

State of Vermont Debt Management Update

**Office of the State Treasurer
January 2015**



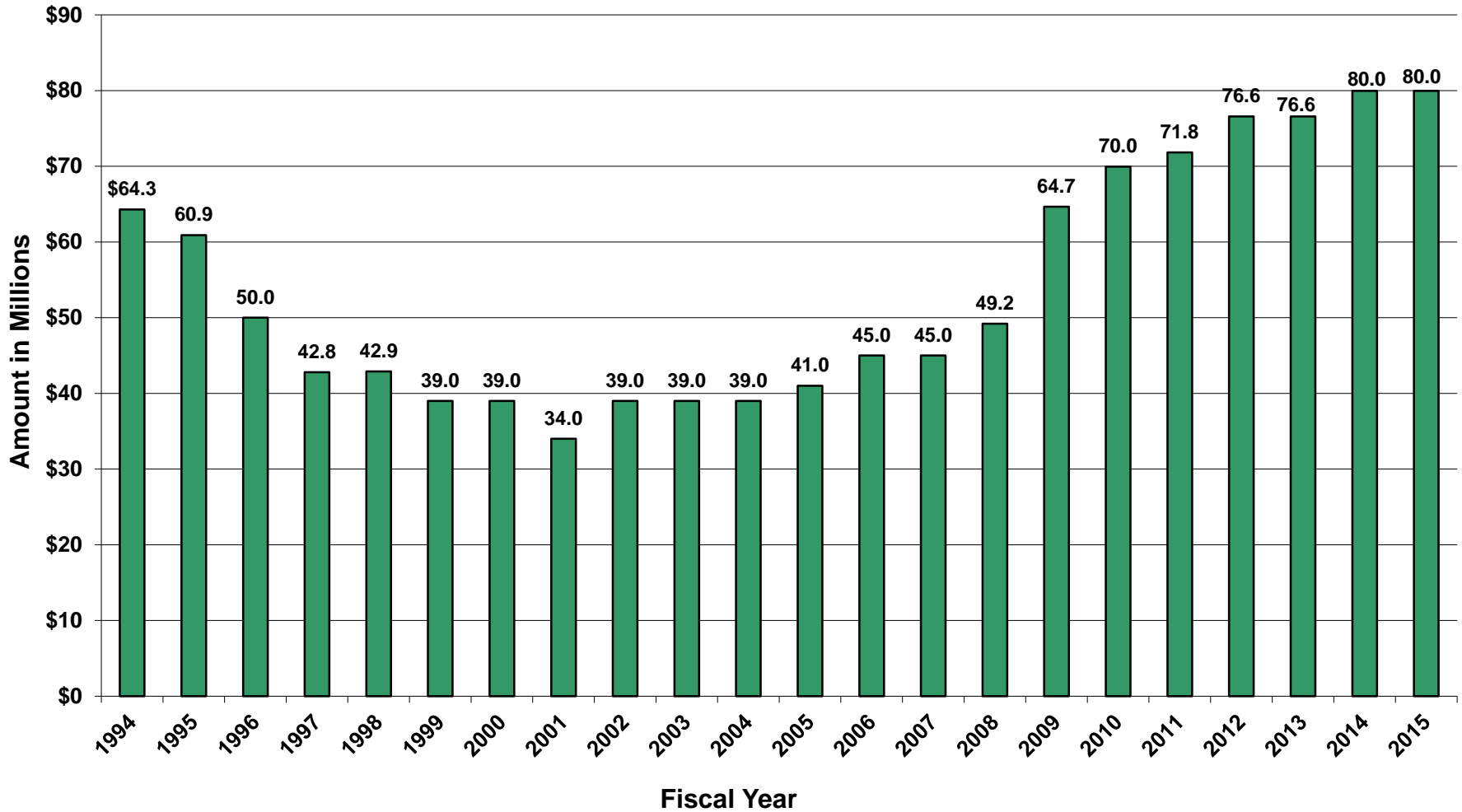
Executive Summary

- In its December 2014 final report, the Capital Debt Affordability Advisory Committee (CDAAC) recommended that net tax-supported (i.e., General Obligation) debt for the FY2016-17 biennium not exceed **\$144 million**.
- On December 9, the State's G.O. bond sale produced **\$11.559 million** of bond premium, freeing up an identical amount of the prior biennium's bond authorization to be used in the current biennium.
- If the General Assembly adopts CDAAC's recommendation, then the total bond authorization for the FY2016-17 Capital Bill would be **\$155.559 million**, a \$4.3 million or 2.7% reduction from FY2014-15.
- The Treasurer's Office and CDAAC believe this recommendation is consistent with Vermont's long-term goals of adequately financing capital needs while maintaining strong ratings and low borrowing costs.

Vermont's Debt Profile and Critical Debt Ratios



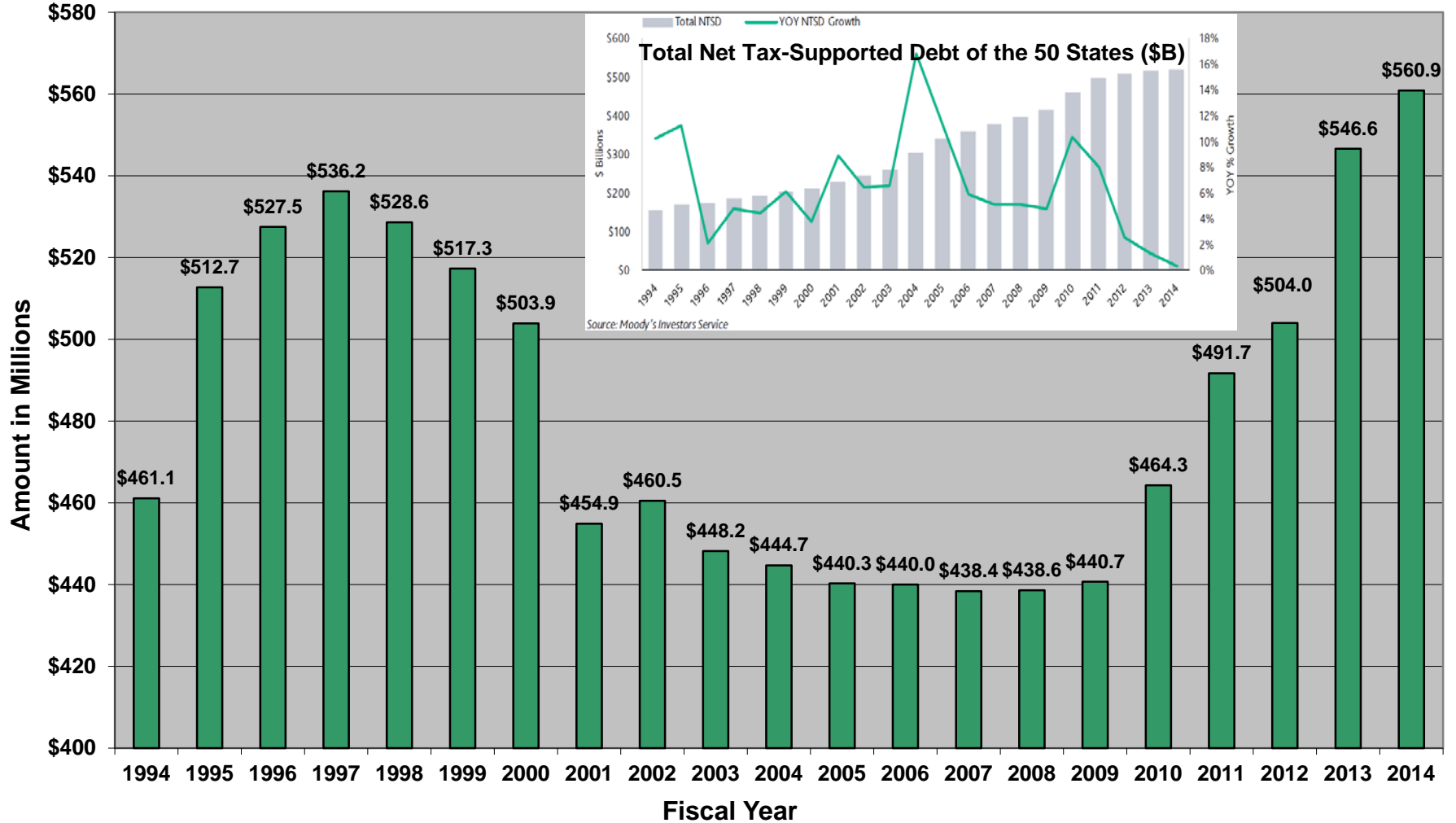
State of Vermont Annual Long-Term Debt Authorizations, FY1993-FY2015 (\$ millions)



Note: FY2014-2015 indicates CDAAC 2-year recommended net tax-supported debt authorization of \$159.9 million.

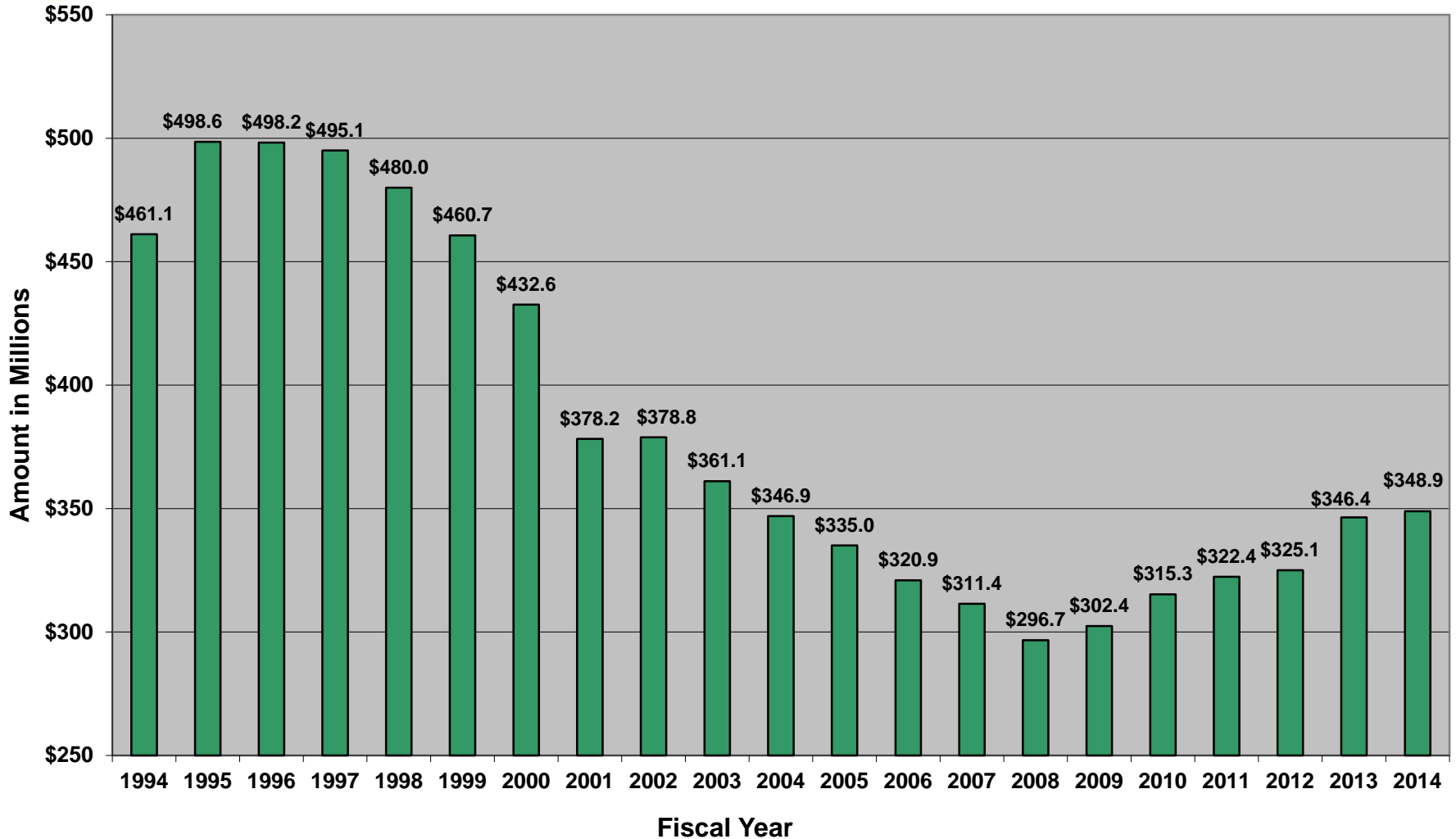


State of Vermont General Obligation Debt Outstanding, FY1994-FY2014 vs. National Trend





State of Vermont General Obligation Debt Outstanding, FY1994-FY2014 vs. National Trend Adjusted for Inflation (Using 1994 Dollars)



* Source: U.S. Bureau of Labor Statistics, CPI for All Urban Consumers, Not Seasonally Adjusted, June 1994 = 100

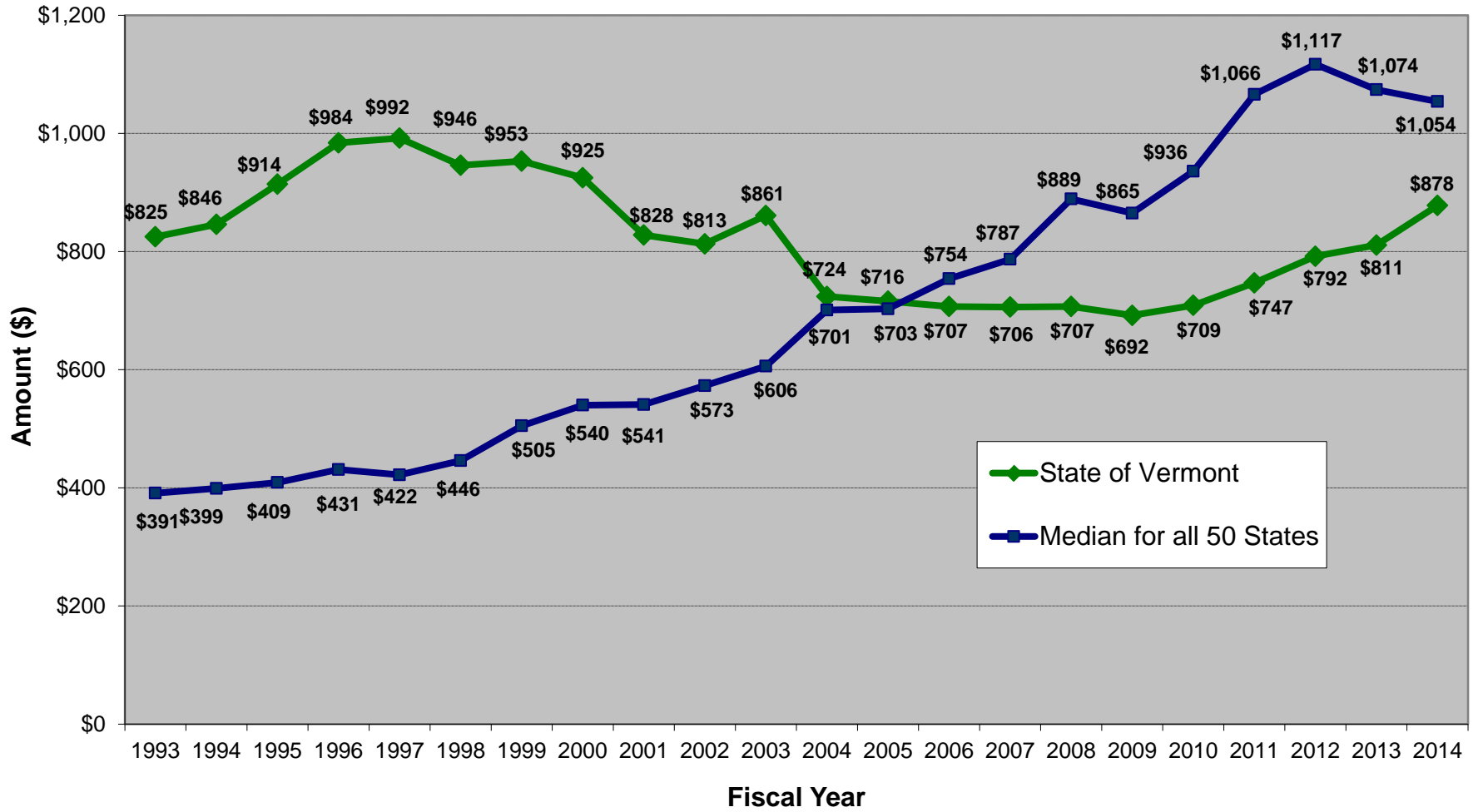
Critical Debt Ratios: A Primer

(All numbers for FY2014)

- **Debt Per Capita (DPC):**
= Total General Obligation Bonds / Vermont's Population
= \$560.9 million / 627,600 = \$894
- **Debt as a Percent of Personal Income (DPI):**
= Total G.O. Bonds / Vermont's Nominal Dollar Personal Income
= \$560.9 million / \$27.93 billion = 2.0%
- **Debt Service as a Percent of Revenues (DSPR):**
= G.O. Principal and Interest / (General + Transportation Fund Revenues)
= \$74.819 million / \$1.575 billion = 4.7%

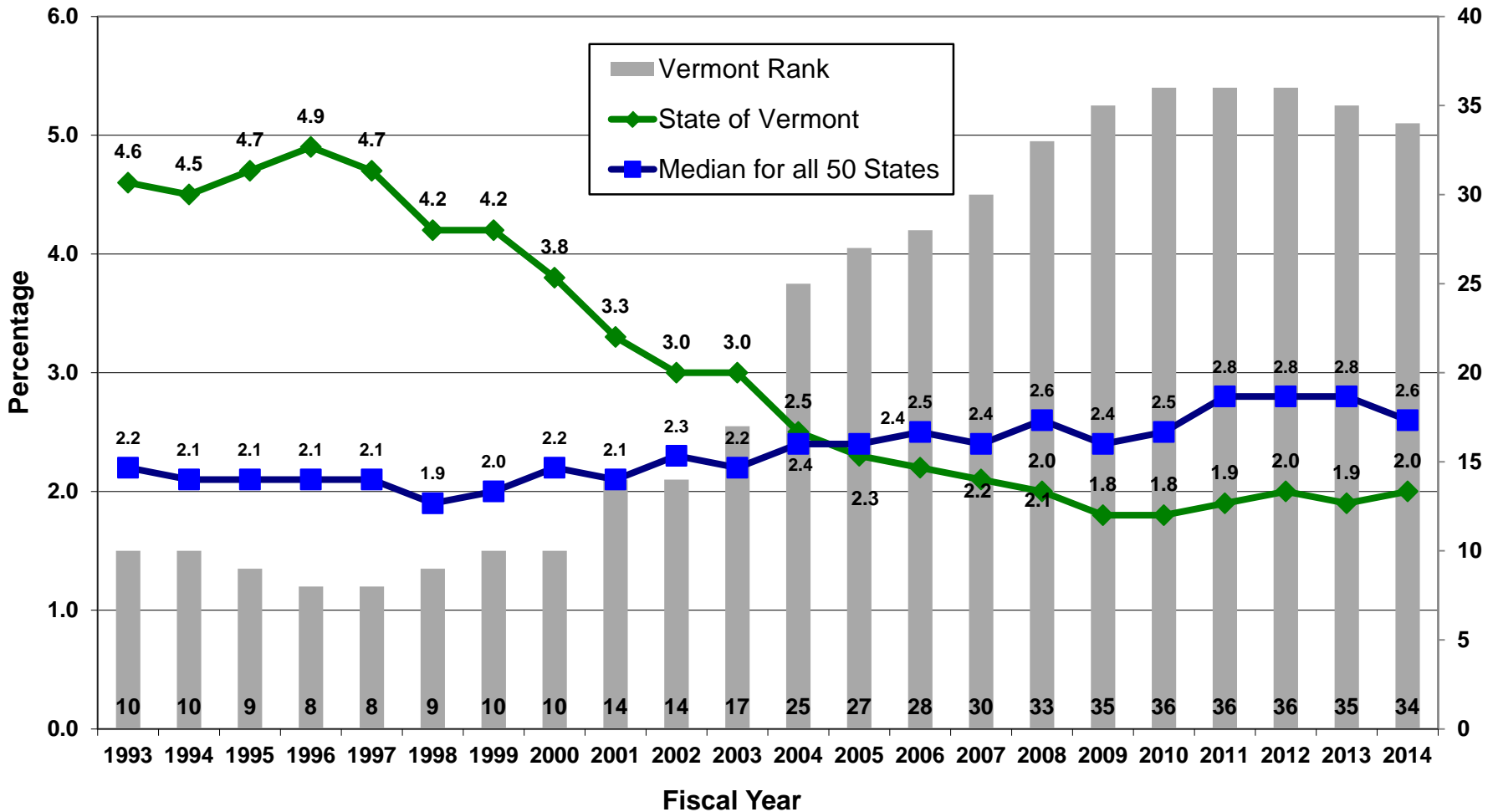


State of Vermont Net Tax Supported Debt Per Capita



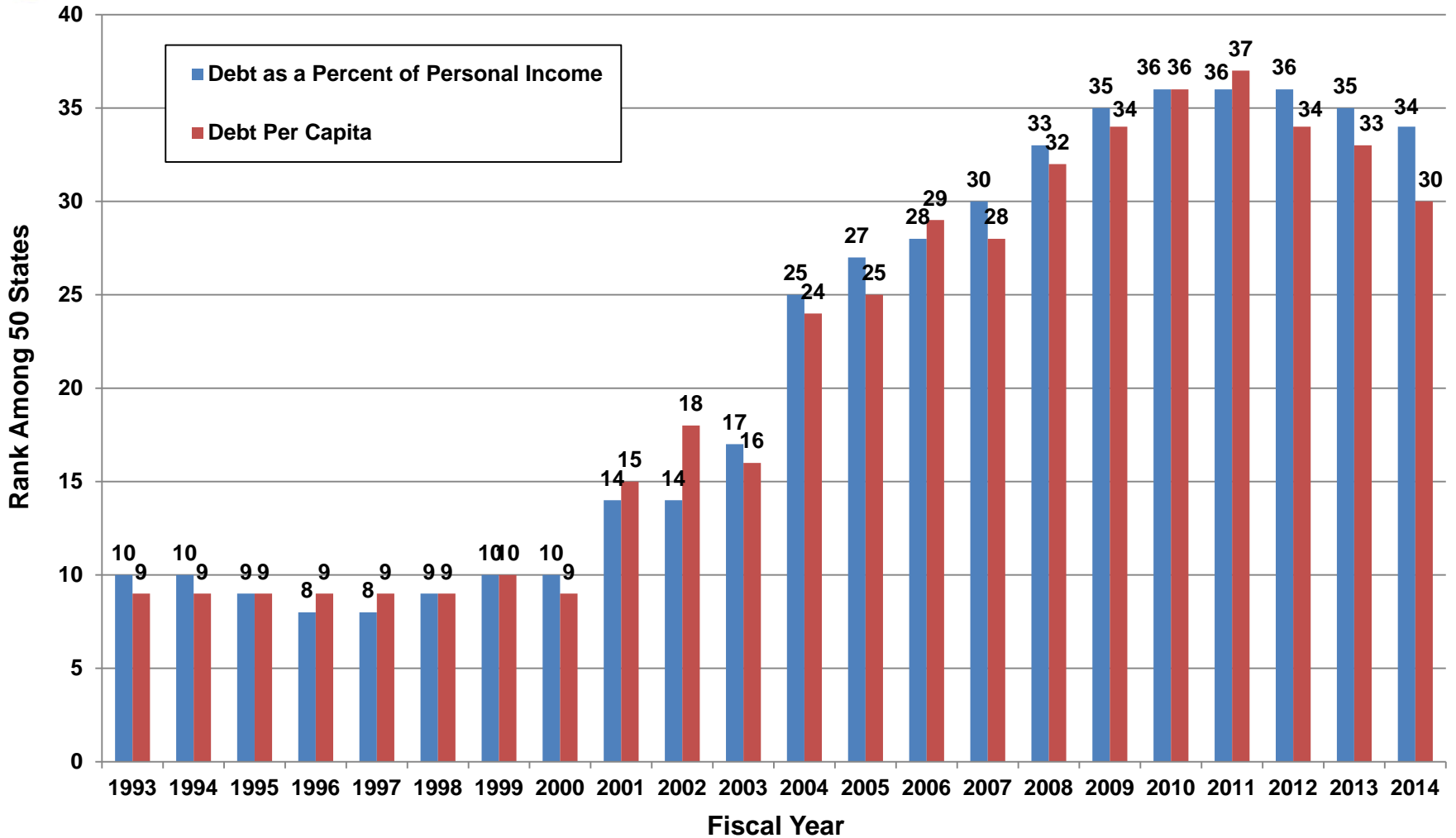


State of Vermont Net Tax Supported Debt as a Percent of Personal Income





State of Vermont Historical State Debt Rankings



10-Year Debt Projection

- \$144 million biennium recommendation for FY2016-17 is based upon assumed issuance of \$72 million per year for 10 years from FY2016-25
- Added to existing \$560.85 million of bonds, plus \$105.505 million of authorized but unissued bonds, less maturities of existing bonds results in projected outstanding bonds of \$761.275 million by 2025, and increase of 36% or 3.1% per year.

| EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. BONDS OUTSTANDING (\$000) | | | | | | | | | | | | |
|---|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------|
| Current FY Debt | 2015 Issue \$105.505M | 2016 Issue 72.000M | 2017 Issue 72.000M | 2018 Issue 72.000M | 2019 Issue 72.000M | 2020 Issue 72.000M | 2021 Issue 72.000M | 2022 Issue 72.000M | 2023 Issue 72.000M | 2024 Issue 72.000M | 2025 Issue 72.000M | Total Est. Debt |
| 2014 560,850 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 560,850 |
| 2015 512,610 | 105,505 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 618,115 |
| 2016 467,550 | 100,225 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 639,775 |
| 2017 425,735 | 94,945 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 661,080 |
| 2018 386,595 | 89,665 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 681,460 |
| 2019 348,355 | 84,385 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 699,140 |
| 2020 311,910 | 79,105 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 715,015 |
| 2021 275,400 | 73,825 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 727,225 |
| 2022 241,610 | 68,545 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 738,555 |
| 2023 209,610 | 63,265 | 46,800 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 748,075 |
| 2024 180,075 | 57,985 | 43,200 | 46,800 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 756,460 |
| 2025 150,570 | 52,705 | 39,600 | 43,200 | 46,800 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 761,275 |

10-Year Economic Projections

Population (Thousands)

| <u>Year</u> | <u>2013</u> | <u>2014</u> | <u>Change</u> |
|-------------|-------------|-------------|---------------|
| 2014 | 630.009 | | n.a. |
| 2015 | 632.146 | 627.621 | -4.525 |
| 2016 | 634.368 | 628.346 | -6.022 |
| 2017 | 636.737 | 629.289 | -7.448 |
| 2018 | 639.301 | 630.398 | -8.904 |
| 2019 | 641.987 | 631.598 | -10.389 |
| 2020 | 644.826 | 632.913 | -11.913 |
| 2021 | 647.529 | 634.225 | -13.304 |
| 2022 | 650.196 | 635.618 | -14.578 |
| 2023 | 652.982 | 637.182 | -15.800 |
| 2024 | 656.050 | 638.707 | -17.343 |
| 2025 | n.a. | 640.222 | n.a. |

Nominal Dollar Personal Income (Millions of \$'s)

| <u>Year</u> | <u>2013</u> | <u>2014</u> | <u>Change</u> |
|-------------|-------------|-------------|---------------|
| 2014 | 27,931.574 | | n.a. |
| 2015 | 29,100.980 | 31,135.507 | 2,034.527 |
| 2016 | 30,175.746 | 32,816.825 | 2,641.079 |
| 2017 | 30,903.760 | 34,392.032 | 3,488.272 |
| 2018 | 31,590.648 | 35,905.282 | 4,314.634 |
| 2019 | 32,425.594 | 37,377.398 | 4,951.804 |
| 2020 | 33,363.219 | 38,947.249 | 5,584.030 |
| 2021 | 34,348.910 | 40,621.980 | 6,273.070 |
| 2022 | 35,345.977 | 42,449.970 | 7,103.993 |
| 2023 | 36,374.875 | 44,360.218 | 7,985.343 |
| 2024 | 37,396.426 | 46,312.068 | 8,915.642 |
| 2025 | n.a. | 48,303.487 | n.a. |

General Fund and Transportation Fund Revenue (Millions of \$'s)

| <u>Year</u> | <u>2013</u> | <u>2014</u> | <u>Change</u> |
|-------------|-------------|-------------|---------------|
| 2014 | 1,575.125 | | n.a. |
| 2015 | 1,658.885 | 1,628.356 | -30.529 |
| 2016 | 1,719.740 | 1,675.665 | -44.074 |
| 2017 | 1,769.848 | 1,728.204 | -41.644 |
| 2018 | 1,817.585 | 1,784.738 | -32.846 |
| 2019 | 1,868.268 | 1,840.144 | -28.123 |
| 2020 | 1,920.081 | 1,898.843 | -21.238 |
| 2021 | 1,974.458 | 1,961.994 | -12.464 |
| 2022 | 2,030.757 | 2,026.086 | -4.672 |
| 2023 | 2,088.177 | 2,094.446 | 6.269 |
| 2024 | 2,147.229 | 2,161.132 | 13.903 |
| 2025 | n.a. | 2,229.849 | n.a. |

General Fund and Transportation Fund Revenue as Percent of Nominal Personal Income

| <u>Year</u> | <u>2013</u> | <u>2014</u> | <u>Change</u> |
|-------------|-------------|-------------|---------------|
| 2014 | 5.6% | n.a. | n.a. |
| 2015 | 5.7% | 5.2% | -0.5% |
| 2016 | 5.7% | 5.1% | -0.6% |
| 2017 | 5.7% | 5.0% | -0.7% |
| 2018 | 5.8% | 5.0% | -0.8% |
| 2019 | 5.8% | 4.9% | -0.8% |
| 2020 | 5.8% | 4.9% | -0.9% |
| 2021 | 5.7% | 4.8% | -0.9% |
| 2022 | 5.7% | 4.8% | -1.0% |
| 2023 | 5.7% | 4.7% | -1.0% |
| 2024 | 5.7% | 4.7% | -1.1% |
| 2025 | n.a. | 4.6% | n.a. |

**STATE OF VERMONT
HISTORIC AND PROJECTED DEBT RATIOS**

| Fiscal Year (ending 6/30) | Net Tax-Supported Debt Per Capita (in \$) | | | Net Tax-Supported Debt as Percent of Personal Income | | | Net Tax-Supported Debt Service as Percent of Revenues ⁽⁵⁾ | | |
|---|--|-----------------------------------|--------------------------------|---|-----------------------------------|--------------------------------|---|--------------------|--------------------------------|
| | State of Vermont | Moody's Median | State's Rank ⁽⁴⁾ | State of Vermont | Moody's Median | State's Rank ⁽⁴⁾ | State of Vermont ⁽⁵⁾ | Moody's Median | State's Rank ⁽⁴⁾ |
| Actual ⁽¹⁾ | | | | | | | | | |
| 2002 | 813 | 573 | 18 | 3.0 | 2.3 | 14 | 6.5 | n.a. | n.a. |
| 2003 | 861 | 606 | 16 | 3.0 | 2.2 | 17 | 6.7 | n.a. | n.a. |
| 2004 | 724 | 701 | 24 | 2.5 | 2.4 | 25 | 6.0 | n.a. | n.a. |
| 2005 | 716 | 703 | 25 | 2.3 | 2.4 | 27 | 5.4 | n.a. | n.a. |
| 2006 | 707 | 754 | 29 | 2.2 | 2.5 | 28 | 5.1 | n.a. | n.a. |
| 2007 | 706 | 787 | 28 | 2.1 | 2.4 | 30 | 5.1 | n.a. | n.a. |
| 2008 | 707 | 889 | 32 | 2.0 | 2.6 | 33 | 5.0 | n.a. | n.a. |
| 2009 | 692 | 865 | 34 | 1.8 | 2.5 | 35 | 5.5 | n.a. | n.a. |
| 2010 | 709 | 936 | 36 | 1.8 | 2.5 | 36 | 5.7 | n.a. | n.a. |
| 2011 | 747 | 1066 | 37 | 1.9 | 2.8 | 36 | 5.1 | n.a. | n.a. |
| 2012 | 792 | 1117 | 34 | 2.0 | 2.8 | 36 | 4.9 | n.a. | n.a. |
| 2013 | 811 | 1074 | 33 | 1.9 | 2.8 | 35 | 4.6 | n.a. | n.a. |
| 2014 | 878 | 1054 | 30 | 2.0 | 2.6 | 34 | 4.7 | n.a. | n.a. |
| Current ⁽²⁾ | 894 | n.a. | n.a. | 1.9 | n.a. | n.a. | 4.7 | n.a. | n.a. |
| Projected (FYE 6/30) ⁽³⁾ | | State Guideline ⁽⁶⁾ | | | State Guideline ⁽⁷⁾ | | | State Guideline | |
| 2015 | 985 | 943 | | 2.0 | 2.5 | | 4.3 | 6.0 | |
| 2016 | 1,018 | 974 | | 1.9 | 2.5 | | 4.4 | 6.0 | |
| 2017 | 1,051 | 1,005 | | 1.9 | 2.5 | | 4.5 | 6.0 | |
| 2018 | 1,081 | 1,037 | | 1.9 | 2.5 | | 4.5 | 6.0 | |
| 2019 | 1,107 | 1,070 | | 1.9 | 2.5 | | 4.6 | 6.0 | |
| 2020 | 1,130 | 1,105 | | 1.8 | 2.5 | | 4.7 | 6.0 | |
| 2021 | 1,147 | 1,140 | | 1.8 | 2.5 | | 4.9 | 6.0 | |
| 2022 | 1,162 | 1,177 | | 1.7 | 2.5 | | 4.8 | 6.0 | |
| 2023 | 1,174 | 1,215 | | 1.7 | 2.5 | | 4.9 | 6.0 | |
| 2024 | 1,184 | 1,254 | | 1.6 | 2.5 | | 4.8 | 6.0 | |
| 2025 | 1,189 | 1,294 | | 1.6 | 2.5 | | 4.9 | 6.0 | |
| 5-Year Average of Moody's Mean for Triple-A States | | | 1,004 | 2.4 | | | n.a. | | |
| 5-Year Average of Moody's Median for Triple-A States | | | 914 | 2.5 | | | n.a. | | |

Vermont's Credit Ratings

Credit Rating Priorities for Legislature

- **Pension Funding:** Continue 100% funding of the annual required contributions (“ARCs”) of the Vermont State Employees’ and State Teachers’ Retirement Systems pension funds.
- **Reserves:** Continue to maintain the 5% budget stabilization reserves, and build the newly-created General Fund Balance Reserve (or “rainy day reserve”) to a target level of 3% of the general fund incrementally and over time.
- **Debt Recommendation:** Continue unbroken 25-year record of adopting the Capital Debt Affordability Advisory Committee’s (CDAAC) biennium recommendation of \$144 million net tax-supported debt.
- **Teachers’ Healthcare:** Continue to fund retired state teachers’ healthcare costs from the annual budget , not from pension funds.

Vermont's Credit Ratings History

MOODY'S INVESTORS SERVICE

| RATING ACTION | DATE |
|----------------------|-------------|
| Aaa | 1971 |
| Aa | 9/20/72 |
| Aa2* | 10/20/97 |
| Aa1 | 9/29/99 |
| AAA | 2/05/07 |

* In 1997, Moody's began refining ratings with numerical modifiers. The shift to the "Aa2" rating was part of this process.

FITCH RATINGS

| RATING ACTION | DATE |
|----------------------|-------------|
| AA | 8/18/92 |
| AA+ | 10/25/99 |
| AAA* | 4/5/10 |

* Resulted from Fitch's "recalibration" of public sector credit ratings.

STANDARD & POOR'S

| RATING ACTION | DATE |
|---------------------------|-------------|
| AAA | 10/2/63 |
| Rating withdrawn | 3/23/71 |
| AA | 2/28/73 |
| Rating withdrawn | 10/16/73 |
| AA | 4/25/86 |
| AA- | 6/10/91 |
| AA | 10/14/98 |
| AA+ | 9/11/00 |
| AA+ with Positive Outlook | 9/18/12 |
| AA+ with Stable Outlook | 11/7/14 |

New England Bond Ratings

as of December 31, 2014

| State | Moody's | S&P | Fitch |
|---------------|---------|------|-------|
| Vermont | Aaa | AA+* | AAA |
| Connecticut | Aa3 | AA | AA |
| Maine | Aa2 | AA | N/A |
| Massachusetts | Aa1 | AA+ | AA+ |
| New Hampshire | Aa1 | AA | AA+ |
| Rhode Island | Aa2 | AA | AA |

* Outlook revised to stable from positive on November 7, 2014.

Moody's State Rating Criteria

- “US States Rating Methodology” – Completed Revised in May 2013
- General Observations
 - States as a Class are Highly-Rated
 - Ratings are a Forward-Looking Opinion of Financial Strength
 - Aaa and Aa Standards are Distinguished by an Emphasis on Management
 - Few States Rated Below Aa Category
- Traditional categories now assigned percentage weights as follows:

| Broad Rating Factors | Factor Weighting | Rating Sub-Factors | Sub-Factor Weighting |
|----------------------|------------------|--|----------------------|
| Economy | 20% | Income | 10% |
| | | Industrial Diversity | 5% |
| | | Employment Volatility | 5% |
| Governance | 30% | Financial Best Practices | 15% |
| | | Financial Flexibility/Constitutional Constraints | 15% |
| Finances | 30% | Revenues | 10% |
| | | Balances and Reserves | 10% |
| | | Liquidity | 10% |
| Debt | 20% | Bonded Debt | 10% |
| | | Adjusted Net Pension Liabilities | 10% |
| Total | 100% | Total | 100% |

Moody's State Rating Criteria

- Each rating category is assigned a score of 1-4, 6 or 9 as follows:

| Rating Category | Aaa | Aa1 | Aa2 | Aa3 | A | Baa And Below |
|-----------------|-----|-----|-----|-----|---|---------------|
| | 1 | 2 | 3 | 4 | 6 | 9 |

- Then an overall rating is assigned based upon a weighted score:

| Indicated Rating | Overall Weighted Score |
|------------------|------------------------|
| Aaa | 1 to 1.7 |
| Aa1 | 1.7 to 2.7 |
| Aa2 | 2.7 to 3.7 |
| Aa3 | 3.7 to 4.7 |
| A1 | 4.7 to 5.7 |
| A2 | 5.7 to 6.7 |
| A3 | 6.7 to 7.7 |
| Baa1 | 7.7 to 8.7 |
| Baa2 | 8.7 to 9.7 |

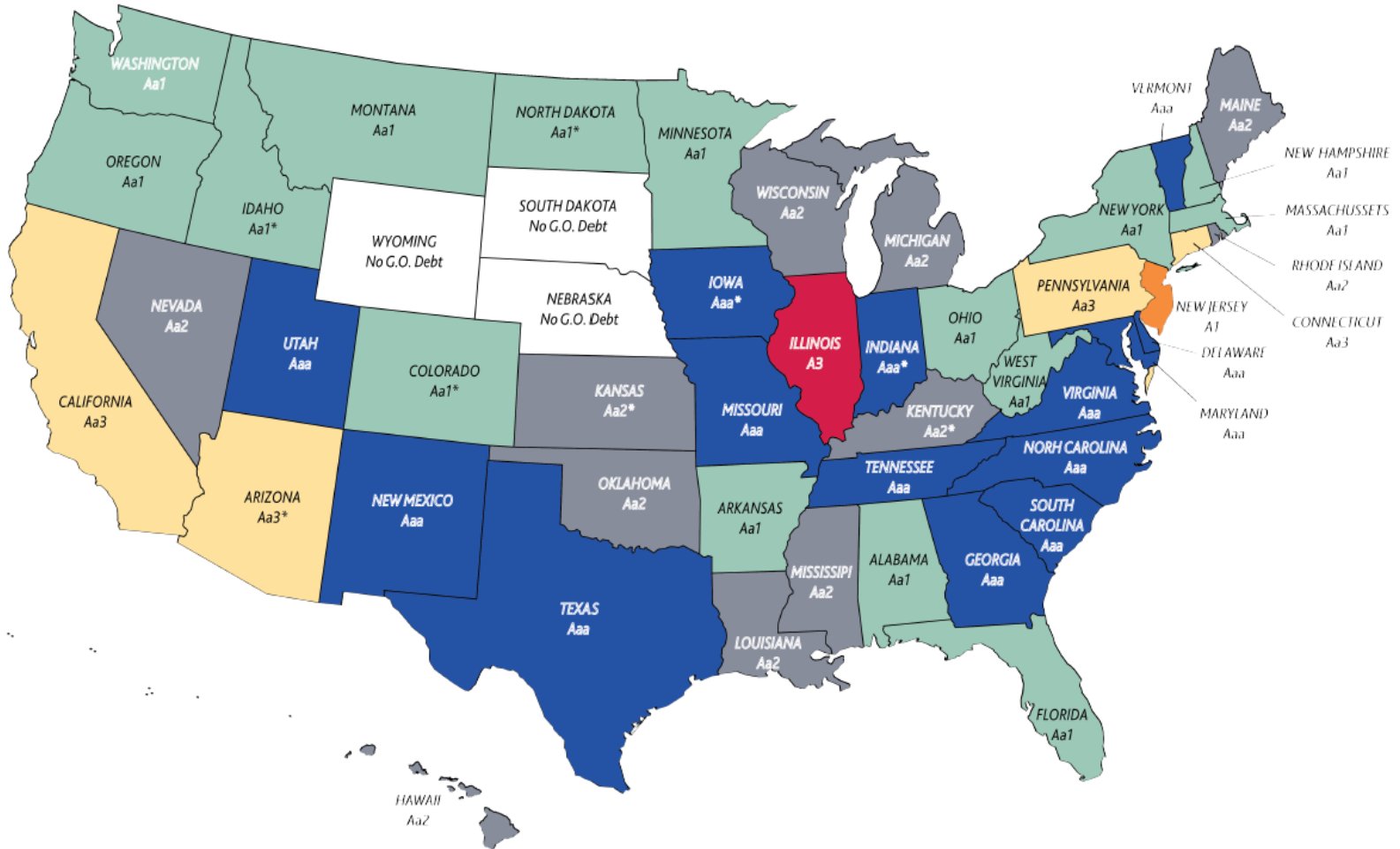
Moody's State Ratings Table

State General Obligation Bonds by rating category

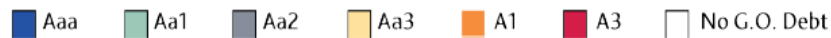
| Aaa (15 States) | Aa1 (15 States) | Aa2 (11 States) |
|-----------------|-----------------|-----------------|
| Alaska | Alabama | Hawaii |
| Delaware | Arkansas | Kansas* |
| Georgia | Colorado* | Kentucky* |
| Indiana* | Florida | Louisiana |
| Iowa* | Idaho* | Maine |
| Maryland | Massachusetts | Michigan |
| Missouri | Minnesota | Mississippi |
| New Mexico | Montana | Nevada |
| North Carolina | New Hampshire | Oklahoma |
| South Carolina | New York | Rhode Island |
| Tennessee | North Dakota* | Wisconsin |
| Texas | Ohio | |
| Utah | Oregon | |
| Vermont | Washington | |
| Virginia | West Virginia | |
| Aa3 (4 States) | A1 (1 State) | A3 (1 State) |
| Arizona* | New Jersey | Illinois |
| California | | |
| Connecticut | | |
| Pennsylvania | | |

* Issuer Rating; no general obligation debt

Moody's State Ratings Map



* Issuer rating; no general obligation debt



Moody's Rating Highlights for Vermont

Credit Strengths

- History of strong financial management and fiscal policies indicated by conservative budgeting practices.
- History of prompt action to reduce spending following revenue weakening.
- Maintenance of budget reserve levels at statutory limit.
- Steady progress in reducing previously high debt ratios and maintaining an affordable debt profile.

Credit Challenges

- Potential service pressures due to a population that is aging at a relatively rapid pace.
- Decline in job growth.

Source: Moody's Investors Service, Rating, November 6, 2014.

Moody's Rating Highlights for Vermont

What Could Make the Rating Go Down?

- A break from the states history of conservative fiscal management.
- Emergence of ongoing structurally imbalanced budgets.
- Depletion of budget reserves without swift replenishment.
- Liquidity strain resulting in multiyear cash flow borrowing.

Source: Moody's Investors Service, Rating, November 6, 2014.

Fitch State Rating Criteria

- “U.S. State Tax-Supported Rating Criteria” – August 16, 2010
- Rated Security
 - Legal Pledge
 - Lien Status
 - Indenture Requirements and Relevant Statutes
 - Bank Bond Ratings
- Debt and Other Long-Term Liabilities
 - Debt Ratios and Trends
 - Debt Structure
 - Future Capital and Debt Needs
 - Pension and Other Post-Employment Benefit (OPEB) Funding
 - Indirect Risks and Contingent Liabilities
- Economy
 - Major Economic Drivers
 - Employment
 - Income and Wealth
 - Other Demographic Factors

Fitch State Rating Criteria

- Economy (continued)
 - Tax Burden
- Finances
 - Revenue Analysis
 - Expenditure Analysis
 - Operating Margin Trends
 - Fund Balance and Reserve Levels
 - Liquidity
- Management and Administration
 - Institutionalized Policies and Budgeting Practices
 - Financial Reporting and Accounting
 - Political, Taxpayer and Labor Environment
 - Revenue and Spending Limitations

Fitch Ratings Highlights

KEY RATING DRIVERS:

- **CONSERVATIVE FINANCIAL MANAGEMENT:** Vermont's revenue stream is diverse and revenue estimates are updated twice a year. The state takes timely action to maintain balance and reserves have been maintained at statutory maximum levels despite periods of declining revenue.
- **RELATIVELY NARROW ECONOMY:** Vermont's economy has diversified but remains narrow with above-average exposure to the cyclical manufacturing sector. While statewide educational attainment and unemployment levels compare favorably to the nation, median resident age levels are well above the national average.
- **RATING SENSITIVITIES:** The rating is sensitive to shifts in Vermont's fundamental credit characteristics, particularly its moderate long-term liability profile and fiscal discipline.

Standard & Poor's State Rating Criteria

- Scores based upon S&P's scale of '1' (strongest) to '4' (weakest)
- Five (5) major factors given equal weight in determining composite score
- Scores correspond to following "indicative credit level:"
 - 1.0 to 1.5 AAA
 - 1.6 to 1.8 AA+
 - 1.9 to 2.0 AA
- Vermont's Composite Score (AA+) 1.7 (down from 1.6)
 - Government Framework 1.6
 - Financial and Budget Management 1.0
 - Economy 1.8 (down from 1.6)
 - Budgetary Performance 1.4
 - Debt and Liability (Pensions) Profile 2.6 (down from 2.4)

Source: S&P Ratings, November 7, 2014.

Standard & Poor's Rating Highlights

Rationale

“The outlook revision reflects Vermont's slower-than-average economic recovery, which continues to pressure the budget, in our view.

The ratings reflect our opinion of the state's:

- Diversifying economic base that is characterized by above-average income levels and low unemployment rates but a slower-than-average pace of growth by most measures recently;
- Strong financial and budget management policies that have contributed to consistent reserve and liquidity levels over time;
- Well-defined debt affordability and capital planning processes, in our view, that have limited leverage and contributed to a modest tax-supported debt burden with rapid amortization of tax-supported debt; and
- Significant pension and other postemployment benefits (OPEB), which remain sizable relative to those of state peers despite some recent reform efforts.

Transportation Infrastructure Bonds

Transportation Infrastructure Bonds

- Created by Act 50 of 2009
- Permitted purposes (32 V.S.A. §972):
 - Rehabilitation, reconstruction or replacement of state bridges & culverts
 - Rehabilitation, reconstruction or replacement of municipal bridges & culverts
 - Rehabilitation, reconstruction or replacement of state roads, railroads, airports and necessary buildings which, after such work, have an estimated remaining useful life of 30 years or more
- Most recent bond sale paid for \$10.4 million of projects, including:
 - 3 Interstate Bridge Replacement Projects: \$4.1 million
(Brattleboro, Milton, Windsor)
 - 8 State Bridge Replacement & Rehab Projects: \$3.3 million
(Bristol, Cambridge, Bennington, Brighton, Hancock, Jamaica x2, Plymouth)
 - 6 Roadway Projects: \$3.0 million
(Brandon x2, Hartford, Montpelier, Morristown, Rutland City)

Transportation Infrastructure Bonds

- Revenue bonds, supported entirely by transportation infrastructure bond (TIB) fund (NOT the State's full faith and credit)
- TIB fund supported motor fuel transportation infrastructure assessments
 - 2% of sales price of motor fuel, approximately \$1.8 million/month
 - \$0.03 per gallon of diesel fuel, approximately \$130,000/month
 - Appropriations from transportation fund under certain conditions
- Credit rating depends primarily upon ratio of annual TIB revenues divided by principal and interest payments on bonds (debt service coverage ratio)
 - Desired ratio is 3.0 times coverage
- Ratings based upon projected ratio are AA+, Aa2, AA (S&P, Moody's, Fitch)
- Borrowing cost slightly higher than for State's general obligation bonds , but still very competitive
- Have funded \$33.685 million of projects through August 2013, leveraged additional \$171.306 million of Federal matching funds (over 5 to 1 ratio)
- Most recent feasibility study projects bonding capacity adequate to finance \$57 million of additional projects through FY2018

Appendix: Bond Premium

What is Bond Premium?

- **Bond Premium:** the amount by which the purchase price of a bond is greater than its par value.
- **Par Value:** A price of \$100.000 per \$100 par (or “principal” or “face”) amount of bonds. Three decimal places is the market convention for pricing municipal bonds.

Example 1: For \$5,000 par amount of a muni bond with a price of \$101.625, the bond premium is

$$(\$101.625 - \$100) / \$100 * \$5,000 =$$

$$\$1.625 / \$100 * \$5,000 =$$

$$0.01625 * \$5,000 = \mathbf{\$81.25}$$

Why Does a Bond Have Premium?

- **Bond premium** arises when the **market yield** of a bond is less than its stated **coupon** or **rate**.
- **Market yield:** the annual interest rate, expressed as a percentage of par, that investors are willing to receive for owning a bond. Market yields change constantly based upon numerous factors including investor demand, perceived changes to tax policy, economic outlook, etc.
- **Coupon or Rate:** The fixed annual interest rate on a bond, expressed as a percentage of par, that the issuer (e.g., Vermont) sets at the time the bonds are sold. The coupon does not change.

Example 2: If Coupon > Market Yield, Bond Premium > \$0

If Coupon = Market Yield, Bond Premium = \$0

If Coupon < Market Yield, Bond Premium < \$0 (discount)

Premiums from the 2014 Series A Bonds

State of Vermont, General Obligation Bonds
2014A- Citizen Bonds- Negotiated

| Maturity Date | Amount | Rate | Yield | Price | Yield to Maturity | Call Date | Call Price | Premium (-Discount) | |
|---------------|------------|--------|--------|---------|-------------------|-----------|------------|---------------------|-----------|
| 08/15/2015 | 355,000 | 0.140% | 0.140% | 100.000 | | | | | |
| 08/15/2015 | 530,000 | 2.000% | 0.140% | 101.269 | | | | 6,725.70 | |
| 08/15/2016 | 770,000 | 0.350% | 0.350% | 100.000 | | | | | |
| 08/15/2016 | 1,150,000 | 3.000% | 0.350% | 104.443 | | | | 51,094.50 | |
| 08/15/2017 | 985,000 | 0.600% | 0.580% | 100.053 | | | | 522.05 | |
| 08/15/2017 | 1,265,000 | 3.000% | 0.580% | 106.433 | | | | 81,377.45 | |
| 08/15/2018 | 400,000 | 3.000% | 0.850% | 107.779 | | | | 31,116.00 | |
| 08/15/2018 | 650,000 | 4.000% | 0.850% | 111.397 | | | | 74,080.50 | |
| 08/15/2019 | 950,000 | 2.000% | 1.140% | 103.910 | | | | 37,145.00 | |
| 08/15/2019 | 830,000 | 3.000% | 1.140% | 108.458 | | | | 70,201.40 | |
| 08/15/2019 | 780,000 | 5.000% | 1.140% | 117.553 | | | | 136,913.40 | |
| 08/15/2020 | 420,000 | 1.450% | 1.450% | 100.000 | | | | | |
| 08/15/2020 | 1,585,000 | 5.000% | 1.450% | 119.297 | | | | 305,857.45 | |
| 08/15/2021 | 2,245,000 | 3.000% | 1.750% | 107.850 | | | | 176,232.50 | |
| 08/15/2021 | 435,000 | 5.000% | 1.750% | 120.412 | | | | 88,792.20 | |
| 08/15/2022 | 425,000 | 4.000% | 1.990% | 114.252 | | | | 60,571.00 | |
| 08/15/2022 | 325,000 | 5.000% | 1.990% | 121.344 | | | | 69,368.00 | |
| 08/15/2023 | 955,000 | 2.000% | 2.140% | 98.894 | | | | -10,562.30 | |
| 08/15/2023 | 395,000 | 5.000% | 2.140% | 122.550 | | | | 89,072.50 | |
| 08/15/2024 | 1,675,000 | 2.250% | 2.250% | 100.000 | | | | | |
| 08/15/2024 | 1,240,000 | 5.000% | 2.250% | 123.805 | | | | 295,182.00 | |
| 08/15/2025 | 20,000 | 5.000% | 2.360% | 122.730 | C | 2.555% | 08/15/2024 | 100.000 | 4,546.00 |
| 08/15/2026 | 225,000 | 5.000% | 2.460% | 121.763 | C | 2.802% | 08/15/2024 | 100.000 | 48,966.75 |
| 08/15/2027 | 125,000 | 5.000% | 2.530% | 121.092 | C | 2.989% | 08/15/2024 | 100.000 | 26,365.00 |
| 08/15/2028 | 40,000 | 5.000% | 2.600% | 120.425 | C | 3.151% | 08/15/2024 | 100.000 | 8,170.00 |
| 08/15/2029 | 1,535,000 | 3.000% | 3.000% | 100.000 | | | | | |
| | 20,310,000 | | | | | | | 1,651,737.10 | |

Premiums from the 2014 Series B Bonds

State of Vermont, General Obligation Bonds
2014B: New Money- Competitive

| Maturity Date | Amount | Rate | Yield | Price | Yield to Maturity | Call Date | Call Price | Premium (-Discount) |
|---------------|------------|--------|--------|-----------|-------------------|------------|------------|---------------------|
| 08/15/2015 | 2,795,000 | 5.000% | 0.170% | 103.296 | | | | 92,123.20 |
| 08/15/2016 | 1,760,000 | 5.000% | 0.340% | 107.814 | | | | 137,526.40 |
| 08/15/2017 | 1,430,000 | 5.000% | 0.580% | 111.750 | | | | 168,025.00 |
| 08/15/2018 | 2,630,000 | 5.000% | 0.850% | 115.016 | | | | 394,920.80 |
| 08/15/2019 | 1,120,000 | 5.000% | 1.140% | 117.553 | | | | 196,593.60 |
| 08/15/2020 | 1,675,000 | 5.000% | 1.450% | 119.297 | | | | 323,224.75 |
| 08/15/2021 | 1,000,000 | 5.000% | 1.740% | 120.482 | | | | 204,820.00 |
| 08/15/2022 | 2,930,000 | 5.000% | 1.980% | 121.423 | | | | 627,693.90 |
| 08/15/2023 | 2,330,000 | 5.000% | 2.120% | 122.728 | | | | 529,562.40 |
| 08/15/2024 | 765,000 | 5.000% | 2.220% | 124.099 | | | | 184,357.35 |
| 08/15/2025 | 3,660,000 | 5.000% | 2.350% | 122.827 C | 2.546% | 08/15/2024 | 100.000 | 835,468.20 |
| 08/15/2026 | 3,450,000 | 5.000% | 2.430% | 122.052 C | 2.777% | 08/15/2024 | 100.000 | 760,794.00 |
| 08/15/2027 | 3,550,000 | 5.000% | 2.520% | 121.187 C | 2.981% | 08/15/2024 | 100.000 | 752,138.50 |
| 08/15/2028 | 3,635,000 | 5.000% | 2.540% | 120.996 C | 3.105% | 08/15/2024 | 100.000 | 763,204.60 |
| 08/15/2029 | 2,140,000 | 5.000% | 2.570% | 120.710 C | 3.219% | 08/15/2024 | 100.000 | 443,194.00 |
| 08/15/2030 | 3,675,000 | 5.000% | 2.620% | 120.235 C | 3.332% | 08/15/2024 | 100.000 | 743,636.25 |
| 08/15/2031 | 3,675,000 | 5.000% | 2.670% | 119.762 C | 3.434% | 08/15/2024 | 100.000 | 726,253.50 |
| 08/15/2032 | 3,675,000 | 5.000% | 2.770% | 118.822 C | 3.557% | 08/15/2024 | 100.000 | 691,708.50 |
| 08/15/2033 | 3,675,000 | 5.000% | 2.820% | 118.356 C | 3.637% | 08/15/2024 | 100.000 | 674,583.00 |
| 08/15/2034 | 3,675,000 | 5.000% | 2.870% | 117.892 C | 3.711% | 08/15/2024 | 100.000 | 657,531.00 |
| | 53,245,000 | | | | | | | 9,907,358.95 |

Sources and Uses of Funds from 2014 Bonds

State of Vermont, General Obligation Bonds
 Final Numbers dated November 19, 2014

| Sources: | 2014A- Citizen Bonds- Negotiated | 2014B: New Money- Competitive | 2014C: Refunding Bonds- Competitive | Total |
|----------------------------|--|-------------------------------------|--|----------------|
| Bond Proceeds: | | | | |
| Par Amount | 20,310,000.00 | 53,245,000.00 | 36,205,000.00 | 109,760,000.00 |
| Net Premium/OID | 1,651,737.10 | 9,907,358.95 | 3,977,501.35 | 15,536,597.40 |
| | 21,961,737.10 | 63,152,358.95 | 40,182,501.35 | 125,296,597.40 |
| Other Sources of Funds: | | | | |
| Transfer from General Fund | 90,774.77 | | | 90,774.77 |
| | 22,052,511.87 | 63,152,358.95 | 40,182,501.35 | 125,387,372.17 |
| Uses: | 2014A- Citizen Bonds- Negotiated | 2014B: New Money- Competitive | 2014C: Refunding Bonds- Competitive | Total |
| Project Fund Deposits: | | | | |
| Project Fund | 21,961,737.10 | 63,036,071.87 | | 84,997,808.97 |
| Refunding Escrow Deposits: | | | | |
| Cash Deposit | | | 0.32 | 0.32 |
| SLGS Purchases | | | 39,934,791.00 | 39,934,791.00 |
| | | | 39,934,791.32 | 39,934,791.32 |
| Delivery Date Expenses: | | | | |
| Underwriter's Discount | 90,774.77 | 116,287.08 | 144,693.28 | 351,755.13 |
| Cost of Issuance | | | 103,016.75 | 103,016.75 |
| | 90,774.77 | 116,287.08 | 247,710.03 | 454,771.88 |
| | 22,052,511.87 | 63,152,358.95 | 40,182,501.35 | 125,387,372.17 |

Projects Financed by 2014 Bonds

**Act 51 of 2013
(as amended by Act 178 of 2014)**

| | | |
|------------|--|--------------|
| Section 2 | State Buildings – Various Projects | \$49,467,548 |
| Section 3 | Administration – Vermont Center for Geographic Information | 100,000 |
| Section 4 | Human Services – Various Projects | 6,981,000 |
| Section 5 | Judiciary | 2,628,000 |
| Section 6 | Commerce and Community Development | 288,000 |
| Section 7 | Grant Programs | 1,075,000 |
| Section 8 | Education | 10,354,690 |
| Section 9 | University of Vermont – Major Maintenance | 1,400,000 |
| Section 10 | Vermont State Colleges – Major Maintenance | 1,400,000 |
| Section 11 | Natural Resources | 6,242,929 |
| Section 12 | Military | 550,000 |
| Section 13 | Public Safety – Various Projects | 3,486,000 |
| Section 14 | Agriculture, Food and Markets | 200,000 |
| Section 15 | Vermont Public Television | 200,000 |
| Section 16 | Vermont Rural Fire Protection | 100,000 |
| Section 17 | Vermont Veterans’ Home | 435,000 |
| Section 18 | Vermont Interactive Technologies | 88,000 |

Act 40 of 2011

| | | |
|-----------|------------------------------------|---------------------|
| Section 2 | State Buildings – Various Projects | <u>1,642</u> |
| | | \$84,997,809 |

Additional Debt Capacity from Premium

State of Vermont

General Obligation Bonds, 2014 Series A and B

Calculation of Unused Bond Authorization (a.k.a. "Bond Premium")

| | |
|--|---|
| Par Amount of 2014 Series A Bonds: | \$20,310,000.00 (A) |
| Par Amount of 2014 Series B Bonds: | 53,245,000.00 (B) |
| Bond Proceeds Used for Projects: | 84,997,808.97 (C) |
| Bond Proceeds Used for Issuance Costs: | 116,287.08 (D) |
| Bonds Authorized But Not Needed:* | <u><u>\$11,559,096.05</u></u> (E = C + D - A - B) |

*This is the amount of general obligation bonds authorized by Act 51 and Act 178 that was not sold, and will not need to be sold, because net bond premium was used instead to finance capital projects. This amount may be re-allocated to projects in the fiscal year 2016-2017 Capital Bill, in addition to the amount of total net tax-supported debt recommended by the Capital Debt Affordability Advisory Committee in its 2014 Final Report, and still adhere to the Report's recommendations.

Appendix:
Capital Debt Affordability
Advisory Committee

Vermont's Current Debt Management Approach

- Bond issuance is substantially lower than in the 1990s. Reduced debt issuance and continued improvement in the State's economy and financial condition have lowered State debt ratios.
- Uncomplicated debt management with nearly exclusive use of general obligation debt (excluding Transportation Infrastructure Bonds).
- Vermont has taken advantage of refunding opportunities, lowering debt service costs.
- Low debt burden with rapid amortization.

History of Vermont's Debt Policies

- In the early 1970s, Vermont lost its Triple-A bond rating, largely because of a significant accumulation of bonded indebtedness. There were three principal causes for the increase in outstanding debt... interstate highway construction, extensive school construction and renovation, and sewage treatment plant construction.
- In 1975, Vermont enacted in statute the so-called “90 percent rule” as a policy device to reduce its large amount of accumulated tax supported debt.
 - New general obligation debt authorization was restricted to 90 percent of the debt being retired in the same fiscal year.
 - The ratio of debt as a percent of personal income, a key benchmark for rating analysts, was reduced from about 11% in the mid-1970s to about 3% in 1989.
 - The 90 percent rule policy was not sustainable and policymakers recognized it would eventually lead to unrealistically small amounts of allowable new debt.
- In 1990 the “90 percent rule” was repealed and the Capital Debt Affordability Advisory Committee was created to provide a new framework for determining the appropriate level of new debt issuance for the State.
- CDAAC Progress: In 1996, Vermont’s debt as percentage of personal income was twice the national median and we ranked 9th highest in the country. In 2012, the State is under the national median for that ratio and ranked 36th highest in the country; Vermont’s debt per capita ranked 34th highest in the country.
- Debt guidelines strengthened in 2004. State now benchmarks against triple-A rated states.
- In February of 2007, Vermont rejoined the ranks of Triple-A rated states when Moody’s raised its rating for the State from Aa1 to Aaa; in April 2010, Fitch “recalibrated” Vermont’s rating from AA+ to AAA; and in September 2012 S&P improved its outlook on Vermont’s AA+ rating from stable to positive although returned it to stable in November 2012.

Capital Debt Affordability Advisory Committee

Duties as Established by Statute

- Review annually the size and affordability of the state tax- supported general obligation debt
- Submit to the Governor and to the General Assembly an estimate of the maximum amount of new long-term general obligation debt that prudently may be authorized for the next fiscal year
- The estimate is advisory. In practice, the CDAAC recommendation has been adopted by the Governor and Legislature
- Conduct ongoing reviews of the amount and condition of bonds, notes and other obligations of instrumentalities of the state for which the state has a contingent or limited liability

Factors Considered by the Committee In Developing Its Recommendation

- Level of outstanding net tax-supported debt bonds over a ten-year period
- Authorized but unissued debt
- Affordable state net tax-supported debt bond authorizations over a ten-year period
- Projected debt service requirements based upon the above
- Criteria that rating agencies use to judge the quality of issues of state bonds, including:
 - Existing and projected total debt service on net tax-supported debt as a percentage of revenues
 - Existing and projected total net tax-supported debt outstanding as a percentage of total state personal income

Factors Considered by the Committee In Developing Its Recommendation

- Outstanding debt obligations of instrumentalities of the State for which the State has a contingent or limited liability; any other long-term debt of instrumentalities of the State and to the maximum extent obtainable, all long-term debt of municipal governments in Vermont which is secured by general tax or user fee revenues.
- The economic conditions and outlook for the State.
- Any other factor that is relevant to:
 - The ability of the State to meet its projected debt service requirements for the next five fiscal years; or
 - The interest rate to be borne by, the credit rating on, or other factors affecting the marketability of state bonds.