Chapter 8. Compliance with Applicable Laws, Policies, and Plans and Regulatory Framework

The CALFED Bay-Delta Program must comply with a myriad of environmental laws, regulations, and policies in fulfilling its purpose and mission. Levels of compliance sometimes depend on the nature of the proposed action. This chapter documents the laws, regulations, and policies with which the Program must comply at the programmatic level; many of these laws also will apply to project-specific, second-tier documents.

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8. Compliance with Applicable Laws, Policies, and Plans and Regulatory Framework

This chapter lists programmatic-level environmental compliance requirements, the regulatory framework, and other environmental policies and plans to which the Program is subject. This list will be a reference for site-specific project planning, permit processing, and environmental documentation requirements that would take place during Phase III of the CALFED Program.

As a cooperative interagency effort, the CALFED Bay-Delta Program (Program) is required to comply with several federal and state environmental laws and regulations, including NEPA and CEQA. Because of the programmatic nature of this document, however, not all environmental laws and regulations (or all aspects of those laws and regulations) pertain to the Program at this phase of the process. A Programmatic EIS/EIR allows agencies to evaluate the potential effects of a program as a whole and simplifies preparation of subsequent project-specific environmental documents. Under this approach, called "tiering," the Programmatic EIS/EIR addresses the broad issues relating to a project, and additional environmental documentation for project-specific impacts are prepared when necessary. This approach reduces duplication of broad policy decisions when future individual aspects of the Program are under review. These second-tier documents must incorporate the Programmatic EIS/EIR by reference.

During Phase III, second-tier site-specific environmental documents will be prepared for the individual Program actions that will be developed and implemented during Phase III. Second-tier documents will be prepared after the Programmatic EIS/EIR is certified; these documents will concentrate on issues specific to the individual parts of the Program elements, including the site chosen for the action. Second-tier documents will focus on project-specific impacts and the mitigation measures necessary to reduce potential impacts.

8.1 ENVIRONMENTAL COMPLIANCE AT THE PROGRAMMATIC LEVEL

8.1.1 NEPA/CEQA

NEPA requires that an EIS be prepared for all major federal actions with significant environmental impacts. Similarly, CEQA requires that state agencies prepare an EIR for projects with significant environmental impacts that they approve. Under these statutes, the environmental documentation and

analysis are circulated for public review and comment before a final document is completed. A final Programmatic EIS/EIR is released after public comments have been carefully reviewed, responded to and, if appropriate, incorporated into the document. Both NEPA and CEQA provide for different kinds of Programmatic EIS/EIRs, depending on the nature of the project, including programmatic and individual project EIS/EIRs.

The Program is a joint effort between federal and state government agencies. Accordingly, this Programmatic EIS/EIR was prepared to comply with both NEPA and CEQA. The document contains information on the No Action Alternative, the Preferred Program Alternative, other Program alternatives considered, mitigation strategies, potential benefits, and potentially significant adverse impacts that could result from implementing the proposed actions. State and federal officials agreed in December 1999 to extend the 1994 Bay-Delta Accord until state and federal approval of the CALFED Program's Final Programmatic EIS/EIR, but not later than September 15, 2000. The Bay-Delta Accord established the primary framework for the CALFED Program. It is expected that a ROD—and perhaps accompanying agreements—will replace the Bay-Delta Accord.

Both NEPA and CEQA require that an agency consider the environmental effects of its actions at the earliest point in time in which the analysis is meaningful. During extensive public scoping meetings, CALFED determined that the wide array of potential actions, the broad geographic area affected, the length of time for implementation, and the inter-related nature of the resources and goals for the CALFED Program indicated that a programmatic-level environmental review would allow for fuller disclosure and improve the opportunity for decision makers and the public to consider alternatives. Identifying and analyzing the potential future combined effects of a proposal allow a greater opportunity to design actions that avoid, minimize, or mitigate identified impacts. The Programmatic EIS/EIR then can be used to tier more detailed environmental documents for individual actions during Phase III.

Assumptions used in the "programmatic impact analysis document" analyses are clearly laid out in the documentation and were explained in several public meetings held throughout the process. The reader is referred to Chapter 10 and Attachment A in the Programmatic EIS/EIR for detailed information about the public review process and the assumptions, respectively.

As a programmatic general plan-level document, the Programmatic EIS/EIR does not analyze site-specific impacts of future projects at specific locations and therefore cannot predict with certainty which impacts will occur or what site-specific mitigation measures are appropriate for second-tier projects. Consequently, the Programmatic EIS/EIR identifies mitigation strategies, approaches tailored to the type of impacts anticipated as a result of CALFED Program projects that will provide the basis to structure more specific mitigation measures.

For each potentially significant environmental impact, one mitigation strategy or more is identified. These mitigation strategies will be considered as part of second-tier environmental review by any agency proposing to undertake projects that are within the scope of the Programmatic EIS/EIR. Where a second-tier project involves impacts that are addressed in the programmatic impact analysis document, the applicable mitigation strategies can be used to formulate site-specific mitigation measures and enforcement programs. The commitment to consider mitigation strategies, and to apply and enforce mitigation measures pursuant to those strategies, will be included in the ROD/CERT. In addition, any state or federal project funded through legislation that provides for projects to be consistent with, or in accord with, the CALFED Program would need to demonstrate compliance with this mitigation monitoring program as set forth in the Mitigation Monitoring Plan adopted at the time of the ROD/CERT.

NEPA and CEQA are intended to inform decision makers and the public of the environmental consequences of the proposed action, provide an analysis of alternatives, and ensure consideration of mitigation options. The governance, financing (including cost-sharing), and assurance structures do not cause physical changes to the environment or affect the analysis of anticipated impacts, alternatives, or mitigation options. Therefore, these structures are not analyzed in the Programmatic EIS/EIR.

As noted previously, second-tier site-specific environmental documents will be prepared for individual projects, where potentially significant environmental impacts require such analysis. Second-tier documents will be prepared to concentrate on issues specific to the individual project being implemented and site(s) chosen for the action before construction can be initiated.

Most areas of NEPA and CEQA overlap, but some sections in NEPA have no CEQA counterparts. These areas, such as the relationship between short-term uses of the environment and the maintenance of long-term productivity, are included in the Programmatic EIS/EIR. In some cases, NEPA categories were thought to be broader than those under CEQA—for example, irreversible and irretrievable commitments of resources (a NEPA category) rather than any significant irreversible environmental changes (a CEQA category). In those instances, the Program chose to document the environmental consequences under the broader requirements.

A more detailed discussion of the nature and organization of this Programmatic EIS/EIR can be found in the Preface and in Chapter 4. Past and future Program public involvement efforts are discussed in Chapter 10.

8.1.2 FEDERAL/STATE ENDANGERED SPECIES ACTS

Both the federal and state governments enacted endangered species acts (ESAs) to ensure that projects do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. The MSCS for the CALFED Program is an approach to fulfilling the requirements of the federal ESA, the California ESA, and the Natural Community Conservation Planning Act (NCCPA) that may be used by entities implementing CALFED Program actions. Specifically, the MSCS:

- Analyzes the effects of the CALFED Program on 243 evaluated species and 18 Natural Community Conservation Plan (NCCP) communities for the federal and state ESAs and NCCPA purposes.
- Identifies species goals ("recovery," "contribute to recovery," or "maintain") for each of the 243 evaluated species and conservation measures to achieve the goals.
- Specifies two types of conservation measures for achieving the species goals: (1) measures to avoid, minimize, and compensate for the Program's adverse effects on NCCP communities and evaluated species; and (2) measures to enhance NCCP communities and evaluated species that are not directly linked to the Program's adverse effects.
- Provides for the preparation of action-specific implementation plans (ASIPs) that strengthen and simplify compliance with federal and state ESAs and the NCCPA for CALFED Program actions.

The MSCS provides a two-tiered approach to compliance with federal and state ESAs and the NCCPA that corresponds to CALFED's two-tiered approach to compliance with NEPA and CEQA. The MSCS

provides a program-level evaluation of the CALFED Program under the federal ESA and the NCCPA, just as the Programmatic EIS/EIR provides a program-level evaluation under NEPA and CEQA. ASIPs are intended to complement the second-tier, project-level environmental review of CALFED Program actions that is anticipated in the Programmatic EIS/EIR.

The MSCS will serve as the biological assessment of the entire CALFED Program for purposes of programmatic compliance with Section 7 of the federal ESA. Based on the MSCS and other relevant information, the USFWS and NMFS will prepare programmatic biological opinions for the CALFED Program. Subsequently, as CALFED Program actions or groups of actions are identified and defined, ASIPs can be prepared that use information and analyses in the MSCS and the programmatic biological opinions. The ASIPs will serve as the biological assessment of the Program actions or groups of actions; the ASIPs will provide necessary details about the actions and their impacts on species and NCCP communities evaluated in the MSCS. The USFWS and NMFS then will use the ASIPs to develop action-specific biological opinions.

The NCCPA provides for the preparation of NCCPs. NCCPs identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity, while allowing compatible and appropriate development and growth, and may be used for compliance with the California ESA. The MSCS will be submitted to DFG as a proposed programmatic NCCP. Based on the MSCS and other relevant information, DFG will determine whether the MSCS complies with the NCCPA. If DFG determines that the MSCS complies with the NCCPA, DFG will prepare an NCCP approval and issue supporting findings. As under the federal ESA, once specific CALFED Program actions or groups of actions are identified and defined, ASIPs that use information and analyses in the MSCS and the programmatic NCCP approval will provide necessary details about the actions and their impacts on species and NCCP communities evaluated in the MSCS. The ASIPs then can serve as project-specific NCCPs for individual Program actions or groups of actions.

The MSCS helps to assure that CALFED Program actions can be completed in accordance with federal and state ESAs and the NCCPA; and that the compliance process will be systematic, efficient, and predictable. The MSCS will not provide the CALFED Program with general authority to take endangered species or threatened species. However, the MSCS compliance process provides the means by which CALFED implementing entities may obtain authorizations under the federal ESA and the NCCPA to allow incidental take of endangered or threatened covered species that may be caused by specific CALFED Program actions or groups of actions.

8.1.3 Fish and Wildlife Coordination Act

Under Subsection 2(a) of the Fish and Wildlife Coordination Act (FWCA), federal agencies are responsible for consulting with the USFWS and NMFS to conserve wildlife resources by preventing loss and damage, as well as providing for their development and improvement in connection with water resource projects. FWCA Subsection 2(b) requires the USFWS and NMFS to (1) report its recommendations for wildlife conservation and development, and the expected results; and (2) describe the damage to wildlife attributable to the project and the measures proposed for mitigating or compensating for these damages.

The USFWS and NMFS will not issue a separate FWCA Report on the CALFED Program for incorporation into the Programmatic EIS/EIR. The Programmatic EIS/EIR for the CALFED Program includes an impact analysis that was developed in coordination with the USFWS and NMFS. The USFWS' and NMFS' recommendations for improving the Program and reducing impacts on fish and

wildlife have been incorporated into the Program and the Programmatic EIS/EIR. Because of this extensive coordination, the incorporation of the USFWS's recommendations, and the programmatic nature of the CALFED Program, the USFWS and NMFS believe that the requirements of Section (b)(2) of the FWCA have been fulfilled. However, future CALFED Program actions that tier from the Programmatic EIS/EIR have not fulfilled the requirements of Section (b)(2) of the FWCA. Separate FWCA reports will need to be completed for those Phase III actions. The USFWS and NMFS will complete FWCA reports for appropriate Phase III actions, presenting their agency's recommendations to avoid, minimize, and mitigate project impacts on fish and wildlife resources. FWCA reports represent the USFWS' and NMFS' recommendations and are not binding conditions. Although FWCA reports are not subject to public review and comment, they will be available for public and stakeholder review following their completion.

8.1.4 Compliance with Section 404(b)(1) Guidelines and Section 401

The alternatives being analyzed in this Programmatic EIS/EIR include numerous activities that would involve the discharge of dredged or fill material to waters of the United States (including wetlands). As such, these activities require authorization under Section 404 of the Clean Water Act (CWA) before they can proceed (Section 404 permits). Activities which would require Section 404 permits range from projects involving significant construction of new infrastructure (such as new surface water storage facilities) to less controversial projects (such as creating new wetland habitat by contouring land and changing local hydrology).

The Corps issues Section 404 permits. Before the Corps can issue a Section 404 permit for a project, it must determine, among other things, whether a proposed project complies with regulations issued by EPA pursuant to Section 404(b)(1) of the CWA (Section 404(b)(1) Guidelines). The Corps cannot determine whether to issue a Section 404 permit for a particular project until a project-specific administrative record is developed to permit a determination as to whether the project complies with the Section 404(b)(1) Guidelines as well as relevant regulatory requirements. Because project-specific evaluations for the CALFED Program will only be completed after the ROD for this Programmatic EIS/EIR, no site-specific Section 404 permits will be issued for Program projects at the time of the ROD. However, the Corps, EPA, and Program staff are developing a memorandum of understanding (MOU) to facilitate timely consideration of Section 404 permits for Program projects.

The MOU has not been finalized but is scheduled to be completed by the time of the ROD. Conceptually, it will provide a mechanism for integrating information developed at the programmatic level (including the Programmatic EIS/EIR) into the site-specific decisions on Section 404 permits. Programmatic information of particular relevance to the Section 404 permits includes:

- Description of Program projects that are likely to need Section 404 permits, including assessment of the purpose and need for these projects.
- Analysis of alternatives to surface storage, including groundwater storage, water use efficiency, and transfers.
- Assessment of the economic costs and environmental impacts of specific surface storage alternatives in the Integrated Storage Investigation.

- Description of the conveyance strategies under consideration and the process for further evaluation of the conveyance options.

A critical issue that the MOU is designed to address is the extent to which less environmentally damaging alternatives to surface storage (for example, groundwater storage, water use efficiency, and transfers) can be practicably implemented and the extent to which these alternatives can contribute to project purposes, since the Section 404(b)(1) Guidelines only authorize issuing Section 404 permits if there are no less environmentally damaging practicable alternatives to the proposed discharge. Thus, the MOU is intended to document the commitments in the ROD to pursuing these less environmentally damaging alternatives to surface storage and set forth a process for assessing the need for additional storage in light of the commitments to alternative approaches to addressing Program goals.

8.1.5 The Coastal Zone Management Act

Under the Coastal Zone Management Act (CZMA) of 1972, coastal states are required to develop Coastal Zone Management Programs, and federal agencies are required to certify that any proposed activities in or affecting the coastal zone are consistent with the State's program. In California, the San Francisco Bay Conservation and Development Commission (BCDC) oversees the San Francisco Bay segment of California's Coastal Zone Management Program. Among other areas, BCDC also has permit jurisdiction over projects in certain waterways up to the Sacramento-San Joaquin Delta (east of Chipps Island) that empty into the Bay and in specific saltponds and managed wetlands.

The Program has prepared a Programmatic Coastal Zone Management Act Consistency Determination that documents the possible effects of the Preferred Program Alternative on coastal resources. The consistency determination documents the actions that the Program will take to ensure that the Preferred Program Alternative is carried out in a manner consistent, to the maximum extent practicable, with the CZMA and the California Coastal Act of 1976. Since the March 1998 Draft Programmatic EIS/EIR did not contain a Preferred Program Alternative, a Programmatic CZMA Consistency Determination for the Program was not previously submitted to the BCDC. The CALFED Program provided a draft CZMA Consistency Determination to the BCDC in August 1999. A Programmatic CZMA Consistency Determination will be presented to the BCDC in summer 2000.

8.1.6 The National Historic Preservation Act

Federal agencies or other federally funded entities must consider the effects of their projects on historic properties under Section 106 of the National Historic Preservation Act (NHPA). NHPA regulations require that a federal agency take the lead in complying with Section 106 and outline procedures to allow for comment on the proposed actions by the Advisory Council on Historic Preservation.

The Program is taking a two-step approach to comply with Section 106 of the NHPA. The first step consisted of a Class I overview of cultural resources in the study area and a programmatic evaluation of the consequences attributable to each Program alternative. The second step will be completed after specific actions stemming from the Preferred Program Alternative are started. At that time, federal agencies will follow 36 CFR 800 procedures before beginning these actions. A discussion about cultural

resources can be found in Chapter 7 of this document, as well as in the March 1998 Cultural Resources Technical Report.

Program staff also coordinated analysis of historic sites in the study area with the State Historic Preservation Office.

8.1.7 The Farmland Protection Policy Act and Memoranda on Farmland Preservation

Two policies require federal agencies to include assessments of the potential effects of a proposed project on prime and unique farmland. These policies are the Farmland Protection Policy Act of 1981 (FPPA) and the Memoranda on Farmland Preservation, dated August 30, 1976, and August 11, 1980, respectively, from the U.S. Council on Environmental Quality. Under requirements set forth in these policies, federal agencies must determine these effects before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. If implementing a project would adversely affect farmland preservation, the agencies must consider alternative actions to lessen those effects. Federal agencies also must ensure that their programs, to the extent practicable, are compatible with state, local, and private programs to protect farmland. The NRCS is the federal agency responsible for ensuring that these laws and polices are followed.

NRCS involvement in the Program will follow the tiered approach used in the NEPA/CEQA process. The analysis of the impacts of the Preferred Program Alternative and the other Program alternatives on prime and unique farmland is provided in Chapters 4 and 7 of this document. During Phase III, the NRCS will comment on project-specific analysis of an individual proposed action's effect on prime and unique farmland. As mentioned at the beginning of this document and in Chapters 4 and 7, mitigation strategies outlined in Chapter 7 will serve as a foundation for project-specific actions.

The analyses of impacts of the Preferred Program Alternative and the other Program alternatives on agricultural resources were coordinated with the NRCS. These analyses can be found in Chapters 4 and 7 of this document, as well as in the March 1998 Agricultural Resources Technical Report.

8.1.8 The Federal Agriculture Improvement and Reform Act of 1996

The Federal Agriculture Improvement and Reform Act of 1996, also known as the 1996 Farm Bill, became law in April 1996. Title III of the Act includes conservation provisions designed to provide landowners with various incentives and technical assistance for incorporating sound conservation practices into farming, grazing, and livestock operations. The 1996 Farm Bill replaces and incorporates parts of previous farm bills, including the Food Security Act of 1985 and the 1990 Farm Bill.

Under Title III, the Wetlands Reserve Program and the Conservation Reserve Program of the Food Security Act of 1985 are extended to 2002. Changes in the programs, addressed in previous farm bills, provide landowners with more options for protecting wetlands and highly erodible land. The wetland conservation provisions were modified to provide farmers with more flexibility to meet wetland conservation compliance requirements. Changes include expanding areas where mitigation can be used;

allowing mitigation by restoration, enhancement, or creation; and changing the abandonment clause. Title III also addresses a new Wildlife Habitat Incentives Program to help landowners improve wildlife habitat on private land. A Flood Risk Reduction Program was established to provide incentives for moving farming operations from frequently flooded land. NRCS is the federal agency responsible for implementing the conservation provisions of the 1996 Farm Bill.

8.1.9 Executive Order 11988 (Floodplain Management)

Executive Order 11988 is a flood-hazard policy for federal agencies, requiring them to take actions to reduce the risks of flood losses; to restore and preserve the natural and beneficial values served by floodplains; and to minimize flood impacts on human safety, health, and welfare.

At the programmatic level, the Program has complied with Executive Order 11988 by discussing the potential effects of the Preferred Program Alternative and the other Program alternatives on flooding and mitigation strategies in Chapter 7 and in the March 1998 Flood Control Technical Report.

8.1.10 Executive Order 11990 (Protection of Wetlands)

Executive Order 11990 is an overall wetlands policy for all agencies managing federal lands, sponsoring federal projects, or providing federal funds to state or local projects. The order requires federal agencies to follow avoidance, mitigation, and preservation procedures with public input before proposing new construction in wetlands. When federal lands are proposed for lease or sale to nonfederal parties, Executive Order 11990 requires restrictions to be included in the lease or conveyance to protect and enhance the wetlands on the property. Executive Order 11990 can restrict the sale of federal land containing wetlands; however, it does not apply to federal discretionary authority for nonfederal projects (other than funding) on nonfederal land.

Discussions about the effects of the Preferred Program Alternative and the other Program alternatives on wetlands can be found in Chapters 5, 6, and 7 of this document, as well as in the Ecosystem Restoration Program Plan and the March 1998 Vegetation and Wildlife Technical Report.

8.1.11 Executive Order 12898 (Environmental Justice)

Executive Order 12898 requires federal agencies to identify and address adverse human health or environmental effects of federal programs, policies, and activities on minority and low-income populations that could be disproportionately high. Federal agencies must ensure that federal programs or activities do not directly or indirectly result in discrimination on the basis of race, color, or national origin. Federal agencies must provide opportunities for input into the NEPA process by affected communities and must evaluate the potentially significant and adverse environmental effects of proposed actions on minority and low-income communities during environmental document preparation. Even if a proposed federal project would not result in significant adverse impacts on minority and low-income populations, the

environmental document must describe how Executive Order 12898 was addressed during the NEPA process.

Chapter 7 in this document describes the effects of the Preferred Program Alternative and the other Program alternatives on minority and low-income populations—in particular, Section 7.14. The March 1998 Agricultural Resources, Urban Resources, and Recreation Resources Technical Reports also address this topic.

The Program developed a separate document detailing plans for multi-cultural public outreach, in addition to its general Outreach Program. The multi-cultural outreach plan includes meeting with ethnic community leaders throughout the state, focusing a media campaign on ethnic media, and identifying public forums that could be hosted by the Program and various community-based organizations. Chapter 10 of this document describes the Program's public involvement plan, which includes the opportunities for minority, low-income communities, and Indian tribal committees to provide input on the preparation of the Programmatic EIS/EIR.

8.1.12 Executive Order 13007 (Indian Sacred Sites) and April 29, 1994 Executive Memorandum

Executive Order 13007 is a policy for federal agencies regarding how to accommodate Indian sacred sites. This order requires federal agencies with statutory or administrative responsibility for managing federal lands to: (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; (2) avoid adversely affecting the physical integrity of such sacred sites; and (3) where appropriate, maintain the confidentiality of the sacred sites.

The April 29, 1994, "Executive Memorandum on Government-to-Government Relations with Native American Tribal Governments," issued by President William J. Clinton, deals with government-to-government relations with Native American tribal governments. Under this memorandum, federal agencies that undertake activities affecting Native American tribal rights or trust resources should implement them in a knowledgeable, sensitive manner that is respectful of tribal sovereignty. The memorandum outlines principles, clarifying how the federal government should operate in a government-to-government relationship with federally recognized Native American tribes.

The potential effects of the Program on Indian sacred sites are unknown and will be determined when specific projects are evaluated. Specific implementation projects for the Program have not yet been identified; at the programmatic level, however, impacts on Indian sacred sites appear unlikely. As specific implementation projects are evaluated, adverse impacts on Indian sacred sites will be disclosed and mitigation provided, as needed.

The Programmatic EIS/EIR does not address specific projects. If projects or activities are proposed for an area that contains a reservation, rancheria, or any Indian trust asset, consultation will take place early in the planning process. At the programmatic level, it is not possible to determine whether projects will be proposed for any reservation or rancheria; however, government-to-government consultation will be provided as needed.

CALFED has initiated broad tribal consultations on the CALFED Program. These consultation efforts include: (1) working with EPA's Regional Tribal Operations Committee (RTOC) to provide briefings

at its meetings about the CALFED Program and how to best encourage tribal participation, (2) conducting a CALFED briefing at the EPA Tribal Environmental Conference, (3) appointing an RTOC nominee to the BDAC to help represent tribal interests, and (4) providing funds to enhance tribal participating in identifying and analyzing potential impacts from future projects on tribal interests.

8.1.13 Federal Clean Air Act

The Federal Clean Air Act (FCAA) was enacted to protect and enhance the nation's air quality in order to promote public health and welfare and the productive capacity of the nation's population. The FCAA requires an evaluation of any federal action to determine its potential impact on air quality in the project region. California has a corresponding law, which also must be considered during the EIR process.

During Phase III of the Program, when specific projects are identified, coordination is required with the appropriate air quality management district as well as with EPA. This coordination would determine whether the project conforms to the FCAA and the State Implementation Plan (SIP).

Section 176 of the FCAA (42 U.S.C. Section 7506[c]) prohibits federal agencies from engaging in or supporting in any way an action or activity that does not conform to an applicable SIP. Actions and activities must conform to a SIP's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and in attaining those standards expeditiously. EPA promulgated conformity regulations (codified in 40 CFR Section 93.150 et seq.).

This Programmatic EIS/EIR discusses the potential air quality impacts of the Preferred Program Alternative and the other Program alternatives in Section 5.8.

8.1.14 Climate Change

The federal government recognizes that global climate change is a serious environmental concern. The continued emissions and changes in sinks of greenhouse gases must be viewed under NEPA as a reasonably foreseeable impact, given the current state of scientific knowledge. Therefore, federal agencies must analyze the extent to which their proposed and ongoing actions and activities could influence such emissions and sinks. Such analyses should consider how federal actions could affect global climate change and, to the extent possible, how global climate changes could affect federal actions.

The Program is proposing significant investments to improve water quality, ecosystem quality, water supply reliability, and levee system integrity. Durability of the Program could be adversely affected by future climate changes. Likewise, Program-related construction and operations could contribute to greenhouse gas production. Two potential effects of global warming of particular concern for the Program are changes in sea levels and precipitation.

The geologic record shows marks from floods and droughts, evidence of past substantial changes in global and regional climates. Sea level changes also are directly related to extremes in climate change. For example, sea levels were from 2 to 6 meters higher than present levels during the last interglacial period 125,000 years ago, and approximately 120 meters below present levels during the last ice age 20,000 years ago. Sea levels have increased by 10-25 cm over the last century. Given this fluctuation, the Delta—with sea levels near current levels—likely has existed for only a small amount of geologic time.

It is difficult to estimate future sea level changes. Not enough is known about how the ice sheets in Greenland and Antarctica will react to global warming or about how much global warming may occur. Global warming may cause ice sheets and land-based glaciers to melt and also could cause thermal expansion of sea water. Sea levels actually could decrease if global warming causes precipitation at very high latitudes to increase and results in water stored as ice sheets.

A literature search indicates that sea level rise currently is estimated at approximately 1.5 millimeters annually. One study estimates that global warming may cause further rise of about 18 cm (0.7 foot) by 2030. Also, if current trends in greenhouse gas emissions continue, the same study estimates the rise could be up to 1 meter (3.3 feet) above current levels by 2100. EPA estimates that sea levels could rise globally approximately 20 inches (ranging between 6 and 38 inches) by 2100, and that average global temperatures could increase by 2 degrees Celsius (ranging between 1 and 3.5 degrees Celsius). Each degree Celsius of warming will shift temperature zones by about 100 miles northward (or 500 feet up in elevation).

This shift in temperature could affect species distribution in the Bay-Delta system and the effectiveness of the Ecosystem Restoration Program. Considering the potential of a 1- to 3.5-degree Celsius increase in global temperatures by 2100, the greenhouse gases that could be generated by the Program would be infinitesimal. However, the Program could contribute to the cumulative impacts of the potential temperature changes.

Rising sea levels could cause significant adverse impacts on the Delta system (for example, on habitat, water supply, and agriculture) if levees are overtopped or if substantial future investments are required to prevent overtopping. Higher sea levels could increase salinity levels throughout the Delta and for many miles inland, which could alter the effectiveness of Program habitats and likely would change the entire Delta ecosystem. Water diversions from Delta channels likely would be abandoned and moved inland to areas of lower salinity. While these changes are potentially significant over the long term (hundreds or thousands of years), they are unlikely to significantly alter Program facilities or operations within the foreseeable future (20-50 years).

Temperature changes could result in more variable precipitation and runoff patterns from year to year and season to season. EPA estimates that California could experience increased winter runoff and decreased spring and summer runoff, which could result in decreased water supply and reliability in the Central Valley basin. If earlier flooding becomes more frequent, competition for remaining scarce water supplies could increase.

8.1.15 FEDERAL WATER PROJECT RECREATION ACT

The Federal Water Project Recreation Act requires federal agencies with authority to approve water projects to include recreation development as a condition of issuing permits. Recreational development must be considered along with any navigation, flood control, reclamation, hydroelectric, or multi-purpose water resource project. For example, a Federal Energy Regulatory Commission license to operate a hydroelectric facility usually includes an obligation to construct specific recreation facilities in order to provide for anticipated demands. CALFED compliance with the requirements of the Federal Water Project Recreation Act will occur at the project-specific level. A programmatic discussion of recreation impacts is included in Section 7.7.

8.1.16 DAVIS-DOLWIG ACT

The Davis-Dolwig Act declares that recreation and fish and wildlife enhancement are among the purposes of state water projects. It specifies that costs for recreation and fish and wildlife enhancement not be included in prices, rates, and charges for water and power to urban and agricultural users. Under the Davis-Dolwig Act, land for recreation and fish and wildlife enhancement must be planned and initiated at the same time as any other land acquisition for the project. CALFED compliance with the requirements of the Davis-Dolwig Act will occur at the project-specific level. A programmatic discussion of recreation impacts is included in Section 7.7.

8.1.17 STATE, REGIONAL, AND LOCAL PLAN CONSISTENCY

Determining consistency with state, regional, and local plans is not possible without specific actions. Since this is a programmatic document, coordination consisted primarily of circulating the Programmatic EIS/EIR to recognized state clearinghouses and local government agencies affected, as well as submitting the document to federal, state, and local elected representatives for review and comment as designated by Executive Order 12372. To fully comply with NEPA and CEQA, the Program will coordinate with appropriate state and local jurisdictions within the study area during Phase III.

8.2 REGULATORY FRAMEWORK

Several laws and regulations affect the existing environment in California, and these must be considered in assessing the potential impacts of future actions. Below is a brief discussion of those regulatory and legal requirements applicable to the Program. These requirements are presented here rather than under the various resource descriptions to provide a complete overview of the regulatory framework in one place and to avoid repetition.

8.2.1 DELTA PROTECTION COMMISSION

The Delta Protection Commission (DPC) is a state regional planning agency with authority over a 450,000-acre portion of the Delta. The authorizing legislation was passed in 1992 (PRC Section 29700 et seq.), and the Commission started meeting in January 1993. The DPC was charged with preparing a regional land use and resources management plan for the Delta to protect and enhance the three existing land uses: agriculture, wildlife habitat, and recreation. The plan was adopted in February 1995. Local governments were required to ensure that their general plans conformed with the regional plan; local general plan amendments were completed in March 1997. The DPC has appeal authority over the local government amendments. The 19-member DPC includes six state agency directors, five county supervisors, three city council members, and five reclamation district representatives. The DPC was initially slated to disband on January 1, 1997, but its authorization has been extended by the legislature until the year 2010.

8.2.2 THE DELTA PROTECTION ACT OF 1959

The Delta Protection Act of 1959 requires adequate water supplies for multiple uses (for example, agriculture, municipal and industrial, and recreation) in the Delta. The Act also provides for Delta water exports under certain conditions that are spelled out in the California Water Code and other regulatory requirements. Since the law was passed, various water quality and flow objectives have been established by the SWRCB and the Central Valley Regional Water Quality Control Board (RWQCB). These objectives are to ensure that the amount and quality of water in the Delta is sufficient to satisfy the multiple uses. For example, water quality objectives require limiting Delta water supply operations, particularly the SWP and CVP, that affect the balance of fresh water and salt water in the Delta.

8.2.3 PORTER-COLOGNE ACT

In 1967, the Porter-Cologne Act established the SWRCB and nine regional boards as the primary state agencies with regulatory authority over water quality and appropriative surface water rights allocations. The SWRCB administers the Porter-Cologne Act, which provides the authority to establish WQCPs that are reviewed and revised periodically; the Porter-Cologne Act also provides the SWRCB with authority to establish state-wide plans.

The nine RWQCBs carry out SWRCB policies and procedures throughout the state. The SWRCB and the RWQCBs also carry out sections of the federal CWA—administered by EPA—including the National Pollutant Discharge Elimination System (NPDES) permitting process for point source discharges and the CWA Section 303 water quality standards program.

WQCPs, also known as basin plans, designate beneficial uses for specific surface water and groundwater resources, and establish water quality objectives to protect those uses. RWQCBs issue waste discharge requirements for the major point-source waste dischargers, such as municipal wastewater treatment plants and industrial facilities. In acting on water rights applications, the SWRCB may establish terms and conditions in a permit to carry out WQCPs.

The Enclosed Bays and Estuary Plan and the Inland Surface Waters Plan enacted by the SWRCB set numerical and narrative criteria for toxic metals and organic compounds. Litigation in 1994 against the plans resulted in their being revoked, and the SWRCB is not considering readopting them. Instead, in early 2000, EPA promulgated numeric objectives for metals and organic compounds under the CWA through the California Toxics Rule; and the SWRCB is developing an implementation policy to support this rule. Both numerical and narrative water quality objectives are established to protect beneficial uses, including human health and aquatic life. Once approved by EPA, the objectives become enforceable under the CWA and the Porter-Cologne Act.

The Delta is under the jurisdiction of the Central Valley (Region 5) and the San Francisco Bay (Region 2) RWQCBs, which carry out policies and procedures adopted under their respective WQCPs. The most recent basin plan was adopted in 1995. Amendments to the basin plan to control agricultural subsurface drainage and lower San Joaquin River water quality objectives currently are being considered for adoption.

8.2.4 DECISION-1485 AND THE 1978 WATER QUALITY CONTROL PLAN

In 1978, the SWRCB adopted the WQCP for the Sacramento-San Joaquin Delta and Suisun Marsh (1978 Delta Plan). At the same time, the SWRCB adopted Water Right Decision-1485 (D-1485). Predecessors to D-1485 were D-1379 and D-1275. D-1485 required water diverters to comply with the water quality objectives in the 1978 Delta Plan. The objectives in the plan were designed to protect natural resources by maintaining Delta water quality in at least as good condition as its condition would have been in the absence of the CVP and SWP. D-1485 also required monitoring and study of Delta aquatic resources. One effect of D-1485 was the amendment of Reclamation and DWR permits to operate the CVP and SWP. Later that year, the legality of D-1485 and the 1978 Delta Plan was challenged. Two things resulted from that legal challenge: a new Delta plan was developed, and a new draft water rights decision was issued.

In 1986, the State was required to revise its water quality standards based on the "Rancanelli Decision" (*United States v. State Water Resources Control Board* (1986) 182 Cal. App. 3d 82). The Rancanelli decision directed the SWRCB to balance all beneficial uses of Bay-Delta waters—including fishery and other instream uses—and to modify existing water rights if necessary to achieve that goal. Pursuant to that decision, the SWRCB began a hearing process—known as the Bay-Delta hearings—to review and amend the 1978 Delta Plan. After this hearing process, the SWRCB issued revised water quality objectives in the 1991 Delta WQCP for Salinity, Temperature, and Dissolved Oxygen (1991 Delta Plan).

The SWRCB conducted a water right hearing to take evidence and recommendations about measures to protect fish and wildlife. After the hearing, the SWRCB issued a draft water right decision (D-1630) in 1993 that included interim water rights terms and conditions. Actions taken by NMFS and the USFWS to protect winter-run chinook salmon and Delta smelt resulted in withdrawal of D-1630 after the hearing and before the decision had been adopted. However, several new Delta water management concepts originally presented in D-1630 have been partially adopted in other actions taken by the SWRCB, DWR, Reclamation, fishery protection agencies, and other regulatory agencies.

8.2.5 1995 WATER QUALITY CONTROL PLAN

In March 1994, the SWRCB started developing new water quality objectives. The SWRCB released a draft version on December 15, 1994—the same day that the Bay-Delta Accord was signed. The SWRCB then released an EIR documenting the effects of carrying out the plan. The 1995 WQCP was adopted in May 1995 and incorporated several elements of EPA, NMFS, and USFWS regulatory objectives for salinity and endangered species protection. The 1995 WQCP objectives are expected to be fully implemented with a new water right decision that replaces D-1485. The major changes associated with the 1995 WQCP in relation to the 1978 and 1991 Delta Plans and associated D-1485 requirements are listed below.

- Water-year classifications are based on the 40-30-30 Sacramento Valley Four River Index and the 60-20-20 San Joaquin Valley Four River Index. The outflow requirements from February through June depend on the previous month's Eight River Index runoff volume.

- Delta outflow requirements are the combination of fixed monthly requirements and estuarine habitat requirements (expressed as "X2," the position of the 2 ppt salinity). Because the X2 requirements in

the 1995 WQCP depend on the previous month's Eight River Index runoff, the required outflow must be calculated for each month.

- Combined SWP and CVP Delta exports are limited to a percentage of the Delta river inflow (which does not include rainfall). These percentages range between 35 and 45% from February through June, depending on the Delta inflow, and 65% the rest of the year. Export pumping during the pulse flow is limited to an amount equivalent to the pulse flow during half of April and half of May.

8.2.6 CLEAN WATER ACT—SECTION 303(D)

Section 303 of the CWA requires all states to conduct triennial reviews to evaluate and, where necessary to protect the designated uses for the state's waters, revise water quality standards. In California, the SWRCB is the recognized entity responsible for implementing the triennial review process.

The triennial review process of Section 303 is particularly well suited to the adaptive management approach to ecosystem protection being proposed in the CALFED Program. CALFED intends to work with the SWRCB, RWQCBs, and EPA to assure that the implementation of the Water Quality Program, Ecosystem Restoration Program, and other CALFED Program elements is consistent with and, where appropriate, incorporated into the ongoing regulatory programs based on Section 303.

Section 303(d) of the federal CWA requires that states develop a list of water bodies with impaired water quality. The Section 303(d) list identifies impaired water bodies and sources of contamination, such as mine drainage, agricultural drainage, urban and industrial runoff, and municipal and industrial wastewater discharges. The SWRCB is responsible for developing the Section 303(d) list.

The Program is using the Section 303(d) list as revised in 1998 for assessment of existing environmental water quality problems in the Central Valley and Bay-Delta. This list includes waterbodies that were considered for Water Quality Program actions. The Water Quality Program will continue to use the Section 303(d) list and other information as proposed actions are considered for implementation.

8.2.7 FEDERAL GUIDANCE ON WATER QUALITY FOR TOXIC POLLUTANTS

EPA developed National Guidance on Water Quality Criteria (CWA Section 304[a]) for pollutants to protect human health and aquatic life. Relevant pollutants are identified under Section 307 of the CWA. These criteria were used by the SWRCB to develop the 1991 Inland Surface Water Plan, which was subsequently invalidated by California courts.

8.2.8 SUISUN MARSH PRESERVATION AGREEMENT

The Suisun Marsh Preservation and Restoration Act of 1979, and the 1987 Suisun Marsh Preservation Agreement (SMPA) among federal and state agencies, were designed to mitigate the effects of CVP and SWP operations and other upstream diversions on water quality in the marsh. The agreement, which is being amended, includes specific water quality objectives for salinity in Suisun Marsh channels. The CVP

and SWP will submit the amended agreement to the SWRCB for approval in the upcoming Bay-Delta Water Right hearing.

As part of the Suisun Marsh preservation efforts, a salinity control structure (tidal gate) was installed on Montezuma Slough in 1998. D-1485 also directed Reclamation and DWR to develop a protection plan for the marsh. D-1485 set water salinity standards for Suisun Marsh from October through May to preserve the area as a brackish-water tidal marsh and to provide optimum conditions for plant production as food for waterfowl.

The SWRCB's 1995 WQCP includes the SMPA normal and deficiency-period standards for the western Suisun Marsh; and recommends that the SMPA parties should "continue the actions, including facility plans, identified for implementation of the SMPA."

The Suisun Marsh also falls under other water quality criteria, including the California Toxics Rule promulgated by EPA under the CWA in early 2000. The rule establishes ambient water quality criteria for priority toxic pollutants for California inland waters, enclosed bays, and estuaries—including Suisun Marsh.

8.2.9 WATER RIGHTS

There are two basic types of water rights applicable to surface water in California: riparian water rights and appropriative water rights. Riparian water rights are based on ownership of land adjacent to a water body, while appropriative water rights are unrelated to riparian land ownership and are historically based on the principle of "first in time, first in right."

Riparian water rights are not lost if they go unused and are not quantified unless they are adjudicated. Landowners with these rights can divert portions of a water body's natural flow for reasonable and beneficial use on their land, provided the land is within the same watershed as the water body and on the smallest parcel adjacent to the water body. According to the SWRCB, during times of water shortage, all riparian water rights holders must share the available supply according to each landowner's reasonable requirements and uses.

Most of the water rights in California are appropriative water rights. These rights are based on the concept that the first to claim and beneficially use a specific amount of water has a superior claim to those of later appropriators. Appropriative rights are quantified and could be lost if unused. All appropriations existing before 1914 have seniority based on the day when they were initiated. Appropriative rights obtained after 1914 require permits and licenses issued by the SWRCB. The SWRCB issues appropriative rights with conditions to protect other water rights holders, including Delta and upstream riparian water users, and to protect the public interest, including fish and wildlife resources. The quantity and quality of water used by existing riparian and senior appropriative users can be limited only by subsequent appropriations in limited circumstances when the senior rights are not legally injured.

There is no state-wide groundwater regulation in California, unlike other western states. Rather, there is a patchwork system of local groundwater management, ordinances, adjudicated basins, and statutes. For example, California Water Code Section 1220 restricts direct export of groundwater within the combined Sacramento and Delta-Central Sierra basins unless pumping is in compliance with a groundwater management plan adopted by a county board of supervisors. Pursuant to Water Code Section 1215, however, this restriction does not apply to CVP or SWP operations. Water Code

Section 1220 does not define what constitutes a groundwater management plan. For groundwater substitution transfers subject to Water Code Sections 1011.5 and 1745.10, "replacement pumping" is not permitted unless it is consistent with a groundwater management plan for that area or the water supplier determines that no long-term overdraft impact will result.

The SWRCB has no jurisdiction over groundwater transfers but does have authority to prohibit "waste or unreasonable use" of groundwater. Furthermore, the Board asserts that it has the authority to consider impacts on groundwater in its review of water rights change petitions. Any long-term transfer requiring CEQA documentation also would include an analysis of impacts on groundwater.

Several Sacramento Valley counties have passed ordinances regulating the export of groundwater. Similar ordinances have been adopted or considered by some San Joaquin Valley counties. Many counties and water districts also have developed or are developing groundwater management programs.

8.3 DRINKING WATER REQUIREMENTS

Drinking water regulations primarily define requirements for treated water quality and not the regulations or requirements noted above that mainly apply to discharges into receiving waters. The following are the regulatory water quality requirements for drinking water.

8.3.1 SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) (PL 99-339) became law in 1974 and was reauthorized in 1986 and again in August 1996. Through the SDWA, Congress gave EPA the authority to set standards for contaminants in drinking water supplies. Amendments to the SDWA provide more flexibility, more state responsibility, and more problem prevention approaches. The law changes the standard-setting procedure for drinking water and establishes a State Revolving Loan Fund to help public water systems improve their facilities and to ensure compliance with drinking water regulations and to support state drinking water program activities.

Under the SDWA provisions, the California Department of Health Services (DHS) has the primary enforcement responsibility. The California Health and Safety Code establishes DHS authority and mandates drinking water quality and monitoring standards. To maintain primacy, a state's drinking water regulations cannot be less stringent than the federal standards.

8.3.2 NATIONAL PRIMARY DRINKING WATER STANDARDS

National Primary Drinking Water Standards include maximum contaminant levels (MCLs), which set the maximum permissible levels of contaminants that are legally allowed in the distribution system of a public water system. Standards also include sampling frequency, location, and reporting requirements. The federal and state MCLs are enforceable and must be met by appropriate public drinking water systems. The MCLs generally are derived based on health effects, but some are derived from balancing the technologic and economic concerns that are directly related to domestic water supply use.

Health effects information is developed in the risk assessment process as part of the derivation of the MCLs. Maximum contaminant level goals (MCLGs) are the maximum levels of contaminants in drinking water at which no known anticipated adverse effect on human health would occur and that allow an adequate margin of safety. MCLGs are nonenforceable health goals that are based only on health.

Primary standards also include treatment techniques when it would be economically or technically infeasible to set an MCL. Use of specific treatment technology would most generally be required where any level of a contaminant can cause near-term harm to health, as where filtration and disinfection are required to protect against waterborne illness.

The Phase I Rule was promulgated in 1987 and contains MCLs, MCLGs, and best available technologies (BATs) for eight VOCs. Phase II and IIB rules were promulgated in 1991, and regulated an additional 16 synthetic organic chemicals (SOCs), 10 VOCs, and 7 inorganic chemicals (IOCs). Phase II and IIB rules contain MCLs, MCLGs, and treatment techniques for these chemicals. The Phase V Rule was promulgated in 1992 and regulates 13 SOCs, 5 IOCs, and 3 VOCs. Phase V established MCLGs, MCLs, laboratory criteria, and BATs for these 23 chemicals.

8.3.3 National Secondary Drinking Water Regulations

In 1979 and 1991, EPA established the National Secondary Drinking Water Regulations (NSDWR), or secondary MCLs. These standards apply at the point of delivery to the consumer and generally involve protecting drinking water taste, odor, or appearance. Federal secondary MCLs are nonenforceable; however, state secondary MCLs are enforceable for all new systems and new sources of water developed by existing systems. In California, DHS regulates and enforces secondary drinking water standards.

8.3.4 Trihalomethane Regulations

Trihalomethane (THM) regulations apply to all public water systems that serve more than 10,000 people. Large utilities began monitoring for total trihalomethanes (TTHMs) in November 1980. The regulation established an MCL of 100 μg/L in a distribution system. This MCL was reduced to 80 μg/L in November 1998 and will be applied over the next few years to all community water systems. The TTHMs include the summation of chloroform, bromodichloromethane, dibromochloromethane, and bromoform con-centrations. THMs can form when water is treated with a disinfectant. Compliance with the MCL is based on the annual average of at least four representative sampling points for each treatment plant. Twenty-five percent of the samples are taken in the distribution system, representing the maximum residence time of water in the system. At least 75% of the samples are collected from representative sites in the distribution system. These representative sites are determined by the number of people served, sources of water, and treatment methods.

8.3.5 FEDERAL LEAD AND COPPER RULE

EPA promulgated the final Lead and Copper Rule in 1991 (56 FR 26460). Under this rule, the first flush water samples from consumers' taps should be monitored. If more than 10% of these samples contain greater than the AL of 0.015 mg/L for lead or 1.3 mg/L for copper, actions may be required—potentially including optimization of control treatment, source water treatment, and public education. The Lead and Copper Rule eliminated the lead MCL and the secondary copper MCL.

8.3.6 FEDERAL SURFACE WATER TREATMENT RULE

EPA promulgated the Surface Water Treatment Rule (SWTR) in June 1989 to protect against *Giardia lamblia*, *Legionella* (a bacterium), and viruses in the nation's surface water drinking water sources and in groundwater sources influenced by surface water. These contaminants were included on the list of 83 contaminants under EPA regulation, according to the 1986 SDWA amendments.

The SWTR requires all utilities with a surface water supply, or a groundwater supply influenced by surface water, to provide adequate disinfection and, under most conditions, filtration. Avoidance from surface water supply filtration is provided on rare occasions where the source water supply meets extremely rigid water quality requirements and there are strong controls on sources of contamination in the watershed. California law requires each utility to perform a watershed sanitary survey at least every 5 years.

Water systems with clean and protected source waters that meet source water quality and site-specific criteria may not be required to filter. Systems that are not required to filter (that is, meet the federal filtration avoidance criteria) do not have to meet disinfectant contact time continuously. A 1-day "disinfectant holiday" per month is provided as part of the federal filtration avoidance criteria. For utilities required to filter, June 1993 was the deadline to meet filtration requirements and performance criteria for both turbidity and disinfection.

In July 1995, EPA proposed an Enhanced Surface Water Treatment Rule (ESWTR) as an amendment to the SWTR. The amendment provides additional protection against disease-causing organisms such as *Giardia lamblia*, *Cryptosporidium parvum*, and viruses in drinking water. The ESWTR outlines several alternatives for treatment requirements based on source water concentrations for these pathogens.

Disinfectants/Disinfection By-Products Rule. The 1986 amendments to the federal SDWA required EPA to propose a rule for disinfectants and DBPs. The rule must balance the need for protection from cancer-causing chemicals (by-products) with the need for protection from pathogenic microbes (bacteria, viruses, and protozoans) that are killed by disinfection. In 1992, EPA began a rule-making process, called the "Reg-Neg" process. Negotiators in the process included state and local health and regulatory agency staff, elected officials, consumer groups, environmental groups, and representatives from public water systems. The Reg-Neg process resulted in a two-stage approach for regulation development.

The Stage I Disinfectant/Disinfection By-Products Rule (D/DBPR), was promulgated in November 1998. Compounds affected under Stage I regulations of the D/DBPR are TTHMs, total haloacetic acids, TOC, bromate, chlorine, chloramines, chlorine dioxide, and chlorite.

For Stage II, EPA and water utilities are collecting data on parameters that influence DBP formation, occurrence, and treatment in drinking water through the Information Collection Rule, and have undertaken wide research on health effects and treatment of DBPs and microbial contaminants. Based on this information and research, EPA will evaluate the Stage I regulations and make changes as necessary. Draft Stage II regulations are expected in early 2001; final Stage II regulations are required by May 2002.

Federal Total Coliform Rule. The Total Coliform Rule became effective in 1990. The rule establishes microbiological standards and monitoring requirements that apply to all public water systems. Compliance is based on the presence or absence of total coliforms in a sample, rather than an estimate of coliform density.

8.3.7 California Surface Water Treatment Regulations

State surface water treatment regulations derived from amendments to the National Primary Drinking Water Regulations. State regulations, found in Title 22 of the CCRs, became effective in 1991. Like the federal rule, the State required multi-barrier treatment for microbiological contaminants, effective June 1993. Unlike the federal rule, all public water systems in California must filter their surface water and groundwater influenced by surface water. Due to high start-up costs, this aspect of the regulation was amended to allow qualifying systems to avoid filtration, similar to the federal rule.

8.3.8 California Total Coliform Regulations

California's total coliform regulations are in Title 22, Chapter 15 of the CCRs, and are analogous to the federal regulations. DHS sets the enforceable drinking water standard for total coliforms, which is identical to that of the federal rule.

A list of contaminants currently regulated for drinking water by both EPA and DHS is in the affected environment and environmental consequence sections of the March 1998 Water Quality Technical Report. The list identifies the federal regulation and the section of the regulation, as well as the MCL or treatment technology, associated with each contaminant. In California, DHS promulgated regulations for several contaminants at levels below EPA MCLs.

8.3.9 California Nonpoint Source Program

Nonpoint source pollution (NPS) in California is addressed in the Porter-Cologne Act and two primary federal statutes, CWA Section 319 and Coastal Zone Act Reauthorization Amendments (CZARA) Section 6217. Enacted by Congress in 1987, CWA Section 319 required California to develop an assessment report detailing the extent of nonpoint pollution and a management program specifying nonpoint source controls, in order to obtain federal funding to carry out nonpoint source controls. In 1990, Congress passed Section 6217(c)(1) of the CZARA. These amendments require the state to "develop and implement management measures for nonpoint source pollution to restore and protect coastal waters...," which serves as an update and expansion of the existing NPS program.

The California Nonpoint Source Management Plan, adopted by the SWRCB in 1988, outlines a systematic approach to managing nonpoint source pollution in the state. Three approaches form the basis for California's program: voluntary implementation of BMPs, regulatory-based encouragement of BMPs, and effluent limitations.

In February 1994, the State initiated a comprehensive process to consider the CZARA requirements and update the existing state-wide Nonpoint Source Program, rather than create a separate program to deal exclusively with coastal waters. The State's updated program, described by the Coastal Nonpoint Pollution Control Submittal (September 1995) and Initiatives in Nonpoint Source Management (September 21, 1995), calls for managing nonpoint sources on a watershed basis and focuses on nonpoint source problems associated with pesticides, grazing, urban runoff, hydromodification, and abandoned mines.

8.4 FEDERAL AND STATE COORDINATION FOR A DELTA SOLUTION

8.4.1 BAY-DELTA FRAMEWORK AGREEMENT AND BAY-DELTA ACCORD/RESTORATION COORDINATION

A Bay-Delta Framework Agreement was signed in June 1994 by the Federal Ecosystem Directorate and the Governor's Water Policy Council of the State of California. The framework established a comprehensive program in the Bay-Delta estuary for coordinated and cooperative environmental protection and water supply. The Principles for Agreement, also known as the Bay-Delta Accord, was signed on December 15, 1994 and has been extended until the adoption of the ROD—but in no event later than September 15, 2000.

The Bay-Delta Accord also included a commitment by the agency and stakeholder signatories to develop and fund non-flow-related ecosystem restoration actions to improve the health of the Bay-Delta ecosystem. This commitment is commonly referred to as "Category III." Some of the specific non-flow factors that were identified as part of the Category III commitment include unscreened water diversions, waste discharges, water pollution prevention, fishery impacts due to harvest and poaching, land-derived salts, exotic species, fish barriers, channel alterations, riparian wetlands loss, and other causes of estuarine habitat degradation.

Category III actions are expected to result in long-term benefits regardless of the final Preferred Program Alternative configuration. The Category III actions were required to be consistent with any alternative configuration and provide early implementation benefits. This implementation also will provide valuable information for adaptively managing the system later in the program. Category III projects were required to have appropriate environmental documentation, result in no significant adverse cumulative impacts, and not limit the choice of a reasonable range of alternatives.

A Category III Steering Committee was formed to administer the first rounds of Category III funding. In 1996, the administration function for Category III funds was shifted to CALFED's Restoration Coordination Program, which receives input from the Ecosystem Roundtable; the BDAC; and the general public. The Ecosystem Roundtable is a subcommittee of the BDAC specifically created to provide input from a broad cross section of stakeholder interests to the Restoration Coordination Program.

To date, CALFED's Ecosystem Restoration Program has received more than 800 proposals and has funded 272 projects, at an approximate cost of $284 million. The Program has funded fish screens, fish ladders, land acquisition, and habitat restoration; and has focused research and monitoring designed to provide information that will improve future restoration efforts. Funding of CALFED ecosystem restoration projects is a cooperative effort between state and federal agencies, stakeholders, and the public. CALFED has received ecosystem restoration funds from four primary sources, including approximately $32 million from the California Urban Water Agencies, $60 million from Proposition 204 state bond funds, $160 million from the Federal Bay-Delta Act, and $2 million from EPA watershed funding. Ecosystem restoration funds are administered through the cooperative efforts of the CALFED agencies. For additional information about projects funded to date, visit the CALFED web site at **http://calfed.ca.gov** under the Ecosystem Restoration topic.

Ecosystem restoration projects may be selected as directed programs or through a public solicitation process. A directed program results when CALFED directs funds to a specific project activity identified because of its ability to help the Program achieve its long-term ecosystem restoration goals. All ecosystem restoration projects are evaluated for their technical merit and undergo a multiple-step approval process that involves agencies, stakeholders, and the public. The CALFED Policy Group makes the final funding recommendations to the California Secretary for Resources and the U.S. Secretary of the Interior.

In 1999, the Restoration Coordination Program began the transition from early ecosystem restoration to implementing the long-term Ecosystem Restoration Program. After the ROD is signed, the agencies will begin full implementation of the long-term Ecosystem Restoration Program.

As the long-term Program developed, the priorities and project selection processes were revised to ensure that expenditures were consistent with the overall direction of the Program and efficiently targeted ecosystem restoration through adaptive management.

8.4.2 CENTRAL VALLEY PROJECT IMPROVEMENT ACT

The USFWS and Reclamation jointly are responsible for carrying out the CVPIA. The Act includes provisions intended to restore anadromous fish populations, improve and facilitate water transfers, implement water conservation actions, provide water for wildlife refuges in the Central Valley, and improve flows on the Trinity River for anadromous fish.

Many of the CVPIA provisions parallel elements of the Program. The Ecosystem Restoration Program also has the responsibility of improving coordination among fish and wildlife restoration programs in the Central Valley. In 1999, functional integration began between the Ecosystem Restoration Program and the CVPIA. In particular, the CVPIA's Anadromous Fish Restoration Program (AFRP), Anadromous Fish Screen Program, and Water Acquisition Program, among others, overlap closely with the Ecosystem Restoration Program.

8.4.3 CALIFORNIA-FEDERAL OPERATIONS GROUP

The 1994 Bay-Delta Framework Agreement also established the California-Federal Operations Group (CALFED Ops Group) to coordinate SWP and CVP operations. The group recommends changes in combined Delta operations that could provide additional fish protection and allow Delta exports with

reduced fishery impacts. The CALFED Ops Group specifically was charged with recommending operational changes to minimize incidental take and satisfy other ESA biological opinion requirements based on real-time fish monitoring results.

Other responsibilities of the CALFED Ops Group include carrying out fish protection measures through information exchange and strategy discussions, satisfying 1995 WQCP water quality objectives, and cooperating with the Interagency Ecological Program (IEP) to (1) determine factors that affect Delta habitat and the health of fisheries, and (2) identify appropriate corrective measures for the CVP and SWP. The IEP is a consortium of agencies who work together to develop a better understanding of the estuary's ecology and the effects of water project operations on the physical, chemical, and biological conditions of the San Francisco Bay-Delta estuary. The IEP provides information about the factors that affect ecological resources in the Sacramento-San Joaquin Estuary that allows for more efficient management of the estuary. The 10 member agencies of the IEP are the state agencies of DWR, DFG, and the SWRCB; the federal agencies of the USFWS, Reclamation, USGS, Corps, NMFS, and EPA; and the non-governmental organization, The San Francisco Estuarine Institute.

8.5 PUBLIC TRUST

When planning and allocating water resources, the State of California must consider the public trust and preserve for the public interest the uses protected by the trust. In common law, the Public Trust Doctrine protects navigation, commerce, and fisheries uses in navigable waterways. However, the courts have expanded the doctrine's application to include protecting tideland, wildlife, recreation, and other public trust resources in their natural state for recreational, ecological, and habitat purposes as they affect birds and marine life in navigable waters. In the *National Audubon Society v. Superior Court* (1983) 33 Cal 3d 419, the California Supreme Court ruled that in administering water rights laws and approving water diversions, the State also has a duty of continuous supervision over the taking and use of appropriated water to protect these public trust uses. The 1986 Rancanelli decision applied the Public Trust Doctrine to decisions by the SWRCB and held that this doctrine must be applied by the SWRCB in balancing all the competing interests in the uses of Bay-Delta waters (*United States v. SWRCB* (1986) 182 Cal. App. 3d 82).

8.6 WATER USE EFFICIENCY

Two California water use efficiency laws require water suppliers to plan for water conservation activities. The first is the Urban Water Management Planning Act (California Water Code Section 10610 et seq.). This act requires every public or private urban water supplier who meets certain operational criteria to prepare, adopt, and submit to DWR an urban water management plan, and to update the plan at least once every 5 years. These operational criteria include providing water directly or indirectly for municipal use to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

An urban water management plan must include the following:

- Estimates of past, current, and future water use.
- Identification of current conservation and recycling measures.
- Analysis of potential alternative conservation measures.

The plan must include water shortage contingency provisions, as well as provisions for using recycled water optimally in the water supplier's service area.

The second law is the Agricultural Water Conservation and Management Act (California Water Code Section 10520 et seq.), which provides that agricultural water suppliers may institute water conservation or water management programs.

Under California Water Code Section 10904, DWR assists agricultural water suppliers in implementing efficient water management practices to improve agricultural water use efficiency.

8.7 AREA OF ORIGIN

When the CVP and the SWP were being planned and developed, area-of-origin provisions were added to the California Water Code to protect local northern California supplies from being depleted as a result of the projects. County-of-origin statutes reserve water supplies for counties in which the water originates, if the SWRCB determines that an application for assignment or release from priority of state water rights filings will deprive the county of water necessary for its current and future development. Provisions of watershed protection statutes require that elements of the CVP and SWP not deprive the watershed or the area where water originates (or immediately adjacent areas that can be conveniently supplied with water) of the prior right to water that could be reasonably required to supply the present or future beneficial needs of the watershed area, any of its inhabitants, or property owners.

Through the provisions of the Delta Protection Act of 1959 (see Section 8.2.2), the Delta area is subject to the county-of-origin and watershed protection laws. The Act also requires the CVP and SWP to provide salinity control in the Delta and an adequate water supply for water users in the Delta. (The Delta Protection Act of 1992 relates to land use and therefore is not included in this discussion about area-of-origin protections.)

Additional area-of-origin protections were enacted in 1984 that cover the Sacramento, Mokelumne, Calaveras, and San Joaquin Rivers; the combined Truckee, Carson, and Walker Rivers; and Mono Lake. These protections prohibit exporting groundwater from the combined Sacramento River and Delta basins, unless the export complies with local groundwater plans.