

# THE 2010 CALIFORNIA WATER BOND: WHAT DOES IT SAY AND DO?

An Independent Analysis of the "Safe, Clean, and Reliable Drinking Water Supply Act of 2010" August 2010

Juliet Christian-Smith, Lucy Allen, Eli Moore, and Peter H. Gleick

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**Cover photo of Yolo county Bypass:** Dave Feliz, California Department of Fish and Game



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# The 2010 California Water Bond: An Independent Analysis

#### Introduction

At the end of 2009, a series of water-related bills was passed by the California Legislature, with the intent of moving the state out of decades of gridlock over water resource management and addressing the consequences of three consecutive years of drought. Almost simultaneously, the Legislature approved an \$11.14 billion bond (named the "Safe, Clean, and Reliable Drinking Water Supply Act of 2010") to be put before voters as Proposition 18 on the November 2010 ballot. The proposed bond would fund a wide range of water-related actions and infrastructure. This is the largest water bond in fifty years, yet the complex language of the bond and its true costs and benefits have not been fully assessed by an independent organization, until now. Among the questions answered by this analysis are:

- What options are available for funding water system improvements?
- What does the bond language actually cover and say?
- How does the bond compare to past water bonds?
- How will the bond be allocated among different funding priorities?
- What are the governance implications of the bond?
- What effect would the bond have on other critical public services and projects funded by the state?
- How are the water needs of disadvantaged communities addressed by the bond?

To address these questions, the Pacific Institute examined the proposed bond language and related legislative and agency documents; reviewed past water-related bond language and allocations; interviewed key legislators, experts, community leaders, and other stakeholders; and drew from the Institute's 24 years of experience working on California water issues.

## What Are General Obligation Bonds?

General obligation bonds are sold by governments primarily to raise funds for public work projects. General obligation bonds must be approved by voters and their repayment, with interest, is guaranteed by a government's general taxing powers. States may raise income taxes, sales taxes, or various fees (e.g., license fees) to pay off general obligation bonds. Other types of bonds, like revenue bonds, are typically repaid using the revenue generated by a specific project through charging the people who benefit directly from the project. For instance, CalTrans may build or repair a bridge by selling revenue bonds. This money will be repaid over time by the tolls paid by people who use the bridge. General obligation bonds give the government a tool to raise funds for projects that will not provide direct sources of revenue, e.g., state parks or public education, which are not easily supported by fees. As a result, general obligation bonds are typically used to fund projects that will serve the entire statewide population; revenue bonds, on the other hand, are used to fund projects that will serve specific populations that can repay the debt through user fees and use taxes.

When California voters pass a general obligation bond, they commit to paying back the amount of the bond, plus interest, out of the state's General Fund. The General Fund is the pool of public money that the state uses to cover the majority of the services and projects that the state provides. Each year, California uses part of the General Fund to pay "debt service"—the annual expenses of interest and principal of bonds the state has sold. This is similar to the way someone who has borrowed money to buy a car or house must make regular payments to repay the loan. The General Fund is also used to pay for public schools and universities, the state prison system, the MediCal health insurance program, unemployment benefits, state parks, and other health and social services.

### Water Bonds Are Increasing in Size and Frequency

Between 1970 and 1999, small water-related bonds were passed every few years, ranging from \$188 million to \$1.8 billion (in 2010 dollars), and totaling \$9.1 billion over the 29-year time period (Figure 1). However, since 2000, the frequency and size of water-related bonds have increased markedly. Between 2000 and 2006, six water-related general obligation bonds were passed, ranging from \$2.5 billion to \$5.8 billion, and totaling \$22.5 billion. The state Legislature recently passed an additional \$11.1 billion water bond to be put before voters in November 2010. Debt service payments for the proposed bond would be made out of the General Fund.

While general obligation bonds are sometimes touted as "tax-free," the General Fund relies on personal income tax, sales tax, and corporate taxes for more than 90% of its revenues. Over the last two years, General Fund revenues have plummeted; for example, General Fund collections in 2008–09 came in 20% below forecasts due to job losses, declining consumption, and weakness in the housing market.<sup>1</sup> Thus, approving general obligation bonds in the current budget deficit will force the state to either raise tax or fee revenues or decrease spending on other General Fund programs.

<sup>&</sup>lt;sup>1</sup> Public Policy Institute of California. 2010. "Just the Facts: California's State Budget."



**Figure 1. Inflation-adjusted amount of past water-related general obligation bonds in billions of (2010) dollars by year, compared with the 2010 proposed water bond.** Source: Legislative Analyst's Office (2009)<sup>2</sup>

### Voters Have Limited the Ability of Government to Raise Revenue

The shift to the greater use of state general obligation bond funding has been linked to the decreased ability to raise government revenues through taxes and fees. In California, many of the revenue sources typically available to state and local governments are significantly constrained. In 1978, California voters passed Proposition 13, restricting property tax increases and requiring a two-thirds majority in both legislative houses for future increases in all state tax rates or revenue collected. In 1996, another ballot initiative further restricted the ability to raise revenue: Proposition 218 changed local government finance rules, requiring local flood control and stormwater managers to obtain a two-thirds vote in order to raise fees. Thus, while Proposition 13 limited taxes, Proposition 218 limited the other main source of government revenue – fees and assessments.<sup>3</sup>

Today, state bonds are often easier to pass than local bonds, because they require only a simple majority of voter approval while most local bonds require a two-thirds majority. For example, if the five state infrastructure bonds that passed in November 2006 had been subject to local voting thresholds, only one bond would have passed.<sup>4</sup> The greater reliance on state general obligation bonds has important financial implications, as it has led to increasing state debt liability.

<sup>&</sup>lt;sup>2</sup> Legislative Analyst's Office. 2009. "Financing Water Infrastructure."

<sup>&</sup>lt;sup>3</sup> University of California. 1997. "Proposition 218.: How it Works and What it Means." California Community Topics. <sup>4</sup> Ibid.

Currently, almost 8% of the General Fund is used to pay off existing general obligation bond debt.

"California does not have adequate funding mechanisms in place to ensure the needed investment in water management improvements over the long term. In recent years, local communities have relied primarily upon state bond funding to augment local investment in water management and efficiency improvements. Bond funds alone do not provide a steady, reliable source of funding and are subject to 'boom and bust' cycles that make it difficult to plan."— 20x2020 Water Conservation Plan (2010)

## An Overview of the "Safe, Clean, and Reliable Drinking Water Supply Act of 2010"

Three years of drought, a growing population, the collapse of the ecosystem within the Sacramento-San Joaquin Delta, and court-ordered limits on the amount of water exported from the Delta to Central and Southern California are all cited as factors contributing to California's human and environmental water crisis. In February 2009, ongoing drought conditions prompted Governor Schwarzenegger to declare a "state of emergency." Later that year, the Governor threatened to veto all bills that passed the California Legislature unless a "comprehensive water package" was included. The Governor made it clear that the package should explicitly include a bond that would allow for "expanded water storage capacity," e.g., dams, reservoirs, and groundwater storage (see quote below). Although the Legislature did not pass such a package during its regular session, the Governor called an "extraordinary session" during which five bills related to different aspects of water governance, monitoring, and use were passed, including the \$11.14 billion "Safe, Clean, and Reliable Drinking Water Supply Act of 2010," hereafter referred to as the proposed bond.

"I cannot sign a comprehensive water package if it fails to include a water infrastructure bond that expands our water storage capacity – both surface and groundwater – funds habitat restoration, water quality, and conservation...I believe we could resolve any remaining differences in an hour, and I will not sign a water bill without the infrastructure necessary to improve supply reliability." – Governor Schwarzenegger (August 18, 2009)

Unlike recent water bonds, which were placed on the ballot through an initiative process that requires citizen signatures, e.g., Propositions 84 and 50, the proposed water bond is a legislative proposition passed by a two-thirds vote of the Assembly and Senate and signed by the

Governor.<sup>5</sup> The proposed bond drew from multiple bonds proposed by the Governor and legislators between 2007 and 2009 and was sponsored by Senator Dave Cogdill, a Republican representing Fresno, San Joaquin, and surrounding areas. Senator Cogdill's bill was first introduced on October 27, 2009. Initial votes on the bond failed to produce the votes needed for passage. Negotiations continued over the following week. In the end, the bond increased in size by \$1.74 billion, with some of the additional funding earmarked for specific entities and areas, e.g., \$100 million for water supply projects in San Diego County.<sup>6</sup>

The final bill authorizes the borrowing of \$11.14 billion via general obligation bonds to finance a variety of water-related projects (Table 1). Broadly speaking, the bond's key funding priorities are infrastructure along with watershed protection and restoration. Forty-two to fifty-seven percent of the bond (\$4.6-\$6.3 billion) is allocated to expanding or repairing existing infrastructure or building new infrastructure.<sup>7</sup> This includes dams and reservoirs, canals and other water delivery infrastructure, groundwater storage, wastewater treatment plants, drinking water system improvements, and water recycling and desalination plants. Thirty to forty-three percent (\$3.3-4.8 billion) is allocated to projects designed specifically to restore and protect ecosystems, over \$2 billion of which is specifically for the Delta ecosystem. Given the way the bond is written, some money for ecosystem restoration may also be allocated to hard infrastructure, if it can be justified as serving ecosystem purposes.

Breakdown of bond funding					
Description	Administering agency or specific grantee	Amount (in \$ millions)			
Chapter 5, Drought relief - \$455 million					
Drought relief projects (various)	Department of Water Resources	\$90			
Drought relief projects in San Diego County	Department of Water Resources /San Diego County	\$100			
Economic impact relief	Department of Water Resources	\$90			
Small community wastewater treatment infrastructure	State Water Resources Control Board	\$75			
Safe Drinking Water State Revolving Fund	Department of Public Health	\$80			
New River water quality	Department of Water Resources	\$20			

#### Table 1. Breakdown of the bond chapters, funds, and managing entities.

0050/sbx7\_2\_bill\_20091104\_amended\_asm\_v97.html.

<sup>&</sup>lt;sup>5</sup> Of the 7 water-related bonds passed by California voters since 1996, only two (Propositions 84 and 50) were initiatives and five (Propositions 204, 12, 13, 40, and 1E) were written by the Legislature.

<sup>&</sup>lt;sup>6</sup> Bill amendment retrieved on 7/23/10 from http://leginfo.ca.gov/pub/09-10/bill/sen/sb\_0001-

<sup>&</sup>lt;sup>7</sup> We provide a range because in some cases funds may be spent on a different project types; how funds are actually allocated across different priorities will depend on the bond's implementation.

	Grand Total:	\$11,140			
Ag and urban conservation and efficiency	Board / Department of Water Resources	\$250			
Desalination and water recycling projects	ation and water recycling projects State Water Resources Control Board/ Department of Water Resources State Water Resources Control				
Water Recycling Projects - \$1,250 million					
General	Department of Public Health	\$800			
Emergency safe drinking water	Department of Public Health	\$100			
Basin-wide management and remediation Department of Public Health		\$100			
Groundwater Protection and Water Oualit	ty - \$1,000 million				
Capitalize an advanced public infrastructure revolving fund mitigation program	Vanced public infrastructure Wildlife Conservation Board				
Klamath River dam removal	Klamath River dam removal Not vet determined				
Allocated in increments of \$250 million or less, primarily among state agencies, boards, and conservancies, for protection and restoration activities.					
Chapter 9, Conservation and Watershed P	rotection - \$1,785 million	,			
Water storage projects	California Water Commission	\$3,000			
Chapter 8 Statewide Water System Operational Improvement - \$3 000 million					
Enhancement of the Delta ecosystem and water conveyance infrastructure	ncement of the Delta ecosystem and r conveyance infrastructure Regulatory agencies, regulated and potentially regulated entities, and affected parties including state and federal water contractors, Sac-SJ Delta Conservancy				
Economic mitigation for loss of agricultural land	Delta cities, counties, and farmers	\$250			
Upstream wastewater treatment improvements	Department of Water Resources /Wastewater treatment facilities upstream of the Delta	\$50			
Delta levee, agricultural, and habitat improvements	Department of Water Resources / Sac-SJ Delta Conservancy, Delta cities and counties	\$450			
Chapter 7. Delta Sustainability - \$2.250 million					
Local and regional conveyance projects	Department of Water Resources	\$350			
Interregional	Department of Water Resources	\$50			
Allocated by region	Department of Water Resources	\$1,000			
projects) - \$1,400 mmon	•				

# Chapter 6, Water Supply Reliability (Integrated Regional Water Management Plan projects) - \$1,400 million

Note: Sacramento-San Joaquin Delta Conservancy is abbreviated as Sac-SJ Delta Conservancy.

In addition to the financial components of the proposed bond, it also has several important governance implications. First, the bond language revives the dormant California Water Commission to determine how the \$3 billion allocated in Chapter 8 to water storage projects will be distributed. All commissioners were appointed by Governor Schwarzenegger for four-year terms, although commissioners must still be confirmed by the Senate. Secondly, the bond exempts Chapter 8 from legislative oversight by "continuously appropriating" the funds rather than following the same legislative budget process required for all of the other chapters. The budget process provides a fundamental check on the executive branch by allowing the people's elected representatives to review the fiscal proposals of the Governor (or appointees of the Governor, in the case of the California Water Commission). Thus, the \$3 billion in Chapter 8 lacks important legislative oversight.

"Bond funded programs that are funded by continuous appropriations bypass the formal budget process with its inherent checks and balances system. Consequently, continuously appropriate bond programs should be avoided." – The Senate Committee on Natural Resources and Water, Recommendations for the Proposed Infrastructure Bonds (2006)

In addition, Chapter 8 includes a special provision that requires a two-thirds vote of the Legislature to amend (the rest of the chapters only require a majority vote to amend), making it much more difficult to change. Finally, the proposed bond allows private entities to join joint powers authorities to own and manage surface storage projects. This is unprecedented and will be discussed further below.

### **Critical Differences from Past Water Bonds**

Since 1960, California voters have authorized over \$44.3 billion (in 2010 dollars) in general obligation bonds for water-related purposes, with more than half of those funds being approved since 2000 (Figure 1). The proposed water bond differs markedly from past water bonds in several ways: it provides significant taxpayer funding for water storage, funding is less targeted to those with the most economic need, and it allows private entities to join joint powers authorities that receive taxpayer funds.

### **Provides Significant Taxpayer Funding for Water Storage**

One of the most controversial elements of the proposed water bond is related to taxpayer funding of water storage. The proposed water bond allocates \$3.0 billion to \$4.2 billion<sup>8</sup> to the construction of surface and groundwater storage projects, accounting for approximately one-third of the total bond amount. With the exception of Proposition 13, which provided a small amount

<sup>&</sup>lt;sup>8</sup> A range is provided because only \$3 billion are specifically allocated to water storage projects in Chapter 8 of the bond; however other chapters include funds that could be used for storage, depending on implementation.

of funding for groundwater storage projects, water bonds passed since 2000 have provided no funds for the construction of water storage projects.<sup>9</sup>

In fact, the last time California voters approved a general obligation bond to finance the construction of major new water storage was in 1960 when they approved a \$1.8 billion bond (equivalent to \$12.7 billion in 2010 dollars) to finance the acquisition, construction, and completion of the State Water Project – one of the largest water infrastructure projects in the nation. The conditions for that bond, however, required those who directly benefited from the State Water Project's construction and operation to repay the cost, a provision referred to as the beneficiary-pays principle or user-funding. Thus, the proposed bond authorizes a similar amount of spending with less defined outcomes and no revenue stream for repayment.

"The case for user-funding for most water system improvements is compelling, both as a matter of equity and fiscal prudence." – State Treasurer Lockyer (2009)

In recent recommendations to the California Legislature, the Legislative Analyst's Office advised that the beneficiary-pays principle be utilized when financing future water infrastructure.<sup>10</sup> Yet, the potential beneficiaries of the proposed water bond have not been identified and have not signed repayment contracts. Rather, the bond states that up to half of project costs may be funded by taxpayers rather than beneficiaries of the project, provided that those funds result in "public benefits." However, the bond is silent in many cases on how "public benefits" will be defined or quantified.

Chapter 8 is the only chapter that lists criteria for defining public benefits: ecosystem improvements, Delta water quality improvements, flood control benefits, emergency response, and recreational purposes. But merely listing the benefits that may be considered does little to illuminate what real benefits or impacts projects funded under this chapter might have. In the end, it is the weighting of these public benefits that will have a major impact on the types of projects that will be funded. For example, if all of these types of public benefits are given equal weight in the review process, certain types of projects would be more competitive than if ecosystem improvements or recreational purposes were given twice the weight of any other criteria. Other chapters do not list potential public benefits to be considered in deciding between which projects to fund, leaving the development of this criteria up to implementing legislation or administering agencies.

<sup>&</sup>lt;sup>9</sup> Proposition 13 allocates \$200 million for groundwater storage, or 10% of the total bond amount. Propositions 84 and 50 both allocate \$65 million to planning and feasibility studies for water supply, conveyance, or flood control projects, representing 1% and 2% of the total bond amounts, respectively.

<sup>&</sup>lt;sup>10</sup> Legislative Analyst's Office. 2010. "Financing Water Infrastructure."

#### Box 1: Raising the San Vicente Dam —Who Should Pay?

Raising the San Vicente Dam will more than double San Diego's water storage. Local bonds have already been sold to finance the project— in January 2010, the San Diego Water Authority completed a \$627 million bond sale to provide funds for capital improvement projects, including the dam expansion.<sup>11,12</sup> The sale of local bonds to finance the project exemplifies the user-pays concept. Construction began in June 2009 and is anticipated to end in the summer of 2014.<sup>13</sup> Despite already securing local financing for the dam expansion the proposed bond contains \$100 million for the project. While the bond language sets aside this money for San Diego County in general,<sup>14</sup> a fact sheet produced by the San Diego County Water Authority explicitly states that this money would be used for the San Vicente Dam project.<sup>15</sup>

Because the bond specifies that bond funds are meant to "result in public benefits" (section 79709, General Provisions), this potential shift from local to statewide public funding indicates a shift in the perceived public benefits of the project, e.g., fish and wildlife enhancement or decreased reliance on the Delta and its tributaries, which could make it appropriate to fund it from the state General Fund. However, the stated objective of the project is emergency storage; it is therefore unlikely to result in fish or wildlife enhancements or in reduced dependence on Delta diversions. This begs the question: why should the general public pay for an already locally funded project with primarily local benefits?

<sup>&</sup>lt;sup>11</sup> San Diego County Water Authority. (2010, April 23). "Main Phase of Nation's Largest Dam Raise Set to Begin in San Diego County: Water Authority Awards Contract for Third Phase of San Vicente Dam Raise Project."

<sup>&</sup>lt;sup>12</sup> San Diego County Water Authority. (2009, March 19). "Water Authority Receives Bids for Second Phase of San Vicente: Dam Raise Project Agency seeking up to \$130 million in federal stimulus funding for project."

<sup>&</sup>lt;sup>13</sup> San Diego County Water Authority. "Infrastructure: San Vicente Dam Raise." Project website.

<sup>&</sup>lt;sup>14</sup> Chapter 5. Drought Relief, §79720.1(f).

<sup>&</sup>lt;sup>15</sup> San Diego County Water Authority. (2010, March). "Fact sheet: 2010 Water Bond."

#### Funding is Less Targeted at Those with the Most Economic Need

Many communities in the state still do not have safe tap water. In the San Joaquin Valley alone, over 320,000 people received contaminated tap water in 2006. Many of these people live in low-income or disadvantaged communities,<sup>16</sup> and a disproportionate number of these residents are people of color, raising questions of environmental justice.<sup>17</sup> The past few water bonds have included mechanisms to target funding to communities with heightened needs for basic water infrastructure. This is primarily accomplished by setting aside funding for "disadvantaged communities," defined as those with a median household income that is less than 80% of the statewide average (Table 2). The threshold of 80% of statewide median household income was carefully developed to target one-third of California's population, and has been used in other statewide programs, e.g., the State Drinking Water Revolving Fund.

The proposed water bond broadens the types of communities eligible for these considerations by introducing a new category of "economically distressed areas," which allows communities with a higher household income to qualify for this funding. Additionally, the median household income for this new category can be measured at a larger geographical scale than was previously allowed. These changes dilute the resources available for those with the most need by spreading them over a larger population. For instance, the new category would potentially allow areas with a relatively high median household income to receive funding simply because they are located in a county with an overall low median household income. Considering the limited funds allocated to disadvantaged communities and economically distressed areas – totaling less than 3% of the bond – this new, broader category may result in even smaller amounts of funding reaching those with the most need.

<sup>&</sup>lt;sup>16</sup> Community Water Center. Not dated. "The Struggle for Safe Drinking Water in the San Joaquin Valley."

<sup>&</sup>lt;sup>17</sup> Community Water Center. Not dated. "The Struggle for Safe Drinking Water in the San Joaquin Valley."

# Table 2. Definitions for disadvantaged communities in different water-related general obligation bonds.

Year	Bond	Definitions for disadvantaged communities	Geographic unit used in determination
2002	Prop 50	"Disadvantaged community" means a community with an annual median household income that is less than 80% of the statewide annual median household income.	Public water system, census- designated place, census tract, block group or other census geography*
2006 Prop 84	Prop 84	" <b>Disadvantaged community</b> " means a community with a median household income less than 80% of the statewide average.	Public water system, census- designated place, census tract, block group or other census geography*
		<b>"Severely disadvantaged community</b> " means a community with a median household income less than 60% of the statewide average.	Public water system, census- designated place, census tract, block group or other census geography*
		" <b>Disadvantaged community</b> " means a community with an annual median household income that is less than 80% of the statewide annual median household income.	Will presumably use the same geographic units as previously applied to "disadvantaged community"
2010	Prop 18	<ul> <li>"Economically distressed area" means a municipality with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger municipality where the segment of the population is 20,000 persons or less, with an annual median household income that is less than 85% of the statewide median household income, and with one or more of the following conditions as determined by the department: <ul> <li>(1) Financial hardship.</li> <li>(2) Unemployment rate at least 2% higher than the statewide average.</li> <li>(3) Low population density.</li> </ul> </li> </ul>	County, municipality, or "reasonably isolated and divisible segment of a larger municipality"

\* different agencies allow the use of different geographic units

### **Allows Private Entities to Join Joint Powers Authorities**

Unlike prior bonds and legislation, this bond gives broad authority for nongovernmental partners to enter into joint powers authorities to "own, govern, manage, and operate a surface water storage project" that is funded in part by taxpayers. Under the Joint Exercise of Powers Act,<sup>18</sup> two or more *public agencies* may enter into a joint powers agreement (JPA), allowing them to jointly perform many duties that the agencies can perform individually. For example, the Encina Wastewater Authority operates under a joint powers agreement that allows six public agencies to share in the costs and management of the wastewater facilities, enabling them to afford more advanced facilities than each agency could on its own. The term public agencies is clearly defined to include government and its agencies and departments, the state government and its agencies and departments, cities, counties, and other districts. In rare and specific instances, special legislation has allowed entities that are not considered public agencies to enter into JPAs, such as individual American Indian tribes and nonprofit hospitals.<sup>19</sup>

But Chapter 8 of the proposed bond specifically authorizes nongovernmental partners to join JPAs, which are eligible to receive bond funds.

The bond states that JPAs "may include in their membership governmental *and nongovernmental partners* that are not located within their respective hydrologic regions in financing the surface storage projects, including, as appropriate, cost share participation or *equity participation*" [emphasis added].

Including nongovernmental agencies in JPAs creates the potential for these entities to benefit from powers traditionally reserved for agencies that are accountable to a constituency. Nongovernmental entities are not bound by the same transparency laws as public agencies (e.g., the Ralph M. Brown Act, the Public Records Act, and the Political Reform Act). The bond does not define the term "nongovernmental partners," therefore leaving it open to apply to any type of private organization, including for-profit entities. Allowing private entities to join these JPAs can provide greater flexibility in financing the surface storage projects and take pressure off of local communities in coming up with matching funds. However, it also presents the opportunity for private profit from projects paid for by taxpayers, as indicated by the language on equity participation.<sup>20</sup>

Both the possibility for private profit, and the fact that the scope of the powers and purposes of these JPAs are not clearly defined, diverges from all previous instances in which nongovernmental entities were authorized to join JPAs.<sup>21</sup> Furthermore, the possibility for

<sup>&</sup>lt;sup>18</sup> See California Government Code §6500-6536.

<sup>&</sup>lt;sup>19</sup> See California Government Code § 6523.4 -6524.

<sup>&</sup>lt;sup>20</sup> Equity participation gives the lender an incentive to make a loan because they share in the profits of the business.

<sup>&</sup>lt;sup>21</sup> J.S. Sullivan. Personal communication. March 25, 2010.

subsequent regulations to more clearly define the scope of private membership in JPAs is limited by the specification that Chapter 8 of the bond may not be amended without two-thirds majority vote in each house of the Legislature and voter approval. No justification has been offered for the decision to change the definition of JPAs and to broaden private sector access to taxpayersupported bonds.

Recently, Assembly Member Jared Huffman introduced a bill that would edit much of this language. Assembly Bill 2775 "would delete the authorization for joint powers authorities to include nongovernmental partners in their membership. The bill would also prohibit the joint powers authorities from including in their membership any for-profit corporation, or mutual water company whose shareholders and members include a for-profit corporation or any other private entity." At the time of this writing, the bill has not been passed by the Legislature.

## **California's Current Financial Situation**

The recession that hit the national economy and global financial markets has dealt California's state and local government finances a powerful blow. Between 2008 and 2009, state revenues plunged more deeply and swiftly than at any time since the Great Depression. Meanwhile, the state needed to spend more money on social services because California workers were losing their jobs at a high rate. A budget deficit developed in fall 2008 and rapidly grew to an historic high. This led to a protracted battle in the Legislature over how to best deal with the state's tough financial circumstances. According to the State Treasurer, as a result of the budget crisis of 2009 and the unprecedented malfunction of national and global credit markets:

- Two rating agencies, Moody's Investors Service (Moody's) and Fitch Ratings (Fitch), in July 2009, downgraded the state's general obligation bonds from A level to a B level, the lowest bond rating in the nation (Box 2); and
- To conserve cash for education, debt service, and other priority payments, on December 17, 2008 the state halted interim financing for more than 5,000 infrastructure projects, which affected thousands of jobs for workers, billions of dollars in revenues for private businesses, and imperiled many community-based and nonprofit organizations.<sup>22</sup>

<sup>&</sup>lt;sup>22</sup> State Treasurer. 2009. "The State of California Debt Affordability Report."

#### **Box 2: General Obligation Bond Ratings**

There are three major bond-rating agencies that regularly rate debt for countries, states, municipalities, corporations, and any other entity issuing securities: Moody's Investors Service, Standard and Poor's, and Fitch Ratings, Ltd. Higher investment-grade ratings provide greater

confidence to the investment community that the issuing entity is able to meet its financial obligations. Higher ratings may allow issuers to issue debt at lower interest rates, thereby lowering debt service costs. Low credit ratings reflect higher risk and generally result in issuers paying a higher rate of interest on debt. If ratings fall low enough ("junk" or non-investment grade), the issuer may be prohibited from obtaining access to the credit market. Rating agencies consistently reevaluate outstanding debt for which they previously issued a credit rating. If circumstances change, ratings may change.

State	Moody's Investors Service <sup>(3)</sup>	Standard & Poor's <sup>(3)</sup>	Fitch Ratings <sup>(3)</sup>
California	Baa1	A	BBB
Texas	Aa1	AA+	AA+
New York	Aa3	AA	AA-
Florida	Aa1	AAA	AA+
Illinois	A1	AA-	A
Pennsylvania	Aa2	AA	AA
Ohio	Aa2	AA+	AA
Michigan	Aa3	AA-	A+
Georgia	Aaa	AAA	AAA
New Jersey	Aa3	AA	AA-
North Carolina	Aaa	AAA	AAA

Source: Status Report on California's Bond Debt (Lockyer 2009)

The state's bond rating affects the interest rate at which the state must repay bonds. According to the Legislative Analyst's Office, annual payments for an \$11.14 billion bond would peak around \$725 million (at 5% interest) and around \$809 million (at a 6% interest rate). Over the 30-year period, the proposed bond is expected to end up costing taxpayers around \$22 billion when interest is included. Considering California's low credit rating combined with the state's outstanding bond debt, the Legislative Analyst's Office estimates debt service will consume almost 9% of General Fund revenues in 2012.<sup>23</sup> For comparison, over much of the last decade, California's debt service hovered around 6%. By 2014 state debt is expected to reach unprecedented levels, consuming more than 10% of General Fund revenues between 2014 and 2020.<sup>24</sup>

<sup>&</sup>lt;sup>23</sup> Legislative Analyst's Office. 2009. "The 2010-11 Budget: California's Fiscal Outlook."

<sup>&</sup>lt;sup>24</sup> State Treasurer. 2009. "The State of California Debt Affordability Report."

### **Potential Impacts of the Proposed Bond on Public Services**

How the General Fund will be spent is negotiated and decided by the Legislature each year in the state's budget. Some spending is negotiable – the Legislature can decide to reduce or eliminate it – while other spending, like debt service, must be paid. The cost of this bond would have to be covered by either reducing state spending or increasing revenue from taxes. California has been resistant to raising taxes and is currently facing a budget deficit. If this trend continues, it is likely the bulk of the cost of the bond will be covered by spending cuts. The political process of decisions on setting spending levels makes future decisions unpredictable, but historic trends can tell us what is likely to happen if we continue in a similar direction.

"General obligation bond repayments are essentially the first funding priority of the General Fund (after K-12 education) and, for this reason, bonded debt service takes precedence over other spending priorities, be they education, health, social services, prisons, etc." – Office of Senate Floor Analyses

As state debt for the water bond rises hundreds of millions of dollars per year, funds for other needs will be constrained. If past trends continue, cuts will most likely be made in the education, health, and social services sectors. At the end of 2004, the Legislative Analyst's Office (LAO) projected the future state spending needs to maintain legally required levels of service, given population and inflation changes. Figure 2 shows the percent difference between those LAO projections for the 2009-2010 budget and actual spending during 2009-2010. The data show that spending increased for prisons and debt service to pay off existing bonds, while spending on most other programs supported by the General Fund fell below the projections. CalWORKS and the Supplemental Security Income (SSI/SSP) programs have fallen approximately one-third below projections. In-home Support Services (IHSS) and Department of Developmental Services (DDS) are about 25% under their projected spending levels. University of California, California State Universities, and K-14 education also show major shortfalls. Thus, debt service on the proposed water bond is likely to force even deeper cuts into these General Fund programs.



# Figure 2. Difference between projected baseline spending on General Fund programs and estimated 2009-2010 spending (see paragraph above for details).

Source: California Budget Project (2010)<sup>25</sup>

<sup>&</sup>lt;sup>25</sup> California Budget Project. 2010. "Searching for Balance: The Social and Economic Context of the Governor's Proposed 2010-11 Budget."

### Moving Forward: Our Vision for a Responsible Water Bond

California faces considerable water challenges over the next decades, and a state water bond could be a vehicle for investing in strategic and wide-reaching solutions. In particular, there are still a significant number of Californians without access to safe tap water, there are economically and environmentally critical ecosystems on the brink of collapse, there is chronic under-investment in local water supply and treatment infrastructure, and there is a need for programs and treatment technologies that make more efficient use of the state's scarce water resources. However, bonds must be carefully constructed to ensure that they use state taxpayer dollars responsibly and appropriately. In our view, a water bond that reflects the highest values of our state and the best thinking on long-term solutions would be based on the following principles:

*A responsible bond relies less on the state's beleaguered General Fund.* Bonds can rely less on the over-burdened General Fund in several ways: 1) by being considerably smaller in size; 2) by requiring greater local matches; and 3) by requiring specified revenue streams for repayment. In addition, financing for water system improvements can be supported by local revenue bonds, taxes and fees paid by direct beneficiaries, or by instituting a public goods charge.

*A responsible water bond ensures that publicly funded projects provide real public benefits.* Given the subjective nature of public benefits, bonds that purport to provide public benefits should be clear as to their definition and quantification. In addition, public funds should not be used for private profit.

A responsible water bond ensures that the needs of the most vulnerable stakeholders are prioritized. A significant number of Californians still do not have access to safe tap water and are served by water systems unable to finance critical improvements. Resolving the drinking water and wastewater issues affecting the public health of these communities must be a top priority to ensure that a dignified standard of living is granted to all residents.

A responsible water bond ensures that water resource management strategies are compared on an equal playing field. Water solutions vary from new surface storage, to groundwater recharge and conjunctive use, to recycled water and desalination, to water demand management strategies, e.g., conservation and efficiency improvements. Rather than separating these strategies into individual chapters, they should be analyzed side-by-side to determine the most cost-effective combinations of options, or portfolio, with the least social and environmental impact. Bond funding could then be targeted toward the most cost-effective options.

## **Rely Less on the General Fund**

California is currently facing an almost \$20 billion budget deficit, and shortfalls are predicted for the following two years.<sup>26</sup> Thus, it is prudent to avoid over-burdening the already underresourced General Fund. Currently, California has over \$3 billion of unspent water-related general obligation bonds. Accordingly, the Planning and Conservation League suggests that a fiscally prudent approach to solving our water problems would allocate these unspent funds and authorize a much smaller new bond of around \$3 billion that targets funding to projects with more clearly defined public benefits.<sup>27</sup> Another approach would be to increase the local match required to be eligible for bond funding above 50 percent.

Local revenue bonds, which traditionally have paid for many water system improvements in California without relying on the General Fund, are another important financial mechanism. Yet, within the last few decades California voters have passed a variety of ballot measures that have made it difficult for local government to raise local revenues (Propositions 13 and 218). Thus, the General Fund has, increasingly, taken the place of local revenue sources. These constraints on financing options led to the passage of Proposition 39 in 2000, which lowered the voter threshold on local school bonds from a super-majority (imposed by Proposition 218) to only 55 percent. "After that, California witnessed a dramatic increase in local capital support for K–12 and community college facilities. Not only did this change result in significantly higher [local bond] pass rates…it also led to a more than doubling of measures put on the ballot, as more school districts felt they had a chance of gaining voter approval."<sup>28</sup> Similar measures could be introduced to reduce the super-majority requirement for other types of local revenue bonds and to remove restrictions on increasing water and wastewater rates and fees. Appropriately configured water rate structures can reduce water demand and provide a sustainable funding source for water system improvements.

Finally, California could enact a public goods charge for water. In 2000, the California Legislature approved an energy surcharge that directs electric utility companies to gather a state energy surcharge to fund energy-related research, planning, and conservation programs. As of January 1, 2005, the surcharge is set at \$0.00022 per kilowatt-hour (kWh) of electricity consumed by all electrical customers. For a home that consumes 600 kWh of electricity in a month, the contribution is \$1.58 per year. The California 20x2020 Water Conservation Plan recommends adopting a similar public goods charge for water, which would avoid repeatedly asking voters to approve large water-related bonds that can strain the General Fund.

"California should enact a public goods charge to support water management and water use efficiency to help ensure stable and adequate funding." – 20x2020 Water Conservation Plan (2010)

<sup>&</sup>lt;sup>26</sup> Planning and Conservation League. 2010. "8 Affordable Water Solutions for California."

<sup>&</sup>lt;sup>27</sup> Ibid.

<sup>&</sup>lt;sup>28</sup> Public Policy Institute of California. 2009. "Paying for Infrastructure: California's Choices."

#### **Ensure Public Benefits**

A water program or project may benefit a clearly defined subset of the state's population (for example, individual water users receiving deliveries from an infrastructure project); the public as a whole (for example, from fish and wildlife enhancements); or reflect a combination of public and private benefits. Yet, the term public benefits has no clear legal definition, apart from the provisions of the Davis-Dolwig Act that define "public benefits" in regard to State Water Project construction and operations, and thus what constitutes a public benefit has taken on many different meanings.

Therefore, when the public is asked to vote on a bond that purports to provide public benefits, these benefits should be clearly defined in the bond text, including information on what criteria will be used and how the individual criteria will be weighed against one another. This allows voters to assess whether the bond will follow a process that is likely to result in real public benefits. In addition to clearly defining public benefits, responsible investment of public funds must ensure that there is no potential for private entities to profit from taxpayer-funded investments.

#### **Prioritize the Needs of Vulnerable Communities**

The California Department of Public Health identified more than 300 "high priority" drinking water projects in need of funding in 2010 to bring systems into compliance with basic state or federal drinking water standards; about half of these projects are located in disadvantaged communities. The estimated cost of bringing these systems into compliance is \$450 million (Table 3), although this is a conservative estimate based on applications for financial support to the Department of Public Health, rather than a survey of all systems in need of upgrades.<sup>29</sup> Additionally, many communities lack adequate infrastructure to treat wastewater prior to release into local streams and rivers. The State Water Resources Control Board identified over 300 wastewater treatment system improvement projects in small, disadvantaged communities that are in need of funding, with an estimated cost exceeding \$1 billion.

Drinking water systems that serve disadvantaged communities often lack both access to much-needed infrastructure financing and the resources to adequately maintain their existing system components. As a result, these [public water systems] face significant challenges in complying with longstanding and new drinking water rules. – (U.S. EPA 2007)<sup>30</sup>

Drinking water and wastewater system improvements can be very expensive, and disadvantaged communities often have difficulty in financing them. In addition, it is often difficult for small

<sup>&</sup>lt;sup>29</sup> California Department of Public Health. 2009. "Safe Drinking Water State Revolving Fund: September 2009 Final SRF Project Priority List."

<sup>&</sup>lt;sup>30</sup> U.S. Environmental Protection Agency. 2007. "DWSRF 2007 Annual Report."

drinking water and wastewater systems to afford improvements because they have few ratepayers among whom to spread the costs. This contributes to small drinking water systems having a far-greater-than-average rate of violations of the Safe Drinking Water Act. In fact, on a per-capita basis, the smallest water systems (serving 25-500 people) exceed contaminant levels mandated by law 30 times more than the average for all system sizes.<sup>31</sup> These small and disadvantaged communities, therefore, have particular need for state funding.

Table 3. H	ligh priority	drinking w	vater system	needs ide	entified in	2009.
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Category	Costs	Description of category
А	\$490,000	Water systems with deficiencies that have resulted in documented waterborne disease outbreak illnesses, or water systems under a court order to correct Safe Drinking
		Water Act violations and/or water outage problems.
В	\$17,911,100	level (Total Coliform Rule) due to active sources contaminated with coliform bacteria
		(fecal, E. coli, or total coliform)
С	\$37,906,910	Water systems which have (1) a surface water supply, or a groundwater under the direct influence of surface water (GWUDI) source, that is not filtered, or not treated; or (2) non-GWUDI well sources that are contaminated with fecal coliform or E. coli.
D	\$200,970,275	Water systems that have (1) surface water sources or GWUDI sources with filtration treatment deficiencies that violate Federal or State treatment requirements; or (2) non-GWUDI wells that are contaminated with fecal coliform or E. coli and are inadequately treated.
Е	\$40,076,840	Water systems with water outages or significant water quantity problems caused by source water capacity or water delivery capability that is insufficient to supply current demand.
F	\$44,357,162	Water systems that (1) distribute water containing nitrates/nitrites in excess of the maximum contaminant level (MCL); or (2) distribute water containing perchlorate in excess of the MCL; or (3) water systems that are in violation of the Total Coliform Rule for reasons other than source contamination.
G	\$109,326,578	Water systems that distribute water containing chemical or radiological contamination exceeding a State or Federal primary drinking water standard.
Total:	\$451,038,865	

Source: California Department of Public Health (2009)<sup>32</sup>

Note: These categories of High Priority Needs are defined by the California Department of Public Health. Need is estimated from applications submitted to the California Department of Public Health for financial support, a method that underestimates need because not all systems with needs apply for funding.

<sup>&</sup>lt;sup>31</sup> Systems serving 25-500 people have 0.8072 Maximum Contaminant Level (MCL) violations per capita and the average of all systems is 0.0251 MCL violations per capita

<sup>(</sup>http://www.epa.gov/safewater/smallsystems/pdfs/smallsys.pdf).

<sup>&</sup>lt;sup>32</sup> California Department of Public Health. 2009. "Safe Drinking Water State Revolving Fund Final Intended Use Plan SFY 2009-2010."

California Department of Public Health. 2009. "Safe Drinking Water State Revolving Fund: September 2009 Final SRF Project Priority List."

Prioritizing the needs of vulnerable communities requires mechanisms to ensure that funding gets to those who need it most. Water bonds passed in the last decade have taken disadvantaged communities into account in various ways, e.g. by setting aside funds, providing outreach activities, and waiving local cost-share requirements. Some of the more effective mechanisms used in these past bonds have included:

- Setting aside funds specifically for disadvantaged communities, thus eliminating competition for these funds;
- Waiving local match requirements;
- Providing grant dollars to fund environmental documentation and feasibility studies;
- Providing funds for technical assistance; and
- Requiring fund-managing agencies to identify and provide outreach to disadvantaged communities. For some departments, this may require additional training or staff, as it may not be within their traditional scope of work.

Meaningful participation of vulnerable communities in the development of projects and programs to be funded by a bond can help to ensure that these priority needs are met. To facilitate this participation, the decision-making process should reflect best practices for community inclusion, including timely reporting of relevant information that is accessible to all affected by the issues being considered, and ongoing opportunities for affected parties to participate substantively in key decisions.

#### **Compare Water Management Strategies on a Level Playing Field**

The proposed bond has six chapters that allocate funds to different water resource management strategies, including: watershed protection and restoration, surface and groundwater storage, water efficiency and conservation, remediation of contaminated water sources, and water recycling. Of the six chapters, Chapter 8 focuses solely on water storage and is allocated by far the largest amount of funds, totaling \$3 billion. Other water resource management strategies are allocated far less – for instance, drought relief projects are allocated \$455 million and water efficiency programs are allocated only \$250 million.<sup>33</sup>

The segregation of water resource management strategies means that solutions are not compared on an equal playing field. Building new water supply infrastructure is certainly one important way to enhance the water resources of the state, but similarly improving the quality of local water sources and expanding water conservation and efficiency programs can also significantly decrease the pressure on the state's limited water resources, often at much lower economic, social, and environmental cost.

<sup>&</sup>lt;sup>33</sup> Drought relief projects are funded in Chapter 5, Section 79720 and "water conservation and water use efficiency plans, projects, and programs" are funded in Chapter 11, Section 79784.

"Ensuring that the benefits of a project are greater than the cost has long been a fundamental guideline for water resource projects, and cost-benefit evaluations should continue to be an integral part in water project financing for California. Before a decision is made to proceed with project implementation, planners should have confidence that the investments made will be justified by the resulting positive impacts." – California Water Plan Update 2009 (Department of Water Resources 2010)

Given the state's dire financial situation, cost-effectiveness should be one important measure of comparison and *all* projects that aim to reduce reliance on the Delta and increase water reliability should be compared based on a cost-effectiveness analysis that integrates environmental and social impacts. For example, infrastructure projects approved in the CalFed Record of Decision are specifically noted as being eligible for funding by Chapter 8. One of these projects is the construction of an additional dam on the San Joaquin River, Temperance Flat. The U.S. Bureau of Reclamation conducted a feasibility analysis of several alternatives for the construction of such a dam.<sup>34</sup> The most favorable project has an average annual yield of 158,000 acre-feet per year with an estimated capital cost of \$3.4 billion, thus the cost of water from Temperance Flat is approximately \$720 per acre-foot, assuming a 100 year lifetime.<sup>35</sup>

In comparison, numerous Pacific Institute analyses have found that urban and agricultural water conservation and efficiency improvements could reduce demand at lower cost than building new supply. For example, the 2003 analysis found that urban water conservation and efficiency measures could save 2.3 million acre-feet per year for less than \$600 per acre-foot.<sup>36</sup> Note that some of these measures, such as showerheads and clothes washers, have a negative cost over their lifetime as a result of energy and wastewater savings. A 2009 analysis found a total potential water savings for the agricultural sector of 4.5 to 5.9 million acre-feet per year for wet and dry years, respectively.<sup>37</sup> The Department of Water Resources estimates that implementing agricultural water conservation and efficiency measures would cost \$85 to \$675 per acre-foot (Table 4).<sup>38</sup>

<sup>&</sup>lt;sup>34</sup> U.S. Bureau of Reclamation. 2008. "Plan Formulation Report: North-of-the-Delta Offstream Storage Investigation."

<sup>&</sup>lt;sup>35</sup> The total capital and operation and maintenance costs spread over the dam's economic life, and then converted to equal annual payments (the Temperance Flat Dam is levelized over a 100-year time period). This estimate incorporates water quality and environmental benefits, e.g., releases for fish restoration/enhancement. These non-water supply benefits are estimated to cost approximately \$55.5 million per year.

<sup>&</sup>lt;sup>36</sup> Gleick, P.H., D. Haasz, C. Henges-Jeck, V. Srinivasan, G. Wolff, K. Kao Cushing, and A. Mann. 2003. Waste Not, Want Not: The Potential for Urban Water Conservation in California. Pacific Institute. Oakland, California.

<sup>&</sup>lt;sup>37</sup> Cooley, H., J. Christian-Smith, and P.H. Gleick. 2009. Sustaining California Agriculture in an Uncertain Future. Pacific Institute. Oakland, California.

<sup>&</sup>lt;sup>38</sup> Department of Water Resources. 2010. "California Water Plan Update 2009."

Water Resource Management	Potential Supply Benefit	Range of Costs
Strategy	(million acre-feet/yr)	(dollars/acre-feet)
Urban water use efficiency	1.2-3.1	\$223 - \$522
Agricultural water use efficiency	0.1-1.0*	\$85 - \$675
Desalination	0.3-0.4	\$1,000 - \$2,500
Recycled municipal water	1.8-2.3	\$300 - \$1,300
Surface storage – CALFED	0.1-1.1	\$300 - \$1,100

# Table 4. Department of Water Resources' summary of the potential water supply benefitsand the costs associated with various water resource management strategies.

#### Source: Department of Water Resources (2010)<sup>39</sup>

Note: \*This estimate dramatically underestimates potential water savings in the agricultural sector. Based on an extensive literature review and empirical research documenting water conservation savings with on-farm irrigation technology and management improvements, a 2009 Pacific Institute analysis (Sustaining California Agriculture in an Uncertain Future) found a total potential water savings of 4.5, 5.5, and 5.9 million acre-feet per year for wet, average, and dry years, respectively. The report does not delineate between recoverable and irrecoverable water savings, thus the potential savings are applied water savings only. These numbers are comparable to those in the 2006 California Bay-Delta Authority Water Use Efficiency Comprehensive Evaluation, which estimates the technical potential savings of on-farm improvements to be 5.2 MAF. It is important to note that the California Bay-Delta Authority report only includes hardware improvements while the Pacific Institute analysis also includes changes in water management.

Comparing the economic, environmental, and social impacts of various water resource management strategies provides critical information to state agencies and the public in prioritizing projects and funding. Yet, the structure of the proposed water bond does not offer an opportunity for such side-by-side comparison.

### **Conclusions**

Since 1960 California voters have authorized more than \$44 billion (in 2010 dollars) in general obligation bonds for water-related purposes, with more than half of those funds being approved since 2000. While general obligation bonds are an important financial mechanism to fund services and infrastructure that benefit the entire state, they have become a primary financial mechanism for water system improvements. The shift to a greater reliance on state general obligation bonds coincided with the passage of two propositions that restricted the government's ability to raise taxes and fees in California (Propositions 13 and 218). These two propositions have not reduced the need to upgrade our state's drinking and wastewater infrastructure, restore and protect the state's aquatic ecosystems, or expand water conservation and efficiency programs that will help us confront population growth, ongoing drought, and climate change impacts. Instead, they have shifted the burden of repayment from direct beneficiaries to general taxpayers. The proposed bond continues this trend. The proposed water bond states that up to half of project costs may be funded by taxpayers rather than project users, provided that those funds result in "public benefits." In many cases, the bond is silent on how public benefits will be defined or

<sup>&</sup>lt;sup>39</sup> Ibid.

quantified. Existing bond language, however, suggests that the term may be interpreted loosely (see Box 1: Raising the San Vicente Dam – Who Should Pay?).

In addition, the bond has a number of important governance implications. The proposed bond revives the dormant California Water Commission to determine how \$3 billion allocated to water storage projects in Chapter 8 will be distributed. All of the commissioners were recently appointed by Governor Schwarzenegger (pending confirmation). The bond exempts Chapter 8 from legislative oversight by "continuously appropriating" the funds rather than following the same annual budget process required for all of the other chapters. In addition, Chapter 8 includes a special provision that requires a two-thirds vote of the Legislature to amend. Thus, the chapter that allocates the largest amount of funds for a limited number of infrastructure projects will have little legislative oversight.

The bond differs markedly from past water-related general obligation bonds by providing significant taxpayer funding for water storage. It also introduces a new category of "economically distressed areas" that will dilute the funding usually set aside only for "disadvantaged communities" by increasing the median household income requirements and including larger geographical areas. And, finally, the proposed bond allows nongovernmental entities, including for-profit entities, to "own, govern, manage, and operate a surface water storage project" funded, in part, by taxpayers. This is an unprecedented change to established law that could allow private profit from publicly-funded infrastructure.

Recently, concerns about the State's budget, growing opposition from particular interest groups, and other factors have led to suggestions that the bond be removed from the ballot, rewritten, or amended. Given these possibilities, we offer here principles for a responsible water bond to guide such amendment. In our view, a bond that reflects the highest values of our state and the best thinking on long-term solutions would: rely less on the state's beleaguered General Fund, ensure that publically funded projects provide real public benefits, ensure that the needs of the most vulnerable stakeholders are prioritized, and require water resource management strategies to be compared on an equal playing field.