

### Kavet, Rockler & Associates, LLC

Economic and Public Policy Consulting

985 Grandview Road Williamstown, Vermont 05679-9003 U.S.A. Telephone: 802-433-1360

Facsimile: 866-433-1360 Cellular: 802-433-1111 E-Mail: tek@kavet.net Website: www.kavetrockler.com

### July 2014 Economic Review and Revenue Forecast Update

Prepared for the
State of Vermont
Emergency Board and
Legislative Joint Fiscal Committee

July 24, 2014

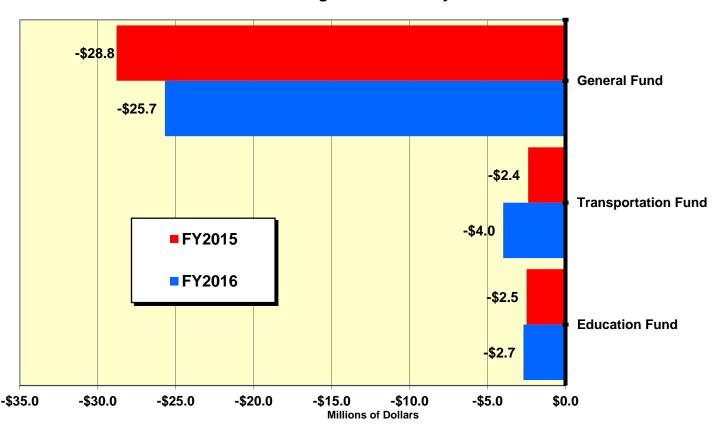
# Economic Review and Revenue Forecast Update July 2014

### Overview

Despite aggregate revenue performance in fiscal year 2014 that was less than 0.5% below January targets (and less than 0.5% above prior July 2013 forecasts), evidence the economy is on a slightly slower growth trajectory and technical changes affecting individual revenue categories and allocations to special funds will result in a downgrade to revenue projections for FY15 and FY16 of approximately 1.8%.

The General Fund closed FY14 slightly below projections (-0.4%), but experienced weakness in the second half of the fiscal year in personal income receipts and sales and use revenues — the State's two largest revenue sources, both of which are intimately linked to general economic conditions. Personal income withholding tax revenues actually declined in the last quarter of the fiscal year, while lagging sales and use tax receipts belied assumptions of accelerating economic growth. Weaker than expected gasoline prices and continued consumption declines in gasoline gallonage account for both the minor negative T-Fund variance in FY14 (-0.6%) and slight adjustments to FY15 and beyond.

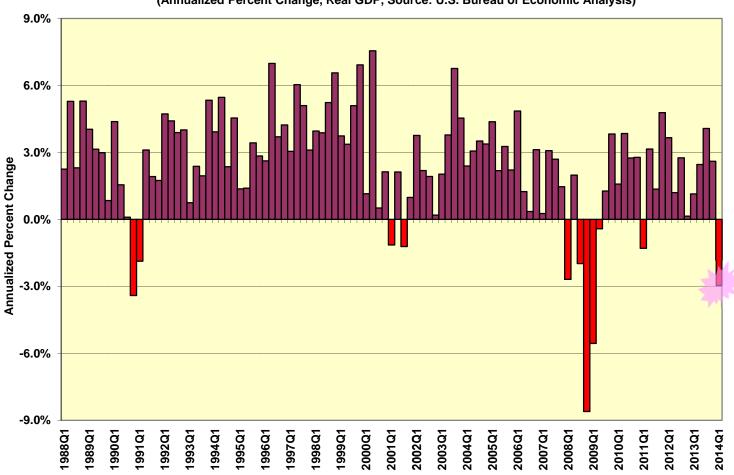
### **Recommended Net Revenue Changes from January 2014 Forecast**



### **January 2014 Economic and Revenue Forecast Commentary**

• Although economic fundamentals remain generally strong, U.S. economic growth stalled in the first half of 2014 – if you believe the most commonly referenced indicator of economic activity, real GDP. After closing out 2013 with 4.1% and 2.6% growth in the final two quarters, real U.S. GDP was reported to have declined an extraordinary 2.9% in the first quarter of 2014 - the largest quarterly decline since the depths of the last recession in early 2009 - and now looks poised to grow only about 2.7% in the second quarter. In response to this, most major economic forecasting entities (including Moody's upon which the official State forecast is based), dramatically lowered expectations for 2014 and 2015 growth.

First Quarter Plunge in U.S. GDP Growth Contradicts Coincident Data (Annualized Percent Change, Real GDP, Source: U.S. Bureau of Economic Analysis)



• Although severe winter weather can explain some slowing in growth, the reported GDP decline was contradicted by a number of other reliable coincident economic indicators. Job growth in the first quarter was the highest in six years, payrolls were up 3.2%, aggregate hours worked were up 4.1% and average hourly earnings were up 2.5%. How can more people work longer hours at higher pay with less output? Only through an extraordinary decline in productivity – which we deem unlikely. In fact, much of the first quarter GDP dip was the result of a purported decline in healthcare

spending – the first such decline since 1965. Although the introduction of the ACA may have delayed some healthcare expenditures, it is unlikely that there would not have been a corresponding increase in the second quarter. It is more likely that the recent GDP read is a mismeasurement that will ultimately be either revised or ignored. Accordingly, we have adjusted macroeconomic assumptions used in this forecast to reflect a slower growth trajectory than that assumed in January, but not as severe as that assumed by Moody's and others in June and July (see Tables A and B).

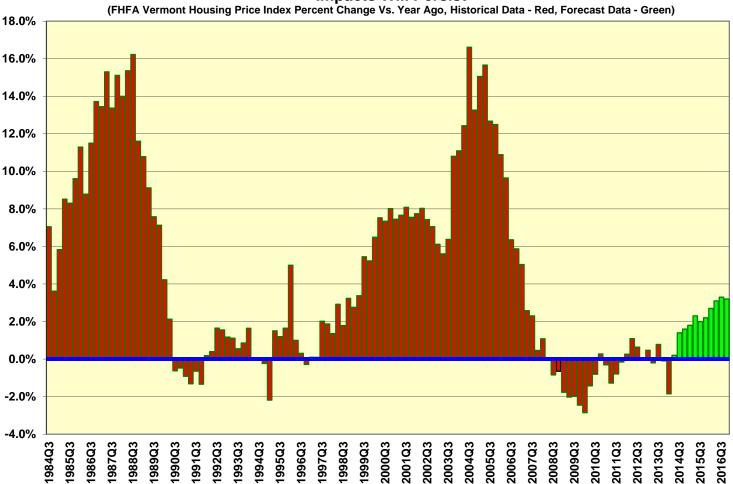


- The unemployment rate continued to drop in the first half of 2014, as steady job growth combined with relatively low but flat labor force participation rates. U.S. unemployment fell from 6.7% in December to 6.1% in June, while Vermont's rate dropped from 4.2% to 3.5% over the same period. Vermont's unemployment rate has been the lowest in New England for 35 consecutive months and has been the second lowest in the nation in recent months.
- Despite the slow but steady improvement in Vermont employment, Personal Income Withholding tax revenues in the final quarter of FY14 were below levels reached during the same period in FY13. This unusual, though not unprecedented, decline may reflect on the quality of the jobs currently being generated, with lower paying and more part-time positions now in the mix.
- Vermont housing prices, as measured by the FHFA Home Price Index, also registered an unusual decline in the first quarter of 2014, slipping 1.8% (see chart on next page). Vermont was one of only five states to post a decline in the quarter, three others of which were also New England states (CT, ME and RI). Although a very low level of winter sales and financing transaction volumes could undermine the statistical significance of this observation and

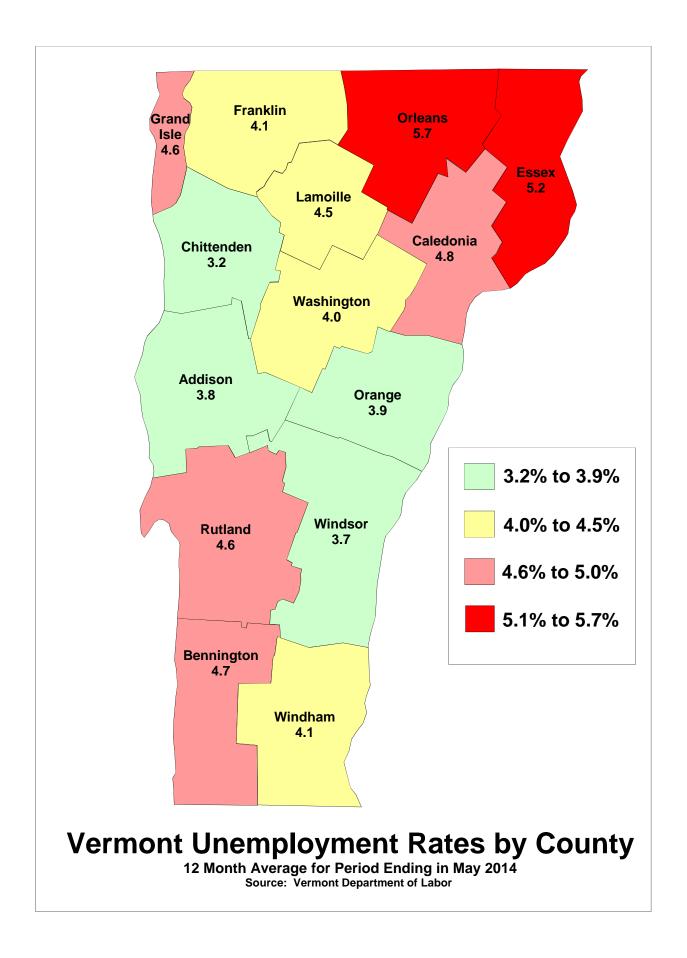
these data are often revised – solid positive price growth is a precondition for the resumption of more "normal" levels of residential construction activity and Grand List tax base growth.



### Vermont Home Price Declines Are Almost Over, but E-Fund Tax Base Impacts Will Persist

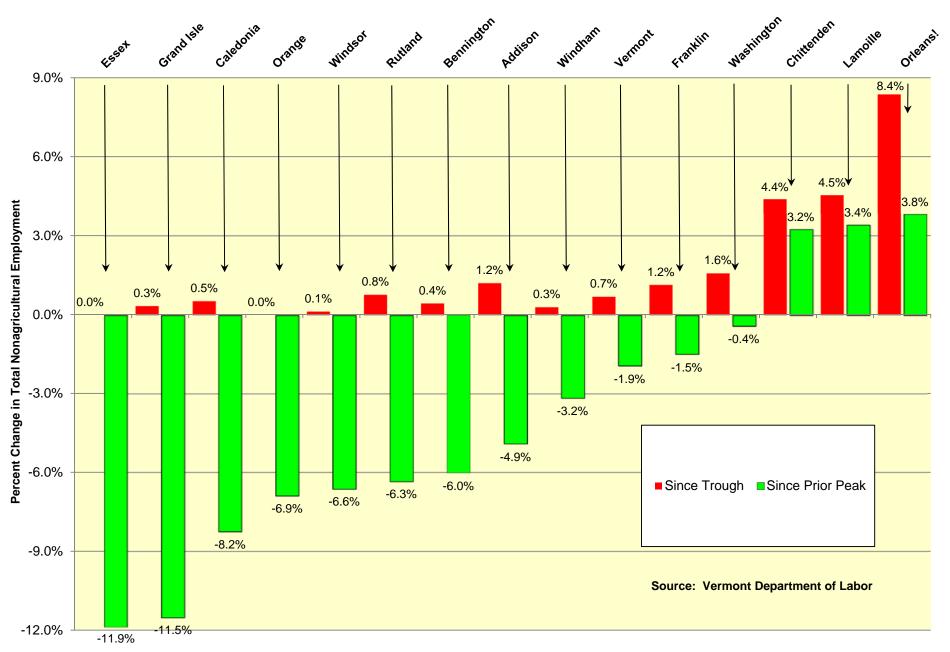


- Residential construction activity started in the last 12 months now stands at approximately \$290 million, up 25% from the 12 months ending in June of 2013, but still almost 60% below the prior March 2006 peak level of \$697 million. Nonresidential construction, which has benefitted from both strong commercial and public building starts in the past 12 months, now exceeds residential construction by \$100 million the largest differential in these two building types ever. At \$389 million, nonresidential starts are up 7% from prior year levels.
- Hidden within Vermont's relatively low unemployment rate, there is considerable variation in labor market conditions within the State. As illustrated in the charts on the next three pages, average unemployment rates over the 12 month period ending in May of 2014 by Vermont county range from 5.7% (Orleans) to 3.2% (Chittenden). Not evident in these rates, however, are important differences in job and labor force growth (or decline) during the recent business cycle.



### **Employment Growth in Last Business Cycle Reorders Vermont Counties**

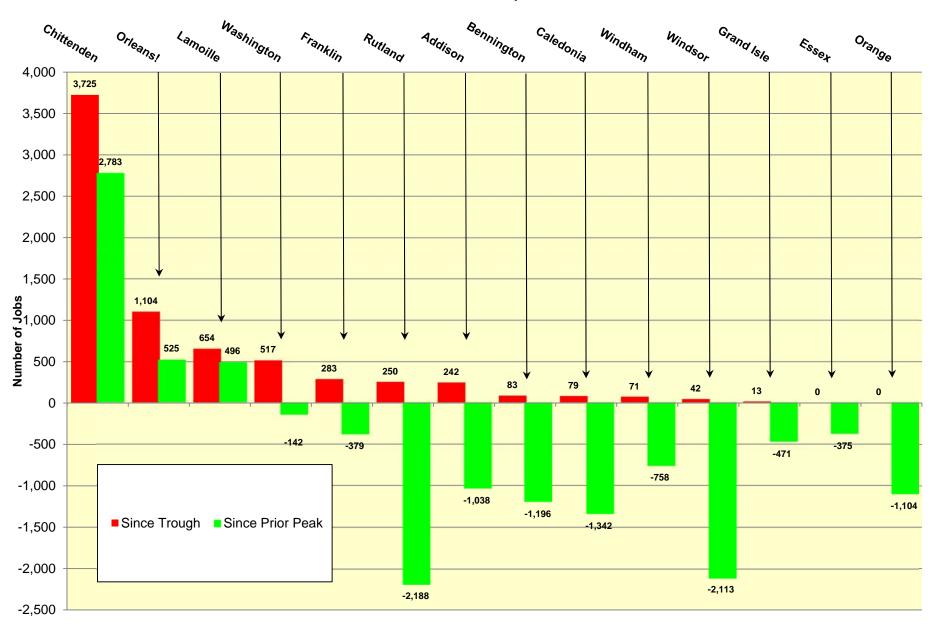
Percent Change in Total Nonagricultural Employment, 12 Month NSA Data Average Ending in May 2014 vs. Trough (cyclical low between Dec. 2009 and May 2014), and vs. Prior Peak (cyclical high between July 2006 and August 2007)



### Where Are The Jobs?

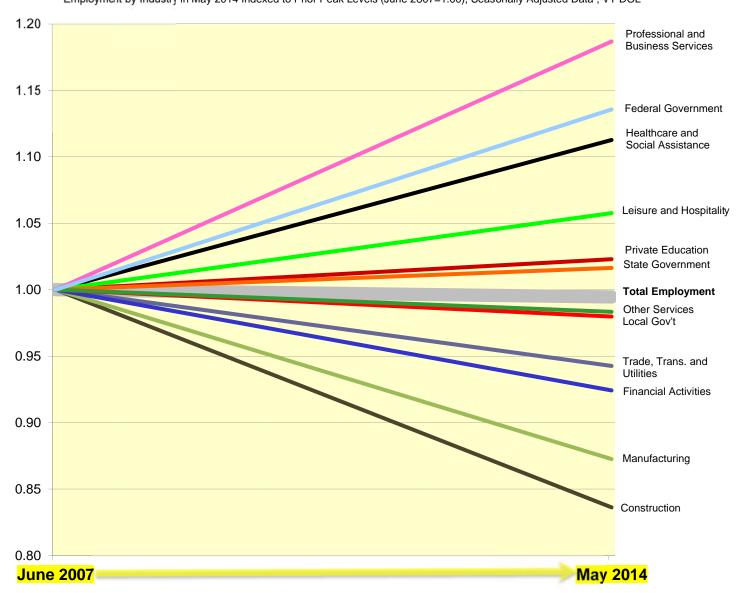
12 Month Average Employment, NSA Data Ending in May of 2014 vs. Cyclical Trough (lowest level between Dec. 2009 and May 2014), and vs. Prior Cyclical Peak (highest level between July 2006 and August 2007)

Source: VT Dept. of Labor



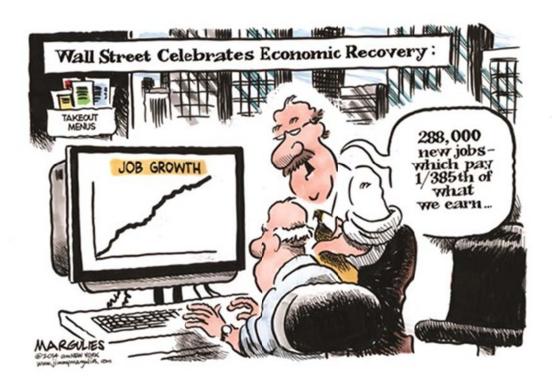
• Despite having the highest unemployment rate in the State, Orleans County has also experienced the highest rate of job growth since both the last cyclical peak and the cyclical low point of the recent recession (see chart on page 6). Benefitting from widely-publicized EB-5 supported projects, Orleans County is also one of the few counties in which the labor force has grown since the last cyclical peak. In contrast, due to declining labor force participation, both Orange County and Windsor County have lower unemployment rates, but have exhibited virtually no job growth since the low point of the last recession and have lost more than 1,000 and 2,000 jobs, respectively, since their prior cyclical peaks (see chart on page 7).

Economic Evolution Update: Change in Vermont Employment Since Prior Peak Employment by Industry in May 2014 Indexed to Prior Peak Levels (June 2007=1.00), Seasonally Adjusted Data, VT DOL



 As illustrated in the above chart, the last business cycle has also changed the industry mix of employment in Vermont, with Business and Professional Services exhibiting the strongest growth (+19%), adding 4,200 jobs since the prior cyclical peak. Federal Government employment, much of it related to Homeland Security in Canadian border areas has also grown since the prior peak in June 2007 (+13.8%), adding 800 jobs. The Healthcare and Social Assistance sector has added the most jobs (+5,000), growing 11.3% since June of 2007. Leisure and Hospitality employment has also shown solid growth (+5.8%) and added 1,900 jobs since its prior peak.

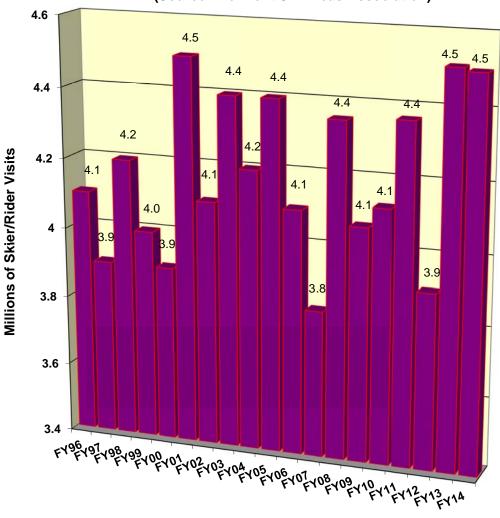
Construction employment continues to be the weakest sector, off 16.4% and -2,800 jobs since the last employment peak. Manufacturing is down 12.7% over the same period, with Durable Goods Manufacturing representing the single largest decline (-22.1% and -5,000 jobs), while Non-durable Goods Manufacturing was up 12.2% (+1,200 jobs) over the same period. The Trade/Transportation/Utilities sector was down 5.7% (-3,700 jobs, -2,000 of which were in retail trade) and Financial Activities, which was among the hardest hit sectors during the last recession, is still 1,000 jobs below June 2007 levels (-7.6%).



- Aggregate FY14 revenues in the General Fund closed the year about 0.4% below January targets, but the mix of revenues by category with strength derived from "one-time" Estate and Corporate tax events and weakness in ongoing Personal Income paid and withholding taxes and Sales & Use receipts will leave FY15 and FY16 revenues slightly below prior projections.
- Sales & Use tax revenues closed the fiscal year about \$1.7 million below target the second year in a row with growth under 2%. Despite consumer spending growth that is estimated at more than twice this rate, an ever expanding list of tax exemptions (to which "compost" was added in FY15) and tax avoidance via growing internet sales will continue to retard future revenue growth.

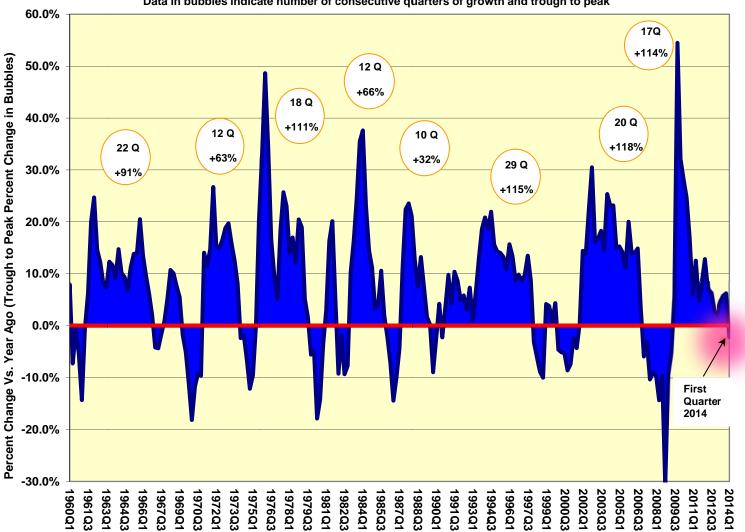
• One of the few bright spots in FY14 was Meals & Rooms tax revenue, which ended the year \$2.6 million above January estimates. This was primarily the result of what everyone else referred to as "bad" winter weather, but was a boon to Vermont ski areas. With U.S. west coast ski areas hampered by truly "bad" weather, ski area visitation in the region dropped nearly 30%, benefiting the rest of the country – including Vermont. As a result, skier visitation in Vermont rose to its highest national share in 19 years (at just over 8%), nearly matching last year's 20 year high of just over 4.5 million visits (see below chart). With more "normal" winter weather assumptions in FY15 and beyond, growth is expected to slow to about half its FY14 rate.





 With the announced closure of the Vermont Yankee nuclear power plant at the end of calendar 2014, electric energy tax revenues will drop \$4.0 million below FY14 levels to \$9.1 million in FY15 before disappearing entirely in FY16 and beyond. The FY15 forecast assumes a gradual decline in VY output beginning in the fall of 2014, with complete operational shutdown in late December of 2014. • Corporate tax receipts in FY14 were exceptionally strong (\$5.6 million above targets), reflecting an extended period of generally elevated corporate profits and individual firm performance in Vermont. As the business cycle ages, however, corporate profits typically slow, as new hiring and other business spending reduces tax liabilities. There is evidence this is happening at the national level (see below chart) and in Vermont. In tandem with this, there are now substantial carry-forward totals entering FY15, which raise the prospect of both lower liabilities and increased refunding in both FY15 and FY16. Accordingly, declines of \$3-\$12 million or more per year are possible in this historically volatile category.

After 17 Consecutive Quarters of Growth, U.S. Corporate Profits Decline U.S. corporate profits with inventory valuation and capital consumption adjustment; Source: US BEA; Data in bubbles indicate number of consecutive quarters of growth and trough to peak



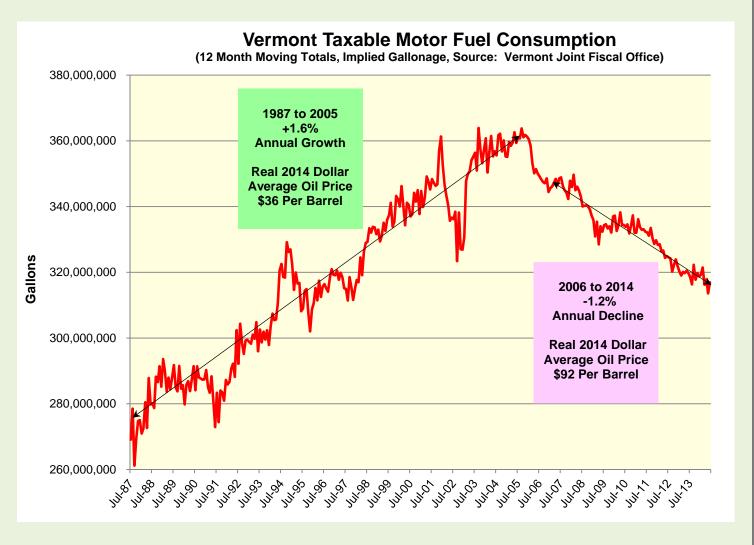
 Cigarette and Other Tobacco Products (OTP) tax revenues closed FY14 about \$0.7 million below estimates, as the rapid expansion of e-cigarette marketing appears to be measurably impacting tobacco sales. With the recent consolidation of the e-cigarette business in the hands of the major tobacco companies, there are now recognized advantages to cannibalizing taxable cigarette sales with untaxed e-cigarettes. These advantages include unfettered product advertising that benefits both e-cigarettes and traditional cigarettes at the same time, the ability to openly market and target products to youth with an addictive substance that can be satisfied with either vapor-based or tobacco delivery systems and the absence (at least now) of comprehensive and widespread taxation and product regulation. As e-cigarette marketing intensifies in the coming years, it will accelerate the erosion of taxable cigarette sales, leading to less revenue than previously projected. Although the recent tax increase on cigarettes and OTP will generate slight revenue gains in FY15 (+0.6%), declines of 3% per year or more may be experienced in FY16 and beyond.

- About \$6 million of the FY15 downgrade can be attributed to the diversion of General Fund revenues to a new special fund dedicated to the Office of the Secretary of State. This allocation change does not affect the collection of these revenues, but will serve to reduce reported Schedule 2 revenues and General Fund revenues reported herein. This accounting change primarily affects Business License, Fee and Service revenues, reducing these categories by \$5.6 million in FY14, and representing most of the \$7.4 million variance in the Available General Fund in FY14.
- Bank and Insurance revenue growth will be limited by mounting tax expenditures. Tax credits taken against these two categories before revenues are reported will stunt growth in FY15 and FY16, limiting gains to about 1% per year. Credits taken against the Bank Franchise tax now account for about 25% of reported revenues and are likely to grow with recently enacted tax expenditure increases.
- Lottery revenues fell short of projections in FY14 by \$0.3 million and show very little prospect for future growth. Absent a change in the business model now in place, Lottery revenues are unlikely to grow more than 1%-2% per year. With this, and continued weakness in the Sales & Use tax, Education Fund revenues are expected to grow at less than 3% in both FY15 and FY16.
- Source Transportation Fund revenues (and derived Available T-Fund and E-Fund revenues) closed FY14 about 0.7% below prior January estimates. Most of the weakness was in the Gasoline tax (-\$1.2 million), which suffered from both steeper consumption declines (see discussion and chart on the following page) and slightly lower pump prices than previously anticipated. With rising U.S. oil production now dampening foreign price volatility and lowering longer-term motor fuel price expectations, Gasoline tax revenues will rise only 1.7% in FY15, as the new Motor Fuel Assessment is fully implemented, and will decline by about 0.4% per year thereafter. Recommended adjustments to total T-Fund revenues will total -\$2.4 million in FY15, -\$4.0 million in FY16 and then gradually increase to about -\$5.6 million over the next five years.

### The Price Effect: Persistently High Real Gasoline Prices Erode Consumption

It is an axiom of economic theory that when the price of a good rises, consumption of the good will decline. In the real world, however, there are many factors that can intervene to complicate demand responses to price changes. Two such factors include the duration of price changes and the perception of future prices. When price changes are short-lived, or expectations of price changes are temporary, demand responses are significantly lower than if price changes are persistent and widely considered to be "permanent."

For nearly 20 years between 1985 and 2005, oil and gasoline prices were relatively low, averaging about \$35 per barrel (West Texas Crude Oil) in 2014 constant dollars. Although prices fluctuated between \$16 and \$67 per barrel, the price spikes were often short-lived. After 2005, however, oil and gas prices increased dramatically, averaging more than \$90 per barrel in constant 2014 dollars between 2006 and 2014. Although prices continued to fluctuate, ranging from \$44 to \$146 per barrel, they were rarely below \$80 and often topped \$100. Of most relevance, the persistence of high prices and a belief in their permanence has caused a more pronounced demand response. This includes widespread adoption of more fuel efficient vehicles, use of nongasoline powered vehicles and fewer miles driven. The effect of these demand responses has been steadily declining consumption, and as a result, steadily declining gasoline tax revenues, even during periods of economic expansion. Although the current rate of decline may slow, the U.S. Energy Information Agency now forecasts gasoline consumption in New England to decline 1.3% per year on average over the next 25 years.



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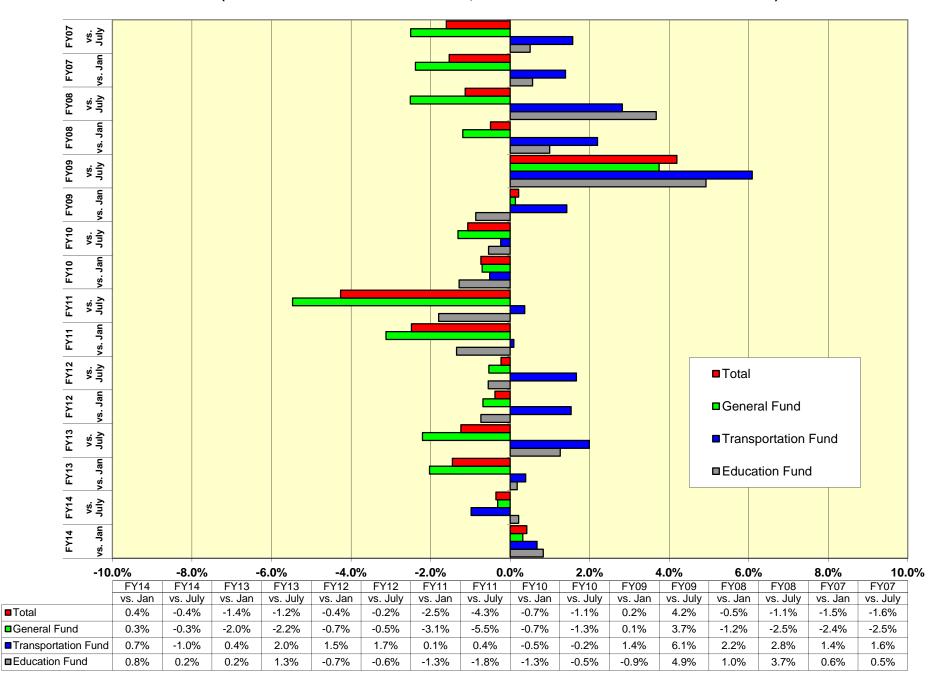
- The U.S. and Vermont macro-economic forecasts upon which the revenue forecasts in this Update are based are summarized in Tables A and B on pages 15 and 16, and represent a consensus JFO and Administration forecast developed using internal JFO and Administration State economic models with input from Moody's Analytics June and July 2014 projections and other major forecasting entities, including the Federal Reserve, CBO, IMF, Conference Board and private forecasting firms.
- For the first time, New England Economic Partnership (NEEP) forecasts were not available for use as forecast inputs. NEEP has lost funding for many of its activities and may discontinue operations. The NEEP model was central to the Vermont State forecasting process, since it allowed customized Vermont simulations based on consensus JFO and Administration assumptions and review. In the absence of NEEP, it is our consensus recommendation that the JFO and Administration purchase a customized State model simulation from Moody's Analytics in the month prior to each revenue forecast update. This would function much like the prior NEEP simulations and preserve essential local input to the larger models run by Moody's.
- Forecast versus actual revenue variance data for the most recent eight years are illustrated in the chart on the following page. The below table summarizes the same data for the past fourteen years. As would be expected, January projections are generally more accurate than July – though in the most recent forecast, the July (2013) variance across all three funds was 0.36% below actual FY14 revenues while the January variance was slightly worse, at 0.42% above. Since fiscal year 2001, there have been 28 regular Consensus forecasts (January and July for each year) for each of the three major funds (General Fund, Transportation Fund and Education Fund) for a total of 84 observations. Over this fourteen year period, there have been 40 variances that were low (under-forecast actuals) and 44 variances that were high (over-forecast actuals). The average absolute value of the variance for these 14 years was just under 2% for total revenues across all three major funds.

### AVERAGE ABSOLUTE VALUE OF FORECAST VS. ACTUAL VARIANCE (FY2001 to FY2014)

Fund		<b>Forecast Period</b>	
	January	July	All Periods
Education Fund	1.0%	2.1%	1.6%
Transportation Fund	1.3%	2.1%	1.7%
General Fund	2.1%	3.4%	2.7%
Total	1.4%	2.4%	1.9%

### **Vermont Consensus Revenue Forecasting Record**

(Forecast Percent Variance from Actual, FY2007 to FY2014 - Source: Joint Fiscal Office)



■Total

TABLE A
Comparison of Recent Consensus U.S. Macroeconomic Forecasts
December 2012 Through June 2014, Selected Variables, Calendar Year Basis

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP Growth									
December-12	-0.3	-3.1	2.4	1.8	2.2	2.0	3.9	4.2	3.5
June-13	-0.3	-3.1	2.4	1.8	2.2	2.0	3.4	4.3	3.3
December-13	-0.3	-2.8	2.5	1.8	2.8	1.8	3.1	4.0	2.9
June-14	-0.3	-2.8	2.5	1.8	2.8	1.9	2.8	3.9	3.2
S&P 500 Growth (Annual Avg.)									
December-12	-17.3	-22.5	20.3	11.4	8.1	6.9	7.1	-0.4	1.7
June-13	-17.3	-22.5	20.3	11.4	8.7	14.4	3.6	-0.7	0.4
December-13	-17.3	-22.5	20.3	11.4	8.7	19.2	9.6	-0.1	0.4
June-14	-17.3	-22.5	20.3	11.4	8.7	19.1	13.1	3.4	-5.5
Employment Growth (Non-Ag)									
December-12	-0.6	-4.4	-0.7	1.2	1.4	1.3	2.1	2.6	2.2
June-13	-0.6	-4.4	-0.7	1.2	1.7	1.4	1.6	2.7	2.4
December-13	-0.6	-4.4	-0.7		1.7	1.6	1.7	2.2	2.1
June-14	-0.6	-4.4	-0.7	1.2	1.7	1.7	1.8	2.4	2.4
Unemployment Rate									
December-12	5.8	9.3	9.6	9.0	8.1	7.8	7.1	6.3	5.8
June-13	5.8	9.3	9.6	8.9	8.1	7.7	7.0	6.2	5.7
December-13	5.8	9.3	9.6	8.9	8.1	7.4	6.6	6.1	5.8
June-14	5.8	9.3	9.6	8.9	8.1	7.4	6.3	6.0	5.7
West Texas Int. Crude Oil \$/Bbl									
December-12	100	62	79	95	94	96	105	110	114
June-13	100	62	79	95	94	97	105	110	114
December-13	100	62	79	95	94	98	105	112	115
June-14	100	62	79	95	94	98	100	103	104
Prime Rate									
December-12	5.09	3.25	3.25	3.25	3.25	3.25	3.32	4.92	6.86
June-13	5.09	3.25	3.25	3.25	3.25	3.25	3.25	4.26	6.60
December-13	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.38	5.31
June-14	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.37	5.00
Consumer Price Index Growth									
December-12	3.8	-0.3	1.6	3.1	2.1	2.2	2.6	2.6	2.4
June-13	3.8	-0.3	1.6	3.1	2.1	1.7	2.1	2.3	2.5
December-13	3.8	-0.3	1.6	3.1	2.1	1.5	1.7	2.1	2.4
June-14	3.8	-0.3	1.6	3.1	2.1	1.5	1.9	2.2	2.5
Average Home Price Growth									
December-12	-4.6	-5.1	-3.8		-0.5	0.8	4.6	5.3	3.5
June-13	-4.7		-3.9	-3.6	-0.1	2.7	4.9	3.7	2.3
December-13	-4.8	-5.4	-4.0	-3.7	0.0	4.1	6.2	2.2	0.3
June-14	-4.9	<i>-5.5</i>	-4.0	-3.7	-0.1	4.1	4.9	5.6	6.4

TABLE B
Comparison of Consensus Administration and JFO Vermont State Forecasts
December 2011 Through June 2014, Selected Variables, Calendar Year Basis

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GSP Growth									
December-11	0.4	-2.3	3.2	2.3	2.8	3.5	3.6	3.3	2.3
June-12	-0.2	-3.6	4.1	0.5	2.3	2.9	3.3	3.4	2.5
December-12	-0.2	-3.6	4.1	0.5	2.0	2.2	3.7	4.0	3.1
June-13	-0.2	-2.9	5.6	1.3	1.2	1.3	3.0	4.2	2.9
December-13	-0.2	-2.9	5.6	1.3	1.2	1.4	3.1	4.1	2.9
June-14	-0.2	-2.9	5.6	1.3	1.2	0.5	2.9	4.0	3.2
Population Growth									
December-11	0.2	0.1	0.2	0.3	0.3	0.3	0.4	0.3	0.4
June-12	0.1	0.1	0.2	0.1	0.3	0.3	0.4	0.4	0.4
December-12	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.4	0.5
June-13	0.1	0.1	0.2	0.1	-0.1	0.3	0.3	0.3	0.4
December-13	0.1	0.1	0.2	0.1	-0.1	0.1	0.1	0.1	0.2
June-14	0.1	0.1	0.2	0.1	-0.1	0.1	0.1	0.1	0.2
Employment Growth									
December-11	-0.4	-3.2	0.1	1.8	1.3	1.9	2.5	2.2	1.4
June-12	-0.3	-3.3	0.2	0.7	1.2	1.1	2.0	2.3	1.4
December-12	-0.3	-3.3	0.2	0.7	1.1	0.9	1.8	2.3	1.8
June-13	-0.4	-3.3	-0.2	0.7	1.2	1.0	0.9	2.2	1.9
December-13	-0.4	-3.3	-0.2	0.7	1.2	1.0	1.3	2.2	1.9
June-14	-0.4	-3.3	0.3	0.8	1.3	0.5	1.4	2.0	1.8
Unemployment Rate									
December-11	4.5	6.9	6.2	5.5	5.4	5.1	4.4	3.5	3.1
June-12	4.6	6.9	6.4	5.6	4.8	4.7	4.3	3.9	3.2
December-12	4.6	6.9	6.4	5.6	5.0	5.0	4.4	3.9	3.5
June-13	4.6	6.9	6.4	6.6	5.0	4.4	4.1	3.6	3.3
December-13	4.6	6.9	6.4	6.6	5.0	4.4	4.1	3.6	3.3
June-14	4.6	6.9	6.4	6.6	4.9	4.4	3.9	3.6	3.3
Personal Income Growth									
December-11	3.7	-1.3	3.4	4.0	5.0	5.3	5.1	4.8	4.0
June-12	4.4	-1.3	3.4	4.3	3.3	4.4	6.0	6.2	5.0
December-12	4.4	-2.2	3.3	4.7	3.2	3.4	5.6	6.3	5.2
June-13	4.4	-2.2	3.3	4.7	3.4	1.0	2.8	4.2	3.7
December-13	4.4	-2.2	3.3	4.7	3.4	3.8	5.7	6.2	5.1
June-14	3.9	-1.4	1.7	7.1	3.7	2.9	4.9	5.6	5.0
Home Price Growth (JFO)									
December-11	0.1	-1.5	-0.8	-0.5	0.5	1.2	1.6	2.1	3.0
June-12	0.0	-1.6	-0.9	-0.4	0.6	1.1	1.6	2.0	3.0
December-12	0.0	-1.9	-1.0	-0.4	0.5	1.0	1.5	2.0	3.1
June-13	0.0	-2.0	-1.1	-0.5	0.5	0.7	1.5	2.0	3.2
December-13	-0.1	-2.0	-1.2	-0.6	0.5	0.5	1.5	2.1	3.1
June-14	-0.1	-2.1	-1.2	-0.6	0.5	0.2	0.4	1.7	2.9

### **Methodological Notes and Other Comments**

- This analysis has benefited significantly from the input and support of Tax Department and Joint Fiscal Office personnel. In the Joint Fiscal Office, Sara Teachout, Stephanie Barrett, Dan Dickerson, Catherine Benham, Neil Schickner and Mark Perrault have contributed to numerous policy and revenue impact analyses and coordinated JFO forecast production and related legislative committee support functions. Theresa Utton-Jerman has diligently organized and updated large tax and other databases in support of JFO revenue forecasting activities. In the Tax Department, Sharon Asay, Mary Cox, Victor Gauto, Doug Farnham and Terry Edwards provided significant analytic contributions to many tax and revenue forecasts, including tax law change analyses and statistical and related background information associated with the detailed tax databases they maintain. Our thanks to all of the above for their many contributions to this analysis.
- The analysis in support of JFO economic and revenue projections are based on statistical and econometric models, and professional analytic judgment. All models are based on 36 years of data for each of the 25 General Fund categories (three aggregates), 32 years of data for each of the Transportation Fund categories (one aggregate), and 14 to 36 years for each of the Education Fund categories. The analyses employed includes seasonal adjustment using the X-11 and X-12 Census methods, various moving average techniques (such as Henderson Curves, etc.), Box-Jenkins ARIMA type models, pressure curve analysis, comparable-pattern analysis of monthly, quarterly and half year trends for current year estimation, and behavioral econometric forecasting models.
- Because the State does not currently fund an internal State or U.S. macro-economic model, this analysis relies primarily on macro-economic models from Moody's/Economy.com and, when available, the New England Economic Partnership (NEEP). The NEEP forecast for Vermont is managed by Jeff Carr, of Economic & Policy Resources, Inc., who is also the current Administration economist. Since October of 2001, input and review of initial Vermont NEEP model design and output prior to its release has been provided by KRA, as the State Economist and Principal Economic Advisor to the Vermont Legislature. Dynamic and other input/output-based models for the State of Vermont, including those from Regional Economic Models, Inc. (REMI), Regional Dynamics, Inc. (REDYN), and IMPLAN are also maintained and managed by the JFO for use in selected economic impact and simulation analyses used herein.
- The Consensus JFO and Administration forecasts are developed following discussion, analysis and synthesis of independent revenue projections, econometric models and source data produced by Administration and Joint Fiscal Office economic advisors.

## TABLE 1A - STATE OF VERMONT LEGISLATIVE JOINT FISCAL OFFICE SOURCE GENERAL FUND REVENUE FORECAST UPDATE

### Consensus JFO and Administration Forecast - July 2014

#### SOURCE G-FUND

revenues are prior to all E-Fund allocations FY 2010 % FY 2013 % FY 2014 FY 2015 % FY 2016 FY 2009 % FY 2011 % FY 2012 % % % and other out-transfers; used for Change Change Change Change Change Change Change Change analytic and comparative purposes only (Actual) (Actual) (Actual) (Actual) (Actual) (Preliminary) (Forecast) (Forecast) REVENUE SOURCE \$530.3 -14.8% \$498.0 -6.1% \$553.3 \$597.0 7.9% \$660.6 10.7% \$671.1 1.6% \$716.4 6.8% \$756.2 Personal Income 11.1% 5.6% Sales & Use\* \$321.2 -5.1% \$311.1 -3.1% \$325.6 4.7% \$341.8 5.0% \$346.8 1.4% \$353.6 2.0% \$362.2 2.4% \$372.5 2.8% Corporate \$66.2 -11.3% \$62.8 -5.1% \$89.7 42.7% \$85.9 -4.2% \$95.0 10.5% \$94.8 -0.1% \$89.9 -5.2% \$86.9 -3.3% Meals and Rooms \$117.1 -3.3% \$118.0 0.8% \$122.6 4.0% \$126.9 3.5% \$134.8 6.2% \$142.7 5.9% \$146.9 2.9% \$151.5 3.1% Cigarette and Tobacco\*\* \$64.1 8.3% \$70.1 9.2% \$72.9 4.0% \$80.1 9.9% \$74.3 -7.2% \$71.9 -3.3% \$72.4 0.6% \$70.2 -3.0% Liquor \$15.0 6.0% \$14.9 -1.0% \$15.4 3.1% \$16.4 7.0% \$17.0 3.4% \$17.7 4.0% \$18.3 3.6% \$18.9 3.3% Insurance \$53.7 -2.1% \$53.3 -0.9% \$55.0 3.3% \$56.3 2.5% \$55.0 -2.3% \$57.1 3.7% \$57.4 0.6% \$57.8 0.7% Telephone \$9.1 -3.8% \$7.9 -13.9% \$11.4 44.4% \$9.6 -15.3% \$9.4 -2.6% \$9.1 -2.9% \$9.0 -1.2% \$8.9 -1.1% Beverage \$5.6 0.3% \$5.7 0.4% \$5.8 2.2% \$6.0 3.3% \$6.2 3.3% \$6.4 3.6% \$6.6 3.2% \$6.8 3.0% Electric\*\*\* \$2.8 4.0% \$2.9 2.5% \$2.9 0.8% \$2.9 0.3% \$8.9 204.5% \$13.1 46.9% \$9.1 -30.9% \$0.0 -100.0% Estate \$23.4 49.1% \$14.2 -39.5% \$35.9 153.3% \$13.3 -62.8% \$15.4 15.4% \$35.5 131.0% \$24.2 -31.9% \$25.4 5.0% \$25.9 -23.7% \$23.8 -8.2% \$25.6 7.7% \$24.1 -6.0% \$28.5 18.3% \$30.9 8.5% \$33.6 8.6% \$36.2 7.7% Property \$20.6 102.5% \$10.4 -49.7% \$15.4 49.0% \$10.7 -30.9% \$10.7 0.2% 2.7% \$11.1 1.2% \$11.2 0.9% Bank \$11.0 13.6% Other Tax \$2.8 -12.7% \$3.7 32.1% \$3.7 1.7% \$1.2 -66.7% \$1.8 42.9% \$1.9 9.6% \$2.2 \$2.4 9.1% Total Tax Revenue \$1257.9 -7.9% \$1196.5 -4.9% \$1335.1 11.6% \$1372.4 2.8% \$1464.3 6.7% \$1517.0 3.6% \$1559.2 2.8% \$1604.9 2.9% **Business Licenses** \$3.0 9.4% \$3.0 -0.2% \$3.0 -0.6% \$3.0 2.8% \$2.8 -8.0% \$1.1 -61.4% \$1.1 1.7% \$1.2 4.5% \$21.4 2.7% \$21.8 \$19.1 29.5% \$19.2 0.9% \$20.5 6.4% \$20.9 2.1% 2.2% \$20.6 -3.4% \$21.2 2.8% Fees Services \$1.5 -11.0% \$1.2 -19.9% \$1.1 -8.7% \$2.3 105.8% \$2.5 8.3% \$1.3 -47.3% \$1.5 12.9% \$1.6 3.3% Fines \$9.8 122.0% \$7.4 -24.8% \$5.7 -22.2% \$7.4 28.7% \$4.7 -35.9% \$3.6 -24.2% \$5.1 42.7% \$5.5 7.8% \$1.4 -63.9% \$0.6 -57.0% \$0.3 -49.7% \$0.4 42.4% \$0.6 26.3% \$0.2 -59.2% \$0.6 165.6% \$1.0 70.0% Interest \$20.9 -7.7% \$21.6 3.0% \$21.4 -0.7% \$22.3 4.2% \$22.9 2.7% \$22.6 -1.6% \$22.6 0.1% \$22.9 1.3% Lottery All Other \$0.2 -64.7% \$0.3 57.4% \$0.7 115.7% \$0.9 15.8% \$1.7 93.1% \$1.3 -24.0% \$1.1 -13.3% \$1.2 9.1% Total Other Revenue \$56.0 10.0% \$53.3 -4.7% \$52.8 -1.1% \$57.3 8.6% \$56.6 -1.2% \$50.7 -10.4% \$53.2 5.0% \$55.1 3.6% TOTAL GENERAL FUND \$1313.9 -7.2% \$1249.9 -4.9% \$1387.9 11.0% 3.1% 2.9% \$1660.0 \$1429.7 3.0% \$1520.9 6.4% \$1567.6 \$1612.4 3.0%

<sup>\*</sup> Includes Telecommunications Tax; includes \$3.76M transfer in FY08 to the T-Fund for prior years Jet Fuel tax processing error

<sup>\*\*</sup> Includes Cigarette, Tobacco Products and Floor Stock tax revenues

<sup>\*\*\*</sup> Assumes Vermont Yankee continues to operate through calendar 2014, with a gradual reduction in output towards the end of the year, and is taxed per Act 143 of 2012 effective in FY13; Stated Electric Energy Tax revenues exclude appropriations to the Clean Energy Development Fund and Education Fund

### TABLE 1 - STATE OF VERMONT LEGISLATIVE JOINT FISCAL OFFICE AVAILABLE GENERAL FUND REVENUE FORECAST UPDATE

Consensus JFO and Administration Forecast - July 2014

#### **CURRENT LAW BASIS**

including all Education Fund allocations and other out-transfers	FY 2009 (Actual)	% Change	FY 2010 (Actual)	% Change	FY 2011 (Actual)	% Change	FY 2012 (Actual)	% Change	FY 2013 (Actual)	% Change	FY 2014 (Preliminary)	% Change	FY 2015 (Forecast)	% Change	FY 2016 (Forecast)	% Change
REVENUE SOURCE																
Personal Income	\$530.3	-14.8%	\$498.0	-6.1%	\$553.3	11.1%	\$597.0	7.9%	\$660.6	10.7%	\$671.1	1.6%	\$716.4	6.8%	\$756.2	5.6%
Sales and Use*	\$214.1	-5.1%	\$207.4	-3.1%	\$217.1	4.7%	\$227.9	5.0%	\$231.2	1.4%	\$229.9	-0.6%	\$235.4	2.4%	\$242.1	2.8%
Corporate	\$66.2	-11.3%	\$62.8	-5.1%	\$89.7	42.7%	\$85.9	-4.2%	\$95.0	10.5%	\$94.8	-0.1%	\$89.9	-5.2%	\$86.9	-3.3%
Meals and Rooms	\$117.1	-3.3%	\$118.0	0.8%	\$122.6	4.0%	\$126.9	3.5%	\$134.8	6.2%	\$142.7	5.9%	\$146.9	2.9%	\$151.5	3.1%
Cigarette and Tobacco	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM								
Liquor	\$15.0	6.0%	\$14.9	-1.0%	\$15.4	3.1%	\$16.4	7.0%	\$17.0	3.4%	\$17.7	4.0%	\$18.3	3.6%	\$18.9	3.3%
Insurance	\$53.7	-2.1%	\$53.3	-0.9%	\$55.0	3.3%	\$56.3	2.5%	\$55.0	-2.3%	\$57.1	3.7%	\$57.4	0.6%	\$57.8	0.7%
Telephone	\$9.1	-3.8%	\$7.9	-13.9%	\$11.4	44.4%	\$9.6	-15.3%	\$9.4	-2.6%	\$9.1	-2.9%	\$9.0	-1.2%	\$8.9	-1.1%
Beverage	\$5.6	0.3%	\$5.7	0.4%	\$5.8	2.2%	\$6.0	3.3%	\$6.2	3.3%	\$6.4	3.6%	\$6.6	3.2%	\$6.8	3.0%
Electric**	\$2.8	4.0%	\$2.9	2.5%	\$2.9	0.8%	\$2.9	0.3%	\$8.9	204.5%	\$13.1	46.9%	\$9.1	-30.9%	\$0.0	-100.0%
Estate***	\$21.9	39.4%	\$14.2	-35.2%	\$21.0	48.3%	\$13.3	-36.5%	\$15.4	15.4%	\$35.5	131.0%	\$24.2	-31.9%	\$25.4	5.0%
Property	\$8.5	-21.1%	\$7.8	-8.2%	\$8.4	7.7%	\$7.9	-6.2%	\$9.2	16.5%	\$10.0	9.3%	\$10.9	8.6%	\$11.7	7.7%
Bank	\$20.6	102.5%	\$10.4	-49.7%	\$15.4	49.0%	\$10.7	-30.9%	\$10.7	0.2%	\$11.0	2.7%	\$11.1	1.2%	\$11.0	-0.9%
Other Tax	\$2.8	-12.7%	\$3.7	32.1%	\$3.7	1.7%	\$1.2	-66.7%	\$1.8	42.9%	\$1.9	9.6%	\$2.2	13.6%	\$2.4	9.1%
Total Tax Revenue	\$1067.7	-8.8%	\$1006.7	-5.7%	\$1121.6	11.4%	\$1162.1	3.6%	\$1255.0	8.0%	\$1300.3	3.6%	\$1337.4	2.8%	\$1379.6	3.2%
Business Licenses	\$3.0	9.4%	\$3.0	-0.2%	\$3.0	-0.6%	\$3.0	2.8%	\$2.8	-8.0%	\$1.1	-61.4%	\$1.1	1.7%	\$1.2	4.5%
Fees	\$19.1	29.5%	\$19.2	0.9%	\$20.5	6.4%	\$20.9	2.1%	\$21.4	2.2%	\$20.6	-3.4%	\$21.2	2.7%	\$21.8	2.8%
Services	\$1.5	-11.0%	\$1.2	-19.9%	\$1.1	-8.7%	\$2.3	105.8%	\$2.5	8.3%	\$1.3	-47.3%	\$1.5	12.9%	\$1.6	3.3%
Fines	\$9.8	122.0%	\$7.4	-24.8%	\$5.7	-22.2%	\$7.4	28.7%	\$4.7	-35.9%	\$3.6	-24.2%	\$5.1	42.7%	\$5.5	7.8%
Interest	\$1.2	-77.8%	\$0.5	-56.3%	\$0.3	-49.9%	\$0.4	52.6%	\$0.5	20.5%	\$0.2	-66.6%	\$0.5	218.8%	\$0.9	80.0%
All Other	\$0.2	-64.7%	\$0.3	57.4%	\$0.7	115.7%	\$0.9	15.8%	\$1.7	93.1%	\$1.3	-24.0%	\$1.1	-13.3%	\$1.2	9.1%
Total Other Revenue	\$34.8	18.0%	\$31.7	-8.9%	\$31.3	-1.2%	\$34.9	11.5%	\$33.5	-3.9%	\$28.0	-16.4%	\$30.5	8.8%	\$32.1	5.2%
TOTAL GENERAL FUND	\$1102.5	-8.1%	\$1038.4	-5.8%	\$1152.8	11.0%	\$1197.0	3.8%	\$1288.6	7.7%	\$1328.4	3.1%	\$1367.9	3.0%	\$1411.7	3.2%

<sup>\*</sup> Includes \$2.5M transfer to the T-Fund in FY08 for prior years Jet Fuel tax processing errors; Transfer to the Education Fund increases from 33.3% to 35.0% effective in FY14

<sup>\*\*</sup> Assumes Vermont Yankee continues to operate beyond FY12, pending legal and regulatory rulings, and is taxed per Act 143 of 2012 effective in FY13; Stated Electric Energy Tax revenues exclude appropriations to the Clean Energy Development Fund and Education Fund

<sup>\*\*\*</sup> Excludes transfer to the Higher Education Trust Fund of \$2.4M in FY05, \$5.2M in FY06 and \$11.0M in FY11

# TABLE 2A - STATE OF VERMONT LEGISLATIVE JOINT FISCAL OFFICE SOURCE TRANSPORTATION FUND REVENUE FORECAST UPDATE

Consensus JFO and Administration Forecast - July 2014

#### **SOURCE T-FUND**

revenues are prior to all E-Fund allocations and other out-transfers; used for analytic and comparative purposes only	FY 2009 (Actual)	% Change	FY 2010 (Actual)	% Change	FY 2011 (Actual)	% Change	FY 2012 (Actual)	% Change	FY 2013 (Actual)	% Change	FY 2014 (Preliminary)	% Change	FY 2015 (Forecast)	% Change	FY 2016 (Forecast)	% Change
REVENUE SOURCE																
Gasoline	\$60.6	-3.1%	\$61.0	0.6%	\$60.6	-0.6%	\$59.3	-2.2%	\$59.9	1.1%	\$76.5	27.6%	\$77.8	1.7%	\$77.5	-0.4%
Diesel	\$15.5	-6.5%	\$15.1	-2.6%	\$15.4	2.0%	\$16.0	3.9%	\$15.6	-2.2%	\$17.2	9.7%	\$18.3	6.6%	\$18.8	2.7%
Purchase and Use*	\$65.9	-16.6%	\$69.7	5.7%	\$77.1	10.5%	\$81.9	6.3%	\$83.6	2.0%	\$91.8	9.9%	\$96.6	5.2%	\$100.1	3.6%
Motor Vehicle Fees	\$65.5	-3.0%	\$72.5	10.7%	\$72.3	-0.3%	\$73.5	1.7%	\$77.9	5.9%	\$79.0	1.5%	\$80.2	1.5%	\$80.8	0.7%
Other Revenue**	\$18.0	-24.0%	\$18.2	1.4%	\$17.9	-1.9%	\$18.3	2.2%	\$19.1	4.2%	\$19.5	2.3%	\$19.8	1.6%	\$20.1	1.5%
TOTAL TRANS. FUND	\$225.6	-9.6%	\$236.6	4.9%	\$243.3	2.8%	\$249.0	2.3%	\$256.0	2.8%	\$284.0	10.9%	\$292.7	3.1%	\$297.3	1.6%

### TABLE 2 - STATE OF VERMONT LEGISLATIVE JOINT FISCAL OFFICE AVAILABLE TRANSPORTATION FUND REVENUE FORECAST UPDATE

Consensus JFO and Administration Forecast - July 2014

### **CURRENT LAW BASIS**

including all Education Fund	FY 2009	%	FY 2010	%	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%
allocations and other out-transfers	(Actual)	Change	(Preliminary)	Change	(Forecast)	Change	(Forecast)	Change								
REVENUE SOURCE																
Gasoline	\$60.6	-3.1%	\$61.0	0.6%	\$60.6	-0.6%	\$59.3	-2.2%	\$59.9	1.1%	\$76.5	27.6%	\$77.8	1.7%	\$77.5	-0.4%
Diesel	\$15.5	-6.5%	\$15.1	-2.6%	\$15.4	2.0%	\$16.0	3.9%	\$15.6	-2.2%	\$17.2	9.7%	\$18.3	6.6%	\$18.8	2.7%
Purchase and Use*	\$44.0	-16.6%	\$46.5	5.7%	\$51.4	10.5%	\$54.6	6.3%	\$55.7	2.0%	\$61.2	9.9%	\$64.4	5.2%	\$66.7	3.6%
Motor Vehicle Fees	\$65.5	-3.0%	\$72.5	10.7%	\$72.3	-0.3%	\$73.5	1.7%	\$77.9	5.9%	\$79.0	1.5%	\$80.2	1.5%	\$80.8	0.7%
Other Revenue**	\$18.0	-24.0%	\$18.2	1.4%	\$17.9	-1.9%	\$18.3	2.2%	\$19.1	4.2%	\$19.5	2.3%	\$19.8	1.6%	\$20.1	1.5%
TOTAL TRANS. FUND	\$203.6	-8.7%	\$213.3	4.8%	\$217.6	2.0%	\$221.7	1.9%	\$228.2	2.9%	\$253.4	11.0%	\$260.5	2.8%	\$263.9	1.3%
OTHER																
TIB Gasoline			\$13.4	NM	\$16.5	23.6%	\$20.9	26.6%	\$21.2	1.4%	\$19.2	-9.5%	\$20.0	4.4%	\$20.6	2.8%
TIB Diesel and Other***			\$1.5	NM	\$2.0	32.1%	\$1.9	-2.1%	\$1.8	-8.1%	\$1.8	3.9%	\$1.9	3.1%	\$2.0	2.6%
Total TIB			\$14.9	NM	\$18.5	24.4%	\$22.8	23.5%	\$23.0	0.6%	\$21.0	-8.4%	\$21.9	4.3%	\$22.6	2.8%

<sup>\*</sup> As of FY04, includes Motor Vehicle Rental tax revenue

<sup>\*\*</sup> Beginning in FY07, includes Stabilization Reserve interest; FY08 data includes \$3.76M transfer from G-Fund for prior Jet Fuel tax processing errors and inclusion of this tax in subsequent years

<sup>\*\*\*</sup> Includes TIB Fund interest income of less than \$15,000

### TABLE 3 - STATE OF VERMONT LEGISLATIVE JOINT FISCAL OFFICE AVAILABLE EDUCATION FUND\* REVENUE FORECAST UPDATE

(Partial Education Fund Total - Includes Source General and Transportation Fund Allocations Only)

Consensus JFO and Administration Forecast - July 2014

### **CURRENT LAW BASIS**

* Source General and Transportation  Fund taxes allocated to or associated	FY 2009	%	FY 2010	%	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%
with the Education Fund only	(Actual)	Change	(Preliminary)	Change	(Forecast)	Change	(Forecast)	Change								
GENERAL FUND																
Sales & Use**	\$107.1	-5.1%	\$103.7	-3.1%	\$108.5	4.7%	\$113.9	5.0%	\$115.6	1.4%	\$123.8	7.1%	\$126.8	2.4%	\$130.4	2.8%
Interest	\$0.3	NM	\$0.1	-60.2%	\$0.1	-48.8%	\$0.0	-7.5%	\$0.1	72.8%	\$0.1	-17.2%	\$0.1	44.7%	\$0.1	20.0%
Lottery	\$20.9	-7.7%	\$21.6	3.0%	\$21.4	-0.7%	\$22.3	4.2%	\$22.9	2.7%	\$22.6	-1.6%	\$22.6	0.1%	\$22.9	1.3%
TRANSPORTATION FUND																
Purchase and Use***	\$22.0	-16.6%	\$23.2	5.7%	\$25.7	10.5%	\$27.3	6.3%	\$27.9	2.0%	\$30.6	9.9%	\$32.2	5.2%	\$33.4	3.6%
TOTAL	\$150.2	-6.4%	\$148.6	-1.1%	\$155.7	4.8%	\$163.6	5.1%	\$166.5	1.7%	\$177.0	6.3%	\$181.7	2.6%	\$186.8	2.8%

<sup>\*\*</sup> Includes Telecommunications Tax; Includes \$1.25M transfer to T-Fund in FY08 for prior Jet Fuel Tax processing errors; Transfer percentage from the General Fund increases from 33.3% to 35.0% effective in FY14

<sup>\*\*\*</sup> Includes Motor Vehicle Rental revenues, restated