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STATE TREASURER



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January 11, 2013

Honorable Peter Bragdon  
President of the Senate  
Honorable Terie Norelli  
Speaker of the House

Dear President Bragdon and Speaker Norelli:

Attached is a copy of the debt affordability study for fiscal year 2012 prepared by the State Treasury and Public Resources Advisory Group, the State's financial advisors. In developing this year's study we have examined the impact of debt issuance and economic scenarios on the State's debt ratios. It is important to note this study focuses on net General Fund debt outstanding and does not consider debt funded with Highway Funds or other self-supporting sources.

The base case found on page 3 of the appendix assumes issuance of \$67.5 million in new net general fund debt and annual revenue growth of 2.5% in fiscal years 2014 through 2019. The bond authorization and appropriation for the University System of New Hampshire's (USNH) Knowledge Economy Education Plan (KEEP) program expires June 30, 2013. The \$67.5 million in new net general fund debt in fiscal years 2014 through 2019 would include any new authorizations for USNH capital needs. Also included in the attached analysis is the effect of the issuance of \$131 million in school building aid debt in fiscal years 2010 and 2011.

Sensitivity Case 1 found on page 13 of the appendix, assumes the same debt issuance as in the base case but assumes a constant revenue forecast. The purpose of this alternative case is to examine how no revenue growth might affect our borrowing capacity. Sensitivity Case 2 on page 15 of the appendix assumes the same debt issuance and revenue growth assumed in the base case but increases the interest rate by one percentage point. Both of these sensitivity analyses demonstrate that while our debt service to revenue ratio increases, it remains below the 10% rule of thumb warning level.

In addition, scenarios were prepared to highlight the impact of state guaranteed bonds on the State's debt ratios. Even in the very worst case (and unlikely) scenario under which the State would be required to assume all guarantee liabilities our debt service to revenue ratio below the 10% rule of thumb warning level, albeit by a narrow margin.

Hon. Peter Bragdon  
Hon. Terie Norelli  
January 11, 2013  
Page 2

The debt service to unrestricted revenues ratio is the measure most closely examined by policy makers as the best barometer of our debt affordability levels. This analysis indicates that our debt service to unrestricted revenue ratio remains manageable under these scenarios. From past analyses we know that our ratios are most dramatically impacted by assuming no future revenue growth in state unrestricted revenues.

Our ratios are also influenced by including contingent debt in the analysis, which is admittedly a worst case scenario but important to consider for credit rating purposes. While sometimes difficult to measure, the level of contingent debt does have an impact on our credit rating, notwithstanding the past success of our State guarantee programs.

I am happy to further discuss this study with you at any time.

Respectfully,



Catherine A. Provencher  
State Treasurer

**Attachments**

**Cc:**

Honorable Maggie Hassan, Governor  
Representative Mary Jane Wallner, Chair, House Finance Committee  
Representative David Campbell, Chair, House Public Works and Highways  
Senator Chuck Morse, Chair, Senate Finance Committee  
Senator David Boutin, Senate Capital Budget Committee  
Linda Hodgdon, Commissioner, Department of Administrative Services  
Jeffrey Pattison, Legislative Budget Assistant

## Public Resources Advisory Group

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40 Rector Street, Suite 1600 ■ New York, New York 10006-2908 ■ (212) 566-7800

**MEMORANDUM TO:** The Honorable Catherine Provencher  
Treasurer  
State of New Hampshire

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

**SUBJECT:** Debt Affordability Study Update

**DATE:** December 18, 2012

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As requested, we have updated the debt affordability study for the State of New Hampshire. This study analyzes only net General Fund debt outstanding at June 30, 2012. The School Building Aid bonds are included in the study. 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 November 9, 2012), "The state's debt ratios are low-to-moderate" (Standard & Poor's report dated November 12, 2012) and "debt levels are low, amortization is rapid" (Fitch Ratings report dated November 9, 2012). Thus, the credit agencies recognize the State's fiscal prudence in regard to debt.

### Assumptions

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

1. \$67.5 million of tax-exempt general obligation debt to be issued in each of fiscal years 2013 through 2019. Each issue is assumed to be amortized over 20 years and carry 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 second ten years. Future debt issuance includes \$17.5 million annually for the University System of New Hampshire in fiscal years 2013 through 2019, totaling \$122.5 million.
2. \$50 million of the Commercial Paper is reissued in fiscal year 2013 and the outstanding Commercial Paper rolled over each year through 2019 at an assumed rate of 3.00%.
3. General Fund Unrestricted Revenues reflect actual revenues for fiscal year 2012 and projected revenues for fiscal year 2013 with the portion of meals and room tax revenues designated for the debt service of school building aid included and an average annual growth of 2.50% in fiscal years 2014 through 2019.
4. Total personal income is based on 2011 figure of \$60.480 million and is projected to grow at an average annual rate of 4.00%.
5. Population is based on 2011 figure of 1.318 million and is projected to grow at an average annual rate of 0.70% 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 taken into account includes debt issued for local Superfund sites, Business Finance Authority ("BFA") and Pease Development Authority ("PDA") and

## Public Resources Advisory Group

Division of Water Resources. The analysis excludes State guaranteed debt issued for water pollution control, local schools and local landfills and Division of Water Resources (program eliminated).

2. Future issuances of State guaranteed debt are assumed to be as follows:

| <b>Expected Issuances of State Guaranteed Debt</b> |                      |                       |
|--|----------------------|-----------------------|
| <b>Fiscal Year</b>                                 | <b>Dollar Amount</b> | <b>Purpose</b>        |
| 2014   | \$29,400,000         | Superfund, BFA, Pease |
| 2015   | 29,400,000           | Superfund, BFA, Pease |
| 2016   | 29,300,000           | Superfund, BFA, Pease |
| 2017   | 6,400,000            | BFA                   |
| 2018   | 6,400,000            | 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**

Chart One of 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 \$67.5 million of tax-exempt general obligation debt in each of fiscal years 2013 through 2019 in addition to the issuance of \$50 million of Commercial Paper in fiscal year 2013. Combining these issuances and repayments of outstanding debt, the total issuance is approximately \$22.7 million less than retirements during the period, causing the State's net general fund debt to decrease from \$807.8 million at June 30, 2012 to \$786.2 million at June 30, 2019, a total decrease of 2.7% or 0.4% annually.

At the current time, New Hampshire's ratios of debt to personal income and debt per capita are significantly below the 2012 Moody's medians for states. New Hampshire's net general fund debt service to revenues ratio at 7.8% for fiscal year 2012 was higher than the median of 4.9% but well below the level that credit analysts use as a warning sign of excessive debt service burden of 10.0%. By issuing general obligation debt over the projected period in the amounts outlined above, New Hampshire's debt ratios would remain under the 2012 Moody's medians for states except for the debt service to revenues ratio, as summarized in the following chart:

| <b>Summary of Debt Ratios for Net General Fund Debt</b> |                       |                      |                    |
|---|-----------------------|----------------------|--------------------|
|   | <b>Moody's Median</b> | <b>New Hampshire</b> |                    |
|   | 2012                  | June 30, 2012        | June 30, 2019 Est. |
| Debt to Personal Income                                 | 2.8%                  | 1.3%                 | 0.9%               |
| Debt Per Capita   | \$1,117               | \$609                | \$564              |
| Debt Service to Revenues                                | 4.9%*                 | 7.8%                 | 7.5%               |

\* 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.

## Public Resources Advisory Group

As can be seen, the ratio of debt service to revenues is projected to decrease to 7.5% at June 30, 2019 although it would reach 8.0% in fiscal year 2015. Debt to personal income would decline over the period, from 1.3% at June 30, 2012 to 0.9% at June 30, 2019 and debt per capita would decline from \$609 to \$564. These ratios relative to Moody's medians form the basis for the rating agencies assessment of the State's debt position.

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

Given the current and future uncertainty regarding the economy and the markets, it is even more difficult than ever to make forecasts. Accordingly, a sensitivity case on General Fund revenues was developed, assuming no growth of revenues after fiscal year 2013. Under these assumptions, New Hampshire's debt ratios would change as summarized in the chart below:

| <b>Debt Ratios Assuming Constant Revenues After FY 2013</b> |                           |                      |         |                                |         |
|---|---------------------------|----------------------|---------|--------------------------------|---------|
| <b>Summary of Debt Ratios for Net General Fund Debt</b>     |                           |                      |         |                                |         |
|   | <b>Moody's<br/>Median</b> | <b>New Hampshire</b> |         |                                |         |
|   |                           | Base Case            |         | Constant Revenue<br>Assumption |         |
|   |                           | 2012                 | FY 2012 | FY 2019<br>Est.                | FY 2012 |
| Debt to Personal Income                                     | 2.8%                      | 1.3%                 | 0.9%    | 1.3%                           | 0.9%    |
| Debt Per Capita   | \$1,117                   | \$609                | \$564   | \$609                          | \$564   |
| Debt Service to Revenues                                    | 4.9%*                     | 7.8%                 | 7.5%    | 7.8%                           | 8.7%    |

With the constant revenue, the ratio of debt service to revenues would increase substantially from 7.8% for fiscal year 2012 to 8.7% for fiscal year 2019, comparing to 7.5% in the Base Case. At the 8.7% level, this ratio would be still below the 10.0% 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 12-13 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. The results are as follows:

| <b>Debt Ratios Assuming Increased Tax-Exempt Rates</b>  |                       |                      |         |                           |         |
|---|-----------------------|----------------------|---------|---------------------------|---------|
| <b>Summary of Debt Ratios for Net General Fund Debt</b> |                       |                      |         |                           |         |
|   | <b>Moody's Median</b> | <b>New Hampshire</b> |         |                           |         |
|   |                       | Base Case            |         | 1% Interest Rate Increase |         |
|   |                       | 2012                 | FY 2012 | FY 2019 Est.              | FY 2012 |
| Debt to Personal Income                                 | 2.8%                  | 1.3%                 | 0.9%    | 1.3%                      | 0.9%    |
| Debt Per Capita   | \$1,117               | \$609                | \$564   | \$609                     | \$564   |
| Debt Service to Revenues                                | 4.9%*                 | 7.8%                 | 7.5%    | 7.8%                      | 7.7%    |

\* 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 7.8% in fiscal year 2012 in the Base Case to 7.7% for fiscal year 2019, still 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 15-16 of the Appendix).

## Public Resources Advisory Group

### Effect of State Guarantees on Debt Ratios

Chart Two of the Base Case (page 4 of the Appendix) shows the effect of State guarantees on New Hampshire's debt ratios. For this analysis there was \$98.9 million of outstanding guaranteed debt at June 30, 2012, which added to the State's net General Fund debt bringing the total to \$906.8 million, as shown in the table below:

| <b>Net General Fund and Guaranteed Debt at June 30, 2012</b> |         |
|--|---------|
| <i>(\$ in millions)</i>                                      |         |
| Net General Fund Debt  | \$807.8 |
| Guaranteed Debt  |         |
| Pease Development Authority                                  | 3.0     |
| Business Finance Authority                                   | 63.0    |
| Qualified School Construction Bonds (QSCBs)                  | 32.9    |
| Total Guaranteed Debt  | \$98.9  |
| Total Net General Fund and Guaranteed Debt                   | \$906.8 |

There is approximately \$100.9 million of authorized but unissued State guaranteed debt at June 30, 2012, as shown in the table below:

| <b>Authorized But Unissued State Guaranteed Debt at June 30, 2012</b> |                |
|---|----------------|
| <b>Purpose</b>  | <b>Amount</b>  |
| <i>(\$ in millions)</i>   |                |
| Local Superfund Sites   | \$20.0         |
| Business Finance Authority  | 32.0           |
| Pease Development Authority   | 48.9           |
| <b>Total</b>  | <b>\$100.9</b> |

For this scenario, we assumed that: the Business Finance Authority would issue \$6.4 million in each of fiscal years 2014 through 2018; Pease Development Authority would issue \$16.3 million in each of fiscal years 2014 through 2016; and the Local Superfund would issue \$6.7 million in each of fiscal years 2014 and 2015 and \$6.6 million in fiscal year 2016.

The table below compares the ratios in four cases. The first case is the Base Case, without guaranteed debt. The second case, 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 maximum exposure would rise to approximately \$1.0 billion at June 30, 2016, which is \$168.1 million more than the net General Fund debt expected to be outstanding at that time. The third case, shown in the Appendix on page 5, includes outstanding and additional issuances of State guaranteed debt, described above, but assumes that \$20 million BFA loan and Pease Development Authority-Lonza Biologics (Celltech) issue have become self-supporting three years after commencement of their respective debt service payments. Contingent debt is deemed by credit analysts to be self-supporting if cash flow from operations is sufficient to pay debt service for three consecutive fiscal years. To the extent any other contingent debt becomes self-supporting; the ratios would be improved by excluding such obligations from State indebtedness. The last "worst case" scenario combines outstanding and additional issuances of the State guaranteed debt (Case 2) with a flat revenue

## Public Resources Advisory Group

assumption (Sensitivity Case 2), shown in the Appendix on page 14. The resulting debt ratios are summarized in the following chart:

### Summary of Debt Ratios Including State Guaranteed Debt

|                                  | New Hampshire     |   |         |                               |         |  |         |  |         |
|----------------------------------|-------------------|---|---------|-------------------------------|---------|--|---------|--|---------|
|                                  | Moody's<br>Median | Case 1 (Base Case)<br>Net General Fund Debt |         | Case 2<br>All Guaranteed Debt |         | Case 3<br>Excluding Self-Supporting<br>Guaranteed Debt |         | Case 4<br>All Guaranteed Debt and<br>Flat Revenues |         |
|                                  |                   | FY 2019<br>Est.                             |         | FY 2019<br>Est.               |         | FY 2019<br>Est.  |         | FY 2019<br>Est.                                    |         |
|                                  |                   | 2012  | FY 2012 | FY 2012                       | FY 2012 | FY 2012  | FY 2012 | FY 2012  | FY 2012 |
| Total Debt Outstanding (000,000) | ---               | \$808                                       | \$766   | \$906                         | \$946   | \$884  | \$923   | \$907  | \$946   |
| Debt to Personal Income          | 2.8%              | 1.3%  | 0.9%    | 1.4%                          | 1.1%    | 1.4%   | 1.1%    | 1.4%   | 1.1%    |
| Debt Per Capita                  | \$1,117           | \$609                                       | \$564   | \$683                         | \$679   | \$666  | \$662   | \$683  | \$679   |
| Debt Service to Revenues         | 4.9%*             | 7.8%  | 7.5%    | 8.7%                          | 8.5%    | 8.0%   | 8.5%    | 8.7%   | 9.9%    |

\* 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.

As would be expected, all debt ratios rise as a result of additional State guaranteed debt issuances. At June 30, 2019, the State's debt to personal income would be 1.1% in Case 2 as opposed to 0.9% in the Base Case while reaching 1.5% in fiscal year 2013. Debt per capita would be \$679 in Case 2 as opposed to \$564 in the Base Case; and debt service to revenues would be 8.5% as opposed to 7.5% in the Base Case. In Case 3, the State's debt to personal income at June 30, 2019, would be 1.1%, while debt per capita would be \$662 as opposed to \$679 in Case 2. Debt service to revenues would be 8.5%, same as in Case 2. Debt per capita and debt to personal income ratio would be lower than the 2012 Moody's medians. Debt service to revenue ratio would remain below the "warning level" of 10%. With an assumption of no revenue growth added to Case 2, the "worst case" scenario, debt service to revenue ratio increases to 9.9% in fiscal year 2019, almost reaching the "warning level."

### Conclusion

The State's debt ratios are considered "manageable" to "low" by the rating agencies. If the State issues \$522.5 million of general obligation debt in fiscal years 2013 through 2019, as outlined above, the amount of debt outstanding would fall slightly and the effect on the debt ratios would be as follows: debt to personal income would decrease from the current level of 1.3% to 0.9% at the end of fiscal year 2019; debt service to revenues would decrease from 7.8% to 7.5% at June 30, 2019; and debt per capita would decline from \$609 to \$564. At these levels, the debt ratios would continue to remain "manageable."

Sensitivity analyses show that with constant revenues the debt service to revenue ratio would be 8.7% in fiscal year 2019, above the 7.5% level in the Base Case, and it would be 7.7% in the scenario with increased interest rates. At these levels, the debt service to revenue ratios in the two sensitivity cases would still be below the warning level for excessive debt service burden of 10%, although closer to it.

When existing and additional State guaranteed debt are added to the Base Case scenario, debt to personal income declines from the fiscal year 2012 level of 1.4% to 1.1%, maintaining that level through fiscal year 2016, before gradually falling down to 1.1% in fiscal year 2019. Debt per capita and the debt service ratio would rise above both current and projected Base Case ratios under the "worst case" scenario of constant revenues, with the most substantial effect on the projected ratio of debt service to revenues, which would rise from the projected Base Case level of 7.5% in fiscal year 2019 to 9.9%. Exclusion of debt expected to be self-supporting would lower this ratio to 8.5% at June 30, 2019. Debt to personal income

## **Public Resources Advisory Group**

ratio would be 1.1%, the same as under the “worst case” scenario. Debt per capita would be lowered from \$679 in the “worst case” scenario to \$662.

Since the ratio of debt service to revenues is already above the Moody’s median level, the State should watch closely this ratio and take corrective action if revenue growth falls below the level projected in the Base Case. This becomes particularly important if the 10% “warning level” is approached.

THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update

Appendix – Analytic Summary

|  |         |
|--|---------|
| List of Exhibits   | Page 1  |
| Assumptions to Base Case   | Page 2  |
| Base Case Results  | Page 3  |
| Effect of State Guaranteed Bonds on Debt Ratios  | Page 4  |
| Effect of State Guaranteed Bonds on Debt Ratios Excluding Self-Supporting Debt for BFA and PDA | Page 5  |
| Debt Service on Outstanding General Obligation Debt  | Page 6  |
| Debt Service on Projected General Obligation Debt  | Page 7  |
| Estimated Debt Service on Outstanding State Guaranteed Debt                                    | Page 8  |
| Estimated Debt Service on State Guaranteed Debt to Be Issued                                   | Page 9  |
| Estimated Debt Service on Outstanding State Guaranteed Debt Excluding Self-Supporting Debt     | Page 10 |
| Estimated Debt Service on State Guaranteed Debt to Be Issued Excluding Self-Supporting Debt    | Page 11 |
| Assumptions to Sensitivity Case 1 (Flat Revenues after FY 2013)                                | Page 12 |
| Sensitivity Case 1 Results   | Page 13 |
| Sensitivity Case 1 Effect of State Guaranteed Bonds on Bond Ratios                             | Page 14 |
| Assumptions to Sensitivity Case 2 (Interest Rates Increased)                                   | Page 15 |
| Sensitivity Case 2 Results   | Page 16 |

THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update

Assumptions to Base Case - Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$50 Million General Fund and \$17.5 Million University) in FY 2014-2019  
School Building Aid Bonds Included

- (1) \$67.5 million of current interest bonds issues annually in FY 2013 through 2019 at an interest rate of 5.0%, 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 second ten years.  
\$50 million of Commercial Paper is issued in FY 2013 and rolled over each year through 2019 at a rate of 3.0%.
- (2) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues. It does include General Fund debt for school building aid.
- (3) General Fund Unrestricted Revenues reflect actual revenues for FY 2012 and projected revenues for FY 2013, with the portion of meals and room tax revenues designated for the debt service of school building aid bonds included. They are assumed to grow by 2.5% in each of fiscal years 2014 through 2019.
- (4) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2011 figure of \$60,480 million. Assumes 4% growth annually thereafter.
- (5) Population - source: U.S. Census Bureau for 2011 figure of 1,318,000. Assumes 0.7% growth annually thereafter.
- (6) State guaranteed debt includes Net General Fund Debt plus the outstanding self-supporting PDA debt totaling \$3.028 million, \$32.9 million of Qualified School Construction Bonds (QSCBs) and BFA debt totalling \$63 million at June 30, 2012.  
State guaranteed debt excluding self-supporting debt includes Net General Fund Debt plus \$32.9 million of QSCBs and \$43 million BFA debt at June 30, 2012.
- (7) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites; BFA, PDA and Division of Water Resources. 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.  
\$29.4 million is issued in each of FY 2014 and 2015, \$29.3 million in 2016 and \$6.4 million in each of FY 2017 and 2018.  
Estimated authorized but unissued State guaranteed debt of \$100.9 million includes:  
\$20 million for local Superfund sites, \$32 million for BFA and \$48.9 million for Pease.  
State guaranteed self-supporting debt includes \$20 million outstanding BFA bonds and outstanding \$3.028 million in FY 2012 of the original \$30 million PDA - Lonza issue.

**THE STATE OF NEW HAMPSHIRE**  
**Debt Affordability Study Update**  
**Base Case: Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$50 Million General Fund and \$17.5 Million University) in FY 2014-2019**  
**School Building Aid Bonds Included**

|   | Actual<br>2012 | Projected   |             |             |             |             |             |             | TOTAL<br>2013-2019 |
|---|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|
|   |                | 2013        | 2014        | 2015        | 2016        | 2017        | 2018        | 2019        |                    |
| Net General Fund Debt (000's)                 |                |             |             |             |             |             |             |             |                    |
| Beginning Outstanding                         |                | \$807,847   | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686   |                    |
| Issuances                                     |                | \$117,500   | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$522,500          |
| Retirements:                                  |                | 72,371      | 69,399      | 65,755      | 64,116      | 63,388      | 62,382      | 61,717      | 459,128            |
| Existing Debt                                 |                | 0           | 4,050       | 8,100       | 12,150      | 16,200      | 20,250      | 24,300      | 85,050             |
| New Debt (1)                                  |                | \$72,371    | \$73,449    | \$73,855    | \$76,266    | \$79,588    | \$82,632    | \$86,017    | \$544,178          |
| Total Retirements                             |                | \$45,129    | (\$5,949)   | (\$6,355)   | (\$8,766)   | (\$12,088)  | (\$15,132)  | (\$18,517)  | (\$21,678)         |
| Net New Debt                                  |                |             |             |             |             |             |             |             |                    |
| Ending Outstanding (2)                        | \$807,847      | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686   | \$786,169   |                    |
| Existing Debt Service (000's)                 | \$106,941      | \$110,627   | \$103,901   | \$101,998   | \$94,841    | \$89,295    | \$83,083    | \$79,284    |                    |
| New Debt Service (000's) (1)                  | 0              | 3,188       | 10,511      | 17,633      | 24,551      | 31,268      | 37,781      | 44,083      |                    |
| Total Debt Service (000's)                    | \$106,941      | \$113,814   | \$114,413   | \$119,631   | \$119,392   | \$120,563   | \$120,864   | \$123,376   |                    |
| General Fund Unrestricted Revenues (000's)(3) | \$1,391,200    | \$1,418,783 | \$1,453,469 | \$1,469,031 | \$1,525,493 | \$1,562,878 | \$1,601,214 | \$1,640,529 |                    |
| Debt Service as a Percent of Revenues         | 7.8%           | 8.0%        | 7.9%        | 8.0%        | 7.8%        | 7.7%        | 7.5%        | 7.5%        |                    |
| Total Personal Income (000,000's) (4)         | 62,899         | 65,415      | 66,032      | 70,753      | 73,583      | 76,526      | 79,588      | 82,771      |                    |
| Debt to Personal Income                       | 1.3%           | 1.3%        | 1.2%        | 1.2%        | 1.1%        | 1.1%        | 1.0%        | 0.9%        |                    |
| Population (000's) (5)                        | 1,327          | 1,337       | 1,346       | 1,355       | 1,365       | 1,374       | 1,384       | 1,394       |                    |
| Debt Per Capita                               | \$609          | \$638       | \$629       | \$620       | \$610       | \$597       | \$581       | \$564       |                    |

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      | Projected     |              |               |               |               |               |               | TOTAL         |
|--|-------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  | 2012        | 2013          | 2014         | 2015          | 2016          | 2017          | 2018          | 2019          | 2012-2019     |
| Beginning Outstanding (6)                        |             | \$806,770     | \$948,521    | \$967,725     | \$985,602     | \$999,997     | \$987,771     | \$972,067     |               |
| G.O. Issuances                                   |             | \$117,500     | \$67,500     | \$67,500      | \$67,500      | \$67,500      | \$67,500      | \$67,500      | \$522,500     |
| State Guaranteed Issuances (7)                   |             | 0             | 25,400       | 29,400        | 29,300        | 6,400         | 6,400         | 0             | 100,900       |
| Retirements G.O. Debt                            |             | 72,371        | 73,449       | 73,449        | 73,855        | 76,268        | 79,588        | 82,632        | 86,017        |
| State Guaranteed Debt (7)                        |             | <u>3,378</u>  | <u>4,247</u> | <u>5,168</u>  | <u>6,139</u>  | <u>6,538</u>  | <u>6,972</u>  | <u>7,259</u>  | <u>39,701</u> |
| Total Retirements                                |             | \$75,749      | \$77,696     | \$79,023      | \$82,405      | \$86,126      | \$89,604      | \$93,276      | \$583,879     |
| Net New Debt                                     |             | \$41,751      | \$19,204     | \$17,877      | \$14,395      | (\$12,226)    | (\$15,704)    | (\$25,776)    | \$39,521      |
| Ending Outstanding                               |             | \$906,770     | \$948,521    | \$967,725     | \$985,602     | \$999,997     | \$987,771     | \$972,067     | \$946,291     |
| G.O. Debt Service (000's)                        |             | \$108,941     | \$113,814    | \$114,413     | \$119,631     | \$119,362     | \$120,563     | \$120,864     | \$123,376     |
| State Guaranteed Debt Service (000's) (7)        |             | <u>11,832</u> | <u>8,388</u> | <u>10,810</u> | <u>13,255</u> | <u>15,686</u> | <u>18,115</u> | <u>19,554</u> | <u>16,436</u> |
| Total Debt Service (000's)                       |             | 120,873       | 122,180      | 125,223       | 132,885       | 135,079       | 136,678       | 137,418       | 139,812       |
| General Fund Unrestricted Revenues (000's)(2)(5) | \$1,391,200 | \$1,418,783   | \$1,453,469  | \$1,489,031   | \$1,525,493   | \$1,562,878   | \$1,601,214   | \$1,640,529   |               |
| Debt Service as a Percent of Revenues            | 6.7%        | 8.6%          | 8.6%         | 8.9%          | 8.9%          | 8.7%          | 8.6%          | 8.5%          |               |
| Total Personal Income (000,000's) (3)(5)         | \$62,899    | \$65,415      | \$68,032     | \$70,753      | \$73,583      | \$76,526      | \$79,588      | \$82,771      |               |
| Debt to Personal Income                          | 1.4%        | 1.5%          | 1.4%         | 1.4%          | 1.4%          | 1.3%          | 1.2%          | 1.1%          |               |
| Population (000's) (4)(5)                        | 1,327       | 1,337         | 1,346        | 1,355         | 1,365         | 1,374         | 1,384         | 1,394         |               |
| Debt Per Capita                                  | \$683       | \$710         | \$719        | \$727         | \$733         | \$719         | \$702         | \$679         |               |

Footnotes explained on page 2.

THE STATE OF NEW HAMPSHIRE  
 Debt Affordability Study Update  
 Effect of State Guaranteed Bonds (Excluding Self-Supporting Debt for BFA and PDA) on Debt Ratios

| Net General Fund Debt (000's)                    | Actual<br>2012 | Projected    |               |               |               |               |               |               | TOTAL<br>2013-2019 |
|--|----------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------|
|  |                | 2013         | 2014          | 2015          | 2016          | 2017          | 2018          | 2019          |                    |
| Beginning Outstanding (6) (7)                    |                | \$883,742    | \$925,493     | \$944,697     | \$962,574     | \$976,969     | \$964,743     | \$949,039     |                    |
| G.O. Issuances                                   |                | \$117,500    | \$67,500      | \$67,500      | \$67,500      | \$67,500      | \$67,500      | \$67,500      | \$522,500          |
| State Guaranteed Issuances                       |                | 0            | 29,400        | 29,400        | 29,300        | 6,400         | 6,400         | 0             | 100,900            |
| Retirements G.O. Debt                            |                | 72,371       | 73,449        | 73,855        | 76,266        | 79,588        | 82,632        | 86,017        | 544,178            |
| State Guaranteed Debt                            |                | <u>3,378</u> | <u>4,247</u>  | <u>5,169</u>  | <u>6,138</u>  | <u>6,538</u>  | <u>6,972</u>  | <u>7,259</u>  | <u>39,701</u>      |
| Total Retirements                                |                | \$75,749     | \$77,696      | \$79,023      | \$82,405      | \$86,126      | \$89,604      | \$93,276      | \$583,879          |
| Net New Debt                                     |                | \$41,751     | \$19,204      | \$17,877      | \$14,395      | (\$12,226)    | (\$15,704)    | (\$25,776)    | \$39,521           |
| Ending Outstanding (7)                           | \$883,742      | \$925,493    | \$944,697     | \$962,574     | \$976,969     | \$964,743     | \$949,039     | \$923,263     |                    |
| G.O. Debt Service (000's)                        | \$108,941      | \$113,814    | \$114,413     | \$118,631     | \$119,392     | \$120,563     | \$120,864     | \$123,376     |                    |
| State Guaranteed Debt Service (000's)            | <u>2,984</u>   | <u>7,671</u> | <u>10,115</u> | <u>12,560</u> | <u>14,991</u> | <u>15,420</u> | <u>15,859</u> | <u>15,741</u> |                    |
| Total Debt Service (000's)                       | \$111,925      | \$121,485    | \$124,528     | \$132,190     | \$134,384     | \$135,983     | \$136,723     | \$139,117     |                    |
| General Fund Unrestricted Revenues (000's)(2)(5) | \$1,391,200    | \$1,418,783  | \$1,453,469   | \$1,489,031   | \$1,525,493   | \$1,562,878   | \$1,601,214   | \$1,640,529   |                    |
| Debt Service as a Percent of Revenues            | 8.0%           | 8.6%         | 8.6%          | 8.9%          | 8.8%          | 8.7%          | 8.5%          | 8.5%          |                    |
| Total Personal Income (000,000's) (3)(5)         | \$62,899       | \$65,415     | \$68,032      | \$70,753      | \$73,583      | \$76,526      | \$79,588      | \$82,771      |                    |
| Debt to Personal Income                          | 1.4%           | 1.4%         | 1.4%          | 1.4%          | 1.3%          | 1.3%          | 1.2%          | 1.1%          |                    |
| Population (000's) (4)(5)                        | 1,327          | 1,337        | 1,346         | 1,355         | 1,365         | 1,374         | 1,384         | 1,394         |                    |
| Debt Per Capita                                  | \$666          | \$692        | \$702         | \$710         | \$716         | \$702         | \$686         | \$662         |                    |

Footnotes explained on page 2.

## CHART FOUR

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

|                                    | 2013             | 2014             | 2015             | 2016             | 2017             | 2018             | 2019             |
|------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Principal Repayments</b>        |                  |                  |                  |                  |                  |                  |                  |
| General Fund                       | 48,125,578       | 45,042,468       | 42,512,267       | 38,431,319       | 38,127,684       | 37,514,318       | 36,987,166       |
| University System Appropriated     | 15,821,022       | 15,624,732       | 14,500,269       | 16,932,277       | 16,496,750       | 16,092,444       | 15,943,083       |
| School Building Aid                | <u>8,724,640</u> | <u>8,732,083</u> | <u>8,742,008</u> | <u>8,752,428</u> | <u>8,763,345</u> | <u>8,774,799</u> | <u>8,786,668</u> |
| Total Repayments                   | 72,371,239       | 69,399,284       | 65,754,543       | 64,116,024       | 63,387,979       | 62,381,520       | 61,716,917       |
| <b>Interest Payments</b>           |                  |                  |                  |                  |                  |                  |                  |
| General Fund                       | 22,829,156       | 20,070,807       | 21,999,908       | 17,864,986       | 15,172,368       | 11,783,438       | 9,914,956        |
| University System Appropriated     | 8,726,498        | 9,162,692        | 9,409,333        | 8,480,017        | 8,770,125        | 5,380,865        | 4,535,911        |
| School Building Aid                | <u>5,699,816</u> | <u>5,268,477</u> | <u>4,834,393</u> | <u>4,389,913</u> | <u>3,965,016</u> | <u>3,536,682</u> | <u>3,115,892</u> |
| Total Payments                     | 36,255,470       | 34,501,976       | 36,243,635       | 30,724,916       | 25,907,509       | 20,700,985       | 17,566,759       |
| <b>Total Debt Service Payments</b> |                  |                  |                  |                  |                  |                  |                  |
| General Fund                       | 70,954,734       | 65,113,276       | 64,512,175       | 56,296,305       | 53,300,253       | 49,297,756       | 46,902,122       |
| University System Appropriated     | 25,247,520       | 24,787,424       | 23,909,602       | 25,392,294       | 23,266,874       | 21,473,308       | 20,478,994       |
| School Building Aid                | 14,424,456       | 14,000,580       | 13,576,401       | 13,152,341       | 12,728,361       | 12,311,441       | 11,902,560       |
| Total Debt Service                 | 110,626,710      | 103,901,280      | 101,998,178      | 94,840,940       | 89,295,488       | 83,062,505       | 79,283,676       |

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

|   |                                 | <u>2013</u>  | <u>2014</u>  | <u>2015</u>  | <u>2016</u>   | <u>2017</u>   | <u>2018</u>   | <u>2019</u>   |
|---|---------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| <u>Debt Issued in FY2013</u>                | Outstanding                     | 50,000       | 50,000       | 50,000       | 50,000        | 50,000        | 50,000        | 50,000        |
| Commercial Paper                            | Principal Payments              | 0            | 0            | 0            | 0             | 0             | 0             | 0             |
|   | Interest Payments               | <u>1,500</u> | <u>1,500</u> | <u>1,500</u> | <u>1,500</u>  | <u>1,500</u>  | <u>1,500</u>  | <u>1,500</u>  |
|   | Total Debt Service              | 1,500        | 1,500        | 1,500        | 1,500         | 1,500         | 1,500         | 1,500         |
| <u>Debt Issued in FY2013</u>                | Outstanding                     | 67,500       | 63,450       | 59,400       | 55,350        | 51,300        | 47,250        | 43,200        |
| Current Interest Bonds                      | Principal Payments              | 0            | 4,050        | 4,050        | 4,050         | 4,050         | 4,050         | 4,050         |
|   | Interest Payments               | <u>1,688</u> | <u>3,274</u> | <u>3,071</u> | <u>2,869</u>  | <u>2,666</u>  | <u>2,464</u>  | <u>2,261</u>  |
|   | Total Debt Service              | 1,688        | 7,324        | 7,121        | 6,919         | 6,716         | 6,514         | 6,311         |
| <u>Debt Issued in FY2014</u>                | Outstanding                     |              | 67,500       | 63,450       | 59,400        | 55,350        | 51,300        | 47,250        |
| Current Interest Bonds                      | Principal Payments              |              | 0            | 4,050        | 4,050         | 4,050         | 4,050         | 4,050         |
|   | Interest Payments               |              | <u>1,688</u> | <u>3,274</u> | <u>3,071</u>  | <u>2,869</u>  | <u>2,666</u>  | <u>2,464</u>  |
|   | Total Debt Service              |              | 1,688        | 7,324        | 7,121         | 6,919         | 6,716         | 6,514         |
| <u>Debt Issued in FY2015</u>                | Outstanding                     |              |              | 67,500       | 63,450        | 59,400        | 55,350        | 51,300        |
| Current Interest Bonds                      | Principal Payments              |              |              | 0            | 4,050         | 4,050         | 4,050         | 4,050         |
|   | Interest Payments               |              |              | <u>1,688</u> | <u>3,274</u>  | <u>3,071</u>  | <u>2,869</u>  | <u>2,666</u>  |
|   | Total Debt Service              | 0            | 0            | 1,688        | 7,324         | 7,121         | 6,919         | 6,716         |
| <u>Debt Issued in FY2016</u>                | Outstanding                     |              |              |              | 67,500        | 63,450        | 59,400        | 55,350        |
| Current Interest Bonds                      | Principal Payments              |              |              |              | 0             | 4,050         | 4,050         | 4,050         |
|   | Interest Payments               |              |              |              | <u>1,688</u>  | <u>3,274</u>  | <u>3,071</u>  | <u>2,869</u>  |
|   | Total Debt Service              | 0            | 0            | 0            | 1,688         | 7,324         | 7,121         | 6,919         |
| <u>Debt Issued in FY2017</u>                | Outstanding                     |              |              |              |               | 67,500        | 63,450        | 59,400        |
| Current Interest Bonds                      | Principal Payments              |              |              |              |               | 0             | 4,050         | 4,050         |
|   | Interest Payments               |              |              |              |               | <u>1,688</u>  | <u>3,274</u>  | <u>3,071</u>  |
|   | Total Debt Service              | 0            | 0            | 0            | 0             | 1,688         | 7,324         | 7,121         |
| <u>Debt Issued in FY2018</u>                | Outstanding                     |              |              |              |               |               | 67,500        | 63,450        |
| Current Interest Bonds                      | Principal Payments              |              |              |              |               |               | 0             | 4,050         |
|   | Interest Payments               |              |              |              |               |               | <u>1,688</u>  | <u>3,274</u>  |
|   | Total Debt Service              | 0            | 0            | 0            | 0             | 0             | 1,688         | 7,324         |
| <u>Debt Issued in FY2019</u>                | Outstanding                     |              |              |              |               |               |               | 67,500        |
| Current Interest Bonds                      | Principal Payments              |              |              |              |               |               |               | 0             |
|   | Interest Payments               |              |              |              |               |               |               | <u>1,688</u>  |
|   | Total Debt Service              | 0            | 0            | 0            | 0             | 0             | 0             | 1,688         |
| <u>Totals Debt Service on New G.O. Debt</u> | Principal Payments              | 0            | 4,050        | 8,100        | 12,150        | 16,200        | 20,250        | 24,300        |
|   | Interest Payments               | <u>3,188</u> | <u>6,461</u> | <u>9,533</u> | <u>12,401</u> | <u>15,069</u> | <u>17,531</u> | <u>19,799</u> |
|   | Total Debt Service              | 3,188        | 10,511       | 17,633       | 24,551        | 31,268        | 37,781        | 44,099        |
|   | 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 Outstanding State Guaranteed Debt

|   | 2013              | 2014             | 2015             | 2016             | 2017             | 2018             | 2019             | 2020             |
|---|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>BFA \$20 million Loan</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>BFA Loan Programs (1)</b>                                  |                   |                  |                  |                  |                  |                  |                  |                  |
| Balance   | 43,000,000        | 41,631,064       | 40,591,992       | 39,278,576       | 37,886,354       | 36,410,599       | 34,846,299       | 33,188,141       |
| Principal   | 1,168,936         | 1,239,072        | 1,313,416        | 1,392,221        | 1,476,755        | 1,564,300        | 1,658,158        | 1,757,647        |
| Interest  | <u>2,580,000</u>  | <u>2,509,864</u> | <u>2,435,520</u> | <u>2,356,715</u> | <u>2,273,181</u> | <u>2,184,636</u> | <u>2,090,778</u> | <u>1,991,288</u> |
| Payment   | 3,748,936         | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        |
| <b>Pease GO (Lonza Biologicals)</b>                           |                   |                  |                  |                  |                  |                  |                  |                  |
| Principal   | 0                 | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest  | 0                 | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Total   | 0                 | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| <b>Qualified School Construction Bonds</b>                    |                   |                  |                  |                  |                  |                  |                  |                  |
| Principal   | 2,208,750         | 2,208,750        | 2,208,750        | 2,205,000        | 2,193,750        | 2,193,750        | 2,193,750        | 2,193,750        |
| Interest (gross of tax credit)                                | <u>1,713,515</u>  | <u>1,594,463</u> | <u>1,475,411</u> | <u>1,358,461</u> | <u>1,237,915</u> | <u>1,119,671</u> | <u>1,001,428</u> | <u>883,185</u>   |
| Total   | 3,922,265         | 3,803,213        | 3,684,161        | 3,561,461        | 3,431,665        | 3,313,421        | 3,195,178        | 3,076,935        |
| <b>Total Outstanding State Guaranteed Debt</b>                |                   |                  |                  |                  |                  |                  |                  |                  |
| Principal   | 3,377,686         | 3,447,822        | 3,522,166        | 3,597,221        | 3,669,505        | 3,758,050        | 3,851,908        | 3,951,397        |
| Interest  | <u>4,989,515</u>  | <u>4,799,327</u> | <u>4,605,931</u> | <u>4,408,175</u> | <u>4,206,096</u> | <u>3,999,307</u> | <u>3,787,206</u> | <u>3,569,474</u> |
| Total   | 8,366,201         | 8,247,149        | 8,128,097        | 8,005,397        | 7,875,601        | 7,757,357        | 7,639,114        | 7,520,871        |
| (1) Assumes level debt service with the following parameters: |                   |                  |                  |                  |                  |                  |                  |                  |
| Principal   | <b>43,000,000</b> |                  |                  |                  |                  |                  |                  |                  |
| Number of Years   | 20                |                  |                  |                  |                  |                  |                  |                  |
| Interest Rate   | 6.0%              |                  |                  |                  |                  |                  |                  |                  |
| Annual Payments   | 3,748,936         |                  |                  |                  |                  |                  |                  |                  |



THE STATE OF NEW HAMPSHIRE  
 Debt Affordability Study Update  
 Debt Service on Outstanding State Guaranteed Debt (Excluding Self-Supporting Debt for BFA and PDA)

|   | <u>2013</u>      | <u>2014</u>      | <u>2015</u>      | <u>2016</u>      | <u>2017</u>      | <u>2018</u>      | <u>2019</u>      |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>BFA \$20 Million Loan</b>                |                  |                  |                  |                  |                  |                  |                  |
| Principal                                   | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest (Fixed Rate)                       | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest (Variable Rate)                    | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Total                                       | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| <b>BFA Loan Programs (1)</b>                |                  |                  |                  |                  |                  |                  |                  |
| Balance                                     | 43,000,000       | 41,831,064       | 40,591,592       | 39,278,576       | 37,886,354       | 36,410,599       | 34,848,299       |
| Principal                                   | 1,168,936        | 1,239,072        | 1,313,416        | 1,392,221        | 1,475,755        | 1,564,300        | 1,658,158        |
| Interest                                    | <u>2,580,000</u> | <u>2,509,864</u> | <u>2,435,620</u> | <u>2,358,716</u> | <u>2,273,181</u> | <u>2,184,638</u> | <u>2,090,778</u> |
| Payment                                     | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        | 3,748,936        |
| <b>Pease GO (Lonza Biologicals)</b>         |                  |                  |                  |                  |                  |                  |                  |
| Principal                                   | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest                                    | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Total                                       | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| <b>Qualified School Construction Bonds</b>  |                  |                  |                  |                  |                  |                  |                  |
| Principal                                   | 2,208,750        | 2,208,750        | 2,208,750        | 2,205,000        | 2,193,750        | 2,193,750        | 2,193,750        |
| Interest (gross of tax credit)              | <u>1,713,513</u> | <u>1,594,463</u> | <u>1,475,411</u> | <u>1,356,461</u> | <u>1,237,915</u> | <u>1,118,671</u> | <u>1,001,428</u> |
| Total                                       | 3,922,263        | 3,803,213        | 3,684,161        | 3,561,461        | 3,431,665        | 3,313,421        | 3,195,178        |
| <b>Total Existing State Guaranteed Debt</b> |                  |                  |                  |                  |                  |                  |                  |
| Principal                                   | 3,377,688        | 3,447,822        | 3,522,166        | 3,597,221        | 3,669,505        | 3,758,050        | 3,851,908        |
| Interest                                    | <u>4,293,313</u> | <u>4,104,327</u> | <u>3,910,831</u> | <u>3,713,176</u> | <u>3,511,096</u> | <u>3,304,307</u> | <u>3,092,208</u> |
| Total Debt Service                          | 7,671,201        | 7,552,149        | 7,433,097        | 7,310,397        | 7,180,601        | 7,062,357        | 6,944,114        |

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

|                 |            |
|-----------------|------------|
| Principal       | 43,000,000 |
| Number of Years | 20         |
| Interest Rate   | 6.0%       |
| Annual Payments | 3,748,936  |

THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update  
Debt Service on State Guaranteed Debt to be Issued (Excluding Self-Supporting Debt for BFA and PDA)

|  | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| <u>Issuances in FY2011 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Principal  | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Interest   | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Total Debt Service   | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <u>Issuances in FY2012 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  | 29,400,000 | 29,600,774 | 27,753,594 | 26,855,584 | 25,903,693 | 24,894,689 | 23,825,144 |            |
| Principal  | 799,226    | 847,180    | 898,010    | 951,891    | 1,009,004  | 1,069,545  | 1,133,717  |            |
| Interest   | 1,794,000  | 1,716,046  | 1,665,216  | 1,611,335  | 1,554,222  | 1,493,681  | 1,429,509  |            |
| Total Debt Service   | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  |            |
| <u>Issuances in FY2013 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  |            | 29,400,000 | 28,600,774 | 27,753,594 | 26,855,584 | 25,903,693 | 24,894,689 |            |
| Principal  |            | 799,226    | 847,180    | 898,010    | 951,891    | 1,009,004  | 1,069,545  |            |
| Interest   |            | 1,764,000  | 1,716,046  | 1,665,216  | 1,611,335  | 1,554,222  | 1,493,681  |            |
| Total Debt Service   |            | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  | 2,563,226  |            |
| <u>Issuances in FY2014 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  |            |            | 29,300,000 | 28,503,492 | 27,659,195 | 26,764,239 | 25,815,585 |            |
| Principal  |            |            | 796,508    | 844,298    | 894,956    | 948,653    | 1,005,572  |            |
| Interest   |            |            | 1,788,000  | 1,710,210  | 1,669,552  | 1,605,854  | 1,548,935  |            |
| Total Debt Service   |            |            | 2,554,508  | 2,554,508  | 2,554,508  | 2,554,508  | 2,554,508  |            |
| <u>Issuances in FY2015 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  |            |            |            |            | 6,400,000  | 6,226,019  | 6,041,599  | 5,846,114  |
| Principal  |            |            |            |            | 173,981    | 184,420    | 195,485    | 207,214    |
| Interest   |            |            |            |            | 384,000    | 373,561    | 362,456    | 350,767    |
| Total Debt Service   |            |            |            |            | 557,981    | 557,981    | 557,981    | 557,981    |
| <u>Issuances in FY2016 (1)</u>   |            |            |            |            |            |            |            |            |
| Balance  |            |            |            |            |            | 6,400,000  | 6,226,019  | 6,041,599  |
| Principal  |            |            |            |            |            | 173,981    | 184,420    | 195,485    |
| Interest   |            |            |            |            |            | 384,000    | 373,561    | 362,486    |
| Total Debt Service   |            |            |            |            |            | 557,981    | 557,981    | 557,981    |
| <u>Total State Guaranteed Debt to be Issued</u>                            |            |            |            |            |            |            |            |            |
| Principal  | 0          | 799,226    | 1,646,406  | 2,541,697  | 2,868,180  | 3,214,252  | 3,407,107  | 3,611,534  |
| Interest   | 0          | 1,754,000  | 3,480,046  | 5,139,262  | 5,370,790  | 5,582,699  | 5,389,814  | 5,185,368  |
| Total Debt Service   | 0          | 2,563,226  | 5,126,452  | 7,680,959  | 8,238,941  | 8,796,922  | 8,796,922  | 8,796,922  |
| <u>Total Outstanding and Future Issuances of State Guaranteed Debt (2)</u> |            |            |            |            |            |            |            |            |
| Principal  | 3,377,686  | 4,247,048  | 5,166,572  | 6,138,919  | 6,537,665  | 6,972,302  | 7,259,015  | 7,562,931  |
| Interest   | 4,293,515  | 5,898,327  | 7,390,977  | 8,852,438  | 8,881,856  | 8,885,977  | 8,482,021  | 8,059,862  |
| Total Debt Service   | 7,671,201  | 10,115,375 | 12,559,549 | 14,991,356 | 15,419,541 | 15,859,279 | 15,741,036 | 15,622,793 |

(1) Assumes level debt service with the following parameter Number of Years 20  
Interest Rate 6.0%

(2) Includes Outstanding Guaranteed Debt Service (excluding selected self supporting BFA and PDA obligations) from totals on Chart Eight

THE STATE OF NEW HAMPSHIRE

Debt Affordability Study Update

Assumptions to Sensitivity Case 1 - Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$50 Million General Fund and \$17.5 Million University) in FY 2014-2019  
No Revenue Increase after FY 2013; School Building Aid Bonds Included

- (1) \$67.5 million of current interest bonds issued annually in FY 2013 through 2019 at an interest rate of 5.0%, 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 second ten years.  
\$50 million of Commercial Paper is issued in FY 2013 and rolled over each year through 2019 at a rate of 3.0%.
- (2) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues. It does include General Fund debt for school building aid.
- (3) General Fund Unrestricted Revenues reflect actual revenues for FY 2012 and projected revenues for FY 2013, with the portion of meals and room tax revenues designated for the debt service of school building aid bonds included. The revenues are assumed to grow by 0% in each of fiscal years 2014 through 2019.
- (4) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2011 figure of \$60,480 million. Assumes 4% growth annually thereafter.
- (5) Population - source: U.S. Census Bureau for 2011 figure of 1,318,000. Assumes 0.7% growth annually thereafter.
- (6) State guaranteed debt includes Net General Fund Debt plus the outstanding self-supporting PDA debt totaling \$3.028 million, \$32.9 million of Qualified School Construction Bonds (QSCBs) and BFA debt totalling \$63 million at June 30, 2012.  
State guaranteed debt excluding self-supporting debt includes Net General Fund Debt plus \$32.9 million of QSCBs and \$43 million BFA debt at June 30, 2012.
- (7) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites; BFA, PDA and Division of Water Resources.  
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.  
\$29.4 million is issued in each of FY 2014 and 2015, \$29.3 million in 2016 and \$6.4 million in each of FY 2017 and 2018.  
Estimated authorized but unissued State guaranteed debt of \$100.9 million includes:  
\$20 million for local Superfund sites; \$32 million for BFA and \$48.9 million for Pease.  
State guaranteed self-supporting debt includes \$20 million outstanding BFA bonds and outstanding \$3.028 million in FY 2012 of the original \$30 million PDA - Lonza issue.

THE STATE OF NEW HAMPSHIRE

Debt Affordability Study Update

Sensitivity Case 1: Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$50 Million General Fund and \$17.5 Million University) in FY 2014-2019

No Revenue Increase After FY 2013; School Building Aid Bonds Included

|   | Actual<br>2012 | Projected   |             |             |             |             |             |             | TOTAL<br>2013-2019 |
|---|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|
|   |                | 2013        | 2014        | 2015        | 2016        | 2017        | 2018        | 2019        |                    |
| Net General Fund Debt (000's)                 |                |             |             |             |             |             |             |             |                    |
| Beginning Outstanding                         |                | \$807,847   | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686   |                    |
| Issuances                                     |                | \$117,500   | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$522,500          |
| Retirements:                                  |                | 72,371      | 69,399      | 65,755      | 64,116      | 63,388      | 62,382      | 61,717      | 459,128            |
| Existing Debt                                 |                |             |             |             |             |             |             |             |                    |
| New Debt (1)                                  |                | 0           | 4,050       | 8,100       | 12,150      | 16,200      | 20,250      | 24,300      | 85,050             |
| Total Retirements                             |                | \$72,371    | \$73,449    | \$73,855    | \$76,266    | \$79,588    | \$82,632    | \$86,017    | \$544,178          |
| Net New Debt                                  |                | \$45,129    | (\$5,949)   | (\$6,355)   | (\$8,766)   | (\$12,088)  | (\$15,132)  | (\$18,517)  | (\$21,678)         |
| Ending Outstanding (2)                        | \$807,847      | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686   | \$786,169   |                    |
| Existing Debt Service (000's)                 | \$108,941      | \$110,627   | \$103,901   | \$101,998   | \$94,841    | \$89,295    | \$83,063    | \$79,284    |                    |
| New Debt Service (000's) (1)                  | 0              | 3,188       | 10,511      | 17,833      | 24,551      | 31,288      | 37,781      | 44,093      |                    |
| Total Debt Service (000's)                    | \$108,941      | \$113,814   | \$114,413   | \$119,831   | \$119,392   | \$120,563   | \$120,864   | \$123,376   |                    |
| General Fund Unrestricted Revenues (000's)(3) | \$1,391,200    | \$1,418,783 | \$1,418,360 | \$1,417,935 | \$1,417,511 | \$1,417,087 | \$1,416,670 | \$1,416,262 |                    |
| Debt Service as a Percent of Revenues         | 7.8%           | 8.0%        | 8.1%        | 8.4%        | 8.4%        | 8.5%        | 8.5%        | 8.7%        |                    |
| Total Personal Income (000,000's) (4)         | 62,899         | 65,415      | 68,032      | 70,753      | 73,583      | 76,526      | 79,588      | 82,771      |                    |
| Debt to Personal Income                       | 1.3%           | 1.3%        | 1.2%        | 1.2%        | 1.1%        | 1.1%        | 1.0%        | 0.9%        |                    |
| Population (000's) (5)                        | 1,327          | 1,337       | 1,346       | 1,355       | 1,365       | 1,374       | 1,384       | 1,394       |                    |
| Debt Per Capita                               | \$609          | \$658       | \$629       | \$620       | \$610       | \$597       | \$581       | \$564       |                    |

Footnotes explained on page 2.

THE STATE OF NEW HAMPSHIRE  
 Debt Affordability Study Update  
 Effect of State Guaranteed Bonds on Debt Ratios - Sensitivity Case 1

| Net General Fund Debt (000's)                    | Actual      | Projected     |              |               |               |               |               |               | TOTAL         |
|--|-------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  | 2012        | 2013          | 2014         | 2015          | 2016          | 2017          | 2018          | 2019          | 2013-2019     |
| Beginning Outstanding (6)                        |             | \$906,770     | \$948,521    | \$967,725     | \$985,602     | \$999,997     | \$987,771     | \$972,067     |               |
| G.O. Issuances                                   |             | \$117,500     | \$87,500     | \$87,500      | \$87,500      | \$87,500      | \$87,500      | \$87,500      | \$522,500     |
| State Guaranteed Issuances (7)                   |             | 0             | 28,400       | 29,400        | 29,300        | 6,400         | 6,400         | 0             | 100,800       |
| Retirements G.O. Debt                            |             | 72,371        | 73,449       | 73,855        | 76,266        | 79,588        | 82,632        | 86,017        | 544,178       |
| State Guaranteed Debt (7)                        |             | <u>3,378</u>  | <u>4,247</u> | <u>5,169</u>  | <u>6,139</u>  | <u>6,538</u>  | <u>6,972</u>  | <u>7,259</u>  | <u>39,701</u> |
| Total Retirements                                |             | \$75,740      | \$77,696     | \$79,023      | \$82,405      | \$86,126      | \$89,604      | \$93,276      | \$583,879     |
| Net New Debt                                     |             | \$41,751      | \$19,204     | \$17,877      | \$14,395      | (\$12,226)    | (\$15,704)    | (\$25,776)    | \$39,521      |
| Ending Outstanding                               |             | \$906,770     | \$948,521    | \$967,725     | \$985,602     | \$999,997     | \$987,771     | \$972,067     | \$946,291     |
| G.O. Debt Service (000's)                        |             | \$108,841     | \$113,814    | \$114,413     | \$119,631     | \$119,382     | \$120,563     | \$120,864     | \$123,376     |
| State Guaranteed Debt Service (000's) (7)        |             | <u>11,932</u> | <u>8,366</u> | <u>10,810</u> | <u>13,255</u> | <u>15,686</u> | <u>16,115</u> | <u>16,554</u> | <u>16,436</u> |
| Total Debt Service (000's)                       |             | 120,873       | 122,180      | 125,223       | 132,885       | 135,079       | 136,678       | 137,418       | 139,812       |
| General Fund Unrestricted Revenues (000's)(2)(5) | \$1,391,200 | \$1,418,783   | \$1,416,360  | \$1,417,935   | \$1,417,511   | \$1,417,087   | \$1,416,670   | \$1,416,262   |               |
| Debt Service as a Percent of Revenues            | 8.7%        | 8.6%          | 8.8%         | 9.4%          | 9.5%          | 9.6%          | 9.7%          | 9.9%          |               |
| Total Personal Income (000,000's) (3)(5)         | \$62,899    | \$65,415      | \$68,032     | \$70,753      | \$73,583      | \$76,526      | \$79,588      | \$82,771      |               |
| Debt to Personal Income                          | 1.4%        | 1.5%          | 1.4%         | 1.4%          | 1.4%          | 1.3%          | 1.2%          | 1.1%          |               |
| Population (000's) (4)(5)                        | 1,327       | 1,337         | 1,346        | 1,355         | 1,365         | 1,374         | 1,384         | 1,394         |               |
| Debt Per Capita                                  | \$683       | \$710         | \$719        | \$727         | \$733         | \$719         | \$702         | \$679         |               |

Footnotes explained on page 2.

THE STATE OF NEW HAMPSHIRE  
Debt Affordability Study Update

Assumptions to Sensitivity Case 2 - Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$50 Million General Fund and \$17.5 Million University) in FY 2014-2019  
School Building Aid Bonds Included; Interest Rates Increased

- (1) \$67.5 million of current interest bonds issued annually in FY 2013 through 2019 at an interest rate of 6.0%, 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 second ten years.  
\$50 million of Commercial Paper is issued in FY 2013 and rolled over each year through 2019 at a rate of 3.0%.
- (2) Ending Outstanding Debt represents total net General Fund Debt to be paid from General Fund Unrestricted Revenues. It does include General Fund debt for school building aid.
- (3) General Fund Unrestricted Revenues reflect actual revenues for FY 2012 and projected revenues for FY 2013, with the portion of meals and room tax revenues designated for the debt service of school building aid bonds included. The revenues are assumed to grow by 2.5% in each of fiscal years 2014 through 2019.
- (4) Total Personal Income - source: U.S. Department of Commerce, Bureau of Economic Analysis for 2011 figure of \$60,480 million. Assumes 4% growth annually thereafter.
- (5) Population - source: U.S. Census Bureau for 2011 figure of 1,318,000. Assumes 0.7% growth annually thereafter.
- (6) State guaranteed debt includes Net General Fund Debt plus the outstanding self-supporting PDA debt totaling \$3.028 million, \$32.9 million of Qualified School Construction Bonds (QSCBs) and BFA debt totalling \$83 million at June 30, 2012.  
State guaranteed debt excluding self-supporting debt includes Net General Fund Debt plus \$32.9 million of QSCBs and \$43 million BFA debt at June 30, 2012.
- (7) Debt Service includes State guaranteed debt outstanding or to be issued for the following: local Superfund sites; BFA, PDA and Division of Water Resources.  
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.  
\$29.4 million is issued in each of FY 2014 and 2015, \$29.3 million in 2016 and \$6.4 million in each of FY 2017 and 2018.  
Estimated authorized but unissued State guaranteed debt of \$100.9 million includes:  
\$20 million for local Superfund sites; \$32 million for BFA and \$48.9 million for Pease.  
State guaranteed self-supporting debt includes \$20 million outstanding BFA bonds and outstanding \$3.028 million in FY 2012 of the original \$30 million PDA - Lanza issue.

THE STATE OF NEW HAMPSHIRE

Debt Affordability Study Update

Sensitivity Case 2: Issuance of \$117.5 Million of Debt in FY 2013 and \$67.5 Million Annually (\$60 Million General Fund and \$17.5 Million University) in FY 2014-2019

School Building Aid Bonds Included; Interest Rates Increased

|   | Actual<br>2012 | Projected   |             |             |             |             |             | TOTAL<br>2013-2019 |            |
|---|----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|------------|
|   |                | 2013        | 2014        | 2015        | 2016        | 2017        | 2018        |                    | 2019       |
| Net General Fund Debt (000's)                 |                |             |             |             |             |             |             |                    |            |
| Beginning Outstanding                         |                | \$807,847   | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686          |            |
| Issuances                                     |                | \$117,500   | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500    | \$67,500           | \$522,500  |
| Retirements:                                  |                | 72,371      | 69,399      | 65,755      | 64,116      | 63,388      | 62,382      | 61,717             | 459,126    |
| Existing Debt                                 |                |             |             |             |             |             |             |                    |            |
| New Debt (1)                                  |                | 0           | 4,050       | 8,100       | 12,150      | 16,200      | 20,250      | 24,300             | 85,050     |
| Total Retirements                             |                | \$72,371    | \$73,449    | \$73,855    | \$76,266    | \$79,588    | \$82,632    | \$86,017           | \$544,178  |
| Net New Debt                                  |                | \$45,129    | (\$5,949)   | (\$6,355)   | (\$8,766)   | (\$12,088)  | (\$15,132)  | (\$18,517)         | (\$21,678) |
| Ending Outstanding (2)                        |                | \$807,847   | \$852,976   | \$847,026   | \$840,672   | \$831,906   | \$819,818   | \$804,686          | \$786,169  |
| Existing Debt Service (000's)                 | \$106,941      | \$110,627   | \$103,901   | \$101,988   | \$94,841    | \$89,295    | \$83,083    | \$79,284           |            |
| New Debt Service (000's) (1)                  | 0              | 3,525       | 11,504      | 119,239     | 26,732      | 33,981      | 40,988      | 47,751             |            |
| Total Debt Service (000's)                    | \$106,941      | \$114,152   | \$115,405   | \$121,237   | \$121,572   | \$123,276   | \$124,070   | \$127,035          |            |
| General Fund Unrestricted Revenues (000's)(3) | \$1,391,200    | \$1,418,783 | \$1,453,469 | \$1,468,031 | \$1,525,493 | \$1,562,878 | \$1,601,214 | \$1,640,529        |            |
| Debt Service as a Percent of Revenues         | 7.6%           | 8.0%        | 7.9%        | 8.1%        | 8.0%        | 7.9%        | 7.7%        | 7.7%               |            |
| Total Personal Income (000,000's) (4)         | 62,899         | 65,415      | 66,032      | 70,753      | 73,583      | 76,526      | 79,588      | 82,771             |            |
| Debt to Personal Income                       | 1.3%           | 1.3%        | 1.2%        | 1.2%        | 1.1%        | 1.1%        | 1.0%        | 0.9%               |            |
| Population (000's) (5)                        | 1,327          | 1,337       | 1,346       | 1,355       | 1,365       | 1,374       | 1,384       | 1,394              |            |
| Debt Per Capita                               | \$609          | \$638       | \$629       | \$620       | \$610       | \$597       | \$581       | \$564              |            |

Footnotes explained on page 2.