

# Delta Vision Strategic Plan

**Governor of California**  
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# Executive Summary

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When it was created by Governor Schwarzenegger's Executive Order S-17-06 in 2006, the charge of the Delta Vision Blue Ribbon Task Force (Task Force) was nothing less than to create a vision to repair the ecological damage to the Sacramento-San Joaquin River Delta (Delta), and then prepare a strategic plan which would sustain the Delta in future decades while ensuring a reliable water supply for the two-thirds of California's population who depend in whole or in part on water from the Delta.

The Delta is both unique and essential.

Unique in that, at 1,300 square miles, it is the largest estuary on the west coast of North and South America—a complex, interconnected ecosystem that is home to 55 species of fish and 750 species of plants and wildlife. It's an agricultural and recreational center.

The Delta is essential because its rivers and the miles of natural and man-made sloughs and channels are the linchpin in how water is moved around California. Twenty-five million Californians—nearly two-thirds of the state population—depend on the Delta for at least some of their water supply. Three million agricultural acres are irrigated with water that flows through the Delta. Three highways, three railroad lines, five high-voltage power lines and hundreds of gas lines crisscross the Delta region.

Without water conveyed through the Delta, several counties adjacent to the Delta would be immediately at risk. Soon, some Central Valley farms would lie fallow, cities west and south of the Delta would wither, and California's economy would run dry. Several threatened and endangered species unique to the Delta would not survive. The simple truth is, truly, that stark.

Both the Task Force's Vision for the Delta and the following Strategic Plan are based on two co-equal goals: Restore the Delta ecosystem and create a more reliable water supply for California.

They are *co-equal* goals because one objective can't be achieved without the other. Recent court rulings reinforce that fact.

As the Task Force's November 2007 Vision bluntly put it: The Delta is in crisis. The crisis worsens each day, posing a higher and higher risk that California's water delivery system will collapse.

The Delta is in an ecological tailspin. Invasive species, water pumping facilities, urban growth, and urban and agricultural pollution are degrading water quality and threatening multiple fish species with extinction.

Urban development is reducing wildlife habitat today and foreclosing future opportunities to improve the ecosystem—and Delta water conveyance. The threat of catastrophic failure from earthquake, flood, sea level rise, and land subsidence is painfully real and growing.

Risks to people, property, and state interests in the Delta have grown to intolerable levels. New levee policies, future-looking land use decisions, and far better emergency preparedness are needed immediately.

Compounding the crisis is that the current governance structure for water and the Delta has failed. More than 200 federal, state, and local government agencies have some jurisdiction in the Delta. Everyone is involved but no one is in charge. Moreover, existing fragmentation of policies and projects guarantees continued failure in restoring the Delta ecosystem and in ensuring reliable water supplies for California.

Executive Order S-17-06 creating Delta Vision identified these same threats and inadequacies, directing the Task Force to recommend “public policy changes...recommendations on institutional changes...oversight, land use and implementation authorities.” Comments received by Delta Vision suggest not all perceive the seriousness of these problems or the urgency of action conveyed by the Executive Order and recognized by the Task Force. Resistance to change in policies and institutions is deep among affected interests. This Task Force believes the time is past for denial of crises and illusory hopes that past practices or institutions can meet the challenges of the future.

A key strategy in achieving the Task Force’s co-equal goals is creation of a new governance structure with needed legal authority and competencies to achieve the co-equal goals.

The Delta also needs to be recognized for its uniqueness—and its importance to California and its economy. Essential to achieving the co-equal goals is officially designating the Delta’s special status, supporting its agriculture, and planning for a vibrant regional economy of the future.

Accomplishing the co-equal goals also requires creation of a reliable water delivery system. As a central protection of that reliability, the Task Force recommends, subject to further analysis, a two-channel approach—improving the existing channel through the Delta and a second channel designed for conveyance—to carry water to export pumps. Increased storage capacity, surface and ground, plus changed operations are also required to improve water supply reliability. Concurrently, Californians need to become less dependent on water supply from the Delta, both to reduce risk from a failed Delta conveyance system and to reduce risks to the ecosystem. A revitalized Delta ecosystem will require reduced diversions at critical times.

Healing the Delta and creating a sustainable water supply also require a broad range of linked actions. Like the Task Force’s co-equal goals, statewide efforts to conserve water and more responsibly use existing supplies directly influence success in the Delta. Some recommendations made in this Strategic Plan will have greater effect if integrated into statewide policies—the Delta is very important to success of salmon, for example, but habitat improvements from river headwaters to the ocean will benefit this species. Institutionalizing the co-equal goals and enhancing capacity of the Department of Fish and Game (DFG), the State Water Resources Control Board (State Board), and the Department of Water Resources (DWR) should be pursued statewide. Effective partnerships with federal agencies will be critical to success.

The Task Force acknowledges that working toward achieving the co-equal goals will require balance. Fish need more water on average at critical times. In any given year there may not be enough water to meet the two co-equal goals. But, averaged over several years, there may be enough water to meet both goals. Certainly, with implementation of this strategic plan, including construction of the storage and conveyance facilities and large scale ecosystem restoration in the Delta, there will be reduction in conflict between the two goals.

Although the strategies presented in this report will have effects over decades, conservation, water system efficiency, promoting regional self-sufficiency, and Delta ecosystem revitalization are, in the near term, the most likely actions to improve California's water future.

To achieve the seven goals, the Task Force recommends 22 strategies and 73 actions, organized under the seven goals. Additionally, ten near-term actions are recommended to address immediate threats as soon as possible. Part 1 of this Strategic Plan provides the context and justification of this Strategic Plan and an overview of its integrated recommendations. Part 2 provides full discussion of the strategies and recommended actions, which the Task Force believes should be viewed and implemented in their entirety in order to achieve the desired results. A compilation of the goals, strategies, actions, and near-term actions is provided here.

Many of the recommended actions specify timelines for implementation, the Task Force's best judgment of the shortest time frame the actions can realistically be undertaken. Given the urgency of the situation in the Delta, these timeframes should be accelerated whenever possible.

## **Goal 1: Legally acknowledge the co-equal goals of restoring the Delta ecosystem and creating a more reliable water supply for California**

**Strategy 1.1:** Make the co-equal goals the foundation of Delta and water policy making.

**Action 1.1.1:** Write the co-equal goals into the California Constitution or into statute.

**Action 1.1.2:** Incorporate the co-equal goals into the mandated duties and responsibilities of all state agencies with significant involvement in the Delta.

**Action 1.1.3:** Require the achievement or advancement of the co-equal goals in all water, environmental, and other bonds, and operational agreements and water contracts or water rights permits, that directly or indirectly fund activities in the Delta.

## **Goal 2: Recognize and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place, an action critical to achieving the co-equal goals**

**Strategy 2.1:** Apply for federal designation of the Delta as a National Heritage Area, and expand the State Recreation Area network in the Delta.

**Action 2.1.1:** Apply by 2010 for the designation of the Delta as a federally recognized National Heritage Area.

**Action 2.1.2:** Expand by 2010 the State Recreation Area network in the Delta, combining existing and newly designated areas.

**Strategy 2.2:** Establish market incentives and infrastructure to protect, refocus, and enhance the economic and public values of Delta agriculture.

**Action 2.2.1:** Establish special Delta designations within existing federal and state agricultural support programs.

**Action 2.2.2:** Conduct needed research and development for agricultural sustainability in the Delta.

**Action 2.2.3:** Establish new markets for innovative agricultural products and enterprises in the Delta.

**Strategy 2.3:** Develop a regional economic plan to support increased investment in agriculture, recreation, tourism, and other resilient land uses.

**Action 2.3.1:** Charge the Delta Protection Commission with facilitating a consortium of local governments to create a regional economic development plan that addresses agriculture, recreation, tourism, and other innovative land uses.

**Action 2.3.2:** Establish special enterprise zones at the major “gateways” to the Delta as part of the economic development plan.

**Strategy 2.4:** Establish a Delta Investment Fund to provide funds for regional economic development and adaptation.

**Action 2.4.1:** Initiate the Delta Investment Fund with state funding.

**Action 2.4.2:** Structure the Fund so that it can accept revenues from federal, state, local, and private sources.

**Action 2.4.3:** Place the Fund under the joint management of the Delta Protection Commission and a consortium of local governments.

**Strategy 2.5:** Adopt land use policies that enhance the Delta's unique values, and that are compatible with the public safety, levee, and infrastructure strategies of Goal 6.

**Actions:** See Goals 3 and 6 for actions to address this Strategy.

## **Goal 3: Restore the Delta ecosystem as the heart of a healthy estuary**

**Strategy 3.1:** Restore large areas of interconnected habitats—on the order of 100,000 acres—within the Delta and its watershed by 2100.

**Action 3.1.1:** Increase the frequency of floodplain inundation and establish new floodplains.

**Action 3.1.2:** Restore tidal habitats and protect adjacent grasslands and farmlands throughout the Delta, with active near-term pursuit of restoration targets.

**Strategy 3.2:** Establish migratory corridors for fish, birds, and other animals along selected Delta river channels.

**Action 3.2.1:** Improve physical habitats along selected corridors by 2015.

**Action 3.2.2:** Provide adequate flows at the right times to support fish migrations, and reduce conflicts between conveyance and migration, by 2012.

**Action 3.2.3:** Immediately use the Central Valley Flood Protection Plan to identify areas of the San Joaquin River within and upstream of the Delta where flood conveyance capacity can be expanded.

**Action 3.2.4:** Using the National Heritage Area and regional economic development planning efforts, begin immediately to identify ways to encourage recreational investment along the key river corridors.

**Strategy 3.3:** Promote viable, diverse populations of native and valued species by reducing risks of fish kills and harm from invasive species.

**Action 3.3.1:** Reduce fish kills in Delta pumps by instituting diversion management measures by 2009, implementing near-term conveyance improvements by 2015, and relocating diversions.

**Action 3.3.2:** Control harmful invasive species at existing locations by 2012, and minimize or preclude new introductions and colonization of new restoration areas to non-significant levels.

**Strategy 3.4:** Restore Delta flows and channels to support a healthy Delta estuary.

**Action 3.4.1:** Charge the Department of Fish and Game with completing recommendations for in-stream flows for the Delta and high priority rivers and streams in the Delta watershed by 2012 and for all major rivers and streams by 2018.

**Action 3.4.2:** Develop and adopt management policies supporting increased diversion during wet periods, a joint effort of the State Water Resources Control Board, the Department of Fish and Game, the Department of Water Resources, and related federal agencies, to be completed by 2012.

**Action 3.4.3:** Adopt new State Water Resources Control Board requirements by 2012 to increase spring Delta outflow. Commence implementation no later than 2015.

**Action 3.4.4:** Adopt new State Water Resources Control Board requirements by 2012 to reintroduce fall outflow variability no later than 2015.

**Action 3.4.5:** Increase San Joaquin River flows between February and June by revising the State Water Resources Control Board's Vernalis flow objectives and the state and federal water projects' export criteria. Revise the flow objectives and criteria no later than 2012 and commence implementation as soon as possible thereafter.

**Action 3.4.6:** Provide short-duration San Joaquin River pulse flows in the fall starting by 2015.

**Action 3.4.7:** Reconfigure Delta waterway geometry by 2015 to increase variability in estuarine circulation patterns.

**Strategy 3.5:** Improve water quality to meet drinking water, agriculture, and ecosystem long-term goals.

**Action 3.5.1:** Require the Central Valley Regional Water Quality Control Board to conduct three actions:

- Immediately re-evaluate wastewater treatment plant discharges into Delta waterways and upstream rivers and set discharge requirements at levels that are fully protective of human health and ecosystem needs.
- Adopt by 2010 a long-term program to regulate discharges from irrigated agricultural lands.
- Review by 2012 the impacts of urban runoff on Delta water quality and adopt a plan to reduce or eliminate those impacts.

**Action 3.5.2:** Relocate as many Delta drinking water intakes as feasible away from sensitive habitats and to channels where water quality is higher.

**Action 3.5.3:** Establish Total Maximum Daily Load programs by 2012 for upstream areas to reduce organic and inorganic mercury entering the Delta from tributary watersheds.

**Action 3.5.4:** Begin comprehensive monitoring of water quality and Delta fish and wildlife health in 2009.

## **Goal 4: Promote statewide water conservation, efficiency, and sustainable use**

**Strategy 4.1:** Reduce urban, residential, industrial, and agricultural water demand through improved water use efficiency and conservation, starting by achieving a statewide 20 percent per capita reduction in water use by 2020.

**Action 4.1.1:** Improve statewide water use efficiency and conservation.

**Action 4.1.2:** Reduce urban per-capita water demand through specific recommended actions.

**Action 4.1.3:** Ensure the most efficient use of water in agriculture.

**Strategy 4.2:** Increase reliability through diverse regional water supply portfolios.

**Action 4.2.1:** Modify the Water Recycling Act of 1991 to add a statewide target to recycle on the order of 1.5 million acre-feet of water annually by 2020.

**Action 4.2.2:** Enact legislation now to encourage local water agencies to at least triple the current statewide capacity for generating new water supplies through ocean and brackish water desalination by 2020.

**Action 4.2.3:** Request that the State Water Resources Control Board set goals by 2015 for infiltration and direct use of urban storm water runoff throughout the Delta watershed and its export areas.

**Action 4.2.4:** Request agencies to ensure that accurate and timely information is collected and reported on all surface water and groundwater diversions in California by 2012.

**Action 4.2.5:** Require that all water purveyors develop an integrated contingency plan by 2015 in case of Delta water supply curtailments or drought.

**Action 4.2.6:** Establish a regulatory framework that encourages efficient and integrated management of water resources at local, regional, and statewide levels, with a focus on specific actions.

## **Goal 5: Build facilities to improve the existing water conveyance system and expand statewide storage, and operate both to achieve the co-equal goals**

**Strategy 5.1:** Expand options for water conveyance, storage, and improved reservoir operations.

**Action 5.1.1:** Direct the Department of Water Resources and other allied agencies to further investigate the feasibility of a dual conveyance facility, building upon the Bay-Delta Conservation Plan effort.

**Action 5.1.2:** Direct the Department of Water Resources, the Department of Fish and Game, and other allied agencies to recommend the size and location of new storage and conveyance facilities by the end of 2010. Develop a long-term action plan to guide design, construction, and operation, and present the recommendation and plan to the California Delta Ecosystem and Water Council for a consistency determination.

**Action 5.1.3:** Complete substantial development and construction of new surface and groundwater storage and associated conveyance facilities by 2020, with the goal of completing all planned facilities by 2030.

**Strategy 5.2:** Integrate Central Valley flood management with water supply planning.

**Action 5.2.1:** Change the operating rules of existing reservoirs to incorporate and reflect modern forecasting capabilities.

**Action 5.2.2:** Require the Department of Water Resources to immediately create a flood bypass along the lower San Joaquin River.

**Action 5.2.3:** Request that the Department of Water Resources encourage greater infiltration as part of watershed management planning.

## **Goal 6: Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and strategic levee investments**

**Strategy 6.1:** Significantly improve levels of emergency protection for people, assets, and resources.

**Action 6.1.1:** Complete a Delta-wide regional emergency response plan by 2010 that establishes legally binding regional coordination.

**Action 6.1.2:** Immediately begin a comprehensive series of emergency management and preparation actions.

**Action 6.1.3:** Conduct a comprehensive analysis of the costs and benefits of highway protection strategies, and adopt a policy based on its findings by 2012.

**Action 6.1.4:** Complete a comprehensive analysis of the costs and benefits of infrastructure protection strategies. Adopt a policy based on its findings by 2012.

**Strategy 6.2:** Discourage inappropriate land uses in the Delta region.

**Action 6.2.1:** Immediately strengthen land use oversight of the Cosumnes/Mokelumne floodway and the San Joaquin/South Delta lowlands.

**Action 6.2.2:** Immediately strengthen land use oversight for Bethel Island, the city of Isleton, and Brannan-Andrus Island.

**Action 6.2.3:** Immediately prepare local plans for these five at-risk locations within the primary zone: Walnut Grove (including the residential area on Grand Island), Locke, Clarksburg, Courtland, and Terminous.

**Action 6.2.4:** Immediately form a landowner consortium to create a new land use strategy that fosters recreation, increases habitat, reverses subsidence, sequesters carbon, improves handling of dredged material, and continues appropriate agriculture on Sherman, Twitchell, and Jersey Islands.

**Strategy 6.3:** Prepare a comprehensive long-term levee investment strategy that matches the level of protection provided by Delta levees and the uses of land and water enabled by those levees.

**Action 6.3.1:** Require the Department of Water Resources, in cooperation with local Reclamation Districts and other agencies, to develop a comprehensive plan for Delta levee investments.

**Action 6.3.2:** Prioritize the \$750 million appropriated by Proposition 1E and Proposition 84 funds for the improvement of Delta levees, including in legacy towns.

**Action 6.3.3:** Require those preparing the comprehensive levee plan to incorporate the Delta Levees Classification Table to ensure consistency between levee designs and the uses of land and water enabled by those levees.

**Action 6.3.4:** Continue the existing Department of Water Resources levee subventions program until the comprehensive levee plan is completed.

**Action 6.3.5:** Vest continuing authority for levee priorities and funding with the California Delta Ecosystem and Water Council to ensure a cost-effective and sustainable relationship between levee investments and management of the Delta over the long term.

## **Goal 7: Establish a new governance structure with the authority, responsibility, accountability, science support, and secure funding to achieve these goals**

**Strategy 7.1:** Establish a new California Delta Ecosystem and Water Council as a policy making, planning, regulatory, and oversight body. Abolish the existing California Bay-Delta Authority, transferring needed CALFED programs to the California Delta Ecosystem and Water Council. Establish a new Delta Conservancy to implement ecosystem restoration projects, and increase the powers of the existing Delta Protection Commission.

**Action 7.1.1:** Establish a California Delta Ecosystem and Water Council to replace the Bay-Delta Authority and take over CALFED programs.

**Action 7.1.2:** Establish a California Delta Conservancy as early as possible in the 2009 legislative session.

**Action 7.1.3:** Strengthen the Delta Protection Commission through legislation.

**Action 7.1.4:** Require the California Delta Ecosystem and Water Council to create a Delta Science and Engineering Program and a Delta Science and Engineering Board by September 1, 2009.

**Action 7.1.5:** Improve the compliance of diversions water use with all applicable laws.

**Strategy 7.2:** Require the California Delta Ecosystem and Water Council to prepare a California Delta Ecosystem and Water Plan to ensure sustained focus and enforceability among state, federal, and local entities.

**Action 7.2.1:** Develop a legally enforceable California Delta Ecosystem and Water Plan.

**Action 7.2.2:** Institutionalize adaptive management through updates to the California Delta Ecosystem and Water Plan every five years.

**Action 7.2.3:** Charge the Delta Science and Engineering Board, with support of the Delta Science and Engineering Program, to develop a science-based adaptive management program to provide for continued learning of, and adaptation to, actions implemented by state, federal, and local agencies in the Delta.

**Strategy 7.3:** Finance the activities called for in the California Delta Ecosystem and Water Plan from multiple sources.

**Action 7.3.1:** Enact a series of principles regarding design of financing into legislation authorizing the California Delta Ecosystem and Water Council.

**Action 7.3.2:** Establish a base of revenues outside the state General Fund for the work of the California Delta Ecosystem and Water Council, the Delta Conservancy, the Delta Protection Commission, and related core activities of the Department of Fish and Game, the Department of Water Resources, and the State Water Resources Control Board.

**Action 7.3.3:** Find new revenue sources beyond the traditional bond funds or public allocations.

**Strategy 7.4:** Optimize use of the CALFED Record of Decision and Coastal Zone Management Act to maximize participation of federal agencies in implementation of the California Delta Ecosystem and Water Plan.

**Action 7.4.1:** Use existing authority under the CALFED Record of Decision to maximize participation of federal agencies in implementation of the Delta Vision Strategic Plan until the California Delta Ecosystem and Water Plan is completed.

**Action 7.4.2:** Prepare the California Delta Ecosystem and Water Plan according to guidelines of the Coastal Zone Management Act, in order to achieve ongoing federal consistency.

## Near-Term Actions

1. Obtain needed information on water diversion and use.
2. Initiate collection of improved socio-economic, ecosystem, and physical structure data about the Delta to inform policy processes and project level decision making by all public agencies, local, state, and federal.
3. Accelerate completion of in-stream flow analyses for the Delta watershed by the Department of Fish and Game.
4. Conduct a Middle River Corridor Two Barrier pilot project.
5. Complete construction of an alternative intake for the Contra Costa Water District.
6. Evaluate the effectiveness of a Three Mile Slough Barrier project.
7. Construct a demonstration fish protection screen at Clifton Court Forebay.
8. Advance near-term ecosystem restoration opportunities.
9. Stockpile rock and other emergency response materials.
10. Assess and improve state capacity to respond to catastrophic events in the Delta.