BILL LOCKYER

# THE CHALLENGE AHEAD: 

 Balancing California's Infrastructure Investments and Service Needs


# Bill Lockyer 

Treasurer
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## Fellow Californians:

Our state's workers, families and communities continue to struggle with the effects of a deep and persistent economic downturn. California's unemployment rate is much higher than the national rate. Our housing market is still depressed. Credit remains scarce for businesses and individuals. Consumer spending has stayed flat. State and local government revenues, which suffered sharp decline over the last four years, are beginning a slow but uncertain recovery.

This year's Debt Affordability Report notes once again the share of the State's General Fund devoted to debt payment. The pace of increase for State debt slowed this year as the Governor imposed a brief moratorium on bond sales. However, as the Report makes clear in the section called "The Challenge Ahead," it is reasonable to expect that State debt will resume its growth during the next 10 years. It will be up to the Governor and Legislature in coming years to make room in the State budget both for the critical infrastructure projects we need to make our state livable and prosperous, and vital public services. These services include public safety, excellent public education, affordable health care and environmental protection. They're vital because they provide opportunities for everyone to enjoy living, working and supporting their families in California.

The 2011 Debt Affordability Report provides useful and straightforward information about the nature and extent of the State's debt. I hope it proves a valuable resource for municipal finance professionals and California policymakers, and all those who want to take a closer look at how the State uses its borrowing authority to meet objectives set by voters, the Legislature and the Governor.

I commend and thank the staff of the State Treasurer's Office as well as our financial advisors and economists. They are professionals who work very hard and well to protect the interests and pocketbooks of Californians. They understand the job they do is important in creating the kind of future California wants and needs.

On their behalf and mine, thank you for the opportunity to serve.

## Bill Jocker

## BILL LOCKYER

California State Treasurer

## Contents

Preface ..... $i$
Executive Summary ..... I
section i: The Challenge Abead: Budget and Debt Estimates ..... 3
SECTION 2: Market for State Bonds ..... II
SECTION 3: Snapshot of State's Debt ..... I7
SECTION 4: Measuring Debt Burden. ..... I9
SECTION 5: Analysis of State's Credit Ratings ..... 2I
appendix a: The State's Debt ..... 23
appendix b: The State's Debt Service ..... 29

## Preface

Government Code Section 12330 requires the State Treasurer to submit an annual debt affordability report to the Governor and Legislature. The report must provide the following information:

- A listing of authorized but unissued debt the Treasurer intends to sell during the current year (2011-12) and the following year (2012-13), and the projected increase in debt service as a result of those sales.
- A description of the market for State bonds.
- An analysis of State bonds' credit ratings.
- A listing of outstanding debt supported by the General Fund and a schedule of debt service requirements for the debt.
- A listing of authorized but unissued bonds that would be supported by the General Fund.
- Identification of pertinent debt ratios, such as debt service to General Fund revenues, debt to personal income, debt to estimated full value of property and debt per capita.
- A comparison of these debt ratios for the State and the 10 most populous states.
- The percentage of the State's outstanding general obligation bonds constituting fixed rate bonds,
variable rate bonds, bonds that have an effective fixed interest rate through a hedging contract and bonds that have an effective variable interest rate through a hedging contract.
- A description of any hedging contract, the outstanding face value, the effective date, the expiration date, the name and ratings of the counterparty, the rate or floating index paid by the counterparty, and an assessment of how the contract met its objectives.


## NOTES ON TERMINOLOGY

- This report frequently uses the words "bonds" and "debt" interchangeably, even when the underlying obligation behind the bonds does not constitute debt subject to limitation under California's constitution. This conforms to the municipal market convention that applies the terms "debt" and "debt service" to a wide variety of instruments, regardless of their precise legal status.
- The report references fiscal years without using the term "fiscal year" or "fiscal." For example, 2011-12 means the 2011-12 fiscal year.
- When referring to the government the word "State" is capitalized. When referring to California, the word "state" is lower-cased.


## Executive Summary

## INTRODUCTION

For California, 2011 has brought little relief from the ravages of the 2007-09 recession.

Through August, the state had recovered just 16 percent of the 1.37 million jobs workers lost from July 2007 through September 2009. Unemployment has stubbornly stayed in the 12 percent range. The housing market - crucial to a comeback - has remained moribund. The construction and manufacturing sectors have continued to sputter along.

The recession had slashed State General Fund revenues by 30 percent coming into 2011, compared to estimates released in January 2008 by the Legislative Analyst's Office (LAO). Despite the revenue slump, 2011's most positive economic/fiscal news has come from the budget front.

The Governor and Legislature closed a $\$ 27.2$ billion shortfall with an honest, on-time budget that included $\$ 11.1$ billion in spending cuts and further, automatic reductions if the revenue picture darkens. The budget reduced projected average annual deficits during the period 2012-13 through 2014-15 from $\$ 19.4$ billion to $\$ 2.3$ billion. The Treasurer called the spending plan the most responsible budget in more than a decade.

The market reacted favorably, too. Standard \& Poor's (S\&P) upgraded the State's credit outlook from Negative to Stable. For the first time since 2007, S\&P gave its highest rating to the State's revenue anticipation notes (RANs). Moody's Investors Service (Moody's) and Fitch Ratings (Fitch) also gave the budget positive reviews. Fitch upgraded the State's RANs, giving its second-highest rating to the $\$ 5.4$ billion of notes sold in September.

Taxpayers have reaped the benefits. They are paying more than one full percentage point less on the RANs issued this year than they paid on the 2010 RANs. The interest rates on $\$ 2.39$ billion of general obligation (GO) bonds sold in September cost taxpayers about 70 basis points to more than 100 basis points less than yields on GO bonds the State sold in November 2010.

Despite substantial improvements to the State's fiscal management, however, significant budget challenges still lie ahead. The consensus among economists seems to be California will not see single-digit unemployment rates until 2014. Inland California and other regions may suffer an even slower recovery.

A persistently lethargic economy will continue to constrain State budget revenues. That means the Governor and Legislature will face tough choices and more hard work to continue the fiscal progress made in 2011. As they undertake the task in this era of limited resources, infrastructure investment, and the question of how the State pays for it, should have a place at the center of the discussion along with other vital public services.

## KEY FINDINGS AND DATA

THE CHALLENGE AHEAD: BUDGET AND DEBT ESTIMATES - This section presents 10 -year estimates for State budget revenues and expenditures, including debt service payments.

Estimates are provided for three different scenarios that cover the period 2011-12 through 2020-21:

Scenario 1: The State issues no new GO or lease revenue bond (LRB) debt over the 10-year period.

Scenario 2: The State sells all $\$ 37.1$ billion of currentlyauthorized, but unissued GO bonds and $\$ 12.1$ billion of currently-authorized, but unissued LRB debt.

Scenario 3: The State issues the currently-authorized, unissued GO and LRB debt, plus about $\$ 20$ billion of new, not-yet authorized bonds proposed by the California Strategic Growth Plan (SGP).

- Budget deficits (without corrective actions): Annual budget shortfalls would peak in 2020-21 under all three scenarios - at $\$ 6$ billion under Scenario 1, $\$ 9.8$ billion under Scenario 2 and $\$ 11$ billion under Scenario 3.
- Debt service: As a percentage of General Fund revenues, debt service payments on GO bonds and LRBs would be less at the end of the period than at the start under all three scenarios. The ratio would fall from 7.8 percent to 4.1 percent under Scenario 1, from 7.8 percent to 6.8 percent under Scenario 2 and from 7.8 percent to 7.7 percent under Scenario 3.

In dollar amounts, debt service would shrink under Scenario 1, but grow under Scenarios 2 and 3. Scenario 1 - from $\$ 6.8$ billion to $\$ 5.6$ billion. Scenario 2 - from $\$ 6.9$ billion to $\$ 9.3$ billion. Scenario 3 - from $\$ 6.9$ billion to $\$ 10.5$ billion.

MARKET FOR STATE BONDS - This section discusses market forces and developments that provide context for the interest rates on California bonds, and the demand for those bonds.

Supply: The issuance of new municipal bonds by issuers in California and across the nation plunged in 2011. Through July 31, compared to the same period in 2010, issuance was down by 47 percent in California and 39 percent nationally.

Many issuers, including the State, reduced issuance to help close budget gaps by cutting debt service costs. The reduced supply helped lower interest rates on municipal bonds.

Interest rates: Over the last two years, interest rates on municipal bonds have been highly volatile. The volatility has been caused by several factors including: supply, shifting investor demand, international sovereign debt problems and relative returns on alternative investments. In California, rates on the State's tax-exempt long-term (30-year) GO bonds were about 5.4 percent in June 2010, rose to about to 6 percent at the start of 2011, then fell to approximately 4.9 percent in August 2011.

SNAPSHOT OF STATE'S DEBT - This section provides data on the State's outstanding debt and estimates of the

State's planned sales of GO bonds and LRBs in 2011-12 and 2012-13.

Outstanding debt: As of June 30 2011, outstanding General Fund-backed debt (mainly GO bonds and LRBs) totaled $\$ 82.6$ billion. Economic Recovery Bonds, veterans bonds and other State bonds not paid from the General Fund totaled $\$ 8.4$ billion. The State's total outstanding debt was $\$ 91$ billion.

Planned sales 2011-12 and 2012-13: According to preliminary estimates by the State Treasurer's Office (STO), the State will issue a combined $\$ 15.5$ billion of GO bonds and LRBs in the two fiscal years. That includes $\$ 10$ billion of GO bonds and $\$ 5.5$ billion of LRBs.

MEASURING DEBT BURDEN - This section summarizes various ratios used to measure the level of the State's debt burden. It provides data for three ratios to show how California's General Fund-supported debt load compares to the national median (for all 50 states) and the 10 most populous states. California's burden is much heavier than the national median and the 10 -state median.

Debt as percentage of General Fund revenues: 7.1 percent in 2010-11 and 7.8 percent in 2011-12.

Debt as percentage of total personal income: California, 6.0 percent; national median, 2.8 percent; 10 -state median, 2.9 percent.

Debt per capita: California, $\$ 2,542$; national median, $\$ 1,066 ; 10$-state median, $\$ 1,089$.

Debt as percentage of Gross Domestic Product (GDP): California, 5.1 percent; national median, 3.9 percent; 10-state median, 3.7 percent.
ANALYSIS OF STATE'S CREDIT RATINGS - This section details what S\&P, Moody's and Fitch think about the State's creditworthiness. While all three agencies say the State faces continued financial challenges, they agree the 2011-12 budget represented a marked improvement in California's fiscal management. Some examples of comments from the agencies' post-budget reports on the State:
$S \& P:$ Improved liquidity compared to recent years.
Moody's: Current year budget is less reliant on one-time revenues and accounting gimmicks than budgets enacted in recent years.

Fitch: Current year budget includes recurring solutions, which if achieved and sustained would materially reduce the state's longstanding structural gap.

## The Challenge Ahead: Budget and Debt Estimates

## INTRODUCTION

In the Silicon Valley they say, "Invest or die."
A modified version of the tech industry adage can be applied to California's public works infrastructure:

- Invest - or handicap our state's economy and global competitiveness.
- Invest - or diminish our quality of life.
- Invest - or punctuate California's future with a very big question mark.

The need for a top-notch infrastructure is widely-recognized.

- In listing its "Five Pillars of Economic Recovery" this year, the California Chamber of Commerce included "investing in public works that provide the backbone for economic growth."
- "For our economic future," proponents of Proposition 1D said in 2006, when they convinced voters to pass the educational facilities bond measure.
- The July 2011 report "Silicon Valley in Transition" said of infrastructure, "Later is simply not good enough when it comes to making the investments that will keep the Valley attractive to entrepreneurs and talented workers and their families."

To make the necessary infrastructure investments, California faces some heavy lifting. Most of our current system of roads, schools, levees, water delivery and the like was designed and built more than three decades ago to accommodate the 25 million people then expected to live in California by the mid-1970s. We're now at around 39 million and projected to reach 60 million by 2050 .

The Treasurer's 2007 Debt Affordability Report (DAR) laid out the challenge. The report estimated that to accommodate population growth, California needed to build: 220,000 new homes every year; 19 classrooms every day for five years; storage and delivery capacity to transport an additional 200,000 acre-feet of water to Central and Southern California; and enough highways for 42 percent more vehicles.

So, infrastructure improvement and development is imperative, the job ahead clear. California has the capacity to accomplish the task. The state is the world's $8^{\text {th }}$-largest economy, with a GDP of $\$ 1.9$ trillion.

The crucial question is: How do we go about making the investment? The analysis in this section should make clear that as the State devises a long-range financing plan, and continues to contend with the persistent effects of the recession, carefully managing debt service's burden on the General Fund should be at or near the top of policymakers' priority list.

## THE PROBLEM

Bond debt service payments compete for State General Fund dollars with critical services - public education, health care, public safety, environmental protection and others. In recent years, debt service has been consuming a rapidly growing share of the General Fund.

In 2003-04, debt service took 3.4 percent of General Fund revenues. In 2010-11, the number grew to 7.1 percent. In 2011-12, STO estimates the ratio will be 7.8 percent. That means in just nine years, debt service's share of the General Fund has increased by 127 percent. This increase has resulted from a combination of factors including: greatly increased sales of bonds authorized by voters in 2006; greatly reduced General Fund revenues caused by the prolonged downturn
in California's economy; the expiration in 2011 of temporary tax and fee surcharges; and redirection of one-cent sales tax revenues to local governments starting in 2011-12.

If the State, during times of limited or shrinking resources, continues to finance all required infrastructure investments with borrowing paid for by the General Fund, debt service payments will continue to grow. That growth will come at the expense of other vital public services. Those services already are under severe strain. Since the 2007 DAR, annual General Fund revenues to pay for those services have fallen from $\$ 104$ billion to as low as $\$ 82$ billion.

This section considers the possibility that hard fiscal times may continue. It looks out 10 years and estimates the cost of borrowing for infrastructure under three scenarios. Each scenario assumes the State will have to close sizeable annual budget deficits over the decade.

Fortunately, the budget-balancing actions taken in 2011 by the Legislature and Governor substantially reduced the estimated ongoing imbalance between General Fund revenues and expenditures. Nevertheless, as the Treasurer has stated, while great progress has been made, more work remains to bring the State budget into long-term balance. Determining the adequate amount of revenues, and deciding the relative priority of funding public services and financing infrastructure improvements, will be among the most important choices confronting legislators and the Governor as they craft State budgets over the coming decade.

## LONG-TERM BUDGET ESTIMATES

To help the Legislature and Governor consider debt options, the STO periodically publishes long-term fiscal estimates. The estimates have focused on debt structure and payments, and the extent to which those factors contribute to General Fund spending requirements.

This year's DAR provides estimates of General Fund revenues and spending - both annual operating expenses and debt service - for the next 10 years starting in 2011-12. Our estimates use the Department of Finance's (DOF) published revenue and expenditure estimates for 2011-12 through 201415. For 2015-16 through 2020-21, STO's model assumes both revenues and non-debt expenditures will grow by 5.0 percent annually. This assumption reflects an expectation the overall budget, including revenues and spending, will grow roughly at the same annual rate as California's population (projected at 1 percent) and economy (projected at 4 percent).

STO's long-term estimates reflect the most current information available from DOF at the time we completed
our analysis. Subsequent events have slightly modified the outlook for 2011-12. These events, however, do not materially affect STO's long-term estimates.

To estimate annual expenditures on debt service, STO disaggregated the costs associated with General Fundbacked debt already issued, debt already authorized but unissued, and any newly-authorized debt which would result from continued implementation of the SGP, as updated in 2008.

The estimates in this DAR are illustrative, not oracular. They are not precise enough to measure the State's longterm fiscal condition. Future amounts of debt issuance will depend on departmental spending needs, overall budget constraints, market conditions, refinancing opportunities and other factors. STO provides the estimates to help policymakers assess the magnitude and probable timing of the fiscal choices they face.

## DEBT SERVICE SCENARIOS

The STO examined three scenarios:

- SCENARIO I: BUDGET OUTLOOK ASSUMING NO NEW DEBT. The first scenario assumes the State issues no new debt during the next decade - no newlyauthorized bonds and none of the $\$ 37.1$ billion of GO bonds or $\$ 12.1$ billion of LRBs already authorized by voters or the Legislature but not sold. The authorized but unsold GO bonds include $\$ 21.3$ billion of transportation bonds, $\$ 4.7$ billion of K-12 bonds, $\$ 731$ million of higher education bonds, $\$ 1.9$ billion of stem cell bonds, $\$ 6.4$ billion of natural resources and environmental protection bonds, $\$ 1.4$ billion of housing bonds and more.

Figure 1 shows annual General Fund revenues and expenditures for each year from 2011-12 through 202021. Spending for "K-14 schools," "debt service," and "all other" programs is shown separately. In estimating debt service costs, STO calculated the payments only on debt already issued.

Figure 1 shows the annual operating budget is estimated to be balanced in the first year. But starting in 2012-13 and extending through the rest of the decade, operating budgets are unbalanced every year, with estimated spending exceeding revenues. By 2020-21, the annual operating deficit is about $\$ 6.0$ billion. To the extent these estimates prove accurate, some combination of additional revenues or spending reductions will be required to balance the State budget in future years.

## FIGURE I

NO NEW BORROWING, ESTIMATED GENERAL FUND REVENUES AND SPENDING DEBT SERVICE INCLUDES PAYMENT ONLY FOR EXISTING BOND OBLIGATIONS 2011-12 THROUGH 2020-21


Debt service in 2011-12 is $\$ 6.8$ billion, or 7.8 percent of General Fund revenues. By 2020-21, debt service is estimated to be $\$ 5.6$ billion, or 4.1 percent of the General Fund.

Figure 2 illustrates the year-by-year payments necessary to service debt as estimated by STO. The figure shows annual payments as a share of revenues and as a dollar amount appropriated from the General Fund.

- SCENARIO 2: BUDGET OUTLOOK ASSUMING ISSUANCE OF CURRENTLY AUTHORIZED DEBT ONLY. Figure 3 adds STO's estimate of annual General Fund payments on $\$ 49.1$ billion of authorized GO and LRB debt that had not been sold as of July 2011.

STO estimated annual debt service costs through 202021 assuming the Treasurer issued all of this debt under a reasonable schedule. Under this scenario, the State would sell the following GO bonds over the next 10 years: $\$ 21.3$ billion of transportation bonds, $\$ 4.7$ billion of K-12 bonds, $\$ 731$ million of higher education bonds, $\$ 1.9$ billion of stem cell bonds, $\$ 6.4$ billion of natural resources and environmental protection bonds, $\$ 1.4$ billion of housing bonds, and other GO bonds and LRBs.

Annual operating deficits rise from $\$ 5.9$ billion in 2012-13 to $\$ 9.8$ billion in 2020-21 (absent corrective
actions). Under this scenario, debt service payments are $\$ 6.9$ billion ( 7.8 percent of revenues) in 2011-12. By the last year, debt service is $\$ 9.3$ billion ( 6.8 percent of the General Fund).

Figure 4 graphs the year-by-year debt service payments as a percentage of General Fund revenues and lists the annual expenditure amount.

- SCENARIO 3: FUNDING The sGp. The SGP, first unveiled in 2006 and amended in 2008, proposed a $\$ 238.6$ billion infrastructure finance plan that extends through 2016. That total includes state, federal and local funding. Through July 2011, a little more than $\$ 145$ billion had been committed to specific projects.

The SGP called for $\$ 100.5$ billion of new (not previously authorized) State bonds - $\$ 90.7$ billion of GO bonds and $\$ 9.8$ billion of LRBs. Through July 2011, voters had authorized $\$ 52.6$ billion of those GO bonds, and the Legislature had authorized $\$ 8.4$ billion of the LRBs. Of this amount, the State had issued $\$ 21.7$ billion of the GO bonds and $\$ 524$ million of the LRBs.

A total of $\$ 39.6$ billion of the new bonds proposed in SGP had not yet been authorized as of July 31, 2011. That amount includes $\$ 38.2$ billion of GO bonds and $\$ 1.4$ billion of LRBs. Among the not-yet-authorized

## FIGURE 2

debt service assuming no new debt
RATIO OF ESTIMATED GENERAL FUND DEBT SERVICE PAYMENTS
TO REVENUES AND ANNUAL DEBT SERVICE AMOUNT (IN BILLIONS), 2011-12 THROUGH 2020-21


Note: 2012-13 includes $\$ 1.9$ billion payment on Proposition 1A bonds.

## FIGURE 3

ISSUE AUTHORIZED BUT UNSOLD DEBT, ESTIMATED GENERAL FUND REVENUES AND SPENDING INCLUDING SPENDING ON DEBT SERVICE FOR EXISTING AND AUTHORIZED BUT UNSOLD BONDS 2011-12 THROUGH 2020-21


FIGURE 4
DEBT SERVICE PAYMENTS WITH LIMITED NEW DEBT
ESTIMATED PERCENTAGE OF GENERAL FUND DEBT SERVICE PAYMENTS
TO REVENUES AND ANNUAL DEBT SERVICE AMOUNTS (IN BILLIONS), 2011-12 THROUGH 2020-21


Note: 2012-13 includes $\$ 1.9$ billion payment on Proposition 1A bonds.

SGP bonds: $\$ 11.8$ billion of water bonds; $\$ 11.6$ billion of K-12 bonds; $\$ 6.3$ billion of higher education bonds; $\$ 2$ billion of court facilities bonds; and others.

BUDGET OUTLOOK ASSUMING FURTHER
ACTIVITY ON SGP. STO estimates assume most of the bonds proposed in the SGP already have been authorized. To complete the plan as depicted in this estimate, the voters and Legislature would need to approve another $\$ 39.6$ billion combined in GO bonds and LRBs. STO estimated the effect on annual
debt service payments if the entire $\$ 39.6$ billion was authorized and the State issued half of that debt in equal annual increments beginning in 2016. (The remainder of SGP bonds would be issued in the following decade, beyond the view of our estimate period.)

As displayed in Figure 5, these debt payments add about $\$ 1$ billion a year to the annual operating deficit in the latter years of the estimate period. By 2020-21, the budget deficit rises to about $\$ 11$ billion.

## FIGURE 5

mORE SGP DEBT, ESTIMATED GENERAL FUND REVENUES AND SPENDING
DEBT SERVICE INCLUDES PAYMENT FOR EXISTING BONDS, AUTHORIZED BUT UNSOLD BONDS AND A PORTION OF SGP 2011-12 THROUGH 2020-21


Under this scenario, debt-service payments rise from $\$ 6.9$ billion in 2011-12 ( 7.8 percent of revenues) to $\$ 10.5$ billion ( 7.7 percent of revenues) by 2020-21. See Figure 6.

## CONCLUSION

Since the 2007 DAR, STO has urged State policymakers to take a longer-term approach to budgeting that fully incorporates infrastructure investment into the process. We have recommended they carefully consider and set priorities, and that they devise a strategic infrastructure financing plan that reduces reliance on the State General Fund. We have suggested this long-term financing plan include alternatives such as user/beneficiary fees to finance State debt where appropriate, or new sources of revenue dedicated to payment of additional debt service.

In its August 2011 report, "A Ten-Year Perspective: California Infrastructure Spending," LAO echoed
and reinforced many of the infrastructure financing recommendations STO made in earlier DARs. For example, the LAO report included specific recommendations on how the Legislature can change its procedures to incorporate long-term infrastructure planning, prioritysetting and financing into its annual budget-making process. The Treasurer strongly supports the adoption of those recommendations.

The 2007-09 recession, and other factors, altered the revenue, expenditure and debt service estimates that formed the backdrop of the ideas STO originally offered in the 2007 DAR. Those economic and fiscal changes have led California to a point where smarter infrastructure planning and financing is more important than ever. The 2011-12 State budget demonstrated a renewed commitment to wise, balanced and gimmick-free fiscal management. The estimates in this report, while only illustrative, bring the need for sustained vigilance into sharp relief.

## FIGURE 6

DEBT SERVICE PAYMENTS WITH MORE SGP DEBT
ESTIMATED GENERAL FUND DEBT SERVICE PAYMENTS TO REVENUES
AND ANNUAL DEBT SERVICE AMOUNTS (IN BILLIONS), 2011-12 THROUGH 2020-21


Note: 2012-13 includes $\$ 1.9$ billion payment on Proposition 1A bonds.

## Market for State Bonds

The State in 2010 continued to be the largest issuer in the $\$ 2.4$ trillion U.S. municipal bond market. The State's issuance included both tax-exempt and taxable bonds. The taxable bonds consisted mainly of Build America Bonds (BABs). Under the BABs program, municipal issuers sold long-term bonds at higher taxable interest rates, but received a 35 percent subsidy from the federal government to offset a portion of the higher interest payments. The net borrowing costs were lower than the interest on tax-exempt bonds.

The savings for taxpayers led the State to aggressively use BABs. As a result, from the inception of the BABs program in 2009 until its expiration at the end of 2010 , the State became one of the market's largest issuers of taxable bonds.

The State issued no GO bonds or LRBs in spring 2011. However, with the on-time adoption of the 2011-12 Budget Act, the State reentered the bond market in September, and plans additional issuances in the fourth quarter of 2011.

The market and price for the State's bonds are affected by factors specific to the State, as well as overall conditions in capital markets. Since July 1, 2010, these factors have included the California and national municipal bond supply, investor perceptions of the State's credit, investor demand, the ability to issue $B A B s$, the performance of alternative investments, including other bonds, and the performance of the equity and commodity markets.

The State faces financial challenges similar to those confronted by states and local governments across the country. California, which suffered disproportionately from the housing market crash, continues a frustratingly slow recovery from the 2007-09 recession. The severe downturn and languid comeback have left the State and local governments with significant revenue declines and
budget shortfalls. Political hurdles make it extremely difficult to fill the gap by raising taxes. As a result, the State and local governments have been forced to cut deeply into public services. With the attendant job losses, the spending reductions have undermined the economic recovery effort.

Budget challenges for the State this year included:

- Expiration on June 30, 2011 of temporary sales tax, income tax and vehicle license fee surcharges approved by the Legislature in 2009.
- Expiration on December 31, 2010 of the American Recovery and Reinvestment Act (ARRA), the federal stimulus program.

With the expiration of the temporary tax and fee surcharges and ARRA, $\$ 11.3$ billion of State and federal funds disappeared.

Despite the tough challenges, the Legislature and Governor on June 30, 2011 adopted an on-time, balanced budget for 2011-12. To close a $\$ 27.2$ billion shortfall over 201011 and 2011-12, the adopted budget slashed spending by $\$ 11.1$ billion. It also contained $\$ 13.2$ billion of revenue solutions and $\$ 2.9$ billion of borrowing and fund transfers. The revenue solutions included an assumption the State would net $\$ 4$ billion in revenues unanticipated when the Governor revised the budget plan in May. The spending plan incorporated automatic mid-year expenditure reductions called "triggers" - if an updated forecast in mid-December shows revenues will fall short of 2011-12 Budget Act estimates by at least $\$ 1$ billion.

DOF estimated the budget will reduce the State's annual ongoing structural deficit through 2014-15 from double digits to low single digits. The market reacted positively to
the budget. Credit spreads tightened and the S\&P returned the State's GO credit outlook to Stable from Negative.

To provide a better understanding of the market for the State's bonds, the discussion below reviews the larger municipal and taxable bond markets.

## SUPPLY AND DEMAND

SUPPLY. Municipal bond supply has been dramatically different in 2011 compared to 2010. In 2010, the most significant factor in the municipal market was the BABs program. BABs impacted the municipal market in a number of ways. In general, the effective interest rate on $B A B s$, net of the 35 percent federal interest subsidy, was significantly less than tax-exempt interest rates on longer maturities. As a result, BABs were very popular, not just with the State, but with many municipal issuers. During the program's lifespan of less than two years, approximately $\$ 181$ billion of BABs had been issued nationwide. The State accounted for approximately $\$ 13.8$ billion of that total. The heavy issuance of BABs reduced the new-issue supply of tax-exempt bonds, which put downward pressure on tax-exempt interest rates.

Despite the success of BABs, Congress rejected proposals to extend the program beyond 2010. In combination with the attractive savings, BABs' impending expiration caused many issuers to accelerate their bond issuance into the last quarter of 2010. These issuances often offered a combination of BABs in the longest maturities and tax-exempt bonds in shorter maturities. That allowed issuers to take advantage of the benefit provided by each type of bonds.

The result was what market participants dubbed a "BABalanche." In the fourth quarter of 2010, municipal bond issuance totaled $\$ 134$ billion, including $\$ 44$ billion of BABs. Total issuance for all of 2010 reached a record-high $\$ 433$ billion.

The expectation was that without BABs, the volume of tax-exempt bond issuance would rise in 2011, causing an increase in tax-exempt interest rates.

At the beginning of 2011, as shown by Figure 8, tax-exempt interest rates did rise. However, because many issuers had accelerated their bond sales into 2010, and states and local governments confronted fiscal challenges, issuance volume ultimately declined dramatically through July 2011.

Figures 9 and 10 present the cumulative volume of national and California municipal bond issuance in 2010 and 2011. On a year-to-date basis, as of July 31, 2011, issuance was down 39 percent nationally and 47 percent in California compared to the same period in 2010.

Each year, there are billions of dollars of municipal bond redemptions which generally are reinvested in municipal bonds. The new-issue supply usually exceeds these redemptions and provides tax-exempt reinvestment opportunities. This year, however, redemptions actually have exceeded new issuances. As a result of the dramatically lower supply of offerings, tax-exempt interest rates declined. However, when tax-exempt supply rises, interest rates will follow suit.

## FIGURE 8

TRENDS OF TAX-EXEMPT INTEREST RATES


[^0]FIGURE 9
CALIFORNIA CUMULATIVE BOND VOLUME, 2010 AND YTD 2011


Source: Thomson Municipal Market Monitor (TM3)

## FIGURE IO

U.S. CUMULATIVE BOND VOLUME, 2010 AND YTD 2011


Source: Thomson Municipal Market Monitor (TM3)

DEMAND. By their nature, tax-exempt bonds have a limited universe of investors. The investor base became even more limited in the aftermath of the 2008 financial crisis. Many non-traditional tax-exempt investors that had become significant market participants, such as hedge funds, exited the municipal market. This significantly reduced the demand for tax-exempt bonds.

The end of BABs also crimped demand. BABs had expanded the universe of municipal bond buyers to include taxable fixed-income investors. BABs' demise further pushed the tax-exempt investor universe in 2011 back to its narrower, traditional base, including retail buyers (both traditional direct retail and professional retail), tax-exempt mutual funds and, to a lesser extent, insurance companies and corporations. As a result of the shift in the composition of the investor base,
technical factors, such as new-issue supply and the amount of maturing bonds or bonds subject to redemption, have had a greater impact on municipal bond pricing.

The U.S. stock market declined by 14 percent between July 22, 2011 and August 22, 2011. The fall came against a backdrop of slowing economic growth, S\&P's downgrade of the federal government's credit rating and the European debt crisis. The stock market's tumble stirred a dramatic flight to quality, and demand for U.S. Treasuries soared. On August 18, 2011, the interest rate on 10 -year Treasuries was 2.07 percent, the lowest level since the 1960 s.

Tax-exempt bond funds are an important investor class for tax-exempt bonds. To be cautious and prepared for potential investor redemptions, however, they have become less active in the municipal market. In addition, as Figure 11 shows, over the course of the last 10 months, tax-exempt bond funds have experienced more than $\$ 44.3$ billion in net redemptions (cash outflows). This has been attributed primarily to investors deciding to withdraw money as returns on alternative investments improved.

These market developments can have both positive and negative effects on the pricing of tax-exempt municipal bonds. In general, tax-exempt bond rates benefit during flights to quality, albeit to a much lesser degree than U.S. Treasuries. Tax-exempt interest rates also decline when alternative markets, primarily the stock market, perform poorly. On the other hand, tax-exempt rates rise when stock market performance is strong.

## INTEREST RATE VOLATILITY

Between July 1, 2010 and August 22, 2011, tax-exempt and taxable interest rates, and interest rate relationships, were volatile. As discussed above, the high volatility reflects shifts in investor sentiment, their evaluation of international sovereign debt, their assessment of U.S. and municipal credit risk, the relative returns on alternative investments and the municipal bond supply. Tax-exempt interest rates were hurt in 2010 by media reports that linked the European debt crisis and sovereign risk to an expected deterioration in municipal credit quality. This caused dislocations in fundamental ratios and spreads. In addition, the expiration of the BABs program affected the performance of both taxable and tax-exempt municipal bonds.

In general, as U.S. Treasury yields have reached historic lows, other types of securities have not kept pace. Figures 12 and 13 present the relationship between U.S. Treasuries, and tax-exempt municipal bonds and corporate taxable bonds, from June 2010 through August 2011.

As shown in Figure 12, the relationship between interest rates on 30 -year tax-exempt bonds and 30 -year Treasury bonds has moved dramatically over this period. Overall, between July 1, 2010 and August 19, 2011, this ratio has ranged from a low of 96 percent to a high of 112 percent meaning the rate on 30 -year tax-exempt bonds ranged from 96 percent of the 30 -year Treasury rate to 112 percent. A recent flight to quality has driven investors worldwide to purchase Treasuries and caused Treasury yields to decline

## FIGURE II

MUNICIPAL BOND MARKET, MONTHLY FUND INFLOWS/OUTFLOWS


[^1]FIGURE 12
TAX-EXEMPT VS. TREASURY BONDS RATIO


Source: Thomson Municipal Market Monitor (TM3)

FIGURE I3
CORPORATE VS. TREASURY BONDS SPREAD


Source: Federal Reserve Board
by more than tax-exempt yields. This trend increased the ratio to the high of 112 percent on August 19, 2011. Similarly, as a result of the flight to quality, the interest rate spread between the Baa-rated taxable corporate bonds and Treasury bonds ranged from a low of 137 basis points to the recent high of 237 basis points. (A basis point is one onehundreth of a percentage point.)

## THE STATE'S BONDS

From July 1, 2010 through August 22, 2011, yields on the State's tax exempt and taxable GO bonds also have moved dramatically. As discussed above, the changes over this period resulted from a variety of factors. These factors include: underlying global economic conditions; an investor flight to quality; a large supply of BAB and tax-exempt
bonds at the end of 2010, followed by extremely low supply in 2011; and perceptions of the State's credit profile.

As shown Figure 14, the State's tax-exempt and taxable yields remained at 2010's high levels through the first few months of 2011 then declined for most of the rest of the year through August. Taxable yields have ranged from 7.30 percent to 5.90 percent, while tax-exempt yields have ranged from 6.24 percent to 4.76 percent.

Figure 15 depicts the State's bond prices from a spread perspective. With the expiration of the BABs program and positive credit developments, the State's taxable bond spread
to the 30 -year U.S. Treasury declined dramatically, from 320 basis points to 180 basis points. The recent uptick in the spread to U.S. Treasuries reflects the underperformance of municipal bonds as a whole caused by the flight to quality. Due to positive credit developments and low newissue supply, the State tax-exempt spread to the "AAA" Municipal Market Data index also tightened considerably, from a high of 135 basis points to a low of 81 basis points.

Both Figures 14 and 15, with the vertical line down the middle, indicate the expiration of the BABs program on December 31, 2010.

## FIGURE I4

TRENDS OF CALIFORNIA GO BOND YIELDS, 30-YEAR GO BONDS


Source: Thomson Municipal Market Monitor (TM3)

## FIGURE I5

TRENDS OF CALIFORNIA GO BOND SPREADS, 30-YEAR GO BONDS


## SECTION 3 <br> Snapshot of State's Debt

## OVERVIEW

Figure 16 summarizes the State's debt as of June 30, 2011. This debt includes GO bonds approved by voters, LRBs authorized by the Legislature, Proposition 1A receivables bonds authorized by the 2009-10 Budget Act ${ }^{1}$ and other Special Fund or Self Liquidating bonds. The numbers include both bonds the State has sold (outstanding) and bonds authorized but not yet sold. A detailed list of the State's outstanding bonds, and their debt service requirements, can be found in Appendices A and B (except for Special Fund Lease Revenue bonds that were issued through a Joint Powers Authority).

- Approximately 6.1 percent of all GO bonds carry variable interest rates. The law authorizes up to 20 percent of GO bonds (including Economic Recovery Bonds) to be variable rate. The remaining 93.9 percent of the State's GO bonds have fixed interest rates.
- The State has no interest rate hedging contracts on any debt discussed in this report.


## INTENDED ISSUANCE OF GENERAL FUND-BACKED BONDS

When available, STO uses DOF projections for the State's future debt issuance. Although DOF has provided intended issuance estimates for LRBs, it is in the process of analyzing departmental funding needs for GO bonds in 2011-12 and 2012-13. Therefore, the GO bond issuance estimates contained in this report have not been provided by DOF. They are preliminary and subject to change.

Projections for debt issuance are based on a variety of factors and are updated from time to time. Factors that could impact the amount of issuance include the timing of the State budget enactment and general market conditions. Actual issuance amounts often vary significantly from initial estimates.

[^2]FIGURE I6
SUMMARY OF STATE'S DEBT (a)
AS OF JUNE 30, 2011 (DOLLARS IN BILLIONS)

| GENERAL FUND SUPPORTED ISSUES | OUTSTANDING | AUTHORIZED <br> BUT UNISSUED | TOTAL |
| :--- | :---: | :---: | :---: |
| General Obligation Bonds | $\$ 71.28$ | $\$ 37.05$ | $\$ 108.33$ |
| Lease Revenue Bonds (b) | 9.43 | 12.09 | 21.52 |
| Proposition 1A Receivables Bonds | 1.90 | - | 1.90 |
| TOTAL GENERAL FUND SUPPORTED ISSUES | $\$ 82.61$ | $\$ 49.14$ | $\$ 131.75$ |

SPECIAL FUND/SELF LIQUIDATING ISSUES

| Economic Recovery Bonds | $\$ 7.17$ | $\$-$ | $\$ 7.17$ |
| :--- | :---: | :---: | :---: |
| Veterans General Obligation Bonds | 0.80 | I.14 | 1.94 |
| California Water Resources Development General Obligation Bonds | 0.42 | 0.17 | 0.59 |
| TOTAL SPECIAL FUND/SELF LIQUIDATING ISSUES | $\$ 8.39$ | $\$ \mathrm{II} .3 \mathrm{I}$ | $\$ 9.70$ |
| TOTAL | $\$ 91.00$ | $\$ 50.45$ | $\$ \mathrm{I} 4 \mathrm{I} .45$ |

(a) Debt obligations not included in Figure16: Any short-term obligations such as commercial paper or RANs; revenue bonds issued by State agencies which are repaid from specific revenues outside of the General Fund; and "conduit" bonds, such as those issued by State financing authorities on behalf of other governmental or private entities whose obligations secure the bonds.
(b) Authorized but unissued figure for LRBs differs from the amount included in the August 2011 LAO report, "A Ten-Year Perspective: California Infrastructure Spending." The figure provided in the LAO report excludes authorizations for Department of General Service office buildings, Judicial Council courthouse projects, and FI\$Cal. Both STO and LAO figures exclude $\$ 356.3$ million of LRBs appropriated for the California Department of Corrections and Rehabilitation's San Quentin Condemned Inmate Complex. Governor Edmund G. Brown Jr. on April 28, 2011 cancelled that project.

Figure 17 shows intended issuances over the next two fiscal years of General Fund-backed bonds. Only currently authorized but unissued GO bonds and LRBs are reflected in Figure 17's numbers. The intended issuances may increase should new bond programs be approved.

As shown in Figure 17, STO preliminarily estimates the State will issue a combined $\$ 15.5$ billion of General Fund-backed bonds in 2011-12 and 2012-13. Using these assumptions for debt issuance, STO estimates debt service payments from the General Fund will increase by $\$ 95.8$ million in 2011-12 and \$535.6 million in 2012-13.

## FIGURE I7

INTENDED ISSUANCES GENERAL FUND-SUPPORTED BONDS (a) (DOLLARS IN MILLIONS)

|  | $2011-12$ | $2012-13$ |
| :--- | ---: | ---: |
| General Obligation Bonds | $\$ 5,000$ | $\$ 5,000$ |
| Lease Revenue Bonds | 2,258 | 3,234 |
| TOTAL GENERAL FUND-SUPPORTED BONDS | $\$ 7,258$ | $\$ 8,234$ |

[^3]
## Measuring Debt Burden

## DEBT RATIOS

Measuring California's debt level with various ratios - while not particularly helpful in assessing debt affordability does provide a way to compare the State's burden to that of other borrowers. The three most commonly-used ratios are: debt service as a percentage of General Fund revenues; debt as a percentage of personal income; and debt per capita. A fourth ratio, debt as a percentage of GDP, although not as commonly used as the others, also can be a useful comparison tool.

## DEBT SERVICE AS A PERCENTAGE OF GENERAL FUND REVENUES

Because debt service is considered a fixed part of a budget, credit analysts compare a state's General Fund-supported debt service to its General Fund revenues to measure its fiscal flexibility. California's ratio of debt service to General Fund revenues was 7.1 percent $^{2}$ in 2010-11. That figure is based on $\$ 6.8$ billion in GO, lease revenue and Proposition 1 A debt service payments versus $\$ 94.8$ billion in General Fund revenues. The STO estimates this ratio will be 7.8 percent ${ }^{3}$ in 2011-12. That estimate is based on $\$ 6.9$ billion
in debt service payments versus $\$ 88.5$ billion in General Fund revenues (as projected by DOF). ${ }^{4}$

## DEBT AS A PERCENTAGE OF <br> PERSONAL INCOME

Comparing a state's level of debt to the total personal income of its residents is a way to measure the borrower's ability to generate revenues to repay its obligations. In its 2011 State Debt Medians report, Moody's lists the State's ratio of net tax-supported debt to personal income at 6.0 percent. ${ }^{5}$

## DEBT PER CAPITA

Debt per capita measures residents' average share of a state's total outstanding debt. It does not account for the employment status, or the income or financial resources of residents. As a result, debt per capita does not reflect a state's ability to repay its obligations as well as other ratios, such as debt service as a percentage of General Fund revenues or debt as a percentage of personal income. In its 2011 State Debt Medians report, Moody's lists the State's net taxsupported debt per capita at $\$ 2,542$.

[^4]
## DEBT AS A PERCENTAGE OF GDP

Debt as a percentage of GDP generally is used to measure the financial leverage provided by an issuer's economy. Specifically, this debt ratio compares what an issuer owes against what it produces. California has one of the world's largest and most diverse economies, ranking eighth. In its 2011 State Debt Medians report, Moody's lists the State's net tax-supported debt-to-GDP ratio at 5.1 percent.

## CALIFORNIA'S DEBT LEVELS COMPARED TO OTHER LARGE STATES

Moody's calculates the ratios of net tax-supported debt to personal income, debt per capita and debt as a percentage of state GDP for each state and publishes an annual report containing the median ratios (State Debt Medians report). It is useful to compare California's debt levels with those of its "peer group" of the 10 most populous states. As shown in Figure 18, the debt to personal income and debt per capita ratios of these 10 states are, on average, higher than the Moody's median for all states combined. California's ratios of debt to personal income, debt per capita and debt as a percentage of GDP rank well above the medians for the 10 most populous states.

FIGURE I8
DEBT RATIOS OF 10 MOST POPULOUS STATES, RANKED BY RATIO OF DEBT TO PERSONAL INCOME

| STATE | MOODY'S/S\&P/ FITCH(a) | DEBT TO PERSONAL INCOME(b) | DEBT PER <br> CAPITA(c) | DEBT AS A \% OF STATE GDP(d) |
| :---: | :---: | :---: | :---: | :---: |
| Texas | Aaa/AA $+/ A A A$ | 1.6\% | \$612 | 1.66\% |
| Michigan | Aa2/AA-/AA- | 2.2 | 762 | 6.03 |
| Pennsylvania | Aa1/AA/AA+ | 2.7 | 1,075 | 3.II |
| North Carolina | Aaa/AAA/AAA | 2.3 | 782 | 1. 80 |
| Ohio | Aa1/AA $+/ A A^{+}$ | 2.8 | 1,007 | 3.44 |
| Florida | Aa1/AAA/AAA | 3.0 | 1,150 | 3.93 |
| Georgia | Aaa/AAA/AAA | $3 \cdot 3$ | 1,103 | 2.79 |
| Illinois | A1/A+/A | 5.7 | 2,383 | 3.87 |
| California | A1/A-/A- | 6.0 | 2,542 | 5.08 |
| New York | Aa2/AA/AA | 6.8 | 3,149 | 5.61 |
| MOODY'S MEDIAN ALL STATES |  | 2.8\% | \$r,066 | 3.94\% |
| MEDIAN FOR THE 10 MOST POPULOUS STATES |  | 2.9\% | \$I,089 | 3.66\% |

(a) Moody's Investors Service, Standard \& Poor's, and Fitch Ratings, as of August 2011.
(b) Figures as reported by Moody's Investors Service in their 2011 State Debt Median Report released May 2011. As of calendar year end 2010.
(c) Figures as reported by Moody's Investors Service in their 2011 State Debt Median Report released May 2011. As of calendar year end 2010.
(d) Figures as reported by Moody's Investors Service in their 2011 State Debt Median Report released May 2011. As of calendar year end 2010 State GDP numbers have a 1-year lag.

## Analysis of State's Credit Ratings

The State's current GO bond ratings are A- from Fitch, A1 from Moody's and A- from S\&P. These ratings are the lowest of all 50 states.

Fitch and Moody's in 2011 maintained a stable outlook on the State's credit rating. S\&P on July 7, 2011 upgraded the State's outlook to Stable from Negative. A summary of the rating agencies' latest actions on the State's GO bond ratings is presented in Figure 19.

S\&P had based its negative outlook on the possibility the State would experience a recurring cash deficiency. In revising its outlook, S\&P cited improvement in the structural alignment between the State's recurring revenues and expenditures. S\&P stated, "We believe the enacted budget makes a lot of progress in improving the state's fiscal structure and should reduce the risk to its liquidity. Most of the solutions employed to achieve budget balance are largely realistic and should clear a path for the state to issue its revenue anticipation notes, thereby helping maintain adequate operating liquidity for the 2012 fiscal year."

In its report, S\&P said it might raise the State's rating in the future if the Governor and Legislature continue efforts
to utilize an effective mid-year budget correction process, improve the alignment between revenues and expenditures, and retire outstanding deficit borrowings. On the other hand, S\&P said unanticipated revenue losses could cause the State's outlook to be revised downward.

S\&P on August 5, 2011 took the unprecedented action of lowering the long-term sovereign credit rating of the U.S. S\&P downgraded federal debt to AA+ from AAA. Although the full impact on the State remains to be seen, S\&P published guidance that suggests state and local government ratings may not be directly affected by the downgrade of the U.S. S\&P's ratings for state and local government credits reflect the role of the federal government. However, S\&P analyzes state and local government credits independently due to the constitutional separation of powers between federal and state governments. Because of California's autonomous economy and moderate level of reliance on the federal government compared to some other states, STO believes the State's GO bond rating, in the near term, should be well shielded from a possible downgrade.

Long-term, however, the federal downgrade could present challenges to the State's credit rating. Many State and local

## FIGURE 19

LATEST RATING ACTIONS

| RATING AGENCY | ACTION | DATE |
| :---: | :--- | :---: |
| S\&P | Affirmed A- and revised outlook to stable from negative | July 2011 |
| Fitch | Affirmed A- and stable outlook | September 2011 |
| Moody's | Affirmed A1 and stable outlook | September 2011 |
| S\&P | Affirmed A- and stable outlook | September 2011 |

functions that rely on federal money could see reduced funding. That would put downward pressure on the State's economy and General Fund. As S\&P notes, the potential for future federal cuts underscores the importance of sound budget management as a measure of state and local government credit quality.

A summary of the rating agencies' opinion of the State's credit strengths and challenges is presented in Figure 20.

FIGURE 20
STATE OF CALIFORNIA GENERAL OBLIGATION RATING AGENCY COMMENTARY

|  | FITCH | M00DY'S | S \& P |
| :---: | :---: | :---: | :---: |
| RATING STRENGTHS | - Broad and diverse economy, with growth resuming after recession conditions <br> - Moderate, but above average, debt burden <br> - Current year budget includes recurring solutions, which if achieved and sustained would materially reduce the state's longstanding structural gap | - Large, diverse and wealthy economy <br> - Current year budget is less reliant on one-time revenues and accounting gimmicks than budgets enacted in recent years <br> - Long-term liabilities are moderate compared to many other states | - Economic depth and diversity <br> - Improved liquidity compared to recent years <br> - Significant cash disbursement flexibility which enables the state to maintain adequate cash for priority payments |
| RATING CHALLENGES | - Institutional weakness, including inflexibility imposed by voter initiatives and a partisan policy-making environment <br> - A large and persistent structural imbalance combined with pronounced revenue cyclicality <br> - Accumulated unpaid obligations continue to hamper ability to respond to fiscal challenges | - Political environment in which making timely and productive budget decisions is difficult <br> - Reliance in the past on one-time solutions (including past deficit borrowing) for longer-term problems <br> - Limited financial and budgetary flexibility leads to steep downturns in periods of economic decline <br> - Debt ratios likely to increase in the future | - Current year budget relies on continued favorable performance of state tax revenues and legal viability of some deficit reduction measures <br> - Governance rules that can contribute to delayed and suboptimal fiscal decision making <br> - Large future debt, retirement benefit and budgetary liabilities will siphon future state resources <br> - Standard, but low, financial management assessment due to lack of a meaningful reserve policy and a history of limited revenue forecasting |

appendix a The State's Debt

AUTHORIZED AND OUTSTANDING
NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS
AS OF JUNE 30, 201 I (DOLLARS IN THOUSANDS)

| GENERAL FUND BONDS (NON-SELF LIQUIDATING) | VOTER AUTHORIZATION DATE | VOTER AUTHORIZATION AMOUNT | LONG TERM BONDS OUTSTANDING (a) | $\begin{aligned} & \text { LONG TERM } \\ & \text { BONDS } \\ & \text { UNISSUED (b) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 1988 School Facilities Bond Act | II/08/88 | \$800,000 | \$68,930 | \$2,255 |
| 1990 School Facilities Bond Act | 06/05/90 | 800,000 | 149,745 | 2,125 |
| 1992 School Facilities Bond Act | II/03/92 | 900,000 | 375,035 | 1,789 |
| California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002 | 03/05/02 | 2,600,000 | 2,193,180 | 346,455 |
| California Library Construction and Renovation Bond Act of 1988 | II/08/88 | 75,000 | 21,940 | 2,595 |
| California Park and Recreational Facilities Act of 1984 | 06/05/84 | 370,000 | 22,440 | 1,100 |
| California Parklands Act of 1980 | II/04/80 | 285,000 | 4,515 | - |
| California Reading and Literacy Improvement and Public Library Construction and Renovation Bond Act of 2000 | 03/07/00 | 350,000 | 266,440 | 30,450 |
| California Safe Drinking Water Bond Law of 1976 | 06/08/76 | 175,000 | 6,290 | 2,500 |
| California Safe Drinking Water Bond Law of 1984 | ıI/06/84 | 75,000 | 3,510 | - |
| California Safe Drinking Water Bond Law of 1986 | II/04/86 | 100,000 | 31,240 | - |
| California Safe Drinking Water Bond Law of 1988 | II/08/88 | 75,000 | 37,405 | - |
| California Wildlife, Coastal, and Park Land Conservation Act | 06/07/88 | 776,000 | 173,245 | 7,330 |
| Children's Hospital Bond Act of 2004 | II/02/04 | 750,000 | 640,470 | 85,715 |
| Children's Hospital Bond Act of 2008 | II/04/08 | 980,000 | 530,760 | 449,240 |
| Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 (Higher Education) | II/03/98 | 2,500,000 | 2,055,110 | - |
| Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 (K-12) | II/03/98 | 6,700,000 | 4,897,1IO | II,860 |
| Clean Air and Transportation Improvement Bond Act of 1990 | 06/05/90 | 1,990,000 | 1,018,605 | 79,295 |
| Clean Water Bond Law of 1974 | 06/04/74 | 250,000 | 455 | - |
| Clean Water Bond Law of 1984 | II/06/84 | 325,000 | 17,490 | - |
| Clean Water and Water Conservation Bond Law of 1978 | 06/06/78 | 375,000 | 6,660 | - |

## AUTHORIZED AND OUTSTANDING

## NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 20 II (DOLLARS IN THOUSANDS) CONTINUED

| GENERAL FUND BONDS (NON-SELF LIQUIDATING) | VOTER AUTHORIZATION DATE | $\qquad$ | LONG TERM BONDS OUTSTANDING (a) | LONG TERM BONDS UNISSUED (b) |
| :---: | :---: | :---: | :---: | :---: |
| Clean Water and Water Reclamation Bond Law of 1988 | II/08/88 | 65,000 | 30,345 | - |
| Community Parklands Act of 1986 | 06/03/86 | 100,000 | 6,200 | - |
| County Correctional Facility Capital Expenditure Bond Act of 1986 | 06/03/86 | 495,000 | 39,705 | - |
| County Correctional Facility Capital Expenditure and Youth Facility Bond Act of 1988 | II/08/88 | 500,000 | 123,450 | - |
| Disaster Preparedness and Flood Prevention Bond Act of 2006 | 1ı/07/06 | 4,090,000 | 2,143,785 | 1,932,640 |
| Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990 | 06/05/90 | 300,000 | 156,355 | 12,410 |
| Fish and Wildlife Habitat Enhancement Act of 1984 | 06/05/84 | 85,000 | 6,850 | - |
| Higher Education Facilities Bond Act of 1988 | II/08/88 | 600,000 | 36,135 | - |
| Higher Education Facilities Bond Act of June 1990 | 06/05/90 | 450,000 | 80,970 | 550 |
| Higher Education Facilities Bond Act of June 1992 | 06/02/92 | 900,000 | 442,995 | 1,305 |
| Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 | II/07/06 | 19,925,000 | 8,239,840 | 11,656,150 |
| Housing and Emergency Shelter Trust Fund Act of 2002 | II/OS/02 | 2,100,000 | 1,689,500 | 171,340 |
| Housing and Emergency Shelter Trust Fund Act of 2006 | II/07/06 | 2,850,000 | 1,590,865 | 1,258,990 |
| Housing and Homeless Bond Act of 1990 | 06/05/90 | 150,000 | 3,105 | - |
| Kindergarten-University Public Education Facilities Bond Act of 2002 (Hi-Ed) | II/O5/02 | 1,650,000 | 1,539,105 | 8,820 |
| Kindergarten-University Public Education Facilities Bond Act of 2002 (K-12) | II/O5/02 | 11,400,000 | 10,047,400 | 250,940 |
| Kindergarten-University Public Education Facilities Bond Act of 2004 (Hi-Ed) | 03/02/04 | 2,300,000 | 2,064,720 | 151,825 |
| Kindergarten-University Public Education Facilities Bond Act of 2004 (K-12) | 03/02/04 | 10,000,000 | 8,259,100 | I,4II,040 |
| Kindergarten-University Public Education Facilities Bond Act of 2006 (Hi-Ed) | II/07/06 | 3,087,000 | 2,554,815 | 530,745 |
| Kindergarten-University Public Education Facilities Bond Act of 2006 (K-12) | II/07/06 | 7,329,000 | 4,362,030 | 2,956,325 |
| Lake Tahoe Acquisitions Bond Act | 08/02/82 | 85,000 | 2,605 | - |
| New Prison Construction Bond Act of 1986 | II/04/86 | 500,000 | 16,850 | - |
| New Prison Construction Bond Act of 1988 | II/08/88 | 817,000 | 39,710 | 2,165 |
| New Prison Construction Bond Act of 1990 | 06/05/90 | 450,000 | 59,290 | 605 |
| Passenger Rail and Clean Air Bond Act of 1990 | 06/05/90 | 1,000,000 | 210,320 | - |
| Public Education Facilities Bond Act of 1996 (Higher Education) | 03/26/96 | 975,000 | 639,590 | 37,465 |
| Public Education Facilities Bond Act of 1996 (K-12) | 03/26/96 | 2,025,000 | 1,181,845 | 12,965 |
| Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act | 03/07/00 | 1,970,000 | 1,591,330 | 137,740 |
| Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 | II/07/06 | 5,388,000 | 2,379,855 | 2,998,140 |
| Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000 | 03/07/00 | 2,100,000 | 1,660,420 | 156,400 |
| Safe, Clean, Reliable Water Supply Act | II/05/96 | 995,000 | 719,800 | 89,070 |

## AUTHORIZED AND OUTSTANDING

## NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 2011 (DOLLARS IN THOUSANDS) CONTINUED

| GENERAL FUND BONDS (NON-SELF LIQUIDATING) | VOTER AUTHORIZATION DATE | VOTER AUTHORIZATION AMOUNT | LONG TERM BONDS OUTSTANDING (a) | LONG TERM BONDS UNISSUED (b) |
| :---: | :---: | :---: | :---: | :---: |
| Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century | II/04/08 | 9,950,000 | 410,050 | 9,539,950 |
| School Building and Earthquake Bond Act of 1974 | II/05/74 | 40,000 | 19,975 | - |
| School Facilities Bond Act of 1988 | 06/07/88 | 800,000 | 9,635 | - |
| School Facilities Bond Act of 1990 | II/06/90 | 800,000 | 236,465 | - |
| School Facilities Bond Act of 1992 | 06/02/92 | 1,900,000 | 793,940 | 10,280 |
| Seismic Retrofit Bond Act of 1996 | 03/26/96 | 2,000,000 | 1,458,605 | - |
| State School Building Lease-Purchase Bond Law of 1984 | II/06/84 | 450,000 | 1,450 | - |
| State School Building Lease-Purchase Bond Law of 1986 | II/04/86 | 800,000 | 6,400 | - |
| State, Urban, and Coastal Park Bond Act of 1976 | II/02/76 | 280,000 | 5,580 | - |
| Stem Cell Research and Cures Bond Act of 2004 | II/O2/O4 | 3,000,000 | 1,075,700 | 1,924,300 |
| Veterans Homes Bond Act of 2000 | 03/07/00 | 50,000 | 40,345 | 975 |
| Voting Modernization Bond Act of 2002 | 03/05/02 | 200,000 | 72,520 | 64,495 |
| Water Conservation Bond Law of 1988 | II/08/88 | 60,000 | 30,000 | 5,235 |
| Water Conservation and Water Quality Bond Law of 1986 | 06/03/86 | 150,000 | 47,485 | 13,730 |
| Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 | II/O5/02 | 3,440,000 | 2,636,095 | 693,745 |
| TOTAL GENERAL FUND BONDS |  | \$129,852,000 | \$71,283,705 | 37,053,049 |

(a) Includes the initial value of capital appreciation bonds rather than the accreted value.
(b) A portion of unissued bonds may be issued initially in the form of commercial paper notes, as authorized from time to time by the respective Finance Committees. A total of not more than $\$ 1.5653$ billion of commercial paper principal plus accrued interest may be owing at one time.

## AUTHORIZED AND OUTSTANDING

## SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 201 I (DOLLARS IN THOUSANDS)

| ENTERPRISE FUND BONDS (SELF LIQUIDATING) | VOTER AUTHORIZATION DATE | VOTER AUTHORIZATION AMOUNT | LONG TERM BONDS OUTSTANDING (a) | $\begin{aligned} & \text { LONG TERM } \\ & \text { BONDS } \\ & \text { UNISSUED (b) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| California Water Resources Development Bond Act | ri/08/60 | \$1,750,000 | \$420,540 | \$167,600 |
| Veterans Bond Act of 1986 | 06/03/86 | 850,000 | 129,215 | - |
| Veterans Bond Act of 1988 | 06/07/88 | 510,000 | 104,635 | - |
| Veterans Bond Act of 1990 | ri/06/90 | 400,000 | 73,205 | - |
| Veterans Bond Act of 1996 | nI/05/96 | 400,000 | 241,530 | - |
| Veterans Bond Act of 2000 | ni/07/00 | 500,000 | 250,890 | 238,610 |
| Veterans Bond Act of 2008 | 1I/04/08 | 900,000 | - | 900,000 |
| TOTAL ENTERPRISE FUND BONDS |  | \$5,310,000 | \$1,220,015 | \$1,306,210 |

SPECIAL REVENUE FUND BONDS (SELF LIQUIDATING)

| Economic Recovery Bond Act | 04/ro/04 | $\$ 15,000,000$ | $\$ 7,171,050$ | - |
| :--- | :--- | :--- | :--- | :--- |
| TOTAL SPECIAL REVENUE FUND BONDS | $\$ 15,000,000$ | $\$ 7,171,050$ | - |  |
| TOTAL SELF LIQUIDATING BONDS | $\$ 20,310,000$ | $\$ 8,391,065$ | $\$ 1,306,210$ |  |

(a) Includes the initial value of capital appreciation bonds rather than the accreted value.
(b) A portion of unissued bonds may be issued initially in the form of commercial paper notes, as authorized from time to time by the respective Finance Committees. A total of not more than $\$ 1.5653$ billion of commercial paper principal plus accrued interest may be owing at one time.

## AUTHORIZED AND OUTSTANDING

## LEASE REVENUE BONDS

AS OF JUNE 30, 201 I (DOLLARS IN THOUSANDS)

| GENERAL FUND SUPPORTED ISSUES: | OUTSTANDING | AUTHORIZED BUT UNISSUED |
| :---: | :---: | :---: |
| STATE PUBLIC WORKS BOARD |  |  |
| California Community Colleges | \$447,490 | \$ |
| California Department of Corrections and Rehabilitations (a) | 2,167,320 | 7,458,901 |
| Office of Energy Assessments (b) | 3,100 | - |
| The Regents of the University of California (c) | 2,224,760 | 380,862 |
| Trustees of the California State University | 804,605 | 164,345 |
| Various State Facilities (d) | 3,299,490 | 4,087,456 |
| TOTAL STATE PUBLIC WORKS BOARD ISSUES | \$8,946,765 | \$12,091,564 |
| TOTAL OTHER STATE FACILITIES LEASE-REVENUE ISSUES (E) | \$479,560 | \$ - |
| TOTAL GENERAL FUND SUPPORTED ISSUES | \$9,426,325 | \$I2,091,564 |

(a) Excludes $\$ 356,275,000$ of lease revenue bonds appropriated for the California Department of Corrections and Rehabilitation's San Quentin: Condemned Inmate Complex that was cancelled by Governor Edmund G. Brown Jr. on April 28, 2011.
(b) This program is self liquidating based on energy cost savings.
(c) The Regents' obligations to the State Public Works Board are payable from lawfully available funds of The Regents which are held in The Regents' treasury funds and are separate from the State General Fund. A portion of The Regents' annual budget is derived from General Fund appropriations.
(d) This includes projects that are supported by multiple funding sources in addition to the General Fund. Includes FISCal.
(e) Includes $\$ 127,040,000$ Sacramento City Financing Authority Lease-Revenue Bonds State of California - Cal/EPA Building, 1998 Series A, which are supported by lease rentals from the California Environmental Protection Agency; these rental payments are subject to annual appropriation by the State Legislature.

## APPENDIX B

## The State's Debt Service

## SCHEDULE OF DEBT SERVICE REQUIREMENTS

FOR GENERAL FUND NON-SELF LIQUIDATING BONDS
FIXED RATE, AS OF JUNE 30, 20 II

| FISCAL YEAR ENDING JUNE 30 | CURRENT DEBT |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST (a) | PRINCIPAL (b) | TOTAL |
| 2012 | \$3,728,613,583.69 | \$1,956,030,000.00 | \$5,684,643,583.69 |
| 2013 | 3,636,920,980.95 | 1,599,315,000.00 | 5,236,235,980.95 |
| 2014 | 3,557,587,003.39 | 2,257,410,000.00 | 5,814,997,003.39 |
| 2015 | 3,448,806,522.50 | 2,369,360,000.00 | 5,818,166,522.50 |
| 2016 | 3,331,644,020.00 | 2,289,435,000.00 | 5,621,079,020.00 |
| 2017 | 3,224,476,432.79 | 1,840,860,000.00 | 5,065,336,432.79 |
| 2018 | 3,133,241,507.12 | 1,802,125,000.00 | 4,935,366,507.12 |
| 2019 | 3,041,836,769.27 | 1,927,495,000.00 | 4,969,331,769.27 |
| 2020 | 2,920,805,341.65 | 2,267,430,000.00 | 5,188,235,341.65 |
| 2021 | 2,817,680,403.96 | 1,942,315,000.00 | 4,759,995,403.96 |
| 2022 | 2,711,371,370.94 | 2,268,400,000.00 | 4,979,771,370.94 |
| 2023 | 2,602,594,449.48 | 1,903,920,000.00 | 4,506,514,449.48 |
| 2024 | 2,509,165,969.29 | 1,736,855,000.00 | 4,246,020,969.29 |
| 2025 | 2,420,706,994.34 | 1,933,325,000.00 | 4,354,031,994.34 |
| 2026 | 2,318,635,821.70 | 2,101,075,000.00 | 4,419,710,821.70 |
| 2027 | 2,204,043,503.64 | 2,153,635,000.00 | 4,357,678,503.64 |
| 2028 | 2,098,442,853.12 | 2,229,300,000.00 | 4,327,742,853.12 |
| 2029 | 1,989,150,006.25 | 2,200,385,000.00 | 4,189,535,006.25 |
| 2030 | 1,877,647,057.96 | 2,483,440,000.00 | 4,361,087,057.96 |
| 2031 | 1,738,224,376.56 | 2,540,470,000.00 | 4,278,694,376.56 |
| 2032 | 1,615,416,919.00 | 2,332,075,000.00 | 3,947,491,919.00 |
| 2033 | 1,491,739,509.00 | 2,286,295,000.00 | 3,778,034,509.00 |
| 2034 | 1,368,227,412.80 | 3,414,935,000.00 | 4,783,162,412.80 |
| 2035 | 1,132,543,905.25 | 2,857,030,000.00 | 3,989,573,905.25 |
| 2036 | 959,899,752.26 | 2,706,740,000.00 | 3,666,639,752.26 |
| 2037 | 789,875,071.97 | 2,705,870,000.00 | 3,495,745,071.97 |
| 2038 | 627,193,153.14 | 2,490,635,000.00 | 3,117,828,153.14 |
| 2039 | 504,378,600.00 | 3,173,990,000.00 | 3,678,368,600.00 |
| 2040 | 239,991,868.75 | 1,603,885,000.00 | 1,843,876,868.75 |
| 2041 | 82,280,000.00 | 2,190,000,000.00 | 2,272,280,000.00 |
| TOTAL | \$64,123,141,160.77 | \$67,564,035,000.00 | \$131,687,176,160.77 |

(a) The amounts do not reflect any interest subsidy under the Build America Bonds program. Subsidy not pledged to the repayment of debt service.
(b) Includes scheduled mandatory sinking fund payments.

SCHEDULE OF DEBT SERVICE REQUIREMENTS
FOR GENERAL FUND NON-SELF LIQUIDATING BONDS
VARIABLE RATE, AS OF JUNE $30,20 I I$

| FISCAL YEAR ENDING JUNE 30 | CURRENT DEBT |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST (a)(b) | PRINCIPAL (c) | TOTAL |
| 2012 | \$49,897,804.67 | \$ - | \$49,897,804.67 |
| 2013 | 49,904,801. 23 | - | 49,904,801.23 |
| 2014 | 49,884,455.95 | - | 49,884,455.95 |
| 2015 | 49,884,455.95 | - | 49,884,455.95 |
| 2016 | 49,894,762.26 | 32,000,000.00 | 81,894,762.26 |
| 2017 | 49,888,871. 28 | 326,945,000.00 | 376,763,871.28 |
| 2018 | 49,421,888.84 | 431,245,000.00 | 480,666,888.84 |
| 2019 | 48,939,026.33 | 197,450,000.00 | 246,389,026.33 |
| 2020 | 48,687,SII.Is | 184,250,000.00 | 232,937,5II.I5 |
| 2021 | 48,481,691.01 | 108,600,000.00 | 157,081,691.01 |
| 2022 | 48,364,695.19 | 58,000,000.00 | 106,364,695.19 |
| 2023 | 48,296,326.31 | 88,200,000.00 | 136,496,326.31 |
| 2024 | 48,189,414.34 | 270,600,000.00 | 318,789,414.34 |
| 2025 | 47,892,206.73 | 174,200,000.00 | 222,092,206.73 |
| 2026 | 47,692,294.50 | 318,000,000.00 | 365,692,294.50 |
| 2027 | 47,376,196.07 | 46,100,000.00 | 93,476,196.07 |
| 2028 | 47,323,114.27 | 49,700,000.00 | 97,023,114.27 |
| 2029 | 47,261,457.16 | 87,500,000.00 | 134,761,457.16 |
| 2030 | 46,652,865.66 | 106,440,000.00 | 153,092,865.66 |
| 2031 | 45,106,128.66 | 129,335,000.00 | 174,441,128.66 |
| 2032 | 43,241,1I3.90 | 132,435,000.00 | 175,676,II3.90 |
| 2033 | 41,371,774.28 | 135,335,000.00 | 176,706,774.28 |
| 2034 | 39,507,432.89 | 54,235,000.00 | 93,742,432.89 |
| 2035 | 37,729,743.62 | 52,635,000.00 | 90,364,743.62 |
| 2036 | 35,953,724.97 | 52,635,000.00 | 88,588,724.97 |
| 2037 | 34,177,690.72 | 52,635,000.00 | 86,812,690.72 |
| 2038 | 32,401,672.07 | 52,635,000.00 | 85,036,672.07 |
| 2039 | 30,625,648.22 | 557,600,000.00 | 588,225,648.22 |
| 2040 | 318,783.64 | 20,960,000.00 | 21,278,783.64 |
| TOTAL | \$1,264,297,5s. 87 | \$3,719,670,000.00 | \$4,983,967,551.87 |

(a) The estimate of future interest payments is based on rates in effect as of June 30 , 2011. The interest rates for the daily and weekly rate bonds range from $0.05-0.19 \%$. The 2009 Stem Cell Bonds, 2009B and 2009C Highway Safety, Traffic Reduction, Air Quality and Port Security Private Placement Bonds, the 2009A Solano County Private Placement Bonds and the 2009A UC Private Placement Bonds currently bear interest at fixed rates of $5.65 \%, 3.77 \%, 3.30 \%, 3.18 \%$, and $3.183 \%$ respectively, until reset date, and are assumed to bear those rates from reset until maturity.
(b) The amounts do not reflect any interest subsidy under the Build America Bonds program. Subsidy not pledged to the repayment of debt service.
(c) Includes scheduled mandatory sinking fund payments for the 2009 Stem Cell Bonds, the Series 2009B and 2009C of the Highway Safety, Traffic Reduction, Air Quality and Port Security Private Placement Bonds, the 2009A Solano County Private Placement Bonds and the 2009A UC Private Placement Bonds.

SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR
SPECIAL REVENUE FUND SELF LIQUIDATING BONDS
(ECONOMIC RECOVERY BONDS)
FIXED RATE, AS OF JUNE 30, 2011

| FISCAL YEAR ENDING JUNE 30 | CURRENT DEBT |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST | PRINCIPAL (a) | TOTAL |
| 2012 | \$294,816,967.50 | \$240,330,000.00 | \$535,146,967.50 |
| 2013 | 278,116,960.00 | 476,470,000.00 | 754,586,960.00 |
| 2014 | 253,545,855.00 | 500,470,000.00 | 754,015,855.00 |
| 2015 | 227,360,123.75 | 525,615,000.00 | 752,975,123.75 |
| 2016 | 199,987,330.00 | 556,690,000.00 | 756,677,330.00 |
| 2017 | 172,061,875.00 | 584,210,000.00 | 756,271,875.00 |
| 2018 | 142,939,488.75 | 612,540,000.00 | 755,479,488.75 |
| 2019 | 113,287,497.5○ | 592,955,000.00 | 706,242,497.50 |
| 2020 | 86,381,762.50 | 496,145,000.00 | 582,526,762.50 |
| 2021 | 61,485,062.50 | 507,445,000.00 | 568,930,062.50 |
| 2022 | 36,945,093.75 | 451,575,000.00 | 488,520,093.75 |
| 2023 | 12,591,250.00 | 500,000,000.00 | 512,591,250.00 |
| 2024 | 45,625.00 | 2,000,000.00 | 2,045,625.00 |
| TOTAL | \$1,879,564,891.25 | \$6,046,445,000.00 | \$7,926,009,891.25 |

(a) Includes scheduled mandatory sinking fund payments.

SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR
SPECIAL REVENUE FUND SELF LIQUIDATING BONDS (ECONOMIC RECOVERY BONDS)

## VARIABLE RATE, AS OF JUNE 30, 2011

| FISCAL YEAR ENDING JUNE 30 | CURRENT DEBT |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST (a) | PRINCIPAL (b) | TOTAL |
| 2012 | \$24,311,576.56 | \$ - | \$24,3II,576.56 |
| 2013 | 24,312,627.87 | - | 24,312,627.87 |
| 2014 | 24,309,570.78 | - | 24,309,570.78 |
| 2015 | 24,309,570.78 | - | 24,309,570.78 |
| 2016 | 24,311,576.56 | - | 24,3II,576.56 |
| 2017 | 24,310,096.44 | - | 24,310,096.44 |
| 2018 | 24,310,836.50 | 25,000,000.00 | 49,310,836.50 |
| 2019 | 23,000,867.93 | II5,000,000.00 | 138,000,867.93 |
| 2020 | 16,216,445.13 | 189,500,000.00 | 205,716,445.13 |
| 2021 | 6,452,344.82 | 240,155,000.00 | 246,607,344.82 |
| 2022 | 1,470,790.37 | 219,190,000.00 | 220,660,790.37 |
| 2023 | 273,551.92 | 210,820,000.00 | 2II,093,551.92 |
| 2024 | 24,534.38 | 124,940,000.00 | 124,964,534.38 |
| TOTAL | \$217,614,390.04 | \$1,124,605,000.00 | \$I,342,219,390.04 |

(a) The estimate of future interest payments is based on rates in effect as of June 30 , 2011. The interest rates for the daily and weekly rate bonds range from $0.06-0.13 \%$. $\$ 500,000,000$ of the series 2009B Economic Recovery Bonds bear interest at fixed rates ranging from $3.50-5.00 \%$ until reset date, and are assumed to bear interest at the rate of $4.00 \%$ from each reset date to maturity.
(b) Includes scheduled mandatory sinking fund payments.

SCHEDULE OF DEBT SERVICE REQUIREMENTS
FOR ENTERPRISE FUND SELF LIQUIDATING BONDS
FIXED RATE, AS OF JUNE 30, 2011

| FISCAL YEAR ENDING JUNE 30 | CURRENT DEBT |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST | PRINCIPAL (a) | TOTAL |
| 2012 | \$ $51,420,872.25$ | \$100,080,000.00 | \$ISI,500,872.25 |
| 2013 | 47,814,853.50 | 82,195,000.00 | 130,009,853.50 |
| 2014 | 44,406,243.75 | 104,110,000.00 | 148,516,243.75 |
| 2015 | 41,128,748.08 | 77,565,000.00 | II8,693,748.08 |
| 2016 | 38,115,191.63 | 75,620,000.00 | 113,735,191. 63 |
| 2017 | 35,414,507.50 | 61,895,000.00 | 97,309,507.50 |
| 2018 | 32,727,509.65 | 60,655,000.00 | 93,382,509.65 |
| 2019 | 29,906,176.16 | 62,930,000.00 | 92,836,176.16 |
| 2020 | 27,765,621.25 | 28,865,000.00 | 56,630,621.25 |
| 2021 | 26,402,666.25 | 20,320,000.00 | 46,722,666.25 |
| 2022 | 25,453,306.28 | 14,380,000.00 | 39,833,306.28 |
| 2023 | 24,811,378.75 | 12,160,000.00 | 36,971,378.75 |
| 2024 | 24,174,391.25 | 16,075,000.00 | 40,249,391.25 |
| 2025 | 23,316,391.05 | 21,830,000.00 | 45,146,391.05 |
| 2026 | 22,292,5II.O5 | 23,545,000.00 | 45,837,5II.05 |
| 2027 | 21,181,948.65 | 23,260,000.00 | 44,441,948.65 |
| 2028 | 19,997,457.80 | 25,835,000.00 | 45,832,457.80 |
| 2029 | 18,377,697.80 | 42,275,000.00 | 60,652,697.80 |
| 2030 | 16,216,908.69 | 48,325,000.00 | 64,541,908.69 |
| 2031 | 13,861,787.28 | 50,490,000.00 | 64,351,787.28 |
| 2032 | 11,371,757.50 | 53,235,000.00 | 64,606,757.50 |
| 2033 | 8,761,341.25 | 55,095,000.00 | 63,856,341.25 |
| 2034 | 6,889,425.00 | 22,940,000.00 | 29,829,425.00 |
| 2035 | 5,786,720.00 | 23,560,000.00 | 29,346,720.00 |
| 2036 | 4,731,100.00 | 21,210,000.00 | 25,941,100.00 |
| 2037 | 3,670,842.50 | 23,885,000.00 | 27,555,842.50 |
| 2038 | 2,756,210.00 | 15,590,000.00 | 18,346,210.00 |
| 2039 | 2,028,212.50 | 16,330,000.00 | 18,358,212.50 |
| 2040 | 1,257,530.00 | 17,IIO,000.00 | 18,367,530.00 |
| 2041 | 450,087.50 | 17,925,000.00 | 18,375,087.50 |
| 2042 | 28,050.00 | 350,000.00 | 378,050.00 |
| 2043 | 9,562.50 | 375,000.00 | 384,562.50 |
| TOTAL | \$632,527,007.37 | \$1,220,015,000.00 | \$1,852,542,007.37 |

(a) Includes scheduled mandatory sinking fund payments.

SCHEDULE OF DEBT SERVICE REQUIREMENTS
FOR STATE OF CALIFORNIA
PROPOSITION IA RECEIVABLES PROGRAM(a)
REVENUE BONDS, FIXED RATE, AS OF JUNE 30, 20 II

|  | CURRENT DEBT |  |  |
| :---: | ---: | ---: | ---: |
| FISCAL YEAR <br> ENDING JUNE 30 | INTEREST | PRINCIPAL | TOTAL |
| 2012 | $\$ 90,800,000.00$ | $\$-$ | \$90,800,000.00 <br> 2013 |
| $90,800,000.00$ | 1,895,000,000.00 | $1,985,800,000.00$ |  |
| TOTAL | $\$ 181,600,000.00$ | $\$ 1,895,000,000.00$ | $\$ 2,076,600,000.00$ |

(a) Bonds were issued by the California Statewide Communities Development Authority pursuant to Article 4 (commencing with Section 6584) of Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California.

SCHEDULE OF DEBT SERVICE REQUIREMENTS
FOR LEASE-REVENUE DEBT
FIXED RATE, AS OF JUNE 30, 20 II

| FISCAL YEAR ENDING JUNE 30 | CURRENT debt |  |  |
| :---: | :---: | :---: | :---: |
|  | INTEREST (a) | PRINCIPAL (b) | TOTAL |
| 2012 | \$495,850,383.49 | \$456,095,000.00 | \$951,945,383.49 |
| 2013 | 473,547,163.55 | 483,605,000.00 | 957,152,163.55 |
| 2014 | 449,223,020.20 | 510,475,000.00 | 959,698,020.20 |
| 2015 | 423,393,890.32 | 535,190,000.00 | 958,583,890.32 |
| 2016 | 396,623,581. 88 | 525,545,000.00 | 922,168,581. 88 |
| 2017 | 369,804,676.59 | 538,170,000.00 | 907,974,676.59 |
| 2018 | 342,611,419.67 | 559,140,000.00 | 901,751,419.67 |
| 2019 | 314,649,639.45 | 528,080,000.00 | 842,729,639.45 |
| 2020 | 287,918,642.71 | 508,940,000.00 | 796,858,642.71 |
| 2021 | 263,296,001.20 | 457,430,000.00 | 720,726,001. 20 |
| 2022 | 239,730,203.33 | 440,100,000.00 | 679,830,203.33 |
| 2023 | 218,309,540.75 | 400,850,000.00 | 619,159,540.75 |
| 2024 | 198,317,716.13 | 327,230,000.00 | 525,547,716.13 |
| 2025 | 181,094,870.06 | 344,460,000.00 | 525,554,870.06 |
| 2026 | 163,234,543.32 | 344,535,000.00 | 507,769,543.32 |
| 2027 | 144,390,317.60 | 363,370,000.00 | 507,760,317.60 |
| 2028 | 124,442,938.38 | 367,595,000.00 | 492,037,938.38 |
| 2029 | 104,835,813.79 | 319,840,000.00 | 424,675,813.79 |
| 2030 | 86,992,738.82 | 300,625,000.00 | 387,617,738.82 |
| 2031 | 70,057,388.41 | 255,565,000.00 | 325,622,388.41 |
| 2032 | 54,587,907.75 | 239,695,000.00 | 294,282,907.75 |
| 2033 | 39,039,859.95 | 229,840,000.00 | 268,879,859.95 |
| 2034 | 23,594,827.23 | 211,880,000.00 | 235,474,827.23 |
| 2035 | 8,504,034.62 | 178,070,000.00 | 186,574,034.62 |
| TOTAL | \$5,474,051,119.20 | \$9,426,325,000.00 | 4,900,376,119.20 |

(a) The amounts do not reflect any interest subsidy under the Build America Bonds program. Subsidy not pledged to the repayment of debt service.
(b) Includes scheduled mandatory sinking fund payments.

## ESTIMATED DEBT SERVICE REQUIREMENTS

## ON INTENDED SALES OF AUTHORIZED BUT UNISSUED BONDS

DURING FISCAL YEARS 20II-I2 AND 2OI2-I3

| FISCAL YEAR ENDING JUNE 30 | $\begin{gathered} \text { FY 2011-12 } \\ \text { GO SALES } \\ \text { DEBT SERVICE } \end{gathered}$ | $\begin{gathered} \text { FY 2012-13 } \\ \text { GO SALES } \\ \text { DEBT SERVICE } \end{gathered}$ | $\begin{gathered} \text { FY 2011-12 } \\ \text { LRB SALES } \\ \text { DEBT SERVICE } \end{gathered}$ | $\begin{gathered} \text { FY 2012-13 } \\ \text { LRB SALES } \\ \text { DEBT SERVICE } \end{gathered}$ | TOTAL DEBT SERVICE ALL SALES |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | \$60,625,000 | \$ | \$35,218,416 | \$ - | \$95,843,416 |
| 2013 | 252,500,000 | 70,625,000 | 170,666,766 | 41,856,563 | 535,648,329 |
| 2014 | 330,322,483 | 355,592,073 | 170,656,088 | 263,344,485 | 1,119,915,128 |
| 2015 | 330,323,101 | 355,591,170 | 170,658,680 | 263,342,744 | 1,119,915,695 |
| 2016 | 330,318,124 | 355,595,163 | 170,660,720 | 263,342,038 | 1,119,916,044 |
| 2017 | 330,322,066 | 355,595,293 | 170,663,286 | 263,345,965 | 1,119,926,610 |
| 2018 | 330,318,678 | 355,592,823 | 170,662,126 | 263,338,498 | 1,119,912,124 |
| 2019 | 330,321,464 | 355,592,825 | 170,667,463 | 263,337,609 | 1,119,919,360 |
| 2020 | 330,318,164 | 355,594,203 | 170,659,069 | 263,344,005 | 1,119,915,440 |
| 2021 | 330,321,011 | 355,590,131 | 170,651,329 | 263,342,748 | I,119,905,219 |
| 2022 | 330,321,230 | 355,593,061 | 170,667,030 | 263,343,076 | 1,119,924,398 |
| 2023 | 330,319,801 | 355,588,668 | 170,668,414 | 263,332,120 | 1,119,909,003 |
| 2024 | 330,321,939 | 355,592,363 | 170,657,994 | 263,346,559 | I,II9,918,854 |
| 2025 | 330,321,705 | 355,592,481 | 170,662,253 | 263,339,123 | 1,119,915,56I |
| 2026 | 330,322,799 | 355,591,935 | 170,660,919 | 263,344,224 | 1,119,919,876 |
| 2027 | 330,317,768 | 355,596,719 | 170,658,605 | 263,336,660 | 1,119,909,751 |
| 2028 | 330,318,674 | 355,596,516 | 170,649,534 | 263,341,133 | I,119,905,856 |
| 2029 | 330,321,166 | 355,594,841 | 170,660,688 | 263,343,745 | I,119,920,440 |
| 2030 | 330,319,884 | 355,593,453 | 170,658,640 | 263,339,644 | I,II9,9II,620 |
| 2031 | 330,323,980 | 355,592,495 | 170,663,815 | 263,336,688 | I,119,916,978 |
| 2032 | 330,320,933 | 355,590,056 | 170,655,605 | 263,334,646 | I,II9,901,240 |
| 2033 | 330,317,734 | 355,592,630 | 170,667,604 | 263,345,398 | I,II9,923,365 |
| 2034 | 330,324,599 | 355,594,350 | 170,670,678 | 263,338,688 | I,II9,928,3I4 |
| 2035 | 330,320,470 | 355,592,595 | 170,661,005 | 263,336,330 | 1,119,910,400 |
| 2036 | 330,323,543 | 355,592,404 | 170,663,148 | 263,346,60I | 1,119,925,695 |
| 2037 | 330,319,971 | 355,591,475 | 170,653,959 | 263,329,160 | I,II9,894,565 |
| 2038 | 330,325,043 | 355,594,865 | - | 263,341,125 | 949,26I,033 |
| 2039 | 330,321,86I | 355,594,846 | - | - | 685,916,708 |
| 2040 | 330,322,42I | 355,591,351 | - | - | 685,913,773 |
| 2041 | 330,321,939 | 355,595,944 | - | - | 685,917,883 |
| 2042 | 330,318,590 | 355,591,960 | - | - | 685,910,550 |
| 2043 | - | 355,594,81I | - | - | 355,594,8iI |
| TOTAL | \$9,892,436,138 | \$Io,738,4I8,498 | \$4,301,743,830 | \$6,625,369,570 | \$31,557,968,035 |



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[^0]:    Source: Thomson Municipal Market Monitor (TM3)

[^1]:    Source: Investment Company Institute (ICI)

[^2]:    ${ }^{1}$ The Proposition 1A receivables bonds were issued pursuant to Article 4 (commencing with Section 6584) of Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California.

[^3]:    (a) Debt issuances not included in Figure 17: Any short-term obligations such as commercial paper or RANs; revenue bonds issued by State agencies which are repaid from specific revenues outside the General Fund; and "conduit" bonds, such as those issued by State financing authorities on behalf of other governmental or private entities whose obligations secure the bonds.

[^4]:    2 Does not reflect offsets due to subsidy payments from the federal government for Build America Bonds (BABs) or transfers from special funds. When debt service is adjusted to account for approximately $\$ 1.0$ billion of estimated general obligation bond debt service offsets, the 2010-11 debt service was $\$ 5.42$ billion, and the ratio of debt service to General Fund revenues was 5.72 percent.
    ${ }^{3}$ Does not reflect offsets due to subsidy payments from the federal government for BABs or transfers from special funds. When debt service is adjusted to account for approximately $\$ 1.1$ billion of estimated general obligation bond debt service offsets, the projected 2011-12 debt service is $\$ 5.73$ billion, and the ratio of debt service to General Fund revenues is 6.48 percent.
    ${ }^{4}$ Excludes Special Fund bonds, for which debt service each year is paid from dedicated funds. Ratio reflects debt service from only a portion of the bond sales listed in Figure 17. For example, $\$ 2.5$ billion of the $\$ 5$ billion of GO bonds and $\$ 1.3$ billion of the $\$ 2.3$ billion of LRBs planned for 2011-12 will be sold during the first half of the fiscal year. These bonds will have interest payments in the second half of the fiscal year. The remaining GO bonds and LRBs to be sold in 2011-12 will not have a debt service payment during the fiscal year and, therefore, will not affect the 2011-12 debt service ratio. When the debt service on the Economic Recovery Bonds (ERBs) is added to General Fund-supported debt service (excluding offsets due to subsidy payments from the Federal Government for BABs or transfers from special funds), and the revenue from the quarter-cent sales tax that is dedicated for payment of the ERBs is added to General Fund revenues, the ratio of debt service to General Fund revenues increases to 7.9 percent in 2010-11 and 8.3 percent in 2011-12.
    5 Moody's calculation of net tax-supported debt includes GO bonds (non self-liquidating), LRBs (excluding UC), ERBs, Prop 1a, GO commercial paper notes, federal Highway Grant Anticipation Bonds, Tobacco Securitization Bonds with a General fund backstop, California Judgment Trust Obligations, and the Bay Area Infrastructure Financing Authority's State payment acceleration notes.

