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September 28, 2020

Honorable Donna Soucy
President of the Senate
Honorable Stephen Shurtleff
Speaker of the House

Dear Senator Soucy and Speaker Shurtleff:

Attached is the debt affordability study for fiscal year 2019 prepared by the State Treasury and Public Resources Advisory Group, the State's financial advisor. Historically, this study has been distributed early in the year right after the issuance of the State's Comprehensive Annual Financial Report (CAFR), however, due to the significant disruption and financial uncertainty caused by the outbreak of COVID-19, we determined that it was better to postpone the issuance of the traditional study until later in the year. Instead, a different approach was used to convey debt affordability, albeit in a much more abbreviated fashion and with an emphasis on extreme revenue decline implications. This was the Debt Affordability Bulletin distributed by former Treasurer William Dwyer on March 26, 2020. Now that we have more information with regard to unrestricted revenue projections while considering the uncertainty regarding the economy and the full effects of the COVID-19 pandemic, in this year's study, we have examined the impact of projected debt issuance and revenue performance on the State's net tax-supported debt ratios. Please note that this study accounts for net tax-supported (General Fund ["GF"] unrestricted) debt outstanding, but not bonding repaid with Highway Funds or other self-supporting debt with a dedicated revenue source. The ratio of net tax-supported debt service to GF unrestricted revenues, a metric closely monitored by the credit rating agencies, has been consistently declining since the Great Recession, reaching 6.4% in fiscal year 2018. <u>Despite the ratio projected to increase for fiscal years 2020 and 2021 as a result of the anticipated revenue performance, I am pleased to report that for fiscal year 2019 the ratio remained at 6.4%. The good news is, as presented in this analysis, the ratio is projected to return to the previous declining trend beginning in fiscal year 2022.</u>

The Base Case presented on page 3 of the study reflects the bonding levels authorized for the current biennium (approximately $120 million) 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: 2022-23 ($120 million), 2024-25 ($120 million) with $60 million reflected for fiscal year 2026. With regard to revenue performance, we have used fiscal year 2020 actual GF unrestricted revenue (cash basis), and fiscal year 2021 budgeted GF unrestricted revenue, as adjusted by State agencies which incorporated the anticipated effect of the COVID-19 pandemic, to calculate the ratio of net tax-supported debt service to GF unrestricted revenue. Subsequently, the Base Case assumes revenue decline of 2% in fiscal year 2022, 1% revenue decline for fiscal year 2023, no growth in fiscal year 2024, and 1% growth for fiscal years 2025 and 2026. We have used conservative revenue assumptions for the following reasons: The timing and extent of this global health and economic crisis is still unknown; although improving, the national economic outlook is still concerning with high levels of unemployment; and, even if all of the monetary and fiscal tools are properly utilized, the economic recovery is expected to last several years.

The projected amounts of new net tax-supported debt in fiscal years 2022 through 2026 would include new capital (HB 25) authorizations 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).

Sensitivity 1, found on page 9 of the study, assumes the same debt issuance as in the Base Case, but adjusts the revenue decline by 5% in fiscal year 2022, followed by no growth from fiscal years 2023 through 2026. The purpose of this scenario is to examine how a more severe revenue performance might impact the State's borrowing capacity and debt ratios. Sensitivity 2 on page 11 of the study assumes the same debt issuance and revenue performance assumed in the Base Case, but reduces the personal income growth rate from 2.7% in fiscal years 2019 and 2020 to 1.7% in fiscal years 2021 through 2026. Both of these sensitivity analyses project that the State's debt service to revenue ratio is expected to remain near or below 7% beyond fiscal year 2019, well below the 10% statutorily prescribed limit (RSA 6-C:2) and rating agency warning threshold.

Lastly, we have presented on page 13 a scenario to highlight the impact of state guaranteed debt combined with the more severe Sensitivity 1 revenue decline beginning in fiscal year 2020. In the very worst case scenario in which the State would be required to assume all guarantee liabilities in a poorly performing revenue environment, although improving after fiscal year 2021, the debt service to revenue ratio could reach 7.3%. 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, due in part to the demonstrated success of State bond guarantee programs.

This analysis indicates that the State's debt service to unrestricted revenue ratio, while projected to increase in fiscal years 2020 and 2021, remains manageable under the Base Case scenario and is trending lower projecting to return to historical low levels using the baseline assumptions presented here. The primary benefits of maintaining lower bonding levels are: budgetary flexibility to address unanticipated operating or borrowing needs; the rating agencies consistently praise the State's debt levels and debt management practices as conservative, and; better financial positioning to absorb potential debt service associated with State debt guarantees made in support of local economic expansion.

Please do not hesitate to contact me for any questions you may have.

Respectfully,

Monica I. Mezzapelle
Commissioner of the Treasury

Attachment: Fiscal Year 2019 Debt Affordability Memorandum and Study

Cc: Honorable Christopher T. Sununu, Governor
Representative Mary Jane Wallner, Chair, House Finance Committee
Representative John Cloutier, Chair, House Public Works and Highways
Senator Lou D'Allesandro, Chair, Senate Finance Committee
Senator David Watters, Chair, Senate Capital Budget Committee
Charlie Arlinghaus, Commissioner, Department of Administrative Services
Michael W. Kane, Legislative Budget Assistant

Public Resources Advisory Group

39 Broadway, Suite 1210 ▪ New York, New York 10006-2908 ▪ (212) 566-7800

MEMORANDUM TO: Monica Mezzapelle
Commissioner of the Treasury
State of New Hampshire

FROM: Public Resources Advisory Group ("PRAG")

SUBJECT: Debt Affordability Study Update

DATE: September 28, 2020

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 2019 and net tax-supported General Fund debt outstanding at June 30, 2019. 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 meals and rooms tax revenue dedicated to pay that debt service. The rating agencies opine that "The…rating is supported by a sound economy, strong governance and low debt and pension burden." (Moody's Investors Service report dated February 20, 2020); "The state's overall debt burden (including capital leases) is low, on both a per capita basis… [and] personal income. Amortization is rapid…" (Standard & Poor's report dated February 12, 2020), and; "New Hampshire's long-term liabilities, including debt and pension liabilities… are low… and are expected to remain a low burden on resources." (Fitch Ratings report dated February 12, 2020). 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 personal income growth rate (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 memorandum.

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 $80.175 million issued in fiscal year 2020 (New Money 2020 Series A Bonds in February 2020) with $59.881 million credited to Net General Fund Debt.
2. $60 million of tax-exempt general obligation debt to be issued in each of fiscal years 2021 through 2026. 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 2021 through 2026.
3. As noted above, General Fund Unrestricted Revenues reflect actual revenues for fiscal year 2019 and for fiscal year 2020 (on cash basis), with the Education Trust Fund portion

of meals and room tax revenues designated for the debt service of school building aid included; budgeted adjusted revenues for fiscal year 2021 and, based on guidance you have provided to us, General Fund Unrestricted Revenues in fiscal year 2022 and 2023 are assumed to decline by 2% and 1%, respectively, with no growth assumed in fiscal year 2024 and 1% growth assumed in each of fiscal years 2025 and 2026.

4. Total personal income is based on the U.S. Department of Commerce, Bureau of Economic Analysis 2018 figure of $83,143 million and is projected to grow at an average annual rate of 2.7%.

5. Population is based on the U.S. Census Bureau 2019 figure of 1,359,711 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. Based on maximum amounts authorized in statute, future issuances of State guaranteed debt total $92.2 million and are assumed to be issued as follows (page 8 of the Appendix):

Expected Issuances of State Guaranteed Debt

Fiscal Year	Dollar Amount	Purpose
2021	$23,000,000	Superfund, BFA, Pease
2022	23,000,000	Superfund, BFA, Pease
2023	22,880,000	Superfund, BFA, Pease
2024	11,660,000	BFA
2025	11,660,000	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.

<u>Effect of General Obligation Debt Issuance on Debt Ratios</u>

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 $60 million in each of fiscal years 2021 through 2026. Combining these issuances and repayments of outstanding debt, the total issuance is approximately $41.21 million less than retirements over the fiscal years 2020 through 2026, causing the State's net general fund debt to decrease from $584.128 million at June 30, 2019 to $542.917 million at June 30, 2026, a total decrease of $41.211 million or 7.06%.

Presently, New Hampshire's ratios of debt to personal income and debt per capita are significantly below the 2019 Moody’s medians for states. New Hampshire's net general fund debt service to revenues ratio at 6.4% for fiscal year 2019 was higher than the median of 3.8% 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 below the 2019 Moody’s medians for states, with the exception of the debt service to revenues ratio, as summarized in the following chart:

Summary of Debt Ratios for Net General Fund Debt

	Moody's Median	New Hampshire	
	2019	June 30, 2019	June 30, 2026 Est.
Debt to Personal Income	2.0%	0.7%	0.5%
Debt Per Capita	$1,071	$430	$394
Debt Service to Revenues	3.8%*	6.4%	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, 2026. Debt to personal income would decline over the period from 0.7% at June 30, 2019 to 0.5% at June 30, 2026 and debt per capita would decline from $430 to $394. 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 Lower Personal Income Growth Rate

Given the uncertainty regarding the economy and the markets, especially with effects of the coronavirus pandemic, it is difficult to make forecasts with a high degree of certainty. Accordingly, Sensitivity 1 for General Fund unrestricted revenues was developed, assuming revenue decline of 5% in fiscal year 2021 and no revenue growth in fiscal years 2022 through 2026. Under these assumptions, New Hampshire's debt ratios would change as summarized in the chart below:

Debt Ratios Assuming More Significant Revenue Declines in FY 2021-2026

Summary of Debt Ratios for Net General Fund Debt

	Moody's Median	New Hampshire			
		Base Case		Declining Revenue Assumption	
	2019	FY 2019	FY 2026 Est.	FY 2019	FY 2026 Est.
Debt to Personal Income	2.0%	0.7%	0.5%	0.7%	0.5%
Debt Per Capita	$1,071	$430	$394	$430	$394
Debt Service to Revenues	3.8%*	6.4%	5.9%	6.4%	6.0%

* 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 the more significant revenue declines, the ratio of debt service to revenues would decline to 6.0% in fiscal year 2026, compared to 5.9% in fiscal year 2026 in the Base Case. At the 6.0% 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 9 and 10 of the Appendix).

A second sensitivity analysis was developed with regard to personal income growth rate. It assumes that the average annual personal income growth rate in fiscal years 2019 and 2020 remains at 2.7% and declines to 1.7% in fiscal years 2021 through 2026. The results are as follows:

Debt Ratios Assuming Lower Personal Income Growth Rate

Summary of Debt Ratios for Net General Fund Debt

	Moody's Median	**New Hampshire**			
		Base Case		1.7% PI Growth Rate FY 2021-2026	
	2019	FY 2019	FY 2026 Est.	FY 2019	FY 2026 Est.
Debt to Personal Income	2.0%	0.7%	0.5%	0.7%	0.6%
Debt Per Capita	$1,071	$430	$394	$430	$394
Debt Service to Revenues	3.8%*	6.4%	5.9%	6.4%	5.9%

* 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 to personal income would decrease from 0.7% in fiscal year 2019 to 0.6% for fiscal year 2026 compared to 0.5% in the Base Case, well below the 2.0% Moody's median. Other ratios would not change from the Base Case because the amount of bonds issued would not change. (The details of this analysis are shown on pages 11 and 12 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 $73.7 million of outstanding guaranteed debt at June 30, 2019, which, when added to the State's net General Fund debt, brings the total to $657.8 million, as shown in the table below:

Net General Fund and Guaranteed Debt at June 30, 2019

	($ in millions)
Net General Fund Debt	$584.1
Guaranteed Debt	
Business Finance Authority	56.1
Qualified School Construction Bonds (QSCBs)	17.6
Total Guaranteed Debt	$73.7
Total Net General Fund and Guaranteed Debt	$657.8

There is approximately $92.2 million of authorized but unissued State guaranteed debt at June 30, 2019, as shown in the table below:

Authorized But Unissued State Guaranteed Debt at June 30, 2019

Purpose	**Amount**
	($ in millions)
Local Superfund Sites	$20.0
Business Finance Authority	58.3
Pease Development Authority	13.9
Total	$92.2

For this scenario, we assumed that the Business Finance Authority would issue $11.66 million in each of fiscal years 2021 through 2025; Pease Development Authority would issue $4.64 million in each of fiscal years 2021 and 2022 and $4.62 million in fiscal year 2023; and the Local Superfund would issue

$6.70 million in each of fiscal years 2021 and 2022 and $6.60 million in fiscal year 2023, as shown in aggregate on page 9 of the Appendix.

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 $672.9 million at June 30, 2026, which is $129.7 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 additional annual declining revenue assumption (Sensitivity 1), shown in the Appendix on page 13. The resulting debt ratios are summarized in the chart below:

Summary of Debt Ratios Including State Guaranteed Debt

New Hampshire

				Including Guaranteed Debt			
	Moody's Median	Case 1 (Base Case) Net General Fund Debt		Case 2 All Guaranteed Debt		Case 3 All Guaranteed Debt and Declining Revenues	
	2019	FY 2019	FY 2026 Est.	FY 2019	FY 2026 Est.	FY 2019	FY 2026 Est.
Total Debt Outstanding (000,000)	---	$584	$543	$658	$673	$658	$673
Debt to Personal Income	2.0%	0.7%	0.5%	0.8%	0.7%	0.8%	0.7%
Debt Per Capita	$1,071	$430	$394	$484	$488	$484	$488
Debt Service to Revenues	3.8%*	6.4%	5.9%	6.8%	6.9%	6.8%	7.0%

* 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, 2026, the State's debt to personal income would be 0.7% in Case 2 as opposed to 0.5% in the Base Case. Debt per capita would be $488 in Case 2 versus $394 in the Base Case; and debt service to revenues would be 6.9% compared to 5.9% in the Base Case, reaching a high of 7.3% in fiscal year 2020. With an assumption of additional declining revenues added to Case 2, the “worst case” scenario, debt service to revenue ratio increases to 7.0% in fiscal year 2026. Debt per capita and debt to personal income ratio would remain below the 2019 Moody's medians in all cases.

Conclusion

The State's debt ratios are considered low by the rating agencies. If the State issues a total of $360 million of new, net tax-supported general obligation debt in fiscal years 2021 through 2026, 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 0.5% at the end of fiscal year 2026; debt service to revenues would decrease from 6.4% to 5.9% by June 30, 2026; and debt per capita would decline from $430 to $394. At these levels, the debt ratios would not only remain low, but would, in fact, improve.

Sensitivity analyses show that with more significant revenue declines in fiscal years 2021 through 2026, the debt service to revenue ratio would be 6.0% by fiscal year 2026, above the 5.9% level in the Base Case. Debt to personal income ratio would be 0.6% in fiscal year 2026 in the scenario with lower personal income growth rate assumption, comparing to 0.5% in the Base Case. At these levels, the debt service to revenue ratio in the sensitivity scenario would still be well below the warning level for excessive debt service burden of 10% and the debt to personal income ratio would remain well below the 2019 Moody’s median.

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 2019 level of 0.8% to 0.7% by fiscal year 2026, debt per capita is projected to increase from $484 in fiscal year 2019 to $488 by fiscal year 2026, and the debt service to revenues ratio is forecast to increase from 6.8% in fiscal year 2019 to 6.9% by fiscal year 2026. Under the “worst case” scenario with the increase of General Fund unrestricted revenues declines 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 7.0% for fiscal year 2026.

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 2026 and to remain well below 10%.

THE STATE OF NEW HAMPSHIRE
Debt Affordability Study Update

Appendix -- Analytic Summary

THE STATE OF NEW HAMPSHIRE
Debt Affordability Study Update
Assumptions to Base Case - Issuance of $60 Million Annually in FY 2021-26
School Building Aid Bonds Included

(1) Includes issuance of $80.175 million of New Money 2020 Series A Bonds in February 2020; $59.9 million credited to Net General Fund Debt.
(2) $60 million issued annually in FY 2021 through 2026 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 2019 and actual cash basis revenues for FY 2020; and budgeted adjusted revenues for FY 2021, with ETF portion of meals and rooms tax revenues designated for the debt service on school building aid bonds added.
Assumes revenue decrese by 2% in FY 2022, by 1% in FY 2023, no growth revenue in FY 2024 and 1% annual revenue growth in FY 2025-26.
(5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2018 figure of $83,143 million. Assumes 2.7% growth annually thereafter.
(6) Population - source: U.S. Census Bureau 2019 figure of 1,359,711. Assumes 0.2% growth annually thereafter.
(7) For certain sensitivities, State guaranteed debt that is added to Net General Fund Debt includes the outstanding $17.6 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling $56.1 million at June 30, 2019.
(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.
$23 million is issued in each of FY 2021 and 2022, $22.88 million in 2023 and $11.66 million in each of FY 2024 and 2025.
Estimated authorized but unissued State guaranteed debt of $92.2 million includes:
$20 million for local Superfund sites; $58.3 million for BFA and $13.9 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 of $60 Million Annually in FY 2021-26
School Building Aid Bonds Included

		Actual	Projected							TOTAL
		2019	2020	2021	2022	2023	2024	2025	2026	2020-2026
Net General Fund Debt (000's)										
Beginning Outstanding			$584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	
Issuances (1)(2)			$59,881	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$419,881
Retirements:	Existing Debt (1)		76,591	69,232	63,159	54,934	52,016	48,865	42,296	407,092
	New Debt (2)		0	0	3,600	7,200	10,800	14,400	18,000	54,000
	Total Retirements		$76,591	$69,232	$66,759	$62,134	$62,816	$63,265	$60,296	$461,092
Net New Debt			($16,710)	($9,232)	($6,759)	($2,134)	($2,816)	($3,265)	($296)	($41,211)
Ending Outstanding (3)		584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	$542,917	($41,211)
Existing Debt Service (000's) (1)		$104,763	$102,387	$93,686	$84,713	$73,503	$68,000	$62,522	$53,971	
New Debt Service (000's) (2)		0	0	1,500	$8,010	14,340	20,490	26,460	32,250	
Total Debt Service (000's)		$104,763	$102,387	$95,186	$92,723	$87,843	$88,490	$88,982	$86,221	
General Fund Unrestricted Revenues (000's)(4)		$1,633,903	$1,505,590	$1,472,530	$1,443,004	$1,427,613	$1,427,401	$1,441,390	$1,455,513	
Debt Service as a Percent of Revenues		6.4%	6.8%	6.5%	6.4%	6.2%	6.2%	6.2%	5.9%	
Total Personal Income (000,000's) (5)		85,388	87,693	90,061	92,493	94,990	97,555	100,189	102,894	
Debt to Personal Income		0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	
Population (000's) (6)		1,360	1,362	1,365	1,368	1,371	1,373	1,376	1,379	
Debt Per Capita		$430	$416	$409	$403	$401	$398	$395	$394	

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 2019	Projected 2020	2021	2022	2023	2024	2025	2026	TOTAL 2020-2026
Beginning Outstanding (7) (8)		$657,864	$637,831	$647,740	$659,408	$674,815	$677,815	$679,828	
G.O. Issuances		$59,881	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$419,881
State Guaranteed Issuances (7) (8)		0	23,000	23,000	22,880	11,660	11,660	0	92,200
Retirements G.O. Debt		76,591	69,232	66,759	62,134	62,816	63,265	60,296	461,092
State Guaranteed Debt (8)		3,323	3,859	4,573	5,339	5,845	6,382	6,634	35,954
Total Retirements		$79,914	$73,091	$71,332	$67,472	$68,661	$69,646	$66,930	$497,046
Net New Debt		($20,033)	$9,909	$11,668	$15,408	$2,999	$2,014	($6,930)	$15,035
Ending Outstanding	$657,864	$637,831	$647,740	$659,408	$674,815	$677,815	$679,828	$672,899	$15,035
G.O. Debt Service (000's)	$104,763	$102,387	$95,186	$92,723	$87,843	$88,490	$88,982	$86,221	
State Guaranteed Debt Service (000's) (8)	6,480	6,963	8,465	10,341	12,219	13,117	14,016	13,899	
Total Debt Service (000's)	111,242	109,350	103,651	103,064	100,061	101,607	102,998	100,119	
General Fund Unrestricted Revenues (000's) (4)	$1,633,903	$1,505,590	$1,472,530	$1,443,004	$1,427,613	$1,427,401	$1,441,390	$1,455,513	
Debt Service as a Percent of Revenues	6.8%	7.3%	7.0%	7.1%	7.0%	7.1%	7.1%	6.9%	
Total Personal Income (000,000's) (5)	$85,388	$87,693	$90,061	$92,493	$94,990	$97,555	$100,189	$102,894	
Debt to Personal Income	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
Population (000's) (6)	1,360	1,362	1,365	1,368	1,371	1,373	1,376	1,379	
Debt Per Capita	$484	$468	$474	$482	$492	$494	$494	$488	

Footnotes explained on page 2.

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

	2020	2021	2022	2023	2024	2025	2026
Principal Repayments							
General Fund	51,789,956	49,125,858	44,534,151	39,530,986	36,210,956	34,149,715	30,047,678
University System Appropriated	16,002,648	14,057,918	12,576,927	10,154,829	10,556,677	9,466,946	7,000,330
School Building Aid	8,798,826	6,048,000	6,048,000	5,248,000	5,248,000	5,248,000	5,248,000
Total Repayments	76,591,429	69,231,777	63,159,078	54,933,815	52,015,633	48,864,661	42,296,008
Interest Payments							
General Fund	18,746,034	18,186,963	16,097,287	13,947,190	12,061,074	10,410,357	9,007,197
University System Appropriated	4,358,241	4,002,977	3,434,257	2,841,094	2,354,541	1,895,562	1,540,307
School Building Aid	2,691,625	2,263,872	2,022,192	1,780,512	1,568,272	1,351,472	1,127,200
Total Payments	25,795,900	24,453,812	21,553,736	18,568,796	15,983,886	13,657,391	11,674,704
Total Debt Service Payments							
General Fund	70,535,990	67,312,821	60,631,438	53,478,176	48,272,030	44,560,072	39,054,875
University System Appropriated	20,360,889	18,060,895	16,011,184	12,995,923	12,911,217	11,362,508	8,540,637
School Building Aid	11,490,451	8,311,872	8,070,192	7,028,512	6,816,272	6,599,472	6,375,200
Total Debt Service	102,387,329	93,685,589	84,712,814	73,502,611	67,999,519	62,522,052	53,970,712

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

		2020	2021	2022	2023	2024	2025	2026
Debt Issued in FY2020	Outstanding	0	0	0	0	0	0	0
Current Interest Bonds	Principal Payments	0	0	0	0	0	0	0
	Interest Payments	0	0	0	0	0	0	0
	Total Debt Service	0	0	0	0	0	0	0
Debt Issued in FY2021	Outstanding		60,000	56,400	52,800	49,200	45,600	42,000
Current Interest Bonds	Principal Payments		0	3,600	3,600	3,600	3,600	3,600
	Interest Payments		1,500	2,910	2,730	2,550	2,370	2,190
	Total Debt Service		1,500	6,510	6,330	6,150	5,970	5,790
Debt Issued in FY2022	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			1,500	2,910	2,730	2,550	2,370
	Total Debt Service	0	0	1,500	6,510	6,330	6,150	5,970
Debt Issued in FY2023	Outstanding				60,000	56,400	52,800	49,200
Current Interest Bonds	Principal Payments				0	3,600	3,600	3,600
	Interest Payments				1,500	2,910	2,730	2,550
	Total Debt Service	0	0	0	1,500	6,510	6,330	6,150
Debt Issued in FY2024	Outstanding					60,000	56,400	52,800
Current Interest Bonds	Principal Payments					0	3,600	3,600
	Interest Payments					1,500	2,910	2,730
	Total Debt Service	0	0	0	0	1,500	6,510	6,330
Debt Issued in FY2025	Outstanding						60,000	56,400
Current Interest Bonds	Principal Payments						0	3,600
	Interest Payments						1,500	2,910
	Total Debt Service	0	0	0	0	0	1,500	6,510
Debt Issued in FY2026	Outstanding							60,000
Current Interest Bonds	Principal Payments							0
	Interest Payments							1,500
	Total Debt Service	0	0	0	0	0	0	1,500
Totals Debt Service on New G.O. Debt								
	Principal Payments	0	0	3,600	7,200	10,800	14,400	18,000
	Interest Payments	0	1,500	4,410	7,140	9,690	12,060	14,250
	Total Debt Service	0	1,500	8,010	14,340	20,490	26,460	32,250

Rate on Current Interest Bonds: **5.00%**
Rate on Commercial Paper: **3.00%**

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

	2020	2021	2022	2023	2024	2025	2026	2027
BFA $20 million Bond								
Principal	0	0	0	0	0	0	0	0
Interest	590,806	354,000	354,000	354,000	354,000	354,000	354,000	354,000
Total	590,806	354,000	354,000	354,000	354,000	354,000	354,000	354,000
BFA Loan & Revenue Bond Programs (1)								
Balance	36,100,000	35,118,637	34,078,393	32,975,734	31,806,916	30,567,968	29,254,684	27,862,602
Principal	981,363	1,040,244	1,102,659	1,168,818	1,238,948	1,313,284	1,392,081	1,475,606
Interest	2,166,000	2,107,118	2,044,704	1,978,544	1,908,415	1,834,078	1,755,281	1,671,756
Payment	3,147,363	3,147,363	3,147,363	3,147,363	3,147,363	3,147,363	3,147,363	3,147,363
Qualified School Construction Bonds								
Principal	2,341,463	2,193,750	2,182,500	2,182,500	2,182,500	2,182,500	2,182,500	2,182,500
Interest (gross of tax credit)	883,185	764,942	647,002	529,365	411,729	294,092	176,455	58,818
Total	3,224,648	2,958,692	2,829,502	2,711,865	2,594,229	2,476,592	2,358,955	2,241,318
Total Outstanding State Guaranteed Debt								
Principal	3,322,825	3,233,994	3,285,159	3,351,318	3,421,448	3,495,784	3,574,581	3,658,106
Interest	3,639,991	3,226,060	3,045,706	2,861,909	2,674,144	2,482,170	2,285,736	2,084,575
Total	6,962,816	6,460,055	6,330,865	6,213,228	6,095,591	5,977,954	5,860,318	5,742,681

(1) Assumes level debt service with the following parameters:

Principal*	**36,100,000**
Number of Years	20
Interest Rate	**6.0%**
Annual Payments	3,147,363

* Includes $22.3 million of BFA loans and $13.8 million of BFA revenue bonds

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

	2020	2021	2022	2023	2024	2025	2026	2027
Issuances in FY2020 (1)								
Balance		23,000,000	22,374,755	21,711,996	21,009,471	20,264,794	19,475,437	18,638,718
Principal		625,245	662,759	702,525	744,677	789,357	836,719	886,922
Interest		1,380,000	1,342,485	1,302,720	1,260,568	1,215,888	1,168,526	1,118,323
Total Debt Service		2,005,245	2,005,245	2,005,245	2,005,245	2,005,245	2,005,245	2,005,245
Issuances in FY2021 (1)								
Balance			23,000,000	22,374,755	21,711,996	21,009,471	20,264,794	19,475,437
Principal			625,245	662,759	702,525	744,677	789,357	836,719
Interest			1,380,000	1,342,485	1,302,720	1,260,568	1,215,888	1,168,526
Total Debt Service			2,005,245	2,005,245	2,005,245	2,005,245	2,005,245	2,005,245
Issuances in FY2022 (1)								
Balance				22,880,000	22,258,017	21,598,716	20,899,856	20,159,065
Principal				621,983	659,302	698,860	740,791	785,239
Interest				1,372,800	1,335,481	1,295,923	1,253,991	1,209,544
Total Debt Service				1,994,783	1,994,783	1,994,783	1,994,783	1,994,783
Issuances in FY2023 (1)								
Balance					11,660,000	11,343,028	11,007,038	10,650,888
Principal					316,972	335,990	356,150	377,519
Interest					699,600	680,582	660,422	639,053
Total Debt Service					1,016,572	1,016,572	1,016,572	1,016,572
Issuances in FY2024 (1)								
Balance						11,660,000	11,343,028	11,007,038
Principal						316,972	335,990	356,150
Interest						699,600	680,582	660,422
Total Debt Service						1,016,572	1,016,572	1,016,572
Total State Guaranteed Debt to be Issued								
Principal	0	625,245	1,288,004	1,987,267	2,423,475	2,885,856	3,059,007	3,242,547
Interest	0	1,380,000	2,722,485	4,018,005	4,598,369	5,152,561	4,979,409	4,795,869
Total Debt Service	0	2,005,245	4,010,490	6,005,272	7,021,844	8,038,416	8,038,416	8,038,416
Total Outstanding and Future Issuances of State Guaranteed Debt (2)								
Principal	3,322,825	3,859,239	4,573,163	5,338,586	5,844,923	6,381,640	6,633,588	6,900,654
Interest	3,639,991	4,606,060	5,768,191	6,879,914	7,272,513	7,634,730	7,265,145	6,880,443
Total Debt Service	6,962,816	8,465,299	10,341,354	12,218,500	13,117,435	14,016,371	13,898,734	13,781,097

(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 $60 Million Annually in FY 2021-26; Revenues Decline More Significantly in FY 2021-2026
School Building Aid Bonds Included

(1) Includes issuance of $80.175 million of New Money 2020 Series A Bonds in February 2020; $59.9 million credited to Net General Fund Debt.
(2) $60 million issued annually in FY 2021 through 2026 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 2019 and actual cash basis revenues for FY 2020; and budgeted adjusted revenues for FY 2021, with ETF portion of meals and rooms tax revenues designated for the debt service on school building aid bonds added.
Assumes revenues decrese by 5% in FY 2022 and no revenue growth in FY 2023-26.
(5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2018 figure of $83,143 million. Assumes 2.7% growth annually thereafter.
(6) Population source: U.S. Census Bureau 2019 figure of 1,359,711. Assumes 0.2% growth annually thereafter.
(7) For certain sensitivities, State guaranteed debt that is added to Net General Fund Debt includes the outstanding $17.6 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling $56.1 million at June 30, 2019.
(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.
$23 million is issued in each of FY 2021 and 2022, $22.88 million in 2023 and $11.66 million in each of FY 2024 and 2025.
Estimated authorized but unissued State guaranteed debt of $92.2 million includes:
$20 million for local Superfund sites; $58.3 million for BFA and $13.9 million for Pease.

THE STATE OF NEW HAMPSHIRE
Debt Affordability Study Update
Sensitivity Case 1 - Issuance of $60 Million Annually in FY 2021-26; Revenues Decline More Significantly in FY 2021-2026
School Building Aid Bonds Included

		Actual	Projected							TOTAL
		2019	2020	2021	2022	2023	2024	2025	2026	2019-2025
Net General Fund Debt (000's)										
Beginning Outstanding			$584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	
Issuances (1)(2)			$59,881	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$419,881
Retirements:	Existing Debt (1)		76,591	69,232	63,159	54,934	52,016	48,865	42,296	407,092
	New Debt (2)		0	0	3,600	7,200	10,800	14,400	18,000	54,000
	Total Retirements		$76,591	$69,232	$66,759	$62,134	$62,816	$63,265	$60,296	$461,092
Net New Debt			($16,710)	($9,232)	($6,759)	($2,134)	($2,816)	($3,265)	($296)	($41,211)
Ending Outstanding (3)		$584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	$542,917	($41,211)
Existing Debt Service (000's) (1)		$104,763	$102,387	$93,686	$84,713	$73,503	$68,000	$62,522	$53,971	
New Debt Service (000's) (2)		0	0	1,500	$8,010	14,340	20,490	26,460	32,250	
Total Debt Service (000's)		$104,763	$102,387	$95,186	$92,723	$87,843	$88,490	$88,982	$86,221	
General Fund Unrestricted Revenues (000's)(4)		$1,633,903	$1,505,590	$1,427,707	$1,427,465	$1,426,424	$1,426,211	$1,425,994	$1,425,770	
Debt Service as a Percent of Revenues		6.4%	6.8%	6.7%	6.5%	6.2%	6.2%	6.2%	6.0%	
Total Personal Income (000,000's) (5)		85,388	87,693	90,061	92,493	94,990	97,555	100,189	102,894	
Debt to Personal Income		0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	
Population (000's) (6)		1,360	1,362	1,365	1,368	1,371	1,373	1,376	1,379	
Debt Per Capita		$430	$416	$409	$403	$401	$398	$395	$394	

Footnotes explained on page 2.

THE STATE OF NEW HAMPSHIRE
Debt Affordability Study Update
Assumptions to Sensitivity Case 2 - Issuance of $60 Million Annually in FY 2021-26; Personal Income Growth Rate 1.7% in FY 2021-2026
School Building Aid Bonds Included

(1) Includes issuance of $80.175 million of New Money 2020 Series A Bonds in February 2020; $59.9 million credited to Net General Fund Debt.
(2) $60 million issued annually in FY 2021 through 2026 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 2019 and actual cash basis revenues for FY 2020; and budgeted adjusted revenues for FY 2021, with ETF portion of meals and rooms tax revenues designated for the debt service on school building aid bonds added.
Assumes revenue decrese by 2% in FY 2022, by 1% in FY 2023, no growth revenue in FY 2024 and 1% annual revenue growth in FY 2025-26.
(5) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2018 figure of $83,122 million. Assumes 2.7% growth annually in FY 2019 and FY 2020 and 1.7% in FY 2021 through 2026.
(6) Population source: U.S. Census Bureau 2019 figure of 1,359,711. Assumes 0.2% growth annually thereafter.
(7) For certain sensitivities, State guaranteed debt that is added to Net General Fund Debt includes the outstanding $17.6 million of Qualified School Construction Bonds (QSCBs) and BFA debt totaling $56.1 million at June 30, 2019.
(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.
$23 million is issued in each of FY 2021 and 2022, $22.88 million in 2023 and $11.66 million in each of FY 2024 and 2025.
Estimated authorized but unissued State guaranteed debt of $92.2 million includes:
$20 million for local Superfund sites; $58.3 million for BFA and $13.9 million for Pease.

THE STATE OF NEW HAMPSHIRE
Debt Affordability Study Update
Sensitivity Case 2 - Issuance of $60 Million Annually in FY 2021-26; Lower Personal Income Growth Rate in FY 2021-2026
School Building Aid Bonds Included

		Actual	Projected							TOTAL
		2019	2020	2021	2022	2023	2024	2025	2026	2019-2026
Net General Fund Debt (000's)										
Beginning Outstanding			$584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	$584,128
Issuances (1)(2)			$59,881	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$419,881
Retirements:	Existing Debt (1)		76,591	69,232	63,159	54,934	52,016	48,865	42,296	407,092
	New Debt (2)		0	0	3,600	7,200	10,800	14,400	18,000	54,000
	Total Retirements		$76,591	$69,232	$66,759	$62,134	$62,816	$63,265	$60,296	$461,092
Net New Debt			($16,710)	($9,232)	($6,759)	($2,134)	($2,816)	($3,265)	($296)	($41,211)
Ending Outstanding (3)		$584,128	$567,418	$558,186	$551,427	$549,293	$546,477	$543,213	$542,917	$542,917
Existing Debt Service (000's) (1)		$104,763	$102,387	$93,686	$84,713	$73,503	$68,000	$62,522	$53,971	
New Debt Service (000's) (2)		0	0	1,500	8,010	14,340	20,490	26,460	32,250	
Total Debt Service (000's)		$104,763	$102,387	$95,186	$92,723	$87,843	$88,490	$88,982	$86,221	
General Fund Unrestricted Revenues (000's)(4)		$1,633,903	$1,505,590	$1,472,530	$1,443,004	$1,427,613	$1,427,401	$1,441,390	$1,455,513	
Debt Service as a Percent of Revenues		6.4%	6.8%	6.5%	6.4%	6.2%	6.2%	6.2%	5.9%	
Total Personal Income (000,000's) (5)		85,388	87,693	89,184	90,700	92,242	93,810	95,405	97,027	
Debt to Personal Income		0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Population (000's) (6)		1,360	1,362	1,365	1,368	1,371	1,373	1,376	1,379	
Debt Per Capita		$430	$416	$409	$403	$401	$398	$395	$394	

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 2019	Projected 2020	2021	2022	2023	2024	2025	2026	TOTAL 2019-2026
Beginning Outstanding (7) (8)		$657,864	$637,831	$647,740	$659,408	$674,815	$677,815	$679,828	
G.O. Issuances		$59,881	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$419,881
State Guaranteed Issuances (7) (8)		0	23,000	23,000	22,880	11,660	11,660	0	92,200
Retirements G.O. Debt		76,591	69,232	66,759	62,134	62,816	63,265	60,296	461,092
State Guaranteed Debt (8)		3,323	3,859	4,573	5,339	5,845	6,382	6,634	35,954
Total Retirements		$79,914	$73,091	$71,332	$67,472	$68,661	$69,646	$66,930	$497,046
Net New Debt		($20,033)	$9,909	$11,668	$15,408	$2,999	$2,014	($6,930)	$15,035
Ending Outstanding	$657,864	$637,831	$647,740	$659,408	$674,815	$677,815	$679,828	$672,899	$15,035
G.O. Debt Service (000's)	$104,763	$102,387	$95,186	$92,723	$87,843	$88,490	$88,982	$86,221	
State Guaranteed Debt Service (000's) (8)	6,480	6,963	8,465	10,341	12,219	13,117	14,016	13,899	
Total Debt Service (000's)	111,242	109,350	103,651	103,064	100,061	101,607	102,998	100,119	
General Fund Unrestricted Revenues (000's) (4)	$1,633,903	$1,505,590	$1,427,707	$1,427,465	$1,426,424	$1,426,211	$1,425,994	$1,425,770	
Debt Service as a Percent of Revenues	6.8%	7.3%	7.3%	7.2%	7.0%	7.1%	7.2%	7.0%	
Total Personal Income (000,000's) (5)	$85,388	$87,693	$90,061	$92,493	$94,990	$97,555	$100,189	$102,894	
Debt to Personal Income	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
Population (000's) (6)	1,360	1,362	1,365	1,368	1,371	1,373	1,376	1,379	
Debt Per Capita	$484	$468	$474	$482	$492	$494	$494	$488	

Footnotes explained on page 2.