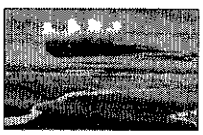
# ATTACHMENT B

# THE CALFED PROGRAM DECISION



# The CALFED Program Decision

This attachment describes the Preferred Program Alternative and a summary of the near-term actions, and the implementation strategy for the CALFED Program. The reader is referred to the Revised Phase II Plan Appendix and the Implementation Plan Appendix for additional information.


B.1 OVERVIEW ..... B-1
B.2 PREFERRED PROGRAM ALTERNATIVE ..... B-3
B.3 NEAR-TERM ACTIONS ..... B-12
B.4 IMPLEMENTATION STRATEGY ..... B-14

# B. The CALFED Program Decision

## B.1 OVERVIEW

The CALFED agencies are developing a long-term comprehensive plan to restore ecological health and improve water management for beneficial uses of the Bay-Delta System. To achieve this goal, the CALFED Program seeks to restore ecological health, improve water quality, improve water supply reliability and ensure levee and channel integrity. Although the CALFED agencies are reaching a program decision, the details of how that program will be implemented, funded and governed are essential to agency and stakeholder confidence that the broad direction of the program is acceptable. The tasks facing the agencies, therefore, are to decide long-term policy direction; develop a plan to "fix the Delta;" begin to implement that plan; and finally, to identify funding, governance, and linking actions to assure the long-term program will be implemented and operated as agreed.

The CALFED agencies are developing a long-term comprehensive plan to restore ecological health and improve water management for beneficial uses of the Bay-Delta System.

The CALFED agencies are currently completing a draft programmatic environmental impact statement and report (EIS/EIR) pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). That document examines alternatives for meeting the Program goals. The CALFED agencies have identified a Preferred Program Alternative as part of this environmental review. The draft programmatic EIS/EIR analyzes the environmental implications of each of the alternatives and compares them to the existing conditions and to the expected future conditions without any CALFED action.

The Preferred Program Alternative (see Section A below) describes the policy direction and long-term plan the CALFED agencies propose to follow in this effort. A programmatic evaluation is useful in the present case because it allows the agencies to examine cumulative impacts of individual, but geographically related, issues. It is also necessary to conduct the environmental review at a programmatic level because of the number of actions, length of time of implementation, and the complexity of the problems and solutions being considered.

It is necessary to conduct the environmental review at a programmatic level because of the number of actions, length of time of implementation, and the complexity of the problems and solutions being considered.

A programmatic analysis, however, does not provide information of sufficient detail to allow the agencies to determine precisely how each program element will be carried out over the life of the Program or to assess all of the site-specific environmental consequences of these actions. Agencies and stakeholders seek greater certainty regarding the types of actions to be implemented and a tentative schedule for doing so. Detail at a greater level

of specificity than is available at a programmatic level of analysis is important to comprehending how a large, complex program may be implemented.

Detail at a greater level of specificity than is available at a programmatic level of analysis is important to comprehending how a large, complex program may be implemented.

For this reason, the CALFED agencies have described their proposed actions for the first years following a Record of Decision. As appropriate, these near-term actions as well as any subsequent actions, will be subject to subsequent alternative analysis, environmental review, and permitting decisions before these actions are implemented. Section B describes the near- term actions that will be analyzed for site-specific compliance with CEQA, NEPA, and permitting requirements prior to a final decision on these actions.

Virtually all the near-term actions share two characteristics. First, they are designed to achieve multiple benefits. Second, they will be implemented in ways that increase our knowledge of the system so that we can adapt subsequent actions to increase effectiveness.

The near-term actions are parts of an integrated program that will yield multiple benefits. Nearly every action proposed will provide benefits in two or more resource areas at the same time, thus increasing program benefits and minimizing costs. In addition, there is synergy among actions that are geographically or functionally related. Thus, implementation is described not in terms of actions such as levee improvements or ecosystem restoration projects, but according to the achievement of multiple Program objectives in a region through implementation of actions that are functionally integrated. There are virtually no single-benefit actions.

While many actions are described in terms of regional implementation, the multiple benefits derived from water management actions are most clearly demonstrated if these actions are described in terms of coordinated water management throughout the Bay-Delta system. This coordinated implementation is referred to as the CALFED Water Management Strategy. The Water Management Strategy is a flexible approach that will comprehensively and systematically evaluate the potential of all available water management tools to contribute to the achievement of Program objectives and will commit CALFED agencies to produce decisions that will aggressively use these tools in a comprehensive strategy that will optimize water management for multiple CALFED objectives. The tools include water use efficiency, water transfers, water recycling, watershed management, water quality improvements, conveyance facilities, and groundwater and surface storage opportunities. These tools can all be used in varying combinations, depending on hydrologic and environmental conditions, to meet all four Program objectives.

Two critical parts of the continuing refinement of the water management strategy include the Environmental Water Account and the Integrated Storage Investigation. The Environmental Water Account (EWA) concept is based upon the notion that flexible management of water operations could provide the flow component of fish recovery more efficiently than a completely prescriptive regulatory approach. The EWA would access water resources throughout the Delta's watershed through a variety of actions. The EWA manager would apply these resources to provide fish protective actions, from in-stream flows to reduced export pumping The EWA's intent is to provide flexibility to achieve

fish recovery, which would provide certainty (ESA and other regulatory assurances) to water users.

The Integrated Storage Investigation will evaluate surface storage, groundwater storage, power facility re-operation, and the potential for conjunctive operation of these different types of storage to achieve multiple program objectives. Additionally, the nature of these investigations will provide an important opportunity to prepare a comprehensive assessment and prioritization of critical fish migration barriers for modification or removal. The Integrated Storage Investigation will enable us to use existing facilities in ways that maximize Program benefits, assess the desirability of modifying other facilities where their costs exceed benefits, and consider the costs and multiple benefits of additional groundwater or surface storage in the context of an integrated water management strategy.

The Integrated Storage Investigation will evaluate surface storage, groundwater storage, power facility re-operation, and the potential for conjunctive operation of these different types of storage to achieve multiple program objectives.

The second characteristic shared by Program actions is a structure that facilitates adaptive management. Actions are designed according to our current understanding of the system and will be monitored so that we can confirm our understanding or modify subsequent actions to be more effective. This adaptive management approach will increase the ability to meet multiple objectives by maintaining the flexibility necessary to respond to new information, changing conditions, and improved understanding.

Finally, the means by which the CALFED Preferred Program Alternative is funded and assured provides additional assurance that the Program will be successfully implemented. Section C describes a strategy for providing financing and governance, and addressing additional concerns about successfully implementing the Program.

The means by which the CALFED Preferred Program Alternative is funded and assured provides additional assurance that the Program will be successfully implemented.

The CALFED Program Decision, therefore, includes the Preferred Program Alternative, near-term actions, and implementation strategy as follows:

## B.2 PREFERRED PROGRAM ALTERNATIVE

The Preferred Program Alternative consists of a set of broadly described programmatic actions which set the long-term, overall direction of the CALFED Program. The description is programmatic in nature, intended to help agencies and the public make decisions on broad methods to meet Program purposes. The Preferred Program Alternative is made up of the Levee System Integrity Program, Water Quality Program, Ecosystem Restoration Program, Water Use Efficiency Program, Water Transfer Program, Watershed Program, Storage and Conveyance.

Even in this broad programmatic description, actions are intended to take place in an integrated framework and not independently of the other programs. While each Program element is described individually, it is understood that only through coordinated, linked, incremental investigation, analysis, and implementation can we effectively resolve problems in the Bay-Delta system.

## LEVEE SYSTEM INTEGRITY PROGRAM

The Levee System Integrity Program is to improve levee stability.

The focus of the Levee System Integrity Program is to improve levee stability to benefit all users of Delta water and land. Actions described in this Program element protect water supply reliability by maintaining levee and channel integrity. Levee actions will be designed to provide simultaneous improvement in habitat quality, which will indirectly improve water supply reliability. Levee actions also protect water quality, particularly during low-flow conditions when a catastrophic levee breach would draw salty water into the Delta.

There are five main parts to the levee program plus Suisun Marsh levee rehabilitation work:

- Delta Levee Base Level Protection Plan - Improve and maintain Delta levee system stability to meet the Corps' PL 84-99 levee standard.
- Delta Levee Special Improvement Projects - Enhance flood protection for key islands that provide state-wide benefits to the ecosystem, water supply, water quality, economics, infrastructure, etc.
- Delta Levee Subsidence Control Plan - Implement current best management practices (BMPs) to correct subsidence adjacent to levees and coordinate research to quantify the effects and extent of inner-island subsidence.
- Delta Levee Emergency Management and Response Plan - The emergency management and response plan will build on existing state, federal, and local agency emergency management programs.
- Delta Levee Risk Assessment- Perform a risk assessment to quantify the major risks to Delta resources from floods, seepage, subsidence and earthquakes; evaluate the consequences; and develop recommendations to manage the risk.
- Suisun Marsh Levees- Rehabilitate Suisun Marsh levees.

## WATER QUALITY PROGRAM

The CALFED Program is committed to achieving continuous improvement in the quality of the waters of the Bay-Delta System.

The CALFED Program is committed to achieving continuous improvement in the quality of the waters of the Bay-Delta System with the goal of minimizing ecological, drinking water, and other water quality problems, and to maintaining this quality once achieved. Improvements in water quality will result in improved ecosystem health, with indirect improvements in water supply reliability. Improvements in water quality also increase the utility of water, making it suitable for more uses.

The Water Quality Program includes the following actions:

- Drinking water parameters - Reduce the loads and/or impacts of bromide, total organic carbon, pathogens, nutrients, salinity, and turbidity through a combination of measures that include source reduction, alternative sources of water, treatment, storage and if necessary, conveyance improvements such as a screened diversion structure (up to 4,000 cfs) on the Sacramento River near Hood. The Conveyance section of this document includes a discussion of this potential improvement.

- Pesticides - Reduce the impacts of pesticides through (1) development and implementation of BMPs, for both urban and agricultural uses; and (2) support of pesticide studies for regulatory agencies, while providing education and assistance in implementation of control strategies for the regulated pesticide users.

- Organochlorine pesticides - Reduce the load of organochlorine pesticides in the system by reducing runoff and erosion from agricultural lands through BMPs.

- Trace metals - Reduce the impacts of trace metals, such as copper, cadmium, and zinc, in upper watershed areas near abandoned mine sites. Reduce the impacts of copper through urban storm water programs and agricultural BMPs.

- Mercury - Reduce mercury levels in rivers and the estuary by source control at inactive and abandoned mine sites.

- Selenium - Reduce selenium impacts through reduction of loads at their sources and through appropriate land fallowing and land retirement programs.

- Salinity - Reduce salt sources in urban and industrial wastewater to protect drinking and agricultural water supplies, and facilitate development of successful water recycling, source water blending, and groundwater storage programs. Salinity in the Delta will be controlled both by limiting salt loadings from its tributaries, and through managing sea-water intrusion by such means as using storage capability to maintain Delta outflow and to adjust timing of outflow, and by export management.

- Turbidity and sedimentation - Reduce turbidity and sedimentation, which adversely affect several areas in the Bay-Delta and its tributaries.

- Low dissolved oxygen - Reduce the impairment of rivers and the estuary from substances that exert excessive demand on dissolved oxygen.

- Toxicity of unknown origin - Through research and monitoring, identify parameters of concern in the water and sediment, and implement actions to reduce their impacts to aquatic resources.

# ECOSYSTEM RESTORATION PROGRAM

The goal of the Ecosystem Restoration Program is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species. In addition, the Ecosystem Restoration Program, along with the water management strategy, is designed to achieve or contribute to the recovery of listed species found in the Bay-Delta and, thus, achieve goals in the Multi-Species Conservation Strategy. Improvements in ecosystem health will reduce the conflict between environmental water use and other beneficial uses, and allow more flexibility in water management decisions.

The goal of the Ecosystem Restoration Program is to improve and increase aquatic and terrestrial habitats, and improve ecological functions in the Bay-Delta in order to support sustainable populations of diverse and valuable plant and animal species.

The Ecosystem Restoration Program identifies programmatic actions designed to restore, rehabilitate, or maintain important ecological processes, habitats, and species within 14 ecological management zones. Implementation of these programmatic actions will be guided by six goals presented in the Strategic Plan for Ecosystem Restoration. Nearly 100 restoration objectives have been developed which are directly linked to one of the six goals. Each objective further defines the restoration approach for each ecological process, habitat, species, or ecosystem stressor. One to several restoration targets have been developed for each objective to set more specific or quantified restoration levels.

Long-term implementation of the Ecosystem Restoration Program will be guided by the adaptive management approach described in the Strategic Plan for Ecosystem Restoration. This approach to restoration will require review by an Ecosystem Restoration Science Review Panel and will rely on information developed in the Comprehensive Monitoring, Assessment, and Research Program.

Long-term implementation of the Ecosystem Restoration Program will be guided by the adaptive management approach described in the Strategic Plan for Ecosystem Restoration.

Representative Ecosystem Restoration Program actions include:

- Protecting, restoring, and managing diverse habitat types representative of the Bay-Delta and its watershed.
- Acquiring water from sources throughout the Bay-Delta's watershed to provide flows and habitat conditions for fishery protection and recovery.
- Restoring critical in-stream and channel-forming flows in Bay-Delta tributaries.
- Improving Delta outflow during key periods.
- Reconnecting Bay-Delta tributaries with their floodplains through the construction of setback levees, the acquisition of flood easements, and the construction and management of flood bypasses for both habitat restoration and flood protection.
- Developing assessment, prevention, and control programs for invasive species.

- Restoring aspects of the sediment regime by relocating in-stream and floodplain gravel mining, and by artificially introducing gravels to compensate for sediment trapped by dams.

- Modifying or eliminating fish passage barriers, including the removal of dams, construction of fish ladders, and construction of fish screens that use the best available technology.

- Targeting research to provide information that is needed to define problems sufficiently, and to design and prioritize restoration actions.

## WATER USE EFFICIENCY PROGRAM

The Water Use Efficiency Program includes actions to assure efficient use of existing and any new water supplies developed by the Program. Efficiency actions can alter the pattern of water diversions and reduce the magnitude of diversions, providing ecosystem benefits. Efficiency actions can also result in reduced discharge of effluent or drainage, improving water quality.

The Water Use Efficiency Program includes actions to assure efficient use of existing and any new water supplies developed by the Program.

The Water Use Efficiency Program will build on the work of the existing Agricultural Water Management Council and California Urban Water Conservation Council Process, supporting and supplementing those processes through planning and technical assistance and through targets financial incentives (both loans and grants). The Water Use Efficiency Program has identified potential recovery of currently irrecoverable water losses of over 1.4 million acre-feet of water annually by 2020 as a result of CALFED actions. Before execution of the ROD, CALFED will identify measurable goals and objectives for its urban and agricultural water conservation program, water reclamation programs, and managed wetlands programs.

Water conservation-related actions include:

- Implement agricultural and urban conservation incentives programs to provide grant funding for water management projects that will provide multiple benefits which are cost-effective at the state-wide level, including improved water quality and reduced ecosystem impacts.

- Identify, in region-specific strategic plans for agricultural areas, measurable objectives to assure improvements in water management.

- Expand state and federal programs to provide increased levels of planning and technical assistance to local water suppliers.

- Work with the Agricultural Water Management Council (AWMC) to identify appropriate agricultural water conservation measures, set appropriate levels of effort,

and certify or endorse water suppliers that are implementing locally cost-effective feasible measures.

- Work with the California Urban Water Conservation Council (CUWCC) to establish an urban water conservation certification process and set appropriate levels of effort in order to ensure that water suppliers are implementing cost-effective feasible measures.

- Help urban water suppliers comply with the Urban Water Management Planning Act.

- Identify and implement practices to improve water management for wildlife areas

- Gather better information on water use, identify opportunities to improve water use efficiency, and measure the effectiveness of conservation practices.

- Conduct directed studies and research to improve understanding of conservation actions.

Water recycling actions include:

- Help local and regional agencies comply with the water recycling provisions in the Urban Water Management Planning Act.

- Expand state and federal recycling programs to provide increased levels of planning, technical, and financing assistance (both loans and grants) and to develop new ways of providing assistance in the most effective manner.

- Provide regional planning assistance that can increase opportunities for the use of recycled water.

## WATER TRANSFER PROGRAM

The Water Transfer Program proposes a framework of actions, policies, and processes that, collectively, will facilitate water transfers and the further development of a state-wide water transfer market. The framework also includes mechanisms to provide protection from third-party impacts. A transfers market can improve water availability for all users, including the environment. Transfers can also help to match water demand with water sources of the appropriate quality, thus increasing the utility of water supplies.

The Water Transfer Program proposes a framework of actions, policies, and processes that, collectively, will facilitate water transfers and the further development of a state-wide water transfer market.

The Water Transfer Program will include the following actions and recommendations:

- Establish a California Water Transfer Information Clearinghouse to provide a public informational role. The clearinghouse would (1) ensure that information regarding proposed transfers is publically disclosed and, (2) perform on-going research and data

collection functions to improve the understanding of water transfers and their potential beneficial and adverse effects.

- Require water transfer proposals submitted to the Department of Water Resources, the U.S. Bureau of Reclamation, or the State Water Resources Control Board to include analysis of potential groundwater, socioeconomic, or cumulative impacts as warranted by individual transfers.

- Streamline the water transfer approval process currently used by the Department of Water Resources, the U.S. Bureau of Reclamation, or the State Water Resources Control Board. This would include clarifying and disclosing current approval procedures and underlying policies as well as improving the communication between transfer proponents, reviewing agencies, and other potentially affected parties.

- Refine quantification guidelines used by water transfer approving agencies when they are reviewing a proposed water transfer. This will include resolving issues between stakeholders and approving agencies regarding the application of current agency-based quantification criteria.

- Improve the accessibility of state and federal conveyance and storage facilities for the transport of approved water transfers.

- Clearly define carriage water requirements and resolve conflicts over reservoir refill criteria such that transfer proponents are acutely aware of the implications of these requirements.

- Identify appropriate assistance for groundwater protection programs through interaction with CALFED agencies, stakeholders, the legislature, and local agencies. This is intended to assist local agencies in the development and implementation of groundwater management programs that will protect groundwater basins in water transfer source areas.

- Establish accounting, tracking, and monitoring methods to aid in-stream flow transfers under California Water Code Section 1707.

## WATERSHED PROGRAM

The Watershed Program provides assistance, financial and technical, to local watershed programs that benefit the Bay-Delta system. Watershed actions can improve reliability by shifting the timing of flows, increasing base flows, and reducing peak flows. This also helps to maintain levee integrity during high-flow periods. Other watershed actions will improve water quality by reducing discharge of parameters of concern.

The Watershed Program provides assistance, financial and technical, to local watershed programs that benefit the Bay-Delta system.

The Watershed Program includes the following elements:

- Support local watershed activities - Implement watershed restoration, maintenance, and conservation activities that support the goals and objectives of the Program, including improved river functions.

- Facilitate coordination and assistance - Facilitate and improve coordination and assistance between government agencies, other organizations, and local watershed groups.

- Develop watershed monitoring and assessment protocols - Facilitate monitoring efforts that are consistent with the CALFED's protocols and support watershed activities that ensure that adaptive management processes can be applied.

- Support education and outreach - Support resource conservation education at the local watershed level, and provide organizational and administrative support to watershed programs.

- Define watershed processes and relationships - Identify the watershed functions and processes that are relevant to the CALFED goals and objectives, and provide examples of watershed activities that could improve these functions and processes.

## STORAGE

Groundwater and /or surface water storage can be used to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control reservoirs. Decisions to construct groundwater and/or surface water storage will be predicated upon complying with all program linkages, including:

Groundwater and /or surface water storage can be used to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control reservoirs.

- An assessment of groundwater storage, surface storage, reoperation of power facilities, and a fish barrier assessment as part of the Integrated Storage Investigation.

- Demonstrated progress in meeting the Program's water use efficiency, water reclamation, and water transfer program targets under the Water Management Strategy.

- Implementation of groundwater monitoring and modeling programs.

- Compliance with all environmental review and permitting requirements.

Subject to the above conditions, new groundwater and/or surface water storage will be developed and constructed, together with aggressive implementation of water conservation, recycling, and a protective water transfer market, as appropriate to meet CALFED Program goals. During Stage 1, through the Water Management Strategy (including the Integrated Storage Investigation), CALFED will evaluate and determine the

appropriate mix of surface water and groundwater storage, identify acceptable projects and initiate permitting and construction if program linkages and conditions are satisfied.

The total volume of surface and groundwater storage being assessed for this alternative range up to 6.0 million acre feet, and facility locations being considered are located in the Sacramento and San Joaquin Valleys and in the Delta. A list of sites for further consideration is included in the Revised Phase II Report Appendix.

## CONVEYANCE

The Preferred Program Alternative employs a through-Delta approach to conveyance. Modifications in Delta conveyance will result in improved water supply reliability, protection and improvement of Delta water quality, improvements in ecosystem health, and reduced risk of supply disruption due to catastrophic breaching of Delta levees. The proposed through-Delta conveyance facility actions include:

Modifications in Delta conveyance will result in improved water supply reliability, protection and improvement of Delta water quality, improvements in ecosystem health, and reduced risk of supply disruption due to catastrophic breaching of Delta levees.

- Construction of a new screened intake at Clifton Court Forebay with protective screening criteria.
- Construction of either a new screened diversion at Tracy with protective screening criteria and/or an expansion of the new diversion at Clifton Court Forebay to meet the Tracy Pumping Plant export capacity.
- Implementation of the Joint Point of Diversion for the SWP and CVP, and construction of interties.
- Construction of an operable barrier at the head of Old River to improve conditions for salmon migrating up and down the San Joaquin River.
- Construction of operable barriers taking into account fisheries, water quality, and water stage needs in the south Delta.
- Operational changes to the SWP operating rules to allow export pumping up to the current physical capacity of the SWP export facilities.
- Study and evaluate a screened diversion structure on the Sacramento River (or equivalent water quality actions) as a measure to improve drinking water quality in the event that the Water Quality Program measures do not result in adequate improvements toward CALFED's drinking water quality goals. This evaluation would consider how to operate the Delta Cross Channel in conjunction with this new diversion structure to improve drinking water quality, while maintaining fish recovery.
- If the Water Quality Program measures are consistently not achieving drinking water quality goals, and the evaluation demonstrates that a screened diversion of up to

If the Water Quality Program measures are consistently not achieving drinking water quality goals, and the evaluation demonstrates that a screened diversion of up to 4,000 cfs would help achieve those goals without adversely affecting fish populations, a pilot screened diversion would be constructed.

4,000 cfs would help achieve those goals without adversely affecting fish populations, a pilot screened diversion would be constructed. This pilot would likely include a fish screen, pumps, and a channel between the Sacramento and Mokelumne Rivers. The design, size, and operating rules for this pilot facility would include an analysis of impacts to upstream and downstream migrating fish, as well as impacts from habitat shifts resulting from increased flows in the eastern Delta on Delta species. Following evaluation of the pilot facility operations, a final decision would be made on whether the diversion channel and structure should continue to be used and, if so, what the operational rules and optimum size of the diversion should be.

- Construct new setback levees; dredge and/or improve existing levees along the channels of the lower Mokelumne River system from Interstate 5 downstream to the San Joaquin River.

The Preferred Program Alternative also includes a process for determining the conditions under which any additional conveyance facilities and/or other water management actions would be taken in the future. The process would include:

The Preferred Program Alternative also includes a process for determining the conditions under which any additional conveyance facilities and/or other water management actions would be taken in the future.

- An evaluation of how water suppliers can best provide a level of public health protection equivalent to Delta source water quality of 50 ppb bromide and 3 ppm TOC.

- An evaluation based on two independent expert panels' reports–one on CALFED's progress toward these measurable water quality goals and the second on CALFED's progress toward ecosystem restoration objectives, with particular emphasis on fisheries recovery.

## B.3 NEAR-TERM ACTIONS

Implementation of actions begins in Phase III. This period will include site-specific environmental review and permitting as necessary. The first stage of Program implementation is critical to its long-term success because it will serve as an indication of the CALFED agencies and stakeholder community capacity to act on a cost-effective, practical, and equitable set of actions which advance the Program objectives.

The preliminary actions have been grouped into seven bundles either to provide a balanced suite of actions for specific regions within the CALFED problem and solution areas, or to provide programmatic balance between actions which are not necessarily associated with any specific geographic area. The bundles highlight certain critical ongoing programs which will require implementation decisions in the near future, but do not include the many other ongoing monitoring and improvement programs in the Bay-Delta region.

The preliminary actions have been grouped into seven bundles either to provide a balanced suite of actions for specific regions within the CALFED problem and solution areas, or to provide programmatic balance between actions which are not necessarily associated with any specific geographic area.

## Lower San Joaquin River and South Delta Region Bundle

This bundle is designed to address the regional concerns regarding south Delta and lower San Joaquin River and south Delta fisheries, water quality, water supply reliability, recreation, flood control, and wildlife habitat. The preliminary actions are designed to conduct feasibility and environmental evaluations, and implement corrective actions in the region as well as in upstream watersheds which affect the quality and quantity of flows in the San Joaquin River.

## Lower Sacramento River, North Delta Bundle

This bundle is designed to develop a balanced solution to concerns surrounding fishery and water quality impacts of diversions from the Sacramento River into the central Delta, to address regional flood concerns, and to substantially enhance riparian and wetlands habitat corridors in the region.

## Yolo Bypass, Suisun Marsh, and West Delta Bundle

This bundle is designed to address water quality, fisheries protection, and habitat enhancement actions for the west Delta region, including Suisun Marsh, the west Delta islands, and the Yolo Bypass. Because of the concern over toxicity effects of mercury originating in the Cache Creek basin, this bundle includes substantial research to identify those sources and potential remediation tools.

## Delta-Wide Ecosystem Restoration Program/Levees Bundle

This bundle is designed to achieve a reasonable balance between implementation of ecosystem improvement actions and levee system improvement actions. In addition, this bundle includes actions to improve fisheries, water quality, and habitat throughout the Delta, including protection and enhancement of Delta in-channel islands.

### SACRAMENTO RIVER, SAN JOAQUIN RIVER, AND TRIBUTARIES BUNDLE

This bundle includes ecosystem restoration involving primarily fisheries habitat, hatchery management, and floodplain and meander belt restoration along key river reaches.

### INTEGRATED WATER MANAGEMENT BUNDLE

This bundle includes actions which can lead to improvements in water supply reliability and flexibility through improvements in water use efficiency, water transfers, water storage and conveyance facilities (groundwater and surface water), water quality, and water-associated habitats. The proposed actions include the Program problem area and solution areas, including state and federal project service areas and upper watersheds. It includes key actions that comprise the Integrated Storage Investigation.

### GOVERNANCE BUNDLE

This bundle addresses certain organizational issues to assure that orderly implementation of Program actions can occur as the level of activity increases substantially. These issues include the potential formation of a CALFED management entity, an Ecosystem Restoration Program implementation entity, comprehensive monitoring, and actions to assure that water quality and water use efficiency measures can be fully implemented. While creation of new entities may be proposed, no agency will transfer any existing regulatory authority to these new entities.

## B.4 IMPLEMENTATION STRATEGY

CALFED is developing an implementation strategy to assure the near- (see Section B)and long-term actions are successfully implemented. These assurances include:

- An adaptive management philosophy and process employed throughout the implementation period.
- Actions and decisions which are implemented over time to make use of information gained during early implementation.
- Coordinated oversight, including comprehensive monitoring and policy guidance, as well as assignment of responsibilities for each of the Program's elements.

- A financial plan.
- An environmental compliance strategy.

## ADAPTIVE MANAGEMENT

No long-term plan for management of a system as complex as the Bay-Delta can predict exactly how the system will respond to Program efforts or foresee events such as earthquakes, climate change, or the introduction of new species to the system. Adaptive management, as an essential Program concept, acknowledges that there is a need to constantly monitor the system and adapt the actions that are taken to restore ecological health and improve water management. These adaptations will be necessary as conditions change and as more is learned about the system and how it responds. The Program's objectives will remain fixed over time, but the actions may be adjusted to assure that the solution is durable.

Adaptive management, as an essential Program concept, acknowledges that there is a need to constantly monitor the system and adapt the actions that are taken to restore ecological health and improve water management.

Adaptive management utilizes monitoring, assessment, and research tools for continuous refinement of Program actions. The information generated from monitoring, assessment, and research will be used to assess the effectiveness of existing actions, to guide additional research and to modify the actions of each of the CALFED programs to improve CALFED's ability to meet its goals and objectives.

## STAGED IMPLEMENTATION AND DECISION MAKING

CALFED has decided to implement the Program through stages and begin with a series of near-term actions (see previous section entitled "Near-term Actions"). Like implementation, the decision process will be staged to allow better decisions at the appropriate time. The Preferred Program Alternative is composed of hundreds of individual actions that will be implemented and refined over the 20- to 30-year implementation period. Therefore, it is logical to implement the Program as well as make decisions in stages according to major program milestones. In this way, adaptive management can be applied equally well to a series of incremental actions such as ecosystem restoration or for major single-decision projects such as surface storage or conveyance.

Staged implementation for the CALFED Preferred Program Alternative involves identifying actions for implementation for which there is general agreement and justification, and also developing conditions for future decisions.

Staged implementation for the CALFED Preferred Program Alternative involves identifying actions for implementation for which there is general agreement and justification, and also developing conditions for future decisions. For example, certain conditions would be linked to the decision to construct major facilities. These linked decisions on several Program elements may be required at each stage of implementation.

## GOVERNANCE PLAN

By the time of the Record of Decision and certification of the final EIS/EIR (ROD/CERT), CALFED will develop and adopt a governance plan for all components of the CALFED Program. To the extent agreement on governance is reached before the ROD/CERT, actions will begin pre-ROD/CERT to implement the governance changes (e.g., federal and state legislation). New legislation may be required to adopt the long-term governance structure. Because legislation could take several years to adopt, an interim governance structure will be adopted by the time of the ROD/CERT to allow for an efficient transition from CALFED planning to implementation.

The governance plan will include:

- **Governance Structure for Oversight Functions.** CALFED will propose an interim and long-term governance structure to provide oversight, policy/program guidance and program assessment for the CALFED Program.

- **Governance Structure for each Program Element.** CALFED will propose interim and long-term governance structures for each Program element to provide program management, coordination, and assessment.

- **Authority and Relationships.** For the long-term governance structures, the governance plan will describe the relationship between the oversight entity and the entities assigned Program element management and implementation responsibilities. CALFED will describe and recommend any change in authority or new authority that may be needed to effectively implement the CALFED Program

## FINANCE PLAN

By the time of the ROD/CERT, CALFED will develop and adopt a financial plan for all components of the CALFED Program. To the extent agreement on a finance plan is reached before the ROD/CERT, actions will be taken pre-ROD/CERT to implement the plan (e.g., federal and state legislation). The primary components of a finance plan include:

By the time of the ROD/CERT, CALFED will develop and adopt a financial plan for all components of the CALFED Program.

- **Program implementation cost estimates.** The cost estimate for actions proposed in Stage I will be refined. These proposed actions and the corresponding cost estimates provide the basis for developing the finance strategy.

- **Crosscut budget evaluation.** An evaluation of related state and federal programs will be conducted and incorporated in the finance strategy and funding requests. This process will identify existing funding and programs that can be used to support proposed CALFED actions.

- **Finance strategies and principles.** For each CALFED program element, a finance strategy will be developed. Key elements of this strategy are the assessment of program benefits and beneficiaries and an equitable, beneficiary-based cost allocation.

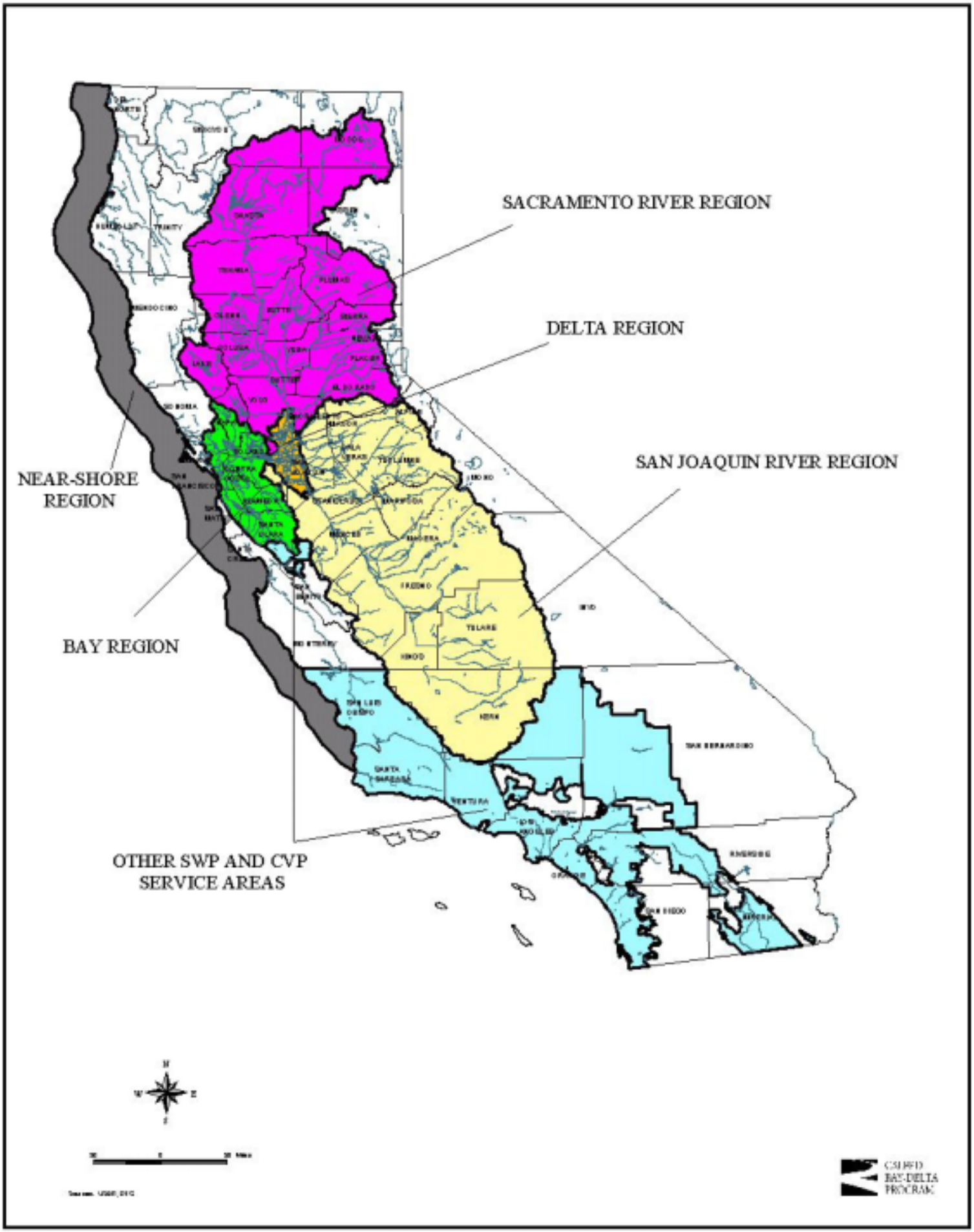
- **Crediting Policy.** CALFED will include a crediting policy in the finance plan. The policy will identify which expenditures and accounts can be credited toward a CALFED program.

- **Cost-share agreements.** The finance plan will include final agreements between state government, federal government, and beneficiaries describing the cost-share requirements that will be agreed to support the CALFED Program.

## ENVIRONMENTAL COMPLIANCE

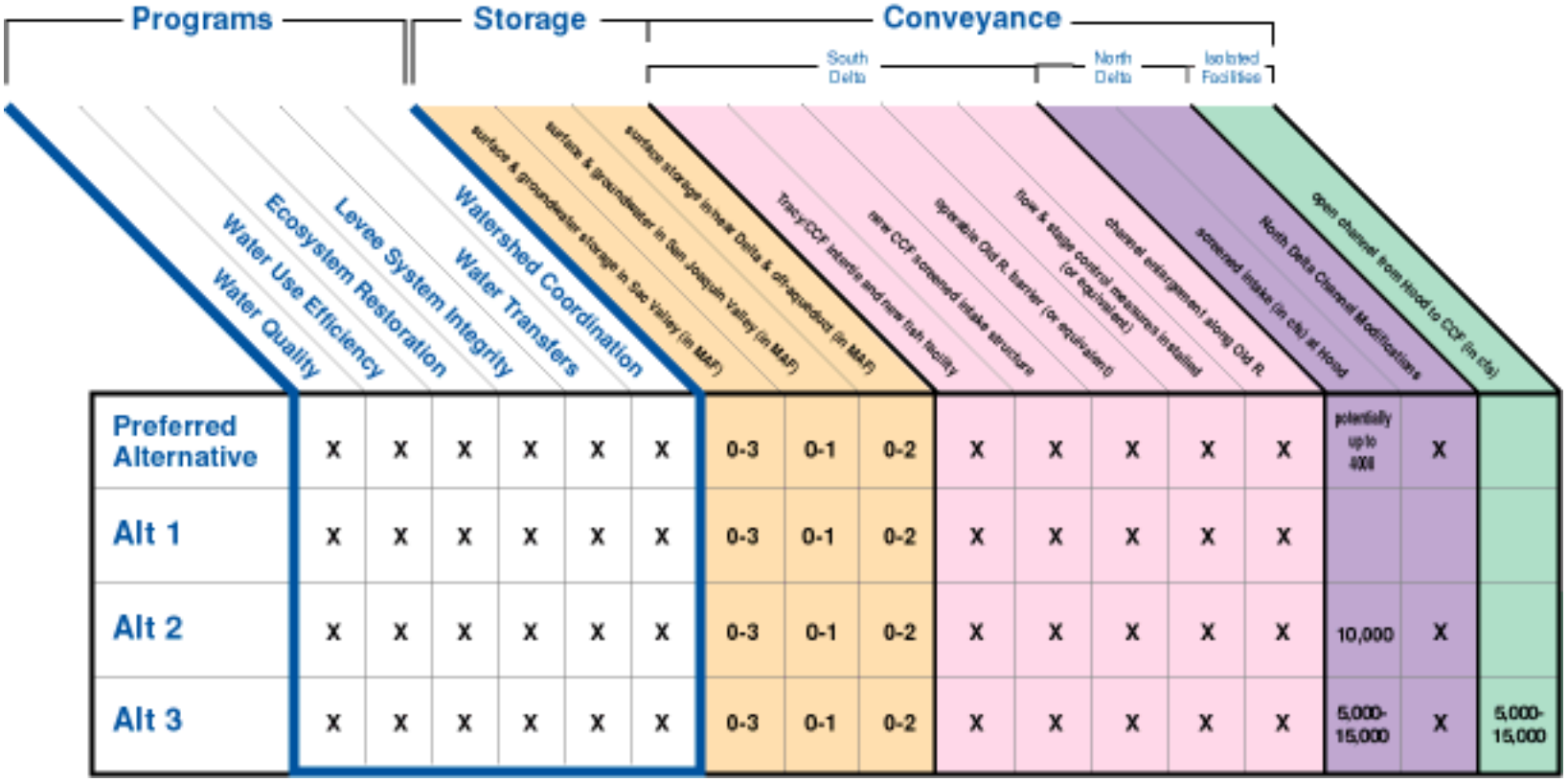
Implementation of the CALFED Program will involve regulatory oversight from a number of federal, state, and local government agencies that operate within a complex framework of laws and regulations. To ensure timely implementation of CALFED actions, a coordinated environmental documentation and permitting process is being established. This approach should help facilitate implementation of projects, should benefit public participation, and effectively reduce duplication while maintaining important environmental safeguards.

A Multi-Species Conservation Strategy (MSCS) (see Multi-Species Conservation Strategy Appendix) will be part of the overall environmental compliance program. The MSCS is a comprehensive species and habitats conservation program that addresses multiple species and habitat needs, and the maintenance of ecological functions within the CALFED Program area. The MSCS also evaluates the effects of the Program actions on special-status species and NCCP habitats at a programmatic level, includes measures to ensure that Program implementation is consistent with the continued survival and recovery of these species, and provides a framework for site- and action-specific compliance with the federal and state Endangered Species Acts. Incidental take authority will be granted when a site-specific analysis is concluded consistent with the MSCS.




CALFED Bay-Delta Program Programmatic EIR/EIS Study Area

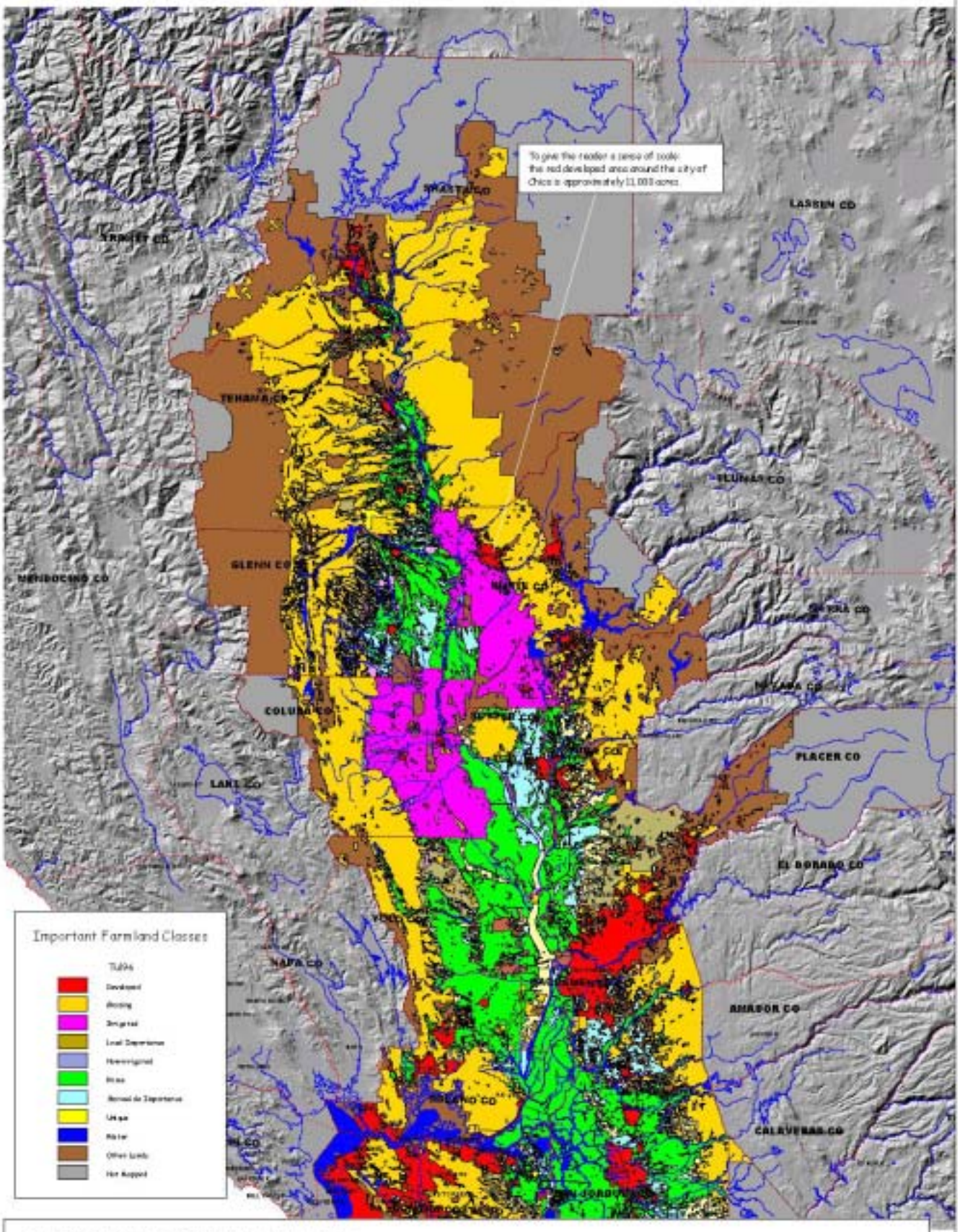
# Alternatives Matrix



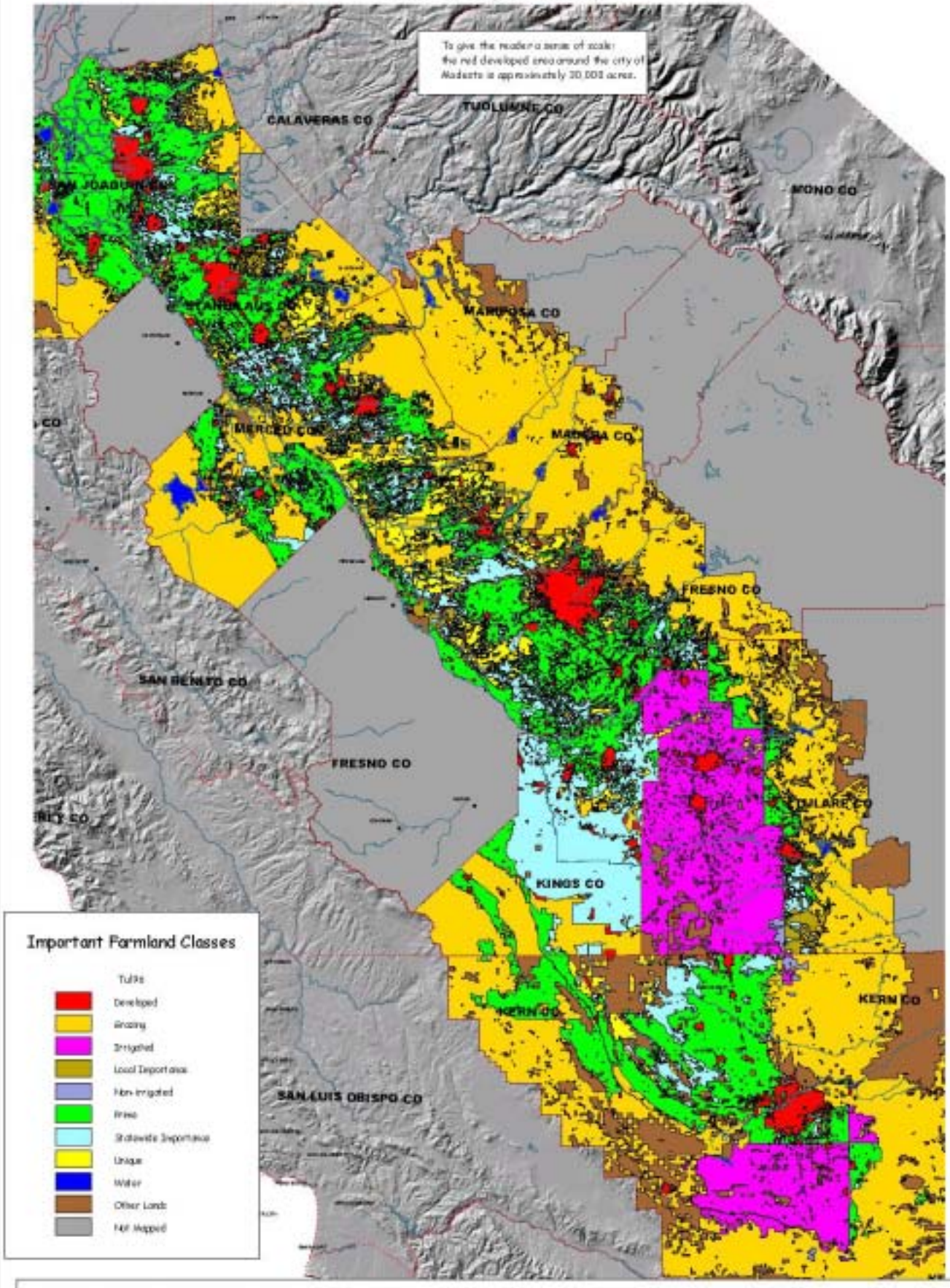
| | Programs | | | | | | Storage | | | Conveyance | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | South Delta | | | North Delta | | Isolated Facilities | | |
| | Water Quality | Water Use Efficiency | Ecosystem Restoration | Levee System Integrity | Water Transfers | Watershed Coordination | surface & groundwater storage in San Joaquin Valley (in MAF) | surface storage in the Delta & off-aqueduct (in MAF) | Tracy CCF intertie and new fish facility | new CCF screened intake structure | operable Old R. barrier (or equivalent) | flow & stage control measures installed (or equivalent) | channel enlargement along Old R. | screened intake (in cfs) at Hood | North Delta Channel Modifications | open channel from Hood to CCF (in cfs) | |
| Preferred Alternative | X | X | X | X | X | X | 0-3 | 0-1 | 0-2 | X | X | X | X | X | potentially up to 4000 | X | |
| Alt 1 | X | X | X | X | X | X | 0-3 | 0-1 | 0-2 | X | X | X | X | X | | | |
| Alt 2 | X | X | X | X | X | X | 0-3 | 0-1 | 0-2 | X | X | X | X | X | 10,000 | X | |
| Alt 3 | X | X | X | X | X | X | 0-3 | 0-1 | 0-2 | X | X | X | X | X | 5,000-15,000 | X | 5,000-15,000 |

# IMPORTANT FARMLAND (1996)

## Sacramento Valley



# IMPORTANT FARMLAND (1996)
## San Joaquin Valley




Sources: Ca. Dept. of Conservation, Farmland Mapping & Monitoring Program, Dept. of Fish and Game, USBR, USGS, Teale Data Center

5 0 5 10 15 Miles

Teale Albers Projection

CALFED BAY-DELTA PROGRAM