providing increased feeding, resting, and cover habitat values.

B. Major Recommendations

1. The group recommended that regardless of the listed species, any transfer related solutions must include language that "levels the field" for instream water use [affording it some legal clout]. They recommended consideration of an institution or agency that could allow other resource agencies access to it.

2. The levee situation was key, and the group agreed that despite the size of any peripheral canal proposed, all solutions should assume that levees will be maintained to preserve Delta habitat. The question was not "whether" levees will be protected but the degree of work to be done.

3. This process needs an accounting for the "phased expectation of results," that is, the time required for benefits to be accrued from respective actions.

4. At the action level, the group expressed the need to carefully separate the intent of each action. They wanted to know what baseline assumptions are being used, and commented that such assumptions regarding the level of implementation make a big difference. They wanted to know how many purposes each action has and how benefits are reconciled across actions and intents. They again called for better specification regarding the timing and characteristics of specific actions.

II. Group Discussion and Comments

A. Evaluation of Example Alternative

1. The example alternative was not critically evaluated by the group. Instead the group focused on clarifying the process for the first three hours. The facilitators then guided the development of an alternative in the afternoon.

B. Discussion of the Categories, Actions, Solution Principles, Objectives, and Conflicts

1. The group felt the need to evaluate alternatives using the solution principles, not just the actions. They felt that a good evaluation needed to be supported by the integration of actions comprising an alternative. The group mentioned that none of the things on the chart (matrix) was an action. The chart had categories, not actions, according to the group. They felt the need to know the "what," "when," "where," "how much," and other characteristics of an action before they could make selection decisions.

C. Discussion of Core Actions

1. One group member's main concern was with levees and levee management. The actions listed only mentioned the modification or construction of levees. The group expressed the need for some base assumptions that answer such questions as:

   a) Will levees be there?
   b) Will levees be allowed to fail? Will failures be consciously planned?
   c) What can be done about some islands that are below sea level and cannot possibly be "returned to tidal action."

2. Flood protection was not seen as part of the habitat-land use conflict since some base level of flood protection. Is needed. A better financed levee system was seen as capable of providing mutual benefits. One member noted that good schemes are out there for waterside and landside berms which go far towards resolving some of the habitat protection conflicts associated with conventional bank protection measures.

3. The levee situation was key, and the group agreed that despite the size of any proposed isolated facility, all solutions should assume that levees will be maintained to preserve Delta habitat. The question was not "whether" levees will be protected but the degree of work to be done.

4. A key issue for the group is for the solution to guide where the best strategic locations for screens may be and to facilitate accommodating levee design features in those locations. One member saw levee construction and screening as a big affordability issue and included cost consideration of consolidating diversions, screening lots of diversions, and so on as a fairly expensive set of propositions. The cost of cleaning screens was also seen as high, especially where no power is available in the Delta.

D. Group Discussion to Generate an Alternative

1. At the process level, the group stated that the alternative (on the matrix) failed with respect to ecosystem quality and durability principles. It omitted the terrestrial/riparian habitat restoration goals, both of which need to be part of any solution.

2. One member sought clarification regarding water planning projects to be considered in the process. He observed that a southern California irrigation district is working on a Colorado River transfer. He asked if that action affects Delta demand management? He noted that it results in more water remaining in the Delta, it moves water through the Delta better (no export of equivalent volume) and it provides better economic returns for instream flow maintenance. One member noted that there are third party and area of origin impacts that must be accounted for with transfers and that a free market does not by itself resolve such impacts.

3. One member noted that all water quality strategies should be developed with the cognizance that the success of many of the demand management programs in export areas are dependent upon low-TDS water from the Delta. The key is in the mixing ratios and transport of low-TDS and low-salinity water.

4. At the action level, and specifically regarding levees, one member stated that "You cannot make base assumptions regarding levee stability; otherwise several [interactive] actions will be eliminated because of cost. None of us knows how big the next seismic event will be." He questioned the capability of the process to help arrive at a solution regarding "adequate" levee work.

5. The group noted that there is a need to address impediments to upstream migration to minimize new species listings. They noted that the potential for spring-run chinook salmon listing is real. It was noted that there is limited access to habitat and that access-related problems could be improved with better management. In addition, other migration problems that were recommended for consideration included flood control work and problems associated with fish becoming entrained in the Yolo Bypass.

6. One member noted that some mitigation value may be found in results from work being done in lots of San Joaquin River gravel mining areas. Former mine pits are hydrologically designed to create cut-off ponds that isolate fish away from predators. Lots of former gravel extraction pits are now ponds, and others could be converted as mitigation areas.

E. Comments Regarding the Alternatives Generation Process

1. At the process level, two members were confused. They wanted to know if they were to receive a long list of actions, or are if they were going to analyze a sample alternative? They suggested some "ground rules" regarding the insertion of pet projects by the participants. Members noted the tendency to "get off the edge" early and that participants should keep their focus on the CALFED goals for the workshop, which were to raise issues, give a sense of complexity to the process, and to keep the process in perspective. The key for the process was seen as the need to scrutinize the goals and to tie actions to goals. One member suggested, to keep the group focused, that they use the four bullets on page C-12 of the workshop handout and proposed the approach of seeing how the alternative can be modified simply by using the [bullet] objectives on page C-12, as follows:

   a) Protection of winter-run chinook salmon and Delta smelt
   b) Water supply reliability not limited by take limits
   c) No new listings of threatened and endangered species
   d) Equity

2. One participant recommended that the group needed to start with quantitative goals (e.g., restore 25% of habitat). He cited the lack of such a goal-setting process as limiting the ability of the alternatives generation forum to be

effective. One member asked the question: " What if the minimum goals are unsatisfactory for one or more of the stakeholder groups?"

3. Two members asked: "How do we move this process along?" They cited the need for the group to be on a learning curve. They said that the process needed a "fast-forward" and needs some waivers and disclosures regarding the actions.

4. At the action level, the group expressed the need to carefully separate the intent of each action. They wanted to know what baseline assumptions are being used and commented that such assumptions regarding the level of implementation make a big difference. They wanted to know how many purposes each action has and how benefits are reconciled across actions and intents? They again called for better specification regarding the timing and characteristics of specific actions.

F. Group Agreements

1. The group agreed that conjunctive use and groundwater banking should be core actions. Conservation, implemented unilaterally with respect to geography and beneficial use, also was agreed upon as essential for indirectly providing more surface water and was therefore consistent with any strategy to increase fish populations. Levee management and source control of pollutants were also agreed upon as core actions.

2. The group also agreed that regardless of the listed species, any transfer-related solutions must have language that "levels the field" for instream water use [affording it some legal clout] – perhaps an institutional agency to allow other resource agencies access to it.

3. The group discussed how to handle December 15 Agreement flows. It was agreed that December 15 Agreement flows would be part of some alternatives but are not required for all alternatives.

III. Areas of Differing Viewpoints

There were three areas of differing viewpoints, including:

1. The value of a barrier at the head of Old River, with advocates saying that a barrier there would reduce the risk of fall-run listing, would help reduce impacts on other species close to being listed and could also generate local water quality benefits. However, another person said that the US Fish and Wildlife Service is not convinced that a barrier at the head of Old River will help Delta smelt and would instead prefer that the alternatives process look at a broader spectrum of species rather than just Delta smelt and winter-run chinook salmon of the workshop handout.

2. The need to identify a "safe yield" for the Delta so transfers will only be allowed on a safe yield basis – once other water management goals have been fulfilled. Difficulties arose in defining such a "safe yield." One group member said that any safe yield concept must account for the maximum safe yield, which varies

with the configuration of the Delta solution(s). The key product, according to another member of the group, would be a statement of maximum benefits across the board that could be gained with different configurations.

a) The imposition of several demand management measures were advocated, including better coordination of land use planning with water planning and more strict controls regarding approvals of California subdivisions without guaranteed water supplies. One member of the group said that the keys to "safe yield" in the Delta are identification and prioritization of the Delta values to preserve and how much water should be allocated to them.

b) Challengers to the safe yield concept asked the hypothetical question: What happens if a drought persists and demand greatly exceeds the "safe yield?" They commented that "you are not going to stop growth by controlling water," and continued to say that southern California has money and can help in this solution and that northern California should start metering water. Solving the Delta problem by limiting exports was seen as politically irrational. Statewide equity was seen as a key part of the process. The commentor said that we must consider all people that are part of the mix, that too many people are affected.

3. Although conservation was agreed upon as a core action, one group member observed that it can be a negative with respect to water quality when it leads to concentration of waste streams.

IV. Recommendations to the Program

One group member recommended stricter restrictions on commercial fishing interests. Another stated that reducing velocities in the Delta could lead to beneficial "spreading out" (of juveniles and fry) so that they won't be "taken south." with exports. Finally, the group strongly advocated a meander corridor action that, by providing setback levees for the Sacramento River from Shasta to Sacramento, could achieve multiple benefits, including:

a) Water quality and supply increases
b) Increased habitat variety
c) Increased sediment recruitment

It was observed that there would be third-party impacts to people living along the river and that such a corridor could lead to increased predation potential when slack water habitat areas are created. One group member recommended that the group add an alternative conveyance action, (i.e., an isolated transfer facility) which could lead to decreased levee system vulnerability due to reduced reliance on levees to convey large export volumes.

One group member observed that the alternative being examined looked like it had been intentionally selected for a "one-sided" approach without consideration of diversions.

ORANGE BREAKOUT GROUP
Facilitators: Rick Breitenbach and Judy Kelly

I. Summary and Conclusions

A. Alternatives Development

1. Suggested basic approach to alternatives development:
   a) Use reasonableness
   b) Develop themes
   c) List common actions
   d) Incorporate performance measures

2. The group recommended several modifications to the example alternative.
   a) Demand management
   b) Habitat protection and restoration
   c) Levee management (construction and protection of integrity)
   d) Shape fisheries management to minimize impacts on protected species
   e) Generate water research data and information management capability
   f) Create an institution for integrated long-term water management
   g) Develop long-term funding
   h) Develop an integrated habitat plan

B. Major Recommendations

1. Objectives should be expanded to include key stakeholder needs (i.e., commercial and recreational fishermen, urban water users, etc.) and economic and community needs.
2. Action "packages" should be developed for key stakeholders.
3. Minimum alternatives should address each of the objectives and solution principles.
4. Minimum alternatives should have a large base of core actions.
5. Many actions could be classified as common to all and left out of the alternative formulation process as variables. Degree of implementation of these actions could be variable and worked out later or be developed systematically under adaptive management.
6. Alternatives and actions cannot be evaluated without more detail.
7. Alternatives be developed from specific themes (e.g. urban water users theme). Emphasize actions that benefit theme topic but provide as much protection for other users as possible to ensure meeting solution principles.
8. Most actions will cause some negative effects,and thus should have built-in mitigation for these impacts.
9. Objectives, solution principles, and performance measures should include the Bay values separate from the Delta

II. Group Discussion and Comments

A. Evaluation of Example Alternative

1. Example alternative:
   a) did not address all solution principles
   b) did not address objectives
   c) is not comprehensive

B. Discussion of the Categories, Actions, Solution Principles, Objectives, and Conflicts

1. Actions:
   a) There was a consensus on the need for more detail on actions.
   b) We should set goals and targets for the actions.
   c) Cost needs to be delineated ($ s, acres, acre-ft, etc.)
   d) There were suggestions for more common actions including demand management and habitat protection and restoration. The degree of implementation of these actions could be variable and worked out later or be developed systematically under adaptive management. Common actions need only benefit some uses and can be detrimental to others if primary benefit is important.

2. Solution Principles and Objectives:
   a) We should have "deeper" solution principles to guide minimum alternatives.
   b) Greater attention should be placed on the principle that there should be no redirected impacts. Most actions have some negative effects on some uses, thus should have some form of inherent mitigation for any suspected impact.
   c) Objective statements and solution principles should include economic and community (people) needs. Additional actions should also be considered for these.
   d) Water users needs were not addressed in objectives: "Meet reasonable current and future needs of water users." There should be an objective that does not allow further degradation of bromides and THMs in water diverted for urban use.

C. Discussion of Core Actions

1. The more multiple benefits of an action, the more it should be considered common.
2. Floodways and meander belts should not be core actions. (Vulnerability of levees could be a concern.)
3. New levee construction practices should be core actions.
4. Protection of levee integrity should be a core action.

D. Group Discussion to Generate an Alternative

1. One participant suggested alternatives should be developed for mutuality of interests rather than conflict resolution.
2. An urban water user theme was suggested for an alternative that would emphasize the following:
   a) minimize fish constraints on water exports

b) improve drinking water quality (less chemicals, bromines, and organics)
c) improve reliability of existing system (levee vulnerability problem)

3. There should be no minimum solution (set of actions) for Delta drainage water quality problems. These problems are too expensive for minimum alternatives.
4. Use linkages brought out in Workshop #3 when evaluating actions and developing performance measures.
5. Concern was expressed for conflicts among beneficial uses of water. Not likely to find solutions that are positive to all uses.
6. Protecting and enhancing commercial and recreational fisheries are not program objectives. Benefit to fisheries could not be found. Benefits to fisheries should be a performance measure. Harvest management can be an action category, except the action could be better worded. Sustainable fish harvest could be a sub-objective of ecosystem quality.
7. More discussion is needed to define reasonable use.
8. The question of reasonable beneficial use should be revisited.
9. A "principle" should be to not reduce flood control capacity of system. No increase in flood impacts should be allowed.
10. We should draw from actions to cover all needs.
11. Riparian action categories should include actions related to riparian forests. Large woody debris are important fish habitat features.
12. Restoration of levees and more wetlands and aquatic habitat could be costly to water supply because of increases in the tidal prism.
13. Many actions could be implemented under an adaptive management approach, wherein actions are first initiated partially or on a small scale (pilot basis) to test feasibility and develop most effective approach.
14. Riprapping of shallow Delta habitat to protect shallow habitat could be bad for riparian vegetation.
15. Riparian vegetation could conflict with flood control objectives.
16. Wetlands enhancement could be a water quality conflict, depending on how wetlands are implemented.
17. Terrestrial habitat enhancement could be a problem for farmers (benefit pests).
18. Control of introduced species should not affect other uses. (2-4D use on water hyacinth was used as an example.)
19. Suggested action: hold more flood waters in upper watersheds (dams and forest management).
20. Fisheries should be faced with less regulatory uncertainty. (Could have action to reduce regulatory uncertainty to fisheries.)
21. Agricultural and urban water should have different water quality objectives and should thus have different sources/delivery systems. Actions should reflect this need.
22. Major water intakes for diversions should at a minimum be locations where flow will pass screens and not be at end of dead-end sloughs (existing south Delta situation). (Suggested as a solution principle that would require resolving in all minimum alternatives.)
23. Fisheries management action should be stated as follows: Shape fisheries to minimize effects on endangered species (time and place closures).
24. Groundwater banking is okay with adequate water quality.

E. Comments Regarding the Alternatives Generation Process

1. It is difficult to deal with tradeoffs among alternatives with only general details of actions. (For example we need to know how much upstream storage is proposed when dealing with this action.)
2. Process is too unfocused. Too much information. Too general. Need details.
3. Working groups are too big to get any work done.
4. Alternative assembling should focus on needs of specific users, needs should be balanced, state clearly who and what interests are being emphasized.
5. To move process forward, staff should go ahead and develop alternatives for stakeholders to evaluate.
6. Next workshop should have a good set of alternatives with strengths and weaknesses well delineated.

GREEN BREAKOUT GROUP
Facilitators: Rick Soehren and Victor Pacheco

I. Summary and Conclusions

A. Alternative Developed by the Group

This group did not complete an alternative. The actions selected by the group to add to the example preliminary alternative are described below.

B. Major Recommendations

The group agreed that the following recommendations should be considered:

1. Approaches should be combined to resolve conflicts.
2. Actions need to be more clearly defined.
3. Detailed information is needed to adequately evaluate actions.

II. Group Discussion and Comments

A. Evaluation of the Example Alternative

The group agreed that the alternative proposed needs:

1. to define the level of implementation of actions
2. to restore a diversity of habitat types
3. institutional water management actions such as demand management and the integration of land use and water supply planning
4. a flood control component
5. upstream habitat restoration
6. to include actions that would recover and protect habitats from exotic plants and animals
7. to address the movement of water across the Delta
8. storage south of the Delta

B. Discussion of the Categories, Actions, Solution Principles, Objectives, and Conflicts

1. One team member suggested combining three related Action Categories: institutions for integrated long-term water management with integration of land use and water supply planning and demand management.
2. It was suggested that a new category called Standards should be added.
3. Other suggestions included one that reduction in subsidence, levee maintenance and flood protection be combined into one category, and that the subsidence category be divided into actions involving flooding islands and those involving filling with dredged material.
4. It was also suggested that the reduction in subsidence category be renamed Controlling Land Subsidence.
5. Other recommendations included: renaming Improvement of Flooding and Seismic Protections to Reduction of Seismic Damage Potential, or including these actions under the Protection and Rerouting of Infrastructure; splitting Improvement of Flooding and Seismic Protections into Levee Maintenance and

Stabilization and Rerouting and Protection of Infrastructure; renaming Protection and Rerouting of Infrastructure to Reducing Hazards to Infrastructure.

C. Discussion of Core Actions

There were no suggestions for changes to core actions.

D. Group Discussion to Generate an Alternative

The group agreed that following actions should be added to the alternative:

1. Flood Control
    a) Ongoing maintenance (e.g., SB 34)
    b) Dredging to maintain flood control capacity
    c) Changes in levee configurations to add capacity and habitat
    d) Meander belts and connections to floodways
2. Water Transfers to improve supply reliability, timed to provide instream environmental benefits.
3. Watershed restoration above dams to protect and improve water quality.
4. Habitat restoration
    a) A diversity of habitats should be created with connectivity between them (would help different species and different life stages).
5. Control of introduced species – all actions in this category (decreased rate of introduction to avoid continual perturbations of the Delta).
6. Conveyance across the Delta (would help fisheries, water supply, water quality, but may harm ecosystem).
7. Demand Management
    a) Conservation
    b) Reclamation
8. Fish Screens (would aid fish migration through the Delta)

E. Comments Regarding the Alternatives Generation Process

No comments regarding the alternatives generation process were received.

BLUE BREAKOUT GROUP
Facilitators: Zach McReynolds and Sharon Gross

I. Summary and Conclusion

A. Alternative Developed by the Group

The Blue breakout group spent perhaps less time than other breakout groups in actually developing an alternative. Consequently, this group did not complete a new alternative. The objective of the alternative that this group attempted to create was primarily to raise the level of a minimum alternative to achieve the Primary Objectives of CALFED. This group felt that the minimum solution strategy identified on page C-12 of the workshop handout was not adequate to achieve the Primary Objectives. In attempting to create an alternative to meet the Primary Objectives of CALFED, at a minimum level, the following actions were selected for an alternative.

1. Screen diversions, with priority given to diversions with the greatest impacts to fish populations.
2. Increase habitat restoration and maintenance activities, including:
    a) shallow water, low salinity habitats
    b) upland terrestrial habitats
    c) riparian and shoreline habitats
    d) aquatic habitats
3. Reduce pollutant discharges to the Bay-Delta system through:
    a) reduction of point and non-point sources of contamination
    b) taking land out of production to reduce agricultural pollutants
4. Ensure efficient use of water through demand management practices and linkage between land use and water supply planning.
5. Maintain existing levels of levee protection while modifying maintenance practices to improve habitat conditions associated with levees.
6. Provide funding for research in the following areas:
    a) criteria for protection of species and identification of impacts
    b) role of hatchery supplementation in reestablishing fisheries
    c) appropriate level of levee protection
    d) adaptive management and monitoring
    e) linkage and support to other complimentary programs
7. Develop institutional mechanisms to ease the implementation of water transfers.
8. Develop additional storage capabilities to enhance implementation of transfers and increase the flexibility of Delta export management. Additional storage should be considered for development in the following order:
    a) storage developed through reoperation of existing facilities
    b) conjunctive use facilities
    c) new off-stream storage facilities south of the Delta
    d) new on-stream storage facilities north or south of the Delta.
9. Land use changes to reduce subsidence.
10. Prevent introduction of nuisance species - ballast water.
11. Develop emergency response system.

B. Major Recommendations

The group found consensus on several general suggestions for CALFED related to developing and presenting alternatives:

1. First the group suggested that a ratings system should be incorporated into the master list of actions. Such a rating system would provide guidance to individuals developing alternatives as well as to workshop participants attempting to understand the benefits of any particular action in an alternative.
2. Another suggestion was made to avoid the approach of "conflict resolution." The conflict resolution approach, according to comments from the group, encourages division between users groups. The group suggested that a better approach would be to develop alternatives based on themes. For example, alternatives could be developed for water quality, water supply, habitat restorations and so on.

II. Group Discussion and Comments

A. Evaluation of Example Alternative

The group generally felt that this minimum alternative did not provide sufficient information on the reasons for formulating it. There was considerable discussion during the first hour of the breakout session regarding the process and reasoning behind the development of this example alternative and the boundary alternatives in general.

The group found this example minimum alternative deficient in reaching equity between the various user groups and felt that the idea of a minimum alternative does not allow for the development of a viable alternative. The group identified the deficiencies listed below.

1. The alternative was not balanced; it did not offer an equitable solution.
2. No actions were included to improve through-Delta movement of water.
3. While the alternative cited actions for managing flows and temperatures for the restoration of anadromous fish habitat, it did not include other actions that should be conjunctively implemented, such as;
    a) restoration and replenishment of spawning gravels
    b) restoration of channel configurations
    c) restoration of shoreline habitats
    d) modification of gravel mining practices
    e) improvement of fish passage at upstream dams and reservoirs
4. No actions were included which addressed system vulnerability and reliability in a significant fashion (i.e., levee maintenance programs).
5. No actions were presented in this alternative or in the master list of actions which directly addressed improvement of water quality for urban users.
6. No actions were included which addressed demand management at existing or more aggressive levels.
7. There is a lack of balance or equity in the example minimum alternative. The group suggested numerous modifications to the actions selected for the alternative to achieve equity.
8. The example alternative lacked precision. It did not go far enough in any particular resource area to be distinguishable. The alternatives should be developed through a thematic approach (i.e., water quality, water supply) rather than the "conflict resolution" approach.
9. The example alternative was difficult to evaluate because of the lack of information for selected actions. It was suggested that the actions have an associated cost or rating to help judge the overall performance of an alternative.

B. Discussion of the Categories, Actions, Solution Principles, Objectives, and Conflicts

1. Comments and modifications were suggested for the program's Primary Objectives. The group suggested two new items to be added to the Primary Objectives: maintain or improve levee stability and water quality.
2. No actions, from the master list of actions, directly addressed water quality for urban supplies.
3. The master list of actions should include a rating of each individual action to aid in determining its benefit to an alternative.

C. Discussion of Core Actions

This breakout group did not directly address core actions. Instead they attempted to determine what actions they felt were important to all potential CALFED solutions through development of a new alternative. Their general premise was to increase the number and implementation level of actions selected to achieve the Primary Objectives of the program. The actions selected for this alternative might be considered this group's attempt at identifying a set of core actions.

D. Group Discussion to Generate an Alternative

The Blue breakout group was generally frustrated at having to work through the process of developing a boundary alternative. While a majority of the participants understood the process that CALFED was undertaking, they generally felt that they did not need to be involved in these preliminary phases of alternative development. The general consensus was that CALFED should present more viable alternatives at these workshops when these alternatives become available.

E. Comments Regarding the Alternatives Generation Process

The group found consensus on several general suggestions for CALFED related to developing and presenting alternatives. First the group suggested that a ratings system should be incorporated into the master list of actions. Such a rating system would provide guidance to individuals developing alternatives as well as to workshop participants attempting to understand the benefits of any particular action in an alternative. Another suggestion was to avoid the approach of "conflict resolution." The conflict resolution approach, according to the group, encourages division between users groups. The group suggested that a better approach would be to develop alternatives based on themes. For example, alternatives could be developed for water quality, water supply, habitat restorations and so on.

As a prelude to developing a new alternative, the group spent considerable time discussing the objectives of a minimum solution strategy, which is shown on page C-12 of the workshop handout. The group decided on modifications and additions to the minimum solution strategy, as follows.

1. Winter-run chinook salmon and Delta smelt are not in danger of extinction.
2. Water supplies do not face regulatory uncertainties caused by take limits.
3. Additional species are not listed as threatened or endangered.
4. The solution principles for equity are satisfied (i.e., benefits are fairly distributed across the range of objectives).
5. The level of system vulnerability is not decreased beyond existing levels (i.e., levees are maintained to at least current levels of protection).
6. Water quality for urban, agriculture, and fish and wildlife uses will be maintained or improved relative to existing levels.