

## CCMP ACTIONS -- QUICK-SCAN LIST

### AQUATIC RESOURCES

- \* Refine and coordinate existing monitoring programs to: (i) better evaluate ecosystem responses to immediate, phased, and long-term water quality and flow standards; (ii) more fully characterize ecosystem processes and properties; and (iii) enhance predictive capabilities of ecosystem models.
- \* Develop, implement, and enforce stringent regulations to control discharges of ship ballast water within the Estuary or adjacent waters.
- \* Prohibit the intentional introduction of aquatic exotic species into the Estuary and its watershed.
- \* Control problem exotic species already in the Estuary.
- \* Develop programs to educate the public about the problems with exotic species and their incidental transport or introduction.
- \* Strengthen programs to reduce the poaching of species within the Estuary.
- \* Review and modify, if necessary, harvest regulations for aquatic species of concern.
- \* Identify and control sources and sinks of contaminants that may affect fish populations or ecosystem health.
- \* Research and develop methods to reduce the incidental take of non-target species in commercial activities.
- \* Prepare/update recovery plans for all listed species. This includes designation of critical habitat.
- \* Monitor status of all candidate species and list them if warranted.
- \* Initiate consultations with all federal agencies that propose or are continuing actions that may affect listed species.
- \* Review all non-federal proposals and continuing actions that may result in take of listed species and take appropriate actions.
- \* Investigate the feasibility of developing a Habitat Conservation Plan (or Plans) for the Bay and Delta that promotes the recovery of the species and addresses incidental take associated with non-federal actions.
- \* Adopt listed species recovery as a policy for all public agencies whose actions affect them.
- \* Adopt water quality and flow standards and operational requirements designed to halt and reverse the decline of indigenous and desirable non-indigenous estuarine biota and to contribute to the attainment of Objective AR-5. Implement these standards and requirements in at least three phases: (a) immediate, interim standards and requirements consistent with current legal requirements that would be in place with the Delta in its existing configuration; (b) standards and requirements linked to South Delta Water Management facilities; and (c) standards and requirements, as may be necessary, linked to off-stream storage south of the Delta to facilitate water banking and water-transfer activities, so long as the last two phases significantly reduce impacts on aquatic estuarine resources and meet all environmental requirements.
- \* Establish conditions on industrial facilities to control entrainment of eggs, larvae, and juvenile fish.
- \* Design and install gates or other facilities at channel openings known to be associated with the loss of fishes.
- \* Design, install, and effectively operate fish screens or other protective devices at diversions associated with fish mortality.
- \* Improve screen efficiencies at state and federal water project pumping and fish salvage facilities.
- \* Develop and implement a management plan to reduce predation in Clifton Court Forebay and near the John E. Skinner Delta Fish Protection Facility.
- \* Protect existing shaded riverine aquatic habitats to ensure no net loss of acreage, lineal coverage, and habitat value within the Estuary. Activities within the "legal Delta" should be conducted consistent with California's Delta Levees Flood Protection Act of 1988.
- \* Increase the quantity of shaded riverine aquatic habitat by 1,000 percent.
- \* Promote the maintenance and development of tule islands, tidal wetlands, and offshore berms to protect against erosion and to provide detrital input and juvenile fish nursery habitat.
- \* Work with the dredging and flood control interests to reduce or eliminate practices that adversely affect fish habitat.
- \* Identify and protect remnant stream habitats containing indigenous and endemic fishes and other native aquatic species.
- \* Protect and maintain marshes, wetlands, shallow water areas, and tidal sloughs to protect fisheries values.

- \* Based on information developed in Action AR-1.1, identify alternative long-term water quality and flow standards, water management measures, operational changes, habitat improvements, and facilities as needed to manage the estuarine aquatic resources (including water) for optimum benefit.
- \* Develop an EIS/EIR to display the alternatives and trade-offs identified in Action AR-5.1 and to initiate the selection of a preferred alternative.
- \* Implement the alternative from Action AR-5.2 (including the adoption of long-term water quality and flow standards and operational requirements) that best optimizes conditions for aquatic resources, efficiently conserves scarce water resources, and restores an equitable balance to the estuarine ecosystem.
- \* Provide necessary instream flows and temperatures to benefit salmon and steelhead in the Central Valley to support the implementation of the state and federal mandates to double the natural production of anadromous fishes.
- \* Implement the Upper Sacramento River Management Plan.
- \* Develop and implement the San Joaquin River Management Plan to identify reservoir operational changes, habitat improvement measures, and other action items to improve habitat and health of the aquatic ecosystem in the San Joaquin River watershed.
- \* Screen upstream diversions that individually or cumulatively result in significant mortality to fishes that utilize the Estuary.
- \* Seek damages for all impacts to trust resources from spills and discharges affecting them and use the funds to improve the resource base.

#### **WILDLIFE**

- \* Preserve, create, restore, and manage large, contiguous expanses of tidal salt marsh and necessary adjacent uplands for the California clapper rail and the salt marsh harvest mouse.
- \* Complete the expansion of the San Francisco Bay National Wildlife Refuge and its satellite refuges and acquire the proposed Stone Lakes National Wildlife Refuge.
- \* Implement concerted efforts to acquire wetlands already degraded or destroyed and restore them so that wetlands in the Estuary are increased by 50 percent by 2000.
- \* Restore tidal marshes in San Francisco Bay.
- \* Identify and convert or restore non-wetland areas to wetland or riparian-oriented wildlife habitat.
- \* Prepare a comprehensive management plan for the San Francisco Bay National Wildlife Refuge.
- \* Enhance the biodiversity within all publicly owned or managed wetlands and other wildlife habitats as appropriate.
- \* Complete and implement a wildlife habitat restoration and management plan for the Estuary.
- \* Implement predator control programs in areas where introduced predators are a constraint to maintenance and restoration of native populations.
- \* Update, and, where necessary, prepare recovery plans for all listed wildlife species.
- \* Provide secure colony sites, allow for population recovery, control predators, and protect adjacent foraging areas for the California least tern.
- \* Monitor status of all candidate species and list them if warranted.
- \* Continue hunting closures to protect the Aleutian Canada goose. Investigate the need for hunting closures for other waterfowl species as necessary.
- \* Implement a captive breeding program for the clapper rail.

#### **WETLANDS**

- \* Prepare Regional Wetlands Management Plan(s).
- \* Encourage geographically focused cooperative efforts to protect wetlands.
- \* Establish a comprehensive state wetlands program for the Estuary which, in addition, includes a coordinated regulatory and policy framework.
- \* Investigate state assumption of Section 404 of the Clean Water Act.
- \* Establish an implementation program to achieve wetlands protection policies. In order to improve wetland protection and reduce regulatory duplication, a uniform and coordinated program should be established that provides state oversight of locally implemented wetlands protection policies. Such a program may be modeled after the Suisun Marsh Protection Plan. The policies themselves (described in Actions WT-2.1, 2.2, and 2.3) should be adopted by the San Francisco Bay and Central Valley RWQCBs, BCDC, and the Delta Protection Commission. Authority and resources to implement these policies should be provided to local governments. In that manner, project sponsors will be informed of wetland protection requirements early in the application

process, thereby minimizing uncertainty and delay. State oversight agencies will coordinate their actions with relevant federal agencies in a manner consistent with the policies and objectives described herein (Actions WT-2.1 through WT-2.4).

- \* Increase enforcement efforts to curtail illegal wetland alteration and to ensure compliance with permit conditions.
- \* Develop and adopt uniform compensatory mitigation policies.
- \* Improve wetlands protection provided under the Clean Water Act.
- \* Expand wetlands acquisition programs, or establish a new Estuary-specific wetlands acquisition program.
- \* Expand existing private, state, and federal financial and technical assistance programs to individual landowners.
- \* Encourage wetland protection by-laws.
- \* Identify and convert/restore non-wetland areas to wetland- or riparian-oriented wildlife habitat. Purchase non-wetland areas to create wetlands. This action should be guided by and consistent with the Regional Wetlands Management Plan.

#### **WATER USE**

- \* Water reclamation and reuse feasibility studies should be completed by each Publicly Owned Treatment Works (POTW), municipality, and/or water district.
- \* Municipalities and counties should adopt water reclamation ordinances encouraging the use of reclaimed water, to the maximum extent practicable, while providing for the protection of public health and the environment.
- \* Local entities interested in implementing reclamation projects should develop and conduct public education programs.
- \* Ensure that state water quality standards and Basin Plans encourage water reclamation and reuse.
- \* If practical, use existing facilities and develop new facilities in order to deliver reclaimed and recycled water for beneficial reuse.
- \* Address and resolve, as appropriate, the impacts on water reclamation and water conservation caused by the discharge of brine from self-regenerating water softeners and other sources into the wastewater stream.
- \* Governmental, agricultural, public, and environmental interests should work together to develop a mechanism to ensure implementation of Efficient Agricultural Water Management Practices.
- \* New methods of agricultural water conservation should be researched through pilot projects and implemented where feasible.
- \* Water conservation feasibility studies shall be completed and implemented by municipalities and/or water districts.
- \* Maximize conjunctive use of water through groundwater recharge.
- \* Study storage of surface water on Delta islands.
- \* Evaluate and adopt, where appropriate, mechanisms to manage groundwater to protect the long-term integrity of groundwater basins.
- \* More fully utilize the existing and expand, where appropriate, the legal and regulatory framework to facilitate voluntary water-marketing agreements among agricultural, urban, and environmental interests.
- \* The state should continue to negotiate with the federal government to determine whether, and to what extent, it is appropriate for the federal government to transfer the ownership or operational control of the Central Valley Project (CVP) to a non-federal entity.

#### **POLLUTION**

- \* Establish specific goals for reducing the discharge of toxic pollution over time and discourage reliance on toxic materials. All dischargers should implement measures to reduce pollutants at their source.
- \* Recommend institutional and financial changes needed to place more focus on pollution prevention.
- \* Develop environmental audit procedures for all significant users and/or producers of toxic substances.
- \* Improve agricultural practices that reduce introduction of pollutants into the Estuary.
- \* Reinforce existing programs and develop new incentives where necessary to reduce selenium levels in agricultural drainage.

- \* Develop a comprehensive strategy to reduce pesticides coming into the Estuary.
- \* Pursue a mass emissions strategy to reduce pollutant discharges into the Estuary from point and nonpoint sources and to address the accumulation of pollutants in estuarine organisms and sediments.
- \* Adopt water quality objectives that effectively protect estuarine species and human health.
- \* Identify and control sources and sinks of selenium and mercury where they are accumulating in aquatic populations in the Estuary.
- \* Improve the management and control of urban runoff from public and private sources.
- \* Develop control measures to reduce pollutant loadings from energy and transportation systems.
- \* Improve the management and control of agricultural sources of toxic substances.
- \* Reduce toxic loadings from mines.
- \* Establish a model environmental compliance program at federal facilities within the jurisdiction of the Estuary Project.
- \* Clean up contaminants presently affecting fish, wildlife, their habitats, and food supplies.
- \* Expedite the clean up of toxic hot spots in estuarine sediments.

#### **DREDGING**

- \* Conduct studies, research, and models of sediment dynamics.
- \* Conduct studies on sediment changes aimed to define accumulation and erosion processes in marsh and mudflat areas.
- \* Adopt policies to manage modification of estuarine sediment production, movement, and deposition.
- \* Conduct laboratory and field bioaccumulation investigations and studies on suspended sediment effects on sensitive life stages throughout the food chain.
- \* Develop and set sediment quality objectives.
- \* Develop a dredge project needs assessment and, as necessary, a prioritization plan, including structural and nonstructural methods to minimize volume requirements.
- \* Identify dredged material reuse and non-aquatic disposal opportunities and constraints.
- \* Develop regulatory land use procedures to promote reuse of dredged material, wetlands restoration and/or creation, and other beneficial uses.
- \* Identify the aquatic and terrestrial resources that are affected by dredging and disposal and are to be protected in the Bay and Delta.
- \* Designate dredged material reference sites for use in development of sediment testing protocols.
- \* Evaluate retention and removal needs for derelict structures in the Bay and Delta.
- \* Adopt regulatory and management policies for Estuary dredging activities and develop dredging and disposal projects that are consistent with the state's existing policies in the San Francisco Bay Plan and in the San Francisco Bay and Central Valley Basin Plans.
- \* Identify dredged material disposal options, including cost estimates and alternative disposal methods. Conduct periodic review as necessary.
- \* Conduct modeling and field studies to determine the saltwater intrusion impacts caused by dredging projects.
- \* Revise Public Notice 87-1, "Interim Testing Procedures for Evaluating Dredged Material Suitability for Disposal in San Francisco Bay," and develop testing procedures and protocols for ocean and upland environments.
- \* Determine areas subject to flooding and erosion and identify causes.
- \* Implement waterway modification policies that protect shoreline areas from detrimental flooding and erosion while maintaining natural resource values.
- \* Establish a program to acquire diked historic baylands listed as buffer areas for coastal flooding and sea level rise. (Cross-referenced to Wetlands Program)

#### **LAND USE**

- \* Local General Plans should incorporate watershed protection plans to protect wetlands and stream environments and reduce pollutants in runoff.
- \* Amend the California Environmental Quality Act Guidelines to add simple and concise criteria for assessing the cumulative environmental impacts on the Estuary when adopting or reviewing General Plans.
- \* Integrate protection of the Estuary with other state land use-related initiatives.
- \* Regional agencies should assist in identifying and developing consistent policies that provide an integrated framework for local governments to protect the resources of the Estuary.

- \* Adopt policies and plans to promote compact, contiguous development, in both the nine-county Bay Area and the three-county Delta region.
- \* Compile and analyze data pertaining to future population and land use change in the nine-county Bay Area and the three-county Delta region to provide information for improved decision making.
- \* Prepare and implement Watershed Management Plans that include the following complementary elements: 1) wetlands protection; 2) stream environment protection; and 3) reduction of pollutants in runoff.
- \* Develop and implement guidelines for site planning and Best Management Practices (BMPs).
- \* Educate the public about how human actions impact the Estuary.
- \* Provide training workshops for local government officials and other key stakeholders to improve land use decision making that affects the Estuary.
- \* Create economic incentives that encourage local governments to take action to implement measures to protect and enhance the Estuary.
- \* Develop new funding mechanisms to pay for plans, physical improvements, and program administration to protect the resources of the Estuary.
- \* Investigate and create market-based incentives that promote active participation by the private sector in cooperative efforts to implement goals for protection and restoration of the Estuary.
- \* Identify financial barriers to implementing the actions recommended in this Land Use Management Program and propose alternative taxation and funding arrangements.
- \* Create a forum to improve communication and resolve disputes regarding land use management among different interest groups that have a stake in the protection and enhancement of the Estuary.

#### **PUBLIC INVOLVEMENT**

- \* Build awareness, interest, and support in the general public and decision-makers for the CCMP's goals and action plans.
- \* Provide and encourage opportunities for direct citizen involvement in implementing the CCMP.
- \* Provide and encourage opportunities for direct citizen involvement in following the CCMP and making any necessary revisions to it.
- \* Serve as a public involvement and education resource for government agencies taking the lead in CCMP management actions.
- \* Ensure provisions for a central collection and distribution (clearinghouse) point for communication and coordination of all information concerning CCMP issues and the Estuary.
- \* Develop and/or promote community-designed model projects for public education and participation activities aimed at implementing the CCMP.
- \* Seek, encourage, and, where appropriate, actively support environmental projects and/or programs that are consistent with CCMP goals and objectives.
- \* Develop, promote, and support multicultural understanding of and involvement in Estuary issues and the decision-making process for these issues.
- \* Work with education groups, interpretive centers, decision-makers, and the general public to build awareness, appreciation, knowledge, and understanding of the Estuary's natural resources and the need to protect them. This would include how these natural resources contribute to and interact with social and economic values.
- \* Promote, support, and cooperate with existing public education and involvement programs concerned with protecting and restoring the Estuary's biological resources.
- \* Develop or promote necessary public education tools, such as a general education speakers bureau, Bay-Delta "Estuary Watch" bulletin boards, slide shows, brochures, and other support materials on a variety of topics.
- \* Assist in the development of long-term educational programs designed to prevent pollution to the Estuary's ecosystem and provide assistance to other programs as needed.
- \* Hold a State of the Estuary Conference at least every other year.
- \* Increase public opportunities to contribute directly to the protection and management of fish and wildlife populations and their habitats within the Estuary.
- \* Using government agencies and citizens, promote the continued development of needed citizen monitoring programs to assist in the restoration and protection of the Estuary.
- \* Provide opportunities for hands-on citizen action in Estuary restoration activities.
- \* Assess the need and, if appropriate, develop and organize an Estuary Conservation Corps.

- \* Develop, plan, and facilitate the transition from the Estuary Project to a community-based entity or entities that would help carry out public involvement and education goals and objectives of the Estuary Project and the CCMP in ways that do not duplicate the efforts of other organizations.
- \* Work to fund and support existing and new public involvement, education, research, and monitoring activities that seek to fulfill the goals of the CCMP.
- \* Ensure that a technical/scientific/academic entity has responsibility to promote scientific research on and monitoring of the Estuary and provide advice and guidance related to those activities.

#### **REGIONAL MONITORING**

- \* Establish and operate a San Francisco Estuarine Institute for research on and monitoring of land use, biological resources, flow regime, pollutants, and dredging and waterway modification.
  - \* Provide a long-term administrative home and regular funding for the Research Enhancement Program (REP).
  - \* Develop and implement the Regional Monitoring Strategy, which will integrate and expand on existing efforts and eventually be part of a comprehensive Regional Monitoring Program.
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