

William F. Dwyer  
STATE TREASURER



THE STATE OF NEW HAMPSHIRE  
STATE TREASURY

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January 26, 2018

Honorable Chuck Morse  
President of the Senate  
Honorable Gene Chandler  
Speaker of the House

Dear Senator Morse and Speaker Chandler:

Attached is the debt affordability study for fiscal year 2017 prepared by the State Treasury and Public Resources Advisory Group, the State's financial advisor. In developing this year's study, we have examined the impact of debt issuance and revenue projections on the State's net tax-supported debt ratios. Please note that this study focuses on net tax-supported (General Fund unrestricted) debt outstanding and does not consider debt repaid with Highway Funds or other self-supporting debt with a dedicated revenue source. As described in detail below, the 2017 study represents a milestone for the State, as the ratio of net tax-supported debt service to General Fund unrestricted revenues fell below 7% for the first time since 2011.

The Base Case presented on page 3 of the study reflects the bonding levels authorized for the current biennium (\$125 million), followed by a reduction of \$5 million in biennial capital project General Obligation bonding beginning with the 2020-21 biennium and maintained at that level thereafter. Therefore this analysis continues the recommendations made in the study prepared last year by proposing the following biennial authorizations: 2018-19 (\$125 million), 2020-21 (\$120 million), and 2022-23 (\$120 million), with \$60 million reflected for fiscal year 2024. In deriving revenue projections, based on the recent RSA 9-5 (II) report from DAS Commissioner Arlinghaus, which projects fiscal year 2018 General & Education Trust Fund revenues to outperform plan by only \$1.7 million and fiscal year 2019 revenues to underperform plan by \$0.3 million, it is reasonable to use budgeted revenue in calculating the ratio of net tax-supported debt service to GF unrestricted revenue for the current biennium. However the Base Case assumes flat annual revenue growth for fiscal years 2020 through 2024 for the following reasons: 1) strong revenue outperformance versus plan in fiscal years 2015-2017 will not be sustained indefinitely; 2) the current period of economic expansion, second longest in U.S. history, is approaching its 10<sup>th</sup> year (average is 7 years); 3) the rating agency outlook for the state government sector calls for increasing pressure on revenue performance, and; 4) this is a slightly more conservative approaching than the alternative 1% revenue growth rate that was considered.

The recommended amounts of new net tax-supported debt in fiscal years 2019 through 2024 would include new authorizations for capital needs to be bonded and paid from GF unrestricted revenues. Also reflected in the attached analysis are the continued effect of the issuance of \$131 million in school building aid debt in fiscal years 2010 and 2011 (debt service funded by an allocation of Meals & Rooms Tax revenues to the Education Trust Fund), as well as the re-characterization of Medicaid Enhancement Tax revenue from unrestricted to restricted, pursuant to the State's settlement with hospitals and care providers prescribed in Laws of 2014, Ch. 158.

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Sensitivity 1, found on page 11 of the study, assumes the same debt issuance as in the Base Case but assumes a 2% annual revenue decline beginning in fiscal year 2019. The purpose of this alternative scenario is to examine how an unexpected reversal of recent revenue outperformance might impact the State's borrowing capacity. Sensitivity 2 on page 13 of the study assumes the same debt issuance and flat revenue performance assumed in the Base Case but increases the bond interest rate by one percentage point to 6% beginning in fiscal year 2019. Both of these sensitivity analyses project that the State's debt service to revenue ratio is expected to remain at or below 7% beyond fiscal year 2017, well below the 10% statutorily prescribed limit (RSA 6-C:2) and rating agency warning threshold. Please note that from 2000 to 2010 this debt service ratio averaged 6.13%, a level that the Base Case is projected to reach following fiscal year 2022 using the modestly reduced net tax-supported debt authorization recommendations and the flat revenue assumption described above.

Lastly, we have presented on page 14 a final scenario to highlight the impact of state guaranteed debt combined with a 2% annual decline in revenue beginning in fiscal year 2019. In the very worst case (and unlikely) scenario in which the State would be required to assume all guarantee liabilities in a declining revenue environment, the debt service to revenue ratio would remain below 8% through 2023 and reach that level in 2024. The debt affordability ratios are clearly impacted by accounting for guaranteed debt in this scenario, a sensitivity worth evaluating for credit strength purposes. However based on our communications with the rating agencies, the level of guaranteed debt does not presently impact the State's credit rating, in part due to the prior success of State guarantee programs.

The general funded debt service to unrestricted General Fund revenues ratio is the metric most closely monitored by the rating agencies and policymakers as the best barometer of debt affordability levels. This analysis indicates that the State's debt service to unrestricted revenue ratio, while presently elevated above recent historical levels (2000-2010), remains manageable under the Base Case scenario and is trending in the right direction, while projecting to return to, and even below, those recent historical levels using the assumptions presented here. The primary benefits of maintaining lower bonding levels are: 1) budgetary flexibility to address unanticipated operating or borrowing needs, and; 2) better financial positioning to absorb potential debt service associated with State debt guarantees made in support of local economic expansion.

Please contact me if you have any questions regarding this analysis.

Respectfully,

  
William F. Dwyer  
State Treasurer

#### Attachments

Cc: Honorable Christopher T. Sununu, Governor  
Representative Neal Kurk, Chair, House Finance Committee  
Representative Mark McConkey, Chair, House Public Works and Highways  
Senator Gary Daniels, Chair, Senate Finance Committee  
Senator Lou D'Allesandro, Chair, Senate Capital Budget Committee  
Charlie Arlinghaus, Commissioner, Department of Administrative Services  
Michael W. Kane, Legislative Budget Assistant

## Public Resources Advisory Group

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**MEMORANDUM TO:** The Honorable William Dwyer  
Treasurer  
State of New Hampshire

**FROM:** Public Resources Advisory Group ("PRAG")

**SUBJECT:** Debt Affordability Study Update

**DATE:** January 25, 2018

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As requested, we have updated the debt affordability study for the State of New Hampshire. This study analyzes General Fund unrestricted revenue for fiscal year 2017 and net tax-supported General Fund debt outstanding at June 30, 2017. The school building aid bonds are included in the study, with an adjustment made to include in General Fund unrestricted revenue the portion of Education Trust Fund revenue dedicated to pay that debt service. The rating agencies opine that the State has "manageable debt levels with debt ratios well below Moody's 50-state medians" (Moody's Investors Service report dated December 1, 2017); "The state's overall debt burden (including capital leases) is moderate... Amortization is rapid" (Standard & Poor's report dated November 30, 2017), and; "debt and pension liabilities are low" (Fitch Ratings report dated December 5, 2017). Thus, the credit rating agencies recognize the State's fiscal prudence in regard to debt.

In this debt affordability study update, the term "Sensitivities" refers to the changes in assumptions related to General Fund unrestricted revenue growth and increased borrowing costs (Sensitivity 1 and 2, respectively). The term "Cases" refers to alternate scenarios in the event that the State is required to take on debt guarantees, as presented on pages 4 and 5 of this update.

### **Assumptions**

The following assumptions were used in preparing the base case analysis that projects the State's future debt ratios:

1. General obligation debt of \$70.885 million issued in fiscal year 2018 (\$4.375 million of New Money 2017 Series A Bonds in July 2017 and \$66.51 million 2017 Series B Bonds in December 2017).
2. \$70 million of tax-exempt general obligation debt to be issued in fiscal year 2019 and \$60 million in each of fiscal years 2020 through 2024. Each issue is assumed to be amortized over 20 years and bear an interest rate of 5.00%, with 60% of principal amortized in equal annual installments over the first ten years and 40% in equal annual installments over the remaining ten years. Future net tax-supported general obligation debt issuance includes the biennial authorizations for the University System of New Hampshire ("USNH"), however, this analysis does not attempt to separately estimate specific USNH authorization amounts for fiscal years 2020 through 2024.
3. As noted above, General Fund Unrestricted Revenues reflect actual revenues for fiscal year 2017, with the Education Trust Fund portion of meals and room tax revenues designated for the debt service of school building aid included; revenue projections for fiscal years 2018 and 2019 are derived from the Governor's budget and, based on guidance you have provided

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to us, no annual growth for General Fund Unrestricted Revenues is assumed for fiscal years 2020 through 2024.

4. Total personal income is based on the U.S. Department of Commerce, Bureau of Economic Analysis 2016 figure of \$74,687 million and is projected to grow at an average annual rate of 2.7%.
5. Population is based on the U.S. Census Bureau 2016 figure of 1,334,795 and is projected to grow at an average annual rate of 0.2% per year.

We have also projected the State's debt ratios including certain State guaranteed debt. In doing so, we have made the following assumptions:

1. State guaranteed debt consists of debt issued for local Superfund sites, Business Finance Authority ("BFA"), and Pease Development Authority ("PDA"). The analysis excludes State guaranteed debt issued for water pollution control, local schools (but does not exclude QSCBs) and local landfills.
2. Future issuances of State guaranteed debt total \$133.1 million and are assumed to be issued as follows:

### Expected Issuances of State Guaranteed Debt

Fiscal Year	Dollar Amount	Purpose
2019	\$35,840,000	Superfund, BFA, Pease
2020	35,840,000	Superfund, BFA, Pease
2021	35,740,000	Superfund, BFA, Pease
2022	12,840,000	BFA
2023	12,840,000	BFA

3. New State guaranteed debt is assumed to be taxable, with level debt service over 20 years at an average interest rate of 6.00%.
4. An analysis of each case is contained in the Appendix to this report.

### Effect of General Obligation Debt Issuance on Debt Ratios

The Base Case (page 3 of the Appendix) shows the effect on the State's debt ratios, based on the above assumptions, including the issuance of \$70 million of tax-exempt general obligation debt in fiscal year 2019 and \$60 million in each of fiscal years 2020 through 2024. Combining these issuances and repayments of outstanding debt, the total issuance is approximately \$48.57 million less than retirements over the fiscal years 2018 through 2024, causing the State's net general fund debt to decrease from \$567.185 million at June 30, 2017 to \$518.611 million at June 30, 2024, a total decrease of \$48.574 million or 8.56%.

Presently, New Hampshire's ratios of debt to personal income and debt per capita are significantly below the 2017 Moody's medians for states. New Hampshire's net general fund debt service to revenues ratio at 6.8% for fiscal year 2017 was higher than the median of 4.1% but well below the level that credit analysts use as a warning sign of excessive debt service burden of 10.0%, which is also the State's statutorily prescribed limit (RSA 6-C:2). By issuing general obligation debt over this period in the amounts identified above, New Hampshire's debt ratios are projected to remain well under the 2017 Moody's medians for states, with the exception of the debt service to revenues ratio, as summarized in the following chart:

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### Summary of Debt Ratios for Net General Fund Debt

	Moody's Median	New Hampshire	
	2017	June 30, 2017	June 30, 2024 Est.
Debt to Personal Income	2.5%	0.7%	0.6%
Debt Per Capita	\$1,006	\$424	\$382
Debt Service to Revenues	4.1%*	6.8%	5.9%

\* Ten percent is rule of thumb used by rating agency analysts as a warning level that should not be exceeded, as a greater relative amount would place too heavy a fixed cost burden on the budget, thereby limiting fiscal flexibility.

As can be seen, the ratio of debt service to revenues is projected to decrease to 5.9% at June 30, 2024. Debt to personal income would decline over the period from 0.7% at June 30, 2017 to 0.6% at June 30, 2024 and debt per capita would decline from \$424 to \$382. These ratios relative to Moody's medians form the basis for an assessment of the weight of the State's debt position.

### Sensitivity Analyses: Effects of Declining Revenues and Higher Interest Rates

Given the uncertainty regarding the economy and the markets, it is difficult to make forecasts with a high degree of certainty. Accordingly, Sensitivity 1 for General Fund unrestricted revenues was developed, assuming revenue declines of 2.0% in each fiscal year 2019 through 2024. Under these assumptions, New Hampshire's debt ratios would change as summarized in the chart below:

#### Debt Ratios Assuming Revenue Declines 2% FY 2019-2024

	Summary of Debt Ratios for Net General Fund Debt				
	Moody's Median	New Hampshire			
	2017	Base Case		Declining Revenue Assumption	
		FY 2017	FY 2024 Est.	FY 2017	FY 2024 Est.
Debt to Personal Income	2.5%	0.7%	0.6%	0.7%	0.6%
Debt Per Capita	\$1,006	\$424	\$382	\$424	\$382
Debt Service to Revenues	4.1%*	6.8%	5.9%	6.8%	6.7%

\* Ten percent is rule of thumb used by rating agency analysts as a warning level that should not be exceeded, as a greater relative amount would place too heavy a fixed cost burden on the budget, thereby limiting fiscal flexibility.

With declining revenue, the ratio of debt service to revenues would decrease from 6.8% for fiscal year 2017 to 6.7% for fiscal year 2024, compared to 5.9% in the Base Case. At the 6.7% level, this ratio would be still well below the 10% rule of thumb. Other ratios would not change since the amount of bonds issued would remain the same. (The details of this analysis are shown on pages 10 and 11 of the Appendix).

A second sensitivity analysis was developed with regard to different market rates. It assumes that tax-exempt interest rates increase by 100 basis points (1%). The results are as follows:

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<b>Debt Ratios Assuming Increased Tax-Exempt Rates</b>					
<b>Summary of Debt Ratios for Net General Fund Debt</b>					
	<u>Moody's Median</u>	<u>New Hampshire</u>			
	2017	<u>Base Case</u>		<u>1% Interest Rate Increase</u>	
		FY 2017	FY 2024 Est.	FY 2017	FY 2024 Est.
Debt to Personal Income	2.5%	0.7%	0.6%	0.7%	0.6%
Debt Per Capita	\$1,006	\$424	\$382	\$424	\$382
Debt Service to Revenues	4.1%*	6.8%	5.9%	6.8%	6.1%

\* Ten percent is a rule of thumb used by rating agency analysts as a warning level that should not be exceeded, as a greater relative amount would place too heavy a fixed cost burden on the budget, thereby limiting fiscal flexibility.

The ratio of debt service to revenues would decrease from 6.8% in fiscal year 2017 in the Base Case to 6.1% for fiscal year 2024, well below the 10% rule of thumb. Other ratios would not change since the amount of bonds issued would not change. (The details of this analysis are shown on pages 12 and 13 of the Appendix).

### Effect of State Guarantees on Debt Ratios

Page 4 of the Appendix shows the effect of State guarantees on New Hampshire's debt ratios in the Base Case. For this analysis there was \$72.7 million of outstanding guaranteed debt at June 30, 2017, which, when added to the State's net General Fund debt, brings the total to \$639.9 million, as shown in the table below:

<b>Net General Fund and Guaranteed Debt at June 30, 2017</b>	
<i>(\$ in millions)</i>	
Net General Fund Debt	\$567.2
Guaranteed Debt	
Business Finance Authority	50.8
Qualified School Construction Bonds (QSCBs)	21.9
Total Guaranteed Debt	<u>\$72.7</u>
Total Net General Fund and Guaranteed Debt	<u>\$639.9</u>

There is approximately \$133.1 million of authorized but unissued State guaranteed debt at June 30, 2017, as shown in the table below:

<b>Authorized But Unissued State Guaranteed Debt at June 30, 2017</b>	
<u>Purpose</u>	<u>Amount</u>
<i>(\$ in millions)</i>	
Local Superfund Sites	\$20.0
Business Finance Authority	64.2
Pease Development Authority	<u>48.9</u>
Total	<u>\$133.1</u>

For this scenario, we assumed that the Business Finance Authority would issue \$12.84 million in each of fiscal years 2019 through 2023; Pease Development Authority would issue \$16.3 million in each of fiscal years 2019 through 2021; and the Local Superfund would issue \$6.7 million in each of fiscal years 2019 and 2020 and \$6.6 million in fiscal year 2021.

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The table below compares the ratios in three cases. The first case is the Base Case, excluding guaranteed debt. The second case (Case 2 in the table below), which is a more pessimistic scenario shown on page 4 of the Appendix, includes all the outstanding and additional debt issuances for State guaranteed debt described above. In this second case, the State's exposure would reach approximately \$684.2 million at June 30, 2024, which is \$165.6 million more than the net General Fund debt expected to remain outstanding at that time (Base Case). The last “worst case” (Case 3 in the table below) scenario combines outstanding and additional issuances of State guaranteed debt with a 2% annual declining revenue assumption (Sensitivity 1), shown in the Appendix on page 14. The resulting debt ratios are summarized in the chart below:

### Summary of Debt Ratios Including State Guaranteed Debt New Hampshire

	Moody's Median	Case 1 (Base Case)		Including Guaranteed Debt			
		Net General Fund Debt		Case 2		Case 3	
		FY 2017	FY 2024 Est.	All Guaranteed Debt		All Guaranteed Debt and Declining Revenues	
	2017	FY 2017	FY 2024 Est.	FY 2017	FY 2024 Est.	FY 2017	FY 2024 Est.
Total Debt Outstanding (000,000)	---	\$567	\$519	\$640	\$684	\$640	\$684
Debt to Personal Income	2.5%	0.7%	0.6%	0.8%	0.7%	0.8%	0.7%
Debt Per Capita	\$1,006	\$424	\$382	\$478	\$504	\$478	\$504
Debt Service to Revenues	4.1%*	6.8%	5.9%	7.2%	7.0%	7.2%	8.0%

\* Ten percent is a rule of thumb used by rating agency analysts as a warning level that should not be exceeded, as a greater relative amount would place too heavy a fixed cost burden on the budget, thereby limiting fiscal flexibility.

As would be expected, all debt ratios rise as a result of additional State guaranteed debt issuances. At June 30, 2024, the State's debt to personal income would be 0.7% in Case 2 as opposed to 0.6% in the Base Case. Debt per capita would be \$504 in Case 2 versus \$382 in the Base Case; and debt service to revenues would be 7.0% compared to 5.9% in the Base Case, reaching a high of 7.6% in 2020. With an assumption of declining revenues added to Case 2, the “worst case” scenario, debt service to revenue ratio increases to 8.0% in fiscal year 2024. Debt per capita and debt to personal income ratio would remain below the 2017 Moody's medians in all cases.

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### **Conclusion**

The State's debt ratios are considered "manageable" to "low" by the rating agencies. If the State issues a total of \$441 million of new, net tax-supported general obligation debt in fiscal years 2019 through 2024, as outlined above, the amount of debt outstanding would fall over the period, as existing debt is retired faster than new debt is issued, and the effect on the debt ratios would be as follows: debt to personal income would decrease from the current level of 0.7% to 0.6% at the end of fiscal year 2024; debt service to revenues would decrease from 6.8% to 5.9% by June 30, 2024; and debt per capita would decline from \$424 to \$382. At these levels, the debt ratios would not only remain "manageable", but would, in fact, improve.

Sensitivity analyses show that with declining revenues (2% per year) the debt service to revenue ratio would be 6.7% by fiscal year 2024, above the 5.9% level in the Base Case, and it would be 6.1% in the scenario with increased interest rates. At these levels, the debt service to revenue ratios in the two sensitivity scenarios would still be well below the warning level for excessive debt service burden of 10%.

When existing and additional State guaranteed debt are added to the Base Case scenario, debt to personal income is projected to decline from the fiscal year 2017 level of 0.8% to 0.7% by fiscal year 2024, debt per capita is projected to increase from \$478 in fiscal year 2017 to \$504 by fiscal year 2024, and the debt service to revenues ratio is forecast to decline from 7.2% in fiscal year 2017 to 7.0% by fiscal year 2024. Under the "worst case" scenario of declining General Fund unrestricted revenues and the addition of State guaranteed debt, the projected ratio of debt service to revenues would rise from the projected Base Case level of 5.9% to 8.0% by fiscal year 2024.

The State's ratio of debt service to revenues remains above the Moody's median level and should be monitored so corrective actions can be taken if revenue growth falls below projections. This becomes particularly important if the 10% "warning level" is approached. At this time, however, there are no concerns, as this ratio is projected to decline over the projected period through fiscal year 2024 and to remain well below 10%.



**THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update**

**Appendix -- Analytic Summary**

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**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Assumptions to Base Case - Issuance of \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24**  
**School Building Aid Bonds Included**

- (1) Includes issuance of \$4.375 million of New Money 2017 Series A Bonds in July 2017 and \$66.51 million 2017 Series B Bonds in December 2017.
- (2) \$70 million issued in FY 2019 and \$60 million annually in FY 2020 through 2024 at an interest rate of 5%, with 60% of the principal amortized in equal payments over the first ten years and 40% of the principal amortized in equal payments over the remaining ten years.
- (3) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues and includes school building aid debt paid for with the Education Trust Fund ("ETF") M&R tax revenue allocation.
- (4) General Fund Unrestricted Revenues reflect actual revenues for FY 2017, with the ETF portion of meals and room tax revenues designated for the debt service on school building aid bonds added; revenue projections for FY 2018 through 2019 are derived from Governor's budget. Assumes no revenue growth in each of fiscal years 2020 through 2024.
- (5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2016 figure of \$74,687 million. Assumes 2.7% growth annually thereafter.
- (6) Population source: U.S. Census Bureau 2016 figure of 1,334,795. Assumes 0.2% growth annually thereafter.
- (7) For certain sensitivities, state guaranteed debt that is added to Net General Fund Debt includes the outstanding \$21.9 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling \$50.827 million at June 30, 2017.
- (8) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites, BFA, and PDA . Excludes water pollution control, local landfills and local school guaranteed debt (with exception of QSCBs). Assumes level debt service over 20 years at 6.00% for new State guaranteed debt.  
\$35.84 million is issued in each of FY 2019 and 2020, \$35.74 million in 2021 and \$12.84 million in each of FY 2022 and 2023.  
Estimated authorized but unissued State guaranteed debt of \$133.1 million includes:  
\$20 million for local Superfund sites; \$64.2 million for BFA and \$48.9 million for Pease.

Footnotes on the attached charts refer to the assumptions above.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Base Case: Issuance \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24**  
**School Building Aid Bonds Included**

	Actual 2017	Projected							TOTAL 2018-2024
		2018	2019	2020	2021	2022	2023	2024	
Net General Fund Debt (000's)									
Beginning Outstanding		\$567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	
Issuances (1)(2)		\$70,885	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$440,885
Retirements:									
Existing Debt (1)		72,679	75,365	72,286	61,741	57,109	48,042	45,236	432,459
New Debt (2)		0	0	4,200	7,800	11,400	15,000	18,600	57,000
Total Retirements		\$72,679	\$75,365	\$76,486	\$69,541	\$68,509	\$63,042	\$63,836	\$489,459
Net New Debt		(\$1,794)	(\$5,365)	(\$16,486)	(\$9,541)	(\$8,509)	(\$3,042)	(\$3,836)	(\$48,574)
Ending Outstanding (3)	567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	\$518,611	(\$48,574)
Existing Debt Service (000's) (1)	\$102,597	\$101,891	\$101,580	\$94,912	\$81,029	\$73,833	\$62,105	\$57,056	
New Debt Service (000's) (2)	0	0	1,750	\$9,095	15,395	21,515	27,455	33,215	
Total Debt Service (000's)	\$102,597	\$101,891	\$103,330	\$104,007	\$96,424	\$95,348	\$89,560	\$90,271	
General Fund Unrestricted Revenues (000's)(4)	\$1,515,918	\$1,529,911	\$1,542,803	\$1,542,390	\$1,539,212	\$1,538,970	\$1,537,929	\$1,537,716	
<b>Debt Service as a Percent of Revenues</b>	<b>6.8%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.3%</b>	<b>6.2%</b>	<b>5.8%</b>	<b>5.9%</b>	
Total Personal Income (000,000's) (5)	76,704	78,775	80,901	83,086	85,329	87,633	89,999	92,429	
Debt to Personal Income	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	
Population (000's) (6)	1,337	1,340	1,343	1,346	1,348	1,351	1,354	1,356	
Debt Per Capita	\$424	\$422	\$417	\$404	\$396	\$389	\$386	\$382	

Footnotes explained on page 2.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Effect of State Guaranteed Bonds on Debt Ratios - Base Case**

Net General Fund Debt (000's)	Actual 2017	Projected							TOTAL 2018-2024
		2018	2019	2020	2021	2022	2023	2024	
Beginning Outstanding (7) (8)		\$639,882	\$635,120	\$661,605	\$675,888	\$695,871	\$693,408	\$695,785	
G.O. Issuances		\$70,885	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$440,885
State Guaranteed Issuances (7) (8)		0	35,840	35,840	35,740	12,840	12,840	0	133,100
Retirements G.O. Debt		72,679	75,365	76,486	69,541	68,509	63,042	63,836	489,459
State Guaranteed Debt (8)		2,969	3,989	5,071	6,216	6,795	7,420	7,735	40,194
Total Retirements		\$75,647	\$79,355	\$81,557	\$75,757	\$75,304	\$70,463	\$71,571	\$529,653
Net New Debt		(\$4,762)	\$26,485	\$14,283	\$19,983	(\$2,464)	\$2,377	(\$11,571)	\$44,332
Ending Outstanding	\$639,882	\$635,120	\$661,605	\$675,888	\$695,871	\$693,408	\$695,785	\$684,214	\$44,332
G.O. Debt Service (000's)	\$102,597	\$101,891	\$103,330	\$104,007	\$96,424	\$95,348	\$89,560	\$90,271	
State Guaranteed Debt Service (000's) (8)	7,178	6,493	9,500	12,506	15,504	16,494	17,496	17,378	
Total Debt Service (000's)	109,775	108,384	112,829	116,513	111,928	111,842	107,056	107,649	
General Fund Unrestricted Revenues (000's) (4)	\$1,515,918	\$1,529,911	\$1,542,803	\$1,542,390	\$1,539,212	\$1,538,970	\$1,537,929	\$1,537,716	
<b>Debt Service as a Percent of Revenues</b>	<b>7.2%</b>	<b>7.1%</b>	<b>7.3%</b>	<b>7.6%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.0%</b>	<b>7.0%</b>	
Total Personal Income (000,000's) (5)	\$76,704	\$78,775	\$80,901	\$83,086	\$85,329	\$87,633	\$89,999	\$92,429	
Debt to Personal Income	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	
Population (000's) (6)	1,337	1,340	1,343	1,346	1,348	1,351	1,354	1,356	
Debt Per Capita	\$478	\$474	\$493	\$502	\$516	\$513	\$514	\$504	

Footnotes explained on page 2.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Debt Service on Outstanding General Obligation Debt**

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<u>Principal Repayments</u>							
General Fund	48,053,356	49,662,506	47,428,893	42,296,183	38,056,411	33,270,905	30,063,295
University System Appropriated	15,850,420	16,916,310	16,058,068	13,396,874	13,004,513	9,523,378	9,925,164
School Building Aid	<u>8,774,759</u>	<u>8,786,668</u>	<u>8,798,826</u>	<u>6,048,000</u>	<u>6,048,000</u>	<u>5,248,000</u>	<u>5,248,000</u>
Total Repayments	72,678,534	75,365,484	72,285,787	61,741,057	57,108,924	48,042,283	45,236,459
<u>Interest Payments</u>							
General Fund	19,732,048	17,995,982	15,623,129	13,433,440	11,674,975	9,843,299	8,267,161
University System Appropriated	5,943,296	5,102,424	4,311,287	3,590,384	3,027,234	2,439,167	1,984,188
School Building Aid	<u>3,536,682</u>	<u>3,115,892</u>	<u>2,691,625</u>	<u>2,263,872</u>	<u>2,022,192</u>	<u>1,780,512</u>	<u>1,568,272</u>
Total Payments	29,212,027	26,214,298	22,626,041	19,287,696	16,724,401	14,062,978	11,819,621
<u>Total Debt Service Payments</u>							
General Fund	67,785,404	67,658,489	63,052,022	55,729,623	49,731,386	43,114,204	38,330,456
University System Appropriated	21,793,716	22,018,733	20,369,356	16,987,258	16,031,747	11,962,545	11,909,352
School Building Aid	12,311,441	11,902,560	11,490,451	8,311,872	8,070,192	7,028,512	6,816,272
Total Debt Service	101,890,561	101,579,782	94,911,828	81,028,753	73,833,325	62,105,261	57,056,080

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Debt Service on New General Obligation Debt (5%)**

		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<u>Debt Issued in FY2018</u>	Outstanding	0	0	0	0	0	0	0
Current Interest Bonds	Principal Payments	0	0	0	0	0	0	0
	Interest Payments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total Debt Service	0	0	0	0	0	0	0
<u>Debt Issued in FY2019</u>	Outstanding		70,000	65,800	61,600	57,400	53,200	49,000
Current Interest Bonds	Principal Payments		0	4,200	4,200	4,200	4,200	4,200
	Interest Payments		<u>1,750</u>	<u>3,395</u>	<u>3,185</u>	<u>2,975</u>	<u>2,765</u>	<u>2,555</u>
	Total Debt Service		1,750	7,595	7,385	7,175	6,965	6,755
<u>Debt Issued in FY2020</u>	Outstanding			60,000	56,400	52,800	49,200	45,600
Current Interest Bonds	Principal Payments			0	3,600	3,600	3,600	3,600
	Interest Payments			<u>1,500</u>	<u>2,910</u>	<u>2,730</u>	<u>2,550</u>	<u>2,370</u>
	Total Debt Service	0	0	1,500	6,510	6,330	6,150	5,970
<u>Debt Issued in FY2021</u>	Outstanding				60,000	56,400	52,800	49,200
Current Interest Bonds	Principal Payments				0	3,600	3,600	3,600
	Interest Payments				<u>1,500</u>	<u>2,910</u>	<u>2,730</u>	<u>2,550</u>
	Total Debt Service	0	0	0	1,500	6,510	6,330	6,150
<u>Debt Issued in FY2022</u>	Outstanding					60,000	56,400	52,800
Current Interest Bonds	Principal Payments					0	3,600	3,600
	Interest Payments					<u>1,500</u>	<u>2,910</u>	<u>2,730</u>
	Total Debt Service	0	0	0	0	1,500	6,510	6,330
<u>Debt Issued in FY2023</u>	Outstanding						60,000	56,400
Current Interest Bonds	Principal Payments						0	3,600
	Interest Payments						<u>1,500</u>	<u>2,910</u>
	Total Debt Service	0	0	0	0	0	1,500	6,510
<u>Debt Issued in FY2024</u>	Outstanding							60,000
Current Interest Bonds	Principal Payments							0
	Interest Payments							<u>1,500</u>
	Total Debt Service	0	0	0	0	0	0	1,500
<u>Totals Debt Service on New G.O. Debt</u>								
	Principal Payments	0	0	4,200	7,800	11,400	15,000	18,600
	Interest Payments	<u>0</u>	<u>1,750</u>	<u>4,895</u>	<u>7,595</u>	<u>10,115</u>	<u>12,455</u>	<u>14,615</u>
	Total Debt Service	0	1,750	9,095	15,395	21,515	27,455	33,215
	Rate on Current Interest Bonds:			<b>5.00%</b>				
	Rate on Commercial Paper:			<b>3.00%</b>				

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Debt Service on New General Obligation Debt (6%)**

		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<u>Debt Issued in FY2018</u>	Outstanding	0	0	0	0	0	0	0
Current Interest Bonds	Principal Payments	0	0	0	0	0	0	0
	Interest Payments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total Debt Service	0	0	0	0	0	0	0
<u>Debt Issued in FY2019</u>	Outstanding		70,000	65,800	61,600	57,400	53,200	49,000
Current Interest Bonds	Principal Payments		0	4,200	4,200	4,200	4,200	4,200
	Interest Payments		<u>2,100</u>	<u>4,074</u>	<u>3,822</u>	<u>3,570</u>	<u>3,318</u>	<u>3,066</u>
	Total Debt Service		2,100	8,274	8,022	7,770	7,518	7,266
<u>Debt Issued in FY2020</u>	Outstanding			60,000	56,400	52,800	49,200	45,600
Current Interest Bonds	Principal Payments			0	3,600	3,600	3,600	3,600
	Interest Payments			<u>1,800</u>	<u>3,492</u>	<u>3,276</u>	<u>3,060</u>	<u>2,844</u>
	Total Debt Service	0	0	1,800	7,092	6,876	6,660	6,444
<u>Debt Issued in FY2021</u>	Outstanding				60,000	56,400	52,800	49,200
Current Interest Bonds	Principal Payments				0	3,600	3,600	3,600
	Interest Payments				<u>1,800</u>	<u>3,492</u>	<u>3,276</u>	<u>3,060</u>
	Total Debt Service	0	0	0	1,800	7,092	6,876	6,660
<u>Debt Issued in FY2022</u>	Outstanding					60,000	56,400	52,800
Current Interest Bonds	Principal Payments					0	3,600	3,600
	Interest Payments					<u>1,800</u>	<u>3,492</u>	<u>3,276</u>
	Total Debt Service	0	0	0	0	1,800	7,092	6,876
<u>Debt Issued in FY2023</u>	Outstanding						60,000	56,400
Current Interest Bonds	Principal Payments						0	3,600
	Interest Payments						<u>1,800</u>	<u>3,492</u>
	Total Debt Service	0	0	0	0	0	1,800	7,092
<u>Debt Issued in FY2024</u>	Outstanding							60,000
Current Interest Bonds	Principal Payments							0
	Interest Payments							<u>1,800</u>
	Total Debt Service	0	0	0	0	0	0	1,800
<u>Totals Debt Service on New G.O. Debt</u>								
	Principal Payments	0	0	4,200	7,800	11,400	15,000	18,600
	Interest Payments	<u>0</u>	<u>2,100</u>	<u>5,874</u>	<u>9,114</u>	<u>12,138</u>	<u>14,946</u>	<u>17,538</u>
	Total Debt Service	0	2,100	10,074	16,914	23,538	29,946	36,138
	Rate on Current Interest Bonds:			<b>6.00%</b>				
	Rate on Commercial Paper:			<b>3.00%</b>				

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Debt Service on Outstanding State Guaranteed Debt**

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
<b><u>BFA \$20 million Bond</u></b>								
Principal	0	0	0	0	0	0	0	0
Interest	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>	<u>695,000</u>
Total	695,000	695,000	695,000	695,000	695,000	695,000	695,000	695,000
<b><u>BFA Loan &amp; Revenue Bond Programs (1)</u></b>								
Balance	28,500,000	27,725,240	26,903,995	26,033,474	25,110,723	24,132,607	23,095,803	21,996,791
Principal	774,760	821,245	870,520	922,751	978,116	1,036,803	1,099,012	1,164,952
Interest	<u>1,710,000</u>	<u>1,663,514</u>	<u>1,614,240</u>	<u>1,562,008</u>	<u>1,506,643</u>	<u>1,447,956</u>	<u>1,385,748</u>	<u>1,319,807</u>
Payment	2,484,760	2,484,760	2,484,760	2,484,760	2,484,760	2,484,760	2,484,760	2,484,760
<b><u>Qualified School Construction Bonds</u></b>								
Principal	2,193,750	2,193,750	2,193,750	2,193,750	2,182,500	2,182,500	2,182,500	2,182,500
Interest (gross of tax credit)	<u>1,119,671</u>	<u>1,001,428</u>	<u>883,185</u>	<u>764,942</u>	<u>647,002</u>	<u>529,365</u>	<u>411,729</u>	<u>294,092</u>
Total	3,313,421	3,195,178	3,076,935	2,958,692	2,829,502	2,711,865	2,594,229	2,476,592
<b><u>Total Outstanding State Guaranteed Debt</u></b>								
Principal	2,968,510	3,014,995	3,064,270	3,116,501	3,160,616	3,219,303	3,281,512	3,347,452
Interest	<u>3,524,671</u>	<u>3,359,943</u>	<u>3,192,425</u>	<u>3,021,951</u>	<u>2,848,646</u>	<u>2,672,322</u>	<u>2,492,477</u>	<u>2,308,899</u>
Total	6,493,181	6,374,938	6,256,695	6,138,452	6,009,262	5,891,625	5,773,988	5,656,352

- (1) Assumes level debt service with the following parameters:
- |                 |                   |
|-----------------|-------------------|
| Principal*      | <b>28,500,000</b> |
| Number of Years | 20                |
| Interest Rate   | <b>6.0%</b>       |
| Annual Payments | 2,484,760         |
- \* Includes \$32.7 million of BFA loans and \$2.3 million of BFA revenue bonds



**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Debt Service on State Guaranteed Debt to be Issued**

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
<u>Issuances in FY2018 (1)</u>								
Balance		35,840,000	34,865,705	33,832,953	32,738,236	31,577,836	30,347,811	29,043,985
Principal		974,295	1,032,752	1,094,717	1,160,400	1,230,024	1,303,826	1,382,055
Interest		<u>2,150,400</u>	<u>2,091,942</u>	<u>2,029,977</u>	<u>1,964,294</u>	<u>1,894,670</u>	<u>1,820,869</u>	<u>1,742,639</u>
Total Debt Service		3,124,695	3,124,695	3,124,695	3,124,695	3,124,695	3,124,695	3,124,695
<u>Issuances in FY2019 (1)</u>								
Balance			35,840,000	34,865,705	33,832,953	32,738,236	31,577,836	30,347,811
Principal			974,295	1,032,752	1,094,717	1,160,400	1,230,024	1,303,826
Interest			<u>2,150,400</u>	<u>2,091,942</u>	<u>2,029,977</u>	<u>1,964,294</u>	<u>1,894,670</u>	<u>1,820,869</u>
Total Debt Service			3,124,695	3,124,695	3,124,695	3,124,695	3,124,695	3,124,695
<u>Issuances in FY2020 (1)</u>								
Balance				35,740,000	34,768,424	33,738,553	32,646,890	31,489,728
Principal				971,576	1,029,871	1,091,663	1,157,163	1,226,592
Interest				<u>2,144,400</u>	<u>2,086,105</u>	<u>2,024,313</u>	<u>1,958,813</u>	<u>1,889,384</u>
Total Debt Service				3,115,976	3,115,976	3,115,976	3,115,976	3,115,976
<u>Issuances in FY2021 (1)</u>								
Balance					12,840,000	12,490,950	12,120,958	11,728,765
Principal					349,050	369,993	392,192	415,724
Interest					<u>770,400</u>	<u>749,457</u>	<u>727,257</u>	<u>703,726</u>
Total Debt Service					1,119,450	1,119,450	1,119,450	1,119,450
<u>Issuances in FY2022 (1)</u>								
Balance						12,840,000	12,490,950	12,120,958
Principal						349,050	369,993	392,192
Interest						770,400	749,457	727,257
Total Debt Service						1,119,450	1,119,450	1,119,450
<u>Total State Guaranteed Debt to be Issued</u>								
Principal	0	974,295	2,007,047	3,099,046	3,634,038	4,201,130	4,453,198	4,720,390
Interest	0	<u>2,150,400</u>	<u>4,242,342</u>	<u>6,266,320</u>	<u>6,850,777</u>	<u>7,403,135</u>	<u>7,151,067</u>	<u>6,883,875</u>
Total Debt Service	0	3,124,695	6,249,389	9,365,365	10,484,815	11,604,265	11,604,265	11,604,265
<u>Total Outstanding and Future Issuances of State Guaranteed Debt (2)</u>								
Principal	2,968,510	3,989,290	5,071,317	6,215,547	6,794,655	7,420,434	7,734,710	8,067,842
Interest	<u>3,524,671</u>	<u>5,510,343</u>	<u>7,434,767</u>	<u>9,288,270</u>	<u>9,699,422</u>	<u>10,075,456</u>	<u>9,643,544</u>	<u>9,192,774</u>
Total Debt Service	6,493,181	9,499,633	12,506,084	15,503,817	16,494,077	17,495,890	17,378,253	17,260,616

- (1) Assumes level debt service with the following parameters:      Number of Years      20  
Interest Rate      **6.0%**
- (2) Includes total Outstanding Guaranteed Debt Service

**THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update**

**Assumptions to Sensitivity Case 1 - Issuance of \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24; Revenues Decline 2% Annually After FY 2018  
School Building Aid Bonds Included**

- (1) Includes issuance of \$4.375 million of New Money 2017 Series A Bonds in July 2017 and \$66.51 million 2017 Series B Bonds in December 2017.
- (2) \$70 million issued in FY 2019 and \$60 million annually in FY 2020 through 2024 at an interest rate of 5%, with 60% of the principal amortized in equal payments over the first ten years and 40% of the principal amortized in equal payments over the remaining ten years.
- (3) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues and includes school building aid debt paid for with the Education Trust Fund ("ETF") M&R tax revenue allocation.
- (4) General Fund Unrestricted Revenues reflect actual revenues for FY 2017, with the ETF portion of meals and room tax revenues designated for the debt service on school building aid bonds added; revenue projections for FY 2018 are derived from Governor's budget. Revenues are assumed to decline by 2.0% in each of fiscal years 2019 through 2024.
- (5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2016 figure of \$74,687 million. Assumes 2.7% growth annually thereafter.
- (6) Population source: U.S. Census Bureau 2016 figure of 1,334,795. Assumes 0.2% growth annually thereafter.
- (7) For certain sensitivities, state guaranteed debt that is added to Net General Fund Debt includes the outstanding \$22.378 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling \$50.827 million at June 30, 2017.
- (8) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites, BFA, and PDA . Excludes water pollution control, local landfills and local school guaranteed debt (with exception of QSCBs). Assumes level debt service over 20 years at 6.00% for new State guaranteed debt.  
\$35.84 million is issued in each of FY 2019 and 2020, \$35.74 million in 2021 and \$12.84 million in each of FY 2022 and 2023.  
Estimated authorized but unissued State guaranteed debt of \$133.1 million includes:  
\$20 million for local Superfund sites; \$64.2 million for BFA and \$48.9 million for Pease.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Sensitivity Case 1 - Issuance of \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24; Revenues Decline 2% Annually After FY 2018**  
**School Building Aid Bonds Included**

	Actual 2017	Projected							TOTAL
		2018	2019	2020	2021	2022	2023	2024	2018-2024
Net General Fund Debt (000's)									
Beginning Outstanding		\$567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	
Issuances (1)(2)		\$70,885	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$440,885
Retirements:									
Existing Debt (1)		72,679	75,365	72,286	61,741	57,109	48,042	45,236	432,459
New Debt (2)		0	0	4,200	7,800	11,400	15,000	18,600	57,000
Total Retirements		\$72,679	\$75,365	\$76,486	\$69,541	\$68,509	\$63,042	\$63,836	\$489,459
Net New Debt		(\$1,794)	(\$5,365)	(\$16,486)	(\$9,541)	(\$8,509)	(\$3,042)	(\$3,836)	(\$48,574)
Ending Outstanding (3)	\$567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	\$518,611	(\$48,574)
Existing Debt Service (000's) (1)	\$102,597	\$101,891	\$101,580	\$94,912	\$81,029	\$73,833	\$62,105	\$57,056	
New Debt Service (000's) (2)	0	0	1,750	\$9,095	15,395	21,515	27,455	33,215	
Total Debt Service (000's)	\$102,597	\$101,891	\$103,330	\$104,007	\$96,424	\$95,348	\$89,560	\$90,271	
General Fund Unrestricted Revenues (000's)(4)	\$1,515,918	\$1,529,911	\$1,499,151	\$1,468,993	\$1,436,665	\$1,407,856	\$1,378,819	\$1,351,171	
<b>Debt Service as a Percent of Revenues</b>	<b>6.8%</b>	<b>6.7%</b>	<b>6.9%</b>	<b>7.1%</b>	<b>6.7%</b>	<b>6.8%</b>	<b>6.5%</b>	<b>6.7%</b>	
Total Personal Income (000,000's) (5)	76,704	78,775	80,901	83,086	85,329	87,633	89,999	92,429	
Debt to Personal Income	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	
Population (000's) (6)	1,337	1,340	1,343	1,346	1,348	1,351	1,354	1,356	
Debt Per Capita	\$424	\$422	\$417	\$404	\$396	\$389	\$386	\$382	

Footnotes explained on page 2.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Assumptions to Sensitivity Case 2 - Issuance of \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24; Interest Rates Increase in FY 2019**  
**School Building Aid Bonds Included**

- (1) Includes issuance of \$4.375 million of New Money 2017 Series A Bonds in July 2017 and \$66.51 million 2017 Series B Bonds in December 2017.
- (2) \$70 million issued in FY 2019 and \$60 million annually in FY 2020 through 2024 at an interest rate of 6%, with 60% of the principal amortized in equal payments over the first ten years and 40% of the principal amortized in equal payments over the remaining ten years.
- (3) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues and includes school building aid debt paid for with the Education Trust Fund ("ETF") M&R tax revenue allocation.
- (4) General Fund Unrestricted Revenues reflect actual revenues for FY 2017, with the ETF portion of meals and room tax revenues designated for the debt service on school building aid bonds added; revenue projections for FY 2018 through 2019 are derived from Governor's budget. Assumes no revenue growth in each of fiscal years 2020 through 2024.
- (5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2016 figure of \$74,687 million. Assumes 2.7% growth annually thereafter.
- (6) Population source: U.S. Census Bureau 2016 figure of 1,334,795. Assumes 0.2% growth annually thereafter.
- (7) For certain sensitivities, state guaranteed debt that is added to Net General Fund Debt includes the outstanding \$21.9 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling \$50.827 million at June 30, 2017.
- (8) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites, BFA, and PDA . Excludes water pollution control, local landfills and local school guaranteed debt (with exception of QSCBs). Assumes level debt service over 20 years at 6.00% for new State guaranteed debt.  
\$35.84 million is issued in each of FY 2019 and 2020, \$35.74 million in 2021 and \$12.84 million in each of FY 2022 and 2023.  
Estimated authorized but unissued State guaranteed debt of \$133.1 million includes:  
\$20 million for local Superfund sites; \$64.2 million for BFA and \$48.9 million for Pease.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Sensitivity Case 2 - Issuance of \$70 Million in FY 2019 and \$60 Million Annually in FY 2020-24; Interest Rates Increase in FY 2019**  
**School Building Aid Bonds Included**

	Actual 2017	Projected							TOTAL
		2018	2019	2020	2021	2022	2023	2024	2018-2024
Net General Fund Debt (000's)									
Beginning Outstanding		\$567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	\$567,185
Issuances (1)(2)		\$70,885	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$440,885
Retirements:									
Existing Debt (1)		72,679	75,365	72,286	61,741	57,109	48,042	45,236	432,459
New Debt (2)		0	0	4,200	7,800	11,400	15,000	18,600	57,000
Total Retirements		\$72,679	\$75,365	\$76,486	\$69,541	\$68,509	\$63,042	\$63,836	\$489,459
Net New Debt		(\$1,794)	(\$5,365)	(\$16,486)	(\$9,541)	(\$8,509)	(\$3,042)	(\$3,836)	(\$48,574)
Ending Outstanding (3)	\$567,185	\$565,391	\$560,026	\$543,540	\$533,999	\$525,490	\$522,448	\$518,611	\$518,611
Existing Debt Service (000's) (1)	\$102,597	\$101,891	\$101,580	\$94,912	\$81,029	\$73,833	\$62,105	\$57,056	
New Debt Service (000's) (2)	0	0	2,100	\$10,074	16,914	23,538	29,946	36,138	
Total Debt Service (000's)	\$102,597	\$101,891	\$103,680	\$104,986	\$97,943	\$97,371	\$92,051	\$93,194	
General Fund Unrestricted Revenues (000's)(4)	\$1,515,918	\$1,529,911	\$1,542,803	\$1,542,390	\$1,539,212	\$1,538,970	\$1,537,929	\$1,537,716	
<b>Debt Service as a Percent of Revenues</b>	<b>6.8%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.8%</b>	<b>6.4%</b>	<b>6.3%</b>	<b>6.0%</b>	<b>6.1%</b>	
Total Personal Income (000,000's) (5)	76,704	78,775	80,901	83,086	85,329	87,633	89,999	92,429	
Debt to Personal Income	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	
Population (000's) (6)	1,337	1,340	1,343	1,346	1,348	1,351	1,354	1,356	
Debt Per Capita	\$424	\$422	\$417	\$404	\$396	\$389	\$386	\$382	

Footnotes explained on page 2.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Effect of State Guaranteed Bonds and Declining Revenues on Debt Ratios**

Net General Fund Debt (000's)	Actual 2017	Projected							TOTAL 2018-2024
		2018	2019	2020	2021	2022	2023	2024	
Beginning Outstanding (7) (8)		\$639,882	\$635,120	\$661,605	\$675,888	\$695,871	\$693,408	\$695,785	
G.O. Issuances		\$70,885	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$440,885
State Guaranteed Issuances (7) (8)		0	35,840	35,840	35,740	12,840	12,840	0	133,100
Retirements G.O. Debt		72,679	75,365	76,486	69,541	68,509	63,042	63,836	489,459
State Guaranteed Debt (8)		2,969	3,989	5,071	6,216	6,795	7,420	7,735	40,194
Total Retirements		\$75,647	\$79,355	\$81,557	\$75,757	\$75,304	\$70,463	\$71,571	\$529,653
Net New Debt		(\$4,762)	\$26,485	\$14,283	\$19,983	(\$2,464)	\$2,377	(\$11,571)	\$44,332
Ending Outstanding	\$639,882	\$635,120	\$661,605	\$675,888	\$695,871	\$693,408	\$695,785	\$684,214	\$44,332
G.O. Debt Service (000's)	\$102,597	\$101,891	\$103,330	\$104,007	\$96,424	\$95,348	\$89,560	\$90,271	
State Guaranteed Debt Service (000's) (8)	7,178	6,493	9,500	12,506	15,504	16,494	17,496	17,378	
Total Debt Service (000's)	109,775	108,384	112,829	116,513	111,928	111,842	107,056	107,649	
General Fund Unrestricted Revenues (000's) (4)	\$1,515,918	\$1,529,911	\$1,499,151	\$1,468,993	\$1,436,665	\$1,407,856	\$1,378,819	\$1,351,171	
<b>Debt Service as a Percent of Revenues</b>	<b>7.2%</b>	<b>7.1%</b>	<b>7.5%</b>	<b>7.9%</b>	<b>7.8%</b>	<b>7.9%</b>	<b>7.8%</b>	<b>8.0%</b>	
Total Personal Income (000,000's) (5)	\$76,704	\$78,775	\$80,901	\$83,086	\$85,329	\$87,633	\$89,999	\$92,429	
Debt to Personal Income	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	
Population (000's) (6)	1,337	1,340	1,343	1,346	1,348	1,351	1,354	1,356	
Debt Per Capita	\$478	\$474	\$493	\$502	\$516	\$513	\$514	\$504	

Footnotes explained on page 2.