

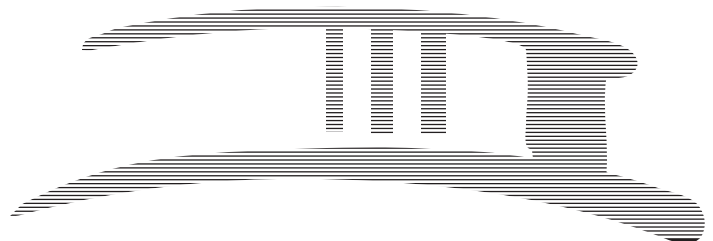
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# Financing the Bay Delta Conservation Plan

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LEGISLATIVE ANALYST'S OFFICE

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Assembly Accountability and Administrative Review Committee  
Hon. Jim Frazier, Chair





## The Sacramento-San Joaquin Delta (The Delta)

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- ☑ ***Importance of the Delta.*** The Delta is an integral part of the two major water delivery systems in the state—the State Water Project (SWP) and Central Valley Project (CVP). It is also a biologically diverse ecosystem, home to significant agricultural and urban areas, and an important infrastructure corridor. It comprises a network of about 70 islands created from what was historically tidal marshland through the construction of over 1,100 miles of levees. A variety of factors negatively affect the Delta ecosystem and the state’s ability to continue to use it for water supply.
  
- ☑ ***Coequal Goals for the Delta.*** In 2009, the Legislature passed the Delta Reform Act, which states its intent to achieve the “coequal goals” of improving the reliability of the state’s water system and enhancing the Delta ecosystem, while preserving the Delta as an evolving place.
  
- ☑ ***Many State Efforts in the Delta.*** Various state, local, and federal agencies currently carry out a variety of policy efforts to manage the Delta. The Delta Reform Act created the Delta Stewardship Council (DSC) to direct efforts across state agencies and to resolve the lack of accountability and authority that hindered previous efforts in the Delta. The act requires DSC to develop a legally enforceable Delta Plan to set the overall direction for state policy in the Delta for the next 50 years.



## Overview of the Bay Delta Conservation Plan (BDCP)

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- Purpose of BDCP.** The BDCP is intended to help achieve the coequal goals by improving the Delta ecosystem and water supply reliability. Specifically, BDCP is a Natural Community Conservation Plan (NCCP) that will provide state and federal wildlife agencies with the necessary information to issue new endangered species act permits for the operation of the SWP and CVP for the next 50 years.
  
- Measures for Species Recovery.** An NCCP must implement activities that will contribute to recovery of the species covered by the plan. Such measures described in BDCP include: (1) adding two tunnels underneath the Delta to take water from the Sacramento River to the existing pumping plants in the south Delta and (2) ecosystem restoration actions, including improving water quality and acquiring or improving roughly 150,000 acres of habitat for protected species. Some habitat will need to be restored before the tunnels are constructed in order to determine how the tunnels will be operated.
  
- Proposed BDCP Governance.** Numerous entities would be responsible for implementing different aspects of BDCP. The Implementation Office—which would include staff from the Department of Water Resources (DWR) and state and federal water contractors that receive water from the SWP and CVP—would be responsible for most implementation activities, such as administering funds and ensuring that species recovery measures are carried out. State and federal water supply agencies would be responsible for overall program oversight, deciding how the SWP and CVP would be operated, and approving changes to the species recovery measures. Wildlife agencies would be responsible for monitoring compliance with the conditions of the permits.



## BDCP Cost Estimates and Funding Sources

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- Expenditures to Date.*** Since 2006-07, a total of \$176 million has been spent on planning activities related to BDCP (as of June 2013). Funding for these activities have come from water contractors south of the Delta under a series of funding agreements with DWR and the United States Bureau of Reclamation.
- Estimated Future Costs.*** The BDCP estimates that the total cost of BDCP over the 50-year term of the permits that would authorize its operation is \$24.8 billion. This estimate does not include financing costs, such as interest payments. About two-thirds of this total comes from the construction and operation of the tunnels.
- Cost Assumptions Generally Reasonable.*** In general, BDCP's various cost assumptions, such as those related to tunneling costs, project management, and discount rates (used in comparing benefits and costs of alternatives) appear reasonable. However, as we discuss later, certain cost assumptions could be improved.
- Potential Funding Sources Identified.*** As required by state law, BDCP lists potential funding sources that equal the total costs. As discussed later, the availability of some of these sources may be uncertain.
- Contractors to Fund Conveyance.*** The BDCP states that the contractors will fund all of the construction and operations of the tunnels and associated legally required mitigation by charging their ratepayers. The current water supply contracts signed by the contractors and DWR contain terms that ensure that contractors fully fund the costs of SWP, which in the future could include the tunnels.



## BDCP Cost Estimates and Funding Sources (Continued)



**State and Federal Governments to Primarily Fund Ecosystem Restoration.** The BDCP expects nearly 90 percent of the costs of ecosystem restoration and program administration to be shared by the state and federal governments. Most state funding is anticipated to be provided by future water bonds, including a bond currently scheduled for the November 2014 ballot. Federal funding is expected to be provided almost exclusively by congressional appropriations with a small amount expected from an existing surcharge on CVP water users.

<b>Bay Delta Conservation Plan Cost Shares</b>				
<i>(Dollars in Millions)</i>				
	<b>Conveyance</b>	<b>Ecosystem Restoration</b>	<b>Total</b>	<b>Percent</b>
Contractor funding	\$16,027	\$903	\$16,930	68.4%
State funding	—	4,117	4,117	16.6
Federal funding	—	3,545	3,545	14.3
Interest income <sup>a</sup>	—	165	165	0.7
<b>Total Funding</b>	<b>\$16,027</b>	<b>\$8,730</b>	<b>\$24,757</b>	<b>100.0%</b>

<sup>a</sup> Includes interest earned on payments by water contractors to fund conveyance.



## Cost Estimate— Issues for Legislative Consideration

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- ☑ ***Potentially Greater Land Costs.*** Based on historical land value data, BDCP estimates that land acquisition costs will exceed over \$1 billion. However, land prices could increase significantly as demand for land increases due to the implementation of BDCP, potentially resulting in higher land acquisition costs.
- ☑ ***Potential for Cost Overruns.*** Based on our review of various studies of cost overruns on large and complex infrastructure projects, we find that actual construction costs can differ significantly from estimates. One specific study that examined 33 bridge and tunnel projects (mostly in Europe and North America) found that the actual cost of these projects exceeded estimates by 34 percent on average. On the other hand, some research indicates that water projects experience smaller overruns than transportation projects.
- ☑ ***Cost Estimates Do Not Capture Potential Range of Costs.*** Because the estimates depend on many assumptions and the potential for overruns, the single cost estimate provided by BDCP does not fully capture the range of potential costs. In order to provide more useful information to the Legislature and public, BDCP could estimate each cost component using a range of assumptions that vary based on costs of historical projects and use those data to present a low-, mid-, and high-cost estimate.
- ☑ ***Unclear Whether Benefits of Tunnels Will Outweigh Costs.*** According to BDCP, the benefits of the tunnels are 34 percent to 40 percent greater than the costs to the water users that will fund them. However, two factors could affect whether the project has net benefits. First, the cost of the project could be higher from cost overruns. Second, the benefits could be lower than estimated because of lower-than-anticipated water demand or costs of alternative supplies.



## Cost Estimate— Issues for Legislative Consideration

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- Ensure All Procurement Methods Are Considered.*** A variety of procurement methods could be used to design and construct the tunnels, such as “design-bid-build,” where separate contractors are responsible for design and construction of the infrastructure project, and “design-build,” where a single contractor is responsible for both the design and construction. Considering the advantages and disadvantages of all procurement methods could help ensure that BDCP chooses the method that best ensures the successful and timely completion of the project.



## Funding Sources— Issues for Legislative Consideration

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- Contract Terms That Protect State Are Not Guaranteed.*** As noted above, the current contracts between DWR and the water contractors contain terms that ensure that contractors pay the full cost of SWP and protect the state from risk. However, the contracts for water supply will have to be renegotiated in order to fund the tunnels, and there is no guarantee that these terms will be continued.
- Some Funding Sources for Ecosystem Restoration Uncertain.*** As discussed above, BDCP relies on two future bond measures to fund the state share of ecosystem restoration, but it is unclear if and when voters will approve them. If bond funds are not available in the near future and no additional funding sources are identified, some ecosystem restoration may not be funded, including the restoration actions needed before the tunnels begin operation. The BDCP states that the SWP and CVP will not pay additional costs or forgo water in the event of a funding shortfall.
- Potential for Additional Public Liability if Species Do Not Recover.*** The Delta is negatively affected by many factors and activities that originate in other parts of the state, such as the discharges of pollutants and water diversions north of the Delta. If such factors put species in danger of extinction, the state and federal endangered species acts would require some entity to take actions to protect them, such as by providing additional habitat restoration. Under federal regulatory guidelines, the costs of any necessary restoration actions beyond those specified in permits are to be paid for primarily by the state and federal governments.





## Funding Sources— Issues for Legislative Consideration

*(Continued)*

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***Potential Legislative Actions.*** In the future, the Legislature will be asked to appropriate funding for ecosystem restoration activities. The Legislature also has the opportunity to provide direction on how BDCP will be funded in order to ensure that all species recovery measures are implemented. For example, the Legislature could:

- Designate other entities as a backstop in case state or federal funding for ecosystem restoration is not available. We note that if the Legislature wants to allocate some responsibility for covering such shortfalls to SWP or CVP, it may have to take action prior to the approval of BDCP.
- Adopt policies to control factors outside of the Delta that have a negative effect on species, which would help reduce the potential need for additional funding for ecosystem restoration.