

## **Responses to Written Comments July 22, 2002 Draft Interim Report**

1-1 The Comprehensive Plan represents a substantial change in approach to solving system problems. The process will be necessary to ensure that future modifications do not adversely affect the system.

2-1 The public domain hydrologic and hydraulic models used by the Comprehensive Study – UNET and HEC-5 - and all data associated with these models will be made available to the public through the Freedom of Information Act (FOIA). The events of September 11, 2001, have made it necessary to use the FOIA process. Model documentation and users manuals are currently being developed for both models. These documents need to be completed prior to the models being released. See response number 14-1.

2-2 The Comprehensive Study team prefers not to use any specific proposed project to show how to use the Guiding Principles, as it may be misinterpreted as an endorsement. Some simple hypothetical examples of how the Guiding Principles will likely be applied will be included in the report. Development of all projects will consider the Guiding Principles.

3-1 Models used in the Comprehensive Study are documented in the Sacramento-San Joaquin River Basins Comprehensive Study Milestone F-4, In-Progress Review Report- Appendices, October 2001. An update of the modeling documentation will be included in supporting documentation at the time of the Final Interim Report. A copy of these reports can be obtained by contacting the Corps of Engineers.

3-2 The Comprehensive Study team is considering preparing a companion document that describes the tools used during the Comprehensive Study. The document may be available in spring 2003. This document could describe, in non-technical terms, the capabilities and limitations of the tools, scenarios evaluated as part of the study, and potential evaluations in future studies.

3-3 See response number 3-1.

3-4 The UNET models were calibrated to the 1995 and 1997 flood events and experts continually scrutinized model outputs to ensure they were reasonable. The use of synthetic hydrology and levee failure assumptions combined to create inundation maps that are slightly different from other inundation maps of the Central Valley, as discussed on page 11 of the July 22, 2002 Draft Interim Report. The large geographic extent of the study, about 43,000 square miles, made specific validation studies unnecessary at this time. The current hydrologic and hydraulic models of the Comprehensive Study will be updated as necessary when smaller local project models discover things that need to be changed or added to the larger basin models.

3-5 See response number 3-2.

3-6 Model developments and their results have been reviewed by State, Federal, and academic experts in an Independent Technical Review (ITR) process to ensure that model development and use follow professionally accepted guidelines. Members of the ITR team are not typically listed in Corps of Engineers reports.

3-7 See response number 3-6.

3-8 Although many Comprehensive Study team members and ITR members have their Professional Engineering licenses, the July 22, 2002 Draft Interim Report is a planning document which makes no recommendations to Congress or the State legislature and therefore requires no signature. Both the Corps and The Reclamation Board/DWR site-specific feasibility studies and more detailed engineering investigations will require the signature of the Professional Engineer taking responsibility for the work.

4-1 Periodic maintenance is needed on most portions of the flood management system, including the weirs. An example of weir maintenance is the removal of approximately 2.4 million cubic yards of sediment from the downstream side of the Colusa Weir in 1999 by the Department of Water Resources. Recent budget requests by the Department for other weir maintenance have been denied.

4-2 Off-stream storage is one type of storage that could be considered for future projects. Most off-stream reservoir sites are located on small streams where the majority of water for filling the reservoir would be diverted from larger rivers or their tributaries. Therefore, off-stream storage would generally provide little direct reduction of peak flows during a flood since the diversions would likely be relatively small compared with the flood flows. Off-stream storage could provide greater flood management benefit if operated in conjunction with on-stream reservoirs located on larger rivers or their tributaries. With this operation, storage of water supply in the off-stream reservoir could allow a larger flood pool in the on-stream reservoir where the direct storage of flood flows would be more effective. The Sites Reservoir Project is an example of a potential off-stream storage project. The Reclamation Board staff will continue to coordinate with the California Department of Water Resources during their evaluation of North of Delta storage to explore potential flood management benefits of Sites Reservoir and other potential reservoirs. Sites Reservoir was briefly discussed on page 55 of the July 22, 2002 Draft Interim Report.

4-3 All measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. While the Sacramento and San Joaquin River Basins Comprehensive Study's flooding analyses focused primarily on the main stem and major tributaries, small reservoirs to help reduce flooding from local sources could be included within a Middle Sacramento River regional project if regional stakeholders support a project. Any detailed planning for a regional project should coordinate with local plans such as the Colusa Basin Integrated Resource Management Program.

5-1 Ongoing maintenance of the levee system has not been delayed during preparation of the Comprehensive Plan. Page 44 of the July 22, 2002 Draft Interim Report acknowledges interim system needs over perhaps decades while projects are constructed. Continued operation and

maintenance is one of those needs. The text will be clarified to stress that each of the listed items needs to continue.

6-1 Although vegetation was incorporated into some features of the flood management system (for example, trees planted to slow flows entering the lower Butte Basin), much of the system was designed under the assumption that vegetation would be managed. Some channel capacity may have been affected by subsequent vegetative growth. The hydraulic models (for the rivers and bypass system) developed for the Comprehensive Study have the ability to evaluate the regional and system-wide impacts of different types and densities of vegetation on flood flows and stage. The models will enable future flood control and environmental improvement projects to evaluate the hydraulic impacts of vegetation, and plan appropriately to ensure that changes to the flood management system protect public safety and support restored ecosystems.

7-1 See response number 4-2.

7-2 The Comprehensive Study has investigated flood and ecosystem problems related to the mainstem Sacramento and San Joaquin Rivers and major tributaries. Addressing fire hazards is outside the scope of the study. We suggest that you contact Colusa County or the California Department of Forestry.

7-3 The Reclamation Board and the Corps can assist with local and regional projects if requested. See response number 48-10. The Comprehensive Study team will be working to develop a report that is responsive to local needs. The team initially attempted to develop several example master plans to begin discussions. However, based on feedback received from the public outreach in October 2001, the report was revised to present a general approach for developing future projects. Based on this public feedback, the report makes no recommendations for projects. There must be local interest in progressing with a project. Public comments from the latest round of public workshops in July and August 2002 are being used to improve the report. The Reclamation Board and the Corps are listening to your community. At the same time, both The Reclamation Board and the Corps must work within existing laws and regulations.

8-1 The summary of comments received during the Colusa and other workshops during July and August 2002 are a part of this response to comments document. In addition, the attached set of written comments on the July 22, 2002 Draft Interim Report provide a broad view of the public feedback. You are on the Study's mailing list to receive future documents including the 2002 Interim Report when finalized.

9-1 All measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. Like any project, a dredging project would need to be shown to be an economical solution and have local support and cost sharing capability. Based on current information, Federal participation in large-scale dredging to enlarge channel cross-section does not appear feasible due to the cost, extensive environmental mitigation requirements and the need for local entities to accept the financial responsibility for

continued future maintenance dredging, including disposal of material with potentially toxic contamination.

9-2 The protection of agriculture is clearly recognized by the Comprehensive Plan as a valuable tool for avoiding future flood damages and restoring natural values. Both the Plan's Guiding Principles and Planning Objectives specifically identify the importance of agriculture to the Plan. The third Guiding Principle states that future projects should evaluate the impacts on agricultural land. Agriculture is an economically valuable land use that is consistent with good floodplain management practices, has intrinsic habitat value, and is very compatible with adjacent natural habitat. It is true that converting agricultural land to natural habitat has social and economic impacts beyond lost production. These broader impacts will be fully taken into account in developing locally supported regional projects. Solutions such as buying easements rather than in fee title in order for the land to remain on the tax rolls will also be investigated. These acquisitions would be made from willing participants in the flood damage reduction and environmental restoration projects.

In addition to potential adverse impacts to local economies, dual-purpose flood damage reduction and ecosystem restoration projects can benefit local economies. The reduction of flood damages could benefit the local economy in many ways, including the reduction of agricultural losses due to flooding. In addition, restored habitats that support wildlife may provide economic benefits from hunters, fishermen, bird watchers and other recreationists and support businesses catering to these activities. Access points to the River for day-use facilities and other features may enhance opportunities for recreation. Further, the sale or lease of lands that are adjacent to the levees and currently subject to flooding or damages from seepage may provide the land owners the means to acquire other agricultural properties with less flood risk that can be enhanced for higher productivity.

10-1 Information that pertains to flood and ecosystem problems related to the mainstem Sacramento and San Joaquin Rivers is appreciated and can be considered in future study efforts. Information provided that is outside of the Comprehensive Study scope can be provided to other agencies, as appropriate.

11-1 The Comprehensive Plan was developed in accordance with existing Federal and State laws, policies, and regulations. Future studies and projects for any area must also be developed in accordance with these existing requirements.

12-1 Sections of the report will be revised to clarify that projects can only proceed with local support. If a local area is interested in pursuing a project, demonstration of having a regional coalition representing the varied views of stakeholders helps the appropriation and planning processes.

13-1 The public comments from the July and August 2002 workshops were the reason for holding the workshops. They provide the team valuable insight and a significant challenge in revising the report. In addition to the oral comments received at the workshops, this response to comments document contains responses to written comments on the July 22, 2002 Draft Interim Report.

14-1 In light of the events of September 11th, increased Homeland Security measures and the need for additional security to our communities, the U. S. Army Corps of Engineers, Sacramento District, is asking the public and all public entities, including State and local governments, to submit requests for Federal government records of a non-routine nature in writing (e-mail is acceptable). Requests should be submitted to the U.S. Army Corps of Engineers, Sacramento District, Freedom of Information Officer (FOIA), Phyllis Svetich, ATTN: CESPCK-OC, 1325 J Street, Room 1340, Sacramento, CA 95814. Requests may be sent by e-mail to: [Phyllis.M.Svetich@usace.army.mil](mailto:Phyllis.M.Svetich@usace.army.mil). The request must mention FOIA, be relatively specific (page number, paragraph etc. not required) and the requestor must agree to pay costs, if there are any. The Sacramento District's technical staff will review the requested information to determine if it contains any data that could pose a reasonable security risk. All such information will be excised from the District's response. Requests from Congressional Representatives, Federal Agencies and Non-Federal Sponsors (project specific) are not required to be submitted under FOIA.

15-1 Stakeholder opposition to floodway widening is noted on page 58 of the July 22, 2002 Draft Interim Report. Neither the Corps nor The Reclamation Board are proposing the use of set-back levees (levee realignment) or any other specific action for an area. However, they are prepared to assist the local stakeholders in planning for a project that has local support and satisfies the region's role in a system-wide solution. While the local stakeholders may unite behind one specific project, NEPA and CEQA will require an evaluation of a reasonable range of alternatives.

16-1 A section will be added to the report on landowner rights. Any projects that are proposed would require the involvement of all affected stakeholders during the development of project plans. The planning process for urban flood control and ecosystem restoration projects would address any impacts to rural stakeholders. See response number 21-7.

16-2 Preliminary technical analyses have shown that some amount of new flood storage is needed in the Sacramento River Basin regardless of what other flood management improvements are implemented, such as levee improvements or changes to the bypass system. In-stream and off-stream storage are potential measures for providing new storage with multiple benefits because they could include water supply or hydropower. The increasing demand for water in California is likely to improve the feasibility of new multipurpose storage projects that foster collaboration between multiple interests. The report will be revised to acknowledge the need for additional storage in the Sacramento River Basin for flood control and other beneficial uses.

16-3 See response number 40-33.

17-1 Due to State budget issues, funding for all projects except the Comprehensive Study itself was ceased for State fiscal year 2002. For the West Bear Creek Initial Project, preliminary studies have indicated there is a strong potential for a project with ecosystem restoration benefits that can be attained via a project that is consistent with the flood management system and that would yield slight reduction in flood stages downstream. State funding for West Bear Creek is currently an uncertainty. Upon request from the State or another non-Federal sponsor, the Corps can prepare a budget request for matching funding to complete the study. There are

opportunities for other groups and agencies to pursue this project with or without The Reclamation Board and the Corps.

18-1 Your support of the general objectives of the Comprehensive Study is appreciated.

18-2 Your support for the process set forth in the Comprehensive Plan is appreciated.

18-3 The hydrologic and hydraulic models developed for the Comprehensive Study provide a new understanding of how the system functions during floods. An update of the modeling documentation will be included in supporting documentation when the 2002 Interim Report is finalized. Due to comments received from review of the July 22, 2002 Draft Interim Report, the Comprehensive Study team is considering various ways to display the models and their results from the last several years of work. This could include a more comprehensive display of existing conditions such as channel capacities and choke points and information on the effectiveness of various flood management measures. Documentation may be available in the spring of 2003. See response number 22-42.

18-4 The Comprehensive Study's hydraulic models consider tidal conditions in the Delta as downstream boundary conditions for the river models. Data from three tide gages were used in the Sacramento River hydraulic model and data from four tide gages were used in the San Joaquin River hydraulic model. "Tailwater hydrographs" (simulated tide-cycle hydrographs) were developed from tide gage data collected during the 1997 flood, representative of downstream tide conditions/boundary conditions. The Comprehensive Study team also used the Delta Simulation Model (DSM2) to estimate flood stages in the Delta with dynamic tidal effects. Future modeling can include a sensitivity analysis of a range of tide levels to evaluate potential future conditions such as sea level rise. More detailed planning studies for the lower Sacramento River region and the lower San Joaquin River region will need to better address the interface with the Delta than could be accomplished with the broad planning level of detail conducted for the Comprehensive Study. The Guiding Principles are not intended to separately address every type of evaluation that must be completed during project planning but to provide guidance for a system-wide approach. The Reclamation Board and the Corps believe that the holistic approach of the Guiding Principles combined with site-specific evaluations conducted under NEPA and CEQA environmental documentation will assure the interface with the Delta and the Bay is adequately considered.

18-5 Reservoir reoperation is just one of many potential measures that could be considered in planning future projects. The Reclamation Board and the Corps had no intention of making reoperation a central theme in the report. It is used several times as an example of a potential measure in the regional descriptions of the July 22, 2002 Draft Interim Report. However, all measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. Any impacts to water supply would have to be mitigated. A new Guiding Principle for the protection of infrastructure will be added to the report. See response number 22-42.

18-6 See response number 2-1.

19-1 Your support of the Plan is appreciated. The Comprehensive Plan aims at integrating flood management and ecosystem restoration.

19-2 See response number 33-7.

19-3 The six planning objectives shown on page 17 of the July 22, 2002 Draft Interim Report have been a part of the Comprehensive Study since the beginning. They were never intended to be requirements for each individual project but were developed as objectives for the complete plan. They can be used to help develop evaluation criteria for comparison and for measuring project performance as shown on pages 40 – 42 of the Draft Interim Report. In general, it is more likely that a project will be cost effective and have broad public support if it can contribute to achieving all the objectives.

19-4 The Comprehensive Plan will retain all ten Guiding Principles (from the July 22, 2002 Draft Interim Report) for “guidance”, not “requirements” for each individual project since some of the Guiding Principles may not apply to some projects. A project may provide the opportunity to apply all ten Guiding Principles and another may not. For example, a reservoir reoperation project may significantly help “optimize use of existing facilities” but have little effect on “sediment continuity” or the “value of agriculture.” Based on other comments on the July 22, 2002 Draft Interim Report, the Comprehensive Study team will add an eleventh Guiding Principle to address protection of infrastructure. The report will be modified to provide a more complete discussion on how the Guiding Principles will be used.

19-5 The Guiding Principles are intended to guide the planning process, not a mandate that specific types of actions be implemented. Restoration of a corridor of riparian habitat and allowance for the river channel to meander over time are measures that could be considered for use in the regional projects. The seventh Guiding Principle states, “Use an ecosystem approach to restore and sustain the health, productivity, and diversity of the floodplain corridors.” This principle recognizes the value of a “full range of ecological components.” This principle includes recognition of the ecological value of contiguous riparian habitat corridors and adequate patch size to maintain dynamic and resilient ecosystem integrity. In addition, the Guiding Principle providing for sediment continuity provides the opportunity for self-sustaining geomorphic processes, which includes a dynamic river meander within the floodplain.

19-6 See response number 19-5.

19-7 See response number 24-7.

19-8 Subject to budgetary constraints and stakeholder interest, The Reclamation Board and the Corps will be the leads for system-wide projects. They will jointly move forward with regional support in planning for regional projects if requested by regional groups. Text to clarify expected roles of project partners will be added to the report.

19-9 See response number 33-7.

20-1 The potential measures in the regional descriptions include an array of actions that could be evaluated in future studies. The measures could be combined in various ways to develop alternative plans. Some measures would negate the need or effectiveness of other measures. Not all measures would be included in each alternative developed, but rather would be a source to develop alternatives. See response number 22-42. Each regional study needs a local sponsor able to cost-share in the planning and eventual construction. It is likely that The Reclamation Board and the Corps will share responsibility for conducting and funding any future regional planning efforts in the traditional manner. See response number 48-10.

20-2 See response number 22-42. At this time, the only projects being evaluated or proposed by The Reclamation Board and the Corps are the Enhanced Flood Response and Emergency Preparedness project (a system-wide, non-structural project) and a local levee realignment project at Hamilton City on the Sacramento River in Glenn County. For these two projects, responsibility for project development and coordination, as well as funding, is shared between The Reclamation Board and the Corps. It is likely that The Reclamation Board and the Corps will share responsibility for conducting and funding any future regional planning efforts in the traditional manner.

20-3 Problems identified by landowners in the Yolo Bypass are essential to planning a regional project in the lower Sacramento River region. To date, their concerns have centered on property and water rights. The report will be revised to include additional text to acknowledge these rights. Input from landowners and other interested parties will be used to define the problems and opportunities and develop any future projects. The Reclamation Board and the Corps are committed to continued outreach during planning of projects.

20-4 Environmental documentation and feasibility studies for future regional projects that include the Yolo Bypass will address timing, rate and duration of flows and potential impacts to agriculture in the bypass and the Delta. The Reclamation Board holds flowage easements in the Yolo Bypass. Additional rights may be necessary in order to change the current flow regime.

20-5 The Reclamation Board and the Corps will make every effort to ensure that all public and private interests that could be affected by future detailed planning studies are notified about the studies and given an opportunity to participate. In addition, studies involving the Corps will publish a notice of intent to prepare a NEPA document in the Federal Register and studies involving a State agency will circulate a notice of preparation of a CEQA document through the State Clearinghouse process. The third Guiding Principle recognizes the value of agriculture. The Comprehensive Plan specifically acknowledges the important contributions agriculture makes to reduce flood damages and protect ecosystem values.

21-1 The only way that future projects can occur is with local participation. See responses 12-1. The San Joaquin River Task Force is a good forum to begin discussion on a potential regional project.

21-2 See response number 21-4.

21-3 All measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. The general concept is to plan for a complete regional project with local stakeholder support and ability to cost-share rather than only looking at individual features. However, it is possible that a regional project could be implemented in stages with new storage being among the first features constructed. While water supply is not a purpose of the Comprehensive Study, the team recognizes that providing additional water in the upper San Joaquin River is a key to riverine ecosystem restoration (page 71 of July 22, 2002 Draft Interim Report). The Friant Water Users Authority and NRDC study of water management strategies is expected to have an influence on available ecosystem restoration opportunities. Study recommendations are expected by the end of 2002, well before a regional planning study under the Comprehensive Plan could be started. New multipurpose storage may prove to be necessary in the basin. The Comprehensive Study team is also coordinating with the U.S. Bureau of Reclamation in their study of new storage potential in the upper San Joaquin River basin.

21-4 The Reclamation Board's authority applies to flood management in the Central Valley (see page 36 of the July 22, 2002 Draft Interim Report). Due to that authority, priority is given to the first Guiding Principle, "public safety is the primary purpose of the flood management system" (see page 28 of the Draft Interim Report). The Guiding Principles were developed to encourage projects that provide both flood damage reduction and ecosystem restoration. The Guiding Principles are intended to provide "guidance", not "requirements" for individual projects. However, due to the purpose and locations, some individual local projects may provide mainly flood management or mainly ecosystem restoration benefits. The complete set of Guiding Principles will likely be more applicable to the regional projects due to the opportunities provided by their larger geographic scope. The report will be modified to provide a more complete discussion on how the Guiding Principles will be used and to clarify that protecting public safety has the highest priority.

21-5 A section on landowner rights will be added to the report.

21-6 The details on how various plan elements may be managed cannot be determined at the programmatic level of the interim report. However, future projects should be designed for easier management of floods and ecosystem preservation. Management responsibilities could vary greatly and would be identified in detail as future projects are developed in concert with the interests and capabilities of a non-Federal sponsor, consistent with applicable legislation and regulations.

21-7 The Reclamation Board's authority is flood management in the Central Valley. With this authority, the Guiding Principles for "public safety" and "avoid hydraulic and hydrologic impacts" will have priority. Projects that jeopardize public safety or transfer hydraulic and hydrologic impacts to other areas will not be permitted. The fourth Guiding Principle recognizes the value of agriculture and open space. A regional project could include compensated easements on agricultural land that would discourage physical urbanization. The report will be modified to provide a more complete discussion on how the Guiding Principles will be used.

22-1 The Comprehensive Study originally excluded consideration of projects within the Delta because of the potential overlap with the CALFED Levee System Integrity Program, which covers about 1,100 miles of Delta levees. Due to the monumental task of developing a plan for the Sacramento and San Joaquin Rivers and their major tributaries, the Comprehensive Study concentrated its effort on the rivers. The Delta levees were left to CALFED. The original concept was to not change the magnitude or timing of river flood flows to the Delta. Over the past year, this thinking has evolved to where it is recognized that a closer interface with the Delta is needed. While the Comprehensive Plan does not treat the Delta as a separate region with its own problems to be solved, it does consider the Delta as a potential solution area for upstream problems. An example may be allowing slightly higher river flood flows to the Delta to eliminate an increment of flood storage within the watershed or to reduce the chance of levee failure. Some preliminary work on Delta inflow is summarized on page 21 of the July 22, 2002 Draft Interim Report. The resultant changes in Delta flood stages and duration potentially could be mitigated through joint projects with CALFED as they proceed with levee construction under the Levee System Integrity Program. This could result in a less expensive and more environmentally sound system solution than addressing the rivers separately from the Delta. Some clarification of the potential use of the Delta as a solution area and the need to evaluate potential impacts is provided in the report.

22-2 The report will be changed to convey an understanding that some flood risk is unavoidable.

22-3 It is beyond The Reclamation Board's authority to "promote" or "preserve" agriculture. The text will be modified to replace "promote" with "recognize" for the third Guiding Principle. The Guiding Principle now reads, "Recognize the value of agriculture." The reference to open space is still retained in the supporting text.

22-4 See response number 21-4. In addition, The Reclamation Board does not seek to be involved in local land use planning issues but it does have some regulatory authority over land use within Board designated floodways. State policy promotes good floodplain management. The Water Code 12585.7 provides for increasing the State share of the non-Federal capital costs for projects that protect or enhance open space. In addition, Water Code 12582.7 (a)(3) requires local agencies to prepare floodplain management plans, "The project's non-Federal sponsor, or other appropriate local agency, shall be in compliance with Section 701b-12 of Title 33 of the United States Code, which requires the preparation, adoption, and implementation of a floodplain management plan designed to reduce the impacts of future floods." The Reclamation Board sees effective floodplain management as one of the most important Guiding Principles to help reduce system flood damages, an area clearly within their existing authority. Some floodplain management measures may influence how local entities prepare their land use plans. The Reclamation Board is not advocating at this time to take on additional ecosystem restoration authority but will coordinate with those agencies that do have that authority (see page 34 of the July 22, 2002 Draft Interim Report). However, The Reclamation Board does have authority in granting permits for any project, including ecosystem restoration, that may influence flood flows, stages and public safety.

22-5 The Comprehensive Plan requires more work than can be conducted by the current three Reclamation Board staff. Currently, DWR provides support to The Reclamation Board for designated floodways, permitting, project development, and work on the Comprehensive Study. Organizational changes are being considered to best meet the resource needs and commitments presented by the Comprehensive Plan. A reference to the need for enlarging the budget and staff will be added to the report text without specifying whether this is for the Board staff or the supporting DWR staff.

22-6 The Regional Descriptions (beginning on page 52 of the July 22, 2002 Draft Interim Report) provide more detail on the characteristics of the river basins, but their unique traits should be highlighted earlier in the report. The sections on “Historical Perspective” and “Conditions Today” will be revised to underscore the distinct differences between the Sacramento and San Joaquin River basins. The statement on page 5 concerning the historic drainage of low-lying basins will be revised to acknowledge that some of the water stored in these basins remained trapped, evaporating rather than finding its way to the river or Delta. The Regional Descriptions are also being expanded, and will include a more complete description of the middle and lower Sacramento River as a naturally ‘perched’ system, elevated above the adjacent low-lying basins from years of sediment deposition along its banks. The perched nature of the Sacramento River was also recognized in Comprehensive Study preliminary technical evaluations of widened floodways, which were limited to the naturally higher ground adjacent to the river.

22-7a The Sacramento River’s native salmon evolved to survive in a system where the river regularly overflowed its banks through numerous sloughs into the lower lying slow draining wetlands in the basins. Although some of this water remained in the basin wetlands or evaporated, much of it ultimately drained into the River, or Delta Sloughs and into the ocean. Some fish were trapped and perished, but a sufficient number survived to sustain the great salmon runs described by early observers. There is evidence from recent studies that indicate that juvenile salmon fare better in the Yolo Bypass than in the Sacramento River during years when the bypass floods, which indicates that the fish evolved to take advantage of floodplain flooding. Slower flows, higher temperatures and more food are thought to be the main reasons. During early spring high flows, splittail spawn in vegetation on floodplains. Studies at the Cosumnes River “accidental forest” indicate that surprisingly few fish get trapped but that they follow the flow of the water, a behavior that supports their adaptation to the historic hydraulic regime of the Sacramento Valley. Currently, these species no longer exist in the vast numbers that were common in the past. Although, the former conditions cannot be recreated in full, where feasible and locally acceptable, this type of habitat can be recreated on a more modest scale to sustain these fish.

22-7b The document will be changed to indicate that the Butte Basin is the most upstream overflow area.

22-8a The report will be revised to clarify how the Sacramento and San Joaquin River Flood Control Projects were built and what entities are responsible for operation and maintenance.

22-8b The Conditions Today section of the report will be revised to recognize the unanticipated operation and maintenance burden placed on local levee and reclamation districts due to environmental laws and regulations.

22-9 See response number 22-2.

22-10 Channel aggradation and vegetative growth have contributed to the loss of conveyance capacity in some areas. The discussion of system conveyance capacity will be revised in the report to include recognition that these factors, along with others, contributed to the loss of conveyance capacity. See response number 6-1 for more discussion of vegetation and conveyance capacity.

22-11 The Guiding Principle for System Conveyance Capacity is intended to help develop projects in the future that provide sufficient capacity for all intended uses. The existing environmental review process that potential projects undergo provides opportunity to review projects for such adverse affects as reduced channel maintenance. The text will be revised to acknowledge that habitat within floodways or bypasses must be maintained to ensure the needed flood conveyance capacity is available.

22-12 Text will be added to the report to clarify that transitory storage may not be feasible in some areas, particularly in portions of the Sacramento River Basin, because the floodplain is lower than the river water level and extensive pumping would be required to evacuate floodwaters, similar to levee failures in the Delta.

22-13 See response number 22-1.

22-14 Under current Federal regulations, benefit-cost analysis must consider costs and benefits wherever they would be accrued. Incremental analysis is used to identify incremental costs and incremental benefits and to help identify the point at which additional increments are not cost-effective. See response number 35-8.

22-15 Page 37 of the July 22, 2002 Draft Interim Report identifies unequal maintenance cost-share between beneficiaries as one potential barrier to Comprehensive Plan implementation. The Comprehensive Study team agrees that a better approach for apportioning the cost of project maintenance between beneficiaries could benefit the system. The beneficiaries could be broader than those directly at risk from flooding. Water supply conveyance benefits of the levee system is one example. A proposed approach for resolving implementation issues will be added to the report.

22-16 In addition to the performance measure on page 41 for reducing conflicts with environmental protection requirements, page 50 - 51 of the July 22, 2002 Draft Interim Report includes some ideas for developing environmentally sensitive channel maintenance measures.

22-17 The bullets on pages 40 – 42 represent potential measures of success rather than potential actions. An additional bullet under paragraph 5 will be added to the report to read, “Improve

means to protect existing levees, where needed, in a manner which is environmentally acceptable.”

22-18 The report will be revised to differentiate between the Sac Bank authorization and current and future trends.

22-19 The Comprehensive Plan provides a vision for flood management and ecosystem restoration within the floodplain. Wildlife-friendly agriculture is a potential component of future projects. Wildlife-friendly agriculture, currently being evaluated by multiple stakeholders and agencies including CALFED’s Working Landscape subcommittee, provides a positive non-structural ecosystem restoration opportunity. While planning, implementation and funding of wildlife-friendly agriculture are administered by other agencies, it is consistent with both the Comprehensive Plan’s Guiding Principles and CALFED. The report will be modified to clarify that wildlife-friendly agricultural practices are actions that others, not The Reclamation Board, administer as a component of a project within the flood control system. However, any actions within the floodway are subject to The Reclamation Board permitting authority. Similarly, to be most effective, a similar potential measure should seek ways to manage habitat so it is more compatible with adjacent agricultural land.

22-20 As used on page 50, “maintaining agencies” should include the Department of Water Resources as well as the local reclamation districts, levee districts and other local entities. It was not meant to separate levee and channel maintenance as the agreement between the Federal government and the State of California covers levee and channel maintenance on most projects. “Department of Water Resources, levee districts, reclamation districts, etc.” will be inserted in parenthesis in the first paragraph to clarify the statement.

22-21 The word “channels” will be replaced with “floodways” on page 50 of the July 22, 2002 Draft Interim Report. Text will be added to the introductory paragraph on page 50 to describe that the State primarily maintains the channels and the Districts primarily maintain the levees.

22-22 This issue was also included as an example of an implementation issue on page 37 of the July 22, 2002 Draft Interim Report.

22-23 See response number 22-1. The Delta is within the study area but, due to the presence of the CALFED Levee System Integrity Program, it is not considered a region. Depending on how the lower Sacramento River and lower San Joaquin regional projects are configured in the future, they are likely to include improvements in portions of the Delta. Therefore, the map on page 53 of the July 22, 2002 Draft Interim Report should not be modified to specifically exclude portions of the Delta.

22-24 Increasing storage in Shasta Reservoir is one potential way to secure additional flood storage.

22-25 The consequence of establishing a wider “meander zone” is that at any one time, only a small reach of the waterway would encroach on the confining levee and a “harder” erosion protection measure could be employed. “When there are no provisions for meandering, the

erosion protection needs of the levee can result in extensive, substantial adverse environmental impacts.

22-26 Downstream of Chico Landing, floodwaters in the Sacramento River overflow the east bank of the river into the Butte Basin at three sites in a reach referred to as the Butte Basin Overflow Area. This area extends roughly from RM 176 to RM 194. The purpose of the Butte Basin Overflow Area is to maintain a split of flood flows between the Sacramento River and the Butte Basin such that flows in the river do not exceed the channel capacity downstream. The three overflow locations are the M&T flood relief structure (FRS), the 3B's natural overflow site and the Goose Lake FRS. These "structures" are low points on the east side of the river located at historical overflow areas. The Reclamation Board regulates the height of these low points and the land use within the Butte Basin. The report will be revised to better reflect the nature of these structures.

22-27 The report will be changed to clarify the perched nature of the Sacramento River in relation to the overflow basins (page 57 of the July 22, 2002 Draft Interim Report).

22-28 The report will be changed to reflect that the Colusa Basin Drain conveys flows to the Sacramento River near Knights Landing rather than Colusa and to explain the relationship among the Colusa Basin Drain, Sacramento River, Knights Landing Ridge Cut, and Knights Landing Outfall Structure.

22-29 The Comprehensive Study team agrees that habitat has the potential to be incompatible with the flood conveyance function of the system if the system is not properly designed to protect natural values. The hydraulic models provide a tool to test how habitat can influence water flow. One of the elements of adaptive assessment and management is to iteratively manage habitat to achieve the planning objectives. The report now reads, "Federal and State resource and flood management agencies generally consider ecosystem restoration to be highly compatible with flood management when the flood management system is designed and maintained to accommodate habitat so as not to decrease the authorized level of flood protection." The need for habitat maintenance has also been included under the heading, "Habitat in the Flood Management System."

22-30 The reference to P.L. 84-99 will be removed.

22-31 Sediment maintenance is one potential measure for consideration during project planning.

22-32 The potential measures on pages 59 – 60 are a partial list of measures that could be considered in future project planning, not proposed measures. See response numbers 15-1 and 22-42.

22-33 See response number 22-37.

22-34 The reference to "backwater inflow" is referring to restoration or creation of side channels to preserve or improve riparian habitat diversity. The backwater inflow would be contained to the side channel and not allowed to flood adjacent non-restoration areas. The report

will be modified to reflect that development of any side channels for restoration would be designed and constructed to maintain the integrity of the flood management system.

22-35 The fourth Guiding Principle pertains to avoiding the transfer of adverse hydraulic and hydrologic impacts to other areas. See response number 22-29.

22-36 See response number 22-31.

22-37 Environmentally acceptable measures to control the extent of the meander zone will be necessary to insure the integrity of the flood management system and the protection of lives and property. Finding these environmentally acceptable measures that also provide acceptable protection to the flood control system has been an on-going effort that has not yet completely succeeded. Currently an interagency team of scientists is investigating environmentally acceptable revetment methods and mitigation measures for traditional revetment under the Sacramento River Bank Protection Project.

22-38 The words “and the Natomas East Main Drain” will be added after “Natomas Cross Canal” on page 65 of the July 22, 2002 Draft Interim Report.

22-39 The first full sentence on page 66 of the July 22, 2002 Draft Interim Report will be modified to include reference to the Colusa Basin Drain: “High stages in the bypass can affect flows in the Knights Landing Ridge Cut, Colusa Basin Drain, Cache Creek, Putah Creek, Willow Slough, and other tributaries.”

22-40 The words “and the American River” will be added to the referenced text.

22-41 The following sentence will be added to the paragraphs describing potential modifications to the Fremont and Sacramento Weirs (pgs. 68-69, July 22 Draft Interim Report): “New flowage easements may be required depending on how flood flows in the bypass are affected by changes to the weir.”

22-42 The comments received on the July 22, 2002 Draft Interim Report indicate that the listing of potential measures described in the regional descriptions that could be considered and expanded in future detailed studies are confusing to readers. The document will be revised to better describe local, regional and agency concerns and the potential measure descriptions will be revised to indicate that there is a broad array of types of measures that could be considered in future studies. The description of potential measures will be deleted for each region and consolidated in one location.

22-43 The text will be modified to read “Egbert Tract”, not “Little Egbert Tract.”

22-44 Modification of levees on the Little Hastings Tract has not been considered to date. If modification of these levees is considered in the development of a project, all potential effects will be evaluated and mitigated as required.

22-45 The text will be modified to replace “Association” with “Agency.”

22-46 The word “attenuate” is appropriate for its intended use. Realigning or breaching levees will spread flood flows out and decrease water velocity, attenuating the peak flow.

23-1 The Comprehensive Study team agrees that wildlife-friendly agriculture practices can improve water quality.

24-1 Your comment on Guiding Principles is appreciated.

24-2 When related to the flood management system, flood damage reduction and ecosystem restoration are interdependent. The existing flood management system provides some degree of flood management; any change to the system could affect that degree. The existing flood management system also is an ecosystem; any change to the system could affect its condition. Because these two functions of the flood management system are intertwined, system modifications should consider them together. See response number 33-7

24-3 Planning objectives are essential for a planning study. The planning objectives were established to guide development of system-wide projects. While the 2002 Interim Report will not set forth a system-wide project, it will continue to include these basic planning objectives so that future study efforts can build upon them in developing more specific objectives as appropriate for each study effort. See response number 19-3.

24-4 See response number 29-6.

24-5 The suggestion to designate the future flood carrying capacities in the two major river systems would be beneficial if all stakeholders were in agreement on a master plan for the entire system. However, the future flood carrying capacities will depend on the regional stakeholder interest in making system changes. The future capacities will also depend on how future projects are configured, where storage is located, and how much water can flow to the Delta. All of these require additional planning with stakeholders before future capacities can be finalized.

24-6 Continued outreach is an ongoing task of The Reclamation Board staff (see page 33 of the July 22, 2002 Draft Interim Report). The outreach will have two fronts, (1) information/education on the evolving system-wide condition and broad opportunities within the flood management system (flood damage reduction and ecosystem restoration), and (2) project specific outreach as the regional stakeholders are ready to plan projects.

24-7 Adaptive assessment and management is a process for evaluating the performance of modification to the flood management system, particularly in relation to both habitat restoration and the conservation of species within the watershed. Large, complex regional restoration programs must include a process and a means for measuring how well they meet their goals. For the Comprehensive Study, a more specific adaptive assessment and management process will be part of any future regional plans for flood damage reduction and ecosystem restoration, and will be used to measure responses of natural and human systems as projects are implemented. The primary role of both Adaptive Management and Adaptive Assessment is to have an on-going process for increasing the probability that the plan will be successful.

25-1 Your comment on the Plan is appreciated. The Comprehensive Plan aims at integrating flood management and ecosystem restoration. See response number 33-7.

25-2 In general, setback levees are inherently safer than levees close to a channel. However, like any levee, a setback levees require careful siting and design to remain reliable. A setback levee that consists of sand and/or is situated on a poor foundation will have a lower factor of safety than a levee that is close to the river channel if it has been constructed and located properly. A local project study would provide this information and help determine the best place to locate a new levee.

25-3 Traditionally, open space includes natural areas, parks, and agricultural lands. Public recognition of the value of open space has increased. It is an important component of the plan (third Guiding Principle). However, the importance of open space does not directly translate to the need for additional ecosystem restoration, since ecosystem restoration would normally involve the improvement of the ecosystem functions of areas that are already considered to be open space.

25-4 The July 22, 2002 Draft Interim Report discusses approaches for operation and maintenance (O&M) that are consistent with ecosystem restoration and the Guiding Principles. Changes to the O&M of the present system cannot be done in a manner that reduces the protection of public safety. Applying the Guiding Principles to future changes in the system provides an opportunity to adopt O&M procedures that protect public safety, reduce flood damages, and restore degraded ecosystems.

25-5 As you noted, the delineation of floodplains can have effects on individuals, communities, and potential projects, including the calculation of economic damages. The Comprehensive Study floodplains were developed specifically for use in estimating economic damages within the Central Valley at a basin-wide scale. Basin-wide hydrologic and hydraulic analyses were performed utilizing a unique approach to floodplain delineation that captures the influence of multiple storm conditions on the shape and extent of the floodplain. The large volume of information necessary for this system-wide analysis made it impractical to conduct analyses at the same level of detail typical for local floodplain mapping efforts. It would be difficult to eliminate inconsistencies between FEMA and Comprehensive Study floodplains due to fundamental differences in the analysis purpose and approach, assumptions, level of detail, and changes in hydrology since FEMA floodplains were developed. FEMA's mandates regarding floodplains and flood insurance regulation are a matter of Federal law, and changing such laws is beyond the authority of the Comprehensive Plan.

25-6 The Comprehensive Plan is based on the principle that all future projects affecting the flood management system, regardless of type or size, need to adopt a comprehensive approach that considers individual and cumulative impacts to the system as a whole.

25-7 Transitory floodplain storage is intentional and compensated flood water storage within the floodplain. Such controlled storage of flood waters can lower peak flows in the river, reducing the risk of failure of the levee system. Similar to the existing flood bypasses, transitory

floodplain storage areas can be used for agriculture and, consistent with providing flood protection, habitat restoration as well.

25-8 The Comprehensive Plan recognizes that public understanding of flood risk is as important to public safety as the levees and other physical features that provide flood protection. In response to this challenging task, recent study documentation has adopted the frequency approach to describe flood risk (i.e. 2% probability, or a 1 in 50 chance of occurring in any year). The model developed for the Comprehensive Study to evaluate project performance (HEC-FDA) also offers several options for communicating flood risk, such as long-term risk, to promote public understanding. The Plan's Guiding Principle for floodplain management is intended to ensure that future projects consider residual risk, public education, and other 'non-structural' activities that contribute to reducing flood damages. Your suggestion that flood insurance requirements and rates vary based on flood risk is one of the potential measures listed on page 47 of the July 22, 2002 Draft Interim Report.

25-9 Pages 33 – 35 of the July 22, 2002 Draft Interim Report lists some of the day-to-day tasks that The Reclamation Board would conduct. As stated on page 35, The Reclamation Board currently has all these responsibilities and authorities for the Comprehensive Plan area. Some responsibilities, such as emergency flood response, are closely coordinated with the California Department of Water Resources.

25-10 Coordinating with CALFED in support of their single blueprint for ecosystem restoration is an important part of the Comprehensive Plan as evidenced by the ninth Guiding Principle on page 30 of the July 22, 2002 Draft Interim Report.

25-11 Additional technical studies, including geomorphic analyses, need to be conducted as future feasibility studies are initiated in order to maintain a comprehensive, system-wide focus. It is anticipated that those entities involved in future project development will undertake such activities as necessary to develop a sound project. It is not certain at this time what entity would conduct each activity and the level and extent of such activities would likely be determined as appropriate for each future project effort. It is possible that some entities would be able to undertake research projects separate from project development efforts.

25-12 Consideration for global climate change was included in the July 22, 2002 Draft Interim Report due to the potential for significant impacts in the State of California. A growing number of projects have begun to consider climate change in their planning process. It was highlighted in the July 22, 2002 Draft Interim Report so future projects related to the Comprehensive Plan will also consider potential climate change. However, whether it deserves more emphasis remains to be seen in the future.

25-13 Ensuring project performance is one important duty of the organizational structure. The bulleted items on pages 40 – 42 are potential performance measures that need additional work before they are ready for measuring success.

25-14 Effective use of the existing reservoir system is a logical first-step toward flood management improvements in the Central Valley. Preliminary technical analyses have

highlighted the potential benefits of reservoir reoperation, and the most promising opportunities are identified under each regional description in the July 22, 2002 Draft Interim Report. Coordinated reservoir operation, anticipatory releases, and other reservoir options need to be analyzed in detail in future feasibility studies. Page 49 of the July 22, 2002 Draft Interim Report identifies some potential components of reservoir reoperation.

26-1 Each of the Guiding Principles supports a system-wide approach for project planning. This includes a strong commitment by the State and Federal governments to assure that public safety is not compromised. In addition, the first Guiding Principle recognizes that public safety is the primary purpose of the flood management system. See response number 22-29 on the need for assurances that restoration sites will be maintained to avoid hydraulic impacts and for avoiding cost burdens to the local maintaining agencies.

The Comprehensive Plan recognizes the benefits of a comprehensive approach to ecosystem restoration in the seventy Guiding Principle, “use an ecosystem approach.” This principle states: “recognition of the interconnectedness and dynamics of natural systems interwoven with human activities in the landscape is integral in this process” of using a “systems view in assessing and addressing restoration needs and opportunities . . .” In fact, “each of the Guiding Principles supports a system-wide approach for project planning.” The measures and alternatives used in developing local and regional projects would be formulated in cooperation with State and local interests, and the direct, indirect, and cumulative impacts of both the flood damage reduction and ecosystem restoration features will be evaluated to assure that any alternative developed would satisfy the Guiding Principles. Another important factor to keep in mind when reviewing the July 22, 2002 Draft Interim Report is that the document is not site specific, and does not attempt to identify solutions that are all universally applicable.

26-2 This discussion of likely future conditions on page 16 of the July 22, 2002 Draft Interim Report is intended to define the conditions that are likely to occur if no project is implemented. Given the likely continued pressures on natural resources, it is unlikely that environmental concerns could be limited to designated areas. One example is anadromous fish, which traverse the entire river corridor. However, if environmental conditions are significantly improved in the future as a result of implementing a project, the limits applicable to ongoing operation and maintenance of levees could be significantly reduced. The Comprehensive Plan does, in fact, make a strong commitment to working within the present system, including public lands, to accomplish both flood damage reduction and ecosystem restoration. This commitment is found in the Plan’s eighth Guiding Principle (page 30), “Optimize use of existing facilities”, which recognizes the importance of making the most effective use of existing facilities before implementing changes or adding to the system. Any references to restoring the “natural floodplain” would apply only to areas that could technically, politically and economically be restored. Moving communities and costly infrastructure out of the floodplain for restoration purposes is not a feasible concept, and is not at all suggested anywhere in the Comprehensive Plan.

26-3 The intent of the July 22, 2002 Draft Interim Report was to present a Comprehensive Plan that recognizes the need for both flood damage reduction and ecosystem restoration. Flood management projects will be encouraged to include ecosystem restoration if opportunities are

available and ecosystem restoration projects will be encouraged to include flood damage reduction if opportunities are available. The tenth Guiding Principle promotes this approach. See response number 19-4.

26-4 The text on page 19 of the July 22, 2002 Draft Interim Report is acknowledging that repairing a weak upstream levee has the potential to transfer hydraulic impacts downstream and that "...system-wide solutions would need to include measures to address the additional flow and volume of floodwater ...". The fourth Guiding Principle addresses the need to avoid hydraulic and hydrologic impacts. The Draft Interim Report does not propose setback levees or any other specific projects for the Feather River Basin. Any future project would need regional stakeholder support including cost-sharing. The Reclamation Board is not aware of any mechanisms that are limiting growth. The Reclamation Board does not anticipate new floodplain designations in that area.

26-5 All measures would be evaluated for proposed projects during the feasibility studies. Feasibility study evaluations of alternatives identify those measures that are constructible and the degree to which safety, reliability, and functional requirements and objectives are met. See response number 22-42.

26-6 The referenced statements in the report indicated that through modeling studies, there are some conditions that vegetation in the floodway can be maintained without reducing conveyance capacity. The statements do not imply that they apply to all conditions. It is through these modeling applications that projects that effectively integrate flood damage reduction and ecosystem restoration can be implemented.

26-7 New foothill reservoirs and additional storage in existing reservoirs are both potentially effective options for providing increased flood storage and other benefits such as water supply. The report will be revised to more clearly convey that all storage options will be considered when developing future projects.

26-8 See response number 22-15.

26-9 Any references to restoring the "natural floodplain" only apply to areas that could technically, politically and economically be restored. Moving communities and costly infrastructure out of the floodplain for restoration purposes is not a feasible concept, and is not suggested anywhere in the Comprehensive Plan. The report will be revised to clarify, and emphasize, that the Plan does not seek to restore any conditions to any particular point in time for any reason.

26-10 The Guiding Principle concerned with agriculture and open spaces recognizes that agriculture in its own right provides important economic benefits to the communities. Some agriculture is flood durable and is compatible with good floodplain management practices. Most agricultural practices have habitat components for many wildlife species and are generally compatible with "natural" habitat as an adjacent land use. Statements in the report regarding the voluntary conversion of agricultural operations on some farmlands to restored habitats refer to the abundant public and private programs that are currently available to willing landowners. At

the programmatic evaluation level of the Comprehensive Study, flood durable, wildlife-friendly agricultural programs are beneficial because they help provide temporary storage in the floodplain increase groundwater recharge, and provide habitat for fish and wildlife species. As regional projects are developed, local stakeholders (including the agricultural community) and other decision makers will determine the characteristics of specific projects. Because the stakeholders and other decision makers need to be fully aware of the consequences of a new project, the third Guiding Principle calls for the evaluation of “the impacts of projects on agriculture and open space lands, the flood damage reduction and ecosystem benefits of these lands, the economic and environmental effects on crop production, and the effects on associated service industries, infrastructure, and local communities.”

26-11 The system-wide projects listed on pages 46 – 51 of the July 22, 2002 Draft Interim Report are primarily non-structural in nature since they involve programs or policies that can be instituted system-wide. As explained on page 24, “Public views on needs and expectations are so diverse that planning and construction of a single system-wide physical project is impractical at this time and in fact would likely take decades to attain.” For that reason, “structural” projects are more likely to occur at the regional or local level where stakeholders can work through the common issues as projects are developed. A clarification will be added to the system-wide description on page 32 of the July 22, 2002 Draft Interim Report.

26-12 A system-wide determination of costs and benefits would certainly improve the system-wide approach that is the basis of the Comprehensive Plan. However, as mentioned on page 37 of the July 22, 2002 Draft Interim Report, existing laws and regulations require all increments of a project to be economically justified for Federal participation in implementation. Future resolution of the implementation issues may allow for system-wide justification. Adjoining regions will be encouraged to cooperate on planning that can affect their regions. The fourth Guiding Principle is to avoid hydraulic and hydrologic impacts. The lower Sacramento River Region cannot make improvements that negatively impact the Feather River Region. On the other hand, if the lower Sacramento River Region proposes improvements that lower water stages in the Feather River Region, cooperation between the regions would enhance the viability of the project.

26-13 This discussion on page 40 of the July 22, 2002 Draft Interim Report, under item 2, is intended to define how alternatives will be evaluated and project performance measured, not to define potential alternative solutions for improving flood damage reduction and environmental restoration. As mentioned in response number 26-2, there are limited opportunities to use natural floodplains. It is important to keep in mind that future projects will be formulated to address flood control and environmental problems in cooperation with State and local interests. These projects will be formulated to reduce the risk of flooding, improve the local and regional environmental resources, and provide for improved operation and maintenance.

26-14 P.L. 84-99 authority limits the funding to levee restoration, but modifications to the flood management system, such as environmental restoration, could be a betterment paid for entirely by a local sponsor or cost-shared as part of another construction authority which could be utilized. The paragraph page 44 should remain as written.

26-15 Expansion of the NFIP is included in a list of potential measures that could be considered in order to reduce flood damages. The 1% risk of flooding in any given year standard for participation in the NFIP is generally considered a minimum standard. Depending on residual risk of an area, improvements to NFIP may assist in reducing damages and risk to life from flooding by encouraging a reduction of new development, flood proofing existing development or improvements of flood control structures.

26-16 “Consider establishing a higher (such as 1 in 200 risk ...) minimum level of flood protection standard for urban areas” is an example of a potential measure. The details of all potential measures need to be worked out as projects or policies are developed. If stakeholders in a region decide that a project is needed to provide protection from a 1 in 200 risk flood and the project is feasible, then they could cost-share along with the State and Federal governments.

26-17 One purpose of identifying a variety of wildlife-friendly agricultural practices is to provide the local landowners the opportunity to select individual practices that would be compatible with existing and ongoing agricultural operations. If compatible restoration practices are identified and implemented, there would be no conflict between agriculture and the resources created. However, some work is needed to better define “compatibility” and to assure growers that operation flexibility would not be constrained. There are currently no plans for incorporating a formal Safe Harbor feature into the Comprehensive Plan. However, the State is working with potentially affected landowners to identify issues of concern throughout the project area. One of the issues that are being discussed is a “Good Neighbor Policy” that is trying to identify solutions to the problem you voiced. Safe Harbor plans, or similar agreements, could be developed during the development of regional projects to foster the invaluable partnership between agriculture and wildlife management.

26-18 The Reclamation Board’s authority applies to flood management in the Central Valley (see page 36 of the July 22, 2002 Draft Interim Report). Due to that authority, priority is given to the first Guiding Principle, “public safety is the primary purpose of the flood management system” (see page 28 of the Draft Interim Report). The first page of the report recognizes the conflicts between maintenance of the existing flood management system and ecosystem needs. Page 16 states, “levee maintenance has grown more difficult and expensive due to such factors as ...conflicts with environmental concerns.” The objectives on page 17 seek to “minimize the flood management system operation and maintenance requirements.” Page 41 lists several potential performance measures for minimizing these requirements. Environmentally Sensitive Channel Maintenance was not intended to give restoration first priority but to find a way to consistently maintain the system for the benefit of public safety, The Reclamation Board’s and the Guiding Principles’ first priority.

26-19 The Environmentally Sensitive Channel Maintenance section on page 50 of the July 22, 2002 Draft Interim Report presents several potential methods to reduce the conflict between the environment and needed maintenance. These should be more fully developed, on a site-specific basis, with input from resource agencies, stakeholder groups and the levee and reclamation districts responsible for the maintenance. A clarification will be added to this section of the report.

26-20 Page 49 of the July 22, 2002 Draft Interim Report briefly discusses some ideas for reservoir reoperation that could be implemented on a system-wide basis or as a component of each regional project. These are primarily to provide more efficient flood operations. Once the water is stored and provides its flood management benefit, there may be some ecosystem benefits in how that water is released to evacuate the reservoir flood pool. In addition, page 49 notes there may be some water supply benefits depending on the selected operation. The reoperation mentioned on page 55 is primarily for flood control but is poorly worded to give the impression that it may be intended more for fish and habitat. The wording should have been more like that on page 64 and will be modified in the text. The intent was to have the fish and habitat benefit from how the water is released once the stored water meets its flood management needs.

26-21 This section will be modified to better reflect stakeholder concerns. The system can no longer function as designed due to regulations not foreseen when the system was designed and built. It is increasingly difficult to obtain environmental compliance permits for maintenance activities. Mitigation costs are increasingly high, which make maintenance of the system less feasible as time goes on. The Comprehensive Plan is not attempting to redesign the system to handle habitat, but rather to outline a process that guides development of future locally supported projects that contribute to reducing damages from flooding and restoring the ecosystems of the Sacramento and San Joaquin River basins within the current regulations. As future projects are developed, a broad array of actions would be considered. Actions that best meet the objectives of the project would be identified. See response number 40-31.

26-22 The potential measure allowing willow planting near the waterline would be combined with other possible flood damage reduction and environmental measures into project alternatives, and evaluated to determine how each complete alternative would satisfy the Guiding Principles for public safety and environmental restoration. This means that the project structural (levee) design would accommodate the willow growth along the waters edge, or any other vegetation established as part of the project without affecting the safety of the new system. The reference to “small-stem diameters” will be removed.

26-23 Within the context of the flood management system, a meander zone is the limit within which the natural movement of the river is allowed to occur. This area could include revetment, levees and other hard points that help define it. The existing system allows for a degree of meandering that varies throughout the study area, from none to a more extensive meander zone. Future projects, developed with stakeholder input, could consider various degrees of meander. Stakeholder participation in future project development is critical in determining goals for restoring river meander and flood protection. Removal of revetment is one measure that could be considered when developing a project to restore natural processes. See response 22-42.

26-24 Several options are available to improve the existing levee system, including fixing levees in place and relocating levees. There are a number of methods to strengthening levees. An existing levee can be rebuilt in place to meet current standards, provided the foundation under the levee is adequate. A water barrier, such as a slurry wall, can be constructed into the levee to prevent seepage. The water side of the levee could also be hardened to prevent erosion. The report will be modified to better describe these options.

26-25 The text on page 61 of the July 22, 2002 report will be modified to replace the “38,000” with “50,000.”

26-26 The Comprehensive Study preliminary modeling has highlighted the complexity of the Sacramento River System, particularly the interactions at the confluence of the Feather River, Sutter Bypass, and Sacramento River. The need to study these regional interactions is the basis for the system-wide, comprehensive focus advocated in the Comprehensive Plan. Future regional feasibility studies need to recognize the interaction of individual regions with the system as a whole and consider ways in which a project could harm, or be augmented to benefit, other areas. This approach would also prevent potential solution areas from being overlooked because they are removed from areas with more severe flood problems.

26-27 The sentence, “Opportunities to make changes to the existing floodways could be lost in the future as urban development pressure increases”, will be removed from page 62 of the July 22, 2002 Draft Interim Report. The concept should apply more broadly the potential future conditions as stated on page 16 of the report.

26-28 The Comprehensive Plan does not set specific goals for future studies, such as restoring the original designed level of flood management or creating a specific number of acres of new habitat. That is because these goals or objectives will vary from project to project to meet the needs of stakeholders and local interests. As such, future comprehensive studies in the Yuba – Feather region may determine that another level of flood protection is more appropriate than what would have been provided if Marysville Reservoir was constructed. Per your comment, the regional description will be expanded in the report to include a discussion of Marysville Reservoir as part of the original flood control project.

26-29 The maintenance of any levees constructed as part of a project would be subject to the terms and conditions included in the Operation and Maintenance manual prepared for the project. This maintenance would typically be the responsibility of the local sponsor, as a result of an agreement between that agency and the State of California. Any maintenance required to assure the success of the vegetation would be the responsibility of a non-Federal sponsor for the environmental components. This non-Federal sponsor could be a non-profit organization, a local governmental agency, the State, or the levee maintaining organization. Each project proposed for implementation will be supported by environmental documentation to display potential impacts within the study area and downstream.

26-30 See response number 26-23.

26-31 The focus of the Comprehensive Study to date has been on the Sacramento and San Joaquin Rivers and their major tributaries. However, future feasibility studies will need to address adverse hydraulic impacts, including those to smaller tributary drainages, as outlined by the Guiding Principles. Some of these drainages are already included in the Comprehensive Study’s hydraulic models, while others will need to be evaluated in future modeling efforts.

27-1 An August 2002 meeting with Caltrans personnel regarding comments on the July 1, 2002 version of the report resulted in the following two changes to the July 22, 2002 version of the Interim Report 2002. An infrastructure protection Guiding Principle is being added to the report.

11.) **Protect infrastructure.** Projects and modifications of existing projects should consider direct and indirect impacts to infrastructure, including but not limited to transportation (highways, railroads, navigation), communications, utility, and water transport systems. Transportation corridors and facilities are necessary for economic viability, emergency/evacuation response, and public safety. Potential impacts to infrastructure could limit future options and could result in unintended consequences.

The fourth Guiding Principle will be modified to add the words “as well as man-made and natural resources” in the next to the last sentence of the paragraph.

27-2 See response number 21-4.

27-3 These issues are generally covered under the Guiding Principles set out in the report and do not need to be specifically repeated in this document.

28-1 Your comment on the Guiding Principles is appreciated.

28-2 See response numbers 24-2 and 33-7.

28-3 See response number 19-3.

28-4 See response number 29-6.

28-5 See response number 24-7.

29-1 Institutional problems are identified at the end of the section entitled “How We Can Influence Future Conditions.” The report will be revised for clarity.

29-2 See response number 25-11.

29-3 There have been two EFM pilot projects (evaluation of hypothetical system modifications) conducted to date, one on the San Joaquin River near the town of Vernalis and one on the Sacramento River near the town of Princeton. The two sites were chosen because the two reaches do not have hydraulic backwater issues and there are daily flow records available. The projects evaluated potential changes to the terrestrial and aquatic ecosystems in the study areas resulting from hypothetical setback levees. Members of the Comprehensive Study team completed both projects.

29-4 The Guiding Principles were developed to provide system-wide guidance, including needed environmental sensitivity. The Corps and The Reclamation Board are exploring ways to continue to partner in a multi-agency, interdisciplinary fashion.

29-5 Funds to implement the Comprehensive Plan will be largely dependent on Federal and State legislative action. At this time, Corps participation in implementation can be accomplished on a project-by-project basis as funds are appropriated by the U.S. Congress and non-Federal sponsors are identified. State participation would be dependent upon authorization and appropriation by the State legislature. The California Water Code Section 12585.7 shows the percentage of the non-Federal project cost that can be paid by the State. The State normally would pay 50 percent of the non-Federal cost but can pay as much as 70 percent if the project provides special ecosystem, recreational or open space benefits. The remainder of the non-Federal costs are paid by the local entities. Other non-Federal entities, such as non-profit or non-governmental organizations, could ultimately provide funding for efforts relating to the Comprehensive Plan and its implementation. Federal law requires non-Federal sponsors share costs and assume project operation and maintenance responsibilities.

29-6 The second paragraph on page 4 of the July 22, 2002 Draft Interim Report will be modified read to explain that many stakeholders approved of a single system-wide plan as a concept, but there was no consensus regarding potential features of such a plan. Feedback from the public forums and other coordination indicated that, on average, stakeholders prefer a process that guides development of locally driven projects, as opposed to an agency-driven system-wide, physical plan. Coordination is needed with all affected groups in order to develop trust and identify mutually acceptable solutions in the future.” As explained on page 24, “Public views on needs and expectations are so diverse that planning and construction of a single system-wide physical project is impractical at this time and in fact would likely take decades to attain.”

29-7 See response number 21-4.

29-8 The Comprehensive Study team will respond to all written comments received. This comment/response document is being provided to each individual or entity that provided written comments. This document is also available to anyone who requests it. The July 22, 2002 Draft Interim Report will be revised as appropriate based on comments received and is scheduled to be transmitted to The Reclamation Board in early December 2002.

30-1 Your comment on the Guiding Principles is appreciated.

30-2 See response numbers 24-2 and 33-7.

30-3 See response number 19-3.

30-4 See response number 29-6.

30-5 See response number 24-5.

30-6 See response number 24-6.

30-7 See response number 24-7.

31-1 Your comment on the system-wide approach is appreciated. As shown on page 28 of the July 22, 2002 Draft Interim Report, each of the Guiding Principles supports a system-wide approach for project planning.

31-2 See response numbers 24-2 and 33-7.

31-3 See response number 22-1.

31-4 The Comprehensive Study has reviewed the San Francisco Bay Estuary Comprehensive Conservation and Management Plan (CCMP), and the subsequent document “Goals Project, 1999, Baylands Ecosystem Habitat Goals”, and finds the two studies are compatible. In addition, both documents are generally consistent with the Bay/Suisun portions of the CALFED Ecosystem Restoration Program Plan Vol II: Ecological Management Zone Visions. The geographic scope of the Comprehensive Study covers the Sacramento and San Joaquin River watersheds, but does not include San Francisco and Suisun Bays and surrounding marshes. Compatibility and consistency can be achieved through coordination with management and policy groups within CALFED: The Corps of Engineers, The Reclamation Board, Department of Water Resources, and the State Water Resources Control Board (overseer of the Regional Water Quality Control Board, which administers the CCMP) are all participants. The Comprehensive Plan Guiding Principles include language that is generally consistent with CCMP goals of connectivity of habitats, continuous riparian corridors, restored habitats, and intact patches of adjacent habitats. The Comprehensive Study at this time is at a very large-scale planning phase, while the CCMP has developed detailed restoration goals for habitats and species around the Bay. As detailed projects are developed from the Comprehensive Study, it is likely that key species such as anadromous fish and birds that move between the two study area boundaries will benefit. The Guiding Principles also seek to provide for sediment continuity that could influence the amount of sediment reaching the Delta and the Bay.

31-5 The Comprehensive Study has from its beginning, taken care to avoid impacts to the Delta. As the San Francisco Estuary is located downstream from the Delta, it is highly unlikely that implementation of projects under the Comprehensive Plan would adversely impact the San Francisco Bay Estuary. Future regional projects will be subject to environmental review under NEPA and CEQA; this will determine potential hydraulic or biotic impacts on the San Francisco Bay Estuary, evaluate alternatives, and identify mitigation measures for any adverse impacts. In addition, the fourth Guiding Principle requires that projects approved and constructed under the Comprehensive Plan avoid hydraulic and hydrologic impacts to downstream areas.

31-6 See response number 25-11.

31-7 Water supply is not included as a project purpose for the Comprehensive Study. However, future regional projects will be subject to environmental review under NEPA and CEQA. Environmental restoration projects require water. Restoration planning will be commensurate with available water supply and water rights to sustained planned habitat features. However, riparian and grassland habitats within the floodplain require less water than wetland habitats.

31-8 Implementation of projects under the Comprehensive Plan may require coordination with the CCMP and many other programs and projects. Rather than attempting to list every potential project or program the July 22, 2002 Draft Interim Report listed the major programs and projects within the study area. To cover the other potential needed coordination, “Coordinate with other programs and projects as appropriate” will be added in a new bullet under Coordination with Ongoing Programs section.

31-9 To date, expert technical review of the models has included State, Federal, and academia experts. See response number 3-6. As mentioned on page 34 of the July 22, 2002 Draft Interim Report, work needs to continue on model maintenance. Additional scientific/peer review (page 35) will be needed.

31-10 While there is general agreement on the merit of a comprehensive system-wide solution, agreement is lacking on specific physical components to such a project. See response number 31-5.

31-11 The fourth Guiding Principle applies to all areas, including the Bay. See response number 31-5. The Bay is outside the Sacramento and San Joaquin River basins, as defined in the study and thus is not part of the study area.

31-12 Each project proposed for implementation will be supported by environmental documentation to display potential impacts within the study area and downstream. Through DWR, The Reclamation Board does have staff to identify permit violations. Given the scope of the potential projects under the Comprehensive Plan, staff and budget will need reevaluation. See response number 22-5.

31-13 See response number 31-5. As projects are developed in the future, as per existing project development processes, such as compliance with the National Environmental Policy Act, the California Environmental Quality Act and all other pertinent Federal, State and local regulations; all “reasonably foreseeable” beneficial and adverse effects will be identified. Direct, indirect and cumulative effects of the action will be addressed and mitigated as determined appropriate. Coordination with CALFED will include reporting restoration project outcomes to CALFED’s Science Program and Ecosystem Restoration Program (ERP) to present and assess research findings and monitoring data and to measure progress towards ERP’s Multi-Species Conservation Strategy. The CALFED Science Program includes a Comprehensive Monitoring, Assessment, and Research Program (CMARP), which will include strategies to monitor key system attributes and indicators, to undertake focused assessment and research to obtain better technical understanding, and to facilitate the transfer of technical information to decision makers. Under this program, CALFED may wish to monitor the Bay for impacts. If impacts are found, the project may need to be modified.

31-14 Water surface elevations in the San Francisco Bay are dominated by sea level and tide cycles, thus water surface elevations in the Bay are relatively unaffected by flood flows exiting the Sacramento – San Joaquin Delta. Preliminary modeling of floods under existing conditions in the Delta has indicated that, in general, flood flows increase western Delta stages during low tide, but not during high tide periods. These results suggest that flood flows cannot overcome

the influence of the ocean during high tide periods but effectively ‘fill in’ the void left by the receding tide, as indicated by the increases in low tide stages. Because western portions of the Delta have shown no increase in peak stage during simulated flood events and tide cycles are known to dominate the Bay, the estuary downstream from Martinez was not included in the current Comprehensive Study Delta modeling effort. Preliminary modeling of a range of potential future flood flows shows the same results. However, detailed analyses of the complex hydrodynamic conditions in the Delta and estuary may be performed, if necessary, in future studies. See response number 31-5.

31-15 Although the July 22, 2002 Draft Interim Report is not an environmental compliance document, the environmental review process was used as a guide in developing the period for review. Generally a 30-day comment period is assumed reasonable for review of environmental documentation; that is, environmental assessments and initial studies. To facilitate the review, the Comprehensive Study team completed eight outreach forums throughout the Valley to provide additional opportunity for feedback on the document. After release of the comment-response document (October 2002) and prior to release of the final 2002 Interim Report to The Reclamation Board (December 2002), the opportunity for individual meetings will be provided to each commenter.

32-1 See response number 22-1. The fourth Guiding Principle, to avoid hydraulic and hydrologic impacts applies to all areas, including the Delta.

32-2 The Comprehensive Plan does not propose any specific actions or projects. When regional projects are proposed in the future, all direct, indirect, and cumulative environmental impacts including impacts to water quality throughout the system will be described and analyzed as required by CEQA and NEPA. The Comprehensive Study has developed hydrologic and hydraulic models and other tools that will aid in this process.

32-3 The words “as appropriate,” in reference to CALFED, will be removed from pages 33 and 38 of the July 22, 2002 Draft Interim Report.

33-1 See response number 24-2.

33-2 See response numbers 24-2 and 33-7.

33-3 The existing flood management system has prevented billions of dollars of flood damages over the years. However, flood risk still remains within the study area due in some places to a system that was not designed to protect against very large events and in other places to levee foundations that are not adequate to withstand prolonged high water. In addition, construction and operation of the flood management system has contributed to the decline in ecosystem health. There are opportunities to make improvements to the system, including how the floodplain is used, that would further reduce the potential for flood damages.

33-4 The measures you mention have the potential to reduce flood damages, to improve ecosystem health, and to maintain agriculture viability. Whether they are the most efficient and effective measures will require a detailed analysis of the costs and benefits of alternative

solutions during subsequent investigations of local and regional projects. Because these measures provide multiple benefits, they are worthy of serious consideration.

33-5 See response number 19-4.

33-6 See response numbers 25-6 and 29-6.

33-7 The report not only identifies the potential for significant benefits when projects incorporate both flood damage reduction and ecosystem restoration, it repeatedly stresses the importance of integration of flood damage reduction and ecosystem restoration. The July 22, 2002 Draft Interim Report first mentions this on page 2, "For an effective and efficient solution, flood damage reduction and ecosystem restoration need to be integrated into the same solution." The Guiding Principles (page 28) were prepared with this integration in mind, "A set of basic principles is needed to ensure that changes to the flood management system integrate flood damage reduction and ecosystem restoration and consider system-wide implications of those changes." The Guiding Principles are intended to provide "guidance", not "requirements" for individual projects. However, due to the purpose and locations, some individual local projects may provide mainly flood management or mainly ecosystem restoration benefits. The complete set of Guiding Principles will likely be more applicable to the regional projects due to the opportunities provided by their larger geographic scope. See response 21-4. Measures that support the linkage between flood damage reduction and ecosystem restoration will likely be more cost effective and have broader public support than those that provide only flood management benefits or only ecosystem benefits. See "Measuring Project Performance" section beginning on page 40 of the July 22, 2002 Draft Interim Report.

33-8 A more complete discussion of how The Reclamation Board intends to apply the Guiding Principles will be added to the report.

33-9 Beginning on page 40 of the July 22, 2002 Draft Interim Report, the potential performance measures show the types of considerations that can be used in evaluating and comparing alternative projects and in measuring performance once the projects are constructed. No one project is likely to provide benefits for each of those performance measures. During project planning, a project that provides benefits for all or a majority of the performance measures will be more beneficial than a project that provides benefits for only a few of the performance measures. More detailed work is required to fully develop the performance measures. The Reclamation Board will use the performance measures together with the Guiding Principles when considering a project permit.

33-10 More detailed work is required to develop a process to incorporate objectives, performance measures and the Guiding Principles in The Reclamation Board's decision-making process. The objectives/performance measures are tools that help project evaluation and alternative analysis at the project planning stage and as ways to measure project performance once a project is constructed. A more complete discussion of how The Reclamation Board intends to apply the Guiding Principles will be added to the report. The basis of every Reclamation Board decision is open for discussion at its regularly scheduled meetings. The

Reclamation Board is one of the few State organizations that makes all its decisions in an open public forum.

33-11 Additional text will be added to the Comprehensive Study Implementation section of the report to show a general strategy for initiating projects, how The Reclamation Board and others may participate in future projects, and how The Reclamation Board intends to use the Guiding Principles and to ensure that system-wide assessments are conducted. Once agencies and stakeholders generally agree on the framework of an implementation plan, more detailed information can be developed.

33-12 The Guiding Principles provide clear direction for integrating a viable ecosystem component into future projects. The ninth Guiding Principle states: “future projects will give priority to those actions that provide benefits for both flood damage reduction and ecosystem restoration.” The tenth Guiding Principle states that all projects should consider opportunities for improving both flood management and ecosystem integrity. Furthermore, benefits from meeting both objectives likely will be needed to justify projects; many single purpose projects may not be cost effective. As part of the normal process for evaluating projects to determine whether they are cost effective, the Corps would conduct a formalized evaluation of flood damage reduction and ecosystem restoration benefits and associated costs. During review of the draft document, this analysis would be subject to review by all interested parties. All comments on this analysis would be considered during the preparation of a final document. In order to achieve flexibility and balance between ecosystem restoration and flood management on a regional scale, there are no plans to provide assurances that benefits occur to both objectives equally on a site-specific scale. Consideration will be given to possible preparation of an annual report.

33-13 Close coordination between CALFED and the Comprehensive Plan is essential for success of both efforts. The preliminary details of CALFED coordination are included on pages 38 and 39 of the July 22, 2002 Draft Interim Report and include coordination with Bay-Delta Public Advisory Committee, the Working Landscapes Group and other CALFED groups, as suggested. The required integration with the CALFED Ecosystem Restoration Program (ERP) draft Stage I Implementation Plan and involvement of ERP’s regional coordinators require ongoing participation in the Agency/Stakeholder Ecosystem Team meetings. Reference to those meetings will be added to the report. The difference between the suggestion and what has been set forth in the report is that responsibility for this coordination would fall upon the project proponent, which is not always going to be The Reclamation Board. When The Reclamation Board is not the proponent, The Reclamation Board would “ensure this coordination is done by the project proponent.”

33-14 See response number 2-1.

33-15 See response number 19-8.

33-16 The concepts of floodplain management are described in their greatest detail under the section on Floodplain Management Program Improvements, beginning on page 46 of the July 22, 2002 Draft Interim Report. However, the general concept of floodplain management is

discussed in various locations throughout the report, including under the following key sections: Technical Findings (page 21), Measures to be Considered in Future Project Development (page 25), Guiding Principles (page 28), and Comprehensive Plan Implementation (page 39).

33-17 The potential measures listed under the regional descriptions in the July 22, 2002 Draft Interim Report were only a partial list of possibilities. See response numbers 4-3 and 22-42.

33-18 The details for implementation have not yet been developed. See response number 29-5.

33-19 To keep the length of the Summary reasonable, the Comprehensive Study team prefers to display the titles of the Guiding Principles without all the supporting text. The titles provide the readers a good sense of the spirit of the guidance.

33-20 By considering the Guiding Principles when developing projects, it is intended that the basic direction of any one project would be expanded or refined to provide better consideration for the system. See response numbers 19-8 and 33-11.

33-21 See response number 33-11.

33-22 The source of the figure, Flood Damages Caused by Recent Flood Events, on page 1 of the July 22, 2002 Draft Interim Report is the March 1999 Post-Flood Assessment by the Sacramento District of the U.S. Army Corps of Engineers. The source will be added to the figure.

33-23 The text on page 4 of the July 22, 2002 Draft Interim Report regarding stakeholder interest in a master plan will be changed to more accurately reflect the language on page 23.

33-24 The SWP annually delivers about 3 million acre-feet of water. This information will be included in the Water Supply and Flood Management Reservoirs section of the report.

33-25 The referenced statement applies to the transfer of any type of problems, including the ecosystem. Clarifying language will be added to the report.

33-26 The preliminary evaluations cited in the July 22, 2002 Draft Interim Report included the modeling of levee realignments to create wider floodways along the Sacramento and San Joaquin Rivers. The preliminary corridors were intended to improve channel capacity and ecosystem conditions. However, the modeled floodways were not wide enough to provide significant floodwater storage. This is because the volume of floodwater that passes through rivers like the Sacramento is extremely large and peak river stages can persist for many days for large flood events; the additional land area within the widened floodways was simply not enough to store such large volumes of water. The additional storage noted in the draft report was needed to mitigate the higher flows conveyed by the widened floodways and prevent damages downstream. The report will be revised to clarify the purpose and results of this preliminary technical evaluation.

33-27 The Comprehensive Study has generated a great deal of technical information over the course of the study. It would be difficult to include all of this information in the report, which is intended to present the framework of the Comprehensive Plan and summarize the key issues and information that led to this approach. Please contact the study team if you would like additional, detailed information regarding preliminary modeling in the Delta. See response number 18-4.

33-28 The Comprehensive Study does have ecosystem restoration objectives, which are included under the planning objectives on page 17 of the July 22, 2002 Draft Interim Report. It is intended that the ecosystem restoration objectives of the Comprehensive Plan are compatible with CALFED restoration objectives, but that the only measures that would be implemented under the Comprehensive Plan would be those that involve changes either to the physical features of the flood management system or in the operation of the system during the flood control season. The document will be modified as follows: “Technical studies show, and stakeholders concur, that three broad categories of measures involving changes in the flood management system are needed to reduce flood damages and restore the ecosystem.” The integration of CALFED restoration goals and objectives with those of the Comprehensive Study is discussed in the ninth Guiding Principle on page 30.

33-29 “Maintenance” will be changed to “restoration” in the last bullet on page 25 of the July 22, 2002 Draft Interim Report.

33-30 See response number 19-5.

33-31 See response number 19-5.

33-32 The fifth Guiding Principle is directed at “all intended uses.” By providing additional wording for one intended use, the principle would need to be expanded to provide additional wording for all intended uses. The Comprehensive Study team believes that the suggested wording is covered by intent of the principle. In addition, restoration of natural processes and growth of native vegetation is provided in the sixth and seventh Guiding Principles.

33-33 As suggested for the seventh Guiding Principle, the last sentence beginning with, “Biotic resources...” will be moved to follow, “Ecosystem restoration uses a systems view...” However, the Comprehensive Study team does not agree with the suggestion to replace “as appropriate” with “whenever possible” in the second to last sentence because almost anything is possible if enough money is available. In review of the sentence, removing the words “as appropriate” may capture the intent of your comment.

33-34 The word “priority” is not consistent with AB 1147. The sentence: “In accordance with State law, projects with multiple-purposes are eligible for increased State cost-sharing,” will be added in place of the suggested wording.

33-35 While local, regional and system-wide project size projects may not be new, the ability to consider effects of such projects on the system is new. The report is being revised to better explain where projects may come from and how they will likely be developed. See response number 33-49.

33-36 The tasks listed on page 33 of the July 22, 2002 Draft Interim Report are simply a collection of the types of day-to-day tasks that The Reclamation Board and supporting staff will be conducting, without tying each one to a specific type of project. Many of the tasks are not project specific. For example, The Reclamation Board would need to respond to Legislative requests for specific information regarding the maintenance of the flood management system. As another example, the Board may choose to initiate an educational public outreach effort on what residual risk means to the average homeowner. In general, more of the tasks will be conducted for projects where The Reclamation Board is an active partner.

33-37 The Comprehensive Study and the CALFED Ecosystem Restoration Program (ERP) are committed to implementing restoration actions in an adaptive assessment/ management context. Implementation principles on adaptive assessment/management are contained in both the Comprehensive Study and the CALFED Program's Implementation Memorandum of Understanding. A specific process or procedure for implementation of adaptive assessment and management will be developed at the regional or site-specific project level. Large, complex regional restoration programs must include a process and a means for measuring how well they meet their goals. Goals will be established as regional interests, the local sponsor, the Reclamation Board and the Corps, develop restoration projects. For the Comprehensive Study, both adaptive assessment and adaptive management will be used to measure responses of natural and human systems as projects are implemented. The primary role of both Adaptive Management and Adaptive Assessment is to have an on-going process for increasing the probability that the plan will be successful. For clarification, the word "routine" will be removed from the text box.

33-38 As shown on page 36 of the July 22, 2002 Draft Interim Report, The Reclamation Board's authority is for flood management within the Central Valley. The Reclamation Board can sponsor projects that provide flood damage reduction and with secondary ecosystem benefits. The Reclamation Board would need to decide on its participation on a project-by-project basis including how the project contributes to meeting the overall system-wide objectives.

33-39 See response number 42-17.

33-40 See response number 22-15.

33-41 See response number 24-7.

33-42 The July 22, 2002 Draft Interim Report has been reviewed by CALFED, and their comments will be incorporated as appropriate. Opportunities for future coordination, at whatever level CALFED deems important, to ensure that CALFED goals and objectives are integrated into projects and that the value of individual projects are maximized, will occur as projects are developed, as discussed on page 38. The broader issues will also continue to be coordinated as projects are developed, but any new agreements or approaches could also be worked into the revised report, which is expected to be revised concurrently with the

documentation for each new project. This planning and coordination to maximize the cumulative value of all projects will require the collaborative effort of all stakeholder agencies.

33-43 See response number 25-11. As funding is appropriated for the study of future projects, additional technical studies will be conducted to ensure good planning, engineering and design at the project development level. The types and extent of the technical studies will depend on the potential project and the participants. In some cases, The Reclamation Board and the Corps may do joint basin wide studies. For regional projects, the studies could be conducted by any of the participants.

33-44 Targets for objectives will vary depending upon the desires of the stakeholders and will be developed during planning for individual local or regional projects. The report includes some potential performance measures (pages 40-42 of the July 22, 2002 Draft Interim Report). More specific performance measures will be defined when targets are identified during project planning.

33-45 The objectives for reducing flooding are stated in such a way that it is clear that safety or structures must be at risk before efforts will be undertaken to reduce flooding. The relevant objectives are:

- Reduce the risk to human life, health, and safety due to flooding.
- Reduce damages due to flooding.

Some of the measures of success listed under the objectives do not include mention of damages or safety, but they do clearly fall under the objective, where that distinction is made.

33-46 The concern over reduced frequency, depth and duration of flooding being contrary to what is needed for the ecosystem is covered by the first bullet under the second objective on page 40 of the July 22, 2002 Draft Interim Report. However, the report will be modified to add “(including frequency, depth and duration of flooding)” after “variability” in that bullet.

33-47 The impacts of regional or specific projects proposed within the Comprehensive Study boundaries would need to be evaluated through the NEPA/CEQA process. The hydrologic and hydraulic models would be used to compare flows within the system, evaluating alternative project conditions with and without the proposed project. Changes in hydrologic ecosystem functions such as flood flow attenuation, groundwater exchange, water quality improvement, and to a limited extent biotic integrity would be evaluated using these large-scale hydrologic and hydraulic models. The EFM has been developed for site-specific assessments, and will help predict natural recruitment and habitat quality at the site-specific scale. The EFM is not designed to examine system-wide effects.

33-48 See response number 2-1.

33-49 The system-wide models are intended to provide an overall understanding of the flood management system and to evaluate potential changes. Many of the details on how the models will be applied depend on the specific project. Depending on the scale of the potential project,

the system-wide models may not need to be run. For most small projects, the project proponent will need to develop site-specific models to estimate hydrologic and hydraulic impacts of the project. If the site-specific models show no change in flooding frequency and duration within the project limits, then the system-wide models may not be run. If there is a need to interface a site-specific model with the system-wide models, any conflicts will need to be worked out on a case-by-case basis. The Comprehensive Study models will be made available for public use. See response number 34-12. Mitigation would also be developed on a case-by-case basis.

33-50 The reference on page 44 of the July 22, 2002 Draft Interim Report on the need to have progress on the water supply issues will be removed. In some areas, the Upper San Joaquin River region for instance, the opportunity to restore riverine ecosystems is limited by the lack of an ecosystem water supply. For the upper San Joaquin River, the USBR study is investigating the feasibility of increased storage for multiple purposes. The Reclamation Board and the Corps will coordinate with that investigation. Some stakeholders may not want to move forward with a flood management/ecosystem restoration project before resolution of water supply issues. See response number 34-14.

33-51 The first sentence on page 50 of the July 22, 2002 Draft Interim Report mentions that maintenance is becoming more difficult due to increasing conflicts with environmental regulations and increasing costs. The second sentence was an attempt to state that given this existing condition, more restoration may result in more conflict. This sentence will be removed from the report.

33-52 The intent of “best management practices” would be to encourage the improvement or restoration of ecosystems, not just the preservation of ecosystems. However, some practices may target just preservation. The language of the first bullet will be modified to remove the words: “preservation operation.” Ecosystem restoration should ideally be self-sustaining and not require maintenance. However, because of the dual objectives of the system, ecosystem maintenance may be needed at times. Vegetation removal techniques should be compatible with the natural community. A statement to this effect will be added to the report.

33-53 The suggestion to change “constructing” to “implementing” in the first sentence of the second paragraph of page 52 of the July 22, 2002 Draft Interim Report is not compatible with how the remainder of the report uses “implementation.” Page 36 begins discussion of the Comprehensive Plan Implementation, which includes planning. In an attempt to address the suggestion, the sentence will be reworded to read, “Currently, there is strong interest in new projects in some regions.”

33-54 See response number 33-50. The last two sentences in the fourth paragraph on page 52 beginning with, “Regional projects for these ...” will be removed from the report.

33-55 The report will be modified to reflect your input, as follows: “In accordance with SB 1086, the Sacramento River Conservation Area Forum is in the process of implementing a management plan for the Sacramento River and its tributaries that would protect and restore both fisheries and riparian habitat.”

33-56 The first sentence of the fourth paragraph on page 55 will be reworded, “The California Department of Water Resources is investigating the potential of additional off-stream storage for water supply at Sites Reservoir and other locations in their North of Delta Off-Stream Storage Investigations.”

33-57 Periodic high flows in the flood management system would flush sediment downstream. However, a detailed analysis would be required to determine how large the flows needed to be and how long they needed to be sustained to be effective. A study of this magnitude is not possible at this time due to funding limitations. This measure could be evaluated during local feasibility studies as local interests identify them. The references to periodic dredging as a potential measure for maintaining channel capacity will be revised. While it is premature to decide categorically that dredging would not be implemented under the Comprehensive Study, it does conflict with the Guiding Principle on sediment continuity. That Guiding Principle envisions a balanced sediment budget that mimics “natural” sediment movement through a system, with alternating cycles of erosion and accretion that drive the stream meander process. While part of this continuity has to do with flow regime, system design is also important to avoid either excessive deposition or erosion.

33-58 Ecosystem benefits could be achieved by providing a more ecological hydrologic regime downstream. These benefits are mentioned on page 78 of the July 22, 2002 Draft Interim Report under the discussion of the potential measure, reservoir reoperation. This is the appropriate location for this discussion. The section on Stakeholder Interests and Concerns will be modified to remove discussions of benefits and add a more thorough discussion of all stakeholder’s concerns, including those who would like to see reoperation to provide a more ecological hydrologic regime downstream. Page 49 of the July 22, 2002 Draft Interim Report mentions that ecosystem benefits can be a part of the reservoir reoperation.

33-59 See response number 22-42.

34-1 The Comprehensive Plan describes a general process for developing future projects. No decision has yet been made that needs NEPA and CEQA environmental documentation. However, no future decision on projects can be made without site-specific environmental documentation. Page 43 of the July 22, 2002 Draft Interim Report acknowledges that a programmatic environmental EIS/EIR will be prepared in accordance with NEPA and CEQA if The Reclamation Board needs to make a decision on a specific course of action for the Comprehensive Plan. However, at this point in time, all potential measures are on the table for consideration. Planning for potential projects will depend on stakeholder interest in pursuing regional or local projects. If there is no stakeholder interest, there are no projects.

34-2 Solving problems in the Delta is not within the scope for the Comprehensive Plan. However, considering changing hydrologic and hydraulic interactions between the rivers and the Delta is within the scope of the Comprehensive Plan. See response number 22-1. CALFED repeatedly stresses that it is concurrently solving problems for ecosystem, water quality, water supply reliability, and Delta levee integrity. The Reclamation Board and the Corps will continue to coordinate with CALFED.

34-3 The existing flood management system does a good job, considering when it was designed and built. However, the existing Sacramento and San Joaquin river system does not currently provide the levels of flood protection, nor sustainable ecosystem function, desired by many people. While many features of the existing system are appropriate for flood management, flood protection needs are different today than when the system was built. In addition, ecosystem needs were not adequately considered when those features were designed. Many features would need to be modified to fulfill current and future flood damage reduction and ecosystem objectives.

34-4 The existing flood management system was designed and constructed largely in the early to mid-20th century. The system reflected the needs and values of society at that time. Since then, some of the needs and values of society have changed. The flood management system has allowed agricultural development of the fertile Sacramento and San Joaquin River floodplains and provided protection for rural communities. Little value (as compared to today's standards) was given to protection of natural ecosystems. Today, the system protects a more intensive agricultural economy and significantly larger population. In addition, environmental laws have been enacted to provide much more protection to natural ecosystems. These changes have increased the demands upon the system and the cost and effort required to maintain the system. The goal of the Comprehensive Plan is to define a process such that the system can be modified to best meet today's needs and values. Transitory floodplain storage is one potential measure that could be part of an overall plan to modify the flood management system. The intent of transitory floodplain storage is not to eliminate levees in the flood management system, but to provide another option for managing the extremely large volume of water that can be generated during a flood event. The third paragraph on page 21 of the July 22, 2002 Draft Interim Report recognizes that opportunities for transitory storage in the Sacramento River Basin are limited. The paragraph states: "In general, opportunities to develop transitory storage sites are greater in the San Joaquin River basin than in the Sacramento River basin. Because flood events in the Sacramento River basin have a large volume of water and a long duration of peak flows, transitory storage sites would require vast land areas to store a high volume of water and would need very large diversion facilities to significantly reduce peak flow. In addition, transitory storage may not be feasible at many locations that would be geographically desirable due to topographic conditions or because water could not be evacuated rapidly enough to ensure the storage space is available for the next flood. In contrast, San Joaquin River basin flood events generally have significantly lower volume of water during peak flow. Transitory storage may be feasible at numerous locations in the San Joaquin River basin that historically functioned as connected floodplain areas."

34-5 Text will be added to the report to clarify that floods cannot be completely controlled. There is always some risk of flooding. The second Guiding Principle recognizes the importance of the floodplain and effective floodplain management. The third Guiding Principle recognizes the value of agricultural land.

34-6 The Reclamation Board and the Corps hope that by circulating the responses to comments, making revisions to the July 22, 2002 Draft Interim Report and by demonstrating responsiveness where possible, that lack of trust can be reversed. Several modifications will be made in the report as an attempt to clarify landowner rights and that the report is making no

project recommendations. Projects can only proceed with local support. See response number 7-3.

34-7 See response number 34-6. The Reclamation Board, the Corps and many stakeholders are working very hard to arrive at a Plan that meets the needs within the Central Valley.

34-8 One of the main reasons for this response to comments document is for the Comprehensive Study team to do a better job of explaining how input is being handled. All input is considered. In some cases, changes will be made to the report and in other cases these responses explain why suggested changes should not be made. Since the Comprehensive Plan represents an approach for developing future projects, it attempts to keep all ideas on the table for the more detailed planning studies at the regional level. Some comments focus on removing potential measures from consideration. It is too early to remove potential measures, prior to detailed planning studies since the studies must consider a full array of alternatives. NEPA and CEQA will require a broader look at alternatives than some stakeholders prefer. Interested parties are encouraged to become involved in regional coalitions for development of projects. See response number 7-3.

34-9 The July 22, 2002 Draft Interim Report reflects comments from local and regional entities that expressed great concern that a system-wide project not be developed. It is not exactly correct to characterize the current approach as being a system methodology "only" for the development of plans and approaches at the local level. It could be that there is regional support for things like reoperation studies. It would help future studies if local and regional entities have a strong idea of what they would like a project to accomplish. They are not being asked to develop detailed plans on their own; it is recognized that such work is a large effort and could be accomplished in conjunction with State and Federal agencies. While it is important for local and regional entities to have an idea of what they would like a project to accomplish, it is not sufficient to develop and evaluate a single plan; Federal and State planning policies and environmental compliance laws require that an array of alternative plans be evaluated in order to understand benefits and costs associated with each. It should also be noted that Federal and State participation in the construction of projects often requires legislative authorization.

34-10 The Comprehensive Study authorization is for flood damage reduction and ecosystem restoration. It is recognized that many landowners are not supportive of ecosystem restoration in or adjacent to the flood management system. It should be noted that some landowners are supportive of ecosystem restoration, as evidenced by their participation in programs and projects. Multi-purpose projects provide multiple types of benefits. However, the need for benefits to be greater than costs for traditional projects makes local traditional flood control projects infeasible in many rural areas where the protected infrastructure cannot support the cost of construction. Providing for ecosystem restoration can help expand the total project benefits and potentially reduce the need for project-by-project mitigation. Not everybody supports the need for ecosystem restoration and some believe that the restoration of habitat would be incompatible with flood damage reduction. It is important to remember that only locally acceptable regional projects that adhere to the Guiding Principles will be pursued in the future. Restoration can be designed that is compatible with flood damage reduction. If given adequate room between

levees, riparian vegetation next to the river channel will slow the flow, reduce erosion, and stabilize banks.

Landowners would be compensated for any loss of land as required by the Constitution. There are many ways that landowners could be compensated and benefited by allowing some land adjacent to the river to provide habitat. These means of compensation can be pursued during the development of regional plans.

34-11 The Reclamation Board and the Corps can only make recommendations for future investments within the existing laws and policies. The Corps can indicate that it is the opinion of local stakeholders that an existing law should be changed. The confusion between the meetings in Modesto and Colusa centered on the distinction between these two points. In Modesto, the team was trying to emphasize that the document could not “recommend” that the law be changed. In Colusa, the team was trying to indicate that the document could be revised to characterize what local stakeholders want. The document will be revised to better indicate local stakeholder concerns.

34-12 The models developed by the Comprehensive Study are tools for improving the Sacramento and San Joaquin River Basin’s flood management system and ecosystem. These models will be made available to all interested parties for their benefit and use. This has always been, and still is, the intent of the Comprehensive Study. See response number 14-1.

34-13 See response number 22-5. The \$30 million referenced was roughly half State and half Federal funding and was appropriated specifically for the Comprehensive Study. The Department of Water Resources provides staff for the Reclamation Board and funding for that staff is provided via a separate budgetary item.

34-14 The July 22, 2002 Draft Interim Report will be revised to better represent stakeholder concerns. The Comprehensive Plan represents an approach for developing future projects and makes no recommendations for projects. Beginning any regional project depends on the interests of stakeholders. The outcome of the Friant Water Users/San Joaquin River Restoration litigation may impact the San Joaquin River regional descriptions in the report but these descriptions are only general in nature. The regional stakeholders may want to delay planning of a regional project until resolution of other pending actions. The regional descriptions do nothing to set the course of future planning studies. The outcome of the litigation should not influence the broad system-wide approach represented in the Guiding Principles. Most portions of The Comprehensive Plan Implementation section beginning on page 36 of the July 22, 2002 Draft Interim Report will require additional work and refinement after the general approach for the Plan is accepted. For example, text will be added to the report (page 37 of the July 22, 2002 Draft Interim Report) to describe a process for identifying and resolving implementation issues. This may be the best way to address issues that result from the Friant process. See response number 24-6. The recent local and regional organizing of groups in the upper San Joaquin River basin greatly facilitates agencies' abilities to coordinate with that area. This organizing was established locally, and similar efforts in other areas are encouraged to develop solutions to water resource related problems.

35-1 The Comprehensive Plan does not provide the requested detail since it presents an approach for developing future projects rather than presenting a master plan of proposed projects. See response numbers 18-3 and 24-5. The requested detailed information will be developed during planning for local and regional projects and preparation of site-specific NEPA/CEQA documentation.

35-2 Due to this and other review comments, the Comprehensive Study team is preparing technical reports to show detailed evaluation data and results. See response number 18-3.

35-3 Since many of the maintenance costs by local entities are not reported to The Reclamation Board or to DWR, the State does not have specific accounting that would substantiate your 85% number. In addition, DWR has maintenance areas that are reimbursed by local taxation in part, as well as a general fund and other funds set aside for maintenance. However, a statement will be added to the report to indicate that the majority of the system maintenance costs are paid by local entities.

35-4 See response numbers 42-19 and 35-8.

35-5 See response number 22-15.

35-6 See response number 31-12.

35-7 The potential for incompatibility between ecosystem restoration and the use of adjacent properties will be evaluated during feasibility studies. This should not be a major problem. Most perceived incompatibilities could be solved with negotiated agreements. If proposed projects are found to have an inverse condemnation effect on adjacent properties, they would be dropped or modified to avoid those impacts or to adequately compensate affected parties.

35-8 Currently, both the Federal and State governments participate with local agencies in planning and constructing projects. Projects must have benefits greater than costs and the local agencies must be willing to cost-share in the project. All regions can be considered equally, but flood management benefits are generally less in a rural area since there is less damage during a flood. However, the ecosystem benefits of a project in a rural area would likely be substantially higher than those reasonable for an urban area. A project in a rural area that provides both flood management and ecosystem benefits could be as justifiable as a project for an urban area. A system-wide determination of costs and benefits would certainly contribute to the system-wide approach that is the basis of the Comprehensive Plan. However, as mentioned on page 37 of the July 22, 2002 Draft Interim Report, existing laws and regulations require all increments of a project be economically justified for Federal participation in implementation. Future resolution of the implementation issues may allow for system-wide project justification.

35-9 The existing funding inequity among maintaining districts is a recognized problem. The July 22, 2002 Draft Interim Report mentions the issue of inadequate funding for maintenance on page 37 under Implementation Issues. Landowners will be compensated for any loss of land as required by the Constitution. During the development of locally supported regional projects, evaluations should seek solutions to the problem of removal of lands from assessment roles by

means such as buying easements rather than in fee title in order for the land to remain on the tax rolls. There are many other methods of compensation that do not include purchase in fee and removal from tax rolls that could be pursued during the development of future projects.

35-10 The current report is at much too general a level to address this issue of liability. Liability concerns could be identified and resolved with other implementation issues. A process for identifying and resolving implementation issues will be added to the report.

35-11 The report will be revised to clarify this point. The Sacramento River Flood Control Project was designed for rainfall storms with peak flows passing through the system for short periods of time. The San Joaquin River Flood Control Project was designed for both rainfall and snowmelt storms and thus considered longer duration peak flows resulting from snowmelt runoff. In some cases, subsequent modifications to the system in both basins has resulted in the system passing high flows for longer periods of time, increasing the duration of stress on the levee system and the associated chance of levee failure due to saturation, erosion, sloughing, etc. The addition of dams, in particular, have increased the duration of high flows by capturing peak flood flows and releasing the water into the system in a controlled manner. While the operation of dams can increase the duration of stress on the levee system, dams significantly reduce the magnitude of peak flows for many flood events and prevent failure of the system.

36-1 See response number 40-1.

36-2 The intent was to clearly strike a balance between ecosystem restoration and flood damage reduction. The statements in the report regarding the need for the plan, the problems, the vision for the future, and the planning objectives all express this necessary balance. Since the Comprehensive Plan only presents an approach for developing projects, the real test for how well balance is achieved will be in the implementation phase. The Guiding Principles, which would be used during implementation, also strike this balance. The tenth Guiding Principle states that all projects should consider opportunities for improving both flood management and ecosystems. The historical perspective on the extent of natural habitat is only mentioned as a reference point. Modifications of the system are subject to many constraints that were not operative under historical conditions. The ecosystem is clearly not in a healthy condition, as judged by threatened and declining populations of species. Establishing a goal for ecosystem restoration would be ideal. Furthermore, establishing a goal is more than just a technical issue. It also involves establishing the will of the stakeholders. Since the project area is so large and diverse, it is not feasible at this time (and perhaps it never will be) to identify the will of the stakeholders for a system-wide solution. Goals will need to be set on local and regional scales. The team has not forgotten why the existing system was constructed; see section on Historical Perspective (page 5). Also, please note that the very first Guiding Principle recognizes that public safety is the primary purpose of the flood management system.

36-3 The planning objectives related to ecosystem restoration and flood damage reduction are listed on page 17 of the July 22, 2002 Draft Interim Report. Those specifically related to ecosystem restoration are:

- Promote natural dynamic hydrologic and geomorphic processes.

- Increase and improve the quantity, diversity and connectivity of riparian, wetland, floodplain, and shaded riverine aquatic habitats, including conservation of agriculture and its ecological value.
- Promote the recovery and stability of native species populations and overall biotic community diversity.

No specific levels of flood damage reduction or specific levels of ecosystem restoration are identified. Levels of flood damage reduction and ecosystem restoration would be selected during feasibility studies for local and regional projects after the evaluation of alternatives. This selection would be based on many factors, including stakeholder acceptability.

36-4 Floodplain management is an important consideration in the Comprehensive Plan. Pages 46 – 48 of the July 22, 2002 Draft Interim Report contain some ideas for potential floodplain management measures but none can be implemented without additional definition. Page 5 states: “Levees were built to contain seasonal high flows and protect the new agricultural lands and growing communities from flooding.” A section will be added to the report to acknowledge landowner rights to mitigation/compensation for use of their property. The Guiding Principles on floodplain management and the value of agriculture first recognize that floodplains and agricultural use of those floodplains provide flood control functions under existing conditions. While it is true that the current flood management system protects these lands, it does not provide protection from all flood events, nor is it practical for the system to ever provide absolute protection. Without changing the system, the existing potential for flooding on these floodplains in large events contributes to the flood protection of downstream property. The Guiding Principle on floodplain management also recognizes that floodplains can be managed to further reduce and avoid future damages without changing flood frequencies or modifying existing uses. The report will be modified to acknowledge that most land in the floodplain is under private ownership. See response number 22-4. As projects are developed in the future, mitigation and compensation would be identified.

36-5 See response number 36-4.

36-6 Risk based flood mapping would provide useful information, such as potential flooding extent, depths, frequencies, and timing. The maps would provide local agencies information for improved flood warning and to educate property owners on their risk of flooding. The intent of the maps is not to place more land under regulatory scrutiny or limit agricultural operator’s choices of commodities available to them. However, the information may indirectly influence choices of others, including decisions that landowners make for their own property. Separately, The Reclamation Board has an ongoing designated floodway program. See response number 48-3.

36-7 The first bullet on page 37 of the July 22, 2002 Draft Interim Report refers to the Federal requirement of economic justification. The State also requires similar justification. The justification is currently on a project-by-project basis, so each regional project could be developed somewhat differently because of different needs and opportunities. With significant differences in damageable property between the regions, it is unlikely that each region, or portions of a region, can justify the same level of flood protection. However, if the entire system

could be justified as one project, there may be more opportunities for solutions. Some clarifying language will be added to the first bullet. See response number 38-7.

36-8 Potential measures were identified in a number of ways. The Comprehensive Study team, other technical experts, and local input all helped identify various measures. Future planning studies for any area would work to fully identify potential measures. Measures should then undergo various iterations of screening to ensure that viable measures are considered in future project development. Measures would be combined in various ways to develop alternative plans for detailed evaluation. Any potentially technically viable measure should be considered in an evaluation and rationale for retaining or deleting each measure should be clear. See response number 22-42.

36-9 See response number 2-1.

36-10 The July 22, 2002 Draft Interim Report will be revised as appropriate based on comments received. Individual meetings, to discuss responses to comments with interested parties, will be held as requested. The revised document will be provided to The Reclamation Board in early December 2002. The Reclamation Board is one of the few State organizations that makes all its decisions in an open public forum.

37-1 The Deer Creek and Elder Creek project levees will be added to the map.

37-2 The text will be modified to include mention of the bank protection within the upper Sacramento River region.

37-3 The Comprehensive Study is a broad, basin-wide study and has focused on flood and ecosystem related problems associated with the Sacramento and San Joaquin Rivers. This included considering the influence of tributaries that significantly contribute to the flows of those two rivers. Future studies could be expanded to include more detailed study of specific tributaries to the Sacramento and San Joaquin Rivers.

37-4 The two bullets on page 37 of the July 22, 2002 Draft Interim Report are examples of the Comprehensive Plan Implementation Issues. Each of these, and many other issues, requires additional expansion and discussion in a future process. Text will be added to this section of the report to describe how identification and resolution of the issues will be pursued.

38-1 See response number 36-2.

38-2 See response number 36-2.

38-3 The Historical Perspectives Section of the July 22, 2002 Draft Interim Report describes how and why the existing system was developed. The first Guiding Principle recognizes that the primary purpose of the flood management system is public safety. Any proposals to make changes in the flood management system must consider effects to public safety. The fourth Guiding Principle recognizes the need to avoid hydraulic and hydrologic impacts. The seventh Guiding Principle promotes use of an ecosystem approach to restore and sustain the health,

productivity, and diversity of the floodplain corridors. This approach recognizes and seeks to address the problems of habitat fragmentation and piecemeal restoration. It is recognized that the interconnectedness and dynamics of natural systems interwoven with human activities in the landscape is integral to the process.

38-4 Non-structural measures are just some of many potential measures that could be considered in planning future projects. The Comprehensive Study team had no intention of emphasizing non-structural measures. The Technical Findings section of the report merely sets forth a summary of the different types of evaluations conducted as part of the study. Investigations and evaluations were conducted to answer questions that were raised during the course of the Study by the Comprehensive Study team or interested agencies, groups and individuals. It should be noted that Section 73 of the Water Resources Development Act of 1974 requires consideration of nonstructural alternatives in flood damage reduction studies and would be considered in any future Federal study. See response number 22-42.

38-5 See response number 36-4.

38-6 The Reclamation Board and the Corps believe there would be little advantage to begin “workshopping” the Guiding Principles at this time due to the amount of work that has already been conducted on the Principles. The Guiding Principles have been evolving with agency and public input for almost a year. They have been part of the draft reports and were displayed at each of the public meetings on the July 22, 2002 Draft Interim Report. See responses 19-4 and 21-4. The Reclamation Board believes that some floodplain management measures could significantly reduce flooding risk in the system and that the second Guiding Principle, along with the other Guiding Principles, provides important guidance in arriving at a system-wide solution for flood damage reduction and ecosystem restoration. None of the potential floodplain management measures beginning on page 46 of the July 22, 2002 Draft Interim Report have been developed beyond concepts and none are yet implementable. See response number 22-4. The Floodplain Task Force is currently examining specific issues related to State and local floodplain management. The Task Force will complete its work by December 31, 2002. The recommendations of the Task Force will be evaluated for incorporation into the Comprehensive Plan. However, more public discussion will be possible as The Reclamation Board is one of the few State organizations that makes its decisions in an open public forum.

38-7 The concern is that the current method for determining the level of Federal participation in a project may result in limited participation, which would potentially mean a greater share for the non-Federal and local partners. The State is interested in exploring revised criteria for determining the level of Federal participation. For Federal participation in projects, Federal law requires that projects be cost effective. Federal law also requires that projects be cost-shared with a non-Federal sponsor. In many cases, the non-Federal sponsor is the State, though it can be another entity, providing they are able to assume the non-Federal sponsor's responsibilities. Determination of the level of Federal participation helps to define the level of non-Federal cost share that will be required for a particular project. The ability or extent of the Federal government's participation in a project has no bearing on a non-Federal sponsor's own authority. See response number 36-7.

Although both the Corps and the State are working together, the State may ultimately have more flexibility in conducting the economic analysis, and more importantly, making recommendations based on that analysis. For example, the State may place equal weight on all four Federal planning accounts (national economic development, environmental quality, regional economic development and other social effects) rather than focusing upon national economic development (NED) and environmental quality (EQ), pursuant to current Corps guidance. Although the Corps is required to perform an “incremental” analysis for individual projects, the State may also evaluate individual projects as part of a larger, regional solution with an overall benefit/cost analysis. Because of these and other differences, the projects recommended by the State (and local agencies) may be different than what would be recommended by a traditional Corps economic analysis. The Reclamation Board's authority limits its ability to sponsor primarily ecosystem projects.

38-8 Two examples of potential implementation issues are shown on page 37 of the July 22, 2002 Draft Interim Report. Considerable work is required on these and other issues. Since additional work is required, a proposed approach for resolving these and other implementation issues will be added to the report. See response number 22-15.

38-9 See response numbers 22-4, 37-4, and 39-15.

38-10 See response number 36-8.

38-11 See response number 2-1.

38-12 Flood damage reduction and ecosystem restoration are dual objectives of the Comprehensive Study, as set forth in both Federal and State authorizations. Most measures for future studies have the potential to yield both flood damage reduction and ecosystem restoration benefits.

38-13 See response number 36-10.

39-1 The Reclamation Board and Corps recognize the difficulties in maintaining projects in accordance with existing laws. The report attempts to acknowledge this situation throughout the document. The second bulletin page 37 of the 22 July 2002 Draft Interim Report describes a potential valley or regional-wide benefit assessment district to provide funds for more consistent maintenance throughout the system. The Reclamation Board or the State government could choose to provide additional technical assistance to the maintaining districts subject to available funding. See response number 22-15.

39-2 A process for resolving implementation issues will be added to the report (page 37 of the July 22, 2002 Draft Interim Report). See response number 22-15.

39-3 Well planned ecosystem restoration can be beneficial to flood management objectives. Public safety is a critical constraint that must be considered. Providing for public safety is the first Guiding Principle of the Comprehensive Plan. The Comprehensive Study team recognizes that the opportunities to restore the ecosystem are also limited by many other factors, including

lack of water and other uses of the floodplain. Another Guiding Principle covers “optimize the use of existing facilities.” There are opportunities on the San Joaquin River in conjunction with the already established refuges for example, or through conservation easements where habitat could be improved. However, the opportunities to use existing facilities are also limited. In some areas, when projects are desired, it may be necessary to expand the flood management system onto lands that are currently in private use. Local stakeholders must decide if they wish to pursue projects and how to pursue them.

39-4 The report will be revised to clarify that the referenced study is not a component of the Comprehensive Study.

39-5 Public safety is the primary purpose of the flood management system. The first Guiding Principle is intended to remind all that the flood management system exists to provide public safety and should not be compromised. See response number 21-7.

39-6 See response number 24-6. This outreach should include risk.

39-7 A cooperative approach is preferred over the regulatory approach. Regulating land use is a function of local government in California. The July 22, 2002 Draft Interim Report states on page 29: “It is essential to encourage and promote effective floodplain planning and management practices...”

39-8 The third Guiding Principle will be modified to more clearly express the intent to recognize the value of agriculture and the benefits of the continued use of floodplains for agriculture. It is not necessary to increase flood flows onto these lands in order to be consistent with this Guiding Principle. In fact, projects that include flood damage reduction could be considered for agricultural lands. To be consistent with the Guiding Principle, any increased level of flood protection for agricultural lands should not contribute substantially to the conversion of these lands to other land uses. This approach is driven by environmental, farmland protection, and flood damage prevention considerations. No project would be pursued without landowner involvement.

39-9 Channel capacities should be maintained continuously throughout the restoration process. In parts of the system where the design would allow increased vegetation within the system, channel capacities would initially tend to exceed the design capacity prior to complete development of vegetation. Temporary hydraulic mitigation measures may need to be built into the design to compensate for hydraulic impacts during this interim period. Habitat restoration features would be monitored and if impacts to the capacity of the channel were detected, maintenance would be necessary to restore the design capacity.

39-10 The Comprehensive Plan offers an opportunity to develop flood damage reduction projects that would improve the reliability of the levees protecting people and property in the San Joaquin River flood plain. Habitat restoration will be included in a manner that does not reduce the reliability of the flood control system. See response number 21-1.

39-11 Throughout the Comprehensive Study, locals have stated that consideration for floodplain storage should first be put onto existing public land before it is considered on private land. The potential creation of transitory floodplain storage would be coordinated with the landowners, be they private or public, in order to determine the potential use of that site. Regarding effectiveness of transitory floodplain storage, topography and location in the system are important factors. For example, due to topography, the West Bear Creek area would not provide much storage. Yet, restoring flows to this area would result in a small increase of attenuation of flows where there currently is little. While the primary benefits would certainly be to the ecosystem, the attenuation of some flood flows could contribute to the reduction of the flood risk down stream.

39-12 It is our understanding that, local water district facilities can be used to convey flood water without being measured against district allocations if the water is ultimately returned to the river, less channel losses. If the water is used for irrigation or other uses, the user(s) may be charged depending on the situation. This could be included as an implementation issue for future resolution. A process for identification and resolution of the issues will be added to the Comprehensive Plan Implementation Issues section of the report.

39-13 The report lays out the Comprehensive Plan, a process by which future projects can be developed. While the general nature of other programs can be described and a big-picture plan for coordination set forth, the details of each program reside with that program. The overall goals of CALFED and other programs have been reviewed to determine if they are generally compatible with the Comprehensive Plan. The purpose of such a review is not so much to develop projects to respond to those programs, but to ensure that Comprehensive Plan projects do not conflict with what those programs or duplicate their work. More detailed coordination with those programs would take place during future planning efforts.

39-14 The Reclamation Board will continue to perform the duties in cooperation with the Corps and with local agencies. The Reclamation Board will determine if any clarification is needed to its existing duties.

39-15 Earlier drafts of the report suggested that The Reclamation Board's authority could be extended to include ecosystem restoration to make its authority more in line with that of the Corps. The most recent draft (July 22, 2002) does not propose to extend ecosystem authority to The Reclamation Board. However, The Reclamation Board currently has authority over any activity that could impact the flood management system. In that capacity, they deny permits for ecosystem restoration project that impede flow of floodwaters or could approve projects that have no measurable impact.

39-16 The Financing section of the report describes the current sources of funding. These are anticipated to remain the same in the future. The Comprehensive Plan encourages that work together to develop projects, whether they have funding or not. It must be recognized that in the absence of Federal and/or State funding due to budget restraints, others could still develop projects. The Comprehensive Study encourages the building of local and regional coalitions to pursue future projects and leverage funding. All projects, regardless of who pays, must mitigate or compensate for adverse impacts. See response number 35-8.

39-17 Including such a statement would be inconsistent with the State and Federal language authorizing the Comprehensive Study. Activities conducted under the authority of PL 84-99 are subject applicable Federal laws. If (after consultation with the appropriate agencies) it is determined that there has been a significant affect on a sensitive resource or species, there may be a mitigation requirement. It is correct that emergency work is done for public safety, and in the spirit of assuring that public safety is not compromised, the resources agencies responsible for endangered species work with the construction agencies during the actual emergency construction to avoid or minimize environmental damage during flood fights and conduct Formal Consultation after the initial emergency has passed. Section 15269 of CEQA Guidelines exempts projects conducted to maintain, repair, restore, demolish or replace property or facilities damaged or destroyed as a result of a disaster in a disaster stricken area in which the Governor has declared an emergency. Accordingly, flood-fighting activities can be exempted from CEQA. Actions and projects that repair or replace structures and facilities after the immediate danger has passed are not exempt from NEPA or CEQA and may require mitigation if there are significant impacts.

39-18 More consideration should be given to this during project development. Some ideas for a new maintenance approach that reduces existing conflicts are shown on pages 50 – 51. See response number 39-1.

39-19 Mitigation credits could be an implementation issue for future resolution (page 37 of the July 22, 2002 Draft Interim Report). However, The Reclamation Board and the Corps have no direct influence on the policies of other agencies. Pending resolution of the issue, negotiation with the resources agencies prior to taking additional actions may be the best approach.

39-20 See response number 39-18.

39-21 The reference to the bypass system not meeting its design flow capacity will be revised to remove that implication. The statement in question relates to a category of potential measures intended to improve system deficiencies that have been previously identified by the Lower San Joaquin Levee District.

39-22 The Comprehensive Study hydraulic model, including the Eastside Bypass, is based on 1998 topographic data and shows the left levee being lower than the right levee for some reaches. The modeling also was modified based on the 2000 as-built drawings for the subsidence repairs.

39-23 The first paragraph on page 71 is part of a general discussion of the region and is not intended to be a detailed reach-by-reach description. To provide clarification, the last sentence of the paragraph will be rewritten: “Scattered remnant riverine habitats are present along portions of the river but sufficient water is generally not available to support functional riverine ecosystems throughout the length of the river.”

39-24 The term stakeholder means “one who has a share or an interest” and this is how it was used in the report. References to stakeholders in the report will be revised to differentiate between local/regional interests and agencies.

39-25 Reservoir reoperation could provide significant benefits for the San Joaquin River basin and a more detailed technical analysis is needed. Criteria for determining the control points in reservoir reoperation alternatives and scenarios would likely be developed through coordination among responsible Federal, State, and local flood management agencies and operators. The reservoir simulation models developed for the Comprehensive Study are ready for use and capable of evaluating changes in the location and/or number of control points and other complex release criteria.

39-26 See response number 39-25.

39-27 Transitory storage was simply mentioned as one potential measure, not a proposal. Depending on stakeholder interest and feasibility, it may or may not be included in a regional project.

39-28 As you have indicated, these flows were used as hypothetical situations in developing computer models and to evaluate how potential measures would perform together under different circumstances. These flow values were presented in earlier Comprehensive Study reports on the computer models and on the conceptual planning evaluations. There are no proposals for projects that would result in these hypothetical conditions. The whole focus of the Comprehensive Plan is to provide the means to identify and resolve local upstream and downstream issues.

39-29 In order to integrate flood damage reduction and ecosystem restoration, changes in the flood management system must be made in a manner that accommodates both.

39-30 Neither The Reclamation Board nor the Corps is promoting a widening of the system. The Comprehensive Study has looked at different ways the flood management systems could be changed to integrate flood damage reduction and ecosystem restoration, and has developed the tools to quantify how changes to the system affect how the system performs. It is up to the public to decide if they want to change the system to better integrate flood damage reduction and ecosystem restoration, and if so, how. Part of the process of considering any change is to ensure that the concerns of those affected are addressed.

39-31 In some of the conceptual planning scenarios to see how different measures could fit together, the idea of providing communities with a higher level of flood was considered. Ring levees are one potential option for providing this protection. When local or regional groups are interested in developing projects, a full array of solutions would be evaluated.

39-32 As the District understands, removing sediment from stream channels is costly and, if required frequently, can exceed the fiscal resources of the maintaining agency. Sediment removal is not generally regarded as a cost-effective means of flood management. It is, in essence, addressing a symptom of a problem, but is not a solution to the problem itself. Some

have suggested a solution to the problem could be to provide a balanced sediment budget, restored natural processes, and a system design that is not continually exposed to erosive stream flows. Widening bridge openings is consistent with this view. The Comprehensive Study has tools and a process to select projects while avoiding transferring impacts to other areas. Evaluating sediment sources, constrictions, and river characteristics enables the development of long-term solutions that benefit the river system as a whole, rather than individual reaches. For this reason, the Comprehensive Plan cites the need for geomorphic studies to gather the information necessary to make sound decisions and prevent unintended impacts to downstream areas.

39-33 The West Bear Creek study is incomplete and there are a number of issues to be solved. The Reclamation Board requested the study be conducted as part of the Comprehensive Study to investigate the potential for reducing damages from flooding and restoring the ecosystem. Study accomplished to date indicates that there is great potential for improving the extent and quality of habitat. Study also indicates that there is little, if any, quantifiable reduction in flood damages but that the potential project would have a slight reduction in downstream stages. See response number 39-11. The report will be changed to state that this potential project would primarily be an ecosystem restoration project and will also summarize remaining issues such as potential adverse effects to the highway, any remaining levee and vernal pools. The report does not state that peak flows would be diverted, as could be the case in other floodplain storage locations. The Comprehensive Study team considers that there is great potential to develop an ecosystem restoration project that is compatible with the flood management system.

39-34 The July 22, 2002 Draft Interim Report will be revised to highlight the distinct characteristics of each basin, including their dissimilar hydrology, hydrography, and history, and the Regional Descriptions will be expanded to more accurately describe individual basins. The San Joaquin and Sacramento basins are two very different systems that have distinct problems, needs, and objectives. However, it is important to have a single, consistent process guiding future projects in both basins to maintain objectivity and ensure a balance between the objectives established for this study by the State and Federal governments - flood control and environmental restoration. The guidelines are not intended to constrain future projects, rather to ensure that they consider the key values that have been identified as important to the future of the river system before taking action.

39-35 Flood damage reduction and ecosystem improvement are dual objectives of the Comprehensive Study, as set forth in both Federal and State authorizations. When related to the flood management system, flood damage reduction and ecosystem restoration are interdependent. Most measures that could be undertaken for flood damage reduction can also be implemented in a way that yields ecosystem restoration. Developing multi-purpose projects provides opportunity to incorporate ecosystem restoration in a proactive manner, potentially minimizing environmental mitigation costs. Building coalitions to develop future projects provides an opportunity to share costs, operation and maintenance responsibilities, and to leverage funding. The Reclamation Board has indicated that public safety is its priority. The team has looked for ways to revise the report to better reflect the balance of the authorized objectives.

40-1 Over the past several months, the Comprehensive Study team produced each draft of the report by building on the previous draft. The draft dated 17 June 2002 was created for review by the agencies funding the Comprehensive Study: The Reclamation Board, the Department of Water Resources, the Resources Agency, and the Corps. The first line of the report showed the reader that things were continuing to change, “NOTE TO READER: *This paper is a work-in-progress. It is a snapshot of the work as of a.m. June 17, 2002. Work is continuing in several sections, especially the Regional Projects and the Implementation Plan.*” The team used the agency comments to prepare a July 1, 2000 draft which built upon the June 17 draft. The team used comments from the July 1 draft to prepare the July 22, 2002 Draft Interim Report that was made available for public review and comment. The team is now using those comments to improve the next draft. Yes, portions of the July 22 draft are different than the June 17 draft because of the thoughtful comments received from reviewers.

40-2 Only eight days between releasing the July 22, 2002 Draft Interim Report and the first public meeting does not provide much time for review if someone felt that they needed to complete their review before the meeting. However, the meetings were intended to help orient people to the Draft Interim Report and allow them to ask questions at information stations and then leave additional review time after the meeting. The schedule allowed everyone a full month for review and comment. Given this schedule, the Comprehensive Study team debated having approximately 3 meetings to provide more review time before and after the meetings. However, the team felt that it was more important to schedule more meetings to give more people a chance to ask questions. Scheduling the eight public meetings within the one-month review period was difficult. The people that had the least review time before the meeting had the most review time after the meeting.

40-3 Environmental laws have been enacted since the construction of the flood management system to protect natural ecosystems for the benefit of humans, wildlife, and plant life. These laws, along with other factors such as growing population, have increased the demands upon the system and the cost and effort required to maintain the system. In particular, some maintenance practices used in the past, such as dredging, clearing, and snagging, are often prohibitively expensive today due to environmental mitigation requirements. The summary of the July 22, 2002 Draft Interim Report will be revised to clarify this point.

40-4 This comment refers to an early internal team draft of the report dated June 17, 2002. Through the process of review and revision of draft versions of the report, this paragraph evolved to better reflect the intended meaning. In the July 22, 2002 Draft Interim Report, which was provided to the public for review, the revised paragraph reads as follows:

“The entire system, including flood processes and ecosystem functions, is interdependent. It is vital to examine the entire system to assure that changes to address problems in one area of the system do not transfer problems to other areas. When levees break and cause flooding in the adjacent floodplain, a substantial amount of floodwater leaves the rivers or bypasses, which reduces flow rates and the water surface elevation. Modifications to reduce the likelihood of levee failure also reduce this temporary storage of water in the floodplain, resulting in increased flow rates, water surface elevation and flooding risk in downstream areas. To address the potential for re-directed hydraulic impacts, system-wide solutions would need to include

measures to address the additional flow and volume of floodwater that could be transferred to downstream areas. Preliminary evaluations show that system-wide levee modifications, regardless of their alignment, would result in lower flood risk and provide opportunities for ecosystem restoration, but would also require several hundred thousand acre-feet of additional floodwater storage to offset hydraulic impacts.”

This revised paragraph clarifies that improvements to the existing condition of levees in the system can redirect flood risk downstream. This redirected risk must be mitigated. One potential mitigation measure, among many, is transitory floodplain storage. The basic message of this paragraph is that one portion of the system cannot benefit at the expense of another. In other words, the entire system must be considered as an integrated whole when evaluating the effects, both positive and negative, of any given measure or project.

40-5 There is wide interest in structural changes to the flood management system throughout the Sacramento and San Joaquin River basins, but there is considerable debate as to what type of structural changes are needed. Because of this debate, developing a widely acceptable project for system-wide structural changes will be extremely challenging and may be impossible to accomplish. Therefore, the Comprehensive Plan proposes developing structural projects at a regional or local level. At these levels, the complex issues associated with specific structural changes can be more effectively analyzed and debated, increasing the likelihood a project can be developed that is acceptable to all interested parties. The discussion of the approach for developing projects (Page S-3 of the July 22, 2002 Draft Interim Report) will be revised to clarify this point.

40-6 Flood damage reduction and ecosystem improvement are dual objectives of the Comprehensive Study, as set forth in both Federal and State authorizations. This has been true throughout the study. When related to the flood management system, flood damage reduction and ecosystem restoration are interdependent. See response number 21-4. CALFED identified goals and objectives for ecosystem restoration; member agencies would likely consider those goals and objectives when developing future projects. When referring to protecting people and property from flooding, the phrase “flood management” is now more commonly used than “flood control.” This is to more accurately relay to people that due to the dynamic nature and uncertainty associated with flooding, events cannot actually be “controlled.” Rather, it can be hoped that events can be “managed” to minimize damage. This is in accordance with the Association of State Floodplain Managers. See response number 22-29.

40-7 The Comprehensive Plan does not sacrifice human safety for habitat enhancement. The first Guiding Principle, to provide for public safety, has priority over the other principles. See response number 21-4. The loss of riparian and wetland habitats in the Central Valley is documented in the proceedings of the California Riparian Systems Conference published by the University of California (1984), in *From Sierra to the Sea* published by the Bay Institute of San Francisco (1997), *The Riparian Bird Conservation Plan* published by the Point Reyes Bird Observatory and the U.S. Bureau of Reclamation (2000), and several reports from the CALFED Bay-Delta Program. In the California Riparian Systems Conference report, Edwin F. Katibah documents changes in the whole Central Valley in *A Brief History Of Riparian Forests In The Central Valley of California* while numerous other authors report upon specific areas and

watersheds within the central valley. D.F. DeSante, and T.L. George in *Population Trends In The Landbirds Of Western North America* published by the Cooper Ornithological Society, Lawrence Kansas (1994) concludes that loss of riparian habitat is the biggest single cause in the decline of landbird populations in western North America.

40-8 The July 22, 2002 Draft Interim Report does not suggest that flood control efforts be halted. On the contrary, The Reclamation Board and the Corps have continued to work on traditional flood control projects that were under way or proposed when the Comprehensive study was initiated in 1998. Piecemeal implementation of ecosystem restoration is not desirable. The hydraulic impacts of piecemeal restoration detracted from the function of the system as a whole have resulted in less cost effective means for meaningful restoration, and have not always provided the anticipated ecosystem benefits. The Comprehensive Plan recognizes the benefits of a comprehensive approach to ecosystem restoration in the seventh Guiding Principle, “use an ecosystem approach.” The context of the discussion on page 6 of the July 22, 2002 Draft Interim Report is on early improvements to the conveyance system. The “Conditions Today” section on may be a better place to clarify the negative effects of a piecemeal approach to ecosystem restoration.

40-9 The array of potential storage measures basically consists of three scenarios: add storage in the foothills; add storage in the floodplains; and add storage in the levee system. Each of these scenarios has been considered and should be considered in future studies. In addition, unintended floodplain storage occurs when levees fail. It is recognized that many landowners do not support the scenario of storing floodwater in the floodplain – often referred to as transitory floodplain storage (temporarily storing peak flood flows within the floodplain, which is predominantly privately owned). In many places, transitory floodplain storage is a technically viable measure to reduce risk of flooding to adjacent areas by storing peak flows until they can more safely be passed. The extent of habitat restoration and agriculture at such a site would be coordinated with landowners on a project-by-project basis. Whatever the land use, such an area would need to be available to receive peak flood flows to be an effective form of flood management.

In future project development, all storage measures should be considered, and associated benefits and costs (including impacts) identified. Once the benefits and costs are understood, trade-offs of one type of storage over another would be evaluated. Such a trade-off analysis should consider the importance of agriculture to national security. Currently, flooding of agricultural land during a large flood is random and associated adverse effects are unanticipated. Dedicating some lands to temporary storage would allow regulation of flows and associated effects that could be better anticipated and compensated. Flooding and agriculture have successfully co-existed for years, as evidenced in the existing flood bypass systems. It is important to note that agriculture can be compatible with occasional flooding, whereas urbanization causes a permanent conversion of agricultural lands. The third Guiding Principle recognizes the value of agricultural land and states, “Future projects will take into account individual and cumulative impacts of project development on agriculture and other open space lands, the flood damage reduction and ecosystem benefits of these lands, the economic and environmental effects on crop production, and the effects on associated service industries, infrastructure, and local communities.”

40-10 The Comprehensive Plan requires that the flood management system, including the ecosystem restoration features, be modeled, monitored and maintained to preserve its design capacity. Without the Comprehensive Plan, the described situation will continue to have conflicts. The Reclamation Board has maintenance obligations to maintain design capacity.

40-11 See response number 40-14 for discussion of dredging as a flood damage reduction measure. The Sacramento River Bank Protection Project (SRBPP) is a continuing Corps construction project. It is a long-range program of bank protection to protect the levees and flood management facilities of the Sacramento River Flood Control Project. The SRBPP has been implemented primarily by construction of continuous revetments along eroding banks to correct site-specific problems of levee erosion or to control channel migration. State and Federal environmental laws enacted to protect the natural ecosystem have increased the cost, effort, and time to implement the SRBPP. The SRBPP is working with natural resource agencies to improve the efficiency and effectiveness of the program, given existing laws and regulations, by developing a more system-wide approach to bank protection and environmentally sensitive methods to protect levees from erosion. These efforts are consistent with the Comprehensive Plan.

40-12 The reference to “small in scale” was for individual projects. The cumulative effects of ecosystem restoration efforts may appear large, but these projects are replacing only a small fraction of the amount of habitat that has been lost.

40-13 The Comprehensive Study team concurs that terminology is very important and that there is a need to increase sensitivity to build trust with the public. Reference to “marginal agricultural land” on page 16 of the July 22, 2002 Draft Interim Report will be eliminated; no other instance was found where that term is used. The team also found no use of the terms “smart growth” and “no growth. The report will continue to use the term “willing seller” until there is a better replacement. The team understands that some stakeholders believe that restoration is creating “willing sellers” by making it more and more difficult to farm. The continuation of agriculture in the project area is critically important not only for the economic health of the region, but also for the ecological health of the region. Detailed project planning will develop ways to ensure that restoration projects do not adversely affect adjacent agricultural operations.

40-14 Sediment and vegetation removal is not forbidden by the Corps or other agencies. In some cases, however, it is very expensive and may not be a cost effective solution to flooding problems because it generally does not significantly reduce flood stages. Sediment removal will be included as a possible measure to reduce local choke points because it may be cost effective in some isolated areas, even with the associated mitigation costs. The feasibility of sediment and vegetation removal will need to be determined on a site-by-site basis.

40-15 The Comprehensive Study has resulted in a greatly improved technical understanding of the Sacramento and San Joaquin River basins. The Comprehensive Study team is preparing documentation to describe this technical understanding and to share the tools.

40-16 Within the bounds of their respective authorities, The Reclamation Board and the Corps are committed to seeking out innovative solutions to challenging problems. The multi-agency approach to working towards solutions at Hamilton City represents this commitment. A solution will likely be costly and both Glenn County and local community representatives desire State and Federal participation. The extent of such participation must be developed in accordance with current laws. For decades, both The Reclamation Board and the Corps have studied the flooding problem that this community faces and a project acceptable to the community and with firm Federal and State interest had not been identified because costs have largely outweighed benefits. The current, multi-agency approach of working with the locals to develop solutions to both the flooding and the ecosystem related problems in this area present opportunity to develop justifiable projects that satisfy existing laws.

40-17 Integrated flood damage reduction and ecosystem restoration projects will generally have net environmental benefits and will substantially reduce mitigation requirements. There may be some instances, however, when special resources (such as endangered species) are adversely affected and the environmental benefits are to other categories of resources. In those cases where impacts must be compensated for in kind, there may be a mitigation requirement.

40-18 Although ecosystem restoration projects have not been conducted for anywhere near the time that flood damage reduction projects have, they could have negative impacts on the flood control system if not properly designed or maintained. The paragraph will be modified to acknowledge these potential impacts. The Comprehensive Plan would ensure that ecosystem projects would be compatible with flood control. The statement regarding the “integrity and continuity of the system” will be modified to make clear the intent that future ecosystem restoration would not be “environmental business as usual”, but rather a new approach that ensures that restoration projects would not cause adverse hydraulic impacts to the system.

40-19 The Reclamation Board and the Corps are concerned about public safety.

40-20 Much of the rural areas along the rivers in the project area are floodplains that are occupied by low-density rural development and agricultural lands. These areas are protected by levees, but the levees do not provide a high level of protection. The low density of structures and the infrequent flooding combine to generally keep damages below a level that would justify a structural solution, such as improved levees. In some cases, projects can be justified to relocate structures out of the floodplain. In other cases, structures can be modified to reduce damages, such as by raising the foundation so that the elevation of the ground floor is above flood level. “Adapting land uses to be more compatible with flooding” does not suggest that flooding would be increased, thereby creating “willing sellers.” Rather, it recognizes that the floodplain does flood on occasion, and that the best way to reduce damages may be to ensure that land uses are compatible with this occasional flooding. Residential development that is raised above the flood elevation would be more compatible than residential development on concrete slabs. Agriculture would be still more compatible, and row crops would be more compatible than vineyards.

40-21 This Guiding Principle recognizes the value of agriculture and open space lands and highlights the importance of considering the benefits of such lands to the flood management system and the ecosystem. It also highlights the need to analyze the cumulative effects of

potential projects on the agricultural industry. It neither advocates nor discourages transitory floodplain storage as a measure. As with any measure, the positive and adverse effects of transitory floodplain storage must be evaluated and appropriately mitigated and/or compensated if included in a plan for implementation. The third and fourth Guiding Principles both recognize this need.

40-22 It is good resource stewardship to consider the system as a whole and, when making changes to the system, to make those changes in a way that accommodates multiple purposes. It would be inefficient and a waste of taxpayer dollars to come back and change the system several times to accommodate different purposes at different points in time. The multiple needs of the system should be acknowledged and partnerships need to be formed to jointly sponsor projects that meet as many of those needs as possible.

40-23 Maintenance (removal) of sediment deposits is virtually nonexistent because it is generally not a cost-effective way to manage flooding problems. It is costly, must be repeated frequently, and does not usually result in significant reduction of flood stages. Additionally, a requirement of Corps projects is that a non-Federal sponsor be responsible for all maintenance, repeated sediment removal in this case. The State has a similar requirement that a local sponsor be responsible for maintenance of their projects. It has been difficult for locals to afford to undertake such a costly action. A system that is designed to accommodate sustainable habitat will likely be more affordable to maintain.

40-24 The seventh Guiding Principle, the ecosystem approach, is only one of eleven Guiding Principles. See response numbers 19-4 and 21-4.

40-25 This Guiding Principle promotes reasonably maximizing the benefits of the existing system before making significant investments to modify existing facilities or build new facilities. It is recognized, however, that reoperating the existing system cannot meet all of the objectives of the study and additional measures will be needed. The array of potential storage measures basically consists of three scenarios: add storage in the foothills; add storage in the floodplains; and add storage in the levee system. Each of these scenarios has been considered and should be considered in future studies. There is no bias against new storage. All potential measures, including new storage, will be evaluated and compared in future studies to identify plans that best meet study objectives and the needs of the stakeholders.

40-26 CALFED has established goals and objectives for ecosystem restoration, which cover the Sacramento and San Joaquin rivers. It is generally recognized that implementation of many of the goals and objectives would likely affect the flood management system. This is one reason that both flood management and ecosystem restoration projects should be undertaken together, or at least with a heightened consideration of each other. The Comprehensive Study needs to continue to coordinate with CALFED and others so that it meets its own flood damage reduction and ecosystem restoration objectives.

40-27 The Comprehensive Plan outlines a process for developing projects to best meet the multiple objectives of flood damage reduction and ecosystem restoration. The process includes Guiding Principles, an approach for developing projects, and an organizational structure. It does

not recommend specific projects or measures for implementation. However, all potential measures are available for consideration during planning for regional and local projects.

40-28 See response number 39-15. Under the day-to-day tasks of The Reclamation Board listed on page 34 of the July 22, 2002 Draft Interim Report, the Ecosystem Restoration task is, “Assist other agencies to restore and enhance the ecosystem in the floodplains.”

40-29 Future projects under the Comprehensive Plan could take decades to implement. With this uncertainty on when system improvements may be made, some people were wondering what happens to maintenance and other system needs before projects are constructed. The list of interim system needs on page 44 of the July 22, 2002 Draft Interim Report is an acknowledgement that there are many current ongoing things that will continue (status quo) until their need is replaced by changes under the Comprehensive Plan. Rather than simply waiting for projects to be constructed under the Comprehensive Plan, there may be some advantage in considering the Guiding Principles while servicing the interim needs. There is no requirement to apply the Guiding Principles but there may be opportunities to make better interim decisions. The section on interim needs will be modified to clarify that these are expected to continue under current procedures but that opportunities for using the Guiding Principles will be considered.

See response number 26-14. Mitigation costs for emergency fixes are based on current law. See response number 39-17. Ecosystem projects serving as mitigation for any flood fight may be possible due to a mitigation bank, but normally ecosystem restoration projects are not for mitigation of project impacts. Projects are required to mitigate for impacts under NEPA and CEQA as well as other laws. Environmental restoration projects normally involve willing sellers for fee, easements, etc. Any actions must be consistent with current laws, which provide property rights protections.

40-30 These types of measures can be part of a plan to both reduce flood damages and restore the health of the ecosystem or may be excluded. In particular, combining ecosystem restoration features and flood damage reduction features can increase the likelihood that a project is economically viable by increasing the overall benefits. All measures for flood damage reduction and ecosystem restoration are open for consideration during projects planning. Unfortunately, the example measures in the regional descriptions do not clearly convey that both flood damage reduction and ecosystem restoration measures will be considered. The regional descriptions will be revised to clarify this point. See response number 22-42.

40-31 The Stakeholder Interests and Concerns sections are intended to capture ideas heard from stakeholders. In some cases, different points of view from different stakeholders result in what may appear as “dismissive statements.” For example, some stakeholders along the middle Sacramento River do not want to consider widening the floodway but some others are interested in providing the river more room between the levees. The Comprehensive Study team cannot choose to show one view and exclude the other; new clarifying language will be provided in the Stakeholder Interests and Concerns sections. Also, based on your suggestion, the report will be revised to indicate that some stakeholders are concerned that new levees may also be placed on poor foundations.

40-32 The Corps dredged the Sacramento River in the past to facilitate navigation. Sediment removal and dredging for flood damage reduction purposes under the Comprehensive Plan would be a one-time only effort. Sediment removal would provide short-term local benefits, but sediment would tend to redeposit in the excavated areas. Repeated sediment removal would be considered maintenance. Maintenance dredging would be necessary on a fairly frequent, regular basis. The cost of dredging the Sacramento and San Joaquin Rivers on a scale that would make a measurable and lasting contribution to conveyance and channel capacity could be prohibitively expensive. Disposal areas would be required for large amounts of material, all of which could not be deposited on levees. Dredging would adversely affect several species of fish and birds listed as either threatened or endangered by the Endangered Species Act, the California Endangered Species Act or both. Mitigation for these and other impacts would be difficult, if at all possible. For these reasons, it is unlikely that benefits would outweigh costs for a dredging program, and consequently, there would be no Federal or State interest. See response numbers 9-1 and 40-23.

40-33 If some land is ultimately used for new purposes such as transitory storage or environmental mitigation banks, land-owners will be compensated. Rather than acknowledging the need for compensation separately for each potential action, a new section that applies to all actions will be included on landowner rights.

40-34 The report is not telling agriculture to be compatible with wildlife. The report is identifying that wildlife-friendly agriculture is one of many things that can be considered to improve ecosystem values. Programs exist (U.S. Department of Agriculture) that provide monetary incentives to landowners to modify their land use practices. Such programs are on a willing-participant basis. See response number 22-19. Similarly, to be most effective, potential measures should seek ways to manage habitat so it is more compatible with adjacent agricultural land.

40-35 Page 49 of the July 22, 2002 Draft Interim Report describes opportunities for, and potential benefits of, reoperating existing reservoirs on a system-wide basis. New storage is not included in this section because it is not within the scope of reoperating existing reservoirs. While new storage was not included as part of a potential system-wide project (See response 40-5), it could be pursued at the regional level. The regional descriptions (pages 52-78 of the July 22 draft) list some potential measures for future projects. Unfortunately, these example measures did not include new surface storage reservoirs. All measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. The regional descriptions will be clarified to include potential new surface storage among the wide array of potential measures. See response numbers 16-2 and 22-42.

40-36 The organizational structure on pages 33 – 35 of the July 22, 2002 Draft Interim Report are the day-to-day tasks of The Reclamation Board and their supporting staff. Coordinating with on-going programs needs to continue, regardless of the program status. If litigation or other action happens to change a program's role, then The Reclamation Board will continue to coordinate with the remaining or replacement programs. The report now includes a section to acknowledge landowner rights including the need for compensation. See response number 26-17 for a brief discussion of "safe harbor."

40-37 Page 19 of the July 22, 2002 Draft Interim Report begins a section of the document called Findings From System-wide Evaluations. This section summarizes the many technical evaluations that were undertaken during the 5-year course of the Comprehensive Study. While the original approach of the study was to evaluate alternative system-wide plans and recommend one to Congress and the State legislature for funding, this was revised in response to local and regional stakeholders. While the Comprehensive Study will not result in a single recommended plan, the detailed technical evaluations are valuable to future project development efforts and will be made available.

Regarding the “2 reports” referenced in the comment, early iterations of the July 22, 2002 Draft Interim Report are no longer relevant. In the course of developing the 22 July 2002 Draft Interim Report, numerous early iterations were prepared for team and management review. The draft dated June 17, 2002 was created for review by the agencies funding the Comprehensive Study: The Reclamation Board, the Department of Water Resources, the Resources Agency, and the Corps. It is unfortunate that anyone else expended effort reviewing that draft, which stated clearly across the top of the first page “NOTE TO READER: *This paper is a work-in-progress. It is a snapshot of the work as of a.m. June 17, 2002. Work is continuing in several sections, especially the Regional Projects and the Implementation Plan.*” These study management agencies provided comments on the earlier draft. Their comments were incorporated into the document, resulting in the July 22, 2002 Draft Interim Report.

41-1 See response number 22-1. The Comprehensive Study can look for solutions within the Central Valley including the Delta. However, due to other ongoing studies and programs, the Comprehensive Study did not seek to solve problems that are present in the Delta, the Cosumnes River, or the Mokelumne River. In addition, the Comprehensive Study did not seek to solve problems within the Tulare Basin. Therefore, Contra Costa County is within the study area for determining impacts but not for solving specific problems in Contra Costa County. The problems and opportunities addressed in the study focus on the main channels of the Sacramento and San Joaquin Rivers, associated flood bypasses and related flood management facilities, and lower reaches of the major tributaries to these two rivers. Technical evaluations were generally limited to the extent of the models developed for the Comprehensive Study. The downstream limits of the modeling tools are the Sacramento River at Collinsville, downstream end of Three-mile Slough, and downstream end of Georgiana Slough in the Sacramento River Basin. For the San Joaquin River basin, the downstream limits of the modeling are the Grant Line Canal at Tracy Road, Middle River at Highway 4, Old River at Tracy Road, and San Joaquin River at Stockton Deep Water Channel in the San Joaquin River Basin. Limited modeling and evaluation of flood flow conditions in the Delta was performed. The downstream limit of these analyses was Martinez. Specific problems and opportunities in Contra Costa County were not investigated as part of the Comprehensive Study, but the Comprehensive Plan can be applied to this and other areas in the development of future projects.

41-2 The Comprehensive Plan includes a Guiding Principle to provide for sediment continuity. Another Guiding Principle aims to avoid hydraulic and hydrologic impacts. Under the Plan, future projects would examine the influence of individual projects on the river system as a whole, not just along specific river reaches. Future feasibility studies will need to utilize existing

and new system-wide modeling tools to demonstrate that sediment transport or other conditions induced by a project do not impact the Delta. Your concerns regarding increased sediment transport in the lower Delta and estuary will be added to the stakeholder input section of the report.

41-3 See response number 31-14. Your concerns associated with the San Francisco Bay Estuary will be included in the report.

41-4 In the past, upstream projects did not always adequately account for potential harm to the Delta or its communities. Any future studies would consider these effects. The Comprehensive Plan provides a system-wide focus and would prevent future modifications to the flood management system that transfer damages or negative impacts to other areas, as outlined in the Guiding Principles. Your agency is on the mailing list and your continued participation is encouraged.

42-1 Your comment on the Guiding Principles is appreciated.

42-2 The Reclamation Board will consider accepting the Interim Report, including the Guiding Principles, at its December 2002 meeting. Depending on their level of agreement at that time, they may take action or delay to a later time. In either case, the Board makes its decisions in an open public forum.

42-3 The key is for local interests to coordinate with each other. It is acknowledged that complex projects would require participation and facilitation by a combination of appropriate agencies and organizations. The Reclamation Board and the Corps are available to help if there is local interest in a project. See response number 33-11.

42-4 See response numbers 24-5, 25-6 and 29-6.

42-5 See response number 24-6. This outreach should include risk.

42-6 See response number 38-6.

42-7 Although the logistics of future modeling efforts are still under discussion, several scenarios for evaluating cumulative impacts have been brought forth. One such scenario would put the burden of 'foreseeing' cumulative changes to the flood management system on the feasibility studies themselves. In other words, future feasibility studies would need to consider not only projects that have been constructed recently, but also those projects that are in the early stages of planning or could occur in the future. Future, cumulative conditions could then be modeled alongside existing conditions to identify circumstances that might change the way the current project is designed. This approach could also identify project elements outside the immediate study area that provide additional local or system-wide benefits – elements that may not have been identified otherwise. Looking ahead for future projects would also promote communication with ongoing studies and those in conceptual stages. A discussion on how cumulative evaluations could be conducted will be added to the report.

42-8 The Guiding Principle on geomorphic processes and sediment continuity is not intended to encourage projects that arrest erosion and deposition processes. Rather, it is intended that projects consider geomorphic processes in designing future changes to the flood management system. It encourages designs that target more self-sustaining systems, require less maintenance, and do not make conditions worse in other areas. Although small, local projects may not have the ability to model system-wide impacts, they should consider how the project could affect sediment load, sediment sources, and other factors that influence downstream reaches, whether that impact extends a mile downstream or all the way through the Delta.

42-9 The Guiding Principles are for “guidance”, not “requirements.” Whenever practical, all Guiding Principles will be used for each project. While the overall system approach is to include flood damage reduction and ecosystem restoration, including both of these objectives in each project may not be appropriate in some cases. See response numbers 19-4 and 21-4.

42-10 Optimization of existing facilities could be considered as part of any future study. It is anticipated that large, regional studies will most likely be undertaken by some combination of the Corps, U.S. Bureau of Reclamation, The Reclamation Board, and/or State Department of Water Resources, in coordination with local and regional coalitions. Local and regional participation will be necessary to help establish objectives for the degree of flood management, ecosystem restoration and other project purposes. Local and regional leadership is necessary to form coalitions to determine what is desired, to facilitate coordination, to leverage funding and to share responsibility for operating and maintaining a project. See response number 19-8.

42-11 Coordination with CALFED is discussed on pages 38 and 39 of the July 22, 2002 Draft Interim Report. More detailed procedures will be developed during planning of regional projects. Most projects can be developed to support CALFED goals and objectives for ecosystem restoration. Projects developed through the Comprehensive Plan would not be subject to the CALFED ERP project selection process and the Comprehensive Study flood management would not become another program of CALFED.

42-12 Your comment on the Guiding Principle is appreciated.

42-13 See response numbers 22-5 and 39-15.

42-14 The public outreach portion (page 33 of the July 22, 2002 Draft Interim Report) was not intended to replace existing groups with new groups. The local stakeholders can choose to organize themselves within SJRMP or any other group. However, not all stakeholders feel that they are represented by some of the existing groups. Successful development of a regional project will require working with stakeholder groups that represent the full range of regional views.

42-15 The Reclamation Board will use the Comprehensive Plan as a framework for all projects within their jurisdiction. In some cases, The Reclamation Board and the Corps will be active partners with local agencies in planning and constructing projects. In other cases the Board will continue to make decisions on permits for other projects within the flood management system.

The report will be modified to provide a more complete discussion on how the Guiding Principles will be used. See response number 33-11.

42-16 See response number 39-15.

42-17 The reference to Federal participation on page 37 of the July 22, 2002 Draft Interim Report was provided as an example of a potential implementation issue. Due to the wider range of potential benefits, system-wide justification is more likely to be economical than only looking incrementally at portions of the system. See response number 36-7.

42-18 Future studies should include scoping the adaptive assessment and management plan so that appropriate funding can be budgeted.

42-19 Existing Corps policy is set in accordance with the laws Congress establishes. Changes to existing law can only be accomplished through normal Federal and State legislative processes.

42-20 Based on the broad nature of the Comprehensive Plan, the Corps and The Reclamation Board believe that NEPA and CEQA are not required at this time. See response numbers 34-1 and 42-2.

43-1 The Comprehensive Study legislative authorizations (see page 2 of the July 22, 2002 Draft Interim Report) list “flood control and environmental restoration” as the focus of the Plan. However, the Comprehensive Study is closely coordinating with the CALFED Bay-Delta Program and others who have water supply reliability as part of their programs. Page 52 of the Draft Interim Report states, “For the upper Sacramento and the upper San Joaquin River regions, there are important investigations underway by the USBR and other stakeholders to determine if additional water supply storage in those regions is feasible.” The tenth Guiding Principle will be amended to recognize that projects should seek multi-purpose benefits, where feasible, beyond the flood management and ecosystem restoration. While, water supply is not a purpose of the study, multipurpose projects including water supply or other purposes could help make projects more feasible. Each regional description lists some potential measures for projects. Unfortunately, these example projects did not include new surface storage reservoirs. All measures for flood damage reduction and ecosystem restoration are open for consideration during planning for regional projects. The potential measures will be clarified to include potential new surface storage among the wide array of potential measures. See response number 22-42.

43-2 The hydrology for the upper San Joaquin River was developed in adherence with established Federal guidelines and procedures. See response number 48-2. Future studies to develop projects will consider all new information and potential measures that could affect the flows in the upper San Joaquin River.

43-3 As stated on page 24 of the July 22, 2002 Draft Interim Report, “Perhaps the most significant finding from the system-wide evaluations is that no single type of modification will be sufficient to address flood damage reduction and ecosystem restoration objectives in the Sacramento and San Joaquin River basins.” Conveyance, storage, and floodplain management

measures will work together to meet program objectives. The third Guiding Principle does recognize the value of agriculture and open space. The principle simply recognizes that agriculture and open space can be exposed to occasional flooding with less risk to public safety and lower economic damages than other more intensive development. A section on landowner rights will be added to the report. See response numbers 39-8 and 40-9.

43-4 The Comprehensive Study has coordinated with FEMA through regular agency coordination meetings and, in particular, in development of the Enhanced Flood Response and Emergency Preparedness Initial Project of which floodplain mapping is a component. In addition, FEMA now has the hydrology developed after the 1997 flood for use in preparation of their floodplain maps. The bullet does not refer to coordination efforts between the Corps and FEMA. The intent of the bullet and the entire text box was to describe the difference and/or similarities between FEMA floodplains and Comprehensive Study floodplains. FEMA and the Corps understand these maps are different because they are used for different purposes. However, the public often gets confused and the text box is intended to help clarify this.

43-5 The EFM does not explicitly model ecosystem functions; it estimates how aquatic and terrestrial ecosystems along a river reach may respond to changes in the flow regime. Any proposed projects that result in a change to the flow regime of the Upper San Joaquin River could be evaluated for ecosystem restoration opportunities using the EFM.

43-6 See response number 19-4. At the August 7, 2002 workshop in Fresno, Comprehensive Study team members stated that the document is subject to change in the future. The intent is not to change “The Comprehensive Plan” portion of the report (see pages 27 – 35 of the July 22, 2002 Draft Interim Report) once it is finalized, but the “Comprehensive Plan Implementation” portion could change as more information and definition become available. For example, future updates of the report may include updates to the Comprehensive Plan Implementation Issues as the issues are resolved. The implementation portion could also change as projects are constructed or as the models are refined. The basic plan, including the Guiding Principles, the organizational structure, and the approach to developing projects would likely remain the same in the report updates.

43-7 The third Guiding Principle will be modified to clarify the value of agriculture. See response number 26-10.

43-8 It was not the intent to limit the fifth Guiding Principle to only “existing” reservoirs. The fifth Guiding Principle will be modified to remove the word “existing.”

43-9 See response numbers 21-4 and 39-15.

43-10 The Reclamation Board is the organizational structure. The Reclamation Board will continue its traditional partnerships with the Corps and local entities. See response number 39-14.

43-11 See response number 36-10.

44-1 The Comprehensive Study is a broad, basin-wide study and has focused on flood and ecosystem related problems associated with the Sacramento and San Joaquin Rivers. Meetings held over the course of the study have been primarily focused in areas directly affected by these rivers. The Delta was considered from the standpoint that upstream changes could affect the Delta. In future studies, the Delta should be considered; see response number 22-1. Regarding the models developed for the Comprehensive Study, the Mokelumne and Calaveras (and Cosumnes) rivers were included in the hydrology (via unregulated flood hydrographs, storm centerings and their reservoirs are included in the HEC-5 models). They were not included in the hydraulic models (the San Joaquin River basin model stops at Stockton Deepwater ship channel). The hydrology developed for the Mokelumne, Cosumnes, and Calaveras in the Department of Water Resources Delta Simulation Model (DSM2) Delta modeling as flow inputs, although the channels themselves were not modeled.

45-1 See response number 33-7. The report will be revised to strengthen the point that in relation to the flood management system, flood damage reduction and ecosystem restoration are interrelated.

45-2 See response number 29-6

45-3 See response number 24-5.

45-4 See response number 39-6.

45-5 See response number 24-7.

46-1 The Comprehensive Plan defines a process to address the interdependent problems and opportunities associated with flood damage reduction and ecosystem restoration, as well as other related water resource issues. It consists of principles to guide future projects, an approach to develop projects with consideration of system-wide effects, and an organization to consistently apply the principles and develop future projects.

46-2 The document is an important step in integrating flood damage reduction and ecosystem restoration in the flood management system. As described on page 24 of the July 22, 2002 Draft Interim Report, the Comprehensive Study began by attempting to develop a master plan.

46-3 See response numbers 24-5, 25-6 and 29-6.

46-4 See response numbers 33-7 and 39-5.

46-5 Some text will be added to the report to describe that single purpose projects that modify the flood management system (flood management projects or ecosystem restoration projects) are becoming more difficult to justify. The outreach efforts will continue. See response number 24-6.

46-6 See response number 19-4.

46-7 See response number 46-5.

46-8 See response number 33-11.

46-9 Ensuring scientific review of projects will be a main goal of coordination with CALFED. Since the July 22, 2002 Draft Interim Report presents a broad plan for developing future projects, it does not include all the detail that will need to be developed for plan implementation. Pages 38 – 39 of the Draft Interim Report provide a brief outline of the coordination with CALFED.

46-10 Hydrologic and hydraulic models developed for the Comprehensive Study indicate that for flood events with a recurrence interval of 50 years or more, flows in the lower San Joaquin River would be minimally affected by potential flow management measures in the upper river. However, to avoid confusion over whether or not these regions are separate, independent hydrologic units, this discussion will be deleted from the report.

46-11 Refer to response number 24-5 regarding designation of future channel capacities. The construction of Friant Dam and the Chowchilla Canal and East Side Bypasses have reduced high flows from much of the upper San Joaquin River, resulting in a significant reduction in channel capacity and altering the physical and biological conditions of the river. The July 22, 2002 Draft Interim Report will be revised to clarify these conditions. All measures for modifying the existing condition for flood damage reduction and ecosystem restoration, including increasing channel capacity, are open for consideration during planning for regional projects.

47-1 See response number 34-14.

47-2 The policy issues you mention are called “implementation issues” in the July 22, 2002 Draft Interim Report. The draft report only shows two examples of the implementation issues on page 37. Text will be added to the report to outline a process for identifying and resolving issues. This process includes working with a full array of interested stakeholders.

47-3 See response numbers 21-3 and 21-4.

47-4 A section on landowner rights will be added to the report. See response numbers 22-4, 26-9 and 40-36.

47-5 There will be no uncompensated “taking.” The Guiding Principle on agriculture will be rewritten to better recognize the value of agriculture. There is no intent to promote increased flooding of agricultural lands. A section on landowner rights will be added to the report.

47-6 The Guiding Principle was written to operate better for flood management and ecosystem restoration. The aim is to be sure that existing facilities are efficiently used so fewer or smaller new facilities will be needed. Making better use of existing facilities minimizes the land use impacts from the “footprints” of new facilities. There will be no uncompensated “taking.”

47-7 The report will be revised to include these local and regional stakeholder concerns. See response numbers 34-14, 21-3, and 26-20.

47-8 See response numbers 21-3, 22-42 and 26-20.

47-9 The Corps and the Reclamation Board hope that this comment and response process will lead to a better understanding between local and regional stakeholders and those agencies.

47-10 Public safety is the highest priority. See response number 33-7.

47-11 A section on landowner rights that clearly states the need for compensation will be added to the report.

48-1 The Comprehensive Plan outlines a process for developing future projects. It consists of a set of principles to guide development of future projects, an approach to develop projects with consideration of system-wide effects, and an organizational structure to ensure consistent use of the principles and approach. Sound science and assumptions are essential to this process and the development of good projects with strong public support. To aid in the implementation of the Comprehensive Plan, several technical models have been developed to allow evaluation of the system-wide effects of potential modifications to the flood management system. These tools have been developed using sound scientific and engineering principles and in accordance with Federal and Corps of Engineers guidelines and procedures. See response number 48-2.

48-2 The data, analyses, and models used in the Comprehensive Study were developed using sound scientific and engineering principles and in accordance with Federal and Corps of Engineers guidelines and procedures. As with any technical effort within the scope of the Comprehensive Study, there can always be some differences of opinion on how the effort should be conducted; however, the Comprehensive Study sponsors believe the data, analyses, and models used are technically sound. The specific data used in model development is not widely disputed throughout the San Joaquin and Sacramento Valleys. The team has attempted to address specific local concerns. As future projects are developed, the data and models will be refined to address local concerns as they arise to ensure any recommendations have a sound technical basis.

48-3 The Reclamation Board is responsible for administering Division 1 of Title 23 of the California Code of Regulations. Potential Reclamation Board acceptance of the Comprehensive Plan would do nothing to change this existing authority. The Reclamation Board periodically makes modifications/additions to its designated floodway program and these will continue, as deemed necessary by The Reclamation Board, regardless of the outcome of the Comprehensive Plan. Approximately 1300 miles of stream channel are currently covered by The Reclamation Board's designated floodways. The Reclamation Board is unaware of any significant impact that the designation has had on agricultural production or cropping patterns. The designated flood program recognizes agriculture as a compatible land use and allows construction of barns and other farm buildings.

48-4 See response numbers 48-3 and 22-5. The Reclamation Board does not regulate seasonal row crops. A good example of this is the Yolo Bypass where the Board provides no input on the crops and makes no inspections. The Reclamation Board's regulations covers tree spacing and row alignment for orchards. However, experience has shown that the orchard owners generally meet this standard on their own because of the interest in protecting their investment.

48-5 See response number 48-3. The Reclamation Board's authority applies to flood management in the Central Valley with public safety having the highest priority. The Reclamation Board does not seek to eliminate agriculture, or even reduce it. Sustainable agriculture is essential to achieving the Comprehensive Plan objectives.

48-6 See response number 48-3.

48-7 The Comprehensive Plan recognizes that except for occasional large floods, the water in the upper San Joaquin River basin is fully allocated to existing beneficial uses. The Plan also recognizes that if there is going to be meaningful restoration of riparian and aquatic habitat additional water above existing river flows would be required. The authority to prepare the Plan specified that it address flood damage reduction and ecosystem restoration, and developing new water supply sources is considered to be beyond the limits of the study authorization. Additionally, this would duplicate ongoing Federal and State efforts to develop new water supply resources. The Comprehensive Study sponsors, The Reclamation Board and the Corps, will work closely with those efforts, including the upper San Joaquin River Basin Storage Investigation being conducted by the Bureau of Reclamation, to maximize opportunities to develop additional flood control storage and to ensure that the broadest range of benefits from new water supply sources are realized.

48-8 See response number 34-6. You can use the referenced unity to build regional coalitions if you are interested in developing projects. See response numbers and 48-10 and 42-14.

48-9 The Comprehensive Study team fully supports regional efforts to identify water resource problems and opportunities and look for solutions in a collaborative manner. It is through efforts such as this that effective durable solutions are implemented and the public interest is served. The team knows from previous discussions with RMC that there are many water resource issues in the upper San Joaquin River area that are very complex and are unique on a large scale.

48-10 The ability for the local agency to cost-share in project planning would be a prerequisite to future project development. There are a number of ways to request State and Federal participation in a regional study. However, the first thing to do is set up a meeting with the Corp's Sacramento District and The Reclamation Board/DRW staff to talk about your project ideas, determine what can be done and how to proceed. After that, your association can send letters to Colonel Michael J. Conrad Jr., District Engineer at the Sacramento District of the U. S. Army Corps of Engineers and Peter D. Rabbon, General Manager of The Reclamation Board. The Corps would then include the planning study in their budget that could be approved 2 years later. The State's participation in the study would be subject to a similar budgeting and approval process. Demonstration of having a regional coalition representing the varied views of stakeholders helps the appropriation and planning processes. The Corps and The Reclamation

Sacramento and San Joaquin River Basins  
Comprehensive Study

Board will use the Comprehensive Plan as guidance for each project in which they participate. The Comprehensive Study team would be happy to discuss details of initiating a regional study with you at your convenience.