5. DRAFT IMPLEMENTATION PLAN

Phase II of the CALFED Bay-Delta Program will culminate with the Federal Record of Decision and the state Certification of the Final Programmatic EIS/EIR (expected to be completed late 1999). At that time, Phase III of the CALFED Bay-Delta Program will begin implementation of the preferred program alternative. Phase III is expected to extend 30 years or more.

Program implementation during Phase III will be guided by the implementation plan. The plan focuses on the early years of implementation when needed actions are better known but also provides a long-term vision for continuing implementation over the next several decades.

The implementation plan cannot be completed until the final programmatic EIS/EIR is completed and the complete "decision" is defined. Therefore, this draft implementation plan, like other chapters of the *Revised Phase II Report*, is a work in progress. The draft implementation plan contains the following parts:

- **Actions and Assurances for 1998-99** - CALFED agencies will use their existing authorities to pursue ongoing actions which are consistent with the CALFED framework
- **Stage 1 Actions** - A list of proposed actions for the first seven years of implementation following the Record of Decision and Certification of the EIS/EIR
- **Water Operations** - Draft concept for water operations criteria for the first seven years of implementation Assurances and Governance Plan - Set of tools and mechanisms to assure that the Program will be implemented and operated as agreed
- **Financing Plan** - Plan for funding the implementation of the preferred alternative including financing principles, cost allocation and cost sharing considerations, and Program element cost estimates
- **Comprehensive Monitoring, Assessment and Research Program** - Plan for monitoring and research that provides the data and necessary information to evaluate the performance of completed actions for use in supporting the adaptive management of future actions
- **Adaptive Management** - Plan to constantly monitor the Bay-Delta system and adjust future implementation as we learn more about the system and how it responds to our efforts
- **Long-Term Implementation** - A general vision (subject to adaptive management and the conditional decisions) for the 30-year Program implementation
- **Draft Stage 1 Environmental Compliance Strategy** - Framework for efficient processing of information needed for conforming with the regulatory procedures of the different agencies and their protocols, guidelines and time lines

5.1 Actions and Assurances for 1998-99

During the period before the final EIS/EIR and ROD are issued in the fall of 1999, the CALFED agencies will continue to make progress in implementing, coordinating, and expanding ongoing project specific actions to provide additional benefits for environmental, urban, and agricultural users, where consistent with the CALFED Bay-Delta Programmatic framework. Project specific actions to pursue include:

- Complete programmatic implementation ~~plan~~ *agreement and assurance package. The assurance package will extend/replace the Accord and include a set of actions and mechanisms to assure that the Program will be implemented and operated to provide for no net loss, no uncompensated takings, no actions resulting in added risk of loss through operating rules, full regulatory protection for in-Delta and upstream diverters that participate in restoration actions, safe harbor, and operational regulatory certainty. The following will be part of the assurance package and available at the time of the ROD and Findings:*
  - *programmatic conservation strategy;*
  - *description of new institution/entity and how agencies will coordinate*
  - *description of process for stakeholder involvement*
  - *financial strategy and principles;*
  - *conditions and linkages;*
  - *final contingency response for unforeseen circumstances;*
  - *framework for the many other assurances in the program;*
  - *mitigation policy/principles/strategy; and*
  - *adaptive management principles for each program element.*[1]
- Develop and implement the annual CVP/SWP Operations Plan Expand south of Delta groundwater storage, *including the implementation of Joint-Point.*[2]
- Facilitate additional short-term water transfers
- Improve coordination of Category III, Bay-Delta Act, CVPIA and other expenditures for ecosystem restoration projects
- ~~Initiate environmental documentation and feasibility analysis for projects that could be implemented early in Stage 1~~ *Define process for identifying, evaluating, and approving stages and substages that maintains balance among the Program purposes and disclose in the Revised Draft PEIS/EIR. The process will include:*
  - *Preparation of a supplemental program EIS/EIR for each substage that evaluates cumulative impacts for the substage as a whole.*
  - *Preparation of individual NEPA/CEQA documents and permitting for substage projects.*
  - *Authorize implementation only when all substage projects are ready to proceed.*[3]

[1] Previous comment not addressed in current draft.
[2] Previous comment not addressed in current draft.
[3] Previous comment not addressed in current draft. See attached diagrams for a graphical representation of the

- Target and increase finding for water conservation, reclamation, water quality, and floodplain and watershed management programs
- Seek continued funding for Delta levees program.
- Issue final State Water Resources Control Board water rights decision to allocate responsibility for meeting the 1995 Water Quality Control Plan
- Extend the Bay-Delta Accord to provide operational and environmental stability through December 1999, at which time CALFED anticipates the ROD will be issued
- Resolve permitting issues and, as appropriate, initiate south Delta improvement actions
- Incorporate ongoing and planned monitoring and studies into the CALFED Comprehensive Monitoring Assessment and Research Program (CMARP)
- *Complete the finance package, including a final cost estimate and agreement on the financial principles and cost allocation strategy, including determination of user fees linked to long term assurances.*

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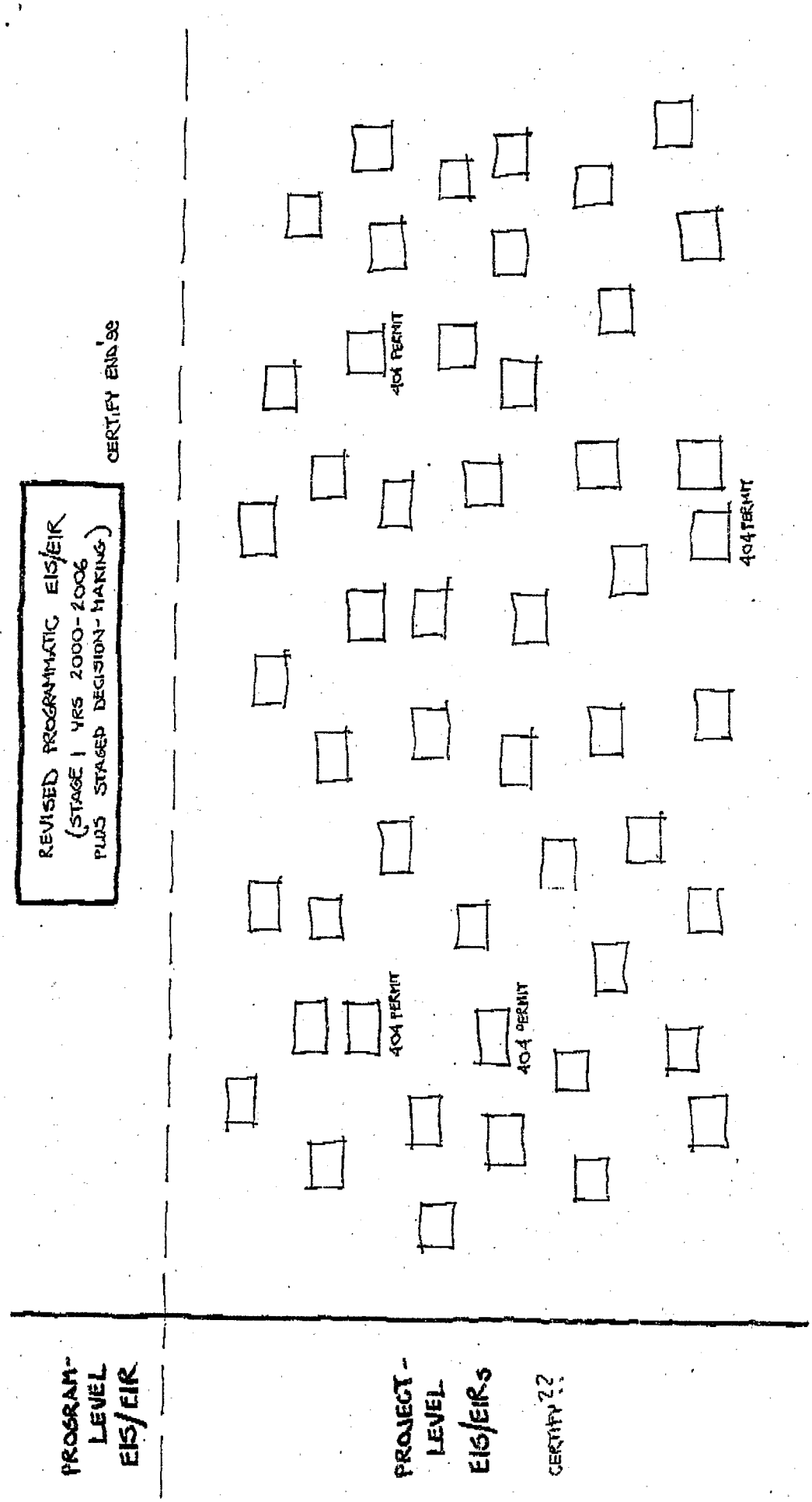
current NEPA/CEQA process compared to the recommended process. As previously recommended, the Phase II Report should describe the specific NEPA/CEQA documents that will be prepared for the program as follows, including a list of project specific environmental documents already underway or ready to begin in 1999:

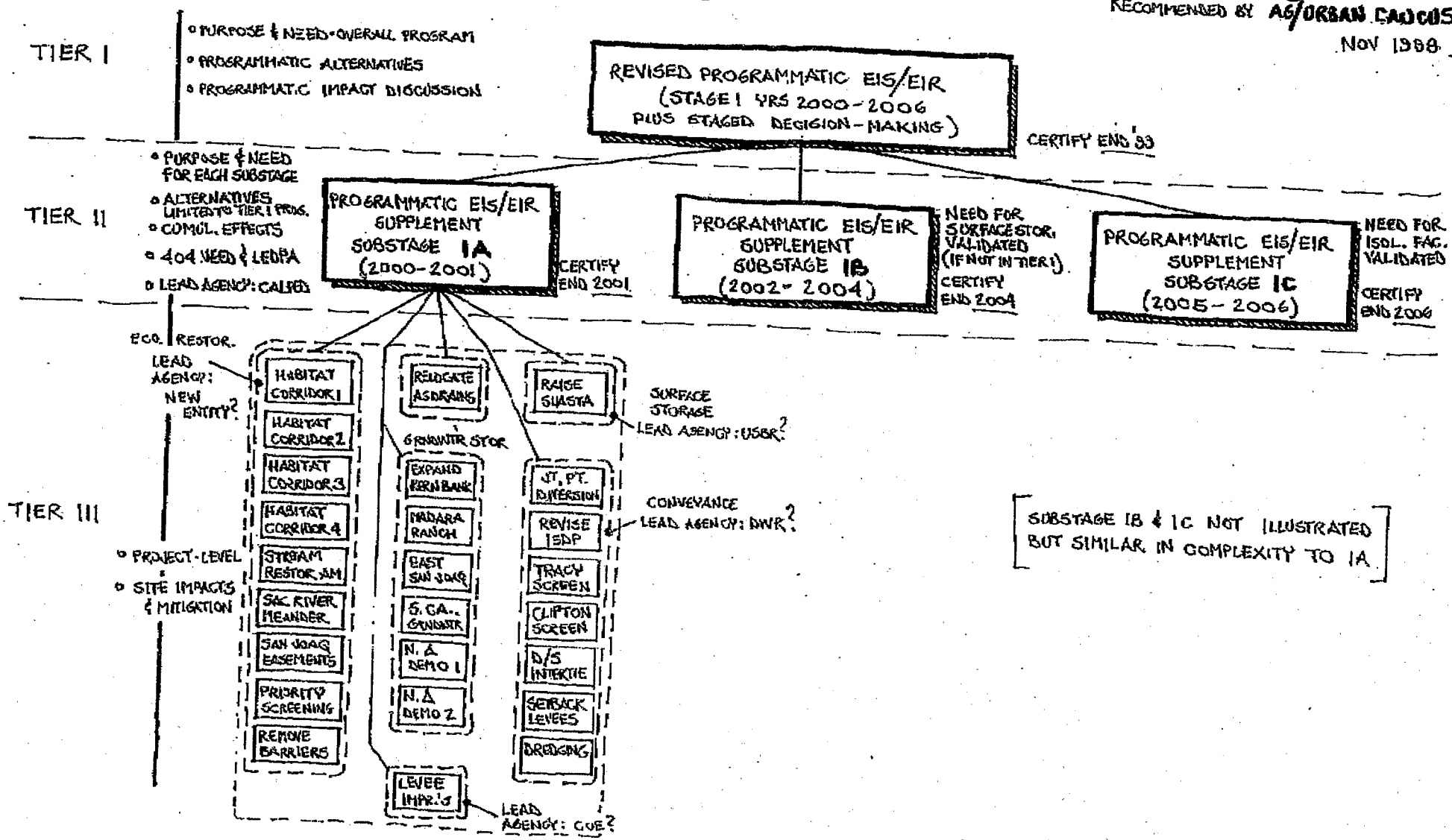
1) Revised Draft Programmatic EIS/EIR now anticipated to be issued spring 1999: Identifies the draft preferred alternative, mitigation policy, and principles.
2) Supplemental Revised Draft Programmatic EIS/EIR
   a) Satisfies the 404 alternatives analysis requirements for the overall program elements.
      i) Measures relating to water supply (conservation, recycling, transfers, and storage) should be grouped together as one integrated water management element.
      ii) The Programmatic EIS/EIR must recognize the dual conveyance as a viable alternative and the possibility that it may constitute the least environmentally damaging practicable alternative. In evaluating the least environmentally damaging practicable alternative, the 404 needs determination must be focused on the primary program issues of public health and water quality, fishery recovery, [and seismic vulnerability?].
   b) Satisfies additional disclosure needed to obtain State and federal endangered species assurances sought in the implementation agreement.
   c) Defines and discloses process for identifying, evaluating, and approving stages and substages in a manner that maintains balance among the Program purposes.
      i) Prepare supplemental program EIS/EIR for each substage that evaluates cumulative impacts for the substage as a whole.
      ii) Prepare individual NEPA/CEQA documents and obtain permits for substage projects.
      iii) Authorize implementation only when all substage projects are ready to proceed.
3) Substage Program EIS/EIRs:
   a) Evaluate alternative mixes of substage projects formulated using criteria disclosed in the Programmatic EIS/EIR.
   b) Disclose cumulative impacts of preferred alternative bundle of substage projects.
4) Project Level Documents: Issue individual project documents as needed for projects within each substage. Utilize existing NEPA/CEQA documents as appropriate. Anticipated project level documents required for the first substage include:
   a) [Provide listing of all projects/actions anticipated to be covered by new environmental documentation]
   b) [Provide listing of all projects/actions anticipated to be covered by separate existing and/or revised environmental documentation]


CURRENT CALFED PROGRAM
PROGRAM-LEVEL EIS/EIR
PROJECT-LEVEL EIS/EIRs
CERTIFY '22
REVISED PROGRAMMATIC EIS/EIR (STAGE 1 YRS 2000-2006 PLUS STAGED DECISION-MAKING)
CERTIFY END '98
404 PERMIT
404 PERMIT
404 PERMIT
404 PERMIT

G-007509

CONCEPTUAL APPROACH TO NEPA/CEQA REQMTS:

RECOMMENDED BY AG/URBAN CAUCUS
NOV 1998



(2)

- *Draft and begin legislative program to create new independent entity wholly responsible for the Ecosystem Restoration element.*
- *Define adaptive management process for making adjustments as better information becomes available, including who makes future decisions, for all elements of the Program; e.g., define triggers and time periods necessary for deciding need for change in management direction*
- *Establish water transfer clearinghouse to provide for early involvement of local officials, ensure public participation, disclose information, and monitor actual transfer impacts*
- *Coordinate with SWRCB, DWR, USBR, and local counties and cities to formulate policy, under their existing authorities, for required water transfers analyses*
- *Develop and implement an outreach, coordination, and partnering program with local landowners including individuals, Reclamation Districts, Resource Conservation Districts, Water Authorities, irrigation districts, Farm Bureaus, etc. to assure participation in planning design, implementation, and management of levee projects*
- *Develop and implement a framework for groundwater banking and conjunctive use projects.*
- *Define water use efficiency, transfers, and groundwater acceptance levels as part of the Implementation Agreement.*[4]

Attachment D contains a short summary of each action.

5.2 Stage 1 Actions

Stage 1 is defined as the seven year period commencing with the final decisions on the Programmatic EIS/EIR. Agreement on Stage 1 actions is only one part of the decision for a preferred program alternative but, it is important that these actions achieve balanced benefits and lay a solid foundation for successful implementation of the Program.

The following pages provide more detail on potential actions for Stage 1. **These actions will be more fully developed as parts of the preferred program alternative for the *Revised Draft Programmatic EIS/EIR* and for the *Final Programmatic EIS/EIR*.**

Adaptive management is an essential part of the implementation strategy for every program element to allow necessary adjustments as conditions change in future stages of implementation and as more is learned about the system and how it responds to restoration efforts. Consistent with the concept of adaptive management, some actions may need to be refined within the time frame of Stage 1 to reflect changing conditions or new information.

The outcome of and certain sites for Stage 1 decisions will not be known until additional information, including need for mitigation, is available and until the options to carry out these

[4] Previously recommended 1999 actions not addressed in current draft.

Stage 1 proposals have undergone environmental review. Consequently, the outcome could be altered as a result of that second tier environmental review and mitigation measures imposed as a part of those actions. However, if the impacts from the actions in Stage 1 have been included in the Programmatic EIS/EIR, the subsequent environmental documents can tier off the Programmatic document for cumulative and long-range impacts of the Programmatic decision.

Each potential action in the following Stage 1 list includes an estimate (in parenthesis) of when the action may occur within Stage 1. For example, "(yr 1)" indicates the action is expected to occur in the first year following the final decisions on the Programmatic EIS/EIR.

CALFED will continue work between the Revised Draft EIS/EIR and the Final EIS/EIR on grouping the Stage 1 actions into a series of bundles packages) which can provide additional assurances for balancing benefits. For example, a package of actions in the Delta could include levee work, habitat improvements, water quality work, and facilities and operations to improve water supply reliability. Packages for some actions may be geographical, based on tiring, or other grouping. Linking the actions would help assure that they all move forward together. These may be linked within the same project EIS/EIRs, tied by contractual documents, dependent on the same funding or other means.

Levees

The focus of the long-term levee protection element of the Program is to reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees. Levee protection is an on going effort which builds on the successes on ongoing programs and consists of

- *Base-level finding to participating local agencies*
- *Funding of special improvement projects for habitat and levee stabilization to augment the base-level finding*
- *Grant projects to develop best management practices for subsidence control*
- *An advanced measures plan and emergency management plan to more effectively plan for and deal with potential levee disasters*
- *A seismic risk assessment to evaluate performance of the existing levee system during seismic events*

The first stage continues the decades-long process to (improve reliability of Delta levees.

1. Develop and implement an outreach, coordination, and partnering program with local landowners including individuals, cities, counties, reclamation districts, resource conservation districts, water authorities, irrigation districts, farm bureaus, other interest groups, and the general public to assure participation in planning

design, implementation, and management of levee projects (*prior to*[5] yr. 1).

2. Obtain short-term federal and state funding authority as a bridge between the existing Delta Flood Protection Authority (AB360) and long-term levee funding (yr. 1-5).
3. Obtain long-term federal and state finding authority (yr. 1-7); e.g., the Corps of Engineers' current Delta Special Study would develop into a long-term Delta levee reconstruction program and the state would be the local cost-sharing partner.
4. Conduct project level environmental documentation and obtain appropriate permits for each bundle package) of Stage 1 actions (yr. 1-7).
5. Implement demonstration projects for levee designs that minimize the need for continuous disruption of habitat from levee maintenance and minimize the need for ongoing mitigation from disrupted habitat (yr. 1-7).
6. Coordinate Delta levee improvements with ecosystem improvements (yr 1-7); e.g., coordinate improvements, modify maintenance manuals as appropriate to accommodate ERP actions near levees, separately track levee mitigation costs and ERP costs.
7. Fund levee improvements up to PL84-99, approximately $114 million [$74 million during years 1 through 5 and $40 million during years 6 through 7] in first stage (yr. 1-7); e.g., proportionally distribute available finds to entities making application for cost sharing of Delta levee improvements.
8. Further improve levees which have significant statewide benefits, approximately $82 million [$58 million during years 1 through 5 and $24 million during years 6 through 7] in first stage (yr. 1-7); e.g., statewide benefits to water quality, highways, etc.
9. Coordinate Delta levee improvements with Stage 1 water conveyance, water quality improvements and with potential conveyance improvements in subsequent stages (yr. 1-7).
10. Institute the Emergency Management Plan (yr. 1-7); e.g., establish $10 million revolving fund, refine command and control protocol, stockpile flood fighting supplies, establish standardized contracts for flood fighting and recovery operations, outline environmental considerations during emergencies.
11. Initiate a subsidence control program to develop and implement BMP's for lands adjacent to levees, approximately $11 million for Stage 1 (yr. 1-7).
12. Continue evaluation of seismic risk to integrity of the levee system and effective ways to mitigate that risk (yr. 1-7).
13. *Complete conservation plan providing for defined permitting conditions and "No Surprises" protection for levee owners.*[6]

Water Quality

The water quality program will consist of a wide variety of actions to provide good water quality

[5] Previous recommendation to advance to 1999 actions not addressed in current draft.

[6] Previously recommended new action not addressed in current draft.

for environmental, agricultural, drinking water, industrial, and recreational beneficial uses of water. The majority of current water quality actions rely on comprehensive monitoring, assessment, and research to improve understanding of effective water quality management and on the ultimate control of water quality problems at their sources. The Stage 1 water quality effort focuses on reducing constituents contributing toxicity to the ecosystem and affecting water users (including BOD) and on reducing total organic carbon loading, salinity, and pathogens that degrade drinking water quality. In addition, research and pilot studies are recommended to obtain information prior to implementation of some actions. CALFED is pursuing Stage 1 actions to continually improve public health through improvements in drinking water quality which includes studies and investigations that will contribute to an assessment on the need for additional conveyance steps (including an isolated facility; see page) and/or other means of providing better quality source water[7]

1. Prepare project level environmental documentation and permitting as needed (yr. 1-7).
2. Coordinate with other CALFED program elements to ensure that in-Delta modifications maximize potential for Delta water quality improvements (yr. 1-7).
3. Continue to clarify use of and fine-tune water quality performance targets and goals (yr. 1-7).
4. Conduct the following *mercury* evaluation and abatement ~~mercury~~ work:

Cache Creek

- Risk appraisal and advisory for human health impacts of mercury (yr. 1-5).
- *Support development and implementation of TMDL for mercury (yr 1-7).*[8]
- Determine bioaccumulation effects in creek and delta (yr. 1-4).
- Source, transport, inventory, mapping and speciation of mercury (yr. 1-7).
- Information Management/Public Outreach (yr. 5-7).
- Participate in stage 1 remediation (drainage control) of mercury mines if federal Good Samaritan protection obtained (yr. 3-5).
- Investigate sources of high levels of bioavailable mercury (yr. 4-7).

Sacramento River

- Investigate Sources of high levels of bioavailable mercury, inventory, map, and refine other models (yr. 3-7).
- Participate in remedial activities (yr. 7).

Delta

- Research methylization (part of bioaccumulation) process in Delta (yr. 1-2).
- Determine sediment mercury concentration in areas that would be dredged during levee maintenance or conveyance work (yr. 3-7).
- Determine potential *impact* of ecosystem restoration work on *methyl*

[7] Recent revision proposed by CALFED staff.
[8] Recent revision proposed by CALFED staff.

mercury levels in lower and higher trophic level organisms (yr. 3-5).[9]

5. Conduct the following pesticide work:
   - Develop diazinon and chlorpyrifos hazard assessment criteria with DEG (yr.1). *Support development and implementation of a TMDL for diazinon.*[10]
   - Develop BMPs for dormant spray and household uses (yr. 1-3).
   - Study the ecological significance of pesticide discharges (using $1.5 million of ERP funds) (yr-1-3).
   - Support implementation of BMPs (yr. 2-7).
   - Monitor to determine effectiveness (yr 4-7).
6. Conduct the following heavy metals work:
   - Determine spatial and temporal extent of metal pollution (yr 3-7).
   - Determine ecological significance and extent of copper contamination (yr. 1-3).
   - Review impacts of other metals such as cadmium, zinc, and chromium (yr. 1).
   - Participate in Brake Pad consortium to reduce introduction of copper (yr. 1-7).
   - Partner with municipalities on evaluation and implementation of stormwater control facilities (yr. 2-5).
   - Participate in remediation of mine sites as part of local watershed restoration and delta restoration (yr. 2-7).
7. Conduct the following salinity reduction work:
   - Develop and implement supply water quality management activities to improve supply quality (yr. 1-7).
   - Develop and implement a management plan to reduce drainage and reduce total salt load to the *San Joaquin*[11] valley (yr. 1-7).
   - *Encourage source reduction programs including tiered pricing, expansion of drainage recirculation systems, land management, and land retirement where other options are infeasible (yr 1-3).*[12]
   - Conduct pilot projects to evaluate the feasibility of water reuse, through agroforestry, of various concentrations of saline water (yr.4-6).
   - Study feasibility of desalination methods including reverse osmosis (yr. ~~7~~ *1-3*)[13].
   - Study cogeneration desalination (yr. 7).
   - Implement real time management of salt discharges (yr. 3-7).
8. Conduct the following selenium work:
   - Conduct selenium research to fill data gaps in order to refine regulatory

[9] Recent revision proposed by CALFED staff.
[10] Recent revision proposed by CALFED staff.
[11] Recent revision proposed by CALFED staff.
[12] Previously recommended action not addressed in current draft.
[13] Recommended advancement of new action.

goals of source control actions; determine bioavailability of selenium under several scenarios (yr. 1-5).
- Research interactions of mercury and selenium (yr. 2-3).
- Refine and implement real-time management of selenium discharges (yr. 1 - 7).
- Expand and implement source control and reuse programs (yr. 1-7).
- *Conduct pilot studies on selenium reduction and removal processes (yr 1-3).*[14]
- Coordinate with other programs (yr. 1-7); e.g., recommendations of San Joaquin Valley Drainage Implementation Program, CVPIA) for retirement of lands with drainage problems that are not subject to correction in other ways. (CVPIA alone will retire approximately 70,000 acres of land with Selenium-caused water quality problems during time period of Stage 1.)

9. Conduct the following sediment reduction work/organochlorine pesticides:
   - Participate in implementation of USDA sediment reduction program (yr. 1-7).
   - Promote sediment reduction in construction arenas and urban SW, and other specific sites (yr. 1-7).
   - Implement stream restoration and revegetation work (yr. 4-7).
   - Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions (yr. 4-7).
   - Coordinate with ERP on sediment needs (yr. 1-3).
10. Conduct the following nutrients work:
   - Complete studies of causes for DO sag in San Joaquin River (yr. 1-2). Define and implement corrective measures for DO sag (yr. 1-7).
   - Encourage regulatory activity to reduce nutrients discharged by unpermitted dischargers (yr. 1-7).
   - Develop inter-substrate DO testing in conjunction with ERP (yr. 24).
   - Study nutrient effects on beneficial uses (yr. 4-7).
11. Conduct the following unknown toxicity work:
   - Participate in identifying unknown toxicity and addressing as appropriate (yr. 1-7).
12. Other actions specific to drinking water improvements:
   - *Develop and implement a strategy in coordination with regulatory agencies to economically address impacts on water quality from increased munidipal waste discharges and urban runoff to the delta and its tributaries (yr 1-3).*[15]
   - *Conduct a comprehensive pilot study of potential methods of reducing organic carbon loadings to the central delta from agricultural drains. potential actions to be investigated include treatment of agricultural drainage, relocation of agricultural drains, storing agricultural drainage*

[14] Previously recommended action not addressed in current draft.
[15] Previously recommended action not addressed in current draft.

for discharge on ebb tide, and active land management for TOC control (yr 1-3).[16]

- *Investigate the feasibility of managing or relocating agricultural drains discharging to Rock Slough and the Contra Costa Canal (yr 1-3).*[17]
- *Implement cost effective agricultural drainage control actions from pilot study. Expand studies to full or demonstration scale where additional data are needed (yr 4-7).*[18]
- *Implement rock slough drainage actions (yr 4-7).*[19]
- *Develop and implement a watershed management plan for the South Bay Aqueduct (yr 4-7).*[20]
- ~~Control TOC contribution through control of algae, aquatic weeds, agricultural runoff, and watershed improvement (yr. 1-7).~~[21]
- ~~Study Bromide and disinfection byproduct control and implement at affected sites~~ *Study brominated and chlorinated disinfection byproduct operational controls at water treatment plants and implement incremental improvements as warranted* (yr. 1-7)[22]
- *Evaluate impacts of ecosystem restoration projects on drinking water quality (yr 1-7).*[23]
- *Conduct a study of sources organic carbon and total dissolved solids in the delta and tributaries. Evaluate BMPs to control TOC and TDS (yr 1-3).*[24]
- *Develop a workplan for a study of pathogen sources in the delta and tributaries (yr 1-3).*[25]
- *Conduct a study of pathogen sources in delta and tributaries and evaluate BMPs for pathogen control (yr 4-7).*[26]
- ~~Control of pathogens through control of cattle, urban storm water, sewage, boat discharge, and possibly recreational swimming; includes various projects depending on area of impact (yr. 3-7).~~[27]
- ~~Study recreational swimming impacts, wild animal impacts (yr. 4).~~[28]
- *Conduct research on sources of bromide in the San Joaquin River and relative contribution to south delta concentrations (yr 1-3).*[29]

[16] Previously recommended action not addressed in current draft.
[17] Previously recommended action not addressed in current draft.
[18] Previously recommended action not addressed in current draft.
[19] Previously recommended action not addressed in current draft.
[20] Previously recommended action not addressed in current draft.
[21] Recommended deletion. Specific control actions should be developed with input of study results.
[22] Recent revision proposed by CALFED staff.
[23] Previously recommended action not addressed in current draft.
[24] Previously recommended action not addressed in current draft.
[25] Previously recommended action not addressed in current draft.
[26] Previously recommended action not addressed in current draft.
[27] Recommended deletion. Specific control actions should be developed with input of study results.
[28] Recent revision proposed by CALFED staff.
[29] Previously recommended action not addressed in current draft.

- *Implement Barker Slough watershed management plan (yr 1-3).*[30]
- ~~Relocate Barker slough intake~~ *Provide an alternative intake to barker slough for the north bay aqueduct contractors if calfed activities degrade water quality or create pumping restrictions* (yr 7+).[31]
- MTBE reductions in various areas (yr 3-5).
- Address water quality problems in terminal reservoirs (yr. 3-5).
- *Perform public health effects studies, as needed, to more specifically identify the potential health effects of bromide related disinfection byproducts (yr 1-3).*[32]
- *Investigate alternative sources of and means of providing high quality water supply for urban users of Delta water (yr 1-7).*[33]
- *Investigate, as needed, advanced treatment technologies for the removal of salt, bromide, total organic carbon, and pathogens in urban water supplies (yr 1-7).*[34]
- *Investigate combinations of new supplies and technologies that can minimize salt content of urban water supplies and provide greater public health protection (yr 1-7).*[35]
- *Convene an expert panel in a public forum to obtain agreement on relevant technical data to inform the governing entity in its consideration of solutions to identified public health issues for urban users of Delta water (yr 4).*[36]
- Develop a plan sufficient to meet forthcoming EPA and Department of Health Services standards for brominated disinfection byproducts (by yr. 7).

13. Conduct the following turbidity and sediment work:
    - Implement protection actions in the upper watershed to reduce sedimentation of fish spawning habitat (yr. 1-7).
    - Implement erosion control BMPs in the upper watershed (yr. 1 7).
    - Construct sedimentation basins in urban and suburban areas (yr. 1-7).
    - Evaluate use of a head control structure on lower Dominici Creek~24).
    - Perform quantitative analysis of river sediment loads, budgets, and Sources (yr. 1-7).

Ecosystem Restoration

The CALFED ecosystem restoration program (ERP) is designed to maintain, improve, and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to

[30] Previously recommended action not addressed in current draft.
[31] Recommended revision consistent with previous comments.
[32] Recent revision recommended by CALFED staff.
[33] Recent revision recommended by CALFED staff.
[34] Recent revision recommended by CALFED staff.
[35] Recent revision recommended by CALFED staff.
[36] Recent revision recommended by CALFED staff.

support sustainable populations of diverse and valuable plant and animal species. A foundation of this program element is the restoration of ecological processes associated with streamflow, stream channels, watersheds, and floodplains. Implementation of the ERP over the 20 to 30 year implementation period will be guided through an ecosystem-based, adaptive management approach. ERP goals and objectives for ecosystem, habitat, and species rehabilitation are designed to produce measurable and progressive improvements to the Bay-Delta ecosystem that should result in a high level of ecosystem health and species recovery that exceeds existing regulatory requirement5 while improving water supply reliability and water quality of the Bay-Delta Ecosystem. The Stage1 restoration efforts are structured to accomplish significant improvement in Day-Delta ecological health through a large scale adaptive management approach in which the actions inform management decisions in later stages of implementation.

Success of ERP Stage 1 actions is also critically dependent on other pro gram elements, including water quality improvement actions throughout the Bay-Delta watershed, levee system integrity actions, and integration with a watershed management strategy and a water transfers market. The priorities for restoration activities will be first on existing public lands as appropriate, second to work with landowners in voluntary efforts to achieve habitat goals including the acquisition of easements, third a combination of fee and easement acquisition, and fourth on acquisition of fee title as necessary to achieve program objectives. Acquisition will be on a willing seller basis and with emphasis on local coordination and partnerships and include appropriate mitigation for agricultural resource impacts. The intent is to maximize habitat benefits while minimizing land use impacts.

1. Develop and implement an outreach, coordination, and partnering program with local landowners and individuals, cities, counties, reclamation districts, the Delta Protection Commission, resource conservation districts, water authorities, irrigation districts, farm bureaus, other interest groups, and the general public to assure participation planning design, implementation, and management of ERP projects.
2. Conduct project level environmental documentation and permitting as needed for each bundle of Stage 1 actions(yr. 1-7).
3. Full coordination with other ongoing activities which address ecosystem restoration in the Bay-Delta system (yr. 1-7); e.g., CVPIA, Four Pumps Agreement, etc.
4. Implement habitat restoration in the Delta, Suisun Bay and Marsh, and Yolo Bypass to Improve ecological function, facilitate recovery of endangered species, and determine the feasibility and desirability of implementing larger scale habitat restoration in future stages (yr. 1-7):
   - Restore major habitat corridors with a mosaic of habitat types along the Mokelumne and San Joaquin Rivers, within the Yolo Bypass, and along other major fish migration corridors as practicable (yr. 1-7).
   - Implement tidal wetland restoration pilot projects to test the effectiveness of larger scale restoration at Various locations in the Delta.
   - Restore large expanses of shallow water habitat in open water areas of the

Delta.

5. Implement large-scale, restoration pilot projects on select rivers (possibly Clear Creek, Deer Creek, and the Tuolumne River) that would include implementation of all long-term restoration measures in coordination with the watershed management common program and monitoring of subsequent ecosystem responses to learn information necessary for making decisions about implementing similar restorations in Stage 2 (yr. 1-7).
6. ~~Develop an ecosystem water market potentially $20 million per year) and acquire 100,000 acre-feet of water for critical ecosystem and species recovery needs (yr. 1-7).~~ *Provide funding for priority and emergency actions, including ecosystem participation in water market. Nature and scope of ecosystem water transaction to be negotiated on a case-by-case basis according to the need for water for the environment and the impact on the water market for water users and other environmental water purchases. The program participation program should include a local public hearing process with a demonstrable local support in the area from which the water is to be transferred.*[37]
7. Complete targeted research and scientific evaluations needed to resolve the high Priority issues and uncertainties (e.g., instream flow, exotic organisms, and Bay-Delta food web dynamics) to provide direction for implementing the adaptive management process and information necessary for making critical decisions in Stage 2 (yr. 1-7).
8. Establish partnerships with universities for focused research (yr. 1-7).
9. Complete the remaining 60% of the easements and/or acquisition for the Sacramento River meander corridor identified under the SB 1086 Program [approximately $30 million required]. Provide assurances for and participation by Sacramento River users and landowners *as part of an ESA conservation plan and demonstration project* that provides indemnification of affected parties against flooding impacts on neighboring landowners and impacts on water diverters ~~(yr. 1-7)~~. *Develop conservation plan (yr 1-3); acquisitions (yr 4-7).*[38]
10. Acquire flood plain easements, consistent with ecosystem needs along the San Joaquin River in coordination with the Corps of Engineers' Sacramento and San Joaquin River Basins Comprehensive Study *and with participation of local interests* (yr. 4-7). *Provide for indemnification of affected parties against flooding, impacts on neighboring landowners, and impacts on water diverters.*[39]
11. Continue high priority actions that reduce Stressors of direct mortality to fishes (yr. 1-7):
    - Aggressively screen existing unscreened or poorly screened diversion on the Sacramento River, San Joaquin River, and tributary streams.
    - Remove select physical barriers to fish passage.

[37] Previously recommended replacement action not addressed in current draft.
[38] Previous comment not addressed in current draft.
[39] Previous comments not addressed in current draft.

12. *Continue implementation of gravel management projects and* ~~C~~continue[40] gravel management (yr. 5-7); e.g., isolate gravel pits on San Joaquin River tributaries and relocate gravel operations on Sacramento River tributaries (most gravel work would be implemented in subsequent stages with designs and plans for ecosystem reclamation of gravel mining sites).
13. Improve research, monitoring, detection, and control of exotic species (yr. 1-7):
    - Implement invasive plant management program in Cache Creek.
    - Develop ballast water management program.
    - Develop early-response invasive organism control programs.
14. Explore ways to provide incremental improvements in ecosystem values throughout the Bay-Delta system in addition to habitat corridors described above (yr. 1-7); e.g., pursue actions that are opportunity-based (willing sellers, funding, permitting, etc.), provide incremental improvements on private land through incentives, develop partnerships with farmers on "environmentally friendly" agricultural practices, etc.
15. Incorporate ecosystem improvements with levee associated subsidence reversal plans (yr. 1-7).
16. Evaluate the feasibility of harvest management to protect weaker stocks (yr. 1-7).
17. *Implement South Delta facilities for fish passage, fish screen, and salvage improvements as listed under the "Conveyance" element.*
18. *Develop and implement, as adaptive management actions, operational modifications to enhance fish protections and increase water user flexibility.*[41]

Water Use Efficiency

The CALFED water use efficiency element focuses on formulation of policies which support implementation of efficiency measures at the local and regional level. The role of CALFED agencies in water use efficiency will be to offer support and incentives through expanded programs to provide planning, technical, and financial assistance. CALFED agencies will also support institutional arrangements that give local water suppliers an opportunity to demonstrate that cost-effective efficiency measures are being implemented. The first stage implements the processes which will continue in subsequent stages.

1. Expand State and Federal programs (DWR, USBR, USFWS, DFG, DHS, and SWRCB) to provide technical and planning assistance to local agencies in support of local and regional conservation and recycling programs (yr. 1-7).
2. Create public advisory committee to advise State and Federal agencies on structure and implementation of assistance programs, and to coordinate Federal, State, regional and local efforts for maximum effectiveness of program expenditures (yr. 1).

[40] Previous comment not addressed in current draft.
[41] Previously recommended new actions not addressed in current draft.

3. Develop a certification process for Urban Water Management Plans: select agency *or establish new entity with broad stakeholder base*[42] to act as certifying entity, obtain legislative authority, carry out public process to prepare regulations, implement program beginning with plans submitted in 2005. Access to CALFED benefits will be contingent upon certification of a supplier's Urban Water Management Plan (yr. 1-3).
4. Implement a process for certification of water suppliers' compliance with the terms of the urban MOU with respect to analysis and implementation of Best Management Practices for urban water conservation. Provide funding support for the entity selected to carry out this function. Access to CALFED benefits will be contingent upon certification of a supplier's compliance with the terms of the urban MOU (yr. 1-7).
5. Implement a process (e.g., AB 3616 Agricultural Water Management Council and CVPIA) for endorsement of water suppliers' compliance with respect to analysis and implementation of Efficient Water Management Practices. Provide funding support for the entity selected to carry out this function. Access to CALFED benefits will be contingent upon endorsement of a supplier's compliance with the terms of the process (yr. 1-7).
6. Resolve legal, institutional, and funding limitations for agricultural and urban water recycling. Secure loan and/or grant funding for water conservation ($200 million in Stage 1) and water recycling ($500 million in Stage 1) capital improvement projects. (yr. 1-3).
7. Develop and implement a program to improve local water management for multiple benefits. This program would help meet CALFED objective for water supply reliability, water quality, and ecosystem quality by identifying appropriate local actions, apportioning benefits and associated cost shares, securing funding, and providing technical implementation assistance (yr. 1-7).
8. Implement the methodology for refuge water management which was recently developed, based upon stakeholder and scientific input, including preparation of an Effective Water Use Plan and annual reports by each refuge manager (yr. 1-7). Consistent with assurance mechanisms for urban and agricultural water users, access to CALFED benefits will be contingent upon continued implementation of the Effective Water Use Plan (yr 1-7).
9. Encourage and support research to expand potential water use efficiency measures (yr. 1-7).

Water Transfer Framework

The water transfer framework is designed to facilitate and streamline the water transfer process while protecting water rights and legal users of water and addressing and avoiding or mitigating third-party socio-economic impacts and local groundwater or environmental impacts. This

[42] Previous comment not addressed in current draft.

would occur through a proposed framework of actions, policies and processes. The first stage implements the processes which will continue in subsequent stages.

1. Establish the California Water Transfers Information Clearinghouse to collect and disseminate data and information relating to water transfers and potential transfer impacts, perform research using historic data to understand water transfer impacts, and provide a forum for discussion and comment on proposed transfers (*prior to*[43] yr. 1).
2. Coordinate with CALFED agencies to formulate policy, under their existing authorities, for required water transfer analysis (yr. 1).
3. Begin forecast and disclosure process DWR and USBR) of potential conveyance capacity in existing export facilities. This would be an on-going activity, occurring in conjunction with hydrologic forecasts (yr. 1).
4. Develop a standardized checklist and analysis procedure (SWRCB, DWR, and USBR) to be followed by transfer proponents for proposed transfers (yr. 1-2).
5. CALFED agencies work with stakeholder representatives to reduce the conflict between transfer proponents and the SWRCB, DWR, or USBR regarding what water is deemed transferable under what conditions (yr. 1-3).
6. CALFED agencies continue work with stakeholder representatives to resolve conflicts over reservoir refill and carriage water criteria (yr. 1-3).
7. CALFED agencies adopt methods to monitor instream transfers and develop associated tracking measures (yr. 2-4).
8. CALFED agencies adopt criteria governing the determination of transport costs in State and federal conveyance facilities (both existing and new, if constructed) (yr. 2-4).

Watershed Program

The Watershed Program is designed to be coordinated and integrated with existing and future local watershed programs and to provide technical assistance and funding for watershed activities that support the goals and objectives of the CALFED Bay-Delta Program. The actions during Stage 1 are a mix of watershed coordination, restoration, maintenance, and conservation activities, as well as demonstration projects designed to show benefits to the Bay-Delta system without harm to existing watershed resources.

1. Fund and implement watershed restoration, maintenance, conservation, and monitoring activities that support the goals and objectives of the CALFED Bay-Delta Program (years 1-7).
2. Identify priority locations and implement watershed restoration activities which benefit restoration in the Bay-Delta system (years 1-7).

[43] Previous recommendation to advance to 1999 actions not addressed in current draft.

3. Assist local watershed groups and government agencies to address common issues, including roles and responsibilities, funding support, technical assistance, information exchange, and to ensure effective communication and implementation among government agencies and stakeholder groups (years 1-7).
4. Develop a funding process and provide watershed stewardship funds to build the capacity of locally controlled watershed groups that ensure participation of local landowner groups (years 1-7).
5. Improve the use and usefulness of existing or future watershed clearinghouse functions to assist watershed groups with obtaining information on funding opportunities, technical assistance, and data storage and retrieval years 1-7).
6. Ensure the completion of project level environmental documentation and permitting; assist with documentation and permitting processes as appropriate (years 1-7).
7. Evaluate the benefits (including economics) that accrue from watershed plans and projects designed to achieve CALFED goals and objectives (yr. 1-7).
8. Establish, fund, and maintain watershed restoration and maintenance assistance to aide local watershed groups and private landowners in project concept, design, and implementation years 1-7).
9. Coordinate with other CALFED and non-CALFED programs on watershed related activities (years 1-7).

Storage

New storage will be included in the preferred pro gram alternative as necessary to meet CALFED's goals and provided conditions and linkages for implementation are satisfied.

Groundwater Banking and Conjunctive Use - *This first stage includes a coordination effort with local implementing entities and landowners in the south- and north-of-Delta areas, and ~~may~~ includes construction of several south-of-Delta projects. Additional south-of-Delta projects and north-of-Delta projects, if feasible, could be constructed in later stages.*[44]

1. Develop and implement a framework for groundwater banking and conjunctive use projects (yr. 1).
2. Include provision to protect overlying and other landowners' water rights (yr. 1-7).
3. Provide funding assistance *to local governments and special districts*[45] for groundwater plan development (yr. 1-7).

[44] August 5 draft contained separate actions for north-of and south-of-Delta areas, and committed to implementing south-of-Delta programs in Stage 1. Recommended changes are to reinstate the commitment to implementing south-of-Delta programs in Stage 1 and clarify that north-of-delta programs have not been eliminated from the Stage 1 actions.

[45] Previous comment not addressed in current draft.

4. ~~Identify~~ *Finalize selection of* potential projects and local cooperating entities and define CALFED role (yr. 1-~~7~~3).[46]
5. Conduct baseline monitoring and modeling (yr. 1-7).
6. Initiate field studies (yr. 2-7).
7. Project environmental documentation and permitting (yr. ~~3-7~~*1-3*[47]).
8. Project design (yr. ~~4-7~~*2-4*[48]).
9. ~~Conduct demonstration projects and~~ *In partnership with local cities, counties, and special districts,* construct two to three production facilities with target volume of 500,000 acre-feet storage (yr. ~~1-7~~*3-5*); e.g., potential options -include Madera Ranch, Stockton East, expanded Kern Water Bank, and others.[49]
10. *Study additional project sites (yr 2-7)*[50]

Surface Storage - *New offstream storage and/or expansion of existing onstream reservoirs could add up to several million acre-feet of new surface storage. A description of three to five possible sites will be available at the start of Stage 1. The first stage will consist of feasibility studies, evaluations, and permitting compliance procedures. Initiation of construction will proceed as necessary to meet CALFED program goals provided conditions and linkages have been satisfied.*

1. Identify initial local partners and other cooperating entities f or projects and CALFED role (yr. 1-3).
2. Develop environmental documentation (yr. 1-5).
3. Perform feasibility studies (yr. 1-5).
4. Perform field studies (yr. 1-5).
5. Finalize 404(b)(l) analyses *associated with location and configuration alternatives*[51] (yr. 1-5).
6. Site selection (yr. 4-5).
7. Evaluate improvements to potential conveyance to storage (yr. 1-5).
8. If ready) obtain permits and negotiate operating agreements (yr. 5-7).
9. Identify beneficiaries and negotiate cost sharing agreements (yr. 5-7).
10. Begin construction if conditions and linkages are satisfied (yr. 6-7).

[46] Previous comment suggested that identification of projects and definition of CALFED role would occur in 1999, thus "finalize selection" would occur in Stage 1. Timeframe of yr 1-3 in August 5 draft is appropriate and should be reinstated.
[47] Previous comment to advance action not addressed in current draft.
[48] Previous comment to advance action not addressed in current draft.
[49] Previous recommendation to delete demonstration projects, to acknowledge participation of local agencies, and to advance implementation of production facilities not addressed in current draft.
[50] Action contained in August 5 draft should be reinstated.
[51] Previous comment not addressed in current draft.

Conveyance

CALFED's basic strategy is to develop a through Delta conveyance alternative based on existing Delta configuration with some modifications. Some construction of improvements in the south and north Delta should occur within the first stage to improve conditions for ecosystem and water management reliability. Part of the first stage consists of studies and evaluations of the major conveyance features. This will allow conveyance projects to be ready for permitting and construction in later stages should the projects be necessary to meet Program objectives.

South Delta Improvements - *South Delta improvements consist of methods to control flow, stage and circulation, improve fish passage, fish screen and salvage facilities, and provide SWP/CIP interties upstream and downstream of the export pumps. South Delta conveyance improvements included in Stage I would function with the basic conveyance strategy or potential modifications.*

1. Complete environmental documentation and permitting including 404(b)(1) analysis (*prior to* yr. 1-*1*[52]).
2. Design south Delta improvements (yr. 1); among others, such improvements could include:
   - Operable fish barrier at head of Old River to improve San Joaquin salmon survival and improve water quality in lower San Joaquin River below the Barrier *(Note: May impair upstream migration of San Joaquin salmon in the fall and increase entrainment of organisms living in the central and southern Delta)*
   - Three south Delta waterway control structures to protect south Delta agricultural water supplies
   - Clifton Court Forebay intake structure
   - Channel enlargement along Old River
   - Modified operation rules, including increased use of full capacity of Banks Pumping Plant linked to improved fish protections (flexible operations)
3. Implement south Delta improvements balanced to improve water supply and environmental conditions] (yr. 2-4).
4. Determine whether to implement an intertie between the Delta-Mendota Canal (at approximately Mile 8) and the California Aqueduct downstream of export pumps (yr. 2-4) and if determined to be needed implement the project (yr. 5-7).
5. Construct new Tracy demonstration/testing fish screen and handling facility capable of screening 2,500 cfs at 0.2 fps through-screen velocity and 5,000 cfs at 0.4 fps through-screen velocity (yr. 1) *Notes: Screen operation would be under criteria established by NMFS, FWS, and DFG. There may be some stranded costs if the point of diversion is moved sometime in the future. The facility would be operated for the following purposes:*

[52] Previous recommendation to advance start-up of environmental documentation to the 1999 actions not addressed in the current draft.

- *Improve survival of salvaged fish at the Tracy pumping plant*
- *Reduce entrainment at the Tracy pumping plant*
- *Provide valuable information for design of future fish facilities*

6. Convert fish screen demonstration project at Tracy Pumping Plant to production facility and expand capacity if appropriate (yr. 4-6).
7. Implement first increment of new south Delta fish screening and fish handling facility at the northeast entrance to Clifton Court Forebay [full module capable of screening 6,000 cfs at 0.2 through-screen velocity and 12,000 cfs at 0.4 fps through-screen velocity] (yr. 2-6); *Notes: Screen operation would be under criteria established by NMFS, FWS, and DFG. There may be conflicts with higher pumping rates (e.g., over pumping screens or exporting water that is not first screened). Facility would be operated for the following benefits:*
   - *Improve survival offish in the south Delta near the State export pumping plant*
   - *Reduce predation of fish in Clifton Court Forebay*
   - *Reduce exposure of fish residing in or migrating through the central and south Delta to entrainment*
8. Evaluate (and, if promising, pilot test) benefits/impacts of recirculation of a portion of Delta Mendota Canal flows through the Newman Wasteway to the San Joaquin River for water quality and ecosystem enhancement (yr. 1-4).
9. Project environmental documentation and permitting for SWP/CVP intertie (yr. 2-4).
10. Design and construct SWP/CVP intertie upstream of export pumps [tie Tracy Pumping Plant intake to Clifton Court Forebay] (yr. 5-7+).
11. Implement joint point of diversion for SWP/CVP (This is a SWRCB permit action which would allow the SWP to pump CVP export flows and vice versa (yr. 1-~~4~~2[53]).

North Delta Improvements - *North Delta improvements consist of a new screened diversion from the Sacramento River near Hood to the central Delta and significant channel modifications including setback levees. The screened diversion and associated channels may be implemented in modular stages in order to resolve technical screening and fish passage issues at the appropriate scale. Stage 1 will focus on studies and design prior to construction. Selected channel improvements may be constructed but the majority of the improvements, if any are selected, will be constructed in Stage 2. These Delta channel improvements are the basic conveyance strategy of the preferred program alternative.*

1. Prepare project environmental documentation (yr. 1-5).
2. Conduct feasibility studies for screened diversion and fish passage facilities, channel modifications, and habitat improvements (yr. 1-5).
3. Conduct field studies (yr. 1-5).

[53] Previous recommendation to implement in yrs 1-2 not addressed in current draft.

4. Prepare environmental documentation for land acquisition (yr. 2-3).
5. Acquire land and convert land use for habitat and flood protection improvements (yr. 4-6).
6. Obtain permits and operating agreements (yr. 4-6).
7. Design selected improvements (yr. 4-6).
8. Construct selected improvements including channel improvements such as setback levees, channel dredging, and waterside berms (yr. 7).
9. Construct new Hood diversion test facility on the Sacramento River capable of diverting up to 2,000 cfs from the Sacramento River to the Mokelumne River (yr. 1-6) *Notes: The facility would have an alignment that would be usable with potential future through Delta modifications or isolated facility. The facility would be operated for the following purposes*
   - *Test screening efficiency, cleaning and bypass mechanisms*
   - *Test upstream passage mechanisms*
   - *Enable closing the Delta Cross Channel without compromising interior Delta and export water quality*
   - *Improve Delta water quality*
   - *Improve cues for migrating fish*
10. Pilot studies for dredge *material* reuse (yr. 1-7).

Isolated Facility - *The isolated facility (a new canal or pipeline connecting the Sacramento River in the northern Delta to the SWP and CVP export facilities in the southern Delta) is not included in the basic Delta conveyance strategy. The following Stage 1 actions provide progress on initial studies in case the isolated facility is found necessary to meet CALFED objectives.*

~~1. Perform public health effects studies to more specifically identify the potential health effects of bromide related disinfection byproducts (yr. 1-3).~~
~~2. Investigate alternative sources of high quality water supply for urban users of~~ Delta ~~water (yr. 1-3).~~
~~3. Investigate advanced treatment technologies for the removal of salt, bromide, total organic carbon, and pathogens in urban water supplies (yr. 1-3).~~
~~4. Investigate combinations of new supplies and technologies that can minimize salt content of urban water supplies and provide greater public health protection (yr. 1-3).~~
~~5. Convene an expert panel in~~ a public forum ~~to make recommendations to the governing entity regarding solutions to identified public health issues for urban users of Delta water (yr. 4)~~[54]
~~6. Conduct the following actions as warranted:~~ [55]

[54] The current draft contains new water quality actions under the Isolated Facility element. These should be should be shown under the Water Quality element as appropriate.
[55] The descriptions and timeframes for the Isolated Facility actions contained in the August 5 draft should be reinstated.

-1 Prepare project environmental documentation (yr ~~4-7~~ 1-7).
-2 Conduct feasibility studies(yr ~~4-7~~ 1-6).
-3 Conduct field studies (yr. ~~4-7~~ 1-6).
-4 Assess right-of-way issues that could impact CALFED's ability to maintain a viable option for a potential future habitat corridor *and facility right-of-way* (yr. ~~4-7~~ 2-7).

5. *404(b)(1) analyses; project site screening (yr 1-6)*[56]
6. *Identify the specific open public process, timetable, and criteria for the decision on the Isolated Facility.*[57]
7. *Take appropriate steps to preserve the preferred isolated facility right-of-way, including optioning and/or purchasing land and/or easements from willing sellers (yrs 2-7). Such steps should be fully coordinated with local landowners and city/county planning authorities, and carried out in such a way as to add value to adjoining lands and enhance local land-use plans.*[58]
8. *Obtain permits and operating agreements for Isolated Facility (yr 7+)*[59]

Assurances & Institutional Arrangements

An assurances package is a set of actions and mechanisms to assure that the Program will be implemented and operated as agreed. The assurances package will include mechanisms to be adopted immediately as well as a contingency process to address situations where a key element of the plan cannot be implemented as agreed. While the principles for the assurances package will be substantially complete before beginning Stage 1, many details remain to be finalized early in Stage 1 after the federal ROD and the state Certification.

1. Finalize coordination among agencies or new entity (yr. 1-3); e.g., provide for ecosystem restoration authority within the individual CALFED agencies or in a new organization with responsibility for ecosystem restoration.
2. Expand on the conservation strategy (yr. 1-3); next steps will implement mechanisms that will provide regulatory certainty for specific projects or bundled projects whose actions were identified in the ROD for completion during Stage 1.
3. Recommend legislation, if necessary, to implement new institutional arrangements or facilitate program implementation (yr. 2-3). Legislation could serve to create a new entity or modify water transfer law and statutes to facilitate an appropriately protective water transfer framework recognizing law that may exist at that time. For any legislation to implement new institutional arrangements that would facilitate increased water transfers out of the Delta, include reaffirmation and enhancement of existing laws such as the Delta Protection Act, the Feigenbaum Act, the Watershed Protection Act, and the Protected Areas Act

[56] Reinstate action deleted from August 5 draft.
[57] Previously recommended action not addressed in current draft.
[58] Previously recommended action not addressed in current draft.
[59] Previously recommended action not addressed in current draft.

(Water Code §§1215, 1222, 1216, and 1217 [a]).

4. Incorporate the final State Board's water rights decision for allocation of responsibility to meet flow requirements for Water Quality Control Plan 95-IWR (May 1995) in water transfer and operational rules.
5. Implement a CALFED environmental documentation, mitigation, and permit coordination process (yr. 1-7).
6. Implement and revise contingency response as needed (yr. 1-7).
7. Develop guidelines and support legislation for federal Good Samaritan protections for mine remediation (yr. 1-2).

Finance

The financial package will seek to finance the preferred program (total Program costs for improvements, mitigation, and ongoing annual operating and maintenance costs) through a combination of federal, state, and user funds. This financing will be needed over several decades as the various parts of the preferred pro gram alternative are implemented, operated, and maintained. An agreement on the financial principles including the benefits-based approach, guidelines for public/user cost split, provisions for crediting for other parallel efforts, provision for repayment of federal/state costs where appropriate, and cost allocation methodology or strategy will be included in an implementation agreement prior to Stage 1. These principles will recognize public and private benefits derived from water quality, environmental protection, flood control, recreation, and a reliable water supply. Stage 1 establishes the financial package for use in all stages.

1. Establish reliable short-term and long-term funding for each program element and for each package of Stage 1 action (1-7):
   - Finalize cost-share agreements (yr. 1).
   - Finalize appropriate user fees *linked to long-term assurances*[60] (yr. 1-7).
   - Seek federal authorization/appropriation and seek authority to sell state bonds (yr. 1-7).

Monitoring, Research, and Adaptive Management

Establish monitoring for all program elements that focuses on obtaining data on a timely basis, providing interpretation of data, and maintaining data in an accessible and useful form. The monitoring, assessment of data, and resultant need for adaptive management are required throughout the CALFED Bay-Delta Program. The first stage refines the monitoring system and procedures which will continue in subsequent stages.

1. Periodic review and refinement of the monitoring plan (CMARP) including all elements of the Program (yr. 1-7).

[60] Previous comment not addressed in current draft.

2. Define conceptual model of Delta watershed as it relates to fish survival and other indicators of ecosystem health. Include model variables for all significant stressors, such as diversion effects, commercial fishing, exotic species, hatchery impacts, and fish barriers on tributaries (yr. 1).
3. Refine monitoring program based on conceptual model to acquire data needed to test model elements and guide investment strategy (yr. 1).
4. Define, review, and refine the adaptive management process for making adjustments as better information becomes available, including who makes future decisions, for all elements of the Program (yr. 1-7); e.g., define triggers and time periods necessary for deciding need for change in management direction.
5. Implement baseline monitoring plan under direction of a single umbrella entity as defined in CMARP with linkage to adaptive management process and provision for stakeholder input but provide for responsible agencies to conduct additional monitoring to meet their obligations in the event that needs cannot be met by baseline monitoring plan (yr. 1-7).
6. Review the isolated facility decision process as developed and refine adaptive management, and monitoring programs as needed to accommodate the decision process needs (yr. 1).[61]
7. Prepare annual reports on status/progress and need for adjustments (yr. 1-7).
8. Analyze status and need for adjustments of actions for stage 2 (yr. 5-7).
9. Complete monitoring studies identified by diversion effects on fisheries team to provide feedback on actual diversion effects of south Delta pumps (yr. 2-7).
10. Provide available data on need to reduce bromides, total dissolved solids, total organic carbon, pesticides and heavy metals (yr. 5).
11. Provide available data on water quality in south Delta and lower San Joaquin River (yr. 1-7).
12. Monitor and assess the impacts of water use efficiency measures on water demands and available supplies, and develop better information for water balances in the Bay-Delta system (yr. 1-7).
13. Expand real-time monitoring for enhanced fish protections and flexible operations for water suppliers (yr. 1-7).

[61] Action reflects previously recommended addition of an Isolated Facility decision process action. However, the action to develop and implement this process is not contained elsewhere in the current draft.;