

**CALFED POTENTIAL ACTION LIST**

<b>Categories and Actions</b>	<b>Fisheries and Diversions</b>	<b>Habitat and Land Use/ Flood Protection</b>	<b>Water Supply Availability and Beneficial Uses</b>	<b>Water Quality and Land Use</b>
<b>Restoration of Bay-Delta System Shallow Water (Tidal) Habitat</b> -Convert existing leveed lands to tidal action -Protect existing shallow habitat from erosion -Restore tidal action to existing diked wetlands -Reconstruct levees to include shallow water habitat -Fill deep water to produce shallow habitat				
<b>Restoration of Bay-Delta System Riverine Habitat</b> -Reconstruct river banks and shallow areas -Restore and preserve channel islands -Restore natural channel configurations -Modify channel/levee construction practices to include riverine elements				
<b>Restoration of Bay-Delta System Riparian Habitat</b> -Improve and protect degraded riparian habitats -Establish new areas of riparian habitat -Reestablish historic riparian areas -Modify levee maintenance practices -Protect existing riparian habitat				
<b>Restoration of Bay-Delta System Wetland Habitat</b> -Restore, enhance, and create wetlands -Expand wetland acquisition programs -Convert agricultural lands to wetlands -Protect existing wetland habitat				
<b>Restoration of Bay-Delta System Terrestrial Habitat</b> -Protect existing upland habitat -Establish upland habitat on levees -Establish upland habitat on fallowed croplands -Establish oak woodlands on suitable soils -Encourage wildlife-friendly agricultural practices -Preserve agricultural land uses providing habitat -Clean up sites contaminated with toxic substances				
<b>Implementation of Integrated Habitat Management Programs</b> -Establish regional ecosystem restoration guidelines -Implement integrated regional habitat management -Develop cooperative management agreements -Establish mitigation banking program				

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Water Quality and Land Use	Water Supply Availability and Beneficial Uses	Habitat and Land Use/ Flood Protection	Fisheries and Diversions	Categories and Actions
				<b>Establishment of Floodways and Meander Belts</b> -Relocate levees to widen floodways -Allow river channels to meander -Acquire Delta islands as overflow areas -Restore floodways as habitat corridors
				<b>Control of Introduced Species</b> -Remove or reduce nuisance species in key habitats -Improve regulation of ballast-water releases -Improve border inspection practices -Inspect for invasions of nuisance species -Modify habitat to favor native species
				<b>Delta Waterfowl Habitat Management</b> -Manage agricultural crops for waterfowl forage production -Improve management of public waterfowl areas -Implement terrestrial predator control programs -Increase sources and availability of wildlife forage
				<b>Restoration of Upstream Anadromous Fish Habitat</b> -Manage flows and temperatures in upstream habitats -Restore and replenish spawning gravels -Restore channel configurations -Restore shoreline habitat conditions -Modify gravel mining practices -Improve floodway drainage to reduce fish stranding
				<b>Improvements for Upstream Fish Passage</b> -Modify passage at upstream dams and other barriers -Modify natural barriers to improve passage
				<b>Restoration of Upstream Riparian Habitat</b> -Restrict livestock grazing in riparian corridors -Revegetate degraded riparian habitats -Protect riparian lands through purchase/easements -Restore flows to dewatered riparian habitats

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Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
<b>Restoration of Upstream Wetland Habitat</b> -Modify floodways to support wetland habitats -Reuse agricultural drainage to create wetlands -Reuse urban wastewater effluent to create wetlands -Manage groundwater recharge for wetland habitat				
<b>Delta Inflow/Outflow/Export Management</b> <b>Actions regarding Delta Inflow</b> -Modify upstream consumptive use -Modify upstream reservoir operations criteria -Modify Delta inflow timing pattern -Provide instream pulse flows for fish passage -Provide instream flows for fish attraction				
<b>Actions regarding Delta Diversions and Outflows</b> -Modify volumes and timing of exports -Modify in-Delta consumptive use -Modify central Delta channel operations -Modify export operations criteria -Establish a Delta watermaster to Manage flows -Use real-time monitoring and adaptive management				
<b>Modification of Diversion Timing Patterns</b> -Modify diversion timing of in-Delta diversions -Modify diversion timing of export diversions -Coordinate SWP/CVP diversion timing -Modify diversion timing through Montezuma Salinity control Gate -Use real-time monitoring and adaptive management				
<b>Increased Rates of Diversion Capacity</b> -Obtain approvals for expanded export capacities -Enlarge export pumping capacities -Increase diversion capability at Red Bluff diversion Dam				
<b>Acquisition of Long-Term Water Supplies for Fish and Wildlife</b> -Acquire water to augment instream flows -Obtain shifts in timing of instream flows -Obtain shifts in diversion timing patterns -Acquire water for refuge habitat use -Modify water law to Establish instream rights				

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<b>Installation and Improvement of Fish Screens</b> -Improve screens at Delta export pumps -Improve other existing fish screen systems -Install screens on other in-Delta diversions -Install screens on upstream diversions -Consolidate and screen existing small diversions -Enforce screening requirements				
<b>Improvement of Bay-Delta System Fish Migration</b> -Install barriers to block fish movement into Old river -Install barriers to keep fish in Sacramento river -Install barriers to divert fish from Sacramento river to western distributaries -Operate fish barrier on San Joaquin river at Merced river confluence in fall -Provide instream pulse flows for fish passage -Provide instream flows for fish attraction				
<b>Improvement of Fish Salvage Operations</b> -Improve design of salvage facilities -Improve operation of salvage facilities -Improve fish hauling and release procedures				
<b>Removal and Control of Aquatic Predators</b> -Harvest predators at Delta export pumps -Harvest predators in upstream habitats				
<b>Fish Hatchery Operations</b> -Expand hatchery capacities -Construct new hatcheries on the San Joaquin river -Improve hatchery operations -Reduce hatchery effects on wild fish populations -Implement tagging of hatchery-bred fish -Establish new captive breeding programs				
<b>Fish Harvest Management</b> -Improve regulation of commercial take -Improve regulation of recreational take -Improve enforcement of Harvest regulations				

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<b>Desalination</b> <ul style="list-style-type: none"> <li>-Expand desalination of Southern California supplies</li> <li>-Expand desalination of San Joaquin Valley supplies</li> <li>-Improve desalination technologies and cost</li> <li>-Educate users about desalination feasibility</li> </ul>				
<b>Water Conservation</b> <ul style="list-style-type: none"> <li>-Increase use of district-wide conservation practices</li> <li>-Increase use of on-farm conservation practices</li> <li>-Increase use of municipal conservation practices</li> <li>-Increase use of industrial conservation practices</li> <li>-Implement financial incentive policies</li> <li>-Implement conservation-oriented rate structures</li> <li>-Educate users about conservation technologies</li> </ul>				
<b>Water Reclamation</b> <ul style="list-style-type: none"> <li>-Recharge groundwater with reclaimed water</li> <li>-Use reclaimed water for agricultural irrigation</li> <li>-Reclaim saline agricultural drainage water</li> <li>-Recycle and treat water for potable Reuse</li> <li>-Use reclaimed water for nonpotable urban uses</li> <li>-Use reclaimed water for landscape irrigation</li> <li>-Use reclaimed water for power plant cooling</li> <li>-Use reclaimed water for industrial processes</li> <li>-Use reclaimed water to repel salinity intrusion</li> <li>-Improve reclamation technologies and cost</li> <li>-Educate public about water reclamation</li> </ul>				
<b>Land Retirement and Fallowing</b> <ul style="list-style-type: none"> <li>-Encourage land fallowing during drought periods</li> <li>-Develop incentive programs for land retirement</li> <li>-Purchase lands or easements</li> <li>-Retire lands with drainage problems</li> </ul>				
<b>Water Pricing</b> <ul style="list-style-type: none"> <li>-Establish incentives for pricing to reduce demand</li> <li>-Educate users about pricing feasibility</li> <li>-Remove legal obstacles to pricing incentive programs</li> </ul>				

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<b>Watershed Management</b> -Manage vegetation cover to increase yield -Manage riparian zones to protect water quality -Manage land uses to reduce sedimentation -Modify weather to increase precipitation				
<b>New or Expanded On-stream Storage</b> -Construct new storage facilities south (downstream) of the Delta -Construct new storage facilities north (upstream) of the Delta -Enlarge existing on-stream storage reservoirs -Modify operations of existing on-stream reservoirs				
<b>New or Expanded Off-stream Storage</b> -Construct new storage facilities south (downstream) of the Delta -Construct new storage facilities north (upstream) of the Delta -Construct new storage facilities in Delta -Enlarge existing off-stream storage reservoirs -Modify operations of existing off-stream reservoirs				
<b>Groundwater Banking and Conjunctive Use</b> -Establish incentives for conjunctive use -Modify water Code to encourage conjunctive use -Establish conjunctive use programs -Store groundwater south (downstream) of the Delta -Store groundwater north (upstream) of the Delta -Implement techniques to increase groundwater recharge				
<b>Improvement of Through-Delta Conveyance</b> -Increase capacities of existing east-side channels -Increase flows from the Sacramento river to the central Delta -Modify Delta levees to increase flow cross sections -Construct pump/siphon systems between Delta channels -Expand existing intakes at the Delta export facilities -Construct expanded export intake/forebay pumping system				

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				<p><b>Construction and Improvement of Conveyance Facilities</b></p> <ul style="list-style-type: none"> <li>-Construct east-side isolated transfer system</li> <li>-Construct west-side isolated transfer system</li> <li>-Construct small isolated transfer facility</li> <li>-Convert Delta islands to storage/conveyance system</li> <li>-Construct conveyance to off-stream storage</li> <li>-Construct conveyance to groundwater storage</li> </ul>
				<p><b>Changes in Locations of Diversions</b></p> <ul style="list-style-type: none"> <li>-Relocate Delta export pumps from key habitats</li> <li>-Relocate other in-Delta diversions for more reliable supplies</li> <li>-Consolidate in-Delta agricultural diversions</li> <li>-Relocate upstream diversions from key habitats</li> <li>-Improve diversion designs when relocating</li> </ul>
				<p><b>Water Transfers</b></p> <ul style="list-style-type: none"> <li>-Modify water Code to ease transfers</li> <li>-Improve procedures for transfer permitting</li> <li>-Coordinate diversion and conveyance of transfers</li> </ul>
				<p><b>Long-Term Planning for Drought Contingencies</b></p> <ul style="list-style-type: none"> <li>-Increase water storage capacities at user locations</li> <li>-Establish incentives for long-term planning</li> <li>-Conduct Integrated Resources Planning</li> <li>-Establish incentives for long-term conservation</li> <li>-Develop alternate supplies for drought situations</li> </ul>
				<p><b>Water Resources Data and Information Management</b></p> <ul style="list-style-type: none"> <li>-Establish a comprehensive water data system</li> <li>-Implement real-time data management system</li> <li>-Integrate data for adaptive management decisions</li> <li>-Establish accessible data management system</li> </ul>
				<p><b>Establishment of Institution for Integrated Long-Term Water Management</b></p> <ul style="list-style-type: none"> <li>-Establish long-term guarantees for management</li> <li>-Establish institution to implement guarantees</li> <li>-Coordinate multiagency roles in management</li> <li>-Coordinate groundwater and surface water management</li> <li>-Establish incentives for cooperation/coordination</li> <li>-Establish a public awareness and education program</li> </ul>

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Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
<b>Establishment of Export Capacity Market</b> -Establish procedures for allocation of export capacity -Establish institution to allocate export capacity -Coordinate water transfers and export capacity -Market export capacity for environmental benefits				
<b>Integration of Land Use and Water Supply Planning</b> -Coordinate land uses with water supplies -Encourage local determination of supplies available -Encourage local assessment of water supply reliability				
<b>Installation and Operation of Flow Barriers</b> -Install flow barriers to manage south Delta quality -Install weirs to control salinity intrusion				
<b>Management of Agricultural Drainage</b> -Implement source control regulations for pollutants -Implement pollutant-load limits in San Joaquin river -Reduce or control volume of agricultural discharges -Modify cropping and irrigation practices -export agricultural drainage to other watersheds -Retire lands with drainage disposal problems -Improve pest-control practices -Avoid use of high-salinity irrigation water -Manage irrigation tailwater to reduce pesticides -Manage drainage liming to reduce instream impacts -Treat drainage to remove salt or other pollutants -Dilute pollutants in Delta inflows from SJR using stored water				
<b>Management of Urban/Industrial Drainage and Wastewater Discharge</b> -Retain and manage stormwater runoff -Implement urban awareness/education programs -Treat discharges to remove problem constituents -Construct wetlands to treat wastewater effluent -Increase key nutrient inputs to estuary -Enforce wastewater discharge requirements -Prevent toxic discharges from industrial plants				

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<b>Dredged Material Management</b> <ul style="list-style-type: none"> <li>-Limit dredging to slack tides</li> <li>-Limit dredging to avoid fish migration periods</li> <li>-Use techniques to localize sediment movement</li> <li>-Dispose dredged materials at nonaquatic or other suitable sites</li> <li>-Remove contaminated sediments in critical habitat sites</li> <li>-Ensure material used for levee maintenance is noncontaminated</li> </ul>				
<b>Management of Abandoned-Mine Drainage</b> <ul style="list-style-type: none"> <li>-Manage discharges from abandoned mines</li> <li>-Remediate abandoned mining sites discharging pollutants</li> </ul>				
<b>Levee Maintenance and Stabilization</b> <ul style="list-style-type: none"> <li>-Maintain and stabilize existing levees</li> <li>-Modify agricultural practices to reduce subsidence</li> <li>-Use infilling to correct past subsidence</li> <li>-Implement uniform maintenance standards</li> <li>-Provide funding for maintenance and stabilization</li> </ul>				
<b>Improvement of Flood Protection Levels and Seismic Stabilities</b> <ul style="list-style-type: none"> <li>-Reconstruct levees to higher design standards</li> <li>-Reconstruct levees to higher seismic standards</li> <li>-Relocate levees to more stable sites</li> <li>-Widen floodways to increase flood conveyance</li> <li>-Establish and manage flood overflow areas</li> </ul>				
<b>Rerouting and Protection of Infrastructure from Flooding and Seismic Risks</b> <ul style="list-style-type: none"> <li>-Maintain/reconstruct levees around infrastructure</li> <li>-Reconstruct infrastructure to increase reliability</li> <li>-Relocate/reroute infrastructure</li> </ul>				
<b>Establishment of Long-Term Funding Mechanisms</b> <ul style="list-style-type: none"> <li>-Establish a disaster contingency funding program</li> <li>-Establish a Bay-Delta financing authority</li> <li>-Provide low-cost debt financing for local agencies</li> <li>-Establish a bond financing mechanism</li> <li>-Establish a statewide water utility surcharge</li> </ul>				