

# State of North Carolina



## Debt Affordability Study

February 1, 2006

Debt Affordability Advisory Committee

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STATE OF NORTH CAROLINA  
DEBT AFFORDABILITY ADVISORY COMMITTEE



February 1, 2006

To: Governor Michael Easley  
Lieutenant Governor Beverly Perdue, President of the North Carolina Senate  
Senator Marc Basnight, President Pro Tempore of the North Carolina Senate  
Representative James Black, Speaker of the North Carolina House of Representatives  
Representative Richard Morgan, Speaker Pro Tempore of the North Carolina House of  
Representatives  
Members of the 2005 General Assembly through the Fiscal Research Division

Attached is the February 1, 2006 report of the Debt Affordability Advisory Committee submitted to you pursuant to North Carolina General Statute §142-101. The report was created to serve as a tool for sound debt management practices by the State of North Carolina.

The report provides the Governor and the General Assembly with a basis for assessing the impact of future debt issuance on the State's fiscal position and enables informed decision-making regarding both financing proposals and capital spending priorities. A secondary purpose of the report is to provide a methodology for measuring, monitoring and managing the State's debt levels, thereby protecting, and perhaps enhancing, North Carolina's bond ratings of AAA/Aa1/AAA.

The concept of Debt Affordability is widely regarded as an essential management tool. Fitch Ratings, one of the three major bond rating agencies, stated in a June 2005 report that "Quantifying the amount of debt the tax base can support enables an entity to determine the scope and limits of immediate, medium-term, and long-term capital plans."

The methodology used by the Committee to analyze the State's debt position incorporates historical and future trends in debt levels, peer group comparisons and provides recommendations within adopted guidelines. The Committee has also provided recommendations regarding other debt management related policies considered desirable and consistent with the sound management of the State's debt. Such recommendations were developed incorporating management practices consistent with those utilized by the most highly-rated states.

Respectfully submitted,

Richard H. Moore, State Treasurer  
Chair, Debt Affordability Advisory Committee

## **Members of the Debt Affordability Advisory Committee:**

Mr. Richard H. Moore, State Treasurer  
Mr. E. Norris Tolson, Secretary of Revenue  
Mr. David McCoy, State Budget Officer  
Mr. Leslie W. Merritt, Jr., State Auditor  
Mr. Robert Powell, State Controller  
Mr. Christopher Henson, Senate Appointee  
Mr. James V. Porto, House Appointee

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## **Executive Summary**

Studies of debt affordability are an essential management tool that help provide a comprehensive assessment of a government's capital needs. While control of tax-supported debt is a key factor affecting credit quality, it is only one of four major criteria used by rating agencies to determine the State's overall credit rating. North Carolina currently maintains a reasonable level of debt, however, the negative unreserved General Fund balance is an area of concern that warrants continued prudence in new debt authorization.

The 2004 General Assembly adopted legislation creating a Debt Affordability Advisory Committee (the "Committee") to annually advise the Governor and the General Assembly of the estimated debt capacity of the State for the upcoming ten fiscal years. The legislation also directs the Committee to recommend other debt management policies it considers desirable and consistent with the sound management of the State's debt. The Committee hereby presents its Study for 2006.

### Recommended Guidelines and Amounts of Debt

The Committee has adopted the following target and outside guidelines to measure the recommended amount of debt that the State could prudently authorize and issue over the next 10 years:

- Net Tax-Supported Debt Service as a percentage of General Tax Revenues should be targeted at no more than 4% and not exceed 4.75%;
- Net Tax-Supported Debt as a percentage of Personal Income should be targeted at no more than 2.5% and not exceed 3.0%; and
- The amount of debt to be retired over the next ten years should be targeted at no less than 55% and not decline below 50%.

The Committee adopts the ratio of net tax-supported debt service as a percentage of revenues as the preferred ratio for the base calculations. It further determines that a measure of average annual debt capacity over a given time period provides a more useful management tool for policymakers than a measure that assumes that available debt capacity is utilized as soon as it is available.

A combination of renewed economic growth, corresponding revenue growth, slowed capital spending, the retirement of existing debt, continued low interest rates and a hiatus in new debt authorizations now enables the State to project modest available debt capacity for the immediate future. Specifically, the Committee finds that the State could annually authorize \$214.4 million of new tax-supported debt over the model horizon and remain within its targeted ratio. However, there are compelling reasons to refrain from authorizing new state debt until the State makes more progress in other areas of fiscal management.

**Table 1**

<b>Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio</b> (In Millions of dollars)					
<i>Fiscal Year</i>	2006	2007	2008	2009	2010
<i>Total Additional Debt Capacity per Year</i> <sup>1</sup>	\$374.5	\$42.4	\$277.8	\$399.7	\$330.8
<i>Debt Capacity Available each and every Year</i>	\$214.4	\$214.4	\$214.4	\$214.4	\$214.4

<sup>1</sup> In Addition to that already Authorized but Unissued.

Other Recommendations

As directed by statute, the Committee submits the following additional recommendations which it finds desirable and consistent with the sound management of the State’s debt:

General Fund Balance

The Committee finds that achieving structural budgetary balance and rebuilding the State’s reserve funds is strong evidence of financial stability and flexibility. While the State has made progress in rebuilding reserves over the last year, the committee believes that more improvement is still necessary. The Committee adopts the following recommendation regarding the level of the State’s unreserved General Fund Balance:

- As the State rebuilds its reserve funds, it should target an Unreserved General Fund Balance of 5% of tax revenues with a floor of 3%.

Capital Project Prioritization and the use of Pay-Go Funding

As we have advocated in the past, the Committee adopts additional recommendations regarding Capital Project Prioritization and the use of Pay-Go Funding.

Another prudent debt management practice to be considered is a method or practice that enables capital projects to be prioritized, often over multiple years. The Committee makes no recommendations as to any individual project or projects that should be given consideration for debt financing or how they should be prioritized through the budgetary and legislative processes. In order to efficiently utilize its debt capacity, however, the Committee recommends that the State develop criteria to prioritize capital projects as an additional tool to assist in the decision-making process for funding capital projects.

The use of “pay as you go” financing for capital projects reduces the amount of debt needed and increases the amount of budgetary flexibility in years when expenditure cuts are necessary. Governmental entities that allocate a percentage of the budget for capital needs or have a

mechanism in place to direct budgetary surpluses for this purpose are positively viewed. Institutionalizing the practice in the form of a recommendation is considered strong evidence of sound debt management.

## **Conclusions**

Currently, all of the State's debt ratios are below median levels both for all fifty states and for a group of six states rated "triple A" by all three rating agencies. North Carolina's debt is considered low and is manageable at current levels. However, the continued negative unreserved General Fund balance is a matter of concern that should be addressed.

As the State continues to issue debt that was previously authorized, the absolute level of tax-supported debt is projected to increase and will stand at approximately \$6.1 billion by the end of Fiscal Year 2006. On an absolute basis, debt service will increase through Fiscal Year 2008, declining thereafter. As a percentage of general tax revenues, debt service remains steady in Fiscal Years 2007 and 2008 at 3.8%, below its 4.0% target. The ratio of debt to personal income is projected to increase to 2.2% in Fiscal Year 2006. The ten-year payout ratio, which stood at 50.2% at June 30, 2005, is projected to improve substantially over the near term. Finally, the level of the unreserved general fund balance improved over the past year but has not yet achieved its targeted levels.

The State has entered into a period of renewed economic growth but it will take some time to bring unreserved general fund balances to levels consistent with those recommended by the Committee. Although the debt model now projects availability to support new debt, the Committee recommends a fiscally conservative approach until the level of unreserved general fund balance shows additional improvement toward its stated target.

## **Introduction and Background**

In 2003, the North Carolina Department of State Treasurer prepared the first Debt Affordability Study to provide a methodology for measuring, monitoring and managing the State's debt capacity. In 2004, the General Assembly adopted legislation creating a Debt Affordability Advisory Committee to annually advise the Governor and the General Assembly on the estimated debt capacity of the State for the upcoming ten fiscal years.

Debt capacity is a limited and scarce resource. It should be used only after evaluating the expected results and foregone opportunities. The Study enables the State to structure its future debt issuances within existing and future resource constraints by providing a comparison of its current debt position to relevant industry standards, and by evaluating the impact of new debt issuances as well as changes in the economic climate on the State's debt position. The Study can thus be used to help develop and implement the State's capital budget. The Study is premised on the concept that resources as well as needs should guide the State's debt issuance program.

Although the State's level of authorized and unissued debt is manageable, establishing guidelines for future debt issuance and financial performance is a critical part of prudent debt management and can keep the debt burden from becoming excessive. The Committee recognizes that such guidelines must strike a balance between providing sufficient debt capacity to allow for the funding of essential capital projects and imposing sufficient discipline so that the State does not create a situation that results in a loss of future budgetary flexibility and could lead to a deteriorating credit position. Control of debt burden is one of the four key factors used by rating agencies' analysts in assessing credit quality. The other three are economic vitality and diversity, fiscal performance and flexibility and the administrative capabilities of government.

The Debt Affordability Committee has recommended both target and maximum (ceilings) debt ratios to use as guidelines to measure and control the State's debt burden. The adoption of such guidelines demonstrates that the State is committed to decreasing capital spending or finding new sources of revenue rather than imposing an excessive debt burden on future budgets.



## **Section I -The North Carolina Debt Affordability Model**

The Debt Affordability Committee has adopted the measure of annual debt service arising from net tax-supported debt as a percentage of general tax revenues as its basis to evaluate the State's existing and projected debt burden. The Committee notes that policymakers control both variables that determine this ratio. By measuring what portion of the State's resources is committed to debt-related fixed costs, this ratio reflects the State's budgetary flexibility and ability to respond to economic downturns.

The Committee recognizes that there is a lag, sometimes of multiple years, between when debt is authorized and when it is issued. Consequently for 2006 the Committee has revised the manner in which the amount of debt affordability is presented, although there has been no change in how it is calculated. The revised annual measure smoothes the amount of debt the State can afford to prudently authorize each year for the 10-year period without exceeding its target ratios.

An added benefit of this change in presentation is that an annual figure provides policymakers with a framework within which to evaluate debt proposals in terms of the number of years of the State's overall debt capacity that will need to be dedicated to that proposal. For the inaugural presentation of this measure and in order to provide comparative information, available capacity is provided in the manner used in previous Debt Affordability Studies, and in the revised format. Section IV and Appendix B contain the detailed presentation of the model solutions.

### **Debt Used in the Model Calculation**

The model uses a definition of net tax-supported debt that includes General Obligation Bonds, Special Indebtedness, Capital Lease Obligations, Installment/Equipment Leasing Obligations and any other such obligations that are owed to a third party over a predetermined schedule from General Fund Revenues. Obligations of Component Units, Highway Fund debt paid from Highway Fund revenues, non tax-supported special indebtedness paid from trust funds and other self-supporting or non-tax supported debt such as revenue bonds and short term tax anticipation notes are also excluded from the definition of net tax-supported debt.

### **Model Assumptions regarding Revenue Growth and Sensitivity Analysis**

The Committee recognizes that it cannot predict the future level of interest rates or the pace of revenue growth and recognizes the sensitivity of the model results to such factors. Changes in revenue estimates have a particularly significant impact on the calculation of available debt capacity because of the multiplier effect of compounding growth over the ten-year period. Such projections are especially important when they reflect changing or different economic outlooks. The Committee has adopted a revenue growth assumption that applies a growth rate of 3.0% to base revenues but has reviewed sensitivity analysis based on differing revenue assumptions.

## Debt Structuring Assumptions

The following assumptions were used in this year's debt affordability model calculations:

- The rate on existing Variable Rate Debt will average 4%
- The interest costs on the remaining GO and non-GO issues for FY 2006 will be 5.25 and 5.50%, respectively. Rates will average 6.00% and 6.50% for GO and Non-GO debt for the remainder of the authorized but unissued debt.
- GO debt will be structured with a 20-year maturity with an overall level principal payment profile after the first year.
- Non-GO debt will be structured with a 20-year maturity with an overall level debt service payment profile after the first year.
- The incremental model debt is assumed to be fixed-rate, 20-year maturity debt with an average interest cost of 6% and a level principal payment profile after the first year.

## Section II – Review of State Debt

### Outstanding Debt

The State issues two kinds of tax-supported debt: General Obligation Bonds and various kinds of “Special Indebtedness”, which are also known as Appropriation-Supported Debt. General obligation bonds are secured by the full faith, credit and taxing power of the State. The payments on all other kinds of long-term debt, including Certificates of Participation (“COPs”), lease-purchase revenue bonds, capital lease obligations and equipment installment purchase contracts are subject to appropriation by the General Assembly. Some appropriation-supported debt is also secured by a lien on facilities or equipment.

Debt that is determined to be self-supporting or supported by non-general fund tax revenues does not constitute net tax-supported debt, but is included in the definition of “gross” tax-supported debt used by some analysts.

The State's outstanding gross and net tax-supported debt positions as of June 30, 2005 are shown below.

**Chart 1**

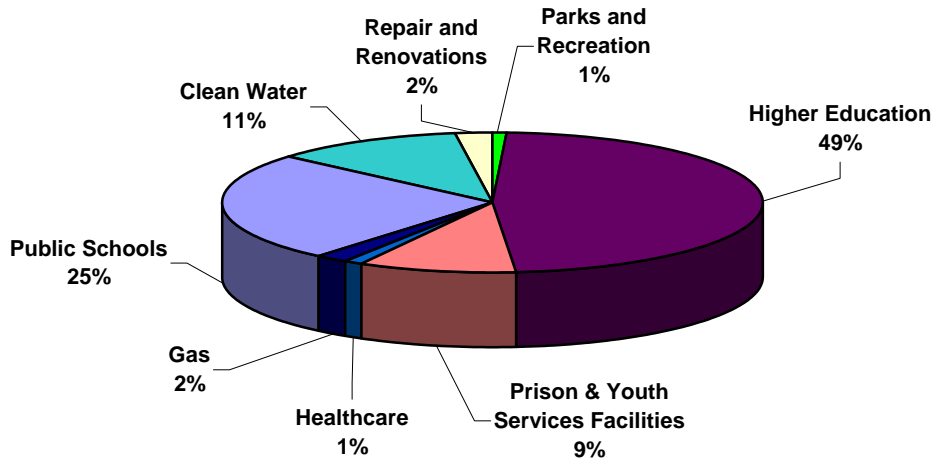
<b>State of North Carolina Outstanding Net Tax-Supported Debt</b>	
	<b>June 30, 2005</b>
<b>Total General Obligation Bonds</b>	<b>\$ 5,693,081,426</b>
<b>Less: Self-Supporting payable from Highway Trust Fund</b>	<b>811,430,000</b>
<b>Net Tax-Supported General Obligation Bonds</b>	<b>\$ 4,881,651,426</b>
<hr/>	
<b>Certificates of Participation / Lease Revenue Bonds</b>	<b>\$ 740,215,000</b>
<b>Less: Self-Supporting payable from Health &amp; Wellness Trust Fund <sup>1</sup></b>	<b>59,865,150</b>
<b>Net Tax-Supported Certificates of Participation / Lease Revenue Bonds</b>	<b>\$ 680,349,850</b>
<b>Plus: Installment Purchase Contracts / Equipment &amp; Capital Leases <sup>2</sup></b>	<b>16,023,933</b>
<b>Net Appropriation-Supported Indebtedness</b>	<b>\$ 696,373,783</b>
<hr/>	
<b>Gross Tax-Supported Debt</b>	<b>\$ 6,449,320,359</b>
<b>Less: Self - Supporting / Trust Fund Debt</b>	<b>871,295,150</b>
<b>Net Tax-Supported Debt</b>	<b>\$ 5,578,025,209</b>

<sup>1</sup> HB 1264 Debt Supported by the Clean Water, Natural Heritage and Parks and Recreation Trust Funds is not considered to be self-supporting because these Trust Funds flow through the General Fund.  
<sup>2</sup> Source: Office of State Budget & Management pursuant to G.S. 147-33.72H.

The following chart illustrates the uses for which the State has issued net tax-supported debt calculated on the amount outstanding. The State has used the proceeds of its debt programs for many purposes with the two largest being to provide facilities and infrastructure for higher education (49%) and public schools (25%).

**Chart 2**

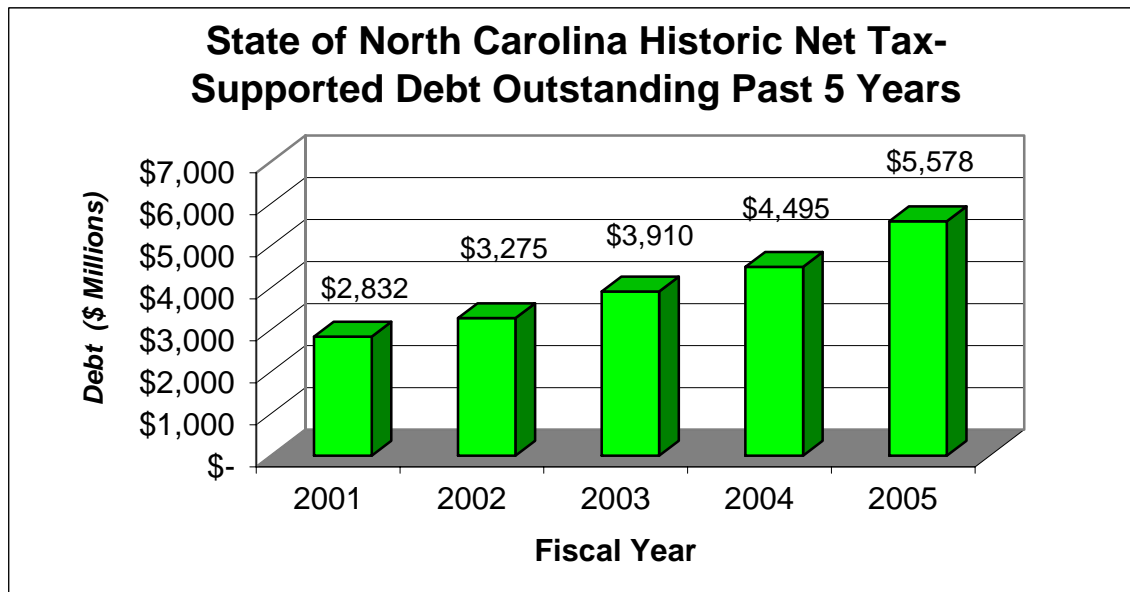
**North Carolina Outstanding Net Tax-Supported Debt by Program as of June 30, 2005**



**Growth in State Debt**

Net tax-supported debt has shown significant growth over the last five years as the State has used debt financing to address the requirements of a growing population for education and other capital needs. Such debt grew by an average annual rate of 19.58% during the last five years, increasing from \$2.8 billion at June 30, 2001 to \$5.6 billion at June 30, 2005. Chart 3 below illustrates the growth in total State net tax-supported debt outstanding over the last five years.

**Chart 3**



## Authorized but Unissued Debt

The State issues debt on a cash flow basis. Bond issues are timed to provide funds as they are actually needed. Therefore there is typically a lag between when debt is authorized and when it is actually issued. As of the end of Fiscal Year 2005, the amount of such authorized but unissued net tax-supported debt totaled approximately \$1.2 billion, including \$704 million Higher Education Bonds, \$169 million Clean Water Bonds, and \$297 million of Certificates of Participation to fund various other projects. For planning purposes, the State anticipates issuance of all currently authorized but unissued debt by the end of Fiscal Year 2008.

Chart 4 below shows the projected pace of net tax-supported debt issuance over the next three years. As discussed previously, Highway debt and other special indebtedness payable from non-tax supported revenue is excluded.

**Chart 4**

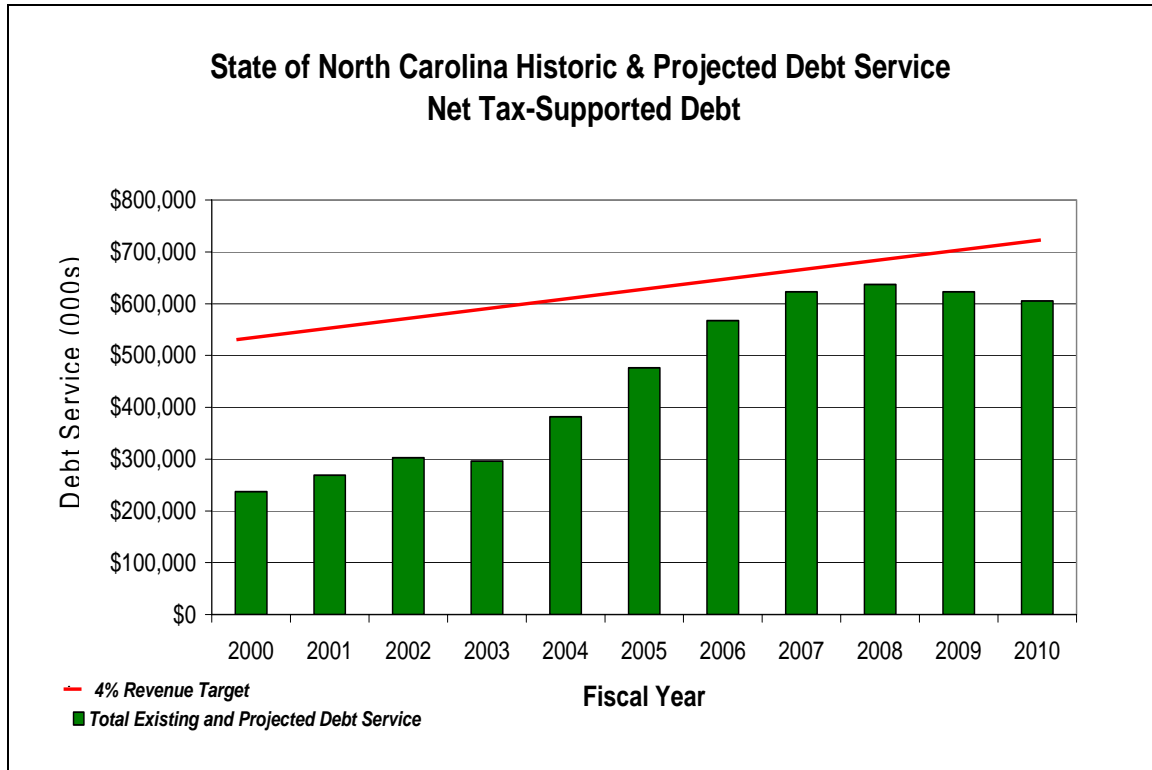
<b>Currently Authorized but Unissued Net Tax-Supported Debt</b>										
Plan of Issuance										
(Dollars in Millions)										
	<i>General Obligation</i>				<i>Special Indebtedness</i>					
	<u>University Projects</u>	<u>Community Colleges</u>	<u>Clean Water</u>	<u>Sub Total</u>	<u>Repair &amp; Renovation</u>	<u>Psychiatric Hospital</u>	<u>Parks</u>	<u>Prisons</u>	<u>Sub Total</u>	<u>Total</u>
Authorized & Unissued as of June 30, 2005	<u>\$524.20</u>	<u>\$179.30</u>	<u>\$169.30</u>	<u>\$872.80</u>	<u>\$175.00</u>	<u>\$48.90</u>	<u>\$20.80</u>	<u>\$52.40</u>	<u>\$297.10</u>	<u>\$1,169.90</u>
Assumed Issued										
FY 2006	524.2	70.0	50.0	\$644.20	75.00	48.90	20.80	52.40	\$197.10	\$841.30
FY 2007	0.0	109.3	50.0	\$159.30	100.00				\$100.00	\$259.30
FY 2008	0.0	0.0	69.3	\$69.30					\$0.00	\$69.30
FY 2009	0.0	0.0	0.0	\$0.00					\$0.00	\$0.00
FY 2010	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>\$0.00</u>					<u>\$0.00</u>	<u>\$0.00</u>
<b>Total:</b>	<u>\$524.2</u>	<u>\$179.3</u>	<u>\$169.3</u>	<u>\$872.8</u>	<u>\$175.0</u>	<u>\$48.9</u>	<u>\$20.8</u>	<u>\$52.4</u>	<u>\$297.1</u>	<u>\$1,169.9</u>

## Debt Service

The amount the State spends on debt service each year has risen, both on an absolute basis and as a percentage of general tax revenues. This trend is expected to continue for the near future, as the absolute amount of outstanding debt also increases. Both the State's historic and projected debt service, incorporating the debt service on all authorized but unissued amounts, is illustrated below in Chart 5.

The scheduled retirement of debt is an important source of future debt capacity and its impact is incorporated into the affordability analysis presented in Section IV and Appendix B.

**Chart 5**



## Section III - Review of State Credit Ratings and Comparative Ratios

Credit ratings are the rating agencies' assessment of a governmental entity's ability and willingness to repay debt on a timely basis. Credit ratings are an important factor in the public credit markets and can influence interest rates a borrower must pay.

Chart 6

<b>North Carolina Credit Rating Matrix</b>		
<i>State of North Carolina</i>		
<i>General Obligation Bond Credit Ratings as of June 30, 2005</i>		
<u><i>Rating Agency</i></u>	<u><i>Rating</i></u>	<u><i>Outlook</i></u>
Fitch Ratings	AAA	Not Applicable
Moody's Investors Service	Aa1	Positive
Standard & Poor's Rating Services	AAA	Stable

The State's general obligation bonds are rated AAA by Fitch Ratings ("Fitch"), and AAA with a "stable" outlook by Standard & Poor's Ratings Services ("S&P"), the highest ratings attainable. Moody's Investors Service ("Moody's") rates the State's general obligation bonds at Aa1 with a "positive outlook", one half step below their highest rating of Aaa. All three agencies base their prime ratings on the State's strong, diverse economic base, its sound financial management and low debt levels.

In the aftermath of the challenges posed by the recent national recession and decline or slowdown in overall state revenue growth, increasing emphasis has been placed on achieving structural balance and rebuilding reserves. Overall, the State, with its conservative approach to its financial operations, remains in a positive credit position as it now enjoys an expanding and more diversified economy. In particular, the rating agencies cite the State's effective management of and swift response to its budget stresses and the adoption of the first formal debt affordability model in 2003 as positive credit factors.

### Comparison of Debt Ratios to Selected Medians

A comparison to national and peer group medians is helpful because absolute values are more useful with a basis for comparison. In May 2005, Moody's published the "2005 State Debt Medians" report with its annual analysis of state debt ratios.

How North Carolina compares with its peers for the three debt ratios evaluated is presented below. The peer group, states rated "triple A" by all three credit rating agencies, includes the states of Delaware, Georgia, Maryland, Missouri, Utah and Virginia. The debt to personal income and debt per capita ratios are taken from Moody's "2005 State Debt Medians" report while the debt service to revenue ratio from Moody's uses 2003 data, the last available period. As shown in Chart 7, the State's debt ratios are below the median levels for the group of triple-A states and the State of North Carolina compares very favorably with its peers.

**Chart 7**

<b>North Carolina Debt Ratios</b> <b>versus Actual Ratios for Other Highly Rated States *</b>				
State	Ratings (Fitch/S&P/Moody's)	2005 Debt to Personal Income	2005 Debt per Capita	2003 Debt Service as % of Tax Revenue
Delaware	AAA/AAA/Aaa	5.5%	\$1,865	5.0%
Georgia	AAA/AAA/Aaa	2.8%	803	5.9%
Maryland	AAA/AAA/Aaa	2.9%	1,064	4.1%
Missouri	AAA/AAA/Aaa	1.5%	449	2.9%
Utah	AAA/AAA/Aaa	3.2%	792	5.3%
Virginia	AAA/AAA/Aaa	1.8%	589	3.6%
	Peer Group Median (as of June 30, 2005)	2.9%	\$798	4.6%
North Carolina (as of 6/30/05)	AAA/AAA/Aa1	2.1%	\$645	3.1%
	Ratio to Median	0.74	0.81	68.3%
North Carolina (Projections for 2006)	AAA/AAA/Aa1	2.2%	\$700	3.6%
(Projections for 2007)	AAA/AAA/Aa1	2.0%	\$684	3.8%
(Projections for 2008)	AAA/AAA/Aa1	1.8%	\$646	3.8%

\* Source: Moody's 2005 State Debt Medians



## **SECTION IV – Guidelines and Model Results**

### **Net Tax-Supported Debt Service as a Percentage of General Tax Revenues**

The Committee adopted the following target and ceiling guidelines as the preferred measure used to determine the amount of net tax-supported debt that can be prudently authorized by the State:

- Net Tax-Supported Debt Service as a percentage of General Tax Revenues should be targeted at no more than 4% and not exceed 4.75%.

The Committee has adopted a revision in the manner that the amount of debt affordability is presented. Beginning with this, the 2006 report, the Committee recognizes that an annual measure of affordability that assumes that all additional debt that the State has the capacity to authorize is, indeed, authorized or issued in the upcoming fiscal year is not grounded in current practice. There is often a time lag, sometimes of multiple years, between when debt is authorized and when it is issued. Consequently the Committee has adopted a revision in the manner that debt affordability is presented. The revised annual measure smoothes the amount of debt the State can afford to prudently authorize each and every year for the model horizon without exceeding its target ratios. In practice, the limit imposed by the year of the least capacity over the model horizon (2008) drives the smoothing.

#### **4.0% Target Ratio/Debt Service Impact**

Illustrated below the first line is the actual amount of new tax-supported debt that could be authorized and issued by year staying within the 4.0% target ratio. The second line shows this new debt amount smoothed over every year of the planning horizon.

One important source of capacity is the retirement of existing debt. As the State retires debt, the amount becomes a resource of future capacity. The amount of debt to be retired totals nearly \$1.7 billion through 2010 and is netted from Total Debt Capacity per year to illustrate the impact versus that of revenue growth.

Finally, the debt service arising from the presumed issuance of \$214.4 million of new debt annually is illustrated.

**Table 2**

<b>Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio</b>					
<b>(In Millions of dollars)</b>					
<i>Fiscal Year</i>	2006	2007	2008	2009	2010
<i>Total Additional Debt Capacity per Year</i> <sup>1</sup>	\$374.5	\$42.4	\$277.8	\$399.7	\$330.8
<i>Debt Capacity Available each and every Year</i>	214.4	214.4	214.4	214.4	214.4

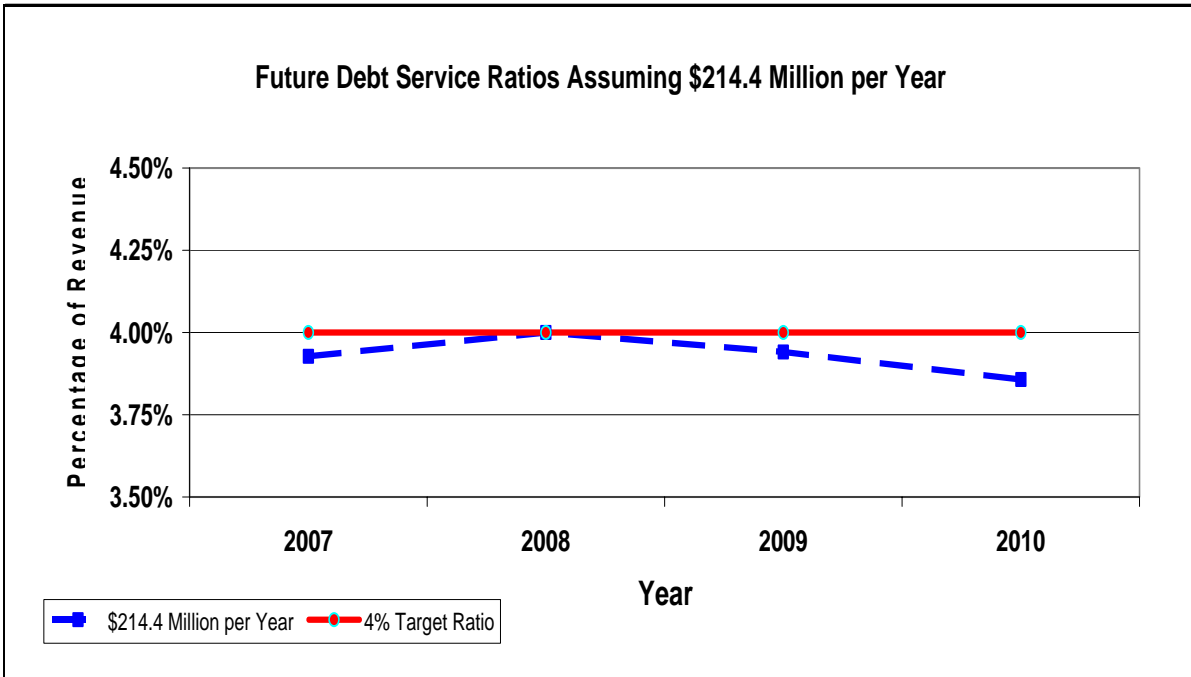
<sup>1</sup> In Addition to that already Authorized but Unissued.

**Table 3**

<b>Retirement of Outstanding Debt Compared to the \$214.4 Million Annual Debt Capacity</b>					
<b>(In Millions of Dollars)</b>					
<i>Fiscal Year</i>	2006	2007	2008	2009	2010
<i>Retirement of Outstanding Debt</i>	302.8	326.5	339.4	339.2	341.3
<i>Debt Capacity in Excess of Retirement of Debt</i>	(88.4)	(112.1)	(125.0)	(124.8)	(126.9)
<i>Additional Debt Service on Debt Capacity (\$214.4 million / year)</i>	0.0	15.7	32.7	56.6	79.9

A chart showing the ratio of debt service to revenues that results assuming the annual \$214.4 million is issued is shown below in Chart 8.

**Chart 8**



**Sensitivity Analysis on 4% Target Solution**

The model results are highly sensitive to changes in revenue assumptions. Specifically, a one percent change, either up or down, in general tax revenues in each and every year of the model solution horizon will change the amount of annual debt capacity by an average of approximately \$46 million. The effect of a variation in revenues of \$100 million per year will impact the amount of new debt that may be prudently issued by an average of approximately \$28 million per year.

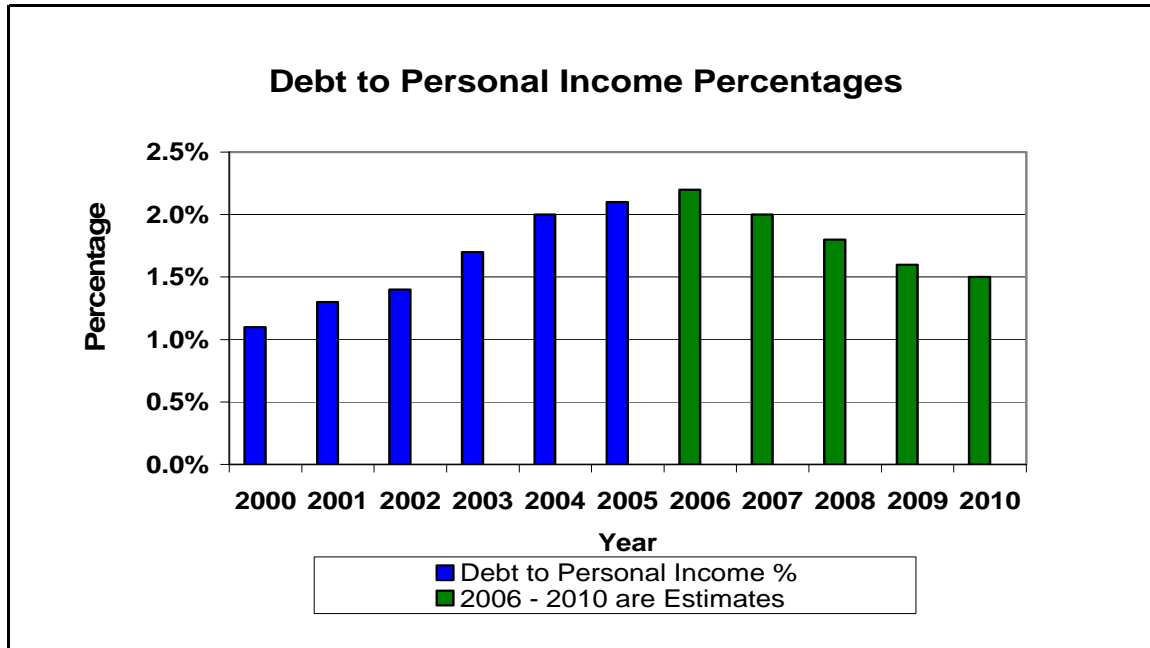
**Net Tax-Supported Debt to Personal Income**

The Committee has also established guidelines for evaluating the State’s debt burden as a measure of personal income, as follows:

- Net Tax-supported Debt as a percentage of Personal Income should be targeted at no more than 2.5% and not exceed 3.0%.

Chart 9 below, shows that the amount of tax-supported debt as a percentage of personal income has been rising and will peak in Fiscal Year 2006 incorporating all currently authorized but unissued debt.

Chart 9



Source: Population and Personal Income statistics provided by “Moody’s Economy.com” courtesy of the North Carolina General Assembly Fiscal Research Division.

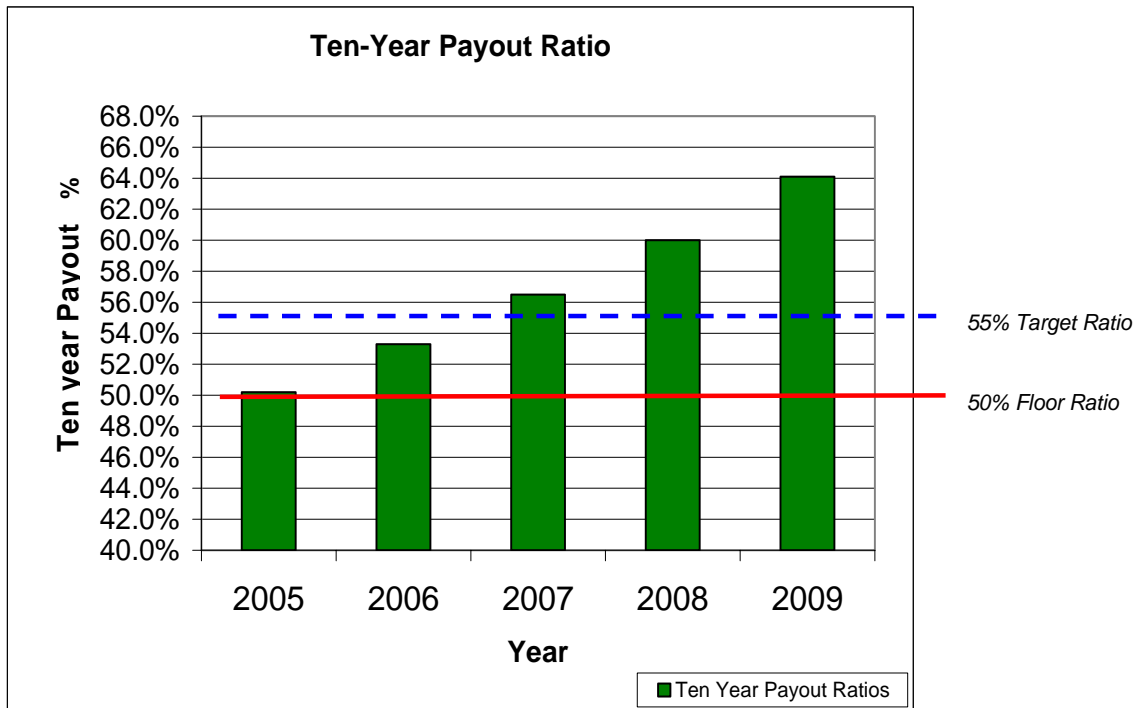
### Ten-Year Payout Ratio

A short period of time within which a State retires outstanding debt obligations is considered a positive credit attribute. The Committee has adopted the following guideline regarding the payment structure of the State’s debt:

- The amount of debt to be retired over the next ten years should be targeted at no less than 55% and should not decline below 50%.

Chart 10 below illustrates that the State’s payout ratio will reach its targeted levels in Fiscal Year 2007 and beyond.

**Chart 10**



### **Level of Unreserved Fund Balance**

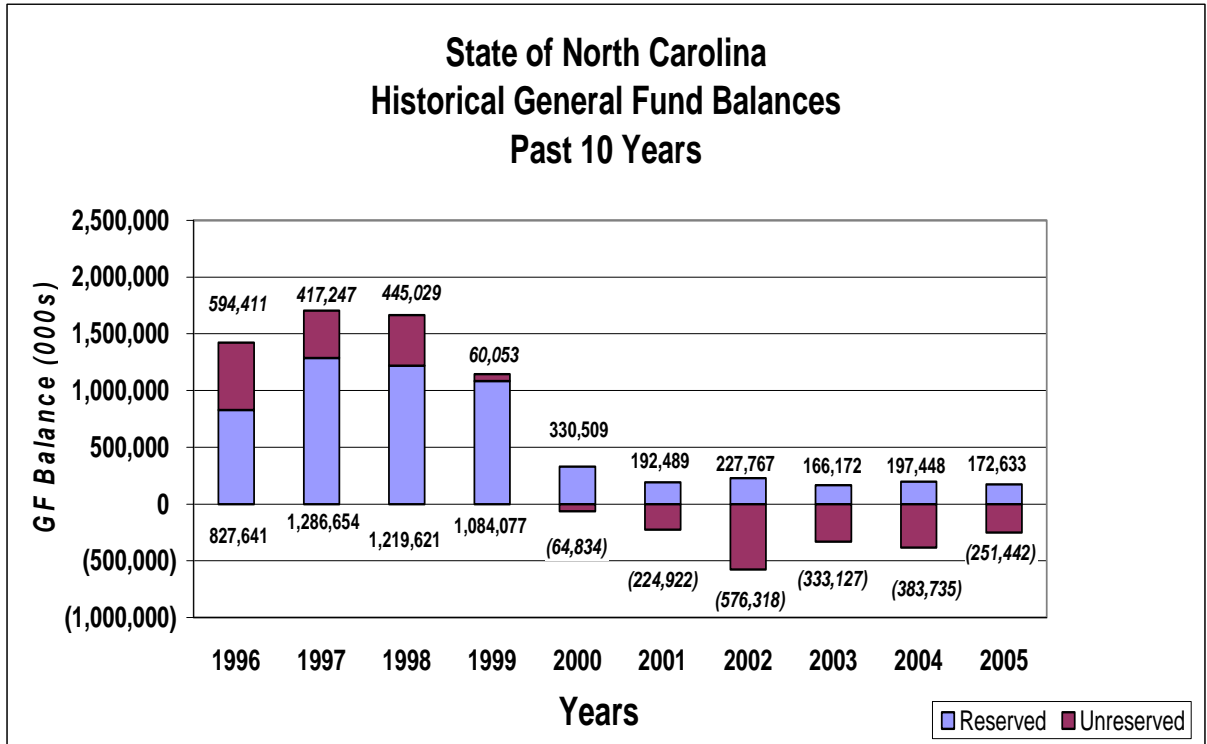
As discussed previously, the rating agencies place emphasis on budgetary reserves. In a report dated December 22, 2005, Standard & Poor’s stated that “...reserves are critical to managing economic cycles and providing substantial flexibility to manage the budget and capital requirements of a government.” The Committee adopted the following guidelines regarding the level of the State’s unreserved General Fund balance:

- As the State rebuilds its reserve funds, it should target an Unreserved General Fund Balance of 5% of tax revenues with a floor of 3%.

The State has made progress over the last year, improving the level of unreserved general fund balances by approximately \$132 million, although the level remains a negative \$251 million.

Chart 11 depicts the State’s historic unreserved fund balance as a percentage of general fund tax revenues over the last ten years.

Chart 11



## **Section V - Capital Project Prioritization and Pay-Go Funding**

In previous years the Committee has provided discussion regarding the prioritization of capital projects and the use of Pay-go funding. That discussion is reiterated below:

As the demand for financing capital projects through the issuance of bonds exceeds the amount of debt capacity projected under the debt affordability study, the Committee again recommends that the State adopt a prioritization program for its capital projects. Adopting a prioritization program allows the State to create a planning tool, which will efficiently allocate the scarce resource of debt capacity.

There are several advantages to the creation of such a program. A prioritization model will enable the State to allocate available debt capacity over a period of years, rather than just one year. It is possible that projects with low priorities will examine alternative ways of financing, thus reducing the strain on the general obligation program. Investors will have a better idea as to when the State will come to market with bonds, thus improving the quality of their investment timing decisions. Last, but not least, a prioritization plan will have a positive impact on the rating agencies' assessments of the State's credit. Rating analysts will be able to accurately predict and review the State's capital needs. Also, the prioritization program will serve as an indicator of the State's capital needs, which is another factor in the evaluation of the State's long-term fiscal outlook.

Possible criteria to consider as part of the prioritization program include: amount of bond proceeds required, useful life of the project, economic benefit of the project and revenues generated from the project.

Another consideration that affects future debt service capacity is the use of "pay-as-you-go" ("PAYGO") funding of capital projects. By using current revenues to fund a portion of a capital plan, the State can reduce future debt service and retain debt capacity. For example, if the State funded a capital project with \$50 million as PAYGO rather than financing it through a \$50 million, 20-year bond issue, the State would save approximately \$20.9 million in total interest payments over the life of the issue assuming current market conditions. Although rating agencies do not set specific guidelines for determining an acceptable level of PAYGO, the consensus is that the use of current revenues for capital projects reduces future debt obligations and is therefore a positive credit factor.

## **Appendix A**

### **Revenues and Liabilities in the North Carolina Debt Affordability Model**

#### **Revenues**

The model uses general tax revenues adjusted for one-time or non-recurring items plus certain other revenue items deemed available to service debt from the most recently available *Comprehensive Annual Financial Report*. The following items are included:

##### General Fund Tax Revenues

- Individual Income Tax
- Corporate Income Tax
- Sales & Use Tax
- Franchise Tax
- Insurance Tax
- Beverage Tax
- Inheritance Tax
- Other Taxes

##### Other General Fund Revenue Items

- Investment Income
- Miscellaneous Revenues

#### **Revenue Growth and other Assumptions**

Changes to revenue estimates have a significant impact on the calculation of available debt capacity because of the multiplier effect of compounding growth over the ten-year period. And such projections are especially important when they reflect changing or different economic outlooks.

Base revenues are assumed to grow at a rate of 3% annually through the forecast period (2015). The Committee believes this assumption to be prudent. Sensitivity analysis has been provided for those who believe that these assumptions are either overly conservative or aggressive.

The revenue estimates are also adjusted to incorporate the effect of any changes dictated in current law. Therefore the expiration of the ½ cent State Sales Tax and 8.25% income tax rate has been incorporated. Again, the sensitivity analysis may provide a tool for those who wish to evaluate different assumptions.



## **Liabilities**

To calculate net tax-supported debt, credit analysts take into account all debt supported by general tax revenues. This debt position shows the amount of indebtedness serviced from an issuer's General Fund; that is, it reflects the debt service payments made directly from tax revenues and is known as net tax-supported debt. Although a consensus appears to exist among credit analysts as to the appropriateness of using net tax-supported debt as the standard for determining an issuer's debt position, there is less unanimity about the precise calculation. The Committee has determined to follow the approach of Moody's Investor Service and exclude self-supporting debt from its calculations.

The model uses a definition of net tax-supported debt that includes General Obligation Bonds, Special Indebtedness, Capital Lease Obligations, and any other such obligations that are owed to a third party over a predetermined schedule from General Fund Revenues. Obligations of Component Units, Highway Fund debt which is paid from Highway Fund revenues, non tax-supported special indebtedness which is paid from trust funds and other self-supporting debt is excluded. Short-term Tax Anticipation Notes and Energy Performance Contract Financing Liabilities are also excluded.

The model includes the actual debt service from all outstanding net tax-supported debt and for all authorized, but currently unissued tax-supported debt if such issuance does not require further action on the part of the General Assembly. The following is a list of those liabilities that are included in the model (outstanding amounts as of June 30, 2005):

- General Obligation Bonds supported by General Fund Tax Revenue - \$4,881,661,426.
- Appropriation-Supported Indebtedness (collectively "Special Indebtedness")
  - Certificates of Participation supported by General Funds \$415,304,850. Also including
    - Chapter 1264 projects supported by the Clean Water, Natural Heritage and Parks and Recreation Trust Funds where funds flow through the General Fund - \$22,719,610.
  - Capital Leases - \$330,000.
  - Installment Purchase Contracts/Equipment lease obligations determined pursuant to G.S. 147-33.72H - \$16,023,933.
  - Lease Revenue or Lease-Purchase Revenue Bonds - \$265,045,000.

Liabilities not included in the model (outstanding amounts as of June 30, 2005):

- Highway Construction General Obligation Debt supported by separate taxes - \$811,430,000.
- Appropriation-Supported Indebtedness (collectively "Special Indebtedness")
  - Certificates of Participation supported by non-General Funds including
    - Chapter 1264 projects supported by the Health and Wellness/Tobacco Trust Funds - \$59,865,150 (issued), \$359,126,036 (authorized but unissued).
- Specifically authorized Revenue Bonds (Butner Water and Sewer Revenue Bonds) - \$9,070,000.
- Short Term Tax Anticipation Notes (not supported by General Tax Revenue) - \$0.

- Obligations of the University of North Carolina System, the North Carolina Housing Finance Agency or other Component Units - \$16,476,404,656.
- Energy Performance Contract obligations where such obligations are guaranteed and approved pursuant to G.S. 142-64 and not supported by separate appropriations - \$0.

Note: Although these liabilities do not constitute tax-supported debt, they are obligations of The State of North Carolina or various component units, and The State's General Fund, although not legally obligated to, could be called upon to service these obligations if necessary.

### Debt Structuring Assumptions

The following assumptions were used in this year's debt affordability model calculations:

- The rate on existing Variable Rate Debt will average 4%
- The interest costs on the remaining GO and non-GO issues for FY 2006 will be 5.25 and 5.50%, respectively. Rates will average 6.00% and 6.50% for GO and Non-GO debt for the remainder of the authorized but unissued debt.
- GO debt will be structured with a 20-year maturity with an overall level principal payment profile after the first year.
- Non-GO debt will be structured with a 20-year maturity with an overall level debt service payment profile after the first year.
- The incremental model debt is assumed to be fixed-rate, 20-year maturity debt with an average interest cost of 6% and a level principal payment profile after the first year.

## Appendix B 10-Year Model Solution

### 4% Debt Service/Revenue Target

**Table 4**

<b>Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio</b>										
(In Millions of dollars)										
<i>Fiscal Year</i>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Total Additional Debt Capacity per Year <sup>1</sup></i>	\$374.5	\$42.4	\$277.8	\$399.7	\$330.8	\$386.4	\$365.4	\$430.7	\$422.2	\$445.3
<i>Debt Capacity Available each and every Year</i>	214.4	214.4	214.4	214.4	214.4	214.4	214.4	214.4	214.4	214.4

<sup>1</sup> In Addition to that already Authorized but Unissued.

**Table 5**

<b>Retirement of Outstanding Debt Compared to the \$214.4 Million Annual Debt Capacity</b>										
(In Millions of Dollars)										
<i>Fiscal Year</i>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Retirement of Outstanding Debt</i>	\$302.8	\$326.5	\$339.4	\$339.2	\$341.3	\$342.3	\$344.3	\$347.3	\$347.7	\$348.1
<i>Debt Capacity in Excess of Retirement of Debt</i>	(88.4)	(112.1)	(125.0)	(124.8)	(126.9)	(127.9)	(129.9)	(132.9)	(133.3)	(133.7)
<i>Additional Debt Service on Debt Capacity (\$214 million / year)</i>	0.0	15.7	32.7	56.6	79.9	102.5	124.3	145.5	166.0	185.8

## 4.75% Debt Service/Revenue Target

**Table 6**

<b>Net Tax-Supported Debt Capacity using 4.75% debt service/revenues target ratio</b>										
<b>(In Millions of dollars)</b>										
<i>Fiscal Year</i>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Total Additional Debt Capacity per Year <sup>1</sup></i>	\$2,016.8	\$78.2	\$299.9	\$105.9	\$165.4	\$593.3	\$372.1	\$552.8	\$485.8	\$548.5
<i>Debt Capacity Available each and every Year</i>	525.9	525.9	525.9	525.9	525.9	525.9	525.9	525.9	525.9	525.9

<sup>1</sup> In Addition to that already Authorized but Unissued.

**Table 7**

<b>Retirement of Outstanding Debt Compared to the \$525.9 Million Annual Debt Capacity</b>										
<b>(In Millions of Dollars)</b>										
<i>Fiscal Year</i>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Retirement of Outstanding Debt</i>	\$302.8	\$326.5	\$339.4	\$339.2	\$341.3	\$342.3	\$344.3	\$347.3	\$347.7	\$348.1
<i>Debt Capacity in Excess of Retirement of Debt</i>	223.1	199.4	186.5	186.7	184.6	183.6	181.6	178.6	178.2	177.8
<i>Additional Debt Service on Debt Capacity (\$525.9 million / year)</i>	0.0	39.0	78.7	123.3	174.6	232.7	289.0	343.5	396.3	447.3