

Alternative 19: 1A, 2A, 3B, 4A - Max

| Category | Actions Selected | Functional Basis for Inclusion | Specification for Action Implementation |
|---|--|---------------------------------|---|
| restore Delta shallow water (tidal) habitat | protect existing shallow habitat from erosion | habitat | |
| | restore tidal action to existing diked wetlands | habitat | |
| | reconstruct levees to include shallow water habitat | habitat | |
| | fill deep water to produce shallow habitat | habitat | |
| restore Delta riverine habitat | reconstruct river banks and shallow areas | habitat | |
| | restore and preserve channel islands | habitat | |
| | restore natural channel configurations | habitat | |
| | modify construction practices to include riverine elements | habitat | |
| restore Delta riparian habitat | improve and protect degraded riparian habitats | habitat, water quality | |
| | modify levee maintenance practices | habitat, land use/flood control | |
| | protect existing riparian habitat | habitat, water quality | |
| restore Delta wetland habitat | restore and enhance existing wetlands | habitat, water quality | |
| | expand wetland acquisition programs | habitat, water quality | |
| | protect existing wetland habitat | habitat, water quality | |
| restore Delta terrestrial habitat | various actions | habitat | |
| integrated habitat mgmt programs | various actions | habitat | |
| control introduced species | remove or reduce nuisance species in key habitats | populations | |
| | improve regulation of ballast water releases | populations, water quality | |
| | improve border inspection practices | populations | |
| | inspect for invasion of nuisance species | populations | |
| | modify habitat to favor native species | populations | |
| Delta waterfowl habitat mgmt | improve management of public waterfowl areas | habitat | |
| | implement terrestrial predator control programs | habitat | |
| | increase sources and availability of wildlife forage | habitat | |
| restoration of upstream anad. fish habitat | manage flows in upstream habitat | habitat | |
| | manage temperature in upstream habitat | habitat | |
| | restore and replenish spawning gravels | habitat | |
| | restore channel configurations | habitat | |
| | restore shoreline habitat conditions | habitat | |
| | modify gravel mining practices | habitat, water quality | |
| | improve floodway drainage to reduce fish stranding | populations | |
| physical improvements for fish passage | modify passage at upstream dams/other barriers | populations | |
| | modify natural barriers to improve passage | populations | |
| restore upstream riparian habitat | revegetate degraded riparian habitats | habitat, water quality | |
| | protect riparian lands through purchase/leases | habitat, water quality | |
| Delta Inflow management | provide instream pulse flows for fish passage | populations | |

Alternative 19: 1A, 2A, 3B, 4A - Max

| Category | Actions Selected | Functional Basis for Inclusion | Specification for Action Implementation |
|--|--|--------------------------------|---|
| | provide instream flows for fish attraction | populations | |
| Delta outflow/export management | use real time monitoring and adaptive management | | |
| Installation and improvement of fish screens | operate fish barrier on San J. River at Merced R in fall | populations | |
| Fish hatchery operations | expand hatchery capacities | populations | |
| | construct new hatcheries on San Joaquin River | populations | |
| | improve hatchery operations | populations | |
| | reduce hatchery effects on wild fish populations | populations | |
| | implement tagging of hatchery-bred fish | populations | |
| | establish new captive-breeding programs | populations | |
| Fish harvest management | improve regulation of commercial take | populations | |
| | improve regulation of commercial take | populations | |
| | improve enforcement of harvest regulations | populations | |
| Desalination | expand desalination of San Joaquin Valley Supplies | water quality | |
| Water Conservation (North of Delta) | increase use of district-wide conservation practices | water use | |
| | increase use of on-farm conservation practices | water use | |
| | increase use of municipal conservation practices | water use | |
| | increase use of industrial conservation practices | water use | |
| | implement financial incentive policies | water use | |
| | educate users about conservation | water use | |
| | implement conservation-oriented rate structures | water use | |
| Water Reclamation (North of Delta) | recharge groundwater with reclaimed water | water use | |
| | use reclaimed water for agricultural irrigation | water use | |
| | reclaim saline agricultural drainage water | water use | |
| | recycle and treat potable water for agricultural use | water use | |
| | use reclaimed water for nonpotable urban uses | water use | |
| | use reclaimed water for landscape irrigation | water use | |
| | use reclaimed water for power plant cooling | water use | |
| | use reclaimed water for industrial processes | water use | |
| | use reclaimed water to repel salinity intrusion | water use | |
| | improve reclamation technologies and costs | water use | |
| | educate public about water reclamation | water use | |
| water pricing | establish incentives for pricing to reduce demand | water use | |
| | educate users about pricing feasibility | water use | |
| | remove legal obstacles to pricing incentive programs | water use | |
| watershed management | manage vegetation cover to increase yield | water use, water quality | |
| | manage riparian zones to protect water quality | water quality | |
| | manage land uses to protect water quality | water quality | |

B-004880

Alternative 19: 1A, 2A, 3B, 4A - Max

| Category | Actions Selected | Functional Basis for Inclusion | Specification for Action Implementation |
|---|---|--------------------------------|---|
| | modify weather to increase precipitation | water use | |
| new or expanded on-stream storage | construct new storage north of Delta (NOD) | water use | |
| | enlarge existing on-stream reservoirs | water use | |
| | modify operations of existing on-stream reservoirs | water use | |
| new or expanded off-stream storage | construct new storage north of Delta | water use | |
| | construct new storage facilities in Delta | water use | |
| | enlarge existing off-stream reservoirs north of Delta | water use | |
| | modify operations of existing off-stream reservoirs (NOD) | water use | |
| groundwater banking and conjunctive use | establish incentives for conjunctive use | water use | |
| | modify Cal Water Code to encourage conjunctive use | water use | |
| | establish conjunctive use ponds north of Delta | water use | |
| | store groundwater north of Delta | water use | |
| | implement techniques to increase groundwater recharge (NOD) | water use | |
| improvement of through Delta conveyance | increase capacity of existing east side channels | water use | |
| | increase flows from the Sacramento R to Central Delta | water use | |
| | modify Delta levees to increase flow cross sections | water use | |
| | construct pumps/siphons between Delta channels | water use | |
| | expand existing intakes at Delta export facilities | water use | |
| | construct expanded export intake/forebay pumping system | water use | |
| construct/ improve conveyance facilities | construct conveyance to off-stream storage | water use | |
| | construct conveyance to groundwater storage | water use | |
| water transfers | modify Calif Water Code to ease transfers | water use | |
| | improve procedures for transfer permitting | water use | |
| | coordinate diversion and conveyance of transfers | water use | |
| long-term planning for drought contingency | increase water storage capacities at user locations(NOD) | water use | |
| | establish incentives for long-term planning | water use | |
| | conduct integrated resource planning | water use | |
| | establish incentives for long-term conservation | water use | |
| | develop alternate supplies for drought situations | water use | |
| water resources data and information mgmt | data and information mgmt | water use | |
| institutions for integrated long-term water m | establish long term guarantees for management | water use | |
| | establish institution to implement guarantees | water use | |
| | coordinate multiagency roles in management | water use | |
| | coordinate groundwater/surface water mgmt | water use | |
| | establish incentives for cooperation/coordination | water use | |
| | establish a public awareness/education program | water use | |
| Integration of land-use and water supply pl | coordinate land uses with water supplies | water use | |

B-004881

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| Category | Actions Selected | Functional Basis for Inclusion | Specification for Action Implementation |
|--|---|--------------------------------|---|
| | encourage local determination of supplies available | water use | |
| | encourage local assessment of water supply reliability | water use | |
| management of agricultural drainage | implement source control regulations for pollutants | water quality | |
| | implement pollutant-load limits in San Joaquin River | water quality | |
| | reduce or control volume of agricultural drainage | water quality | |
| | modify cropping and irrigation patterns | water quality | |
| | export agricultural drainage to other watersheds | water quality | |
| | improve pest control practices | water quality | |
| | avoid use of high-salinity irrigation water | water quality | |
| | manage irrigation tailwater to reduce pesticides | water quality | |
| | treat drainage to remove pollutants | water quality | |
| mgmt of urban and waste water discharge | retain and manage stormwater runoff | water quality | |
| | implement urban awareness/education programs | water quality | |
| | treat discharges to remove problem pollutants | water quality | |
| | construct wetlands to treat wastewater effluent | water quality | |
| | increase key nutrient inputs to the estuary | water quality | |
| | enforce wastewater discharge requirements | water quality | |
| | prevent toxic discharges from industrial plants | water quality | |
| dredged material mgmt | limit dredging to slack tides | water quality | |
| | limit dredging to avoid fish migration periods | water quality | |
| | use techniques to localize sediment movement | water quality | |
| | dispose of dredged materials at non-aquatic sites | water quality | |
| | remove contaminated sediments in critical habitat sites | water quality | |
| | ensure material used for levee maintenance is noncontaminated | water quality | |
| management of mine drainage | manage discharges from abandoned mines | water quality | |
| | remediate abandoned mining sites discharging pollutants | water quality | |
| levee maintenance and stabilization | maintain and stabilize existing levees | land use/levees | |
| | modify agricultural practices to reduce subsidence | land use/levees | |
| | use infilling to correct past subsidence | land use/levees | |
| | implement uniform maintenance standards | land use/levees | |
| | provide funding for maintenance and stabilization | land use/levees | |
| improvement of flooding/seismic protection | reconstruct levees to higher design standards | land use/levees | |
| | reconstruct levees to higher seismic standards | land use/levees | |
| establishment of long-term funding mechanism | establish long-term funding mechanism | | |
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B-004882