REPORT OF THE

CAPITAL DEBT AFFORDABILITY COMMITTEE

ON

RECOMMENDED DEBT AUTHORIZATIONS

FOR FISCAL YEAR 2014

SUBMITTED TO

THE GOVERNOR AND GENERAL ASSEMBLY

OF MARYLAND

October 2012

October 1, 2012

The Honorable Martin J. O'Malley
Governor of Maryland
State House
Annapolis, Maryland 21401

The Honorable Thomas V. Mike Miller, Jr.
President of the Senate
Maryland General Assembly
State House
Annapolis, Maryland 21401

The Honorable Michael E. Busch
Speaker of the House
Maryland General Assembly
State House
Annapolis, Maryland 21401

Gentlemen:

The Capital Debt Affordability Committee, created pursuant to Section 8-104, *et seq*., of the State Finance and Procurement Article, is required to submit to the Governor and the General Assembly each year an estimate of the maximum amount of new general obligation debt that prudently may be authorized for the next fiscal year. The Committee is also required to submit an estimate of the amount of new academic facilities bonds that prudently may be authorized.

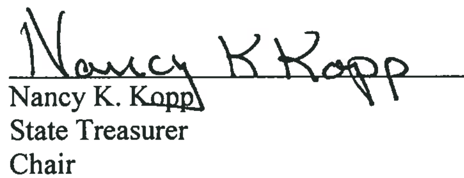
The Committee met on October 1, 2012 and considered a recommendation to increase the authorization assumption projected in the 2011 CDAC Report by $150 million. The Committee thus approved a total of $1,075 million for new general obligation authorizations by the 2013 General Assembly to support the fiscal year 2014 capital program. The vote was 4-1, with the Comptroller voting against the proposed amount and advocating no change to the original $925 million incorporated in the earlier planning assumption.

In addition to determining and recommending a prudent affordable authorization level for the coming year, the Committee also sets out planning assumptions for the State to use in its capital program planning process. The Committee's adopted planning assumptions for future authorizations assume nearly level authorizations through fiscal year 2017 of between $1,085 million and $1,105 million. In fiscal year 2018, the projected authorization is $1,200 million and it increases by approximately 3% through 2022. With these authorization levels, the debt affordability ratios remain within the CDAC benchmarks of 4% debt outstanding to personal income and 8% debt service to revenues. The affordability analysis presented at the Committee's meetings indicates that the Committee's projection of General Obligation Bond authorizations will continue to be affordable (within debt guidelines) going into the future. Debt outstanding peaks at 3.46% of personal income in fiscal year 2014 and is at 2.94% in fiscal year 2022. Debt service increases annually to 7.62% of revenues in fiscal year 2018 but declines to 7.15% in fiscal year 2022.

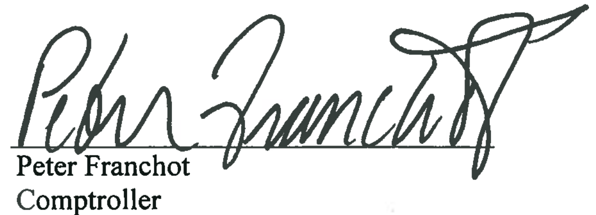
The Committee recognizes that there are multiple annual authorization levels and patterns that would result in adherence to the benchmarks, depending on future levels of personal income and State revenue. The Committee's planning assumptions for future authorizations will be reviewed in preparation for the 2013 report in light of updated revenue and personal income projections and authorization levels may be adjusted to adhere to these affordability benchmarks.

Based on its review of the condition of State debt in light of the debt affordability guidelines, the Committee recommends a limit of $32 million for new academic facilities bonds for the University System of Maryland for fiscal year 2014.

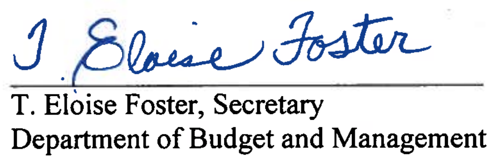
We are pleased to present to you the Committee's Annual Report with the recommendations relating to the fiscal 2014 capital program.



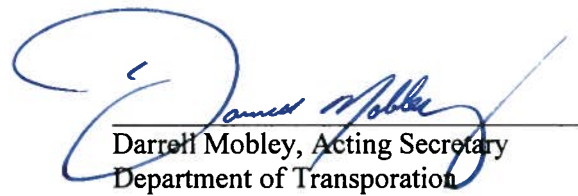
Nancy K. Kopp
State Treasurer
Chair



Peter Franchot
Comptroller



T. Eloise Foster, Secretary
Department of Budget and Management



Darrell Mobley, Acting Secretary
Department of Transporation

Paul B. Merit
Public Member

TABLE OF CONTENTS

			Page
	EXECUTIVE SUMMARY		6
I.	**INTRODUCTION**		
	A.	Membership of the Committee	8
	B.	Duties of the Committee	8
	C.	2011 Recommendations and Subsequent Events	9
II.	**TAX-SUPPORTED DEBT - TRENDS AND OUTLOOK**		
	A.	General Obligation Bonds	10
	B.	Transportation Debt	14
	C.	Grant Anticipation Revenue Vehicles "GARVEE" Bonds	16
	D.	Lease and Conditional Purchase Financings	17
	E.	Maryland Stadium Authority	22
	F.	Bay Restoration Fund Revenue Bonds	24
III.	**CAPITAL PROGRAMS**		
	A.	State of Maryland Capital Program	26
	B.	Capital Improvement and School Construction Needs	27
IV.	**BOND RATING AGENCY REPORTS**		
	A.	Rating Discussion	29
	B.	Excerpts from Rating Agency Reports	29
	C.	Moody's 2012 State Debt Medians	30
V.	**AFFORDABILITY ANALYSIS**		
	A.	The Concept of Affordability	31
	B.	Affordability Criteria	31
	C.	2012 Affordability Recommendation	31
	D.	Comparison of Recommendation and Criteria	32
	E.	Comparison of Recommendation and Capital Program	38
	F.	Affordability Risk Analysis	38
VI.	**HIGHER EDUCATION DEBT**		
	A.	Background	44
	B.	CDAC Duties	44
	C.	Size and Condition of Higher Education Debt	45
	D.	Incorporating Higher Education Academic Debt into the Affordability Analysis	47
	E.	2012 Recommended Authorization for Higher Education Academic Debt	48

TABLE OF CONTENTS (CONTINUED)

Page

APPENDICES

A. History of the Capital Debt Affordability Committee 50
B. History of Maryland Stadium Authority Financings 55

SCHEDULES

A-1 Maryland Personal Income and Population
Historical Data and Projections 60
A-2 Maryland State Revenue
Historical Data and Projections 61
B-1 Proposed General Obligation Authorizations and
Estimated Issuances 62
B-2 Projected General Obligation Debt - Authorized
But Unissued 63
B-3 Projected General Obligation Debt Outstanding 64
B-4 Projected General Obligation Debt Service 65
C-1 Historical Data - General Obligation Debt 66
C-2 Historical Data - Affordability Ratios 67
C-3 Historical Data - Consolidated Transportation Bonds 68

EXECUTIVE SUMMARY

The Capital Dept Affordability Committee ("CDAC" or "the Committee"), established under Section 8-104 *et seq*. of the State Finance and Procurement Article (SF&P), is charged with reviewing:

1. The size and condition of State tax-supported debt on a continuing basis, and advising the Governor and General Assembly each year regarding the maximum amount of new general obligation debt that prudently may be authorized for the next fiscal year;

2. Higher education debt and annual estimates concerning the prudent maximum authorization of academic facilities bonds to be issued by the University System of Maryland, Morgan State University, St. Mary's College of Maryland and Baltimore City Community College;

To develop its recommendations, the Committee met in July through October. At its July meeting, the Committee reviewed actions taken by the 2012 General Assembly and the size, condition and projected issuances of tax-supported debt. The Committee conducted a similar annual review of the debt of higher education institutions at its August meeting and also reviewed the State of Maryland Capital Program and school construction needs at that time.

At its September meeting, the Committee reviewed its assumptions on interest rates, revenues, personal income, debt issuance and bond authorizations. The Committee believes that these variables have been estimated prudently. The personal income and revenue estimates reflect the most recent forecast by the Bureau of Revenue Estimates in September 2012. At this meeting the Committee considered a proposal to increase the fiscal year 2014 authorization assumption projected in the 2011 CDAC Report by $150 million and recommend an authorization level of $1,075 million, an amount unchanged from the fiscal year 2013 authorization. The Committee decided to reconvene to vote on the recommendation.

The Committee met on October 1, 2012 to consider the recommendation to increase the authorization assumption projected in the 2011 CDAC Report by $150 million. **The Committee thus approved a total of $1,075 million for new general obligation authorizations by the 2013 General Assembly to support the fiscal year 2014 capital program.** The vote was 4-1, with the Comptroller voting against the proposed amount and advocating no change to the original $925 million planning assumption.

In addition to determining and recommending a prudent affordable authorization level for the coming year, the Committee also sets out planning assumptions for the State to use in its capital program planning process. The Committee's adopted planning assumptions for future authorizations assume nearly level authorizations through fiscal year 2017 of between $1,085 million and $1,105 million. In fiscal year 2018, the projected authorization is $1,200 million and it increases by approximately 3% through 2022. With these authorization levels, the debt affordability ratios remain within the CDAC benchmarks of 4% debt outstanding to personal income and 8% debt service to revenues. The affordability analysis presented at the Committee's meetings indicates that the Committee's projection of General Obligation Bond authorizations will continue to be affordable (within debt guidelines) going into the future. Debt outstanding peaks at 3.46% of personal income in fiscal year 2014 and is at 2.94% in fiscal year 2022. Debt

service increases annually to 7.62% of revenues in fiscal year 2018 but declines to 7.15% in fiscal year 2022.

The Committee recognizes that there are multiple annual authorization levels and patterns that would result in adherence to the benchmarks, depending on future levels of personal income and State revenue. The Committee's planning assumptions for future authorizations will be reviewed in preparation for the 2013 report in light of updated revenue and personal income projections and authorization levels may be adjusted to adhere to these affordability benchmarks.

Based on its review of the condition of State debt in light of the debt affordability guidelines, the Committee therefore, recommended a limit of $32.0 million for new academic facilities bonds for the University System of Maryland for fiscal year 2014. The Committee did not receive any requests for new issuances for Morgan State University, St. Mary's College of Maryland and Baltimore City Community College and therefore made no recommendations for these institutions.

No public-private partnerships were presented to the Committee for its consideration for fiscal year 2014.

The 2012 Capital Debt Affordability Report and the 2012 meeting materials are available on the State Treasurer's website at http://www.treasurer.state.md.us/debtmanagement/cdac-reports.aspx

I. INTRODUCTION

A. Membership

The members of the Capital Debt Affordability Committee ("CDAC" or "Committee") are the State Treasurer (Chair), the Comptroller, the Secretaries of Budget and Management and Transportation, one public member appointed by the Governor, and as non-voting members, the Chairs of the Capital Budget Subcommittees of the Senate Budget and Taxation Committee and the House Appropriations Committee.

B. Duties

The Committee is required to review the size and condition of State debt on a continuing basis and to submit to the Governor and to the General Assembly by October 1 of each year,[1] an estimate of the total amount of new State debt that prudently may be authorized for the next fiscal year. Although the Committee's estimates are advisory only, the Governor is required to give due consideration to the Committee's findings in determining the total authorizations of new State debt and in preparing a preliminary allocation for the next fiscal year. The Committee is required to consider:

- The amount of State tax-supported debt [2] that will be:
  - Outstanding, and
  - Authorized but unissued during the next fiscal year;
- The capital program prepared by the Department of Budget and Management and the capital improvement and school construction needs during the next five fiscal years, as projected by the Interagency Committee on School Construction;
- Projected debt service requirements for the next ten years;
- Criteria used by recognized bond rating agencies to judge the quality of State bond issues;
- The aggregate impact of public-private partnership agreements on the total amount of new State debt that prudently may be authorized for the next fiscal year[3];
- Other factors relevant to the ability of the State to meet its projected debt service requirements for the next five years or relevant to the marketability of State bonds; and
- The effect of new authorizations on each of the factors enumerated above.

[1] Chapter 695, Laws of Maryland 2010 changed the date from September 10 to October 1 of each year to allow the Committee to consider updated projections from the Board of Revenue Estimates made in September of each year.
[2] See Appendix A for the Committee's definition of tax-supported debt.
[3] Chapter 641 of the Laws of 2010 requires the State Treasurer to analyze the impact of each public-private partnership agreement proposed by a unit of State government on the State's Capital Debt Affordability limits and submit that analysis to the Budget Committees within 30 days of receiving a copy of the proposed agreement from a unit of State government. Chapter 641 also requires the Committee to analyze the aggregate impact of public-private partnership agreements on the Committee's recommended authorization for the next fiscal year.

The Committee also reviews on a continuing basis the size and condition of any debt of the University System of Maryland, Morgan State University, St. Mary's College of Maryland and Baltimore City Community College; takes any debt issued for academic facilities into account as part of the Committee's affordability analysis with respect to the estimate of new authorizations of general obligation debt; and, finally, submits to the Governor and the General Assembly a recommendation of the amount of new bonds for academic facilities that prudently may be authorized in the aggregate for the next fiscal year by these institutions of higher education.

A history of the Committee's membership, duties, debt affordability criteria, definition of tax-supported debt, and authorization increases can be found in Appendix A.

C. 2011 Recommendations and Subsequent Events

The recommendations of the Committee to the Governor and the General Assembly for the fiscal year 2013 capital program and the subsequent events related to those recommendations are summarized below.

2011 Recommendations of the Capital Debt Affordability Committee

The Committee made a conditional recommendation of $925.0 million in new debt for fiscal year 2013 in its 2011 report. In its letter dated September 23, 2011 to the Governor, President of the Senate and the Speaker of the House, the Committee noted that the motion to recommend $925.0 million specifically recognized that authorization levels proposed in the Governor's 2013 capital budget could be adjusted to reflect up-to-date economic and fiscal information and the Board of Revenue Estimate's December revenue estimates. In December 2011, the Capital Debt Affordability Committee increased its original recommendation by $150.0 million for a revised recommendation of $1,075 million in new debt for fiscal year 2013.

Based on its review of the condition of State debt in light of the debt affordability guidelines, the Committee recommended a limit of $32.0 million for new academic facilities for the University System of Maryland for fiscal year 2013.

Authorizations by the 2012 General Assembly

The net general obligation debt authorized for the fiscal year 2013 capital program (effective June 1, 2012) totaled $1,075.0 million including $1,119 million in new debt offset by $44 million in previously authorized debt.

The 2012 General Assembly authorized the University System of Maryland to issue $32.0 million in new academic facility bonds including $15.0 million to finance specific capital projects and $17.0 million to finance capital facility renewal projects.

II. TAX-SUPPORTED DEBT - TRENDS AND OUTLOOK

The State of Maryland has issued six types of tax-supported debt in recent years including: General Obligation Bonds, Consolidated Transportation Bonds, GARVEE Bonds, Lease and Conditional Purchase Financings, Maryland Stadium Authority revenue bonds and Bay Restoration Bonds. Although the State has the authority to make short-term borrowings in anticipation of taxes and other receipts up to a maximum of $100.0 million, the State has not issued short-term tax anticipation notes or made any other similar short-term borrowings for cash flow purposes. A detailed discussion of each component of tax-supported debt is included in the following pages.

A. General Obligation ("G.O.") Bonds

Purpose

General Obligation Bonds, which are limited to a maximum maturity of 15 years, are authorized and issued to:

- Provide funds for State-owned capital improvements, including institutions of higher education, and the construction of locally owned public schools;
- Fund local government improvements, including grants and loans for water quality improvement projects and correctional facilities; and
- Provide funds for repayable loans or outright grants to private, nonprofit, cultural, or educational institutions.

Security

The State has pledged its full faith and credit as security for its General Obligation Bonds.

Current Status:

Debt Outstanding as of June 30, 2012: $7,541,101,517

Amount Authorized but Unissued at June 30, 2012: $2,330,440,366*

*Includes the $15,324,000 authorization for Qualified Zone Academy Bonds (QZABs) in the 2012 legislative session which was unissued as of June 30, 2012.

Ratings

Fitch Ratings, Moody's Investors Service and Standard and Poor's have rated Maryland's General Obligation Bonds AAA since S&P's first rating in 1961, Moody's in 1973 and Fitch's in 1993. On July 18 and July 19, 2012 Moody's Investors Service, Standard & Poor's (S&P) and Fitch Ratings all affirmed the State's AAA rating in conjunction with the sale of General Obligation Bonds State and Local Facilities Loan of 2012, Second Series.

Moody's has assigned a negative outlook to Maryland's General Obligation Bonds. In its latest confirmation of Maryland's Aaa rating dated July 18, 2012, Moody's stated that the negative outlook on Maryland's Aaa rating, like that for the Commonwealth of Virginia, is due to Maryland's indirect linkages to the weakened credit profile of the U.S. government, which itself was assigned a negative outlook by Moody's on August 2, 2011. The July 18, 2012 rating states "Moody's has determined that issuers with such indirect linkages, such as Maryland, have some combination of economies that are highly dependent on federal employment and spending, a significant healthcare presence in their economies, have direct healthcare operations, or high levels of short-term and puttable debt." In a December 7, 2011 assessment of issuers with these

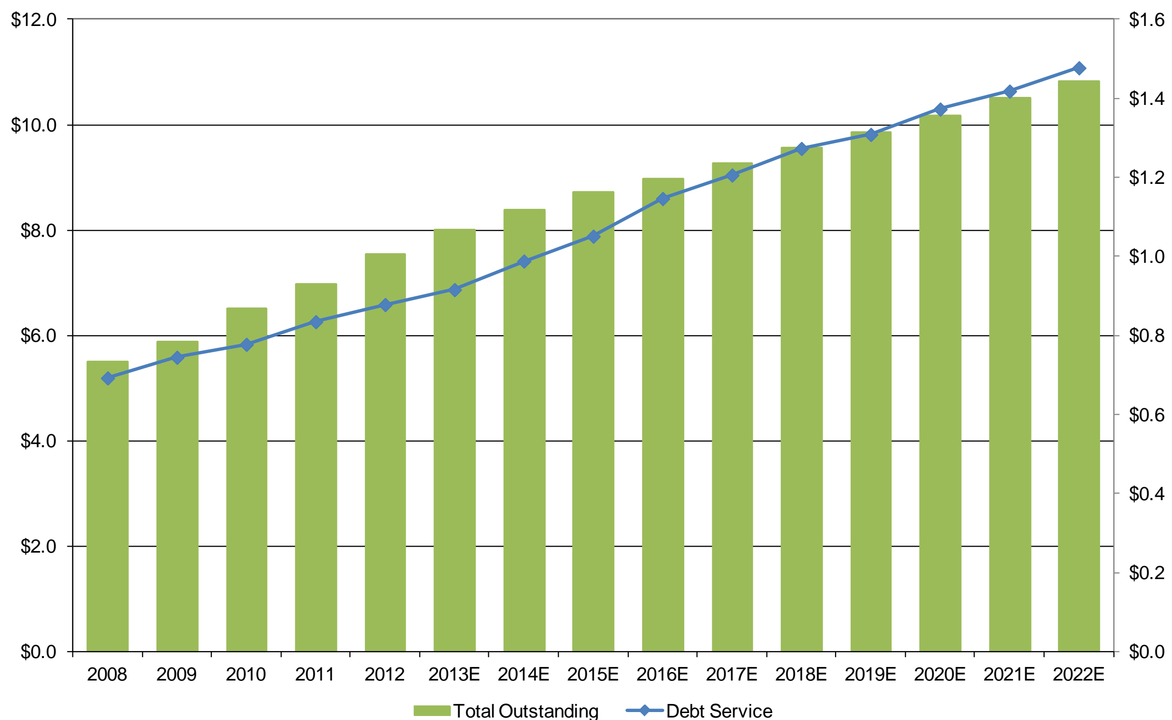
indirect linkages, Moody's specifically cited Maryland's and Virginia's economic sensitivity to federal employment and spending as an outlier having high risk exposure when compared to national norms. Moody's did not cite any elevated risk exposure for economic sensitivity to the healthcare industry or capital markets exposure as evidenced by the fact that the State has no general obligation variable rate debt.

Use of Variable Rate Debt, Bond Insurance, Interest Rate Exchange Agreements and Guaranteed Investment Contracts

The State is authorized to issue variable interest rate bonds in an amount that does not exceed 15% of the outstanding general obligation indebtedness. The State has not issued any variable rate debt and has not executed any interest rate exchange agreements. Because the State is a "natural" AAA credit, there has been no need for bond insurance. To invest the sinking funds paid on certain Qualified Zone Academy Bonds ("QZABs"), the State has entered into master repurchase agreements.

Trends in Outstanding General Obligation Debt

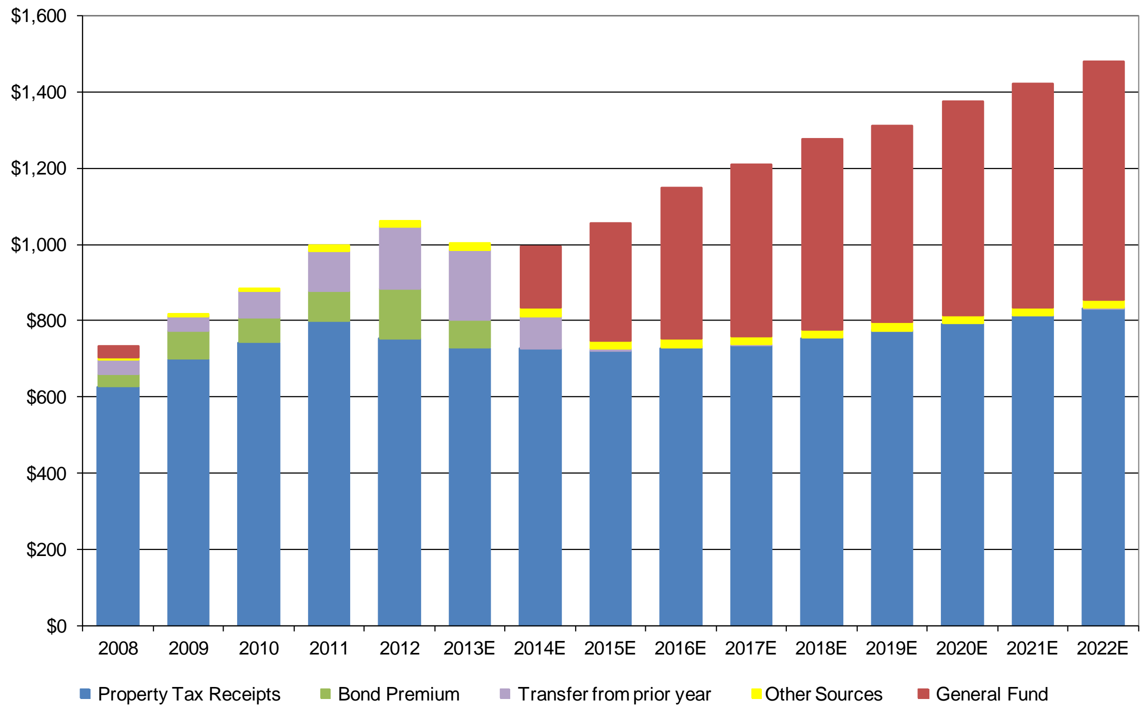
General Obligation Bond debt outstanding, including authorized but unissued amounts, for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 1***. A detailed historical summary of General Obligation debt activity may be found in ***Appendices B-1 – B-4***.

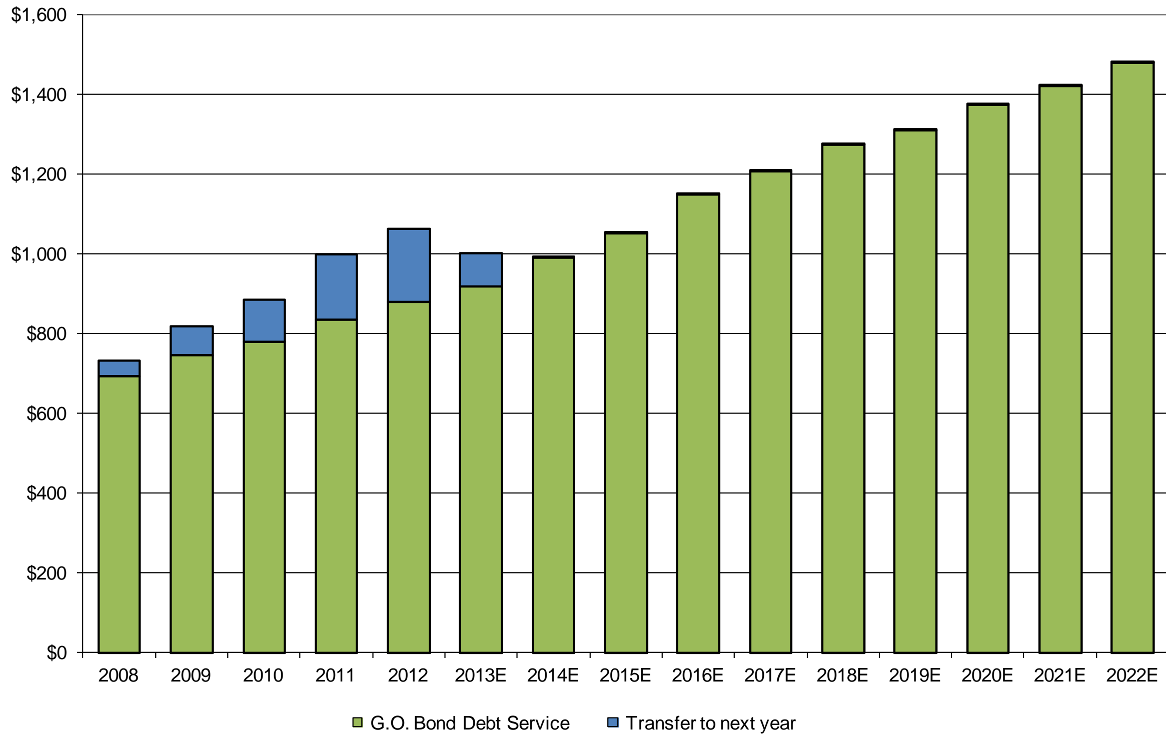


Future authorizations are projected to be issued over a five year period. The bonds are sold over an extended period of time as the projects are developed and cash is required to pay property owners, consultants, contractors, equipment manufacturers, etc. The following table provides a detailed summary of projected General Obligation debt activity.

Summary of Projected Debt Activity General Obligation Bonds ($ in millions)					
Fiscal Year	**Debt Outstanding at Beginning of Year**	**New Issues**	**Redeemed**	**Debt Outstanding at End of Year**	**Required Debt Service**
2013	$7,541	$1,043	$575	$8,009	$916
2014	$8,009	$977	$614	$8,372	$988
2015	$8,372	$995	$658	$8,710	$1,051
2016	$8,710	$1,014	$753	$8,971	$1,147
2017	$8,971	$1,068	$781	$9,257	$1,206
2018	$9,257	$1,125	$832	$9,550	$1,273
2019	$9,550	$1,164	$851	$9,862	$1,309
2020	$9,862	$1,211	$906	$10,167	$1,373
2021	$10,167	$1,256	$924	$10,499	$1,418
2022	$10,499	$1,300	$967	$10,833	$1,477

Debt service for General Obligation Bonds is paid from the Annuity Bond Fund ("ABF"). The State constitution requires the collection of an annual tax to pay debt service and State statute requires that, after considering the balance in the ABF and other revenue sources, the Board of Public Works set an annual property tax rate sufficient to pay debt service in the following fiscal year. ***Graphs 2 and 3*** depict the sources and uses, respectively, for the ABF for the past five fiscal years and projections for the next 10 fiscal years.


Graph 2
Annuity Bond Fund Sources
($ in Millions)
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
2008
2009
2010
2011
2012
2013E
2014E
2015E
2016E
2017E
2018E
2019E
2020E
2021E
2022E
Property Tax Receipts
Bond Premium
Transfer from prior year
Other Sources
General Fund


Graph 3
Annuity Bond Fund Uses
($ in Millions)
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
2008
2009
2010
2011
2012
2013E
2014E
2015E
2016E
2017E
2018E
2019E
2020E
2021E
2022E
G.O. Bond Debt Service
Transfer to next year

B. Transportation Debt (Consolidated Transportation Bonds)

Purpose

Consolidated Transportation Bonds ("CTB"), like State General Obligation Bonds are 15-year obligations, issued by the Maryland Department of Transportation ("MDOT") for highway and other transportation projects.

Security

Debt service on CTBs is payable from MDOT's shares of the motor vehicle fuel tax, the motor vehicle titling tax, sales tax on rental vehicles, and a portion of the corporate income tax. The 2011 Budget Reconciliation and Financing Act (House Bill 72/Chapter 397) made the following changes to MDOT's pledged revenues effective July 1, 2011:

(1) MDOT will no longer receive a distribution of the State's general sales and use tax revenues, and

(2) MDOT will receive a reduced distribution of the State's corporate income tax revenues.

The bill also made provision for these revenues to remain available, if needed, to pay debt service on CTBs issued prior to July 1, 2011 while they remain outstanding and unpaid. In addition, other receipts of MDOT (including motor vehicle licensing and registration fees and operating revenue of MDOT) are available to meet debt service if these tax proceeds should become insufficient. The holders of CTBs are not entitled to look to other sources for payment including the federal highway capital grants that are pledged to GARVEE Bonds.

Limitations to Debt Outstanding

The gross outstanding aggregate principal amount of CTBs is limited by statute to $2.6 billion. The General Assembly may set a lower limit each year, and for fiscal year 2013 the limit is $1.9 billion. In addition, MDOT has covenanted with the holders of outstanding CTBs not to issue additional bonds unless:

(1) the excess of Transportation Trust Fund revenues over MDOT operational expenses in the preceding fiscal year is equal to at least twice the maximum amount of debt service for any future fiscal year, including debt service on the additional bonds to be issued; and

(2) total proceeds from taxes pledged to debt service for the past fiscal year equal at least twice such maximum debt service or, conversely, total debt service cannot exceed 50% of total proceeds from taxes pledged using the debt service divided by revenues convention.

Current Status:

Debt Outstanding as of June 30, 2012: $1,562,630,000
Amount Authorized but Unissued at June 30, 2012: $326,365,000

Ratings

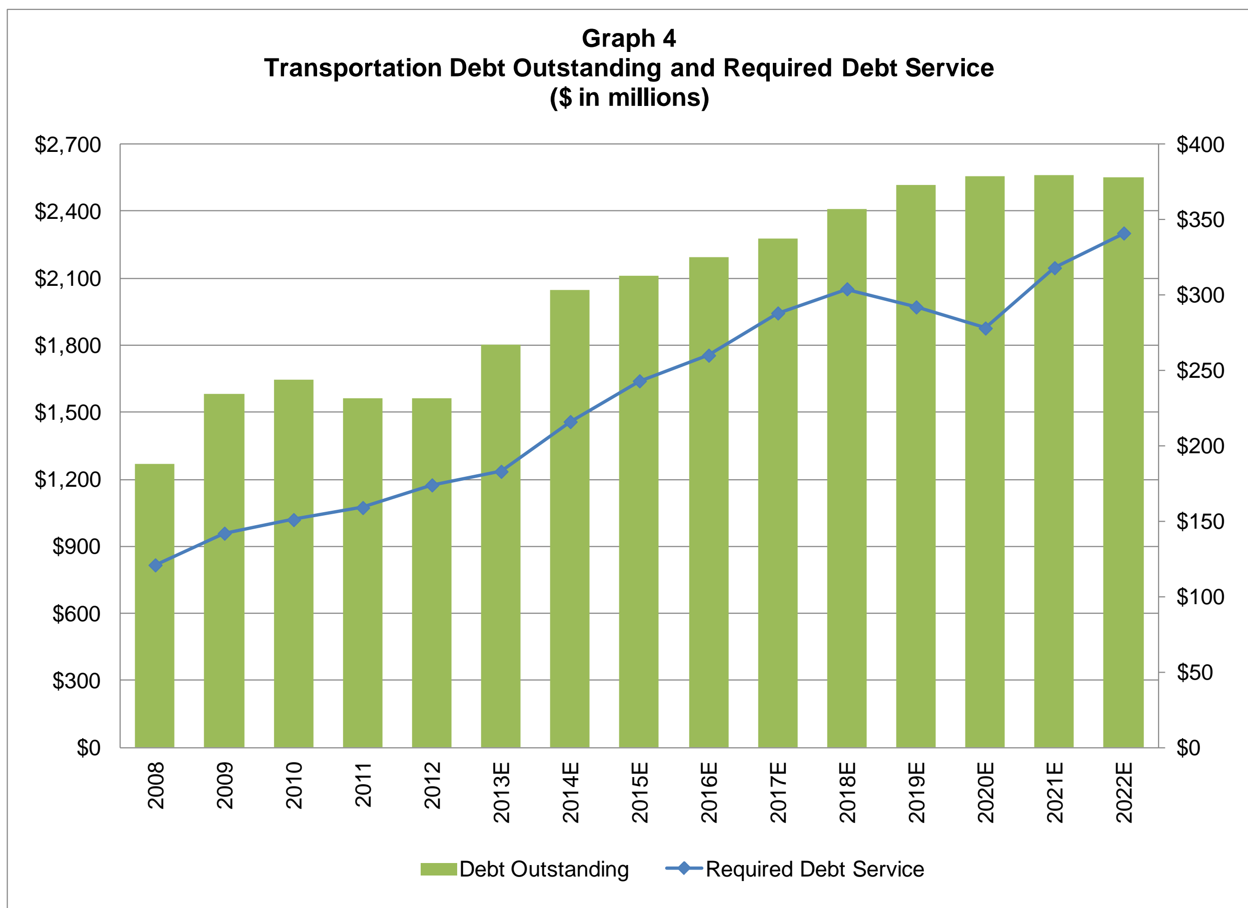
CTBs are currently rated AAA by Standard and Poor's, Aa1 by Moody's Investors Service and AA+ by Fitch Ratings.

Use of Variable Rate Debt, Bond Insurance, Interest Rate Exchange Agreements and Guaranteed Investment Contracts

MDOT does not have variable rate debt or bond insurance on CTBs nor does MDOT use interest rate exchange agreements or guaranteed investment contracts.

Trends in Transportation Debt

Historically, MDOT has used a combination of current revenues and bond financing to fund its capital program. Reliance on debt to support capital projects has often varied with revenue performance and cash flow requirements. For example, in 2008 and 2009 revenues were affected by the slowing economy and consequently MDOT increased its reliance on debt to support capital projects. The growth in debt outstanding slowed substantially in 2010 and in 2011, revenues were slightly higher than target levels at the same time capital funds were not expended as quickly as anticipated, therefore the issuance of debt was delayed. Transportation debt outstanding and required debt service for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 4***. A detailed historical summary of Transportation debt activity may be found in ***Appendix C-3***.



Projected bond issuances are based on MDOT's revenue projections, the draft six-year capital budget for transportation projects, and adhere to statutory debt outstanding limitations and bondholder covenants. The following table provides a detailed summary of projected Transportation debt activity.

Summary of Projected Debt Activity MDOT Consolidated Transportation Bonds ($ in millions)					
Fiscal Year	**Debt Outstanding at Beginning of Year**	**New Issues**	**Redeemed**	**Debt Outstanding at End of Year**	**Required Debt Service**
2013	$1,563	$350	$110	$1,803	$183
2014	$1,803	$375	$130	$2,048	$216
2015	$2,048	$215	$153	$2,110	$243
2016	$2,110	$250	$166	$2,194	$260
2017	$2,194	$270	$189	$2,275	$288
2018	$2,275	$335	$200	$2,410	$304
2019	$2,410	$290	$182	$2,518	$292
2020	$2,518	$200	$163	$2,555	$278
2021	$2,555	$205	$199	$2,561	$318
2022	$2,561	$210	$220	$2,551	$341

C. Grant Anticipation Revenue Vehicles ("GARVEE") Bonds

Purpose

Grant Anticipation Revenue Vehicles ("GARVEE") Bonds are authorized by statute as 12-year obligations that may be used to leverage federal aid to finance the cost of transportation facilities. GARVEEs were used as a part of the funding plan for the Intercounty Connector ("ICC") project, in addition to various other debt instruments and cash. Use of GARVEEs on the ICC was intended to allow the project to be implemented sooner than otherwise would be possible and with less reliance on the State's available funds in the short term.

Security

GARVEE bonds are secured by a pledge of federal transportation funds received by the State which approximate $440.4 million annually. In addition, there is a subordinate pledge of certain State Transportation Trust Fund ("TTF") tax sources. The GARVEEs were also structured to include debt service reserve funds.

Limitations to Debt Issuance

Statute limits GARVEE issuance to an aggregate principal amount of $750.0 million and requires that GARVEE bonds be considered tax-supported debt.

Current Status:

Debt Outstanding as of June 30, 2012: $539,355,000

Ratings

GARVEEs are currently rated AAA by Standard and Poor's, Aa1 by Moody's Investors Service and AA by Fitch Ratings.

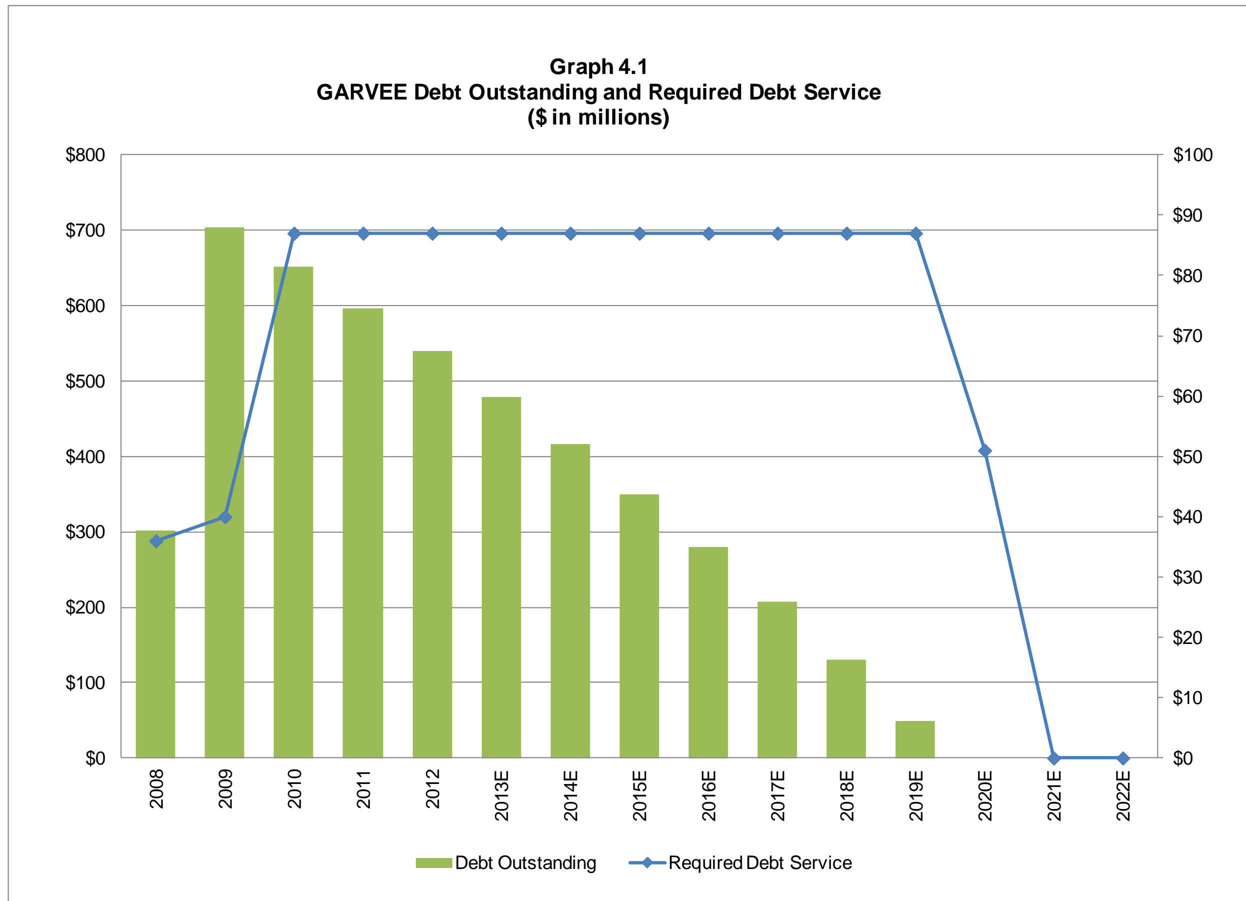
Use of Variable Rate Debt, Bond Insurance, Derivatives and Guaranteed Investment Contracts

The GARVEE bonds are fixed rate bonds, and were issued without bond insurance due to

the subordinate pledge of the TTF and the availability of debt service reserve funds. The Authority has not used derivatives or guaranteed investment contracts.

Trends in GARVEE Debt

A total of $750.0 million in GARVEE bonds have been issued by the Maryland Transportation Authority. The first issuance occurred in May 2007 and totaled $325.0 million with a true interest cost of 3.99%. In December 2008, the Authority sold the remaining $425.0 million of GARVEE bonds with a true interest cost of 4.31%. GARVEE debt outstanding and required debt service for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 4.1***. The final GARVEE bond matures in fiscal year 2020 and no further issuances are projected.



D. Lease and Conditional Purchase Financings

Purpose

The State has financed assets using capital leases, energy leases and conditional purchase financings using Certificates of Participation ("COPs"). In a capital lease financing the State builds an equity interest in the leased property over time and gains title to such property at the end of the leasing period and have been used for the acquisition of both real property and equipment. Under current practice, capital leases for equipment (primarily computers and telecommunications equipment) are generally for periods of five years or less. Real property capital leases are longer term (in the range of 20 to 30 years) and have been used to acquire a wide variety of facilities. In all leases, the term of the lease does not exceed the economic life of

the property. The State also uses lease-purchase agreements with a maximum term of 15 years to provide financing for energy conservation projects at State facilities.

The CDAC considers capital leases in accordance with current Generally Accepted Accounting Principles ("GAAP"). Therefore if a lease meets one or more of the following four criteria it is classified as a capital lease and thereby included as tax-supported debt as long as the lease is supported directly or indirectly by State tax revenues:

- The lease transfers ownership of the property to the lessee (user) by the end of the lease term.
- The lease allows the lessee (user) to purchase the property at a bargain price at fixed points in the term of the lease and for fixed amounts.
- The term of the lease is 75% or more of the estimated useful economic life of the property.
- The present value of the lease payments is 90% or more of the fair value of the property.

A discussion of potential changes to the GAAP capital lease classifications is included in Section V of this report.

State Agencies have also made significant use of COPs, another form of conditional lease purchase debt financing. Some COPs are supported by facility revenues and therefore are not considered to be tax supported and are not included in the capital lease component of the affordability analysis. The following lease activity for equipment and energy performance contracts does not include leases for the Maryland Stadium Authority ("MSA") which are reported as MSA debt.

Security

Lease payments by the State are subject to appropriation. The State has represented to the lessors that it will do all things lawfully within its power to obtain, maintain, and pursue funds to make the lease payments. In the event of non-appropriation, the State will surrender the secured property to the lessor. Energy lease payments are made from the agencies' annual utility appropriations utilizing savings achieved through the implementation of energy performance contracts.

Limitations to Debt Issuance

Financings described in this section may be subject to statutory limitations such as transportation leases or to various approval processes including but not limited to legislative review and approval by the Board of Public Works.

Current Status:

The following table summarizes the current tax-supported leases and tax-supported Conditional Purchase Financings with debt outstanding totaling $310,464,316 as of June 30, 2012.

FY 2012 Debt Outstanding and Debt Service by Agency (\$ in millions)			
State Agency	Facilities Financed	Debt Outstanding	Debt Service
Treasurer's Office	Capital Equipment Leases	$28.7	$18.3
	Energy Performance Projects	7.7	1.7
Transportation	Headquarters Office Building	22.6	2.8
	MAA Shuttle Buses - BWI	6.4	1.5
General Services	St. Mary's County Multi-Service Center	0.7	0.7
	Hilton Street Facility	1.3	0.2
	Prince George's County Justice Center	19.2	1.5
Transportation Authority	State office parking facility	20.0	1.6
Lottery	Ocean Downs and Perryville VLTs	33.0	8.7
Health and Mental Hygiene	Public Health Lab	170.9	0.0
	Total	$310.5	$37.1

Ratings

The Treasurer's Office equipment and energy leases are not rated, however some of the capital leases and COPs included in this section may have ratings.

Energy Leases

As directed by statute, tax supported debt does not include capital leases used to finance energy performance contracts if, as determined by the CDAC, energy savings that are guaranteed by the contractor: 1) equal or exceed the capital lease payments on an annual basis; and 2) are monitored in accordance with reporting requirements adopted by the CDAC (see State Finance and Procurement §8-104). The Committee has adopted the following guidelines in regards to its analysis of energy leases:

1. All energy leases that do not have any guarantees should be included as tax supported debt in CDAC's affordability analysis.

2. Prior to the recommendation of the total amount of new State debt that prudently may be authorized for the next fiscal year, CDAC should monitor and review the following:

   If construction of the energy improvement is complete:
   - The Guarantee must be current and not expired
   - If the amount of the Guarantee is greater than or equal to the annual debt service on the lease, the lease will not be included as tax supported debt in CDAC's affordability analysis.

   If the energy project is in construction:
   - If the proposed amount of the surety bond that will be posted is greater than or equal to the future annual debt service on the lease, the lease will not be included as tax supported debt in CDAC's affordability analysis.

Based on these criteria the following leases are <u>not</u> included as tax-supported debt in the affordability analysis.

Energy lease project	Debt Service for FY2013	Annual Surety Bond Amount
USM – Baltimore County	$543,600	$592,164
DGS – District Court & Multi–Service Centers	388,320	399,649
Maryland School for the Deaf	291,257	291,257
DHMH – Springfield Hospital	637,912	637,912
DPSCS – Hagerstown Prison	488,395	832,158
DHMH - Deer's Head Hospital	255,946	255,946
DHMH - Spring Grove Hospital	1,896,641	2,392,341
DHMH - Spring Grove Hospital (Modification)	138,649	*
Department of Agriculture	194,960	243,185
DGS - Multi-Service Centers	1,588,714	1,818,967
University of Baltimore	649,125	701,240
USM – College Park	1,836,990	1,904,343
UMCES (Horn Point Lab)	148,783	214,407
State Police	483,258	936,268
Workforce Technology	169,101	204,181
DPSCS – Jessup	1,684,300	1,944,776
Maryland Aviation Administration	1,600,404	2,061,302
State Highway Administration	1,828,854	2,234,503
Maryland Transit Administration	493,823	646,589
Maryland Port Administration	$0	1,618,485**
Total	$15,319,032	$19,929,673

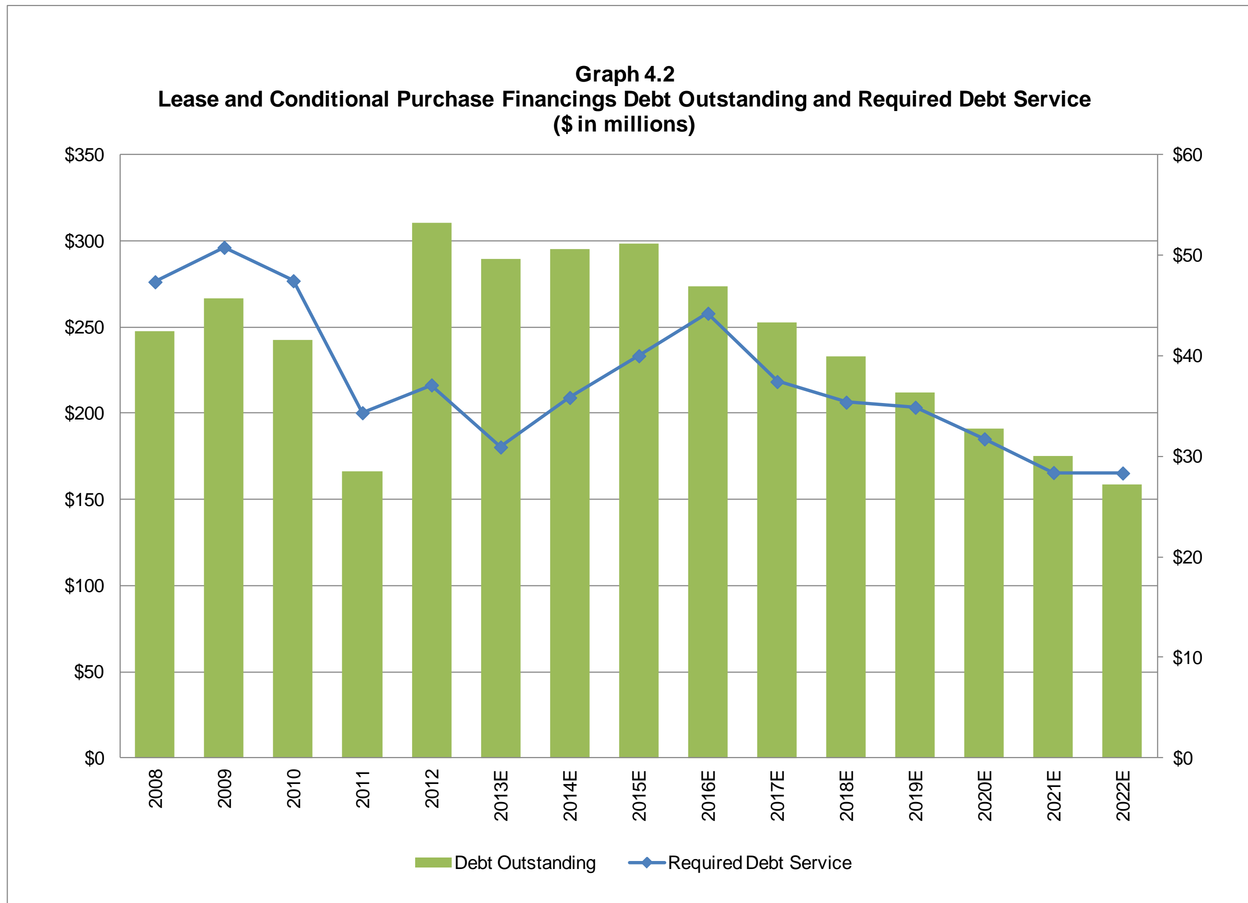
Notes: * The surety bond amount is included with the original Spring Grove project surety bond amount.
** Project is currently under construction and the proposed surety bond is greater than the projected annual debt service.

The following leases are included as tax-supported debt in the affordability analysis on ***Tables 1 and 2*** because the energy savings were not guaranteed in an amount that was equal to or greater than annual debt service. In some instances surety bonds are less than the debt service, or have been cancelled due to facility closure or cost savings.

Energy lease project	Debt Service for FY2013
DGS - State Office Complex	$908,233
DHMH -Rosewood Center	383,326
DHMH -Rosewood Center	156,934
St. Mary's College of Maryland	205,295
Veterans Affairs	56,638
Total	$1,710,426

Trends in Lease and Conditional Purchase Financings

Debt outstanding from lease and conditional purchase financings and required debt service for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 4.2***.



Projected financings are based on historic activity and surveys of State agencies and include $5 million of equipment leases in fiscal years 2013 – 2022; except for fiscal year 2015 where $30 million is projected including $25 million in equipment for the DHMH lab. A MEDCO financing for a parking garage at State Center is also projected for fiscal year 2014 totaling $32.5 million, although the timing of this project is uncertain. No additional financings for Video Lottery Terminals are planned due to changes in how the machines are procured and leased. The Department of General Services ("DGS") has indicated that $3.6 million in energy leases will be financed in fiscal year 2014. DGS has advised the CDAC that all of the projected energy lease financings will have surety bond guarantees that equal or exceed the debt service payments throughout the term of the lease; therefore, these leases are not included in the CDAC Affordability Analysis. The following table provides a detailed summary of projected lease and conditional purchase financings.

Summary of Projected Debt Activity Lease and Conditional Purchase Financings ($ in millions)					
Fiscal Year	**Debt Outstanding at Beginning of Year**	**New Issues**	**Redeemed**	**Debt Outstanding at End of Year**	**Required Debt Service**
2013	$310	$5	$26	$289	$31
2014	$289	$38	$31	$295	$36
2015	$295	$30	$27	$298	$40
2016	$298	$5	$30	$274	$44
2017	$274	$5	$26	$253	$37
2018	$253	$5	$25	$233	$35
2019	$233	$5	$26	$212	$36
2020	$212	$5	$26	$191	$32
2021	$191	$5	$21	$175	$28
2022	$175	$5	$21	$159	$28

E. Maryland Stadium Authority ("MSA")

Purpose

The MSA was created in 1986 as an instrumentality of the State responsible for financing and directing the acquisition and construction of professional sports facilities in Maryland. Since then, the MSA's responsibility has been extended to include convention centers in Baltimore City, Ocean City and a conference center in Montgomery County, and the Hippodrome Theater in Baltimore, Maryland. A history of MSA's financings is in Appendix B.

Security

Lease rental payments subject to annual appropriation by the State are pledged to pay debt service on MSA bonds. Revenues pledged to pay debt service include lottery revenues from certain select lottery games that are transferred to MSA for operations and the State's lease rental payments, General Fund appropriations, ticket surcharges and other operating revenues. MSA's share of lottery revenues has been pledged for recent bond issuances. These bonds are not considered tax-supported debt and are not included in the CDAC affordability analysis and the debt data that is presented in this report.

Ratings

MSA bonds are currently have a long-term rating of AA+ by Standard and Poor's, Aa2 by Moody's Investors Service and AA by Fitch Ratings. Short-term bonds are currently rated A-1+ by Standard and Poor's, VMIG1 by Moody's Investors Service and F1+ by Fitch Ratings.

Use of Variable Rate Debt, Bond Insurance, Interest Rate Exchange Agreements and Guaranteed Investment Contracts

MSA has two outstanding issues or approximately $73 million of outstanding variable rate debt that has been swapped to fixed rate. Barclay's is the counterparty on the swaps.

Current Status:

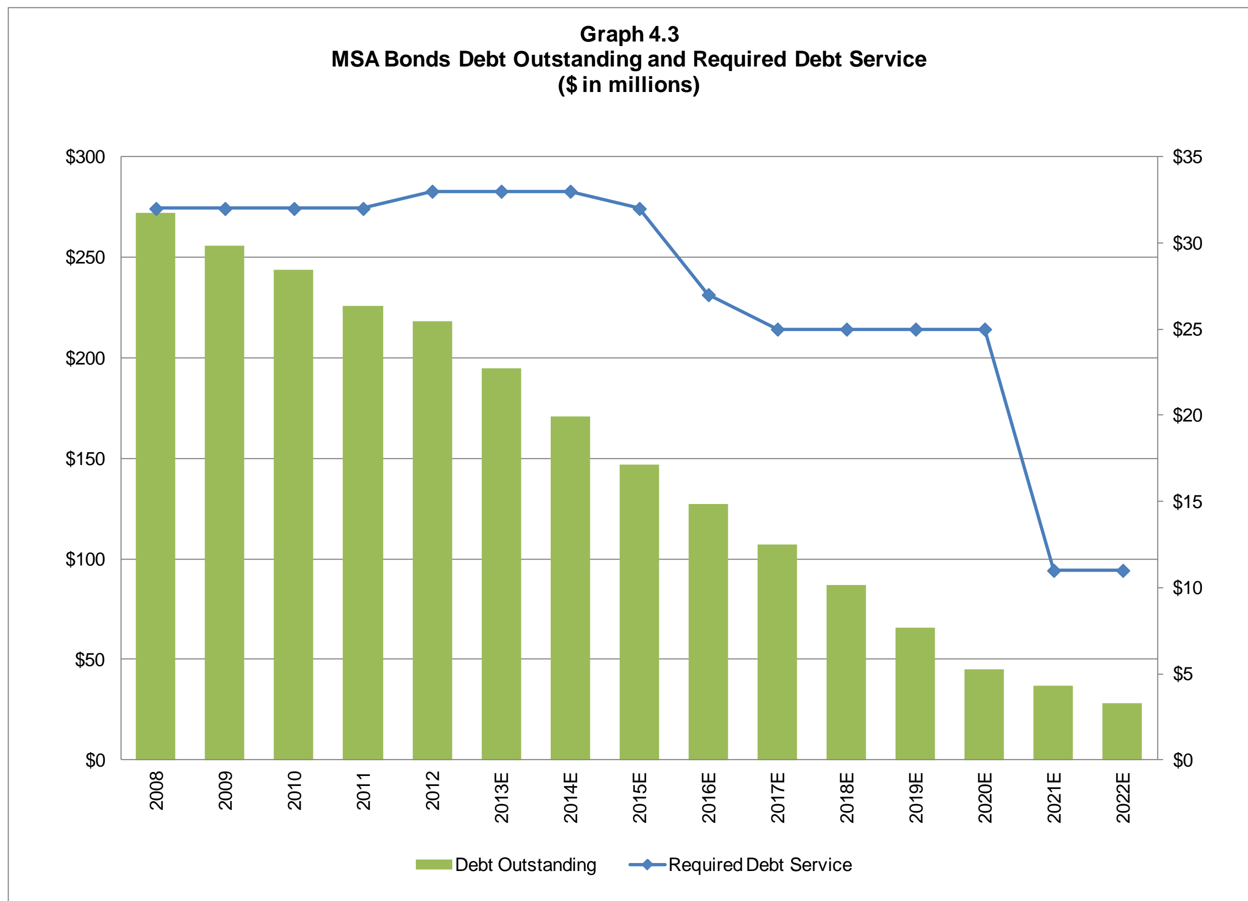
Debt Outstanding as of June 30, 2012: $217,891,433

FY 2012 Debt Outstanding and Debt Service by Project *($ in millions)*		
	Debt Outstanding	**Debt Service**
Oriole Park at Camden Yards	$97.7	$15.3
Baltimore City Convention Center	$13.6	$5.1
Ocean City Convention Center	$5.4	$1.4
Ravens Stadium	$64.3	$7.0
Montgomery County Conference Center	$16.0	$1.8
Hippodrome Theater	$13.7	$1.8
Camden Station Renovation	$7.2	$0.8
Total Tax Supported Debt:	**$217.9**	**$33.2**
Oriole Park at Camden Yards	$5.5	$0.7
Ravens Stadium	$2.2	$0.3
Total Energy Leases:	**$7.7**	$1.0

(a) Leases are debt of the MSA, but are not included as part of tax-supported debt because guaranteed utility savings exceeds the annual debt service.

Trends in MSA Debt

Debt outstanding and required debt service for MSA tax-supported debt for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 4.3***. No further tax-supported issuances are projected.



F. Bay Restoration Fund Revenue Bonds (Bay Restoration Bonds)

Purpose

Bay Restoration Bonds are authorized by statute as 15-year obligations to finance grants to waste water treatment plants ("WWTP") for upgrades to remove nutrients thereby reducing nitrogen loads in the Chesapeake Bay and its tributaries.

Security

Bay Restoration Bonds are secured by a pledge of revenues deposited in the Bay Restoration Fund from a monthly charge on WWTP users. The Bay Restoration Fund is administered by the Water Quality Financing Administration of the Maryland Department of the Environment.

Current Status:

Debt Outstanding as of June 30, 2012: $38,820,000

Ratings

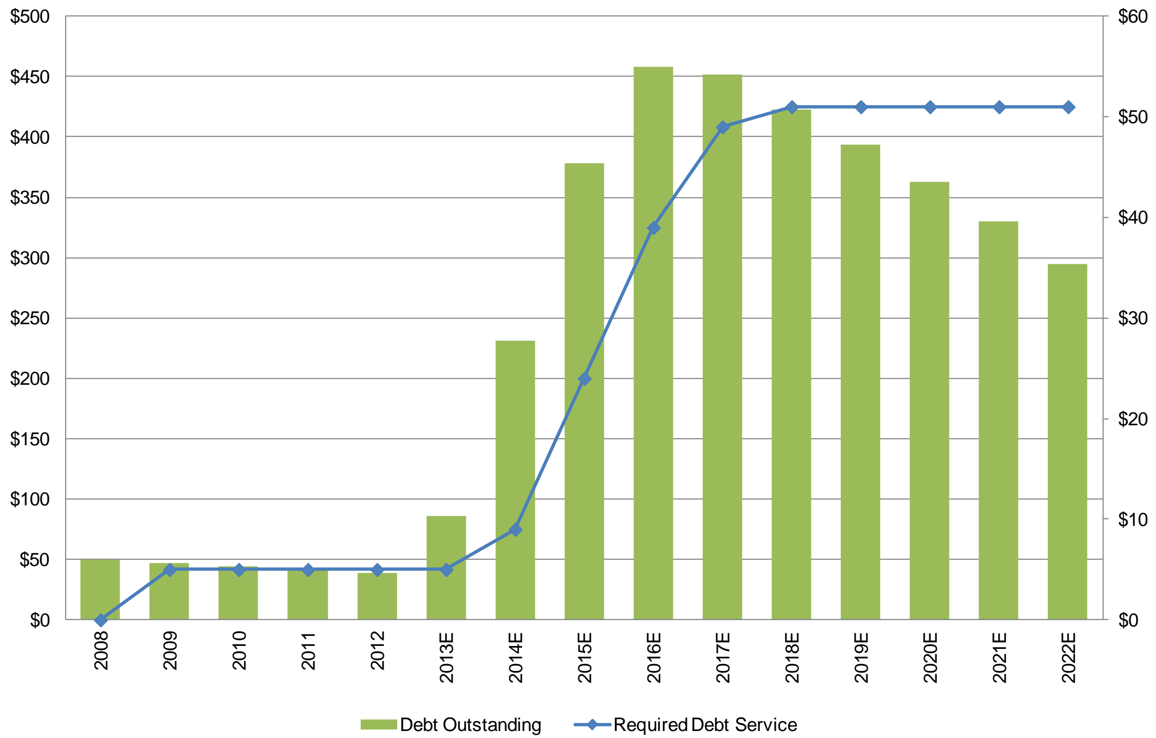
Bay Restoration Bonds are currently rated Aa2 by Moody's Investor Service.

Use of variable rate debt, bond insurance, derivatives and Guaranteed Investment Contracts (GIC)

The indenture permits the issuance of variable rate debt although none has been issued to date. The structure for the Series 2008 issue was fixed rate only, with no debt service reserve that may have required guaranteed investment contracts and no bond insurance.

Trends in Bay Restoration Bond Debt

The Water Quality Financing Administration issued $50.0 million in Bay Restoration Bonds in April, 2008 with a true interest cost of 4.03%. Bay Restoration Bond debt outstanding and required debt service for the past five fiscal years and projections for the next ten fiscal years are shown in ***Graph 4.4*** on the following page.



The timing and amount of future bond issuances will depend on the fee revenue attained and project funding requirements as upgrades of WWTP proceed. The following table provides a detailed summary of projected Bay Restoration Bond debt activity.

Summary of Projected Debt Activity Bay Restoration Bonds ($ in millions)					
Fiscal Year	**Debt Outstanding at Beginning of Year**	**New Issues**	**Redeemed**	**Debt Outstanding at End of Year**	**Required Debt Service**
2013	$39	$50	$3	$86	$5
2014	$86	$150	$5	$231	$9
2015	$231	$160	$12	$378	$24
2016	$378	$100	$20	$458	$39
2017	$458	$20	$26	$452	$49
2018	$452	$0	$28	$423	$51
2019	$423	$0	$30	$394	$51
2020	$394	$0	$31	$363	$51
2021	$363	$0	$33	$330	$51
2022	$330	$0	$34	$295	$51

III. CAPITAL PROGRAMS

A. State of Maryland Capital Program

Capital Program Structure

The State's annual capital program includes projects funded from General Obligation Bonds, general tax revenues, dedicated tax or fee revenues, federal grants, and auxiliary revenue bonds issued by State agencies.

The General Obligation Bond-financed portion of the capital program consists of an annual Maryland Consolidated Capital Bond Loan (“MCCBL”). The MCCBL is a consolidation of projects authorized as general construction projects and various Administration-sponsored capital programs, capital grants for non-State-owned projects, and separate individual legislative initiatives.

General Obligation Bond funds are occasionally supplemented with State general fund capital appropriations (“PAYGO”) authorized in the annual operating budget. The amount of funds available to fund capital projects with operating funds varies from year to year. For example, fiscal year 2006 general fund PAYGO appropriation totaled $2.5 million, the fiscal year 2010 general fund PAYGO appropriation totaled $60.0 thousand, and the fiscal year 2012 general fund PAYGO appropriation totaled $47.5 million.

The operating budget also traditionally includes PAYGO capital programs funded with: (i) a broad range of dedicated taxes, loan repayments, and federal grants such as the State’s Drinking Water Revolving Loan Program and the Water Quality Revolving Loan Program; (ii) individual dedicated revenue sources such as the property transfer tax which supports the State’s land preservation programs; and (iii) specific federal grants which provide funds for armory construction projects, veteran cemetery expansion projects, and housing programs.

State-Owned Facilities

Requests for improvements to State-owned facilities are expected to exceed $3.75 billion over the next five years. Higher education, juvenile services, judiciary, and correctional facilities comprise the bulk of these requests.

State Capital Grants and Loans

State capital grants and loans are allocated to local governments and non-profit organizations. These grants and loans are primarily used to improve existing, and construct new public schools and community college buildings. Grants and loans are also used to restore the Chesapeake Bay, improve and expand access to quality health care, and revitalize existing communities.

Authorizations for capital grants and loans have increased in recent years to accommodate the need to improve the State’s public elementary and secondary schools. Future requests for funding are expected to remain high for public schools, community colleges, and environmental programs. The need for funding environmental programs reflects the State’s efforts to restore the Chesapeake Bay. Requests for State capital grant and loan programs to be funded with General Obligation Bonds are expected to total $4.8 billion over the next five years.

Legislative Initiatives

Funding requests are also submitted each year by members of the General Assembly to provide financial support for local programs or projects of Statewide interest. These bond requests include capital grants to local governments and private non-profit sponsors to support construction of local public and private facilities. These requests are estimated to total $215.2 million over the next five years based on the past five-year average of $43.0 million per year.

Summary of Capital Program: FY 2014 – 2018

The total capital requests are estimated at $8.7 billion for the next five years. By contrast, the Department of Budget and Management anticipates recommending a five-year capital improvement program of approximately $4.8 billion in General Obligation Bonds (based on the authorization levels recommended by the Committee in December, 2011). The total capital program will depend on the amount of general funds and other non-General Obligation Bond sources available for capital funding.

FY 2014 – FY 2018
Requests versus Anticipated Funding
($ in millions)

	Total Current and Anticipated Requests	Anticipated Bond Funded Capital Program	Difference Between Anticipated Requests and Anticipated Funding Level
State-Owned Facilities	$3,750.1	$2,003.7	$1,746.4
Capital Grant Programs	$4,778.8	$2,731.3	$2,047.5
Legislative Initiatives	$215.2	$75.0	$140.2
Totals	$8,744.1	$4,810.0	$3,934.1

B. Capital Improvement and School Construction Needs

Fiscal year 2013 is the final year of the annual State school construction goal of $250.0 million that the Governor and General Assembly set in the 2004 Public School Facilities Act. Since fiscal year 2006, the State has invested a total of $2.516 billion in public school construction, surpassing the overall State goal of providing $2.0 billion within eight years. The Public School Facilities Act (Chapters 306 and 307, Laws of Maryland, 2004), among other provisions, declared the intent that the State pursue a goal of fully funding by fiscal year 2013 the school facility needs identified by the 2003 School Facility Assessment Survey. Achieving this goal would require a commitment by the State to provide approximately $2.0 billion for school construction projects over eight years (fiscal year 2006 to fiscal year 2013) or approximately $250.0 million per year.

In 2003, at the request of the Task Force to Study Public School Facilities, the Maryland State Department of Education conducted a survey to determine the extent to which public school facilities Statewide meet current federal, State, and local facility standards and can

support required programs and expected enrollment. The results, reported in November 2003, indicated that more than one-third of public schools were deficient in at least one facility standard and that the cost of the necessary improvements was $3.85 billion in 2003 dollars. Since that figure was determined, school construction costs increased by more than 50% due to increases in the cost of steel, cement, and other material components before stabilizing, and even declining, since fiscal 2009. Costs are projected to increase 4% in fiscal year 2014. The Public School Construction Program ("PSCP") monitors actual costs based on final contracts throughout the year and may make adjustments to the State reimbursement rate if warranted by market conditions. For discussion purposes, this Report refers to the documented $3.85 billion, but the Committee acknowledges the impacts of inflation. The Task Force recommended that the State assume $2.0 billion of this cost with the remainder the responsibility of local government under the State-local cost share formula for school construction.

In fiscal year 2013, public school construction received $349.2 million from general obligation bonds ($326.4 million) and previously-authorized contingency funds ($22.8 million). This total includes $25.0 million reserved for the Energy Efficiency Initiative. The Governor and the General Assembly have met or exceeded the State funding goal for school construction in each of the past eight years primarily by both reducing and delaying funds for some other State capital projects and using unspent school construction funds from prior years available in the contingency fund. The amount of available contingency funds has increased significantly in the past several years reflecting economic conditions as more projects have come in well-under budget and local governments have reduced project scopes or cancelled projects due to lack of local matching funds.

The Governor's fiscal year 2013 Capital Improvement Program proposed to continue the $250.0 million annual funding commitment for public school construction through fiscal year 2017. Although the State has exceeded the $2.0 billion overall funding goal by 25 percent, it is important to recognize that escalation in building costs since 2004 has significantly raised the actual cost of the basic goal of the Public School Facilities Act - to bring all public schools up to minimum standards by fiscal year 2013. And while funding requests from local jurisdictions have declined in the last five years, school construction needs continue to exceed the anticipated level of State funding. Fiscal year 2014 requests are expected to total approximately $670.0 million.

IV. BOND RATING AGENCY REPORTS

A. Rating Discussion

On July 18 and July 19, 2012 Moody's Investors Service, Standard & Poor's (S&P) and Fitch Ratings all affirmed the State's AAA rating in conjunction with the sale of General Obligation Bonds State and Local Facilities Loan of 2012, Second Series.

Moody's has assigned a negative outlook to Maryland's General Obligation Bonds. In its latest confirmation of Maryland's Aaa rating dated July 18, 2012, Moody's stated that the negative outlook on Maryland's Aaa rating, like that for the Commonwealth of Virginia, is due to Maryland's indirect linkages to the weakened credit profile of the U.S. government, which itself was assigned a negative outlook by Moody's on August 2, 2011. The July 18, 2012 rating states "Moody's has determined that issuers with such indirect linkages, such as Maryland, have some combination of economies that are highly dependent on federal employment and spending, a significant healthcare presence in their economies, have direct healthcare operations, or high levels of short-term and puttable debt." In a December 7, 2011 assessment of issuers with these indirect linkages, Moody's specifically cited Maryland's and Virginia's economic sensitivity to federal employment and spending as an outlier having high risk exposure when compared to national norms. Moody's did not cite any elevated risk exposure for economic sensitivity to the healthcare industry or capital markets exposure as evidenced by the fact that the State has no general obligation variable rate debt.

On September 11, 2012, Moody's issued an update on the U.S. government stating that the Aaa rating with a negative outlook remains unchanged. The report continued to state that THE DIRECTION OF THE U.S. RATING AND ITS OUTLOOK WILL MOST LIKELY BE DETERMINED BY THE OUTCOME OF BUDGET NEGOTIATIONS DURING THE COURSE OF 2013 AND THAT THE MAINTENANCE OF THE CURRENT RATING AND OUTLOOK INTO 2014 IS "HIGHLY UNLIKELY". THE TREASURER'S OFFICE ANTICIPATES THAT MOODY'S WOULD REVIEW THE STATE'S RATING AND NEGATIVE OUTLOOK SHORTLY FOLLOWING ANY CHANGES TO THE U.S. RATING OR OUTLOOK.

B. Excerpts from Rating Agency Reports

Generally, there is consensus among the rating agencies in evaluating the State's credit strengths and weaknesses. All three agencies cite Maryland's economy and fiscal management as a credit positive. The State's unfunded pension liability continues to be a credit challenge, although each agency recognizes the State's recent reform efforts. The complete reports are available on the Treasurer's website at www.treasurer.state.md.us and may be summarized as follows:

Fitch Ratings, in assigning the AAA rating and stable outlook, noted:

- *Debt oversight is strong and centralized, and the debt burden is moderate. The State has policies to maintain debt affordability, and the constitution requires GO and transportation bonds to amortize within 15 years.*
- *Pension funding levels have deteriorated, although the State has undertaken extensive pension and other post-employment benefit (OPEB) reforms.*

- *The State has a diverse, wealthy economy, benefiting from its proximity to the nation's capital.*
- *Financial operations are conservative, and the State maintains a well- funded Rainy Day Fund to manage revenue cyclicality. The State took repeated action during the course of the recession to address projected budget gaps, including raising tax revenues, cutting spending, and using Rainy Day and other balances.*

Credit challenges that were cited by Moody's include:

- *Continuing budget pressure*
- *Low retirement system funded levels*
- *Above average debt burden*
- *Reliance on federal jobs in year of retrenchment*

Standard and Poor's AAA rating with a stable outlook reflects the State's:

- *Diverse, broad-based economy, which has historically outperformed the national economy;*
- *Strong wealth and income levels, coupled with unemployment that remains below the national average through economic cycles;*
- *Long history of prudent fiscal management, including making difficult decisions to restore structural budget balance; and*
- *Moderate debt burden; enhancing this are a clearly defined debt-affordability model limiting annual issuance and the maintenance of ratios within reasonable limits, including a constitutional 15-year debt maturity schedule.*

Standard and Poor's continues in its analysis to cite below-average pension funded ratios and the potential for significant reductions in federal funding as downside risks to the rating.

C. Moody's 2012 State Debt Medians

The Committee reviewed a May 2012 Moody's report titled 2012 State Debt Medians Report. This annual report uses various debt measures to compare state debt burdens, which is one of many factors that Moody's uses to determine state credit quality. Selected measures from the report are summarized in the table below. The Moody's calculation of debt outstanding as a percent of personal income will differ from the CDAC calculations due to timing variances. For example, the Moody's reported ratio for 2011 measures net state tax-supported debt as of calendar year-end 2011 compared to personal income as of 2010. The full report is available on the Treasurer's website at www.treasurer.state.md.us under the CDAC August 22, 2012 meeting materials.

Measure	Maryland	Mean	Median	Ranking
Net Tax-Supported Debt per Capita	\$1,742	\$1,408	\$1,117	14th
Net Tax-Supported Debt as % of GDP	3.60%	3.40%	2.80%	18th
Net Tax-Supported Debt as % of Personal Income	3.44%	2.96%	2.40%	16th
Debt Service Ratio	5.70%	5.30%	4.90%	20th

V. AFFORDABILITY ANALYSIS

The objective this affordability analysis is to draw a proper balance between two basic interests: the State's capital needs and the State's ability, as measured by the Committee's self-imposed affordability criteria, to repay the debt issued to finance those capital needs.

A. The Concept of Affordability

The ultimate test of debt affordability is the willingness and ability of the State to pay the debt service when due. Apart from revenue sources which are dedicated by law, the allocation of future resources between debt repayment and other program needs is a matter of judgment. A careful and comprehensive determination of affordability should take into consideration the demand for capital projects, the relationship between debt authorization and debt issuance, available and potential funding mechanisms, overall budgetary priorities, and revenues.

The Committee believes that the crux of the concept of affordability is not merely whether or not the State can pay the debt service; rather, affordability implies the ability to manage debt over time to achieve certain goals. Maryland has a long tradition of effectively managing its finances and debt. The challenge of debt management is to provide sufficient funds to meet growing capital needs within the framework of the State's debt capacity, thereby maintaining the AAA credit rating.

B. Affordability Criteria

The Committee has self-imposed affordability criteria which are: State tax-supported debt outstanding should be no more than 4.0% of State personal income; and debt service on State tax-supported debt should require no more than 8.0% of revenues.

C. 2012 Affordability Recommendation

The Committee met on October 1, 2012 and considered a recommendation to increase the authorization assumption projected in the 2011 CDAC Report by $150 million. The Committee thus approved a total of $1,075 million for new general obligation authorizations by the 2013 General Assembly to support the fiscal year 2014 capital program. The Committee's adopted planning assumptions for future authorizations assume nearly level authorizations through fiscal year 2017 of between $1,085 million and $1,105 million. In fiscal year 2018, the projected authorization is $1,200 million and it increases by approximately 3% through 2022. With these authorization levels, the debt affordability ratios remain within the CDAC benchmarks of 4% debt outstanding to personal income and 8% debt service to revenues.

The Committee recognizes that there are multiple annual authorization levels and patterns that would result in adherence to the benchmarks, depending on future levels of personal income and State revenue. The Committee's planning assumptions for future authorizations will be reviewed in preparation for the 2013 report in light of updated revenue and personal income projections and authorization levels may be adjusted to adhere to these affordability benchmarks.

Current estimates for personal income and revenues were updated in September 2012 to reflect the Board of Revenue Estimates September forecast and both support the recommended authorization while adhering to the affordability criteria. Schedules of Personal Income and

Revenues are in ***Appendix A-1 and Appendix A-2,*** respectively. The Committee reviewed these estimates as well as assumptions for interest rates, authorizations, and issuances at its July and September meetings. The Committee believes that revenues, personal income and interest rates have been prudently estimated. Because the affordability ratio for debt service to revenues is near the 8.0% benchmark, any variation to the assumptions for revenues, interest rates, and projected activity in tax-supported debt issuance would impact directly the amount of future tax-supported authorizations and issuances.

The virtue of the annual CDAC process is the ability, if needed, to adjust authorizations in future years should forecasts of personal income and revenues decline or if projections for debt service rise because of increases in interest rates. However, these reductions to authorizations can be significant. For example, primarily as a result of declining revenues, the projected legislative authorizations of general obligation bonds in the five year period of 2012 - 2016 declined from $5.6 billion in the 2008 CDAC Report to $4.7 billion in the 2011 CDAC Report. See the history of projected authorizations on page 50. ***Appendix B-4*** highlights the effect of the maturity limit of 15 years on the State's General Obligation Bonds and the resulting rapid amortization of current outstanding debt. Debt service on current outstanding debt declines appreciably after about 5 years.

D. Comparison of Recommendation and Criteria

To analyze the relationship of the Committee's recommendation for general obligation debt to the affordability criteria, each component of tax-supported debt and debt service has been examined.

Debt Outstanding

The rise in total tax-supported debt in ***Table 1*** reflects the projected steady increase in authorizations and issuances of general obligation bonds and the increased authorization of transportation bonds as the department approaches its statutory debt limit of $2.6 billion. Total general obligation debt outstanding rises steadily from $7.5 billion in fiscal year 2012 to $10.8 billion in fiscal year 2022. Debt outstanding on Maryland Stadium Authority bonds are projected to decline with the assumption of no future issuances. GARVEE debt outstanding peaked at $704 million in fiscal year 2009 and is expected to be retired in fiscal year 2020. Bay Restoration Bond debt is expected to increase beginning in fiscal year 2013, peak at $458 million in fiscal year 2016 and steadily decline thereafter.

Debt Outstanding as a Percent of Personal Income

The ratio of debt outstanding to personal income reflects the State's reliance on revenues (sales tax and income tax) that are primarily based on consumption and income. Debt outstanding is measured as of the fiscal year end and personal income is measured as of the calendar year end. For example, the fiscal year 2012 ratio is calculated using debt outstanding as of June 30, 2012 and personal income is projected as of December 31, 2012.

The ratio of State tax-supported debt outstanding to personal income (***Table 1***) rises from 3.31% in fiscal year 2012, peaks at 3.46% in fiscal year 2014 and declines to 2.94% in fiscal year 2022. Due to the rapid amortization of most tax-supported debt in 15 years and the even faster amortization of GARVEE Bonds in 12 years, the ratio declines 0.52% from fiscal year 2014 to fiscal year 2022. At all times, the ratio remains below the affordability criterion of 4.0%.

STATE TAX SUPPORTED DEBT OUTSTANDING — TABLE 1

COMPONENTS AND RELATIONSHIP TO PERSONAL INCOME

FY 2008-2012 are final; FY 2013-2022 are projections and subject to change

State Tax Supported Debt Outstanding

($ in thousands)

Fiscal Year	General Obligation Bonds[a]	Consolidated Transportation Bonds	Capital Leases[b,c]	Stadium Authority	Bay Restoration Bonds	Garvee Bonds	Total Tax Supported Debt Outstanding	Fiscal Year
2008	$5,493,830	$1,268,815	$247,427	$271,570	$50,000	$300,655	$7,632,297	2008
2009	$5,873,643	$1,582,605	$266,757	$256,013	$46,825	$704,365	$8,730,208	2009
2010	$6,523,222	$1,645,010	$242,636	$243,557	$44,185	$651,795	$9,350,406	2010
2011	$6,982,846	$1,561,840	$166,551	$225,743	$41,560	$596,915	$9,575,456	2011
2012	$7,541,102	$1,562,630	$310,464	$218,281	$38,820	$539,355	$10,210,652	2012
2013	$8,009,372	$1,803,000	$289,182	$195,015	$85,995	$479,035	$10,861,599	2013
2014	$8,372,393	$2,048,000	$295,433	$170,708	$230,738	$415,775	$11,533,046	2014
2015	$8,709,688	$2,110,000	$298,436	$146,692	$378,279	$349,440	$11,992,535	2015
2016	$8,970,603	$2,194,000	$273,878	$126,681	$457,806	$279,780	$12,302,748	2016
2017	$9,256,677	$2,275,000	$252,828	$107,213	$451,726	$206,590	$12,550,034	2017
2018	$9,549,778	$2,410,000	$232,653	$86,961	$423,455	$129,680	$12,832,527	2018
2019	$9,862,372	$2,518,000	$212,078	$66,262	$393,813	$48,865	$13,101,390	2019
2020	$10,167,005	$2,555,000	$190,812	$44,715	$362,613	$0	$13,320,145	2020
2021	$10,499,341	$2,561,000	$175,176	$36,540	$329,858	$0	$13,601,915	2021
2022	$10,832,555	$2,551,000	$158,875	$27,945	$295,471	$0	$13,865,846	2022

State Tax Supported Debt Outstanding as a Percent of Personal Income

(Affordability criteria standard = 4.0%)

Fiscal Year	General Obligation Bonds	Consolidated Transportation Bonds	Capital Leases	Stadium Authority	Bay Restoration Bonds	Garvee Bonds	Total Tax Supported Debt Outstanding	Fiscal Year
2008	1.98%	0.46%	0.09%	0.10%	0.02%	0.11%	**2.75%**	2008
2009	2.15%	0.58%	0.10%	0.09%	0.02%	0.26%	**3.20%**	2009
2010	2.30%	0.58%	0.09%	0.09%	0.02%	0.23%	**3.30%**	2010
2011	2.35%	0.53%	0.06%	0.08%	0.01%	0.20%	**3.22%**	2011
2012	2.45%	0.51%	0.10%	0.07%	0.01%	0.17%	**3.31%**	2012
2013	2.51%	0.57%	0.09%	0.06%	0.03%	0.15%	**3.41%**	2013
2014	2.51%	0.62%	0.09%	0.05%	0.07%	0.12%	**3.46%**	2014
2015	2.49%	0.60%	0.09%	0.04%	0.11%	0.10%	**3.43%**	2015
2016	2.44%	0.60%	0.07%	0.03%	0.12%	0.08%	**3.34%**	2016
2017	2.40%	0.59%	0.07%	0.03%	0.12%	0.05%	**3.26%**	2017
2018	2.39%	0.60%	0.06%	0.02%	0.11%	0.03%	**3.21%**	2018
2019	2.37%	0.61%	0.05%	0.02%	0.09%	0.01%	**3.15%**	2019
2020	2.35%	0.59%	0.04%	0.01%	0.08%	0.00%	**3.08%**	2020
2021	2.32%	0.57%	0.04%	0.01%	0.07%	0.00%	**3.01%**	2021
2022	2.30%	0.56%	0.03%	0.01%	0.06%	0.00%	**2.94%**	2022

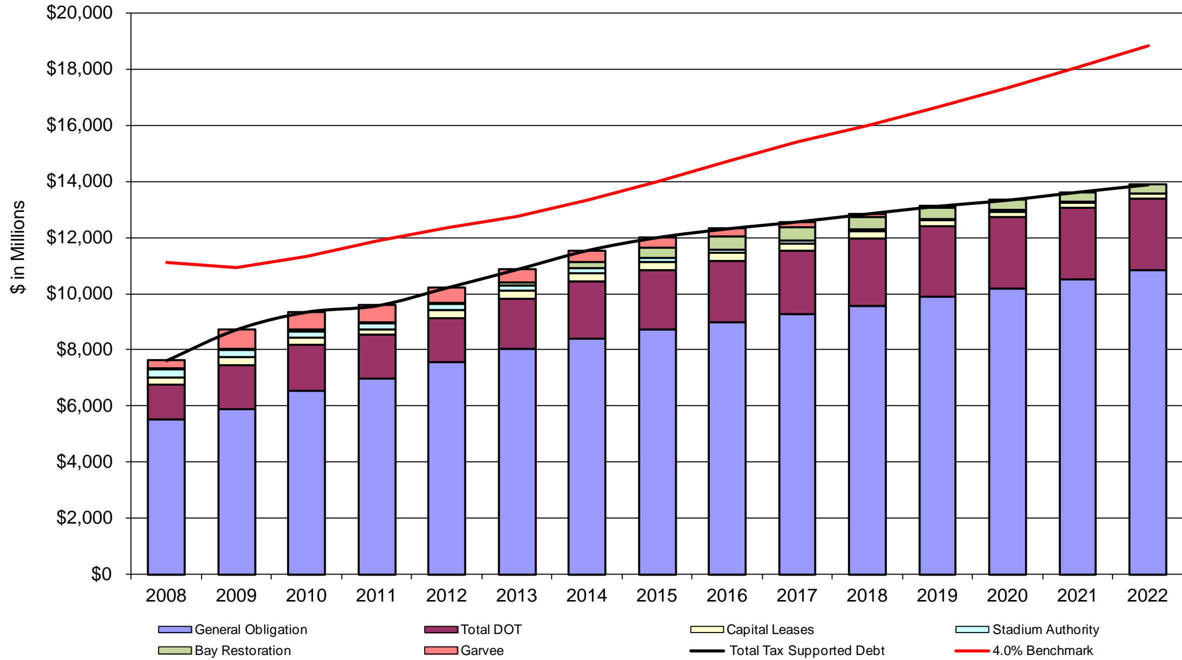
(a) Reflects presumed authorizations as follows:

General Assembly Session:	2012	2013	2014	2015	2016
Fiscal Year/Capital Budget:	**2013**	**2014**	**2015**	**2016**	**2017**
(in millions)	$1,075	$1,075	$1,085	$1,095	$1,105

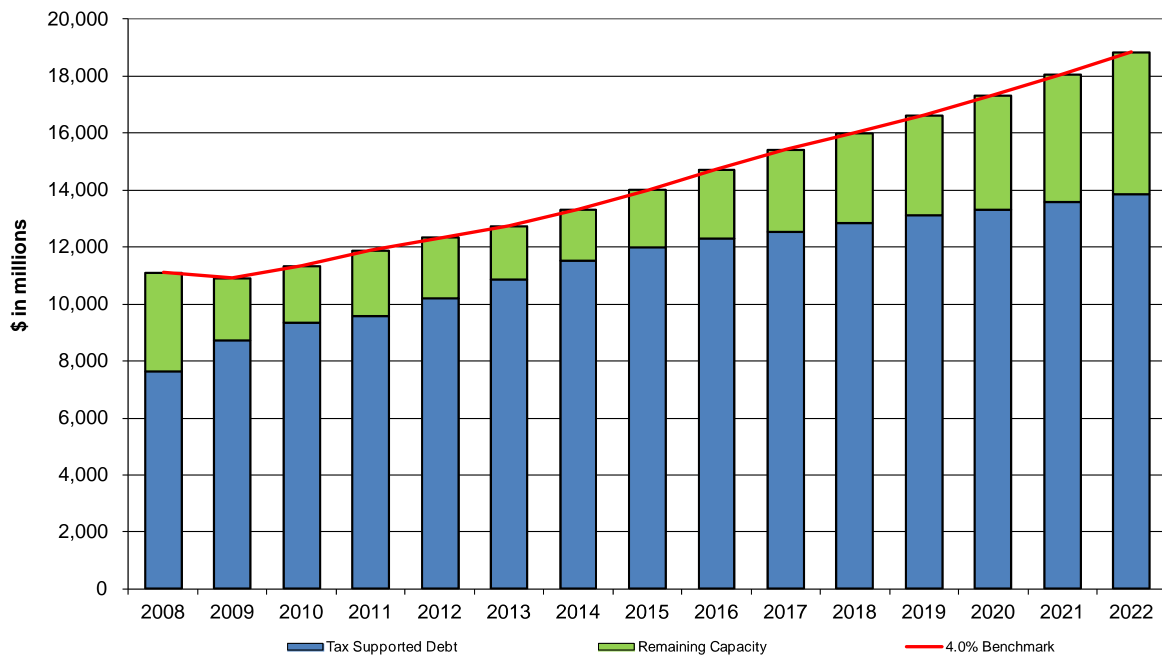
(b) Includes financings for a multi-agency office building in St. Mary's County, district court facilities in Prince George's County, a MDOT headquarters building, shuttle buses at BWI Airport, the DHMH public health lab and parking facilities at the Annapolis Office Complex and State Center.

(c) Leases include equipment, video lottery terminals and energy leases that do not have guaranteed energy savings = or > debt service.

Issuance Assumptions: ($ in millions)	**2013**	**2014**	**2015**	**2016**	**2017**
G.O. issues	$1,028.0	$930.0	$910.0	$900.0	$931.0
DOT issues	$350.0	$375.0	$215.0	$250.0	$270.0
Stadium Authority issues	$0.0	$0.0	$0.0	$0.0	$0.0
New Capital Leases - Equip. & EPC	$5.0	$5.0	$25.0	$5.0	$5.0
New Capital Leases - State Center Garage	$0.0	$32.5	$0.0	$0.0	$0.0
Garvee Bond Issues	$0.0	$0.0	$0.0	$0.0	$0.0
Bay Bonds Issues	$50.0	$150.0	$160.0	$100.0	$20.0
Total	$1,433.0	$1,492.5	$1,310.0	$1,255.0	$1,226.0
Personal Income (billions) (Appendix A-1)	$318.6	$332.9	$349.9	$368.1	$385.4



Source: Table 1 as of September, 2012
FY 2008-2012 are final; FY 2013-2022 are projections and subject to change



Source: Table 1 as of September, 2012
FY 2008-2012 are final; FY 2013-2022 are projections and subject to change

Debt Service

Projected general obligation debt service (***Appendix B-4)*** assumes that future interest rates are consistent with current forecasts and also assumes authorizations total $1,075 million for the fiscal year 2014 capital program. Projected authorizations for fiscal years 2015 through 2022 are shown in ***Appendix B-1***.

Debt Service as a Percent of Revenues

Compared to the prior criterion, debt service as a percent of revenues is a better measure for State financial management purposes, i.e., the legislature has control of both variables – revenues through the enactment of taxes and fees and debt service through the authorization of debt. It also reflects the State's ability to repay its debt.

The ratio of annual debt service to revenues (***Table 2a)*** increases from 6.68% in fiscal year 2012 to a peak of 7.62% in fiscal year 2018. It then declines to 7.15% in 2022. This decline reflects the maximum 5 year amortization for VLT equipment leases and the final payment of GARVEE debt service in fiscal year 2020.

TABLE 2A

STATE TAX SUPPORTED DEBT SERVICE

FY 2008-2011 are final; FY 2012-2022 are projections and subject to change

STATE TAX SUPPORTED DEBT SERVICE AS A PERCENT OF REVENUES

($ in thousands)

(Affordability criteria standard = 8%)

Fiscal Year	General Obligation Bonds[a]	DOT Consolidated Bonds[b]	Capital Leases[c,d]	Stadium Authority	Bay Restoration Bonds	Garvee Bonds	Total Tax Supported Debt Service	Total Revenues	Total Tax Supported Debt Service as a % of Revenues	Fiscal Year
2008	$692,539	$121,390	$47,357	$32,108		$36,091	$929,484	$16,735,213	**5.55%**	2008
2009	$744,799	$142,355	$50,783	$31,935	$4,655	$40,364	$1,014,892	$16,333,158	**6.21%**	2009
2010	$777,523	$150,954	$47,460	$32,054	$4,710	$87,458	$1,100,158	$16,061,611	**6.85%**	2010
2011	$834,833	$158,662	$34,331	$32,464	$4,616	$87,455	$1,152,361	$17,525,280	**6.58%**	2011
2012	$878,208	$174,215	$37,097	$32,694	$4,614	$87,457	$1,214,285	$18,164,677	**6.68%**	2012
2013	$915,982	$183,000	$30,922	$33,223	$4,617	$87,451	$1,255,195	$18,883,840	**6.65%**	2013
2014	$988,295	$216,000	$35,847	$33,239	$9,431	$87,458	$1,370,270	$19,697,081	**6.96%**	2014
2015	$1,051,193	$243,000	$39,999	$31,942	$23,884	$87,454	$1,477,472	$20,647,735	**7.16%**	2015
2016	$1,146,511	$260,000	$44,224	$26,904	$39,297	$87,450	$1,604,386	$21,522,982	**7.45%**	2016
2017	$1,205,907	$288,000	$37,432	$25,563	$48,902	$87,452	$1,693,255	$22,421,742	**7.55%**	2017
2018	$1,273,162	$304,000	$35,380	$25,505	$50,788	$87,457	$1,776,292	$23,301,412	**7.62%**	2018
2019	$1,308,596	$292,000	$34,874	$25,067	$50,746	$87,452	$1,798,734	$24,179,459	**7.44%**	2019
2020	$1,372,799	$278,000	$31,736	$24,984	$50,858	$51,365	$1,809,742	$25,128,289	**7.20%**	2020
2021	$1,418,254	$318,000	$28,382	$10,952	$50,859	$0	$1,826,447	$25,663,602	**7.12%**	2021
2022	$1,477,317	$341,000	$28,336	$10,990	$50,856	$0	$1,908,499	$26,693,139	**7.15%**	2022

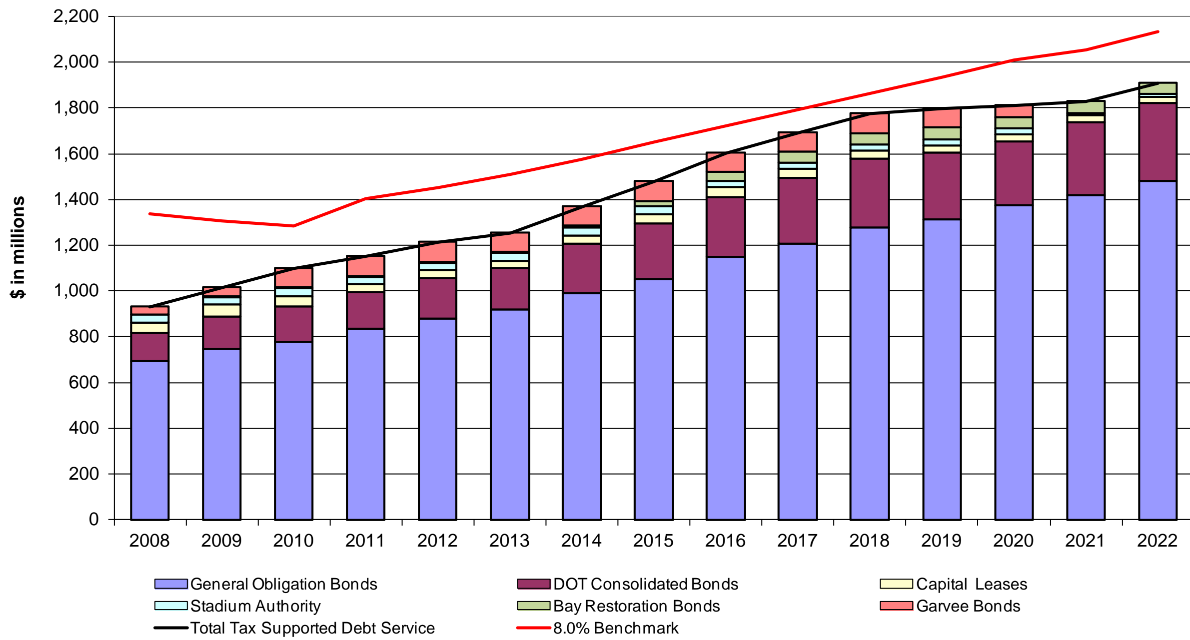
(a) Includes payments for Qualified Zone Academy Bonds (QZAB's).
(b) Does not include debt service on county transportation bonds. Highway user revenues from counties exceed debt service requirements.
(c) Includes financings for a multi-agency office building in St. Mary's County, district court facilities in Prince George's County, a MDOT headquarters building, shuttle buses at BWI Airport, the DHMH public health lab and parking facilities at the Annapolis Office Complex and State Center.
(d) Debt service on leases include equipment, video lottery terminals and energy leases that do not have guaranteed energy savings = or > than debt service.

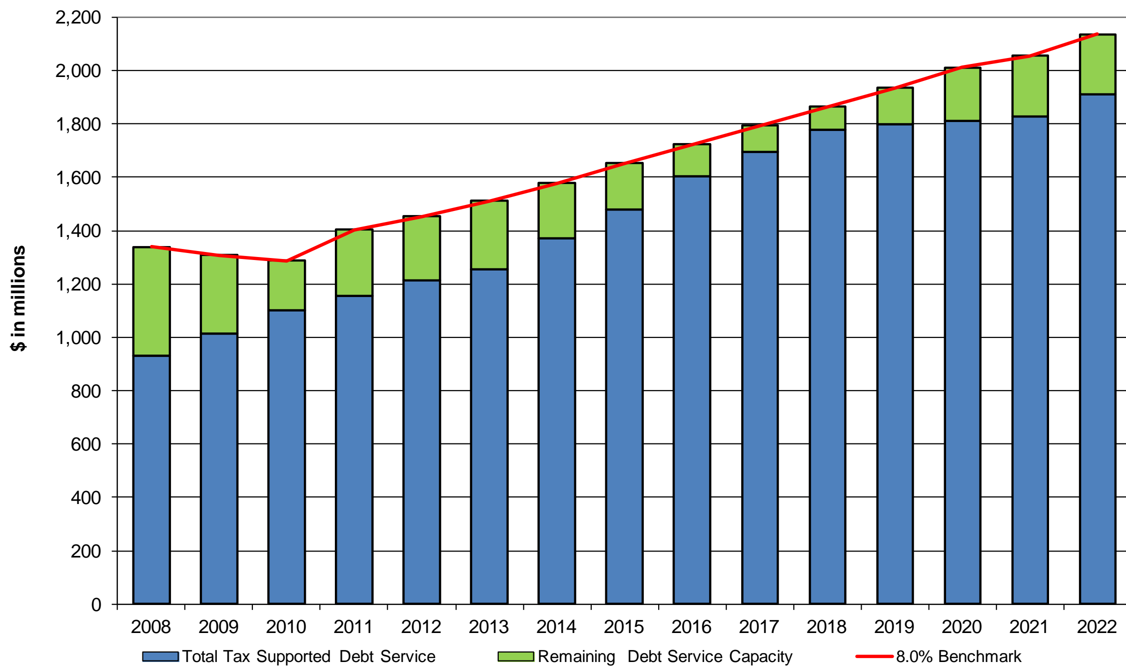
TABLE 2B

STATE TAX SUPPORTED DEBT SERVICE AS A PERCENT OF DEDICATED REVENUES

Fiscal Year	General Obligation Bonds	DOT Consolidated Bonds	Capital Leases	Stadium Authority	Bay Restoration Bonds	Garvee Bonds
2008	4.9%	6.0%	0.3%	149.3%		8.2%
2009	5.4%	6.7%	0.4%	159.7%	8.7%	9.1%
2010	5.8%	7.1%	0.4%	160.3%	8.6%	19.8%
2011	5.7%	7.0%	0.3%	137.3%	8.5%	16.2%
2012	5.7%	7.7%	0.3%	133.8%	8.4%	19.9%
2013	5.8%	7.5%	0.2%	135.0%	4.7%	19.9%
2014	6.0%	8.2%	0.2%	135.1%	9.4%	19.9%
2015	6.0%	9.0%	0.3%	137.0%	23.6%	19.9%
2016	6.3%	9.4%	0.3%	115.4%	38.5%	19.9%
2017	6.3%	10.3%	0.2%	109.4%	47.5%	19.9%
2018	6.4%	10.6%	0.2%	109.5%	48.8%	19.9%
2019	6.3%	10.2%	0.2%	109.7%	48.3%	19.9%
2020	6.3%	9.5%	0.2%	109.8%	47.9%	11.7%
2021	6.3%	10.7%	0.1%	125.9%	47.4%	n/a
2022	6.3%	11.4%	0.1%	126.1%	47.0%	n/a

Note: Unlike Table 2A, Table 2B ratios are serviced by separate and specific revenue sources and have different denominators; therefore, ratios cannot be added across to provide a sum of combined ratio totals. Refer to "Appendix A-2, Revenue Projections."


Tax Supported Debt Service to Revenues
FY 2008 - FY 2022
$ in millions
2,200
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
General Obligation Bonds
DOT Consolidated Bonds
Capital Leases
Stadium Authority
Bay Restoration Bonds
Garvee Bonds
Total Tax Supported Debt Service
8.0% Benchmark
Source: Table 2A as of September, 2012
FY 2008-2012 are final; FY 2013-2022 are projections and subject to change


Tax Supported Debt Service to Revenues
Available Capacity using the 8.0% Benchmark
FY 2008 - FY 2022
$ in millions
2,200
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Total Tax Supported Debt Service
Remaining Debt Service Capacity
8.0% Benchmark
Source: Table 2A as of September, 2012
FY 2008-2012 are final; FY 2013-2022 are projections and subject to change

As indicated by ***Table 3***, Tax-Supported Debt Outstanding and Debt Service Stress Test, if the projections for debt service are held constant, limited declines in revenues can still be absorbed and the affordability ratios maintained. Similarly, there is limited capacity for increases in debt service if the revenue projections are held constant and the affordability criteria is 8.0%. Based on the estimates and assumptions in September 2012, the Committee's recommendation is expected to result in a pattern of debt issuances and debt service payments that remain within this 8.0% affordability benchmark.

Table 3

Tax Supported Debt Outstanding and Debt Service Stress Test

($ in thousands)

Projections as of September 2012 and subject to change

State Tax Supported Debt Outstanding as a Percent of Personal Income Under "Stress" Scenarios

Fiscal Year	Debt Outstanding	Personal Income	Current Ratios	Fiscal Year	Maximum Ratio	Minimum Personal Income	(a) Difference	(c) Additional Affordable Debt Outstanding
2013	$10,861,599	$318,637,000	3.41%	**2013**	4.00%	$271,539,970	$47,097,030	$1,883,881
2014	$11,533,046	$332,944,000	3.46%	**2014**	4.00%	$288,326,144	$44,617,856	$1,784,714
2015	$11,992,535	$349,890,000	3.43%	**2015**	4.00%	$299,813,368	$50,076,632	$2,003,065
2016	$12,302,748	$368,085,000	3.34%	**2016**	4.00%	$307,568,693	$60,516,307	$2,420,652
2017	$12,550,034	$385,385,000	3.26%	**2017**	4.00%	$313,750,852	$71,634,148	$2,865,366
2018	$12,832,527	$400,029,000	3.21%	**2018**	4.00%	$320,813,168	$79,215,832	$3,168,633
2019	$13,101,390	$415,790,000	3.15%	**2019**	4.00%	$327,534,738	$88,255,262	$3,530,210
2020	$13,320,145	$433,087,000	3.08%	**2020**	4.00%	$333,003,636	$100,083,364	$4,003,335
2021	$13,601,915	$451,753,000	3.01%	**2021**	4.00%	$340,047,873	$111,705,127	$4,468,205
2022	$13,865,846	$471,043,000	2.94%	**2022**	4.00%	$346,646,158	$124,396,842	$4,975,874

State Tax Supported Debt Service as a Percent of Revenues Under "Stress" Scenarios

Fiscal Year	Debt Service	Revenues	Current Ratios	Fiscal Year	Maximum Ratio	Minimum Revenues	(b) Difference	(c) Additional Affordable Debt Service
2013	$1,255,195	$18,883,840	6.65%	**2013**	8.00%	$15,689,937	$3,193,903	$255,512
2014	$1,370,270	$19,697,081	6.96%	**2014**	8.00%	$17,128,371	$2,568,710	$205,497
2015	$1,477,472	$20,647,735	7.16%	**2015**	8.00%	$18,468,398	$2,179,336	$174,347
2016	$1,604,386	$21,522,982	7.45%	**2016**	8.00%	$20,054,828	$1,468,154	$117,452
2017	$1,693,255	$22,421,742	7.55%	**2017**	8.00%	$21,165,693	$1,256,049	$100,484
2018	$1,776,292	$23,301,412	7.62%	**2018**	8.00%	$22,203,652	$1,097,761	$87,821
2019	$1,798,734	$24,179,459	7.44%	**2019**	8.00%	$22,484,179	$1,695,280	$135,622
2020	$1,809,742	$25,128,289	7.20%	**2020**	8.00%	$22,621,770	$2,506,519	$200,521
2021	$1,826,447	$25,663,602	7.12%	**2021**	8.00%	$22,830,592	$2,833,010	$226,641
2022	$1,908,499	$26,693,139	7.15%	**2022**	8.00%	$23,856,233	$2,836,906	$226,952

This table demonstrates the minimum levels to which personal income and revenues could fall without violating the 4.0% and 8.0% criteria on projected debt and debt service levels.

(a) Holding debt outstanding constant, personal income could decline by indicated amounts and affordability ratios would not exceed the 4.0% maximum.
(b) Holding debt service constant, revenues could decline by indicated amounts and affordability ratios would not exceed the 8.0% maximum.
(c) Holding personal income and revenues constant, these figures indicate additional debt outstanding and debt service that is affordable without exceeding current maximum affordability ratios.

E. Comparison of Recommendation and Capital Program

The Committee's recommendation of $1,075.0 million in general obligation authorizations provides a commitment for the fiscal year 2014 Capital Improvement Program. However, the program and the recommendations fall short of total funding needs and the Committee recognizes that allocation decisions will have to be made by the Governor and General Assembly.

F. Affordability Risk Analysis

Background

Since 1989, the Committee has included in its Reports an *affordability risk analysis*: the analysis of the risk that a particular five-year General Obligation Bond authorization plan, if followed over time, might lead to a violation of the Committee's affordability criteria, even though the plan was deemed affordable at the time it was proposed. Beginning in its 2007 review, the Committee has examined this risk over a ten-year horizon.

Components of Risk

Economic uncertainty continues as the economic recovery has been slow and potential future federal reductions in employment and procurement could negatively impact Maryland more than most states. In light of this context, the Committee identified and reviewed the following risks in making a judgment about the ultimate affordability of its 2012 recommended authorization and the projected future authorizations as described earlier:

- Changes in personal income;
- Changes in and sources of revenues;
- Interest rate risk;
- Changes in the definition of tax-supported debt;
- Changes in the bond issuance plans of non-general obligation issuers of tax-supported debt;
- Changes within the General Obligation Bond program.

Changes in Personal Income

Significant adjustments to personal income estimates have occurred in the past. These changes result from: (1) after-the-fact measurement changes by federal statisticians; and (2) revised projections by the State's Bureau of Revenue Estimates, which are used by the Committee. The former risk is clearly beyond the Committee's control but it is important to note that material changes are often limited to the first couple of years following the close of the measurement period and subsequent adjustments generally have been small. Projections of future personal income levels must make certain economic and demographic assumptions that may not prove accurate.

Table 3 demonstrates that at current projections for debt outstanding, personal income could decline by no more than $44.6 billion in 2014 without the affordability ratio exceeding the 4.0% maximum. A decline of this magnitude would represent 13.4% of the $332.9 billion in projected personal income in 2014. Furthermore, personal income would have to be limited to less than 1.65% total growth over the 5 year period between 2010 (the most recent actual) to 2014 in order for the affordability ratio to exceed the 4.0% maximum. In comparison, personal

income increased by 12.36% over the 5 year period between 2006 and 2010, which incorporated the impact of the worst recession in post-war history. Consequently, the possibility of exceeding the 4.0% threshold seems remote. Additionally, the personal income projections seem prudent as the projected annual growth rates shown in ***Appendix A-1*** for 2011 through 2022 average 4.32%, a rate below the 10-year average for 2001 through 2010, which was 4.44%.

Changes in and Sources of Revenues

Sources of Revenues

Appendix A-2 displays the components of and total tax-supported revenues from fiscal year 2008 to fiscal year 2022. Tax-supported revenues are comprised of a variety of sources that are available to make debt service payments on tax-supported debt. The following paragraphs will discuss some of the major revenue sources in more detail. In general, the estimates are based on current law and do not take into account any possible changes in future tax rates or structures.

General fund revenues are shown as projected by the Board of Revenue Estimates in its most recent forecast as of September 2012. Year to year changes vary significantly during this period and reflect the recessions impact on State revenues as well as various State tax and revenue allocation actions. Beginning in fiscal year 2018, growth is assumed to hold at 4.5% annually reflecting 2.5% real growth plus 2.0% inflationary growth.

Property tax revenue estimates were calculated using assessable base data obtained from the Department of Assessments and Taxation for fiscal years 2012-2017. Property tax revenues are projected to decline in fiscal years 2012 – 2015 and begin to grow in fiscal years 2016 and 2017 at approximately 1%. Beginning in fiscal year 2018, growth is assumed to hold at 2.5% annually.

Bond premiums and various other Annuity Bond Fund revenues are also included in tax-supported revenues. Bond premiums can be volatile and are not projected on future sales although some amount may likely occur. Miscellaneous receipts and US Treasury subsidies on a Build America bonds, Qualified School Construction Bonds, Qualified Zone Academy Bonds and Qualified Energy Conservation Bonds are included but the amounts are relatively insignificant.

Revenues from the Education Trust Fund, which is primarily funded by gaming revenues, and the State property transfer tax may be available for debt service on general obligation bonds to the extent that bonds are used to support school construction or Program Open Space respectively.

The remaining revenues shown in ***Appendix A-2*** represent the revenues available to pay debt service on the other components of tax-supported debt. These revenues are projected by entity responsible for issuing and oversight of the bonds and are based on the most currently available data.

Changes in Revenues

Table 3 demonstrates that, holding debt service constant, current revenue projections could decline by nearly $1.1 billion in fiscal year 2018 without the affordability ratio exceeding the 8.0% maximum. A decline of this magnitude would represent 4.7% of the $23.3 billion of revenue projected in fiscal year 2018 and could be possible if another recession, of similar

magnitude to the last recession, were to occur. CDAC meets annually to review the affordability ratios and if another recession were to occur it is also likely that significant revision of debt authorizations and issuance would be considered. The Ccommittee acted similarly in 2010.

Interest Rate Risk

Debt service is calculated for future General Obligation Bonds assuming coupon and market interest rates of 5.0%. The State Treasurer's Office and the State's financial advisor reviewed historical indices for municipal debt including the Municipal Market Data (MMD) for 15 year, AAA general obligation bonds. This index had daily rates from 1993 through November 2012. For this time period, the average rate for a 15 year bond was 4.57% and the median was 4.58%. For a 10 year bond, the average rate and median were 3.98% and 4.03%, respectively. The general obligation bonds have a 15 year term but an average life of around 10 years. The State's financial advisor has commented that the actual rate is closer to the average life rather than the final maturity and so the estimate of 5.0% is conservative. Based on this review and after consideration for expected future inflation trends in rates, 5.0% was the assumed rate for all future issues.

Debt service on capital equipment leases is projected using tax-exempt rates ranging from 1.20% - 1.70% and 1.35% - 1.85% for the 3 and 5 year capital equipment leases respectively. The lowest rates were used for leases financed in fiscal year 2013 and rates are projected to increase by 0.25% in fiscal year 2014 and again by 0.25% in fiscal year 2015. The most recent actual rates on capital equipment leases were 0.86% for a three year lease and 1.07% for a five year lease. Recent rates reflect historically low tax-exempt rates that are expected to rise, albeit slowly. Future Bay Restoration Bond debt service is projected using a weighted average interest rate of 5.0%. Maryland Department of Transportation used 3.4% for the 2013 sale; 4.0% for the 2014 sale; 4.3% for the 2015 sale; 4.6% for the 2016 sale; 4.8% for sales occurring in 2017 and 2018; and 5.3% thereafter.

There is a risk to the federal tax-exemption for all municipal bonds from recent discussions to reduce the federal deficit. If the State and other municipal issuers have to issue taxable debt or if tax-exempt debt is less attractive to taxpayers with high tax rates, interest rates and debt service will increase. At this time, there is no clear indication of the potential adoption of any proposal to alter the State's ability to issue tax-exempt debt.

Changes in the Definition of Tax-Supported Debt

Changes in the definition of tax-supported debt dictated by an outside authoritative group could have a major impact on the affordability ratios.

The Financial Accounting Standards Board ("FASB") has a current project that proposes to establish a common leasing standard and to change lease accounting so that all lease obligations and the related right-to-use are reported on private sector balance sheets. Consequently, all leases would be considered debt. The proposed changes could increase the amount of tax – supported debt subject to CDAC review by requiring the State's operating leases be classified as capital leases (debt). The State's 2011 Comprehensive Annual Financial Report ("CAFR") indicates that the State's governmental funds pay for office space that are accounted for as operating leases. These rent expenditures for the fiscal year 2011 totaled approximately $66.9 million.

FASB currently expects to issue a revised exposure draft in the first half of calendar year

2013 which will tentatively be subject to a comment period of 120 days. The State's financial statements conform to Governmental Accounting Standards Board ("GASB") which has added a similar lease accounting project to their research agenda. GASB does not expect to complete their research until the FASB's proposed standards become more certain.

Since there have been no definitive changes to accounting standards to date, CDAC continues to consider only capital leases in its affordability analysis. CDAC will continue to monitor this accounting issue at future meetings and may review the affordability benchmarks if the accounting standards change.

Changes in Bond Issuance – General Obligation Bonds

Changes within the General Obligation Bond program may arise because of changes in: (1) the types and costs of facilities and other projects financed by General Obligation Bonds; or (2) changes in the speed at which authorized bonds are issued.

There do not appear to be any federal regulatory changes that might lead to an acceleration of general obligation debt issuances. Regulatory actions are from time to time announced or proposed and litigation is threatened or commenced which, if implemented or concluded in a particular manner, could adversely affect the market value of the Bonds. It cannot be predicted whether any such regulatory action will be implemented, how any particular litigation or judicial action will be resolved, or whether the Bonds or the market value thereof would be impacted thereby. Therefore, we have not considered this to be a risk to our interest rate assumptions.

Changes in the types and costs of facilities do not necessarily affect total authorizations but may lead to a re-allocation of resources. The Committee's recommendations are made in terms of a total dollar amount of bonds, not in specific capital projects. Changes in construction costs, the availability of PAYGO funding, the need for unanticipated new projects, changes in federal tax laws, and a host of other variables influence both the need for General Obligation Bonds and the share of the total allocation allotted to each use. Such changes affect which assets can be acquired within a specific dollar amount of the program. These changes by themselves, however, affect neither the dollar amount of the Committee's assumed authorizations nor the affordability ratios. Therefore, without Committee or General Assembly action to alter the total dollars to be authorized in the plan, there is no affordability risk resulting from such changes within the general obligation plan.

While some currently authorized projects will be abandoned or completed for less than authorized, it is assumed that any such amounts will be reallocated to other approved projects through the legislative process. Although some authorizations may ultimately be cancelled the amount of such cancellations are expected to be immaterial to the analysis.

Changes in the timing of issuance of authorized bonds, however, may affect the affordability criteria. Bonds authorized at a General Assembly session are not immediately issued. In fact, only half of the bonds authorized each year are typically issued within the ensuing two fiscal years and the remaining issuances occur over the next three years. The bonds are sold over an extended period of time as the projects are developed and cash is required for payment. Consequently, the impact of a change in any year's debt authorizations affects issuances over time and impacts debt outstanding with a substantial lag.

Appendix B-1, Proposed General Obligation Authorizations and Estimated Issuances converts, the recommended levels of new General Obligation Bond authorizations into a projected level of annual issuances; it is assumed that all authorized debt will be issued. In addition to projecting issuances at prescribed levels, the State Treasurer's Office monitors the disbursement pace of bond proceeds and has adjusted issuance amounts as necessary. Any systematic change altering the speed of bond issuance would impact the amounts of debt outstanding and debt service and consequently affect both of the affordability ratios. The Committee reviewed the issuance projections for the 2012 Report in light of the pattern of recent authorizations and issuances. The following chart compares projected issuances in CDAC Reports from 2005 to 2012 to actual issuances.

Projected Issuances in CDAC Reports ($ in millions)

CDAC Reports	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2005	$725	$725	$750	$775	$800
2006	$760	$810	$860	$900	$940
2007	$810	$885	$955	$970	$1,010
2008	$810	$910	$970	$1,000	$1,030
2009	XXXX	$960	$970	$975	$980
2010	XXXX	XXXX	$970	$960	$945
2011	XXXX	XXXX	XXXX	$960	$955
2012	XXXX	XXXX	XXXX	XXXX	$1,028
Actual Issuance	$840.0	$1,135.3	$970.2	$1,096.5	$1,028 (Estimate)

* Issuances are for new money only, amounts do not include refundings or QZABs.

Project cash flows as well as market conditions can explain some of the differences between projections and issuances in a specific fiscal year, however authorization increases greater than previously projected are likely to have a greater impact. A history of projected authorizations is depicted in the following chart. Authorizations highlighted in gray indicate those years where the increase from the prior year was at least $100 million or more. The chart also illustrates the decline in projected authorizations in fiscal years 2011 through 2013 due to the recession's impacts.

Projected General Assembly Authorizations

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
CDAC Reports										
2012	x	x	x	x	x	x	x	x	**x**	**$1,075**
2011	x	x	x	x	x	x	x	**$925**	**$1,075**[2]	**$925**
2010	x	x	x	x	x	x	**$925**	**$925**	**$925**	**$925**
2009	x	x	x	x	**x**	**$1,140**[3]	**$1,020**	**$1,050**	**$1,080**	**$1,110**
2008	x	x	x	x	**$1,110**	**$990**	**$1,020**	**$1,050**	**$1,080**	**$1,110**
2007	x	x	x	**$935**	**$960**	**$990**	**$1,020**	**$1,050**	**$1,080**	**$1,110**
2006	x	x	**$810**	**$835**	**$860**	**$890**	**$920**	**$950**	**$980**	**$1,010**
2005	x	$690	$710	$730	**$745**	**$770**	**$795**	**$820**	**$845**	**$870**

[2]The conditional recommendation of $925 million made in September 2011 was revised to $1,075 million in December.
[3] The conditional recommendation of $990 million made in September 2009 was revised to $1,140 million in December.

There was an acceleration of issuance in calendar year 2010 to provide sufficient proceeds for projects like the ICC which had construction underway, to take advantage of historically low interest rates and to keep the cash flow of bond proceeds positive and minimize liquidity pressures on the State's cash accounts. Future substantial acceleration of the issuances of General Obligation Bonds appears unlikely at this time. The current amount of authorizations that are unissued appears reasonable and the amount of bond issuances appears sufficient to meet projected cash flows.

Changes in the Bond Issuance – Other Components of State Tax-Supported Debt

Changes in the bond issuance plans for other issuers of tax-supported debt may include the expansion of existing programs or the creation of a new debt financing program. In the past, significant new debt has factored into the affordability analysis that had not been accounted for or contemplated in the prior years' report. The impact of previously unplanned debt on the affordability ratios and process has been a topic of discussion in recent years and resulted in the Committee's recommendation in the 2011 Report that the Administration coordinate the issuance plans for all issuers of tax-supported debt. The Committee has recommended an aggregate total of $562.5 million in new issuances in fiscal year 2014. The changes in the issuance plans of other components of tax-supported debt also appear to pose limited risk at this time.

Conclusion

In light of the assumptions and risks noted above, the Committee believes that the variables that factor into the affordability analysis have been estimated prudently and conservatively in many cases. The most noteworthy risk appears to be economic uncertainty and the potential impact on personal income and revenues. Because the affordability ratio for debt service to revenues is near the 8.0% benchmark, any variation to the assumptions for revenues, interest rates, and projected activity in tax-supported debt issuance may have a direct impact on future tax-supported authorizations and issuances.

Based on the assumptions outlined in this report, the Committee's recommendation of $1,075.0 million recommendation for the 2013 legislative session and fiscal year 2014 capital program remains within the debt affordability criteria. The Committee's adopted planning assumptions for future authorizations assume nearly level authorizations through fiscal year 2017 of between $1,085 million and $1,105 million. In fiscal year 2018, the projected authorization is $1,200 million and it increases by approximately 3% through 2022. With these authorization levels, the debt affordability ratios remain within the CDAC benchmarks of 4% debt outstanding to personal income and 8% debt service to revenues. The affordability analysis presented at the Committee's meetings indicates that the Committee's projection of General Obligation Bond authorizations will continue to be affordable (within debt guidelines) going into the future.

VI. HIGHER EDUCATION DEBT

A. Background

Title 19 of The Education Article (the "Statute"), establishes the revenue bonding framework and authority of the University System of Maryland ("USM"), Morgan State University, St. Mary's College of Maryland and Baltimore City Community College. The Committee is assigned certain duties relevant to higher education debt, as described below.

The Statute provides a framework for the issuance of higher education debt. Specifically, the Statute distinguishes between auxiliary facilities (which generate fees or income arising from the use of the facility) and academic facilities (which are primarily instructional, but can include any facilities not defined as auxiliary). The statute also authorizes institutions to issue bonds to finance either auxiliary or academic facilities (maximum terms of 33 and 20 years, respectively) with the stipulation that any academic facilities so financed must first be expressly approved by an act of the General Assembly as to both project and amount.

Furthermore, the Statute specifies fund sources that can be pledged as security as well as those that can be used for debt service payments. Specifically available to be pledged as security are auxiliary fees (fees and rents arising from the use of the auxiliary facility) and academic fees (tuition and student fees). The systems specifically cannot pledge: (1) a State appropriation; (2) contracts, grants, or gifts; or (3) any other source not expressly authorized by the General Assembly. Debt service on bonds is payable solely from auxiliary fees, academic fees, a State appropriation expressly authorized for that purpose, or revenues from contracts, gifts, or grants, as appropriate.

B. CDAC Duties

The Committee is directed to:

1. "...review on a continuing basis the size and condition of any debt of the University System of Maryland, Morgan State University, St. Mary's College of Maryland, and Baltimore City Community College;"

2. "In preparing an estimate with respect to the authorization of any new State debt" [i.e., general obligation debt] to "take into account as part of the affordability analysis any debt for academic facilities to be issued by a System;" and

3. "...submit to the Governor and the General Assembly the Committee's estimate of the amount of new bonds for academic facilities that prudently may be authorized in the aggregate for the next fiscal year by the University System of Maryland, Morgan State University, St. Mary's College of Maryland, and the Baltimore City Community College."

To satisfy the Committee's responsibilities in these area representatives from all four institutions presented debt information to the Committee at its August 22, 2012 meeting. A summary of the information presented and the committee's consideration of higher education debt is discussed in the sections below.

C. Size and Condition of Higher Education Debt

University System of Maryland ("USM")

Bond Activity

Since 1989, the General Assembly has authorized bonds totaling $788 million for various academic facilities for USM. Of this amount, $32.0 million was authorized by the 2012 General Assembly for academic facilities (Chapter 638, Laws of Maryland, 2012).

In fiscal year 2012, the total new debt issued for academic and auxiliary facilities was $115.0 million. USM reports its bond debt outstanding at $1,114,619,442 at June 30, 2012. Of this outstanding amount, USM has $50.0 million of variable rate bonds outstanding with a three year interest reset. The University System has not used interest rate exchange agreements or guaranteed investment contracts. Projected issuances through fiscal year 2018 are shown in ***Table 4***.

The bonds are rated as follows: Fitch Ratings, AA+; S&P, AA+; and Moody's, Aa1. All ratings have a stable outlook. USM Credit strengths include strong student demand, sound financial operations and a large, diverse revenue base. Credit challenges noted by the rating agencies include potential increases in capital spending to meet enrollment growth and State budget pressure. According to a 2009 report, Moody's median rating for 220 public universities is A1, with the average climbing to Aa2 when weighted by the amount of debt outstanding.

Other Debt and Capital Lease Activity

There are $55,739,415 of Other Debt and Capital Lease Obligations outstanding as of June 30, 2012: $33,204,981 has been financed through the State Treasurer's Office primarily for energy performance contracts and $22,534,434 has been financed directly by USM to lease a facility and finance certain equipment acquisitions. ***Section II D***, ***Lease and Conditional Purchase Financings***, in this 2012 CDAC Report lists the energy leases, including those for the University System, that are not included in the CDAC affordability analysis because the annual guaranteed savings equals or exceeds the annual debt service on the leases.

Debt Management Policy

The USM debt management policy outlines criteria to protect bond ratings, Interest rate management strategies, definitions of all types of debt and its impact on debt capacity and a process to assess a project's impact on debt capacity. As a result of this policy, USM is committed to maintaining:

1. Debt service that does not exceed 4.5% of operating revenues plus State Appropriations, and

2. Available resources that are not less than 55% of direct debt

Table 4 shows that debt service was 3.26% of operating revenues plus State appropriations in fiscal year 2012 and projects compliance with the debt policy standard through 2018. Available resources include net assets of USM and its affiliated foundations with adjustments for certain long term liabilities. An analysis of the ratio of available resources to debt outstanding follows. The table includes actual data for fiscal years 2008 through 2011 and estimates for fiscal years 2012 and 2013.

University System of Maryland Ratio of Available Resources to Debt Outstanding *($ in millions)*			
FY	**Available Resources**	**Debt Outstanding**	**Ratio of Available Resources to Debt Outstanding**
2008	$1,142	$970	118%
2009	$1,130	$1,029	110%
2010	$1,188	$1,083	110%
2011	$1,430	$1,119	128%
2012 E	$1,620	$1,170	138%
2013 E	$1,377	$1,203	114%

E=Estimate and preliminary.

St. Mary's College of Maryland

Bond Activity

Debt outstanding as of June 30, 2012 includes: $36.5 million in revenue bonds and a bond anticipation note. Moody's has rated the bonds A1 with a stable outlook. No future bond issuances are projected at this time. St. Mary's College of Maryland does not have any interest rate exchange agreements, variable rate bonds or guaranteed investment contracts. Except for the bond anticipation note, substantially all of the bonds are insured by AMBAC.

Lease Activity

There is a capital lease through the State Treasurer's Office with a remaining balance of $1.4 million related to an energy performance contract. ***Section II D***, ***Lease and Conditional Purchase Financings***, in this 2012 CDAC Report lists the St. Mary's College energy lease that is included in the CDAC affordability analysis because the annual guaranteed savings does not equal or exceeds the annual debt service on the lease. For this particular project the desired savings were realized however it was later decided to discontinue the guarantee as it was no longer cost-effective.

Morgan State University

Bond Activity

Morgan State University bonds are currently rated A+ by Standard and Poor's and rated Aa3 with a negative outlook by Moody's Investors Service. Moody's notes the University's significant reliance on state support given the State's fiscal challenges, low level of financial resources and high reliance on federal financial aid in its assignment of the negative outlook. $52.6 million of revenue bonds are outstanding as of June 30, 2012. Morgan State University does not have immediate plans for the issuance of additional bonds. Morgan State University does not have any interest rate exchange agreements, variable rate bonds or guaranteed investment contracts nor are any of their bonds insured.

Lease Activity

Morgan State University utilizes the State Treasurer's Office Capital Equipment Lease-Purchase Program for financing facilities and technology equipment. As of June 30, 2012, $2.6 million of capital leases were outstanding. Over the next ten years, the University estimates that it will utilize the Capital Equipment Lease-Purchase Program for additional projects.

Baltimore City Community College ("BCCC")

Bond Activity

In 2009 the General Assembly increased the total amount of debt authorized for BCCC from $15.0 million to $65.0 million and expanded the authorization to include academic as well as auxiliary facilities. BCCC has no bonds outstanding and has no plans to issue bonds in fiscal years 2013 or 2014. BCCC is currently exploring the feasibility of various projects that might be funded by the issuance of academic and/or auxiliary bonds or capital leases in the next ten years. Potential projects include East-side facility capital leases – Gompers and a parking garage

Lease Activity

BCCC had $1.0 million in capital leases outstanding as of June 30, 2012.

D. Incorporating Higher Education Academic Debt into the Affordability Analysis

The statutory language of the Committee's charge states: "In preparing an estimate with respect to the authorization of any new State debt [i.e., general obligation debt], the Committee shall take into account as part of the affordability analysis any debt for academic facilities to be issued by a system." This language, however, is not explicit regarding the meaning of "take into account."

The statute does not direct, nor has the Committee elected to include higher education debt as a component of State tax-supported debt for purposes of the capacity criteria or affordability analysis. Consequently, the Committee's recommendations relating to new authorizations of general obligation debt and higher education academic debt are made independently for the following reasons:

1. The rating agencies do not consider debt issued by institutions of higher education as State tax-supported debt. The debt of the systems, either currently outstanding or related to future issuances, is not included by the rating agencies in determining the rating of the State's General Obligation Bonds.

2. Both the statutory structure of higher education debt and the current budgetary policies related to higher education debt underscore the separation of higher education debt and tax-supported debt. The Statute provides that higher education debt may not be secured by a pledge of the issuer's general fund appropriation. The Statute further provides that no general funds may be used to pay debt service unless specifically authorized in the budget.

3. The revenue sources that secure the bonds are under the direct control of the systems and not directly subject to the approval of either the Governor or the General Assembly.

The Committee believes that its analysis, discussions, and deliberations of higher education debt levels, capacity, and needs address the legislative intent to take into account higher education academic debt.

E. 2012 Recommended Authorization for Higher Education Academic Debt

The Committee's charge is to submit an "estimate of the amount of new bonds for academic facilities that prudently may be authorized in the aggregate for the next fiscal year by the University System of Maryland, Morgan State University, St. Mary's College of Maryland and the Baltimore City Community College." This charge, therefore, requires the Committee to distinguish between burdens imposed by academic debt and those imposed by auxiliary debt in arriving at a recommendation for academic debt alone. From a credit analyst's point of view, however, the aggregate level of a system's debt is critical.

One approach to determining a prudent amount of new academic debt to be authorized is to start with the aggregate level of debt that each system anticipates issuing. If it is estimated that the level of debt is prudent over time, then it is reasonable for the Committee to accept the aggregate total and also to accept the breakdown between academic and auxiliary as proposed by the System.

The guidelines initially adopted by the Committee to judge debt manageability are those contained in the rating methodology used by one of the major rating agencies. Standard and Poor's uses five factors to rate a public institution's debt (over a time frame of several years): (1) the rating of the State; (2) the State's general financial support for higher education as a whole; (3) the State's financial support for the particular institution; (4) the institution's demand and financial factors; and (5) the security pledge. The first, second, and fifth factors are the same for all four systems. All systems benefit from the State's AAA rating; all are part of public higher education in Maryland; and all can offer the same types of security.

S&P’s third factor looks at the trends in State appropriations to the four systems. The fourth factor, the institution's demand and financial factors, encompasses a host of data dealing with the student body, financial performance, and components of debt.

Table 4 displays information on the debt of each of the four higher education systems, compliance with statutory limitations, and financial performance.

1. Legislation limits the aggregate principal amount of revenue bonds outstanding and the present value of capital lease payments, less the amount of any reserves established therefore, for both academic and auxiliary facilities. The current statutory limits are $1,400.0 million for the University System of Maryland, $88.0 million for Morgan State University, $60.0 million for St. Mary's College of Maryland, and $65.0 million for Baltimore City Community College. All four higher education systems are within the statutory limits as of June 30, 2012.

2. A key measurement of financial performance frequently used by credit analysts is debt burden; that is, debt service as a percent of operating revenues plus State appropriations. USM debt is managed so that the ratio does not exceed 4.5%, which is the limit established in the USM debt policy.

For purposes of this analysis and for the CDAC recommendation, the relevant measure is debt burden. As can be seen from the final column in ***Table 4***, USM's debt issuance plan would result in a debt burden level well below the 4.5% maximum mandated by USM's debt management policy.

CDAC has concluded that the overall level of debt is prudent over time and therefore recommends a limit of $32.0 million for new academic facilities bonds for the University System of Maryland for fiscal year 2014. Morgan State University, St. Mary's College of Maryland, and Baltimore City Community College do not propose to issue bonds for academic facilities in fiscal year 2014.

TABLE 4

HIGHER EDUCATION DEBT

Total Auxiliary and Academic Bonds and Leases

($ in thousands)

Fiscal Year	Projected Issuances: Auxiliary	Projected Issuances: Academic	Debt Outstanding as of June 30: Bonds	Debt Outstanding as of June 30: Leases	Debt Service for Fiscal Year: Bonds	Debt Service for Fiscal Year: Leases	Total Debt Service	Revenues (see note)	Ratio of Debt Service to Revenues
University System Of Maryland									
2013	$83,000	$32,000	$1,182,951	$47,406	$128,093	$12,320	$140,413	$4,308,711	3.26%
2014	$83,000	$32,000	$1,198,941	$40,250	$130,307	$11,226	$141,533	$4,437,972	3.19%
2015	$83,000	$32,000	$1,235,507	$35,064	$140,273	$9,059	$149,332	$4,571,111	3.27%
2016	$83,000	$32,000	$1,264,826	$30,298	$150,570	$8,480	$159,050	$4,708,244	3.38%
2017	$83,000	$32,000	$1,290,989	$25,983	$156,385	$7,871	$164,256	$4,849,492	3.39%
2018	$83,000	$32,000	$1,314,833	$21,851	$161,296	$7,552	$168,848	$4,994,977	3.38%
Morgan State University									
2013			$49,240	$7,491	$6,124	$1,021	$7,145	$174,691	4.09%
2014			$46,690	$5,800	$6,125	$1,891	$8,016	$179,580	4.46%
2015			$41,965	$7,635	$6,115	$1,518	$7,633	$184,730	4.13%
2016			$38,035	$8,888	$6,124	$2,154	$8,278	$191,155	4.33%
2017			$33,905	$8,793	$6,114	$2,837	$8,951	$197,370	4.54%
2018			$29,530	$9,831	$6,127	$2,774	$8,901	$203,291	4.38%
St. Mary's College of Maryland									
2013			$34,780	$1,253	$3,002	$205	$3,207	$72,185	4.44%
2014			$33,175	$1,093	$3,001	$205	$3,206	$75,072	4.27%
2015			$31,530	$927	$2,995	$205	$3,200	$78,075	4.10%
2016			$29,830	$756	$3,002	$205	$3,207	$81,198	3.95%
2017			$28,075	$577	$3,009	$205	$3,214	$84,446	3.81%
2018			$26,350	$392	$2,831	$205	$3,036	$87,824	3.46%
Baltimore City Community College									
2013				$985		$99	$99	$67,605	0.15%
2014				$949		$99	$99	$70,985	0.14%
2015				$911		$99	$99	$74,534	0.13%
2016				$870		$99	$99	$78,261	0.13%
2017				$827		$99	$99	$82,174	0.12%
2018				$781		$99	$99	$86,283	0.12%

Note: Revenues include operating Revenues plus State appropriations.

Appendix A
History of the Capital Debt Affordability Committee

Duties

The creation of the Capital Debt Affordability Committee was an outgrowth of two events: the dramatic increase in outstanding debt during the mid-1970's due to the creation of the State's school construction program and the release in June 1974 of the Department of Legislative Services' two year study on the State's debt picture, titled "An Analysis and Evaluation of the State of Maryland's Long-Term Debt: 1958 - 1988." In response to this study and the rising level of State debt, the 1978 General Assembly enacted the current State Finance and Procurement Article, Section 8-104, *et seq.*, which created the Committee and Capital Debt Affordability process.

The 1989 General Assembly further expanded the Committee's charge as part of legislation relating to higher education debt (Chapter 93, Laws of Maryland, 1989). The statute requires the Committee to review on a continuing basis the size and condition of any debt of the University System of Maryland, Morgan State University, and St. Mary's College of Maryland; take any debt issued for academic facilities into account as part of the Committee's affordability analysis with respect to the estimate of new authorizations of general obligation debt; and, finally, to submit to the Governor and the General Assembly an estimate of the amount of new bonds for academic facilities that prudently may be authorized in the aggregate for the next fiscal year by the University System of Maryland, Morgan State University, and St. Mary's College of Maryland. The 1994 General Assembly added Baltimore City Community College to the list of higher education institutions that the Committee reviews and the 2009 General Assembly expanded the debt authorization for Baltimore City Community College to academic as well as auxiliary facilities.

The 2004 General Assembly added to the duties of the Committee in Public School Facilities Act of 2004 (Chapters 306, 307, Laws of Maryland, 2004, uncodified Section 11), in which it directed the Committee to annually "review the additional school construction funding needs as identified in the 2004 Task Force to Study Public School Facilities report and … make a specific recommendation regarding additional funding for school construction when recommending the State's annual debt limit." The statute also directed that the Committee "include a multiyear funding recommendation that will provide stability in the annual funding for school construction." The 2009 General Assembly repealed this requirement that the Committee annually review the school construction needs and make a specific recommendation regarding additional funding (Chapter 485, Laws of Maryland 2009).

Chapter 641 of the Laws of 2010 requires the Capital Debt Affordability Committee to analyze and report on the aggregate impact of Public-Private Partnership agreements on the total amount of new State debt that prudently may be authorized for the next fiscal year.

Membership

Since 1979, the members have been the State Treasurer (Chair), the Comptroller, the Secretaries of Budget and Management and Transportation, and one public member appointed by the Governor. Chapter 445, Laws of Maryland, 2005 expanded the membership of the Committee with the addition of the Chair of the Capital Budget Subcommittee of the Senate Budget and Taxation Committee and the Chair of the Capital Budget Subcommittee of the House Committee on Appropriations as non-voting *ex officio* members.

Definition of Tax-Supported Debt

In addition to the duties previously noted, the Committee has generally reviewed other types of public debt issued by State or State-created authorities or agencies. In keeping with a narrow interpretation of its statutory charge, the Committee's efforts through 1986 focused mainly on bringing the State's general obligation debt in line with certain parameters. In 1987, however, the Committee began to adopt a more comprehensive view of State debt that included all tax-supported debt in addition to general obligation debt.

This broader view was adopted in recognition of the fact that the rating agencies and investment community take a more comprehensive view of a state's debt when analyzing that state's obligations. Discussions with rating analysts over several years indicated that analysts were interested in all tax-supported debt. Summaries of rating agency reports indicated that the measure of debt used was "net tax-supported debt" - the sum of general obligation debt, consolidated and county transportation debt (net of sinking funds), capital lease commitments, and tax or bond anticipation notes.

The more comprehensive view of debt also recognized that other forms of long-term commitments were becoming more common. Capital leases, particularly lease purchase obligations, were more visible, if not more widely used. The bonds issued by the Maryland Stadium Authority for the Baltimore stadiums are supported by lease arrangements; the State had consolidated a significant amount of equipment lease obligations; and the Motor Vehicle Administration was using the capital lease method for expanding or relocating its service center network. Although these leases do not represent debt in the constitutional sense, any default on these leases would be viewed by the market as similar to a default on State bonds. This broader view was ultimately codified and included in the Committee's statutory charge by Chapter 241, Laws of Maryland, 1989.

The Committee considered in 2004 the question of whether Bay Restoration Bonds constitute a new component of State tax-supported debt for purposes of debt affordability calculations. The Bay restoration fee is applied broadly across the State and is not directly tied to the use of a specific WWTP. There is a consensus among counsel that the maturity of the bonds must be limited to 15 years, the maximum for "State debt." As a result, the Committee concluded that the Bay Restoration Bonds are State tax-supported debt.

Most recently, the 2005 General Assembly expanded the scope of what the Committee considers in Chapters 471, 472, Laws of Maryland, 2005, by explicitly recognizing debt issued by the Maryland Department of Transportation ("MDOT") under Title 4, Subtitle 6 of the Transportation Article, or by the Maryland Transportation Authority ("MdTA") under Title 4, Subtitle 3 of that Article, when "secured by a pledge of future federal aid from any source" (e.g., GARVEE Bonds) as "tax-supported debt." Thus, this type of debt must be taken into account both in the annual authorization recommendation and in consideration of the amount of tax-

supported debt outstanding.

It is useful to note that the bond rating agencies are not uniform in their treatment of the federal-revenue backed debt when assessing the State's situation. Two of the agencies do include GARVEEs as tax-supported debt outstanding; the remaining agency considers it a "gray area" and would not include them as long as the bonds are "stand alone," that is, not backed by the State's full faith and credit. All three agencies also noted that to the extent the State includes GARVEEs as tax supported, it would be appropriate to include the supporting federal revenue stream that backs the bonds when considering the debt service affordability criterion of 8.0% of State revenues. Further, one of the two bond rating agencies that include GARVEEs as tax-supported debt stated that they did so for their own analytic purposes, but would accept and understand if a State did otherwise for affordability determination purposes.

In accordance with SF&P §8-104(c), leases are considered tax-supported debt when the lease or unit of State government is "supported directly or indirectly by State tax revenues". However, SF&P §8-104 was amended in the 2011 Session by Chapter 163 of the 2011 Laws of Maryland. Effective June 1, 2011, tax supported debt does not include capital leases used to finance energy performance contracts if, as determined by the committee, energy savings that are guaranteed by the contractor:

(i) equal or exceed the capital lease payments on an annual basis; and
(ii) are monitored in accordance with reporting requirements adopted by the committee.

History of Debt Affordability Criteria

Based upon an analysis of available material and consultation with a number of financial experts, the following affordability criteria were developed by the Committee in 1979:

- Outstanding debt should be no more than 3.2% of State personal income;
- Adjusted debt service should be no more than 8.0% of State revenues; and
- New authorizations should be kept in the range of redemptions of existing debt over the near term.

These criteria were adopted by the Committee solely for the analysis of general obligation debt.

Criteria 1 and 2 represented traditional measures and criterion 3 reflected a discretionary policy position that the State should "get out of debt." The Committee at that time declared that, given the high debt level of the mid-late 1970's, the first two criteria were goals to be achieved over time, and the final criterion became controlling over the short term.

In 1987, while retaining the first and second criteria for evaluating the expanded definition of debt and debt service, the Committee concluded that the third criterion was no longer an applicable guideline. The basis for its conclusion was threefold. First, the high ratings of the State's General Obligation and Transportation Bonds indicated that the existing level of debt and the planned increases were acceptable to the rating agencies. Second, pressing legislative and executive commitments required an increase in the level of bonded debt to finance needed transportation and other projects. Third, adherence to the criterion tied yearly authorizations to events of 15 years before, thereby producing highly variable bond authorizations inconsistent with either good debt management or a stable capital program.

In 1988, a detailed survey of credit analysts was undertaken to obtain their views on the Committee's comprehensive approach to reviewing debt and to the criteria the Committee had been using for 10 years. The survey affirmed the Committee's decision to take an expanded view of debt. In addition, criteria 1 and 2 were almost universally approved. This position was reinforced in discussion with investment banks and bond rating agencies in July 2005**.** Indeed, the rating agencies have repeatedly cited the Capital Debt Affordability process and criteria as major reasons for awarding Maryland AAA status.

The 2007 Capital Debt Affordability Committee Report (Section VII) documented the Committee's review of its affordability criteria, initiated at the request of the General Assembly. The Committee concluded the 2007 Report with a recommendation for the continued study and evaluation of the criteria in 2008. That recommendation was followed and, after thorough analysis by the Committee and staff, and following consultation with the rating agencies and the State's financial advisor, the Committee voted to retain the 8.0% debt service to revenues criterion and to change the debt outstanding to personal income criterion from 3.2% to 4.0%. A complete report of the process undertaken by the Committee to change the criterion is in Section V of the 2008 CDAC Report.

In 2008, as part of the 2007 and 2008 review of variables incorporated in the affordability criteria, the Committee standardized the calculation of revenues for all components of tax-supported debt. Beginning in the 2008 analysis, revenues for GARVEE Bonds and Bay Restoration Bonds are no longer limited to their respective debt service as had been the prior practice. Revenues for GARVEE Bonds and Bay Restoration Bonds include all federal capital highway revenues and bay restoration fees respectively. This adjustment matches the convention that has been used by CDAC for all other tax-supported debt. For instance, debt service on General Obligation Bonds is measured using all available revenues from the general fund, bond premiums and real property taxes and revenues were not restricted solely to debt service on G.O. Bonds.

Actual affordability ratios for 1960 through 2012 are in ***Appendix C-2***.

History of Authorizations

In its 1992 report, while reaffirming its belief in the theories underlying its prior recommendations, the Committee recommended that the six-year program originally recommended in 1988 be reduced, due principally to the severe national and state economic downturn. The 1992 recommendation acknowledged that the persistent recession had depressed the levels of personal income and that the structural changes in Maryland's economy would deter near term resumption of the State's rapid growth in personal income. The 1992 program also recognized that, while there had been no abatement in the population growth and need for services, cost inflation and, therefore, total need had been lower than originally projected in the years between 1988 and 1991. Considering all of these factors, the Committee recommended limiting authorization increases to 3% based at that time on the prevailing inflation rate plus 1%. In earlier years, the recommended out-year increases had varied between 3-5%, usually incorporating some estimate of inflation plus need.

In the years between 1993 and 2002, the State's economy and personal income recovered significantly but, due to the availability of general PAYGO funds, the guideline increase of 3% was generally observed and incorporated in future year projections. As debt authorizations grew at a slower rate than personal income, the level of "unused" debt capacity increased. Between

2002 and 2008, the inclusion of Bay Restoration Bonds and GARVEEs as State tax-supported debt and the increases in the authorizations of General Obligation Bonds absorbed virtually all of the previously unused debt capacity. The recommendations for General Obligation Bond authorizations in 2006, 2007, 2008 and 2009 were over the amount that would have been recommended had the 3.0% growth rate been maintained. In 2006 and 2007, the $100 million increases extended to future years. In 2008 and 2009, $150 million was projected as a one-time increase for each year.

In its September 2010 meeting, CDAC recommended an authorization of $925.0 million for the 2011 Legislative Session which was $215.0 million below the December 2009 CDAC recommendation. The 2010 Committee adjusted future authorization levels for the 2012 – 2016 Sessions to remain within the CDAC self-imposed affordability benchmarks. These future levels were essentially unchanged in the 2011 CDAC analyses. The authorization levels that were projected at the September 2010 and 2011 meetings and that are in the 2010 and 2011 CDAC Reports represent one of many authorization options that could be used to achieve adherence to the CDAC affordability criteria.

For a history of recent authorizations and issuances, see Section V of the 2012 CDAC Report, "Changes within the General Obligation Bond Program" for further discussion.

Appendix B
History of Maryland Stadium Authority Financings

Oriole Park at Camden Yards - Bonds. Currently the Maryland Stadium Authority ("Authority") operates Oriole Park at Camden Yards, which opened in 1992. In connection with the construction of that facility, the Authority issued $155.0 million in notes and bonds. In October 1993, the Authority entered into an agreement to implement a synthetic fixed rate refinancing of the sports facility bonds using a combination of variable rate refunding obligations and forward interest rate exchange agreements. As provided under the agreements, savings of $15.5 million was paid to the Authority on April 1, 1996. In accordance with this agreement and in consideration for the prior payment of the savings, the Authority issued its $17.9 million Sports Facilities Lease Revenue Refunding Bonds in Series 1998 A in December 1998 to refund its outstanding Sports Facility Lease Revenue Bonds Series 1989C, and issued its $121.0 million Sports Facilities Lease Revenue Refunding Bonds Series 1999 in December 1999 to refund its Sports Facilities Lease Revenue Bonds Series 1989D.

In December 2011, the Authority terminated the 1998 synthetic fixed rate refinancing with AIG Financial Products ("AIG-FP"), which required payment of a termination fee in the amount of $19.7 million. The variable rate debt associated with the synthetic fixed rate refinancing was called and replaced with the Sports Facilities Lease Revenue Refunding Bonds Series 2011A Bonds in the amount of $31.4 million. The federally taxable proceeds of the Series 2011A Bonds were used to defease the Series 1998A Bonds, and to pay the termination fee due to AIG-FP, underwriter's costs and issuance costs. The Authority also issued the Sports Facilities Lease Revenue Refunding Bonds Series 2011B in the amount of $62.9 million, whose tax-exempt proceeds and premium of $7.7 million were used to defease the Series 1999 Bonds. The amounts outstanding as of June 30, 2012, are $31.4 million (unaudited) for the Series 2011A Bonds and $61.6 million (unaudited) for the Series 2011B Bonds.

The Authority's notes and bonds are lease-backed revenue obligations, the payment of which is secured by, among other things, an assignment of revenues received under a lease of Oriole Park at Camden Yards from the Authority to the State. The rental payments due from the State under that lease are subject to annual appropriation by the General Assembly. Revenues to fund the lease payments are generated from a variety of sources, including in each year lottery revenues, the net operating revenues of the Authority, and $1.0 million from the City of Baltimore.

In November 2001, the Authority issued $10.3 million in bond anticipation notes, which were refunded in July 2002 with $10.3 million in taxable lease-backed revenue bonds. The 2001 bond anticipation notes were used to fund a $10.0 million deposit to the "Supplemental Improvements Fund" under the Baltimore Orioles Lease in accordance with the order of the panel of Arbitrators in American Arbitration Association Case No. 16Y1150005500. The amount outstanding as of June 30, 2012, totaled $2.4 million (unaudited).

In April 2010, the Maryland Stadium Authority issued the Sports Facilities Taxable Revenue Bonds, Series 2010 Bonds, in the amount of $10.0 million. The proceeds were used for capital repairs to Oriole Park at Camden Yards and to fund a debt service reserve account. The Series 2010 Bonds will mature on December 15, 2013. The amount outstanding as of June 30, 2012, totaled $9.3 million (unaudited). The Authority's share of lottery revenues was pledged for these bonds; therefore they are not considered tax-supported debt and are not included in the

CDAC affordability analysis.

In August 2011, the Maryland Stadium Authority issued the Sports Facilities Taxable Revenue Bonds, Series 2011 Bonds, in the amount of $11.1 million. The proceeds will be used for capital repairs to the warehouse located at the Camden Yards Complex. The Series 2011 Bonds will mature on December 15, 2014. The amount outstanding as of June 30, 2012, totaled $11.1 million (unaudited). The Authority's share of lottery revenues was pledged for these bonds; therefore they are not considered tax-supported debt and are not included in the CDAC affordability analysis.

Oriole Park at Camden Yards - Leases. In early 2007, the Baltimore Orioles filed for arbitration over the selection and installation of a new video board at Oriole Park at Camden Yards. In September 2007 the Authority and the Baltimore Orioles reached a settlement, agreeing to purchase and install $9.0 million of new audio and video equipment funded by $5.5 million from the "Supplemental Improvements Fund" and $3.5 million from the Authority. The Authority's share was financed under the State's Master Equipment Lease-Purchase Program and amortized over 10 years. The outstanding balance of the lease as of June 30, 2012, was $2.3 million (unaudited).

In November 2009, the Maryland Stadium Authority entered into a contract with Pepco Energy Services to provide $6.0 million of energy upgrades and enhancements to Oriole Park at Camden Yards and the adjoining warehouse. The Authority is financing the upgrades and enhancements under the State's Energy Performance Contract Lease-Purchase Program over 12 years. Some of the upgrades and enhancements include the replacement of a chiller and cooling tower, replacement of light fixtures and upgrades to the generator plant. The outstanding balance as of June 30, 2012, was $5.5 million (unaudited). This lease is not included in the CDAC affordability analysis because the guaranteed annual savings exceeds the annual debt service.

The amount outstanding of the Authority's bonds, included in the CDAC analysis related to the Oriole Park at Camden Yards project totaled $95.5 million (unaudited) as of June 30, 2012.

Baltimore City Convention Center Expansion. The Authority also constructed an expansion of the Baltimore City Convention Center. The Convention Center expansion cost $167.0 million and was financed through a combination of funding from Baltimore City revenue bonds ($50.0 million), Authority revenue bonds ($55.0 million), State general obligation bonds ($58.0 million) and other State appropriations. As required, the City sold its revenue bonds before the Authority's sale of lease-backed revenue bonds on August 25, 1994. The State sold $58.0 million in general obligation bonds designated for the Convention Center in sales from October 1993 to October 1996. The agreement between the City and the Authority provides that: (1) the City and the Authority each make equal annual contributions to a capital improvements reserve fund; (2) after completion of construction through fiscal year 2008, the Authority and the City contribute toward operating deficits in the proportion Authority (2/3), City (1/3); and (3) the City be solely responsible for operating deficits and capital improvements prior to completion of the expansion and after fiscal year 2008. Authority debt service in fiscal year 2010 was $5.0 million. The 2011 contribution to operating deficits and the project's capital improvements fund was approximately $6.1 million. The project has generated direct and indirect benefit to the State that offset its costs (debt service, operating deficit contributions, deposits to the capital improvements fund, and that portion of the Authority's budget that is allocable to the Baltimore

City Convention Center project) since 1999.

In June 1998, the Authority entered into an agreement to implement a synthetic fixed rate refinancing of its revenue bonds for the Baltimore City Convention Center using a combination of variable rate refunding obligations and forward interest rate exchange agreements. As provided under the agreements, savings of $0.6 million was paid to the Authority on June 10, 1998. The Authority issued refunding bonds in the amount of $31.6 million of which $31.2 million was used to call the outstanding principal balance on the 1994 Series Bonds on December 15, 2006. The balance of the proceeds, $400,000 was used towards closing costs. The 1994 Series Bonds were called on December 15, 2006 in accordance with the swap agreement.

The amount outstanding of Maryland Stadium Authority bonds related to the Baltimore City Convention Center project totaled $13.6 million (unaudited) as of June 30, 2012.

Ocean City Convention Center. The Authority also constructed an expansion of the Ocean City Convention Center in Ocean City. The expansion cost $33.2 million and was financed through a matching grant from the State to Ocean City and a combination of funding from Ocean City and the Authority. In October 1995, the Authority issued $17.3 million in revenue bonds to provide State funding; as required, Ocean City sold $15.0 million of its special tax and general obligation bonds before the sale by the Authority.

In March 2011, the Authority refinanced the outstanding balance of $6.5 million. A new fixed rate series was issued in the amount of $6.6 million with $6.5 million being used to call the Series 1995 Bonds and the balance used for transactional costs. The annual debt service on the Series 2011 Bonds is approximately $1.4 million annually. The amount outstanding as of June 30, 2012, totaled $5.4 million (unaudited).

The Authority will also continue to pay one-half of any annual operating deficits of the facility through December 15, 2035, after which time Ocean City will be solely responsible for operating deficits. The 2011 contribution to operating deficits and the project's capital improvements fund is approximately $1.4 million. The project has generated direct and indirect benefits to the State that offset its costs (debt service, operating deficit contributions, deposits to the capital improvements fund, and that portion of the Authority's budget that is allocable to the Ocean City Convention Center project) since 2007.

Ravens Stadium. The Authority currently operates Ravens Stadium, which opened in 1998. In connection with the construction of that facility, the Authority sold $87.6 million in lease-backed revenue bonds on May 1, 1996 for Ravens Stadium. The proceeds from the Authority's bonds, along with cash available from State lottery proceeds, investment earnings, contributions from the Ravens and other sources were used to pay project design and construction expenses of approximately $229.0 million. The bonds are solely secured by an assignment of revenues received under a lease of the project from the Authority to the State. In June 1998, the Authority entered into an agreement to implement a synthetic fixed rate refinancing of the football lease-backed revenue bonds using a combination of variable rate refunding obligations and forward interest rate exchange agreements. As provided under the agreements, savings of $2.6 million were paid to the Authority on June 10, 1998. The Authority issued Maryland Stadium Authority Sports Facilities Lease Revenue Refunding Bonds Football Stadium Issue Series 2007 in the amount of $73.5 million of which $73.1 million was used to call the outstanding principal balance on the 1996 Series Bonds on March 1, 2007. The balance

of the proceeds, $375,000, was used for closing costs. The 1996 Series Bonds were called on March 1, 2007 in accordance with the swap agreement.

On December 15, 1997 the Authority issued $4.6 million in Sports Facilities Lease Revenue Bonds, Series 1997 whose proceeds were used toward the construction of Ravens Stadium. The Series 1997 bonds fully matured on December 15, 2007. The Authority's combined debt service on the remaining outstanding revenue bonds is $7.3 million annually. The bonds outstanding as of June 30, 2012, totaled $60.8 million (unaudited).

In November 2009, the Maryland Stadium Authority entered into a contract with Pepco Energy Services to provide energy upgrades and enhancements to Ravens Stadium. The energy upgrades and enhancements will cost approximately $2.5 million. The Authority is financing the upgrades and enhancements under the State's Energy Performance Contract Lease-Purchase Program over 12 years. The outstanding balance as of June 30, 2012, was $2.2 million (unaudited). This lease is not included I the CDAC affordability analysis because the guaranteed annual savings exceeds the annual debt service.

In the spring of 2010, the Maryland Stadium Authority entered into several contracts for the replacement of the video boards and control room at Ravens Stadium. The budget for the project was estimated at $10.0 million. The Baltimore Ravens funded approximately $6.0 million and the Maryland Stadium Authority funded $4.0 million. The Maryland Stadium Authority's share was financed under the State's Equipment Lease-Purchase Program and amortized over 10 years. The outstanding balance as of June 30, 2012, was $3.5 million (unaudited).

The amount outstanding of the Authority's bonds, included in the CDAC affordability analysis, related to the Ravens Stadium project totaled $60.8 million (unaudited) as of June 30, 2012.

Hippodrome Theater. In July 2002, the Authority issued $20.3 million in taxable lease-backed revenue bonds in connection with the renovation and construction of the Hippodrome Theater as part of Baltimore City's West Side Development. The cost of renovating the theater was $63.0 million and was financed by various public and private sources. The Authority does not have any operating risk for the project which was completed in February 2004. The average annual debt service for these bonds is $1.8 million. The bonds outstanding as of June 30, 2012, totaled $13.7 million (unaudited).

In July 2012, the Authority refinanced the outstanding balance of $13.7 million. A new fixed rate series was issued in the amount of $14.1 million with $13.7 million being used to call the Series 2002 Bonds and the balance used for interest and transactional costs. The annual debt service on the Series 2011 Bonds is approximately $1.6 million.

Montgomery County Conference Center. In January 2003, the Authority issued $23.2 million in lease-backed revenue bonds in connection with the construction of a conference center in Montgomery County. The conference center is adjacent and physically connected to a Marriott Hotel, which has been privately financed. The center cost $33.5 million and was financed through a combination of funding from Montgomery County and the Authority. The Authority does not have any operating risk. The average annual debt service for these bonds is $1.75 million. The bonds outstanding as of June 30, 2012, totaled $16.0 million (unaudited).

In November 2012, the Authority refinanced the outstanding balance of $16.0 million. A new fixed rate series was issued in the amount of $13.6 million with $13.3 million plus $2.3 million in premium being used to call the Series 2003 Bonds and the balance used for interest and transactional costs. The annual debt service on the Series 2012 Bonds is approximately $1.6 million.

Camden Station Renovation. In February 2004, the Authority issued $8.7 million in taxable lease-backed revenue bonds in connection with the renovation of the historic Camden Station located at the Camden Yards Complex in Baltimore, Maryland. The cost of the renovation was $8.0 million. The Authority has executed lease agreements for the entire building, with the Babe Ruth Museum leasing approximately 22,600 square feet since May 2000 and Geppi's Entertainment Museum leasing the balance of the building since early fall 2006. To date, lease payments have not been sufficient to cover debt service on the bonds and the shortfall has been subsidized by the Authority. The average annual debt service for these bonds is $0.8 million. Bonds outstanding as of June 30, 2012, totaled $7.2 million (unaudited).

APPENDIX A - 1

MARYLAND PERSONAL INCOME AND POPULATION

Historical Data through 2010
Projections 2011-2022

Calendar Year	Personal Income *($ in millions)*	% Change	Population *(thousands)*	% Change
2008	$ 277,793	4.91%	5,706	0.67%
2009	$ 272,829	-1.79%	5,758	0.91%
2010	$ 283,634	3.96%	5,810	0.91%
2011	$ 296,965	4.70%	5,846	0.62%
2012	$ 308,398	3.85%	5,882	0.61%
2013	$ 318,637	3.32%	5,913	0.53%
2014	$ 332,944	4.49%	5,944	0.52%
2015	$ 349,890	5.09%	5,974	0.50%
2016	$ 368,085	5.20%	6,004	0.50%
2017	$ 385,385	4.70%	6,034	0.50%
2018	$ 400,029	3.80%	6,063	0.49%
2019	$ 415,790	3.94%	6,092	0.48%
2020	$ 433,087	4.16%	6,121	0.47%
2021	$ 451,753	4.31%	6,150	0.48%
2022	$ 471,043	4.27%	6,180	0.48%

Rate	Description
4.44%	Average rate of personal income growth for 10 year period 2001 through 2010
4.90%	Median rate of personal income growth for 10 year period 2001 through 2010

Sources: Personal Income
2000-2010 Bureau of Economic Analysis, U.S. Dept. of Commerce
2011-2022 Forecast: BRE March 2011 forecast

Population
2000-2010 Census Bureau, U.S. Dept. of Commerce
2011-2022 Forecast: Economy.com June 2012 forecast

APPENDIX A - 2

MARYLAND STATE REVENUE PROJECTIONS
($ in millions)
Updated as of September 2012

Fiscal Year	General Funds	% Change	Property Taxes	% Change	Use of Premium and Misc. ABF Receipts	US Treasury Subsidy - Direct Subsidy Bonds	Educational Trust Fund (VLT revenues)	Transfer Taxes	Total	Transportation Revenues	Stadium Related Revenues	Garvee Revenues	Bay Restoration Fund	Total Revenues	% Change
2008	$13,545.6	4.7%	$625.7	13.2%	$37.1				$14,208.4	$2,009.0	$21.5	$441.3	$55.0	$16,735.2	6.92%
2009	$12,900.5	-4.8%	$698.6	11.6%	$79.2				$13,678.2	$2,140.3	$20.0	$441.3	$53.3	$16,333.2	-2.40%
2010	$12,587.1	-2.4%	$742.9	6.3%	$67.8	$0.9	$10.8		$13,409.5	$2,135.8	$20.0	$441.3	$54.8	$16,061.4	-1.66%
2011	$13,537.4	7.5%	$798.3	7.5%	$83.0	$9.2	$82.8	$113.8	$14,624.4	$2,282.4	$23.7	$540.2	$54.6	$17,525.3	9.11%
2012	$14,257.8	5.3%	$752.9	-5.7%	$132.7	$11.5	$91.1	$121.7	$15,367.7	$2,277.0	$24.4	$440.4	$55.1	$18,164.7	3.65%
2013	$14,631.3	2.6%	$728.5	-3.2%	$76.5	$12.2	$286.1	$131.3	$15,865.8	$2,454.0	$24.6	$440.4	$99.0	$18,883.8	3.96%
2014	$15,317.5	4.7%	$726.1	-0.3%	$2.7	$12.4	$297.0	$153.4	$16,509.1	$2,623.0	$24.6	$440.4	$100.0	$19,697.1	4.31%
2015	$15,984.8	4.4%	$720.1	-0.8%	$2.7	$12.4	$483.4	$179.6	$17,383.0	$2,700.0	$23.3	$440.4	$101.0	$20,647.7	4.83%
2016	$16,740.0	4.7%	$727.7	1.1%	$2.7	$12.4	$514.7	$196.8	$18,194.3	$2,763.0	$23.3	$440.4	$102.0	$21,523.0	4.24%
2017	$17,568.4	4.9%	$735.2	1.0%	$2.7	$12.4	$523.6	$206.7	$19,048.9	$2,806.0	$23.4	$440.4	$103.0	$22,421.7	4.18%
2018	$18,358.9	4.5%	$753.5	2.5%	$2.7	$12.4	$539.3	$210.8	$19,877.6	$2,856.0	$23.3	$440.4	$104.1	$23,301.4	3.92%
2019	$19,185.1	4.5%	$772.4	2.5%	$2.7	$12.4	$555.5	$215.0	$20,743.1	$2,868.0	$22.8	$440.4	$105.1	$24,179.5	3.77%
2020	$20,048.4	4.5%	$791.7	2.5%	$2.7	$11.6	$572.2	$219.3	$21,646.0	$2,913.0	$22.8	$440.4	$106.2	$25,128.3	3.92%
2021	$20,950.6	4.5%	$811.5	2.5%	$2.7	$10.9	$589.3	$223.7	$22,588.7	$2,959.0	$8.7	n/a	$107.2	$25,663.6	2.13%
2022	$21,893.4	4.5%	$831.8	2.5%	$2.7	$10.1	$607.0	$228.2	$23,573.1	$3,003.0	$8.7	n/a	$108.3	$26,693.1	4.01%

Sources:
General Fund: 2008 - 2022: Bureau of Revenue Estimates
Property Tax and Use of Premium Revenues: 2008 - 2011; State Budget Books; 2011 - 2022 Dept. of Budget and Management, STO, Department of Assessments and Taxation
US Treasury Subsidy - Direct Subsidy Bonds including Build America, Qualified School Construction, Qualified Zone Academy, and Qualified Energy Conservation Bonds
Educational Trust Fund (VLT revenues): 2010 - 2017 - Dept. of Budget and Management; 2017 through 2022, projected at 3% growth
Transfer Taxes: 2011 - 2017: Bureau of Revenue Estimates & DBM; 2018 - 2022: Projected at growth rate of 2.0%
Transportation Revenues: 2008-2022: Department of Transportation; Includes Taxes and Fees, Operating Revenue (including federal funds), Other Revenue (including investment revenue); MdTA transfers are deducted.
Garvee Revenues: 2008-2020; MdTA, Federal highway capital revenues; No debt service or revenues to be included after 2020
Stadium Revenues: Stadium's Lottery revenues net of debt service on the 2010 & 2011 Sports Facilities Revenue Bonds, Camden Yards revenues, and Hippodrome ticket surcharge revenues
Bay Restoration Fund Revenues: 2008-2022 total program revenues; Department of Environment - MWQFA

Appendix B-1

Proposed General Obligation Authorizations and Estimated Issuances

($ in millions)

Legislative Session	Fiscal Year	Proposed Authorizations	Rate of Increase	Projected Issuance of New Authorizations By Fiscal Year 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 and beyond	Total Issued
2013	2014	$1,075	0%		333	269	215	161	97						$1,075
2014	2015	$1,085	1%			336	271	217	163	98					$1,085
2015	2016	$1,095	1%				339	274	219	164	99				$1,095
2016	2017	$1,105	1%					343	276	221	166	99			$1,105
2017	2018	$1,200	9%						372	300	240	180	108		$1,200
2018	2019	$1,240	3%							384	310	248	186	$112	$1,240
2019	2020	$1,280	3%								397	320	256	$307	$1,280
2020	2021	$1,320	3%									409	330	$581	$1,320
2021	2022	$1,360	3%										422	$938	$1,360
2022	2023	$1,400	3%											$1,400	$1,400
Projected Issuance of New Authorizations		**$12,160**		**0**	**333**	**605**	**826**	**995**	**1,127**	**1,167**	**1,211**	**1,257**	**1,302**	**3,338**	**$12,160**
Current Authorized but Unissued		**$2,315**		**1,028**	**644**	**390**	**188**	**73**	**(2)**	**(4)**	**(0)**	**(1)**	**(2)**		**$2,315**
Total Projected Issuances		**$14,475**		**$1,028**	**$977**	**$995**	**$1,014**	**$1,068**	**$1,125**	**$1,164**	**$1,211**	**$1,256**	**$1,300**	**$3,338**	**$14,475**

Projected Bond Sales By Fiscal Year:	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
1st sale	$528	$475	$475	$475	$475	$500	$550	$595	$625	$650
2nd sale	$500	$502	$520	$539	$593	$625	$614	$616	$631	$650
Total sales	**$1,028**	**$977**	**$995**	**$1,014**	**$1,068**	**$1,125**	**$1,164**	**$1,211**	**$1,256**	**$1,300**

Issuance Assumptions For New Authorizations:

Fiscal year following year of authorization:	1st	2nd	3rd	4th	5th
Percent of original authorization issued	31%	25%	20%	15%	9%

Appendix B-2

Projected General Obligation Authorized but Unissued Debt

($ in thousands)

Fiscal Year	Authorized but Unissued Debt at Beginning of FY	New Debt Authorizations (a)	Bond Issues (b)	Authorized but Unissued Debt at End of FY
2013	$2,330,441	$1,075,000	($1,028,000)	$2,377,441
2014	$2,377,441	$1,085,000	($977,000)	$2,485,441
2015	$2,485,441	$1,095,000	($995,000)	$2,585,441
2016	$2,585,441	$1,105,000	($1,014,000)	$2,676,441
2017	$2,676,441	$1,200,000	($1,067,500)	$2,808,941
2018	$2,808,941	$1,240,000	($1,125,000)	$2,923,941
2019	$2,923,941	$1,280,000	($1,163,500)	$3,040,441
2020	$3,040,441	$1,320,000	($1,211,000)	$3,149,441
2021	$3,149,441	$1,360,000	($1,256,000)	$3,253,441
2022	$3,253,441	$1,400,000	($1,300,000)	$3,353,441
		$12,160,000	($11,137,000)	

Summary:

Authorized but Unissued at 7/1/2012	$2,330,441
Total Authorizations	$12,160,000
Total Issuances	($11,137,000)
Total Authorized but Unissued at 6/30/2022	$3,353,441

(a) Authorizations are shown in the fiscal year of the legislative session to support the capital program of the following fiscal year.

(b) As projected in Appendix B-1

Projected General Obligation Debt Outstanding

($ in thousands)

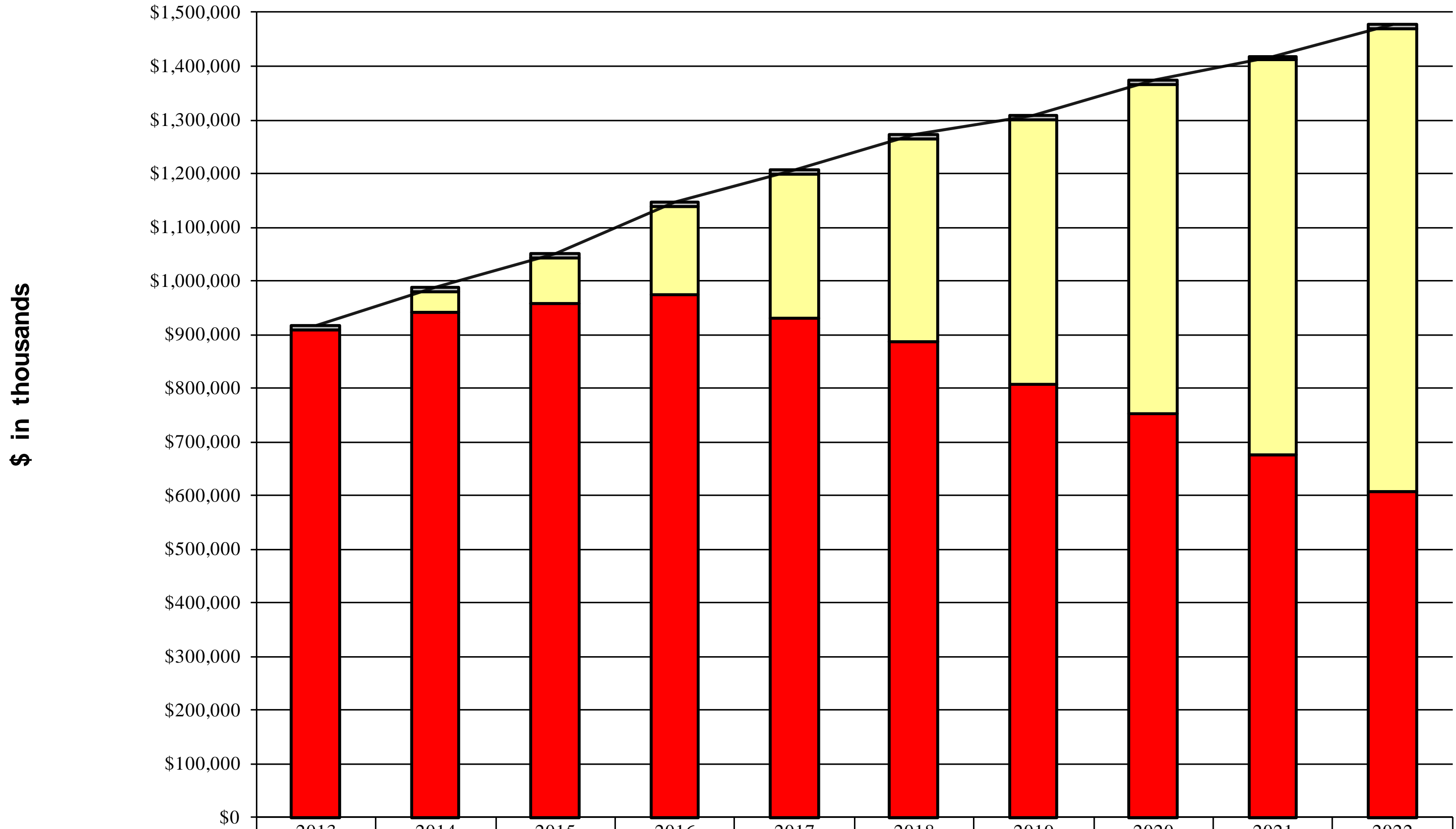
Fiscal Year	Outstanding at Beginning of FY	GO New Issues (a)	Redemptions	Refundings	QZAB Issuances / (Redemptions)	Outstanding at End of FY
2013	$7,541,102	$1,028,000	($564,299)	($10,660)	$15,230	$8,009,372
2014	$8,009,372	$977,000	($613,979)			$8,372,393
2015	$8,372,393	$995,000	($657,704)			$8,709,688
2016	$8,709,688	$1,014,000	($734,987)		($18,098)	$8,970,603
2017	$8,970,603	$1,067,500	($781,426)			$9,256,677
2018	$9,256,677	$1,125,000	($831,899)			$9,549,778
2019	$9,549,778	$1,163,500	($850,906)			$9,862,372
2020	$9,862,372	$1,211,000	($897,323)		($9,043)	$10,167,005
2021	$10,167,005	$1,256,000	($923,664)			$10,499,341
2022	$10,499,341	$1,300,000	($962,407)		($4,378)	$10,832,555
		$11,137,000	($7,818,597)		($16,289)	

Summary:

Outstanding at 7/1/2012	$7,541,102
Total GO issued	$11,137,000
Refunding in FY 2013	($10,660)
Total GO Redeemed	($7,818,597)
QZAB Issuances / Redemptions	($16,289)
Outstanding at 6/30/2022	$10,832,555

(a) New issues as projected in Appendix B-1

Appendix B-4
Projected General Obligation Debt Service
FY 2013 - FY 2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
QZAB/QSCB Sinking Payments	$8,562	$8,562	$8,562	$8,562	$7,674	$7,674	$7,674	$7,674	$7,183	$7,183
Debt Service: Expected New Issues	$-	$36,875	$85,725	$163,703	$268,890	$378,359	$492,366	$611,157	$735,119	$863,267
Debt Service: Bonds Currently Outstanding	$907,420	$942,858	$956,906	$974,246	$929,344	$887,129	$808,556	$753,969	$675,951	$606,867
Total Debt Service	$915,982	$988,295	$1,051,193	$1,146,511	$1,205,907	$1,273,162	$1,308,596	$1,372,799	$1,418,254	$1,477,317

Historical Data - General Obligation Debt

($ in thousands)

	Summary of Authorizations				Summary of Debt Activity					Summary of Debt Service				
											Adjustment (b)			
Fiscal Year	Authorized (a)	Cancelled	New Issuances	Authorized but Unissued	New Issuances	Refunding	Redeemed	Refunded	Outstanding at Fiscal Year End	Gross Total	Repayable	Assumed	Net	Adjusted Debt Service
1973	$463,565	$9,152	$193,505	$1,256,159	$193,505		$51,017		$1,018,664	$88,836	($9,912)	$45,766	$35,854	$124,690
1974	$412,827	$16,058	$162,150	$1,490,778	$162,150		$59,823		$1,120,991	$105,394	($9,405)	$45,684	$36,279	$141,673
1975	$375,956	$35,267	$353,615	$1,477,852	$353,615		$72,452		$1,402,154	$125,787	($11,581)	$44,674	$33,094	$158,881
1976	$180,181	$20,465	$391,605	$1,245,963	$391,605		$83,416		$1,710,343	$155,462	($11,072)	$44,186	$33,114	$188,576
1977	$169,908	$653	$448,200	$967,018	$448,200		$92,633		$2,065,910	$184,751	($11,963)	$43,425	$31,462	$216,213
1978	$190,896	$4,577	$218,145	$935,192	$218,145		$111,095		$2,172,960	$216,797	($14,066)	$42,459	$28,393	$245,190
1979	$155,887	$61,422	$115,350	$914,307	$115,350		$134,235		$2,154,075	$244,653	($14,503)	$39,599	$25,096	$269,749
1980	$205,510	$72,819	$117,310	$929,688	$117,310		$162,255		$2,109,130	$269,054	($15,052)	$37,425	$22,373	$291,427
1981	$182,418	$16,335	$271,065	$824,706	$271,065		$176,140		$2,204,055	$286,003	($15,946)	$35,841	$19,895	$305,898
1982	$184,998	$22,391	$188,180	$799,133	$188,180		$184,575		$2,207,660	$311,372	($16,253)	$33,947	$17,694	$329,066
1983	$190,250	$8,851	$392,230	$588,301	$392,230		$190,000		$2,409,890	$330,491	($14,062)	$28,328	$14,266	$344,757
1984	$203,150	$24,467	$116,700	$650,284	$116,700		$212,275		$2,314,315	$361,279	($12,750)	$27,209	$14,459	$375,738
1985 (c)	$331,387	$11,187	$138,990	$831,495	$138,990		$222,010		$2,231,295	$380,089	($11,809)	$24,146	$12,337	$392,426
1986	$219,034	$49,892	$124,585	$876,052	$124,585		$245,805		$2,110,075	$396,768	($9,204)	$20,227	$11,023	$407,791
1987	$230,950	$7,575	$164,645	$934,782	$164,645		$244,305		$2,030,415	$394,568	($5,104)	$16,441	$11,337	$405,905
1988	$254,228	$13,601	$304,860	$870,549	$304,860		$244,455		$2,090,820	$389,993	($4,649)	$13,635	$8,986	$398,979
1989	$294,997	$3,545	$160,000	$1,002,000	$160,000		$245,460		$2,005,360	$393,388	($4,240)	$10,293	$6,053	$399,441
1990 (c)	$328,219	$103,063	$234,227	$992,930	$234,227		$252,681		$1,986,906	$395,118	($4,260)	$8,317	$4,057	$399,175
1991	$329,200	$2,570	$296,787	$1,022,773	$296,787		$245,256		$2,038,437	$388,400	($1,349)	$6,547	$5,198	$393,598
1992	$349,979	$1,000	$340,000	$1,031,752	$340,000		$200,238		$2,178,199	$345,897	($1,353)	$5,648	$4,295	$350,192
1993	$369,995	$2,320	$260,410	$1,139,018	$260,410	$147,740	$176,479	$130,475	$2,279,395	$322,251	($1,358)	$3,156	$1,798	$324,049
1994	$379,889	$1,417	$380,365	$1,137,125	$380,365	$207,390	$183,106	$180,040	$2,504,004	$323,618	($654)	$2,146	$1,492	$325,110
1995	$389,960	$1,111	$335,000	$1,190,958	$335,000		$219,936		$2,619,069	$373,485	($653)	$1,357	$704	$374,189
1996	$412,088	$12,425	$470,000	$1,119,919	$470,000		$229,134		$2,859,935	$382,125	($652)	$1,360	$708	$382,833
1997	$416,133	$2,114	$410,000	$1,124,656	$410,000		$244,541		$3,025,394	$401,799	($647)	$347	($300)	$401,499
1998	$442,999	$15,142	$500,000	$1,052,513	$500,000		$254,869		$3,270,525	$417,900	($642)	$64	($578)	$417,322
1999	$448,745	$5,764	$475,000	$1,020,898	$475,000		$245,297		$3,500,238	$417,646	($124)	$0	($124)	$417,522
2000	$471,786	$3,659	$125,000	$1,363,620	$125,000		$276,362		$3,348,872	$459,156	$0	$0	$0	$459,156
2001	$513,250	$3,612	$400,000	$1,473,258	$400,000		$297,966		$3,450,900	$470,868	$0	$0	$0	$470,869
2002	$731,058	$12,614	$418,098	$1,773,604	$418,098	$109,935	$322,320	$112,435	$3,544,178	$495,217	$0	$0	$0	$495,217
2003	$756,513	$11,634	$725,000	$1,793,483	$725,000	$376,950	$326,695	$386,940	$3,932,493	$496,870	$0	$0	$0	$496,870
2004	$663,663	$10,692	$500,000	$1,946,454	$500,000		$330,215		$4,102,278	$536,819	$0	$0	$0	$536,819
2005	$679,807	$6,730	$784,043	$1,835,488	$784,043	$855,840	$348,180	$882,155	$4,511,826	$553,783	$0	$0	$0	$553,783
2006	$690,000	$1,004	$750,000	$1,774,484	$750,000		$393,355		$4,868,471	$625,208	$0	$0	$0	$625,208
2007	$821,126	$4,645	$679,378	$1,911,587	$679,378		$405,695		$5,142,154	$654,055	$0	$0	$0	$654,055
2008	$935,000	$2,749	$779,986	$2,063,852	$779,986		$428,310		$5,493,830	$692,539	$0	$0	$0	$692,539
2009 (d)	$1,112,000	$1,939	$845,563	$2,328,350	$845,563	$65,800	$464,725	$66,825	$5,873,643	$744,799	$0	$0	$0	$744,799
2010 (e)	$1,214,543	$7,026	$1,140,883	$2,394,984	$1,140,883	$798,080	$482,754	$806,630	$6,523,222	$777,523	$0	$0	$0	$777,523
2011 (f)	$940,902	$4,127	$974,718	$2,357,041	$974,718		$515,094		$6,982,846	$834,833	$0	$0	$0	$834,833
2012 (g)	$1,090,324	$4,525	$1,112,400	$2,330,440	$1,112,400	$393,295	$542,179	$405,260	$7,541,102	$878,208	$0	$0	$0	$878,208

(a) Authorizations for a fiscal year represent those authorizations effective for that fiscal year; therefore, authorizations for FY 1988 exclude $15 million for the Salisbury Multi-Service Center which authorization is effective 7/1/88.
(b) Adjustment to debt service: "repayable" represents debt service on loans the repayment of which is received by the State, from non-State entities, concurrently with, or prior to, debt service payment dates.
"Assumed" debt represents payments made by the State for debt service on non-State debt.
(c) Includes $100 million authorized in the Special Session of 1985 for the savings and loan crisis; no bonds were issued and the authorization was cancelled in 1990.
(d) $1,110 million for G.O bonds and $2.0 million for Local Government Infrastructure program
(e) $1,140 million for 2010 MCCBL, $70 million 2009 Program Open Space and $4.543 million for QZAB authorization
(f) $925 million for 2011 MCCBL, $15.902 million for QZAB authorization
(g) $1,075 million for 2012 MCCBL, $ 15.324 million for QZAB authorization

History of Affordability Ratios

	Year	Debt as a % of Personal Income (1)		Debt Service as a % of Revenues (2)	
		GO Debt Only	Tax-Supported Debt (3) (4)	GO Debt Only (5) (6)	Tax-Supported Debt (3) (4)
	1960	3.11%		5.23%	
	1965	3.12%		5.10%	
	1970	3.34%		3.35%	
	1975	5.26%		9.78%	
	1976	5.87%		10.17%	
	1977	6.53%		10.55%	
	1978	6.11%		10.60%	
	1979	5.41%		10.55%	
	1980	4.76%		10.46%	
	1981	4.48%		10.63%	
	1982	4.24%		10.60%	
	1983	4.43%		10.32%	
(7)	1984		4.15%		10.16%
(7)	1985		3.63%		9.61%
(7)	1986		3.12%		8.80%
	1987		2.87%		7.77%
	1988		2.71%		6.99%
	1989		2.51%		6.78%
	1990		2.64%		6.85%
	1991		2.90%		6.74%
	1992		3.01%		6.25%
	1993		2.97%		6.13%
	1994		3.00%		5.50%
	1995		3.04%		6.09%
	1996		3.01%		6.46%
	1997		2.93%		6.45%
	1998		2.85%		6.45%
	1999		2.78%		5.84%
	2000		2.50%		5.73%
	2001		2.36%		5.45%
	2002		2.34%		5.86%
	2003		2.58%		6.15%
	2004		2.59%		5.93%
	2005		2.56%		5.54%
	2006		2.56%		5.55%
(3)	2007		2.68%		5.40%
(4)	2008		2.75%		5.55%
	2009		3.20%		6.21%
	2010		3.30%		6.85%
	2011		3.22%		6.58%
	2012		3.31%		6.68%

(1) The criterion for debt outstanding to personal income was 3.2% from 1979 - 2007 and increased to 4.0% in 2008.

(2) The criterion for debt service to revenues has been 8.0% since 1979.

(3) GARVEE Bonds were first issued in 2007 and included in tax-supported debt beginning in that year.

(4) Bay Restoration Bonds were first issued in 2008 and included in tax-supported debt beginning in that year.

(5) Gross GO debt service plus debt service on assumed local school debt minus debt service on loans repayable by local governments, State agencies and others.

(6) Revenues included general fund revenues plus property tax revenues.

(7) Various components of tax-supported debt first appear in the 1988 report which recalculated the ratios beginning in 1984.

Appendix C-3

Historical Data - Department of Transportation Debt

Consolidated Transportation Bonds

($ in thousands)

	Summary of Debt Activity							Summary of Debt Service (d)			
Fiscal Year	Gross Debt Outstanding Beginning of Year	Issued	Defeased	Redeemed	Gross Debt Outstanding End of Year	Sinking Fund(s) Balance (c)	Net Debt Outstanding End of Year	Deposits to Refunding Sinking Fund	Principal Redeemed	Interest	Total
1981	$ 399,865	$ 120,000 (a)	-	$ -	$ 519,865						
1982	$ 519,865	$ 60,000		$ 60,000	$ 519,865						
1983	$ 519,865	$ 40,000	-	$ 60,000	$ 499,865	$ 240,601	$ 259,264	$ 20,924	$ 60,000	$ 32,884	$ 113,808
1984	$ 499,865	-	-	-	$ 499,865	$ 283,617	$ 216,248	$ 20,924	-	$ 29,219	$ 50,143
1985	$ 499,865	-	-	-	$ 499,865	$ 335,241	$ 164,624	$ 20,924	-	$ 29,219	$ 50,143
1986	$ 499,865	-	$ 354,865 (b)	$ 3,000	$ 142,000	$ 29,299	$ 112,701	$ 10,462	$ 3,000	$ 19,547	$ 33,009
1987	$ 142,000	$ 100,000	-	$ 7,000	$ 235,000	$ 48,317	$ 186,683	-	$ 7,000	$ 12,919	$ 19,919
1988	$ 235,000	-	-	$ 8,000	$ 227,000	$ 58,953	$ 168,047	-	$ 8,000	$ 15,685	$ 23,685
1989	$ 227,000	$ 100,000	-	$ 17,000	$ 310,000	$ 68,162	$ 241,838	-	$ 17,000	$ 18,195	$ 35,195
1990	$ 310,000	$ 260,000	-	$ 20,000	$ 550,000	$ 67,309	$ 482,691	-	$ 20,000	$ 28,842	$ 48,842
1991	$ 550,000	$ 310,000	-	$ 18,000	$ 842,000	$ 68,329	$ 773,671	-	$ 18,000	$ 46,261	$ 64,261
1992	$ 842,000	$ 120,000	-	$ 21,000	$ 941,000	$ 66,230	$ 874,770	-	$ 21,000	$ 59,211	$ 80,211
1993	$ 941,000	$ 75,000	-	$ 56,200	$ 959,800	$ 39,901	$ 919,899	-	$ 56,200 (e)	$ 61,445	$ 117,645
1994	$ 959,800	$ 543,745 (f)	$ 457,800	$ 25,455	$ 1,020,290	$ 27,570	$ 992,720	-	$ 25,455	$ 56,423	$ 81,878
1995	$ 1,020,290	$ 75,000	-	$ 47,785	$ 1,047,505	$ 32,338	$ 1,015,167	-	$ 47,785	$ 52,841	$ 100,626
1996	$ 1,047,505	-	-	$ 69,880	$ 977,625	$ 30,940	$ 946,685	-	$ 69,880	$ 51,526	$ 121,406
1997	$ 977,625	$ 50,000	-	$ 88,245	$ 939,380	$ 15,495	$ 923,885	-	$ 88,245	$ 47,448	$ 135,693
1998	$ 939,380	$ 93,645 (g)	$ 91,200	$ 97,810	$ 844,015	-	$ 844,015	-	$ 97,810	$ 44,959	$ 142,769
1999	$ 844,015	-	-	$ 94,885	$ 749,130	-	$ 749,013	-	$ 94,885	$ 38,025	$ 132,910
2000	$ 749,130	$ 75,000	-	$ 99,360	$ 724,770	-	$ 724,770	-	$ 99,360	$ 35,873	$ 135,233
2001	$ 724,770	-	-	$ 76,720	$ 648,050	-	$ 648,050	-	$ 76,720	$ 32,954	$ 109,674
2002	$ 648,050	$ 150,000	-	$ 83,900	$ 714,150	-	$ 714,150	-	$ 83,900	$ 29,278	$ 113,178
2003	$ 714,150	$ 607,405 (h)	$ 46,500	$ 313,810	$ 961,245	-	$ 961,245	-	$ 313,810	$ 34,204	$ 348,014
2004	$ 961,245	$ 395,900 (i)	$ 77,500	$ 93,995	$ 1,185,650	-	$ 1,185,650	-	$ 93,995	$ 40,915	$ 134,910
2005	$ 1,185,650	-	-	$ 115,705	$ 1,069,945	-	$ 1,069,945	-	$ 115,705	$ 53,950	$ 169,655
2006	$ 1,069,945	$ 100,000	-	$ 91,470	$ 1,078,475	-	$ 1,078,475	-	$ 91,470	$ 49,702	$ 141,172
2007	$ 1,078,475	$ 100,000	-	$ 67,425	$ 1,111,050	-	$ 1,111,050	-	$ 67,425	$ 50,999	$ 118,424
2008	$ 1,111,050	$ 226,755	-	$ 68,990	$ 1,268,815	-	$ 1,268,815	-	$ 68,990	$ 52,400	$ 121,390
2009	$ 1,268,815	$ 390,000	-	$ 76,210	$ 1,582,605	-	$ 1,582,605	-	$ 76,210	$ 66,145	$ 142,355
2010	$ 1,582,605	$ 140,000	-	$ 77,595	$ 1,645,010	-	$ 1,645,010	-	$ 77,595	$ 73,358	$ 150,953
2011	$ 1,645,010	-	-	$ 83,170	$ 1,561,840	-	$ 1,561,840	-	$ 83,170	$ 75,492	$ 158,662
2012	$ 1,561,840	$ 276,435 (j)	172,800	$ 102,845	$ 1,562,630	-	$ 1,562,630	-	$ 102,845	$ 71,370	$ 174,215

(a) Includes $60 million Consolidated Transportation Bonds plus a one-year Bond Anticipation Note for $60 million. The one-year BAN was re-issued the following year.

(b) Represents a defeasance of the balance remaining of the series 1978 refunding bonds.

(c) For bonds issued prior to 7/1/89, sinking fund balances reflect the net effect of: deposits into the fund, one calendar year in advance, of debt service; fund earnings; and payments, from the sinking fund, to bondholders. Bonds issued after 7/1/89 do not require such a sinking fund.

(d) Represents payments to the refunding bond sinking fund plus payments of principal and interest to the bondholders. Amounts may differ from budgetary amounts (budgetary amounts represent payment to sinking funds).

(e) Includes early redemptions of $30 million.

(f) DOT sold two issues of refunding bonds in FY 94:
$211.985 million to refund $204.0 million
$291.760 million to refund $253.8 million

(g) The Department issued $93.645 million refunding bonds to refund $91.2 million during fiscal year 1998.

(h) The Department issued $262.405 million refunding bonds to refund $265.820 million during fiscal year 2003.

(i) The Department issued $75.9 million refunding bonds to refund $77.5 million during fiscal year 2004.

(j) The Department issued $161.435 million refunding bonds to refund $172.8 million during fiscal year 2012