

MAD RIVER VALLEY

2015 ANNUAL DATA REPORT



Acknowledgments

This report was authored by Joshua Schwartz, Executive Director of the Mad River Valley Planning District with assistance from MRVPD Planning Coordinator, Dara Torre.

The data used in this report originates from a variety of public sources, and reflects the calendar year of 2014 plus seasonal data for the 2014-15 ski season. Our thanks to Sugarbush Resort, Mad River Glen, Friends of the Mad River, and the Mad River Watershed Conservation Partnership for supplying local data. Data points from [2014's Mad River Valley Economic Study](#), authored by a consultant team consisting of SE Group, Doug Kennedy Advisors, and Birchline Consulting, also informed this report and helped guide an ongoing community conversation about economic vitality in the MRV.

Cover Photography by Steve Butcher.

TABLE OF CONTENTS

INTRODUCTION 4

HISTORY 4

SECTION I: ECONOMICS 5

 TOURISM & HOSPITALITY 5

 SKIER VISITS 12

SECTION II: POPULATION & HOUSING 15

 POPULATION 15

 HOUSING..... 24

 HOUSING AFFORDABILITY 33

SECTION III: EMPLOYMENT 35

 LABOR MARKET AREA (LMA)..... 35

 WORKER FLOW 43

SECTION IV: TRAFFIC & TRANSIT 46

 ANNUAL TRAFFIC SUMMARY 47

 EFFICIENCY OF TRANSPORTATION INFRASTRUCTURE 48

 TRANSIT 49

SECTION V: TOWN INFRASTRUCTURE 50

 EMERGENCY SERVICES 50

 CRIME..... 52

SECTION VI: ENVIRONMENT 55

 ENERGY..... 55

 WATER QUALITY 57

 LAND CONSERVATION..... 59

INTRODUCTION

This report was prepared by the Mad River Valley Planning District to address the requirements of its [1998 Memorandum of Understanding](#) (MOU), and provide information for community planning purposes. Information used in this report was publicly available, except where noted. Sugarbush Resort provided data in conjunction with the MOU. This report utilizes the most recent data available as of July, 2015. As such, it focuses primarily on the 2014 calendar year, but includes economic and Sugarbush Resort data collected in the first quarter of 2015 in order to capture the 2014-2015 ski season. This report was finalized on April 1st, 2016.

HISTORY

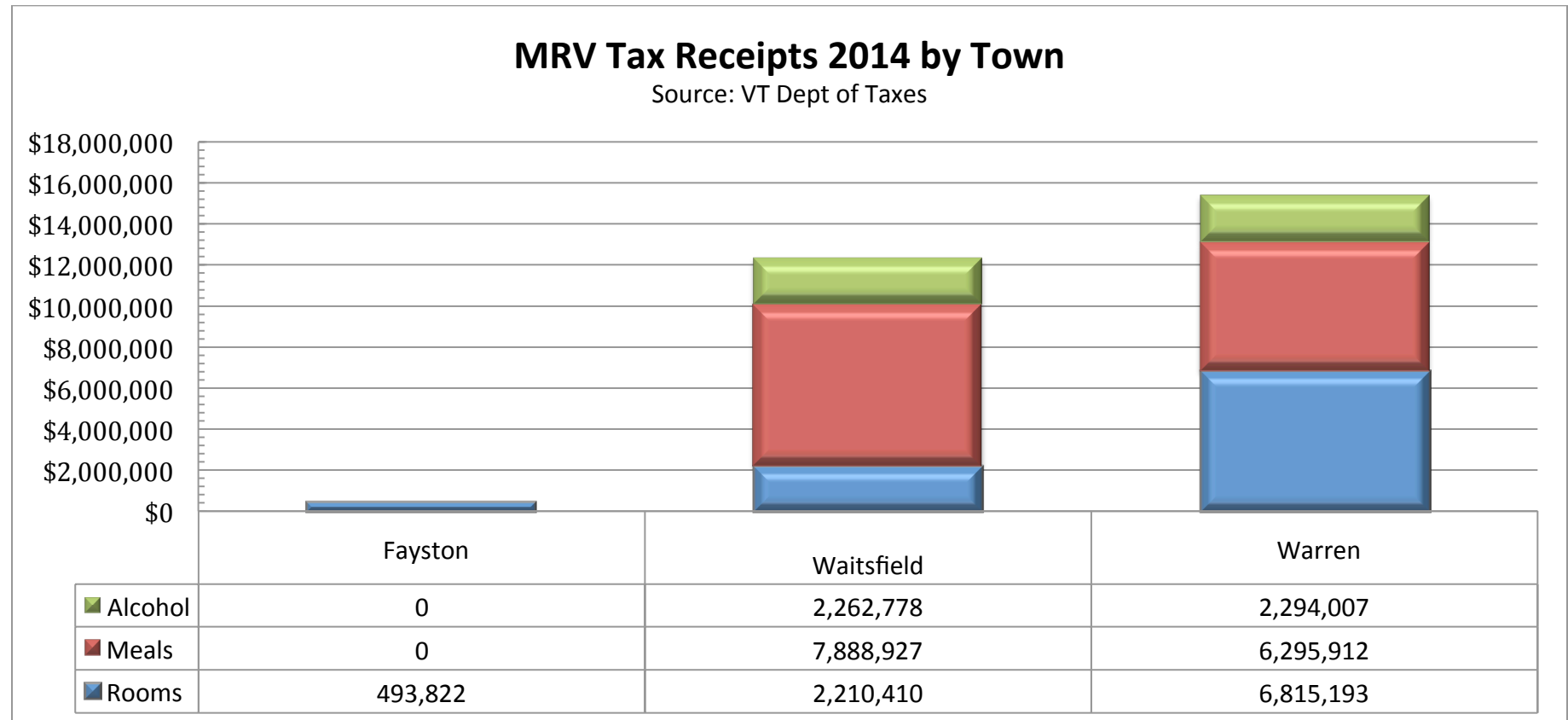
The Towns of Fayston, Waitsfield and Warren created the Mad River Valley Planning District in 1985. The Purpose of the Planning District is to *carry out a program of planning for the future of the Mad River Valley. The planning program shall be directed toward the physical, social, economic, fiscal, environmental, cultural and aesthetic well being of the member Towns and its inhabitants* (MRVPD Articles of Agreement, March 1985).

The Mad River Valley Planning District employs a full time Executive Director and a part time Planning Coordinator. The District is governed by a Steering Committee consisting of a Selectboard Member and a Planning Commission member from each of the three member Towns, a business representative from the Mad River Valley Chamber of Commerce, and a non-voting representative from Sugarbush Resort. The Central Vermont Regional Planning Commission (CVRPC) holds a non-voting ex-officio seat. The three towns and Sugarbush Resort fund the Mad River Valley Planning District equally.

SECTION I: ECONOMICS

The Economics section includes Items #35 & 36 from the Memorandum of Understanding.

TOURISM & HOSPITALITY

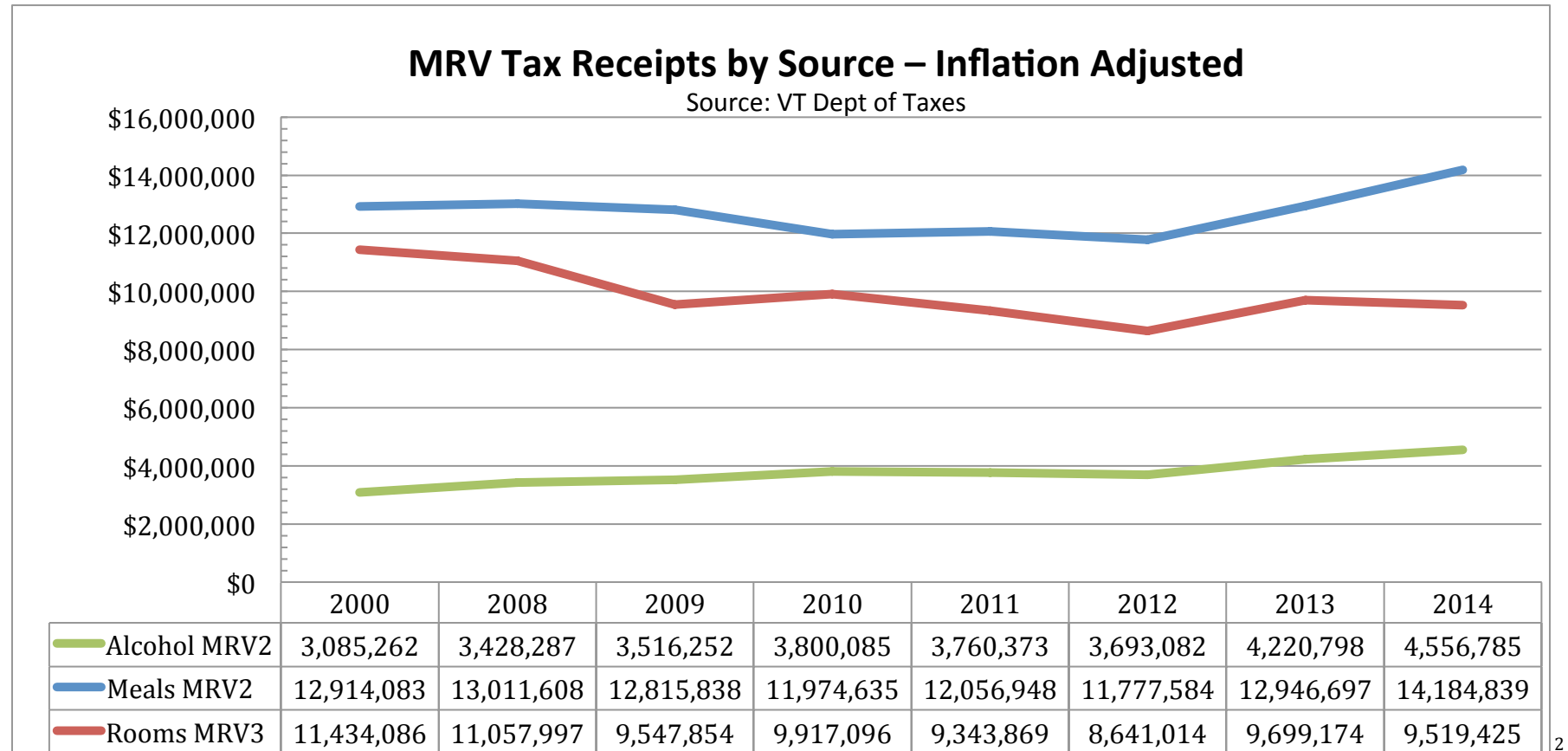


A comparison of 2014 tax receipts by town¹ illustrates a predominance of meals revenue in Waitsfield and lodging revenue in Warren. Compared to 2013 receipts, Alcohol receipts increased by 24% in Waitsfield and decreased by 1.4% in Warren. Meals

¹ Fayston's Meals & Alcohol numbers were suppressed due to confidentiality threshold after 2009.

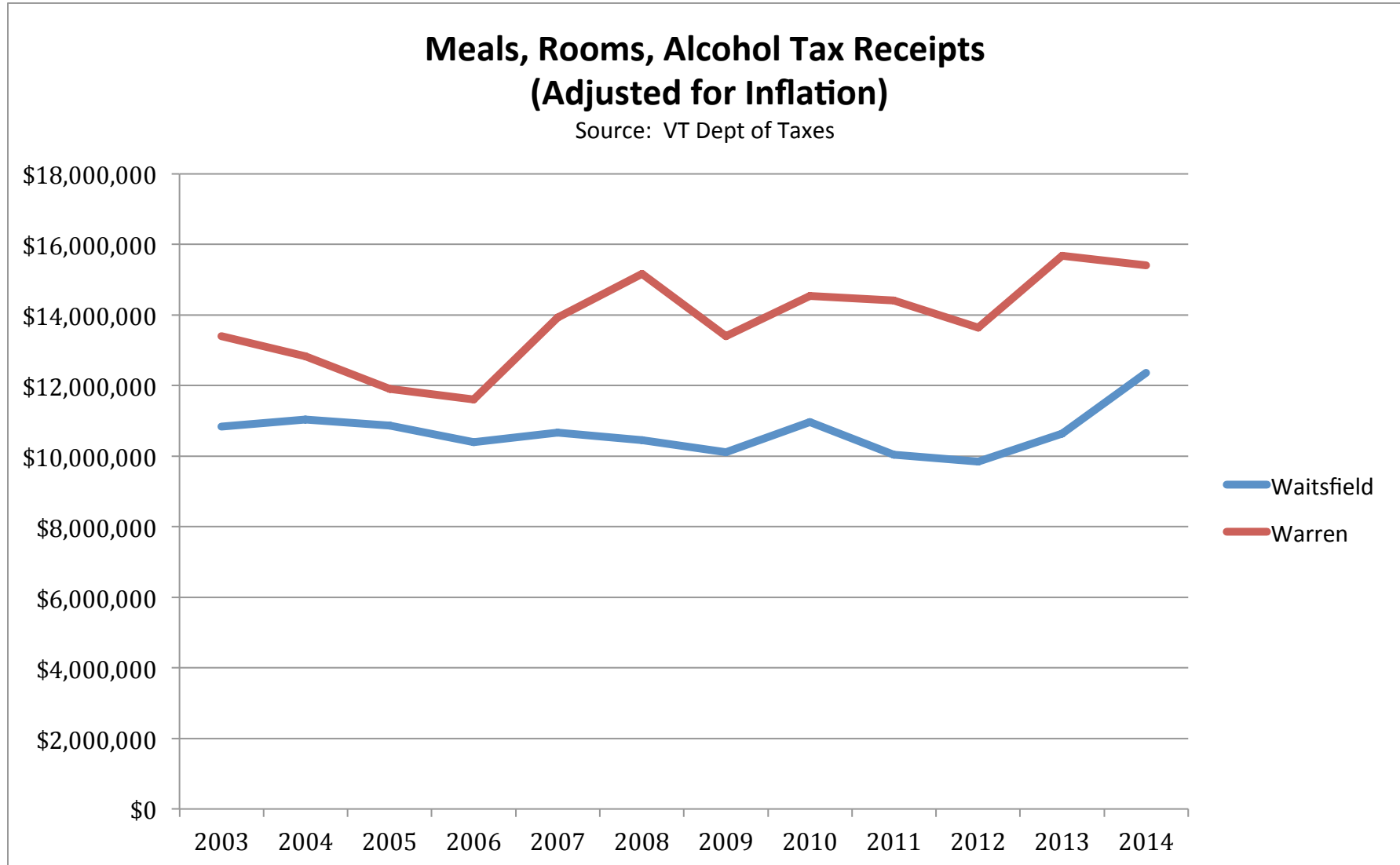
receipts reflected this trend, seeing an increase of 24% in Waitsfield and a 1% decrease in Warren. Rooms receipts showed an 1.2% increase in Warren, a 2.3% decrease for Waitsfield, and a drop by 10% for Fayston.

Tax revenue trends illuminate the relative health of the MRV's primary tourist industries - skiing, foliage and weddings, which impact each of these sectors (alcohol, meals, and rooms). 2014 shows an upward trend in meals and alcohol for the MRV as a whole, with relatively stable lodging.

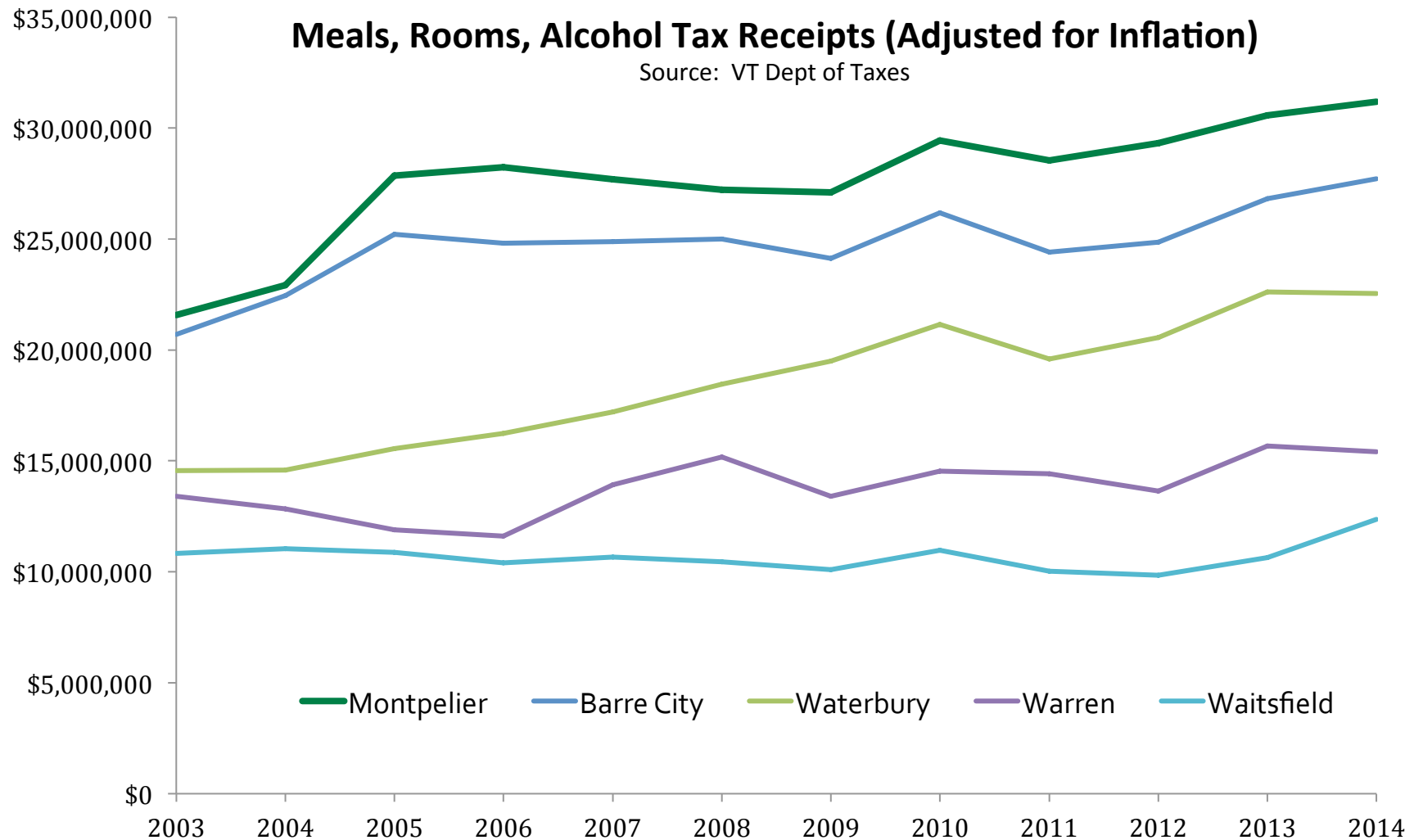


² MRV2 = Waitsfield & Warren; MRV3 = Fayston, Waitsfield & Warren.

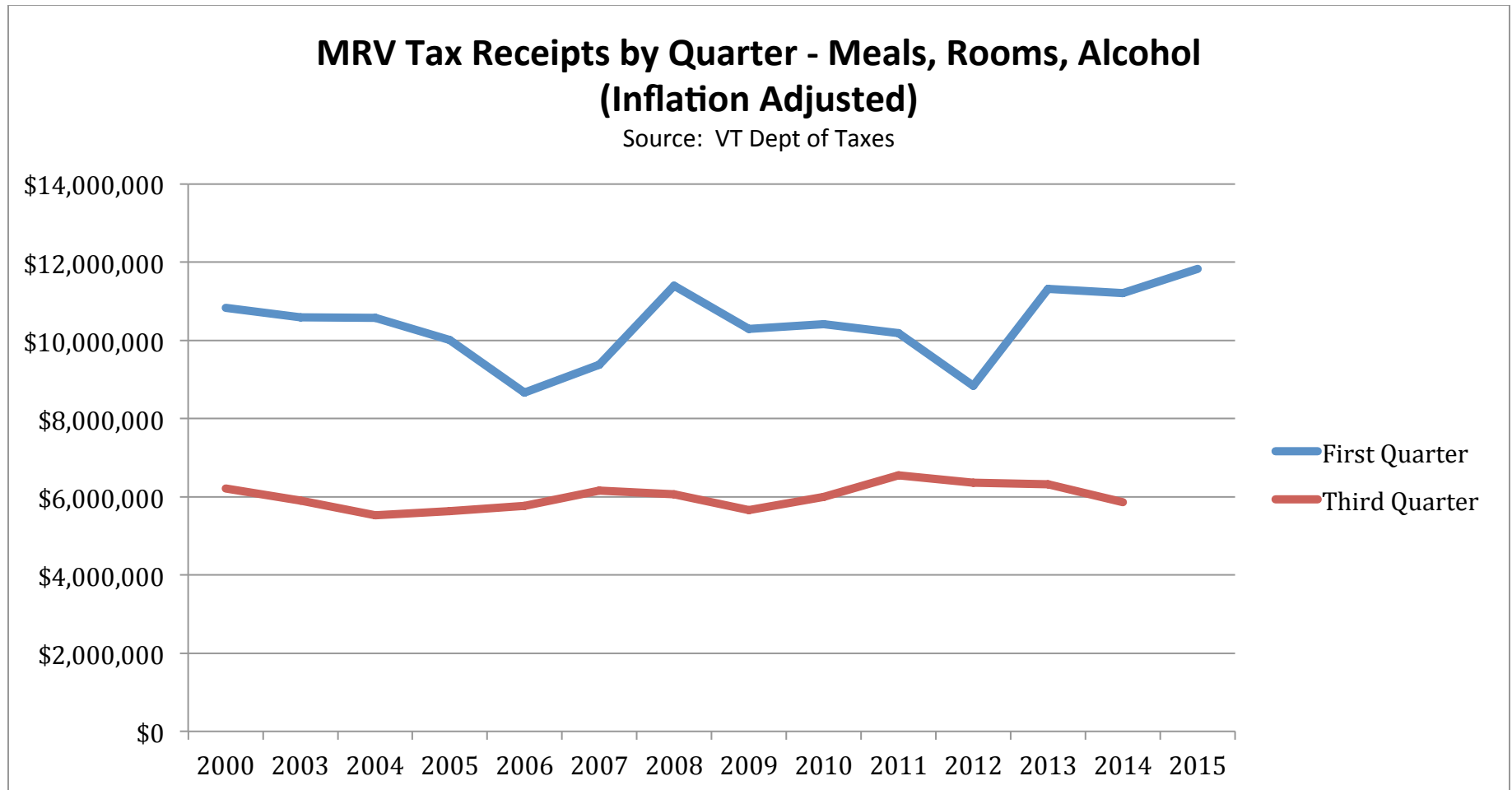
An inflation adjusted comparison of total tax receipts in Waitsfield and Warren underscores the big gains for Waitsfield in 2014, compared to the relative stagnation that preceded it. Warren has had more consistent growth, with a peak year in 2013.



The following graph provides a regional perspective on the health of the hospitality sector over time, showing an upward trend in 2014 for Waitfield, with a small decline in Warren compared to the previous year.

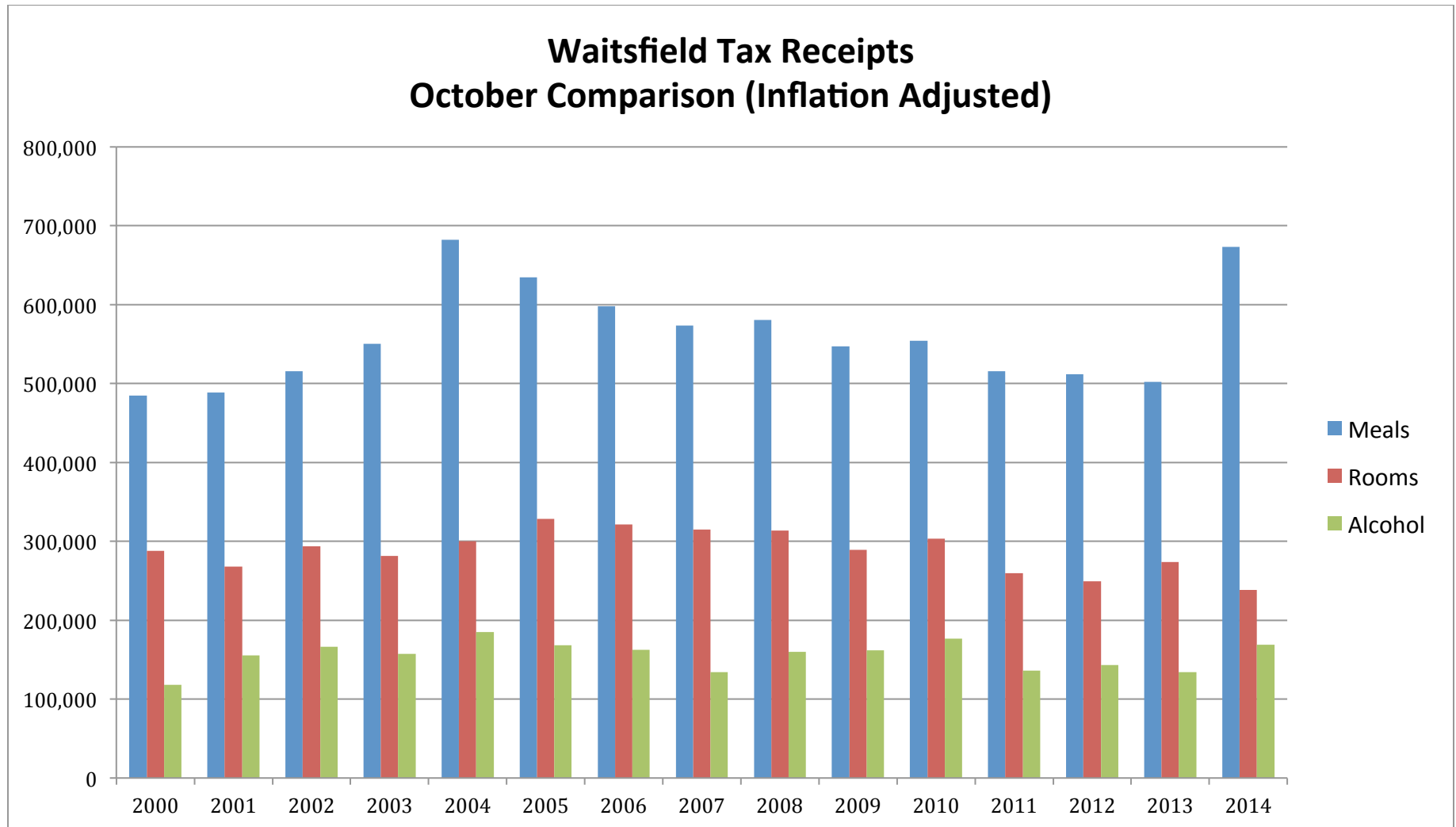


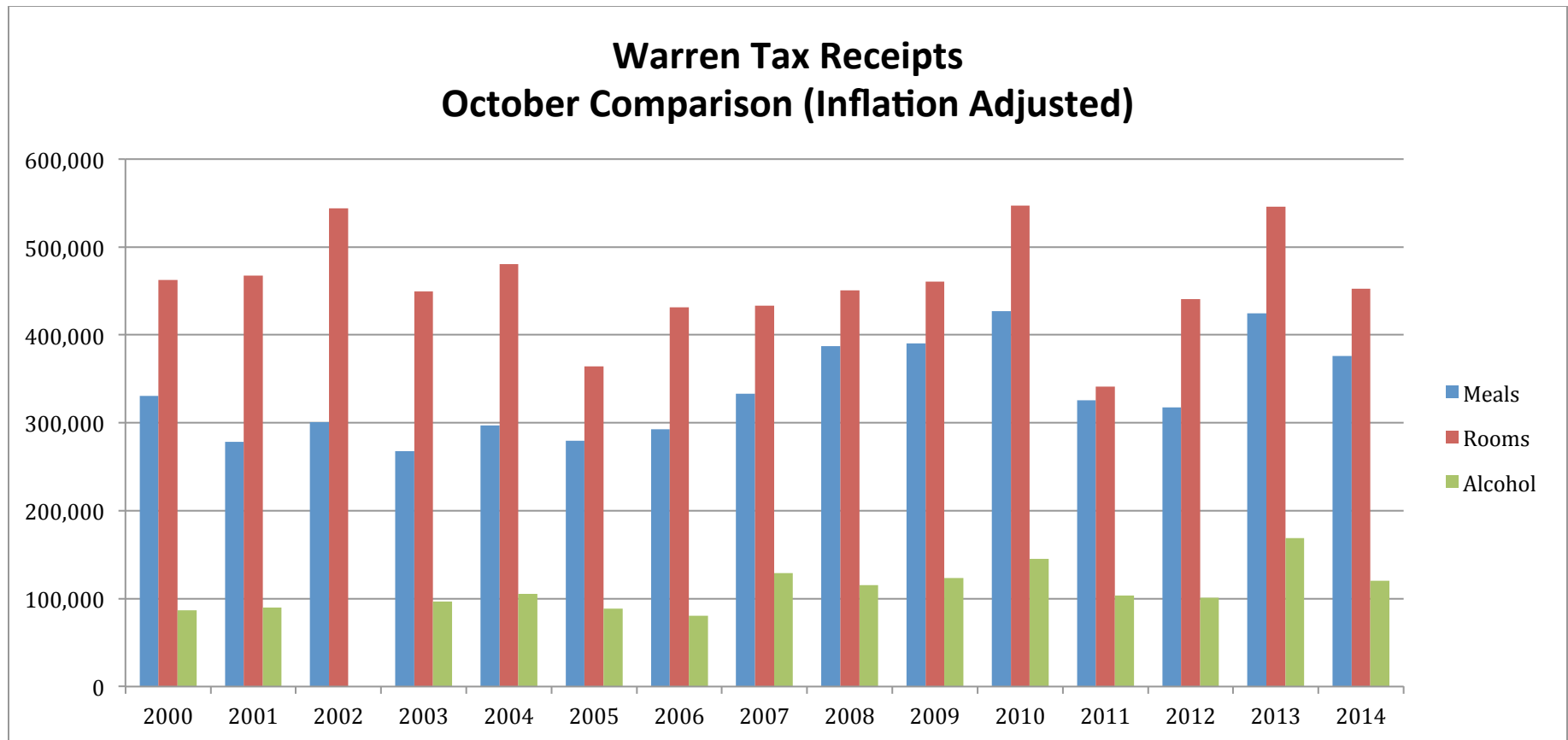
The robustness of the winter and summer tourist seasons can be approximated by using quarterly tax receipt data, though the quarters (First: January–March, Third: July–September) omit a percentage of the actual seasons. The graph below shows increased volume and volatility in winter revenue versus the summer months.



In the MRV, the first quarter of 2015 reflects another strong ski season. The third quarter of 2014 indicates less summer activity compared to 2013.

A comparison of monthly tax revenue during the month of October provides further insight into the fall tourist and wedding season. 2014 saw a significant increase in October tax revenue in Waitsfield over previous years, with very strong alcohol and meals revenue (up 26% and 34%, respectively). However, Waitsfield experienced a drop of 13% in rooms over the previous year.





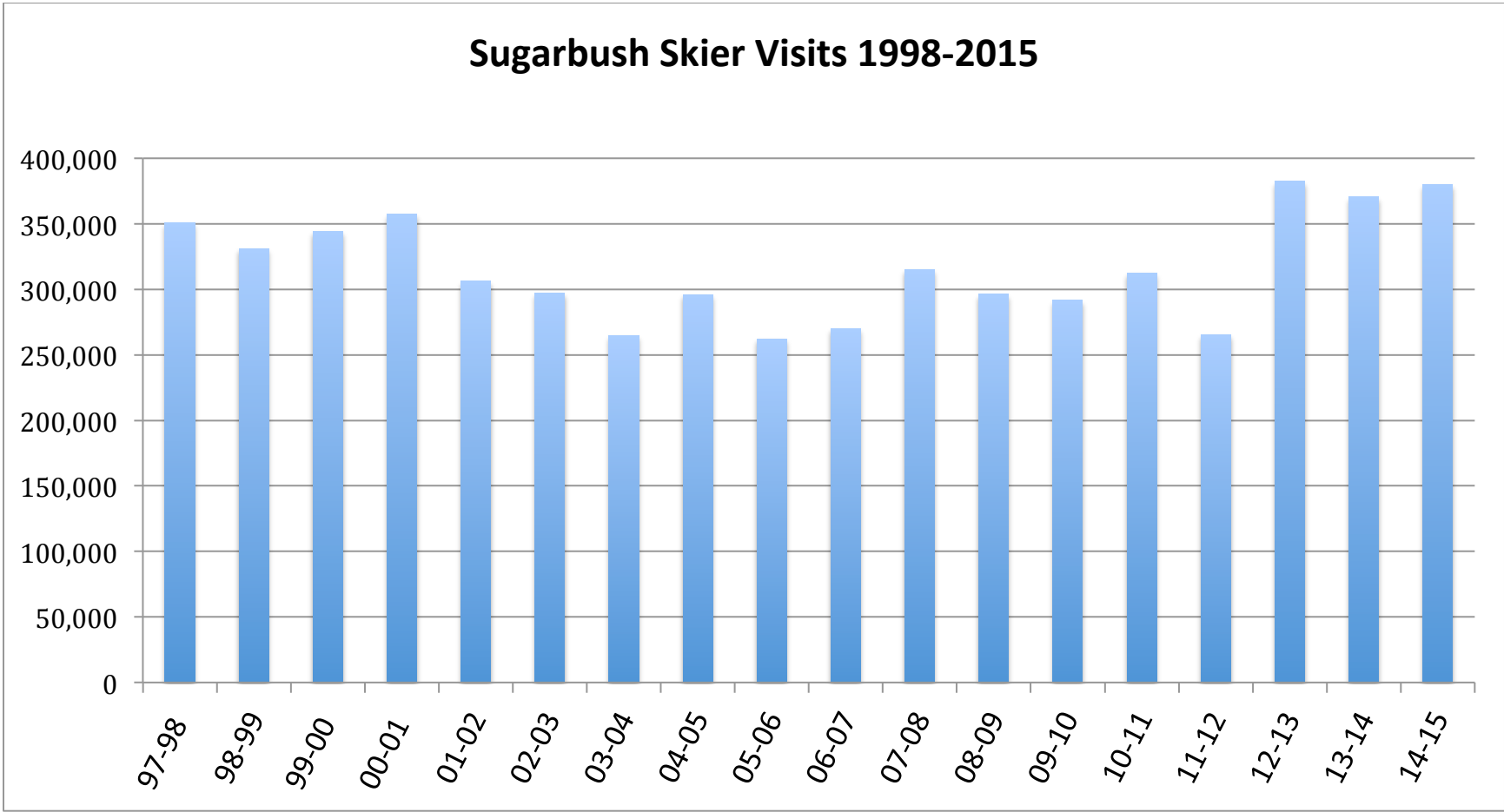
After a drop in 2011, Warren has trended upward in October lodging revenue, declining somewhat in 2014. 2014 saw decreases in all categories in Warren compared to the previous year.

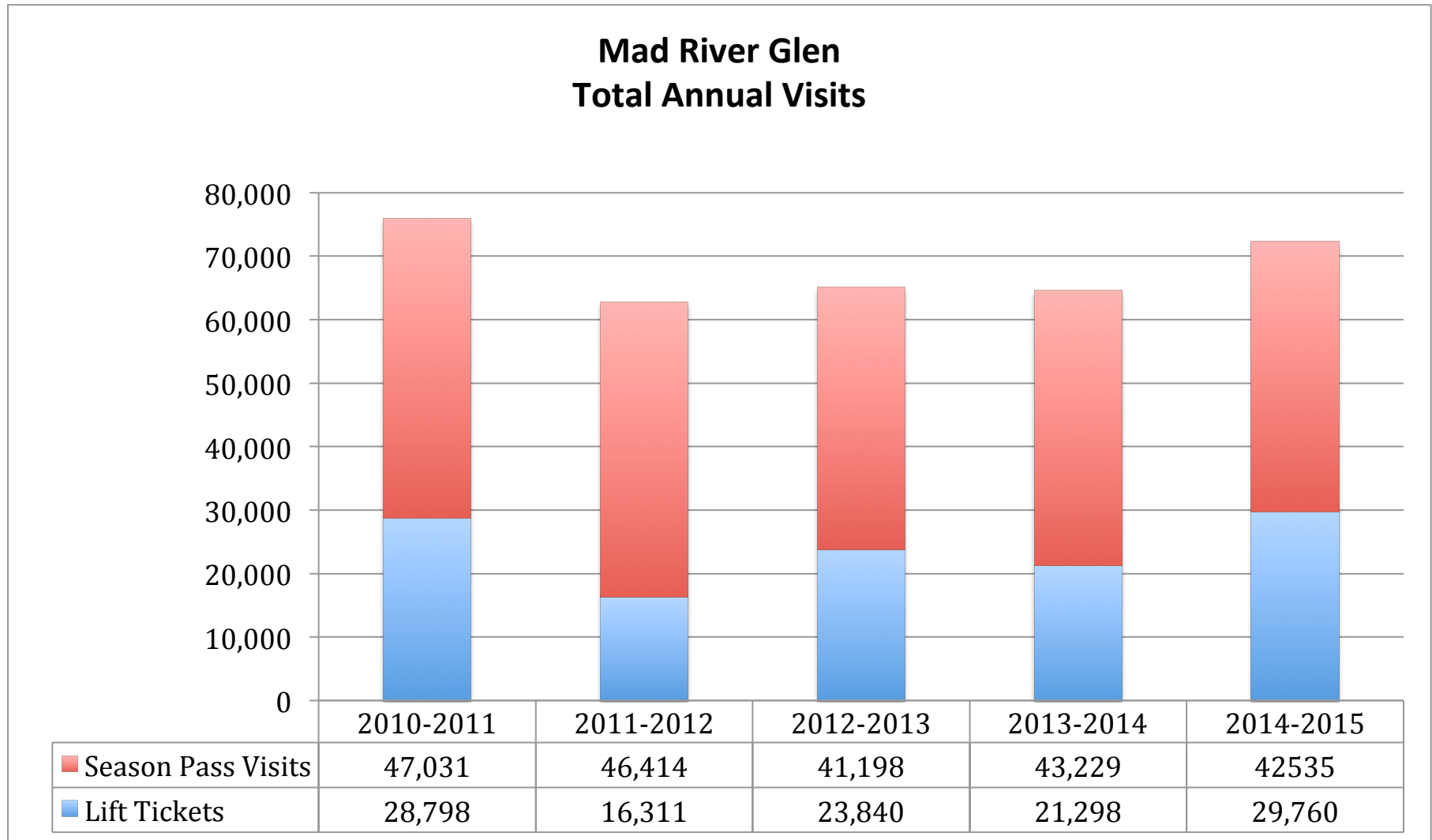
Wedding Activity

Weddings provide significant revenue across the state and within the MRV. In 2013, the [Vermont Association of Wedding Professionals](#) reported in its annual report that Vermont had 5,199 weddings, which raised an estimated \$263 million in the lodging, meals, and retail sectors for a multiplier of over \$50,000 per wedding. 5,455 marriage certificates were issued in the state in 2014, as tracked by the Vermont Department of Health. The Town Clerks in Waitsfield, Warren, and Fayston issued 89 marriage licenses in 2014 versus 71 the previous year.

SKIER VISITS

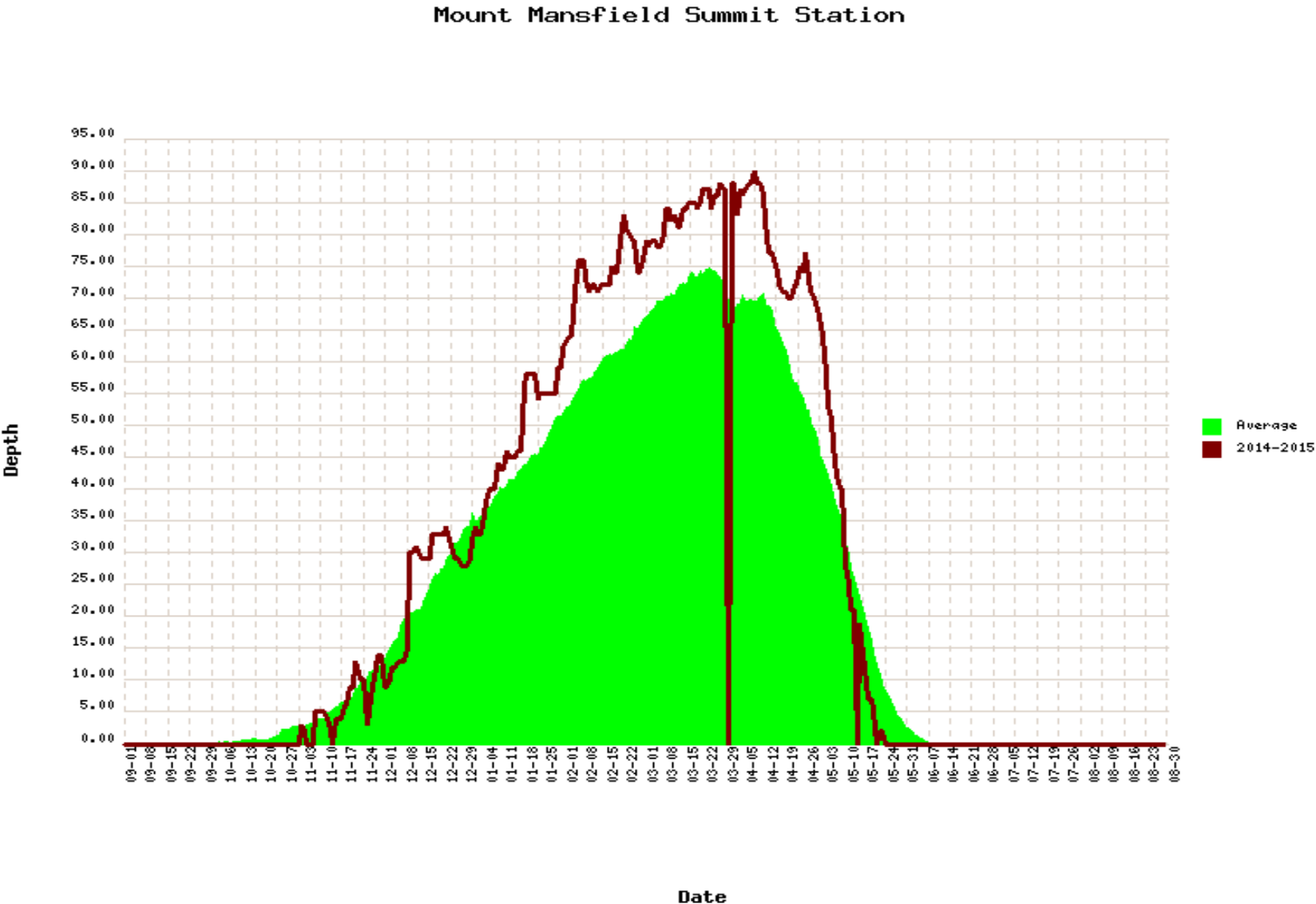
In Vermont overall, the 2014-15 ski season was the best season on record (at nearly 4.7 million skiers and riders), according to the Vermont Ski Areas Association. Sugarbush Resort skier visits echoed this trend, as depicted below. Sugarbush received 249 inches of natural snowfall during the 2014-2015 season (annual average is 269), compared to 237 inches during 2013-2014.





Mad River Glen is not part of the MOU, but contributes skier visit data to provide a snapshot of its annual activity. The 2014-2015 season surpassed the previous one, with an almost 40% increase in lift tickets sold. Overall, visits were up 12% over 2013-14.

Snowfall depth data collected at Mount Mansfield provides a visual comparison of the 2014-15 ski season compared to the average snowfall depth. Snowfall was consistently above normal, boosting the state's skier visits to record-breaking numbers.

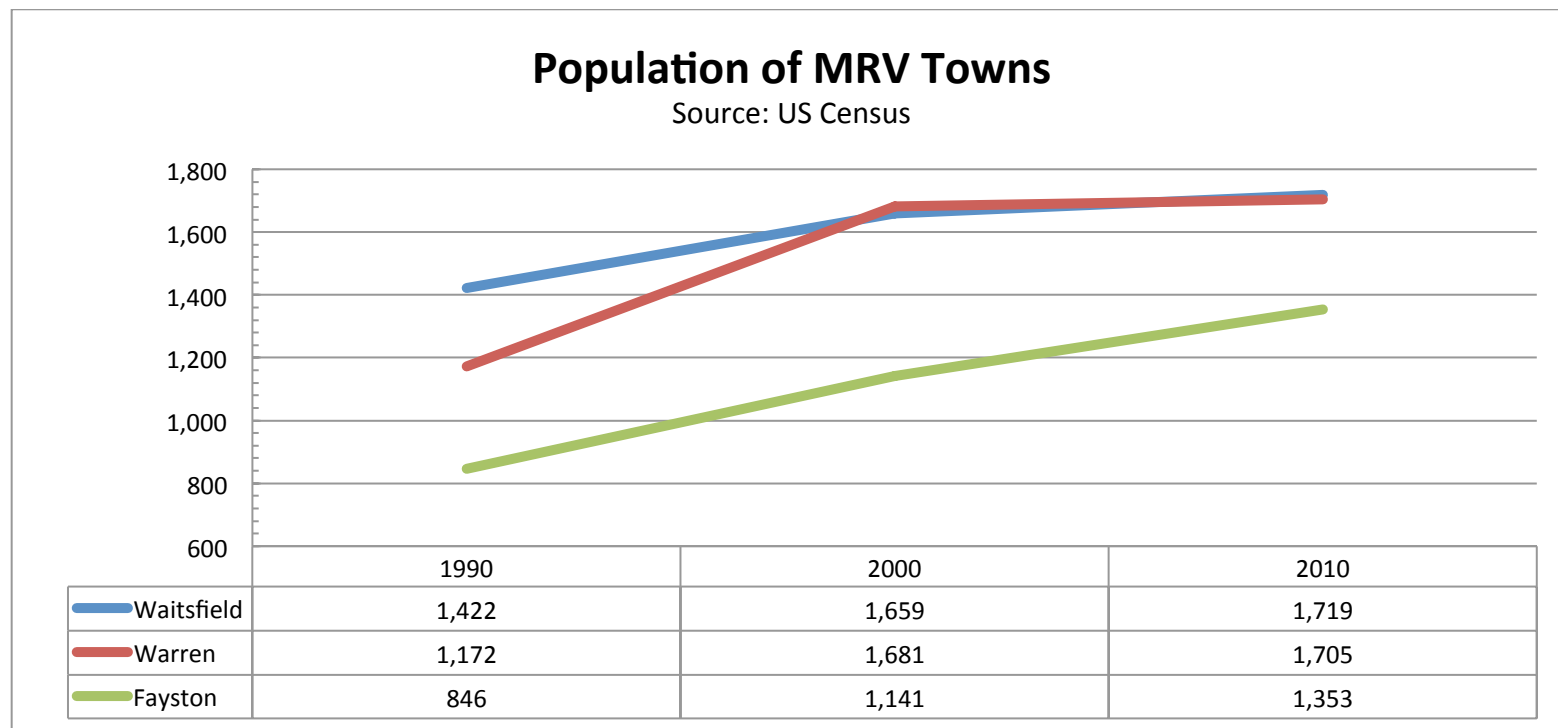


SECTION II: POPULATION & HOUSING

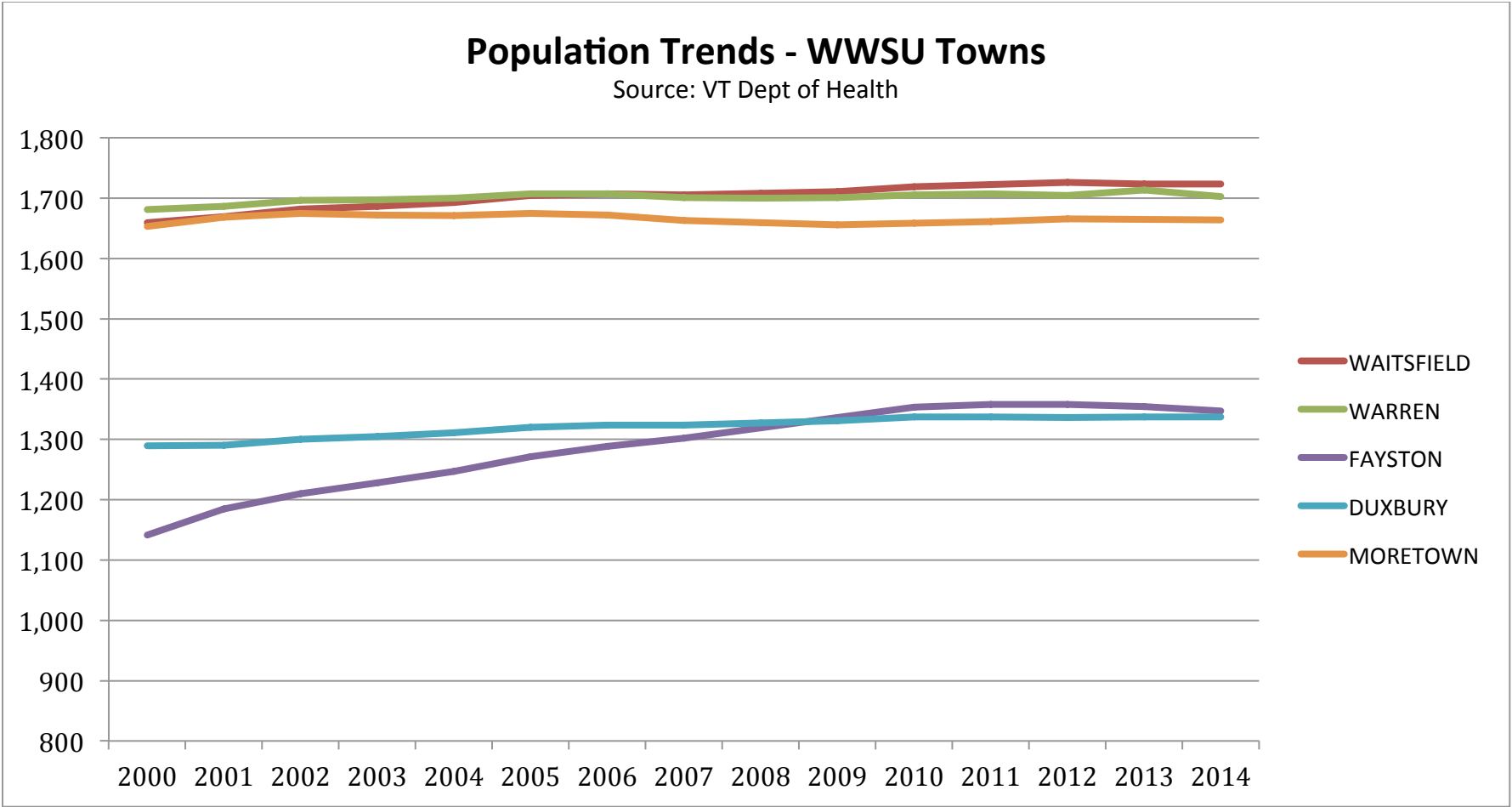
POPULATION

The Population and Housing section includes Items #29, 30, 35 from the Memorandum of Understanding.

To analyze trends in housing and population, this report reviews several different indicators, including population growth estimates, school enrollment, number of homes sold, age of residents, births and deaths, and in-migration patterns in the MRV.

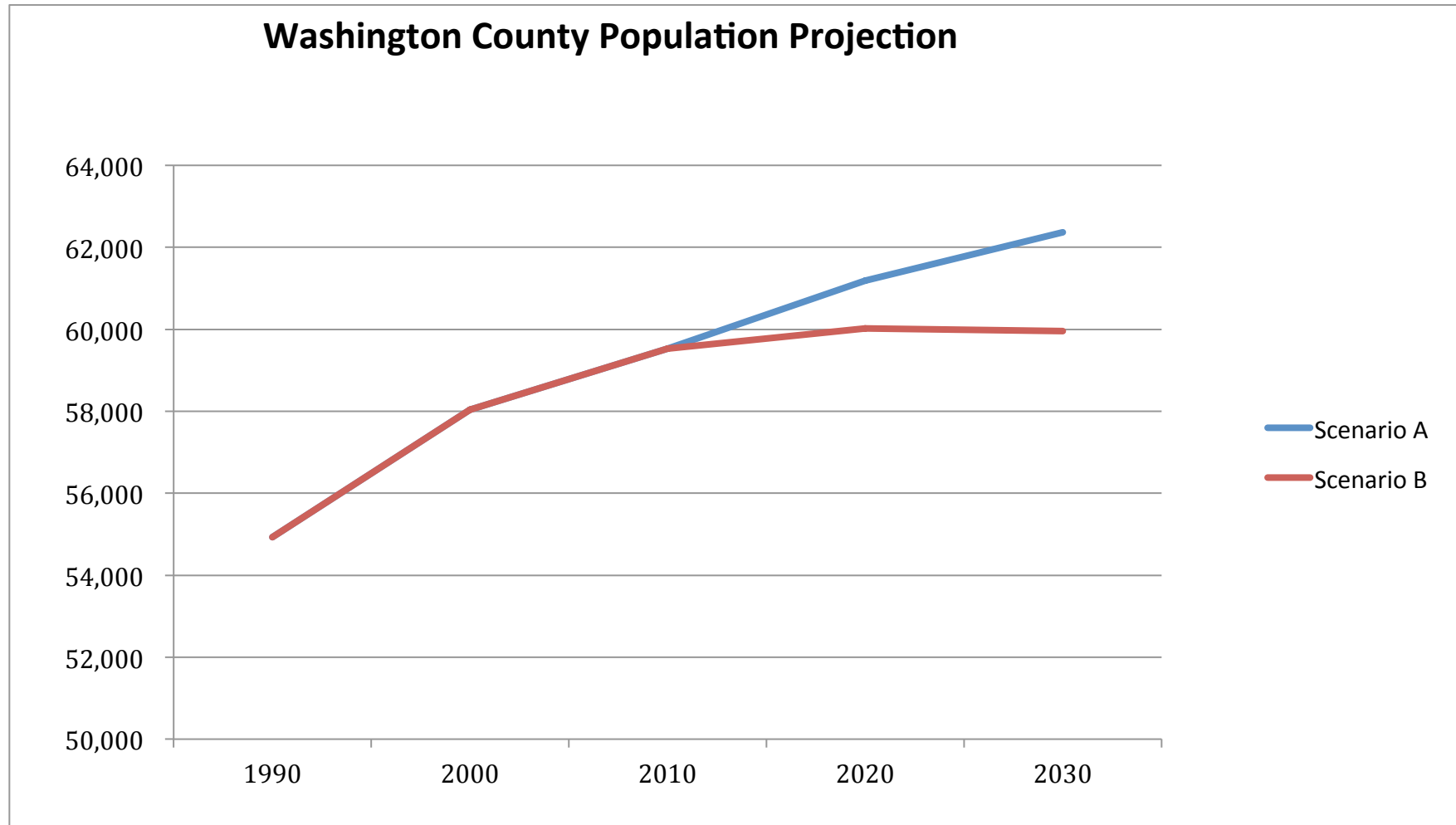


The majority of population growth in the Mad River Valley has taken place in Fayston, at a rate of 18.6% between 2000 and 2010 (34.9% over the previous period). The combined population of the three MRV towns increased by 6.6% between the last two most recent US Census counts. This is more than twice the growth rate that has been experienced for Vermont overall in the same time period (2.8%). These percentage increases are higher than previous estimates [the MRV was expected to see its population increase by 4% and Vermont by 2%].

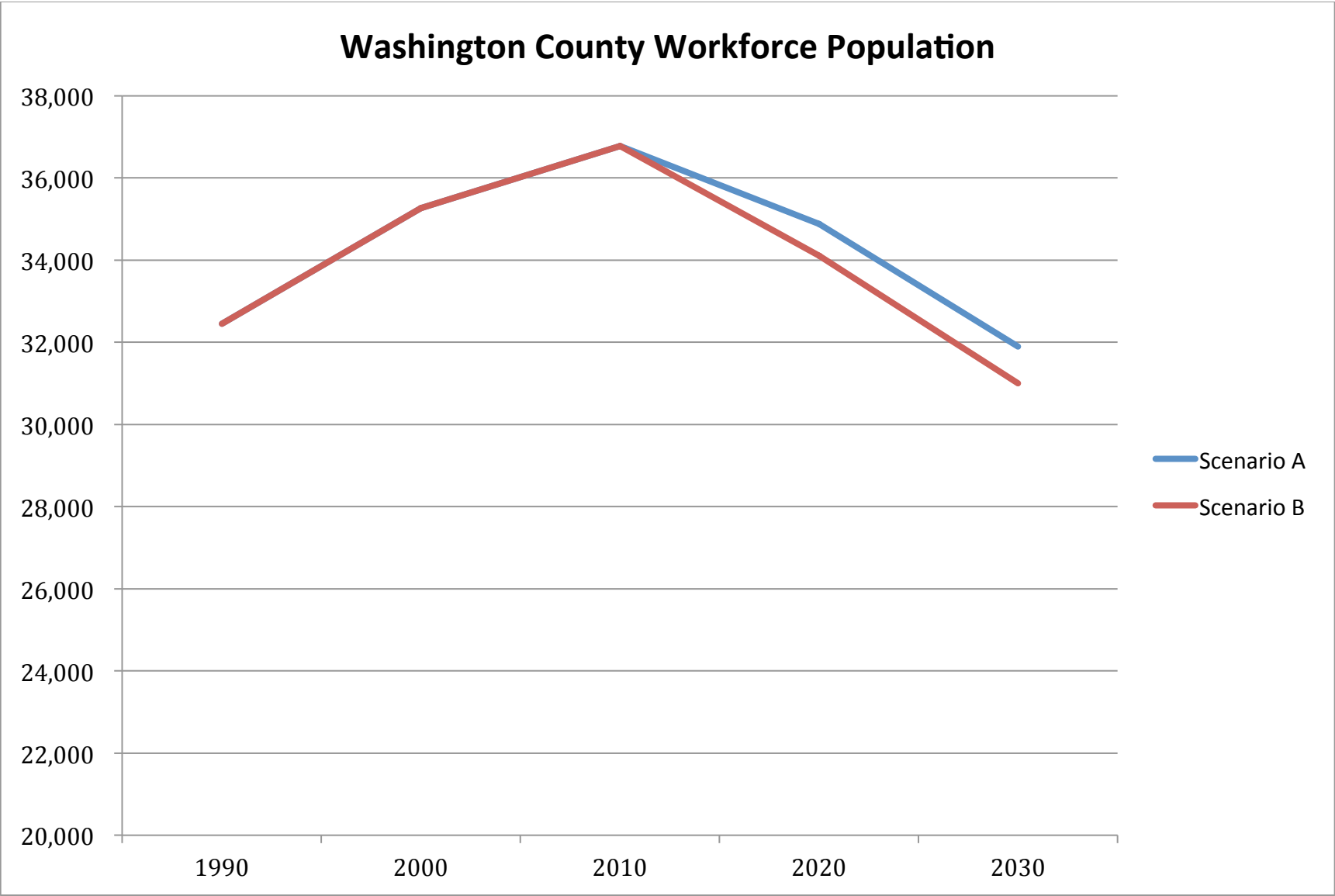


The above graph provides a broader perspective on the population of towns that make up our school district, Washington West Supervisory Union. A leveling off of population has been estimated for each town in the years since the last census (2010).

The following graphs provide a perspective on population estimates for Washington County as a whole, including its workforce population, based on high (Scenario A) and low (Scenario B) estimates that include birth rate and migration variables³.



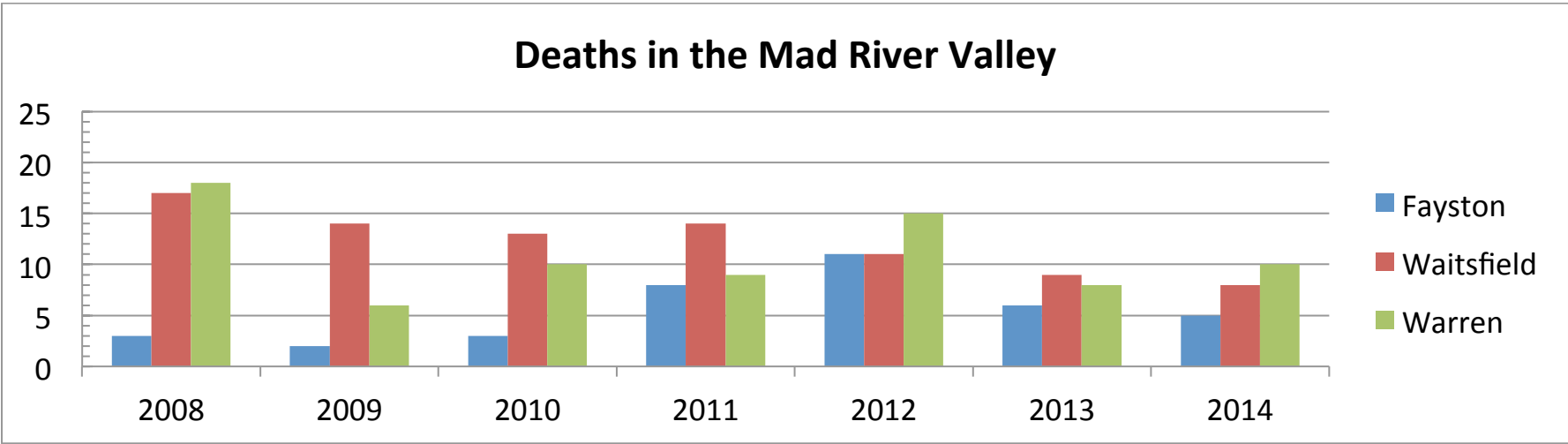
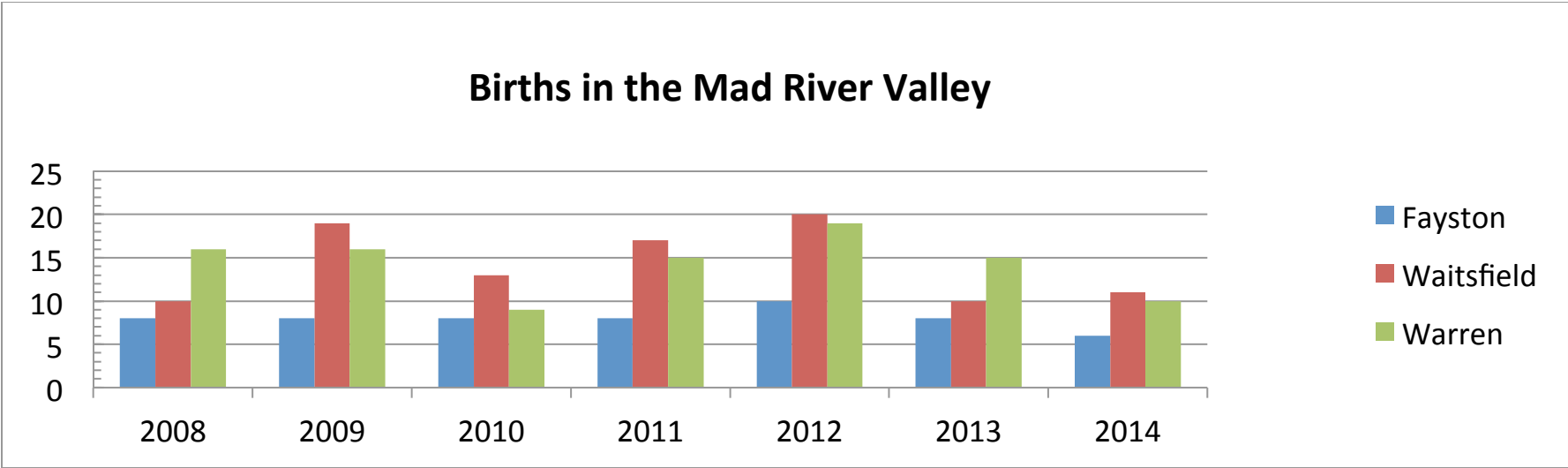
³ "Vermont Population Projections, 2010 – 2030, Vermont Agency of Commerce and Community Development, August 2013", <http://dail.vermont.gov/dail-publications/publications-generalreports/vt-population-projections-2010-2030>



The table below provides two-scenario population estimates for MRV towns, compared to neighboring towns and the county as a whole. With stable birth rates, we can assume that expected in-migration to the MRV drives the higher projections presented below.

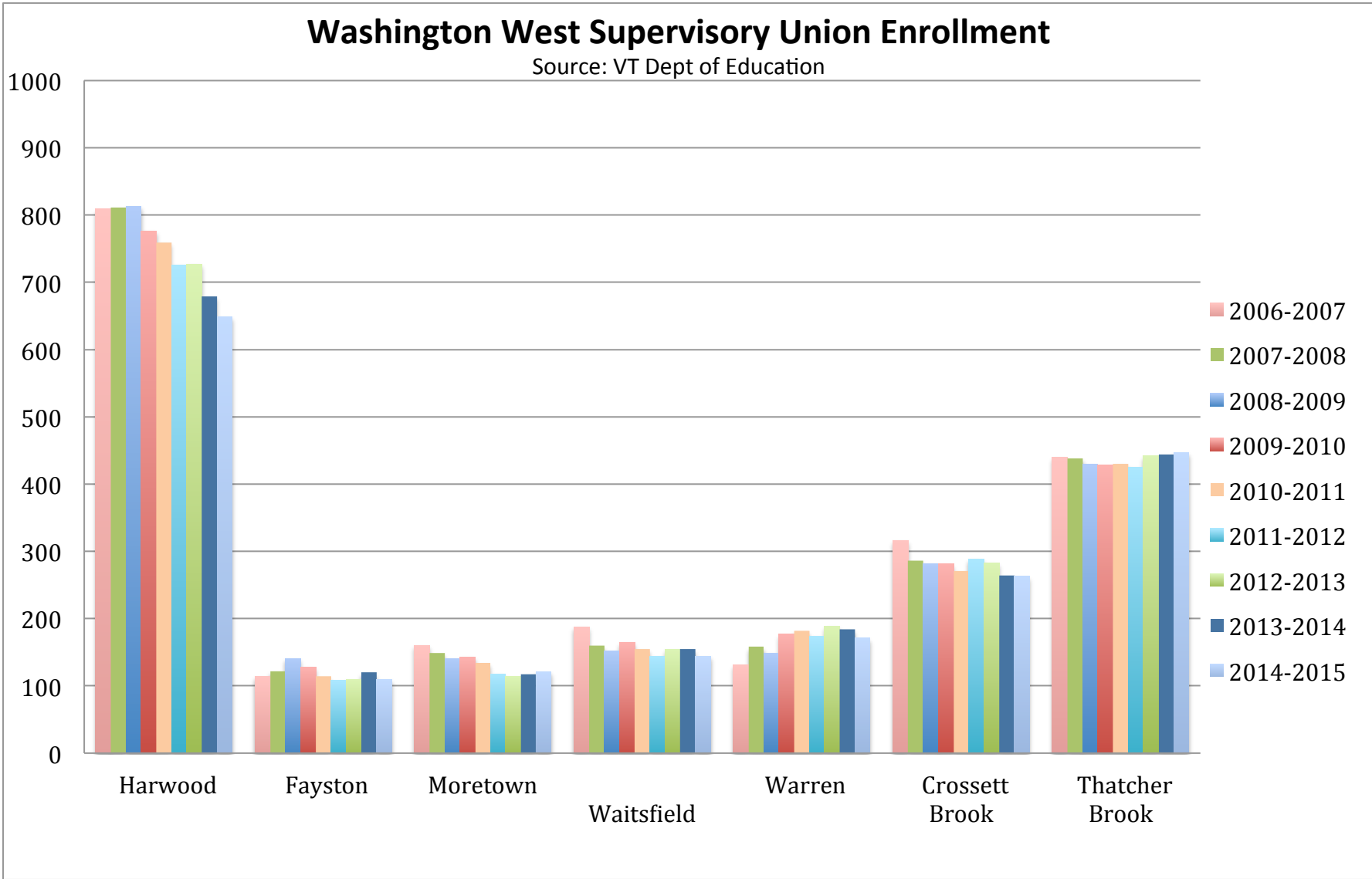
Population											
Town	2010 Census	2020 Low	2030 Low	'10-20 growth	'10-'30 growth	Town	2010 Census	2020 High	2030 High	'10-20 growth	'10-'30 growth
Washington County						Washington County					
DUXBURY	1,337	1,436	1,491	7.40%	11.52%	DUXBURY	1,337	1,464	1,550	9.50%	15.93%
FAYSTON	1,353	1,561	1,706	15.37%	26.09%	FAYSTON	1,353	1,590	1,772	17.52%	30.97%
MIDDLESEX	1,731	1,754	1,752	1.33%	1.21%	MIDDLESEX	1,731	1,787	1,823	3.24%	5.31%
MONTPELIER	7,855	7,546	7,294	-3.93%	-7.14%	MONTPELIER	7,855	7,694	7,591	-2.05%	-3.36%
MORETOWN	1,658	1,692	1,698	2.05%	2.41%	MORETOWN	1,658	1,724	1,766	3.98%	6.51%
NORTHFIELD	6,207	6,336	6,382	2.08%	2.82%	NORTHFIELD	6,207	6,458	6,638	4.04%	6.94%
WAITSFIELD	1,719	1,781	1,808	3.61%	5.18%	WAITSFIELD	1,719	1,815	1,880	5.58%	9.37%
WARREN	1,705	1,860	1,947	9.09%	14.19%	WARREN	1,705	1,895	2,023	11.14%	18.65%
WATERBURY	5,064	5,115	5,108	1.01%	0.87%	WATERBURY	5,064	5,213	5,314	2.94%	4.94%
County total	59,534	60,027	59,960	0.83%	0.72%	County total	59,534	61,186	62,372	2.77%	4.77%

⁴ “Vermont Population Projections, 2010 – 2030, Vermont Agency of Commerce and Community Development, August 2013”, <http://dail.vermont.gov/dail-publications/publications-generalreports/vt-population-projections-2010-2030>

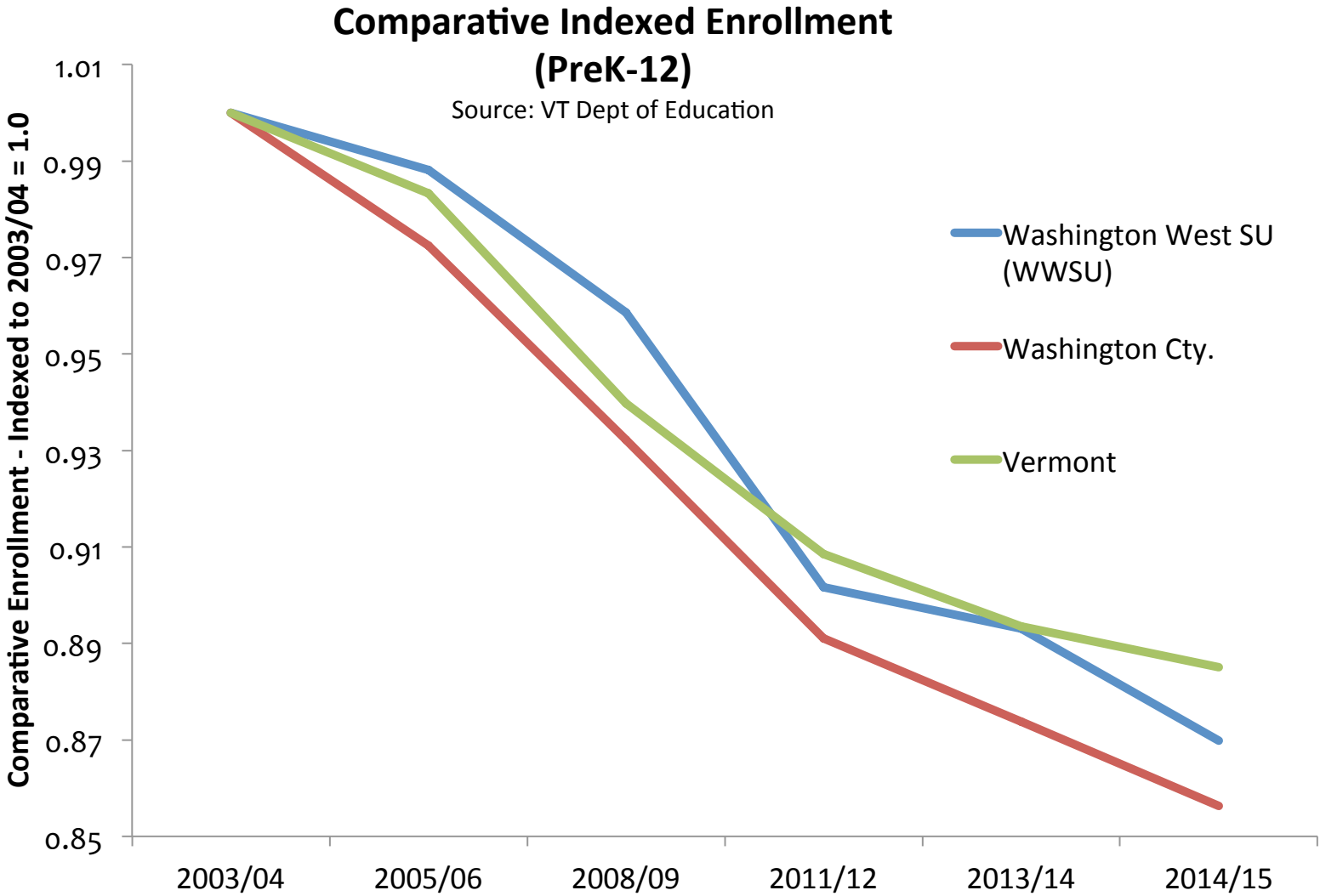


The above graphs show birth and death numbers as recorded by municipal town clerks.

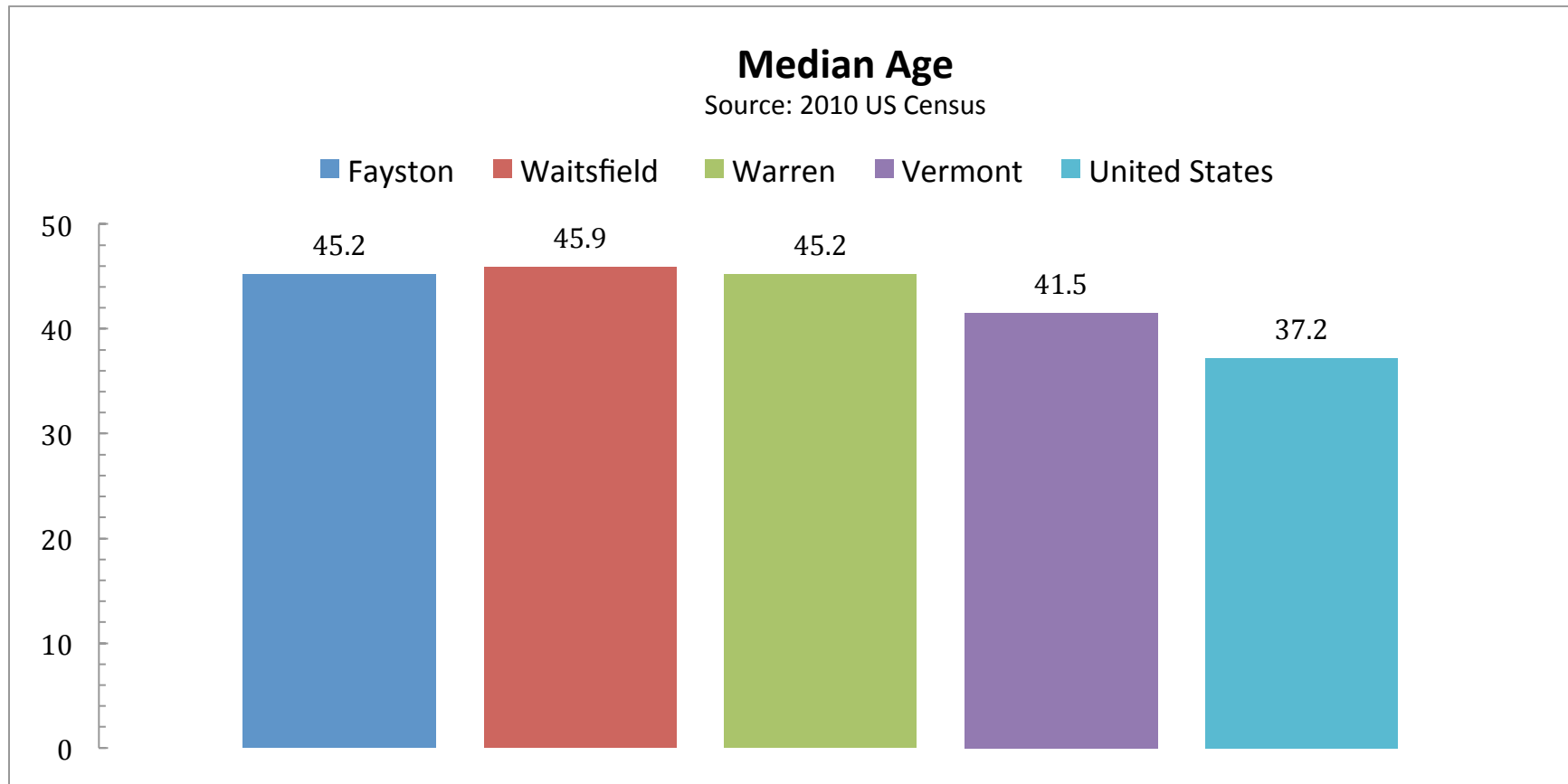
School enrollment figures indicate a stabilization of elementary school enrollments, but a continued decline at middle and high schools.



A comparison of enrollment declines in the state and county is provided below, showing a similar rate of decline in the local school district in comparison to the county and state.

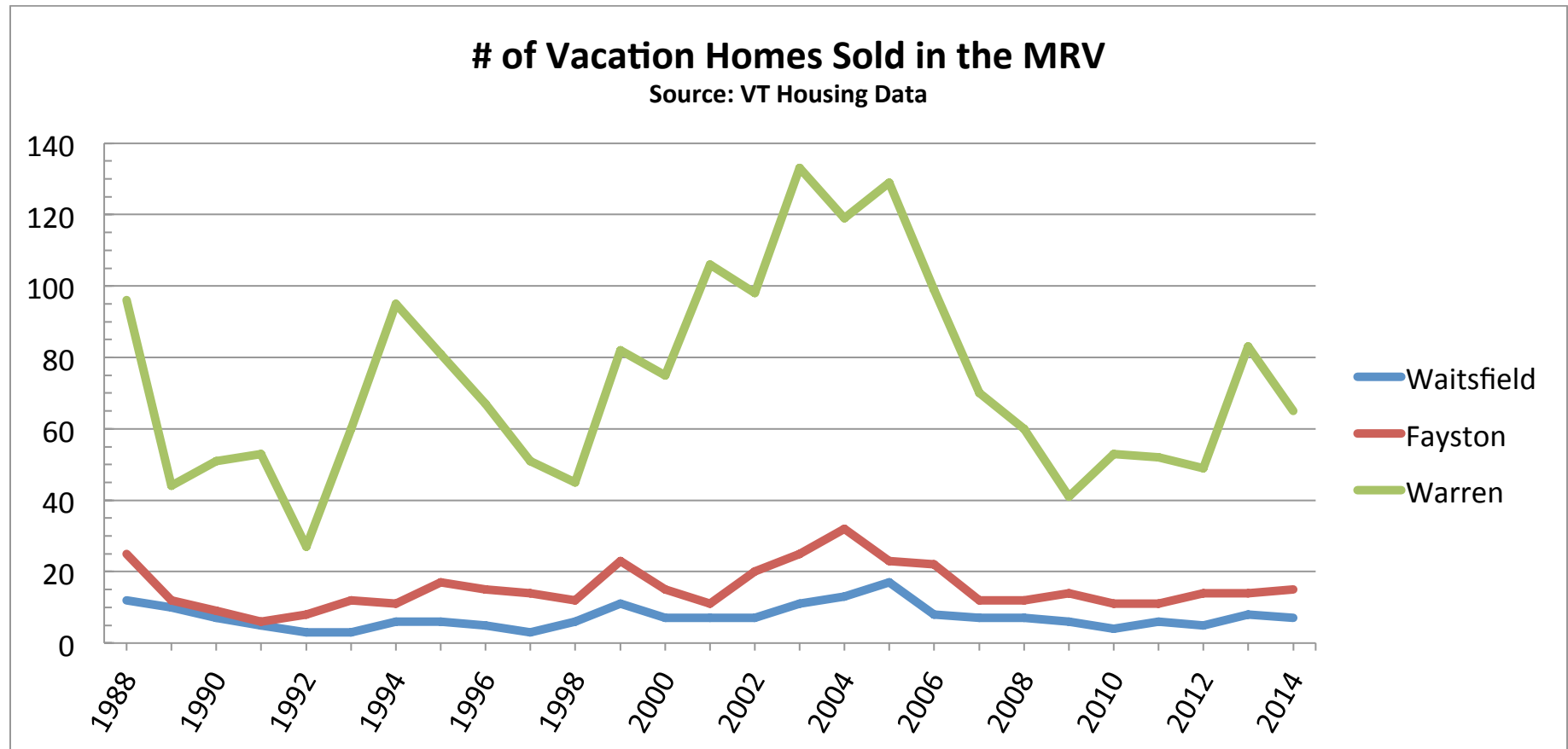


Another useful piece of information is the median age of the population within MRV towns. During the most recent Census year available, 2010, MRV towns continue to be older than Vermont overall, and much older than the nation. The median age in the Valley is about 45 years (versus 40 years in 2000).



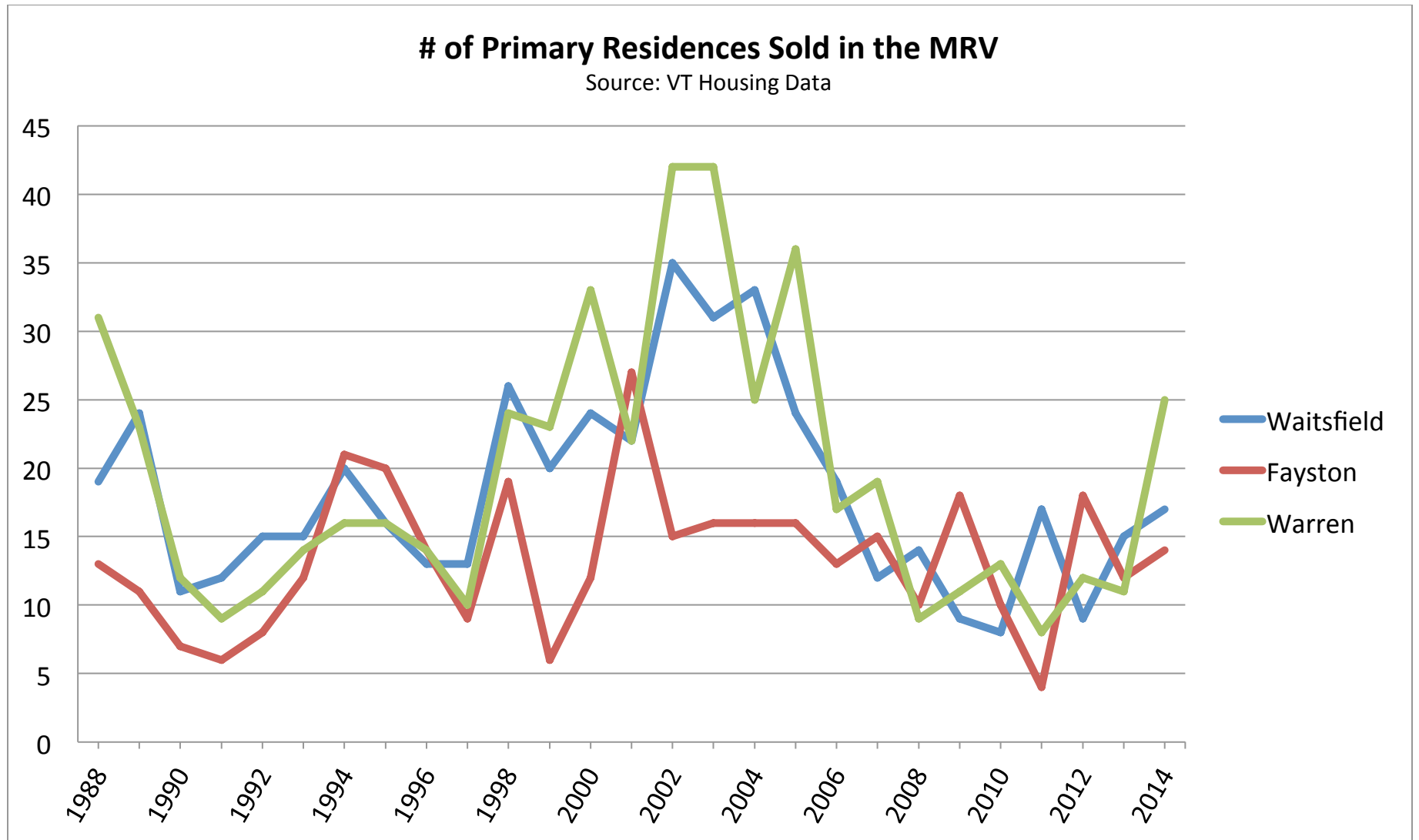
HOUSING

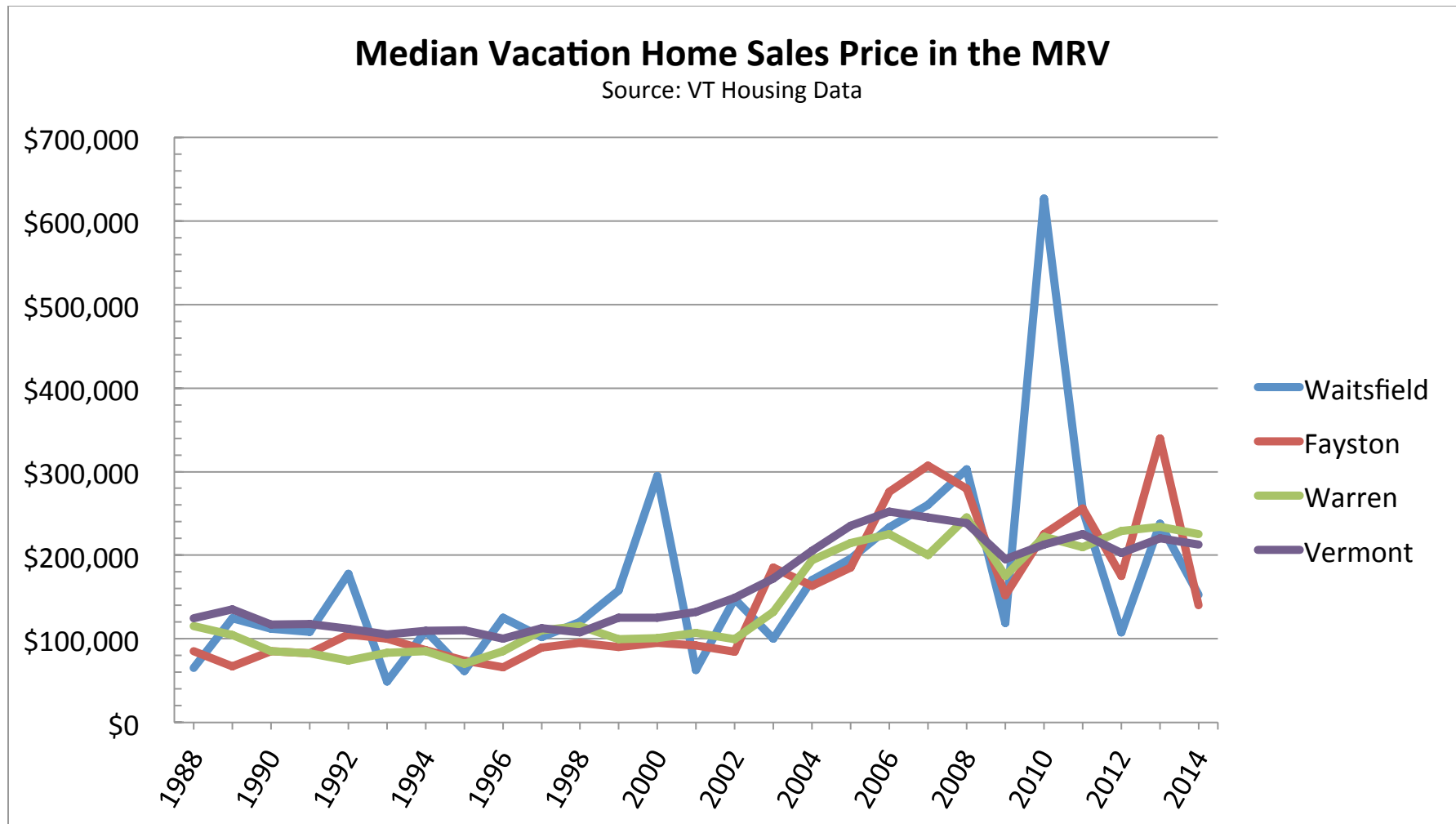
The number and type of homes sold in the MRV provides another view of growth patterns and trends.



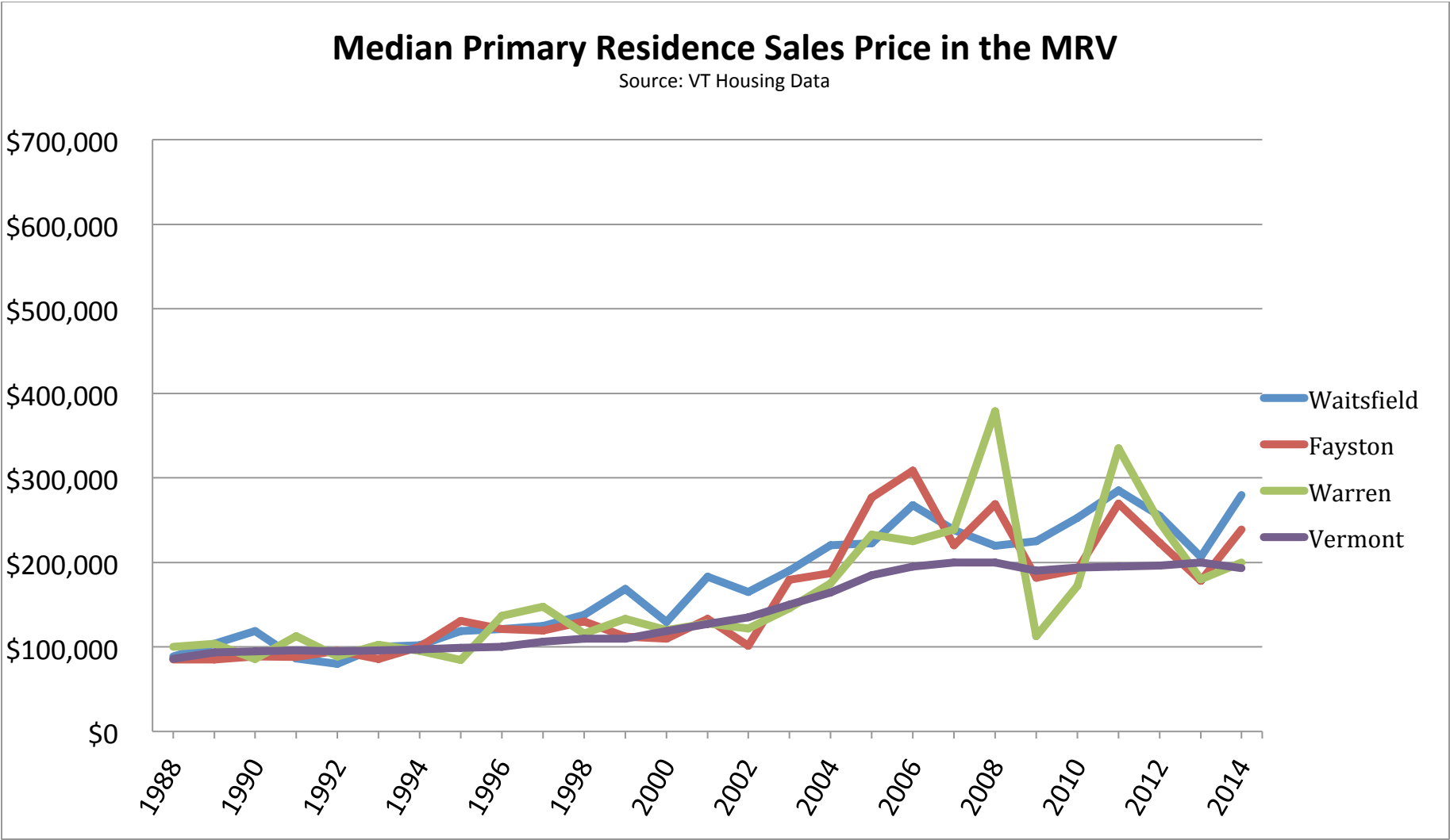
As the above chart shows, the number of vacation homes sold remains relatively flat in Waitsfield and Fayston after a peak in 2004-2005, with Warren experiencing the steepest post-recession declines and the greatest overall volume. Vacation homes include condominiums that are not primary residences, as well as other non-primary residences. Most of these vacation homes are found closer to Sugarbush Resort. In Warren, 65 vacation homes were sold in 2014 (versus 83 the previous year); Fayston and Waitsfield had 15 and 7 sales, respectively, compared to 14 and 8 in 2013. 2,026 vacation homes were sold statewide, up from 1,822 the previous year.

The number of primary homes sold has declined since its peak in 2003-2004. In 2014, however, all three towns saw increased sales, the most taking place in Warren. There were 17 primary residences sold in Waitsfield (vs. 15 in 2013), 14 in Fayston (vs. 12) and 25 in Warren (vs. 11). Statewide, primary home sales increased to 7,008 from 6,430. The peak sales number of 9,312 occurred in 2005.



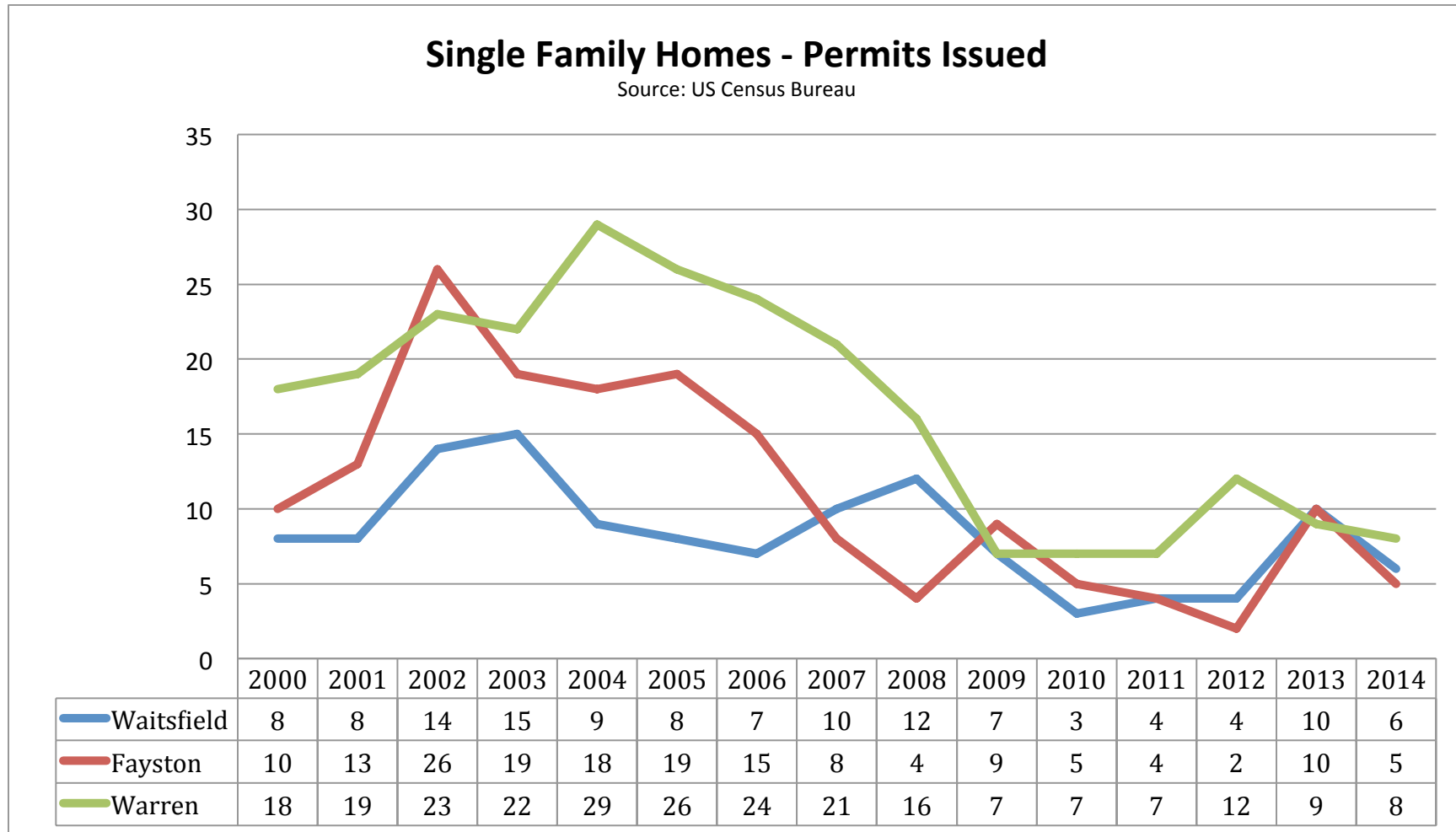


Warren's median vacation sales price at \$225,000 in 2014 largely follows the state median for vacation home sales prices (\$212,500), with Waitsfield and Fayston dropping below (at \$153,000 and \$140,000, respectively). The median vacation home sales price had rebounded somewhat since 2009, with 2013 showing an uptick for all three towns, especially Fayston, at \$280,000. For reference, in 2008, the median vacation home price in Waitsfield was \$303,000, versus the state average of \$239,000. The median vacation home price for Vermont decreased from \$220,000 in 2013 to \$212,500 in 2014.



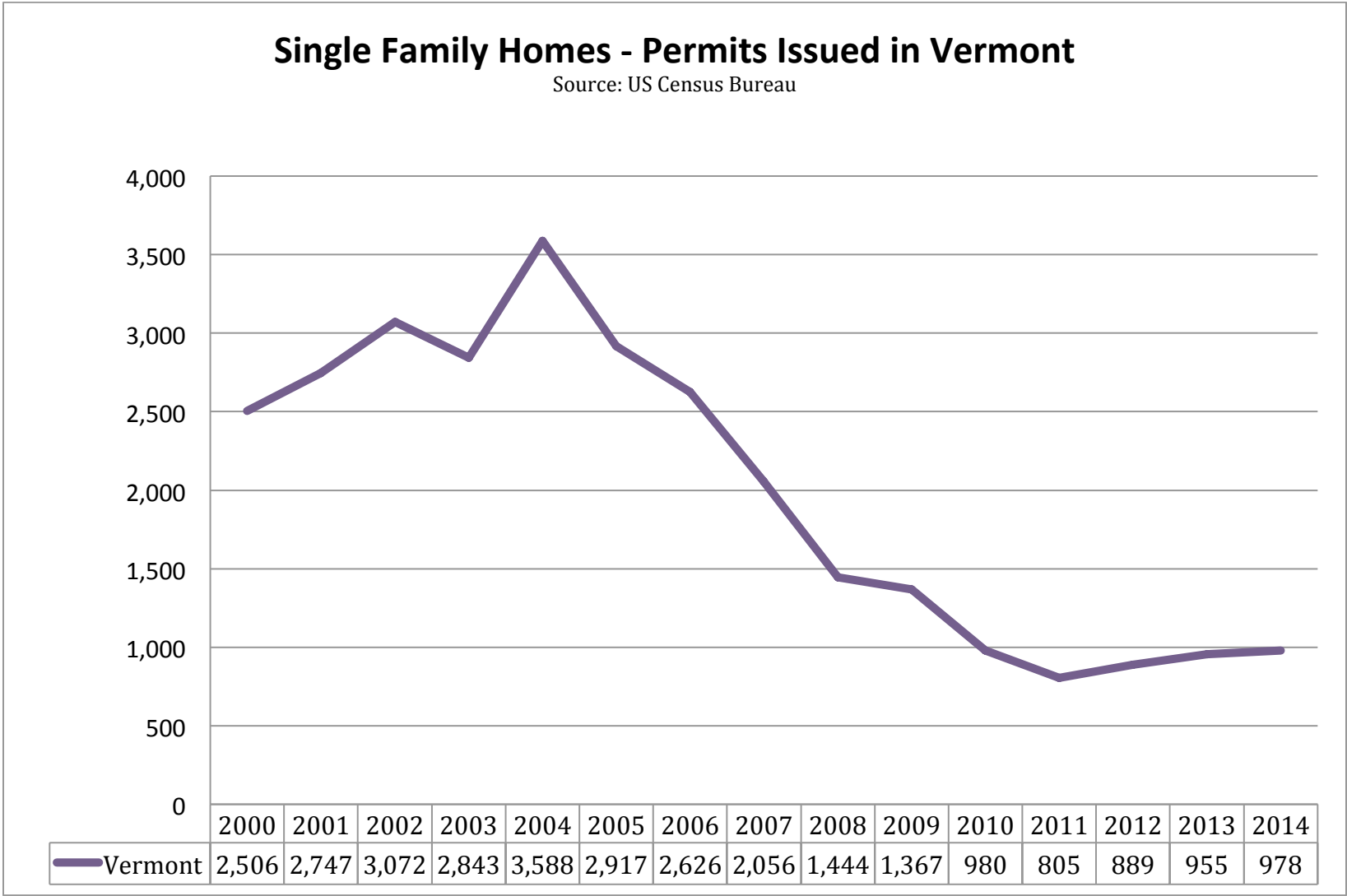
Overall, primary residence sales prices in the MRV have had a much stronger recovery since 2009, with all three towns above the state median of \$226,663 in 2014. For reference, the median home in Waitsfield cost \$280,000 in 2014 (vs. \$206,500 in 2013) and \$239,000 in Fayston (vs. \$178,000), while Warren’s median home price was \$200,000 (vs. \$180,000).

A leading indicator of new home construction is zoning permits. This chart shows a decrease for zoning permits issued for single family homes in all three towns compared to 2013.⁵



⁵ Permit numbers for this graph originate from the [US Census Building Permits Survey](#). Some small discrepancies exist when compared to individual Town Reports. The only instance when a Town Report number was used was for Fayston's 2012 permit number – the Census number for this year was zero.

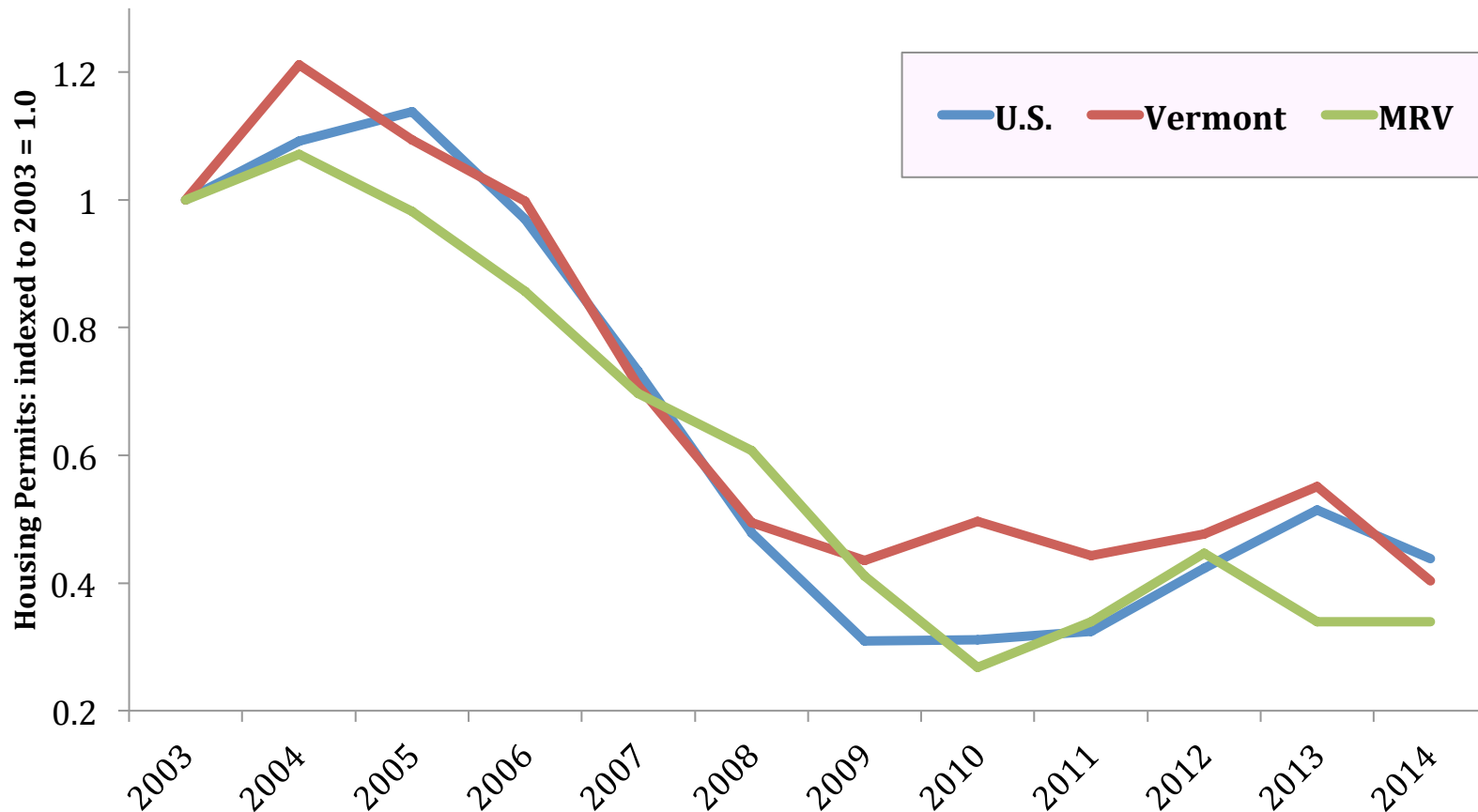
The issuance of permits for single-family homes in the MRV has charted a similar course to the statewide trend.



When the permit data is indexed to 2003 levels, the local decrease in construction activity since 2004 is also consistent with state and national trends.

Indexed Housing Permits: MRV/Study Area, U.S., Vermont (2003 – 2014)

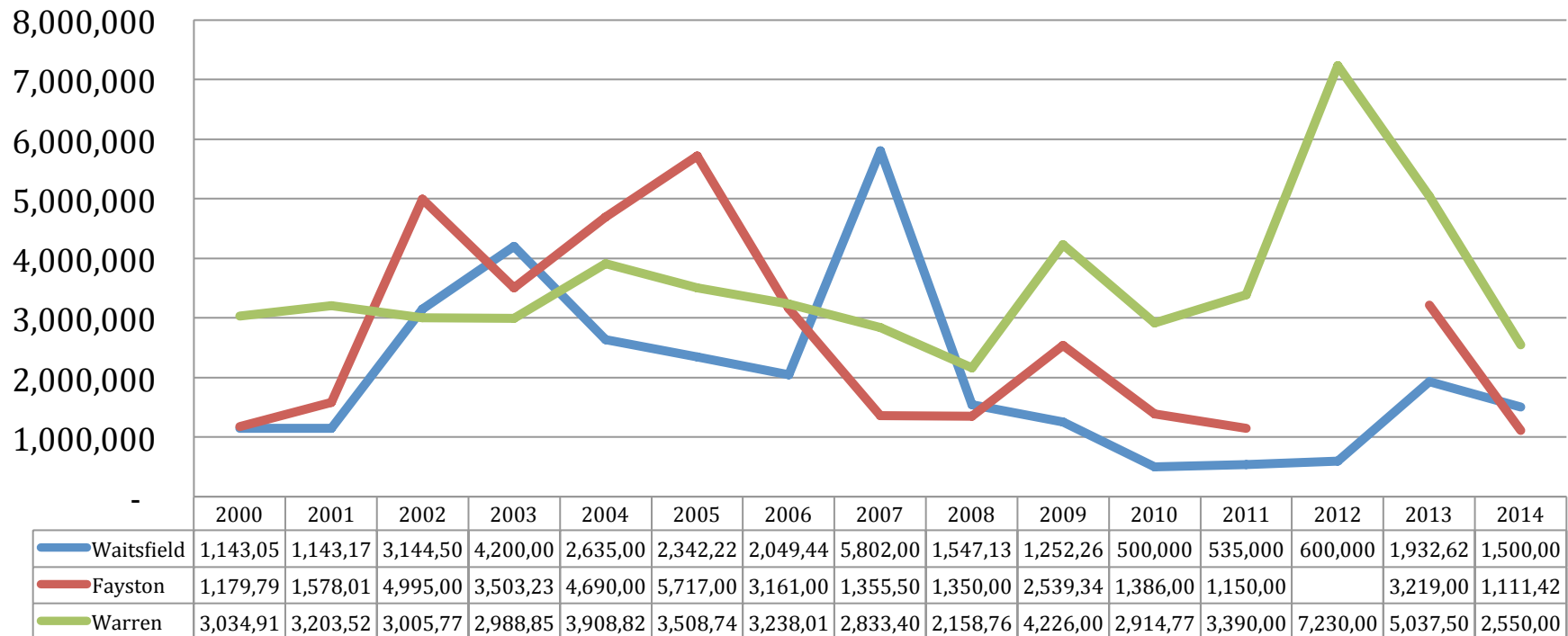
Sources: HUD – State of the Cities Database, Federal Reserve Bank – Boston



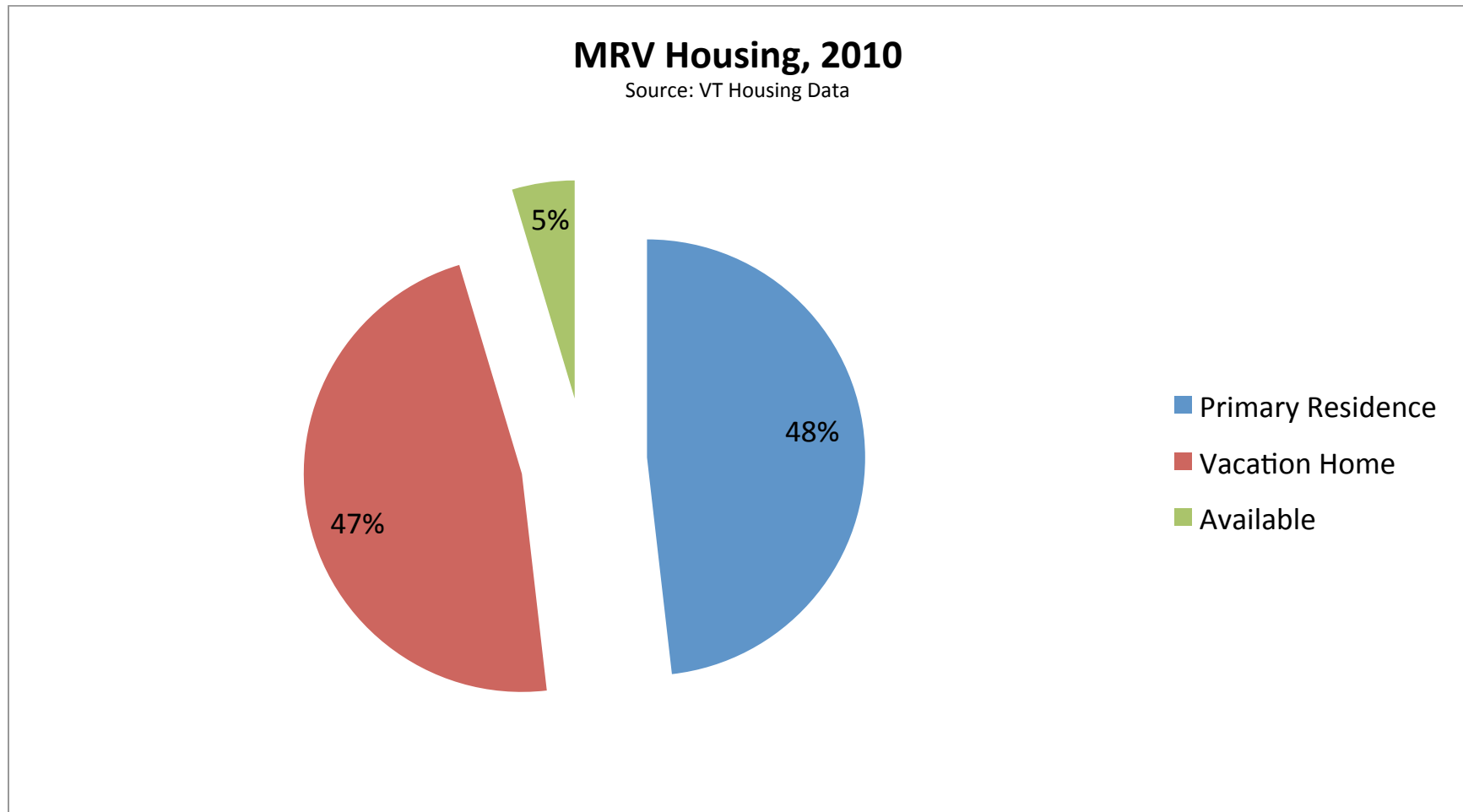
While the raw number of single-family homes permitted is important, the total dollars attributed to those permits is also an important figure.⁶ The cost of construction in all three towns in 2014 decreased compared to the previous year, with a high degree of variability overall since 2000.

Single Family Homes - New Construction Costs in \$

Source: US Census Bureau



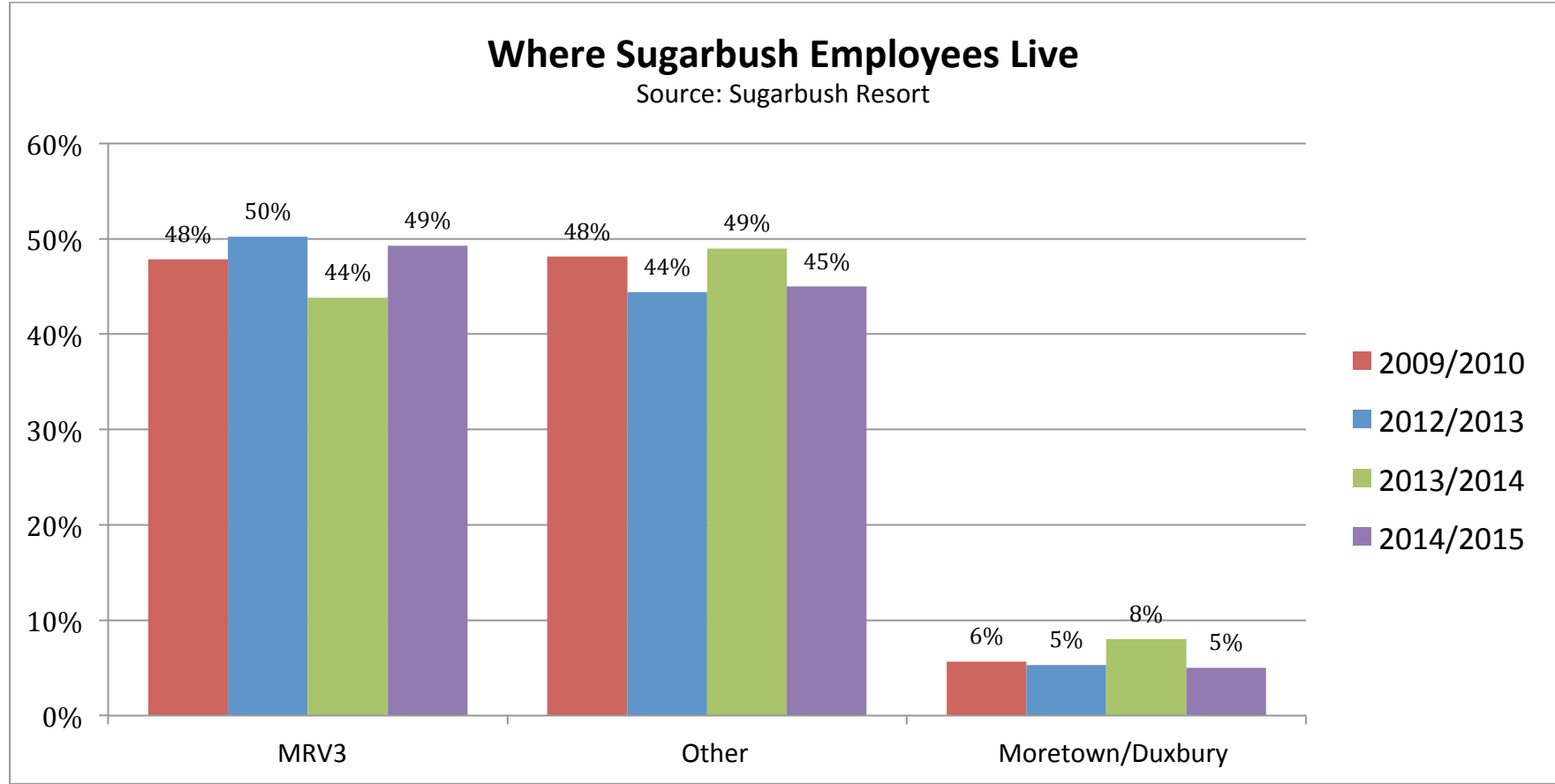
⁶ Fayston lacks a number for 2012. This is due to the discrepancy between the [US Census Building Permits Survey](#) and the Town Report for that year.



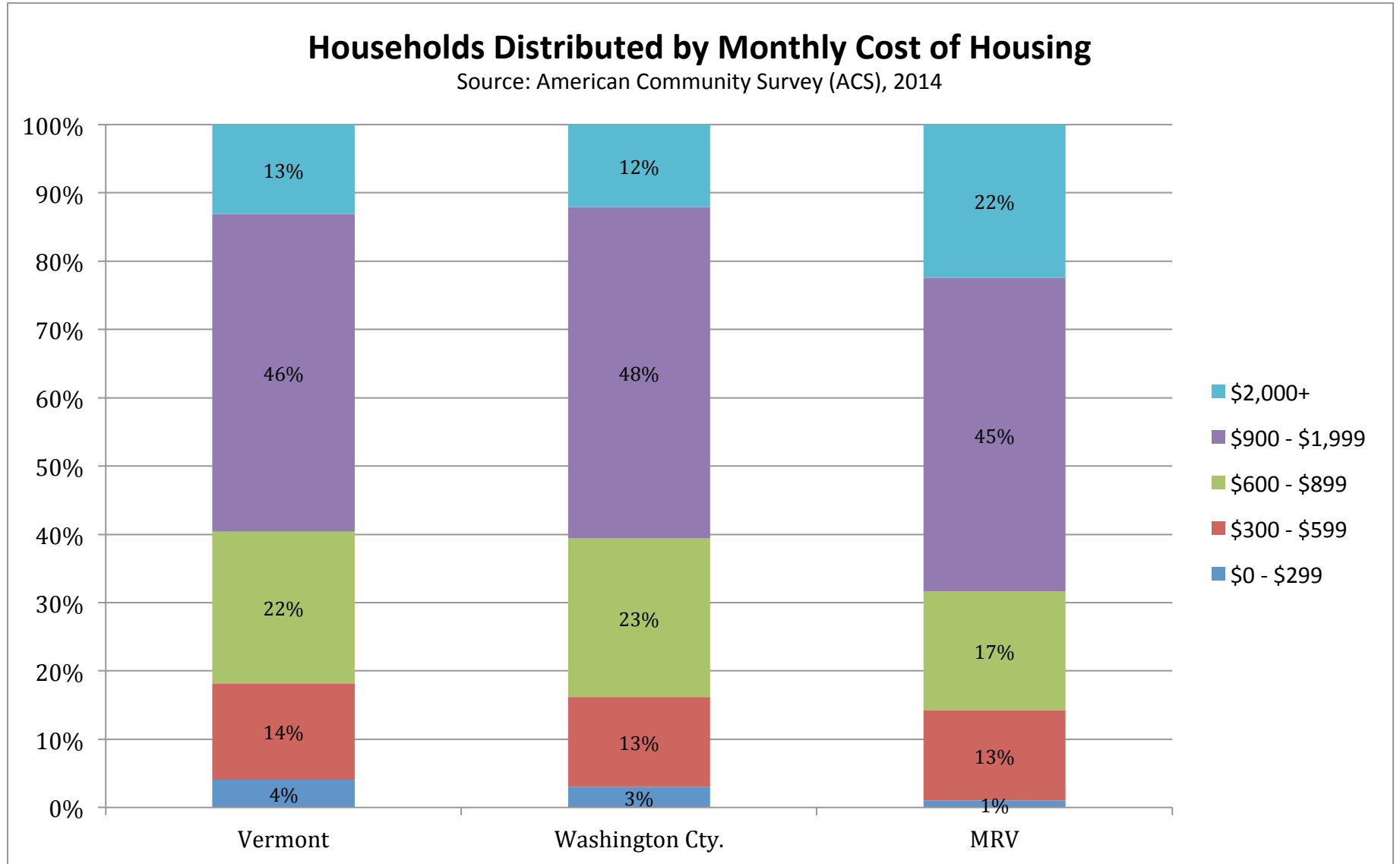
A snapshot of available housing shows that in 2010, housing has continued to be split fairly evenly between full-time and seasonal occupancy, with just a small percentage of housing available at the time of the Census.

HOUSING AFFORDABILITY

Data from Sugarbush Resort is collected each year from surveys given to seasonal and year-round employees. The data suggest an increase in the number of employees (year-round and seasonal) who live in one of the three MRV towns (49% in 2014-2015 season versus 44% in 2013-2014 season). 44% of seasonal staff reported residing in Fayston, Waitsfield or Warren, while 89% of the year round staff call one of these three towns home. Of the 749 seasonal employees who responded to the survey, 95 reported moving to Warren, Fayston or Waitsfield to work at Sugarbush. Of the 103 year-round staff members who completed this section of the survey, 13 reported moving to Warren, Fayston or Waitsfield to work at Sugarbush in the last year.



An analysis of housing costs shows a greater percentage of income is required of those who live in the MRV as compared to county and state levels, with almost twice the proportion of people spending \$2000 or more on housing per month.



Section III: Employment

The Employment section includes Items #35 & 36 from the Memorandum of Understanding.

LABOR MARKET AREA (LMA)

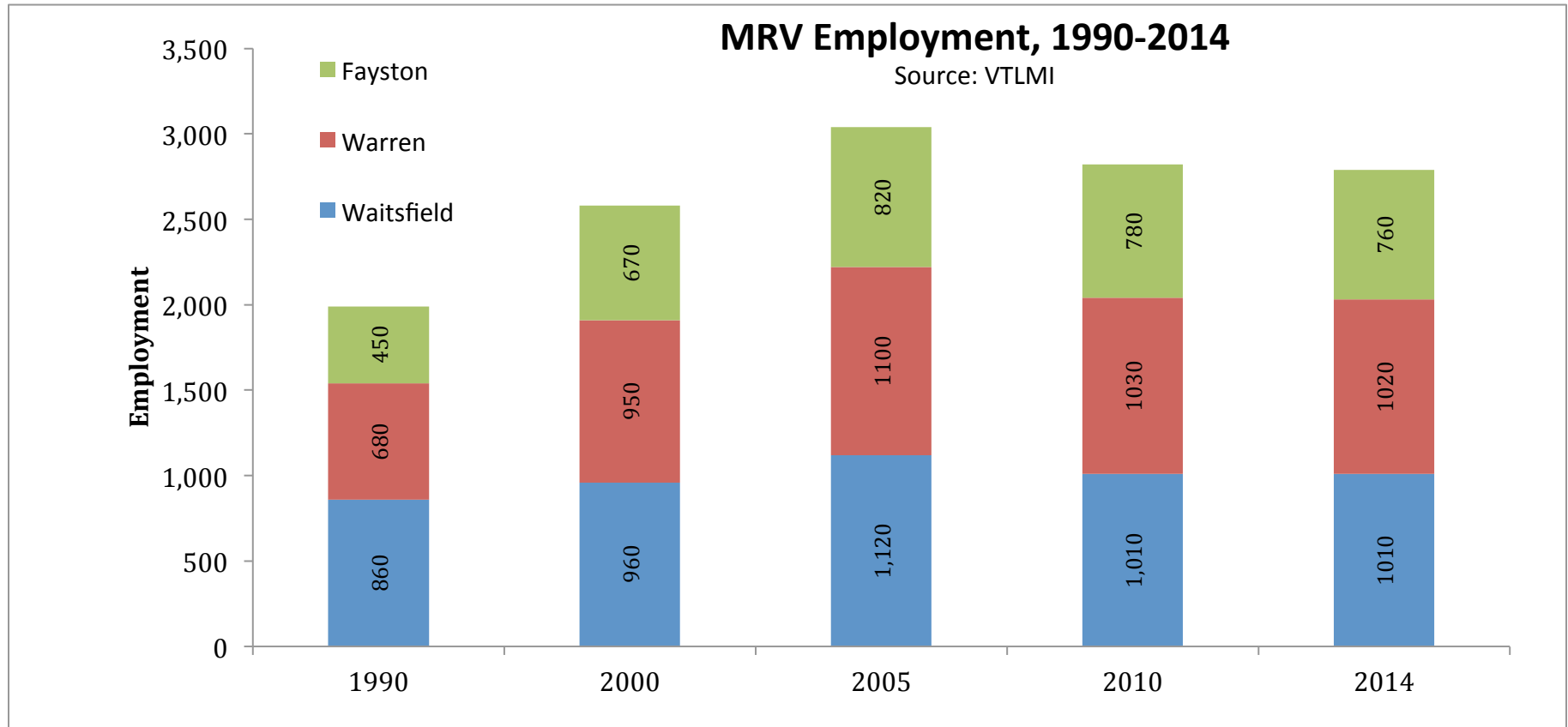
Effective 2014, the Mad River Valley Labor Market Area (MRVLMA) was changed to the Northfield-Waitsfield LMA (comprised of the former MRVLMA towns of Fayston, Moretown, Waitsfield and Warren with the addition of Northfield). In an attempt to provide consistency with historic data, and focus on the MRV, the VT Department of Labor's Economic and Labor Market Information Department provided MRVPD with 2014 Northfield-Waitsfield LMA data with Northfield excluded. In some cases, due to confidentiality, data has been suppressed.

Industry categories are described below, as reflected in the Quarterly Census of Employment and Wages (QCEW), which provides for all firms covered by unemployment insurance in the state of Vermont. Data includes monthly employment level and wages at each worksite.

Descriptions of each industry is as follows:

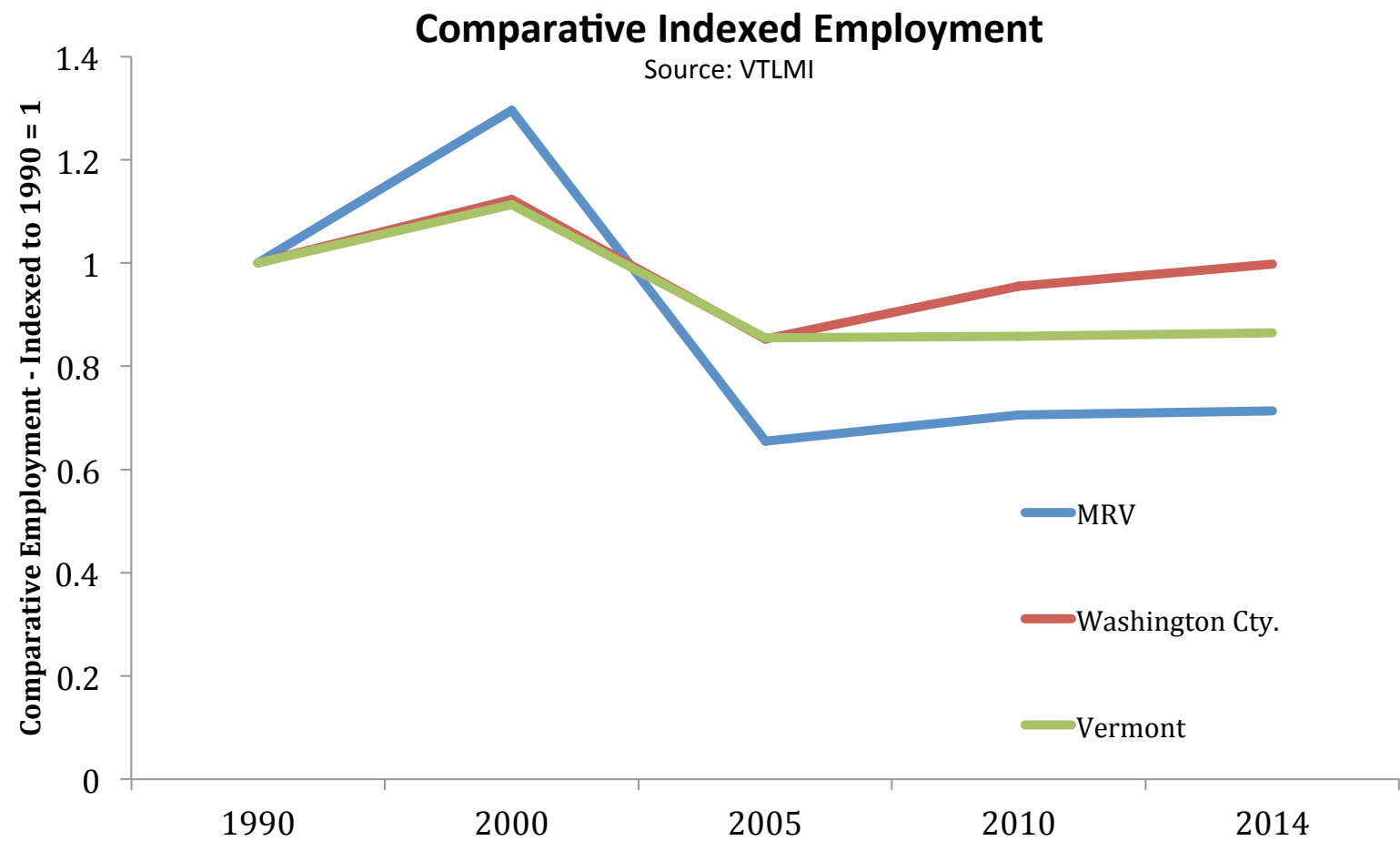
- Agriculture includes forestry, fishing, and hunting
- Construction industry includes building construction, engineering and contractors
- Manufacturing includes manufacturers of durable (wood products, mineral products, transportation equipment, furniture, etc.) and non-durable goods (food, beverage, tobacco, and printing)
- Retail trade includes sellers of motor vehicles and parts, furniture, home furnishings, electronics, appliances, building materials, garden supplies, food and beverages, personal care, gasoline, clothing, sporting goods, books, music and general merchandise
- Information industry includes publishing, motion picture, sound recording, broadcasting and some telecommunications
- Financial activities include financial services, insurance, credit services, securities and other investments, real estate services
- Professional and business services includes professional services, technical services, administrative services, and other support services
- Educational services include non-government schools, technical or trade schools. Since this data is suppressed for our LMA towns, the info depicted in the subsequent graphs is for government (public) elementary and secondary schools.
- Health care includes outpatient, ambulatory care, nursing services and facilities, social assistance
- Leisure and hospitality includes art, entertainment, recreation, performing arts, spectator sports, gambling, accommodation, food services, drinking places
- Other services include repair and maintenance, personal services, laundry services, membership associations
- Local government as represented in the subsequent graphs includes public administration.

Total annual average employment data⁷⁷ from the Vermont Department of Labor's Economic & Labor Market Information (VTLMI) shows an employment peak in 2005 with stable numbers since 2010.

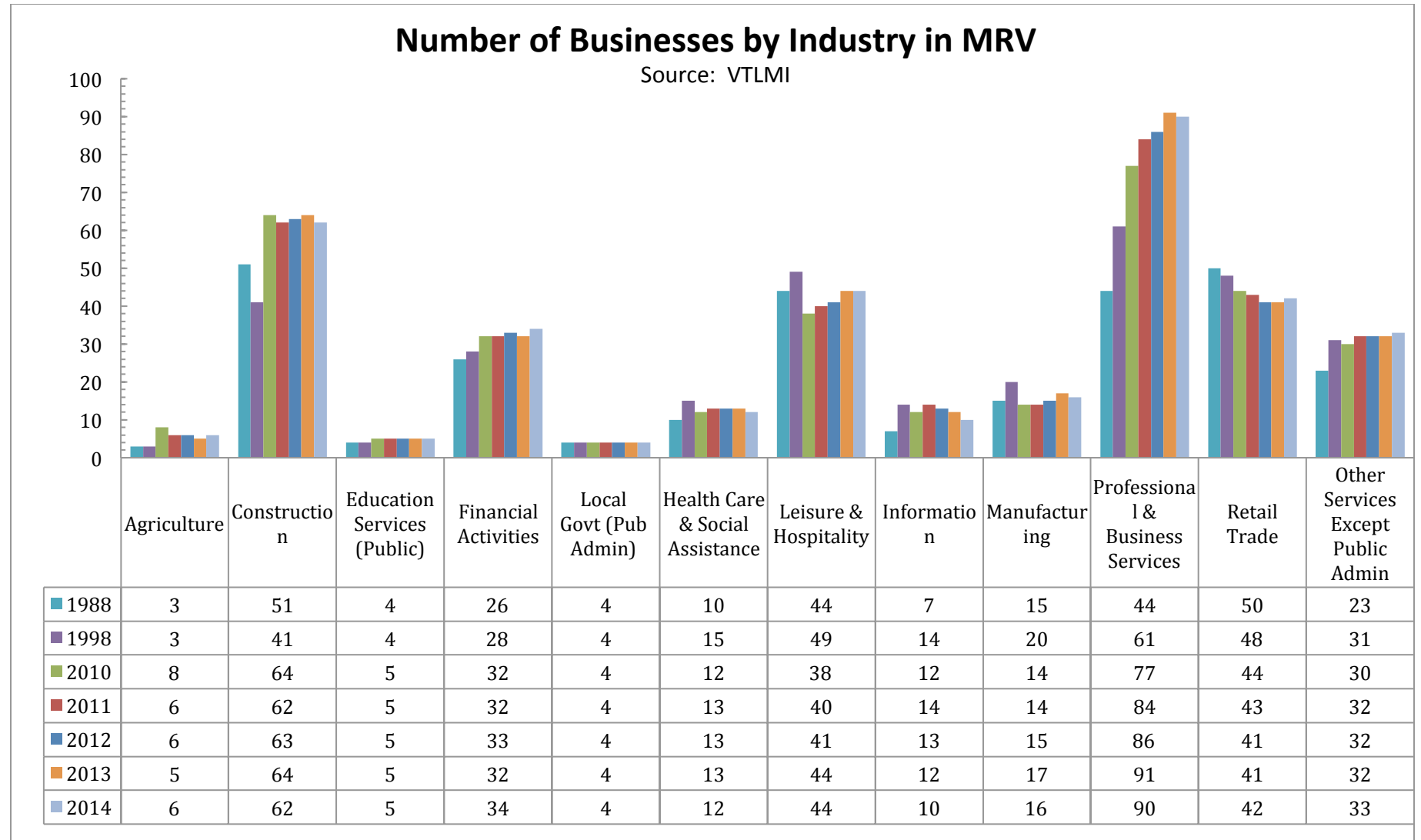


⁷⁷ **Employment (total)** - A count of all civilians 16 years of age or older who worked for compensation in a business or on a farm during the week which included the 12th day of the month; or worked at least 15 hours (during the week which includes the 12th day of the month) as unpaid workers in a family business; or had jobs from which they were temporarily absent due to illness, bad weather, vacation, or labor-management dispute. This count is based on the residence of the workers, and each worker is counted only once, even if they hold more than one job. Therefore, this is sometimes referred to as employment "by place of residence." The [Vermont Department of Labor's Local Area Unemployment Statistics \(LAUS\)](#) staff compiles total employment data.

Compared to state and county employment trends, however, the MRV experienced steeper pre-recession declines in total employment.



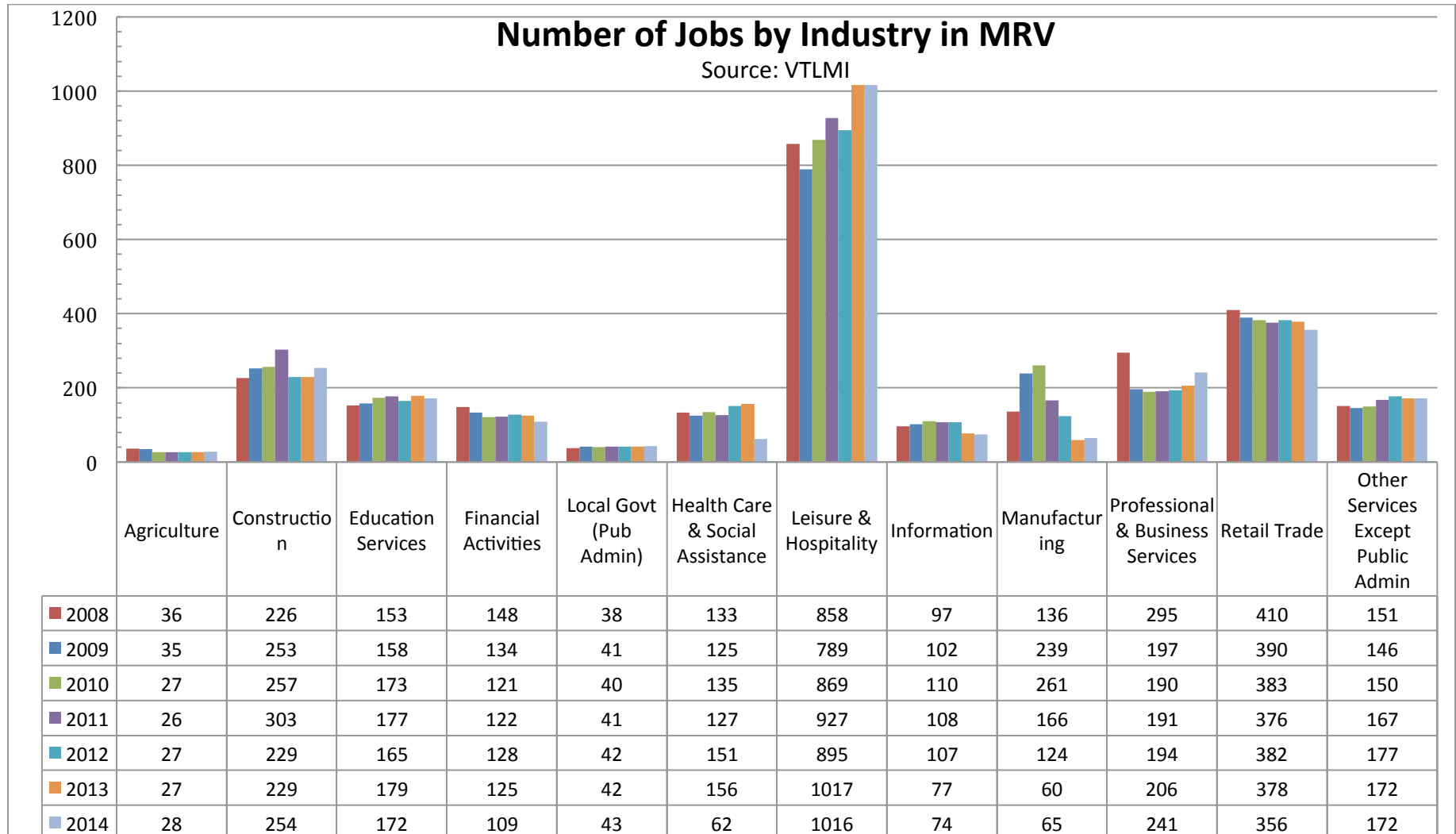
The sector with the largest and continued increase in the number of businesses between 1988 and 2014 is the Professional & Business category. The number of Construction and Financial Activities firms has also grown. Retail businesses are trending lower since 1988.



Due to a change in the data reporting from the Vermont Department of Labor beginning in 2014, the towns of the former MRV Labor Market Area (MRVLMA), which included Fayston, Moretown, Waitsfield, and Warren, have now been grouped with Northfield in the new Northfield-Waitsfield LMA. As a result of this new reporting format, there are several sectors that now have missing data due to confidentiality standards for the private sector⁸. Those sectors are Information, Financial Activities, Educational Services (private), and Health Care & Social Services, for which each has between 1 and 3 suppressed establishments. The Educational Services information presented in these graphs is for public institutions; the private data is completely suppressed and is not included.

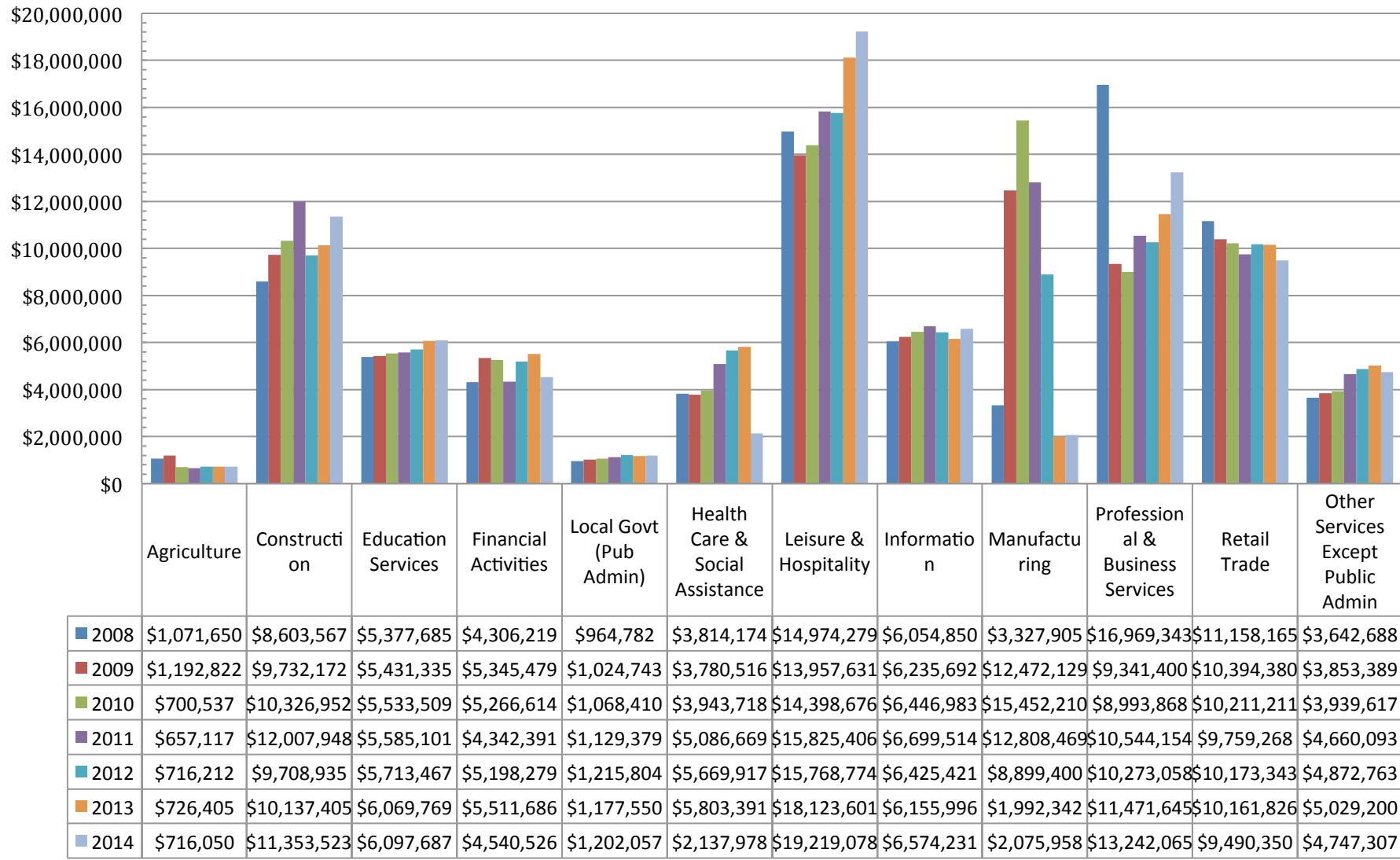
⁸ **Confidentiality standards** for the Quarterly Census of Employment and Wages (QCEW) program are set by the U.S. Bureau of Labor to protect against release of employment or wage information for an individual firm. In Vermont, confidentiality only applies to the private sector. Government, federal, state and local, is fully disclosable. To be released, data for a geography and or industry must include at least 3 firms with no single firm accounting for 80 percent or more of the total. In addition, it may be necessary to suppress otherwise releasable data that could be used to derive confidential information for another industry or area. An example of the latter is the Warren-Waitsfield LMA and Northfield-Waitsfield LMA. Since the difference between these two areas is the Town of Northfield, releasing both LMAs would, in effect, disclose data that was confidential in the Town of Northfield. For confidential data, employment and wage information is suppressed but the number of establishments is released.

While the MRV has attracted businesses from most major sectors, figures from the Vermont Department of Labor depict the dominant role of the Leisure & Hospitality sector. Of note, these job numbers are an aggregate that includes part-time and seasonal jobs, which contribute significantly to this sector. Professional & Business Services and Construction job numbers rose in 2014, along with modest increases in Manufacturing and Agriculture. 2014 saw a continued increase in the number of Food Manufacturing establishments in the MRV (20%) over the previous year. Food Manufacturing is a subset of Manufacturing.

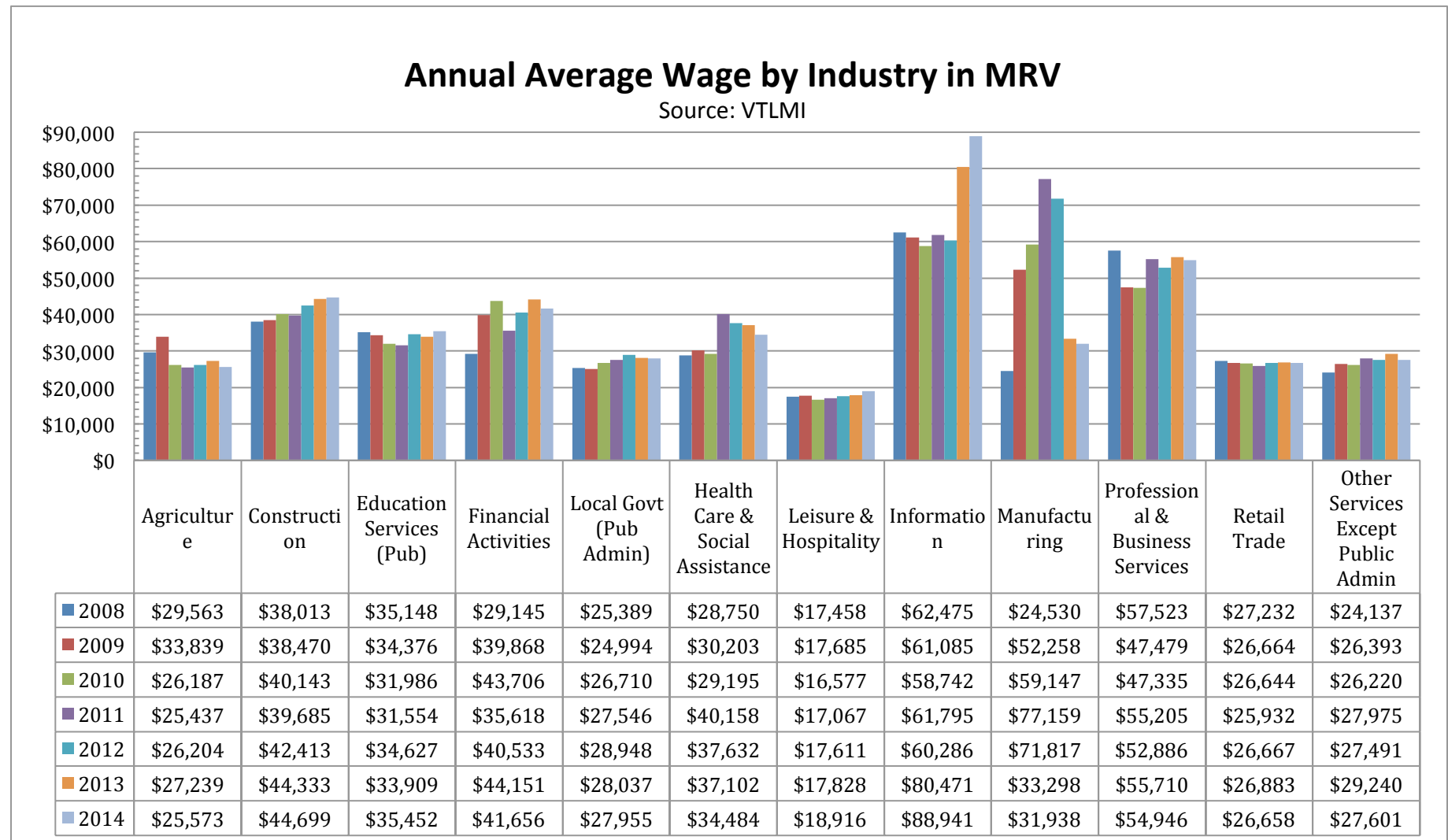


Total Annual Wages by Industry in MRV

Source: VTLMi



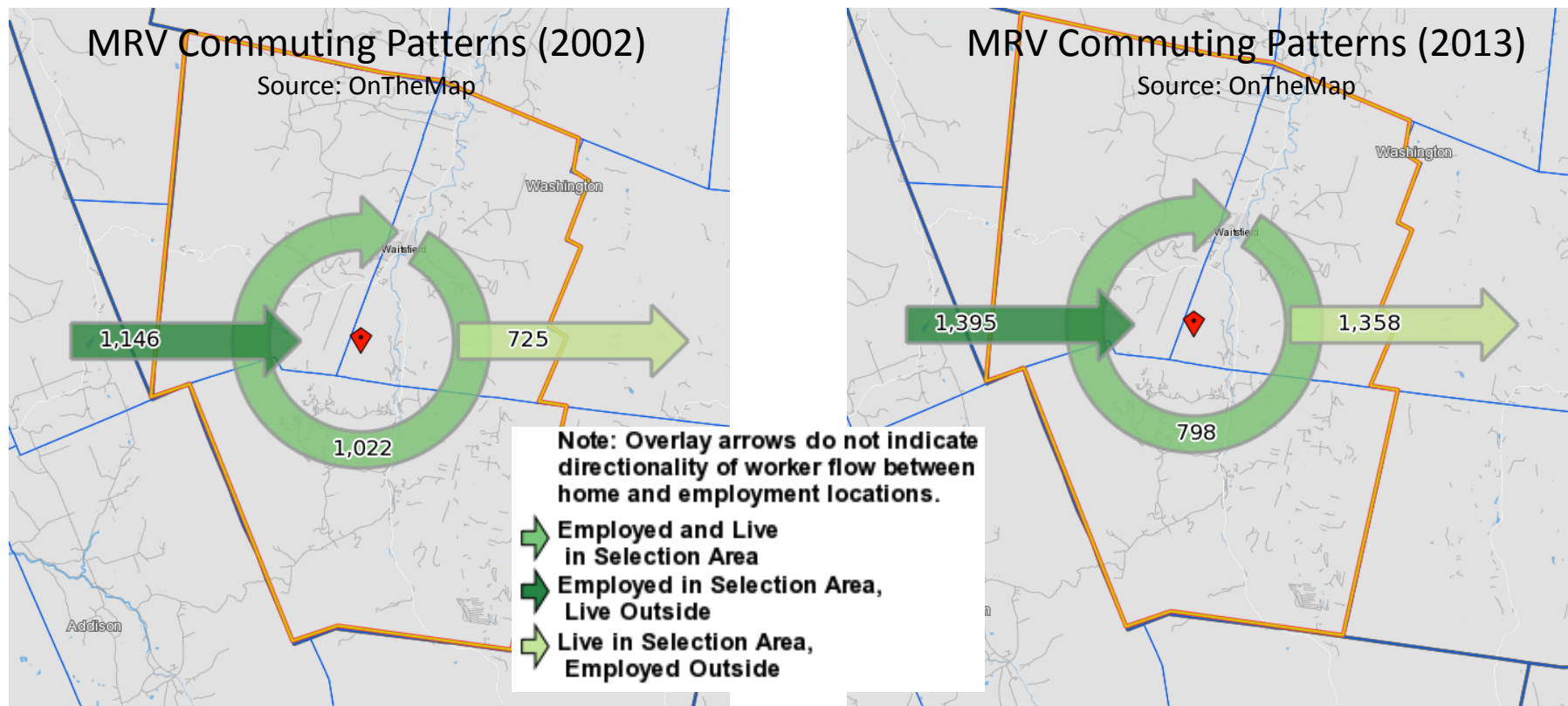
The continued strength in the Information and Professional & Business sector total wages (see graph previous page) suggests the retention or creation of higher paying jobs in the MRV. Of the sectors with missing data due to the reporting changes in 2014, only Health Care & Social Services shows a significant drop (almost 40%); there was one fewer establishment reported in that sector than in 2013. Manufacturing wages in 2013 reflect the overall loss in job numbers in that sector, a trend that began in 2011.



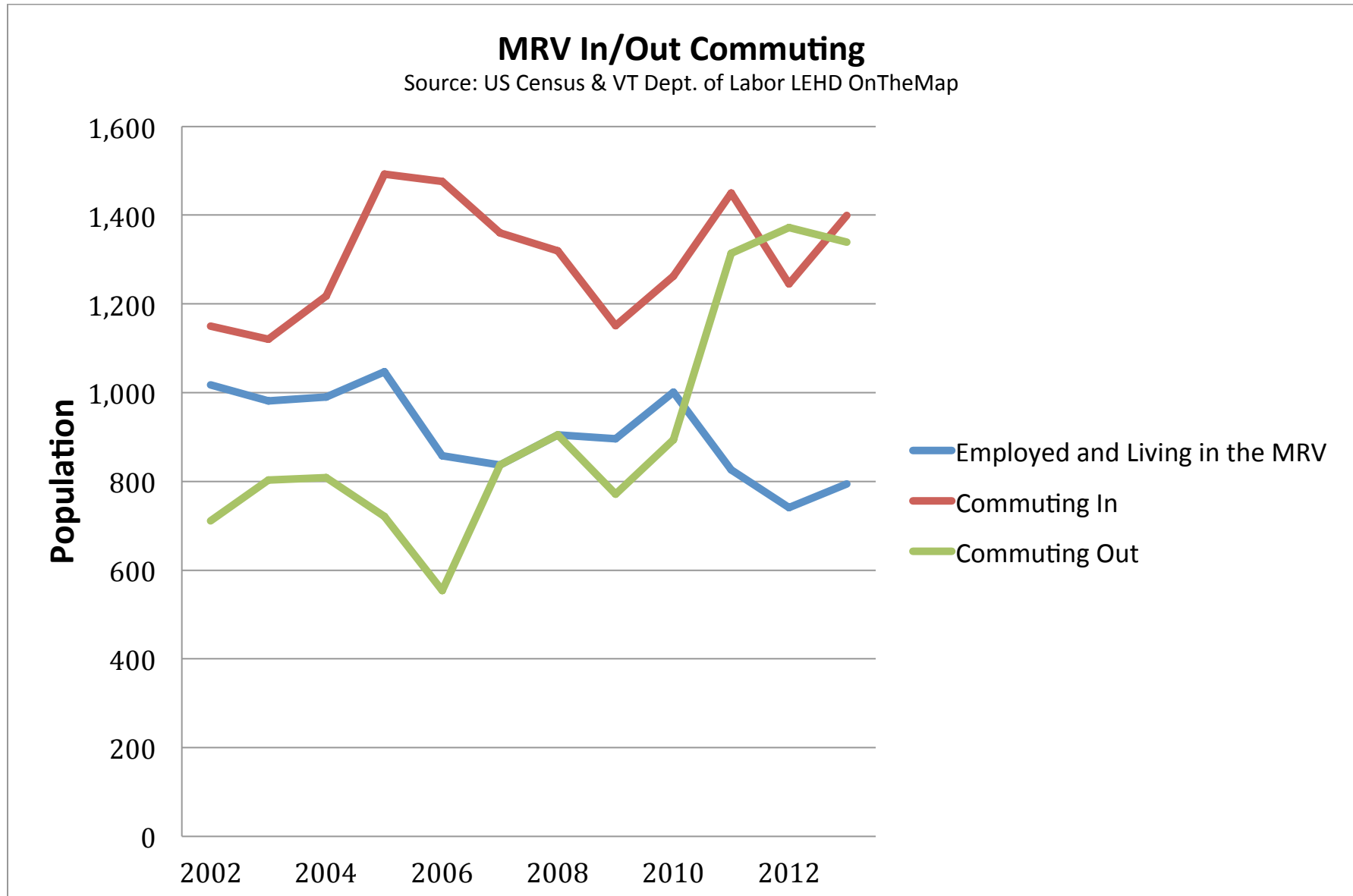
The average wage in the MRV ranges from just under \$19,000 in the Leisure & Hospitality sector to nearly \$90,000 in Information. The Information sector shows the greatest increases in average wages of all sectors. The Leisure & Hospitality industry employs the most people, and along with Retail and Local Government, continues to show the most wage stagnation. Average wages are affected by the proportion of part-time and seasonal jobs, which lowers the annual average compared to full-time jobs.

WORKER FLOW

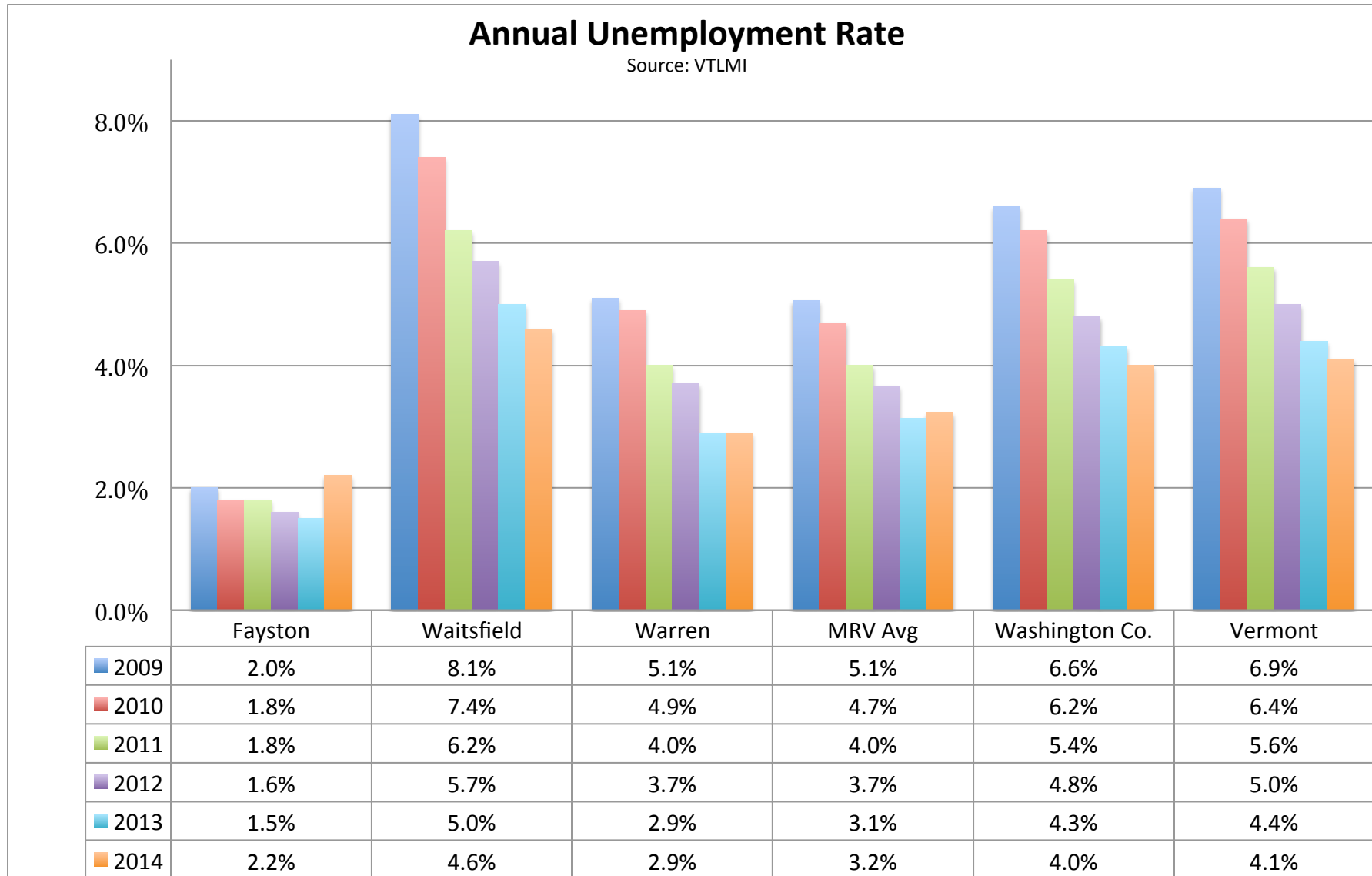
2013 worker flow data shows parity between in and out commuters to the MRV. When compared to 2002, however, the 2013 data shows a decrease in the percentage of workers who live and work in the Valley. This data does not capture self-employment. 2014's MRV Economic Study estimated self-employment income in the MRV at 13% in 2012, nearly twice that of the state.



Worker flow data for the MRV shows a growing percentage of workers employed outside the MRV since 2002. Again, self-employment is not reflected. The number of workers commuting into the MRV has increased since 2002, with a peak in 2005.

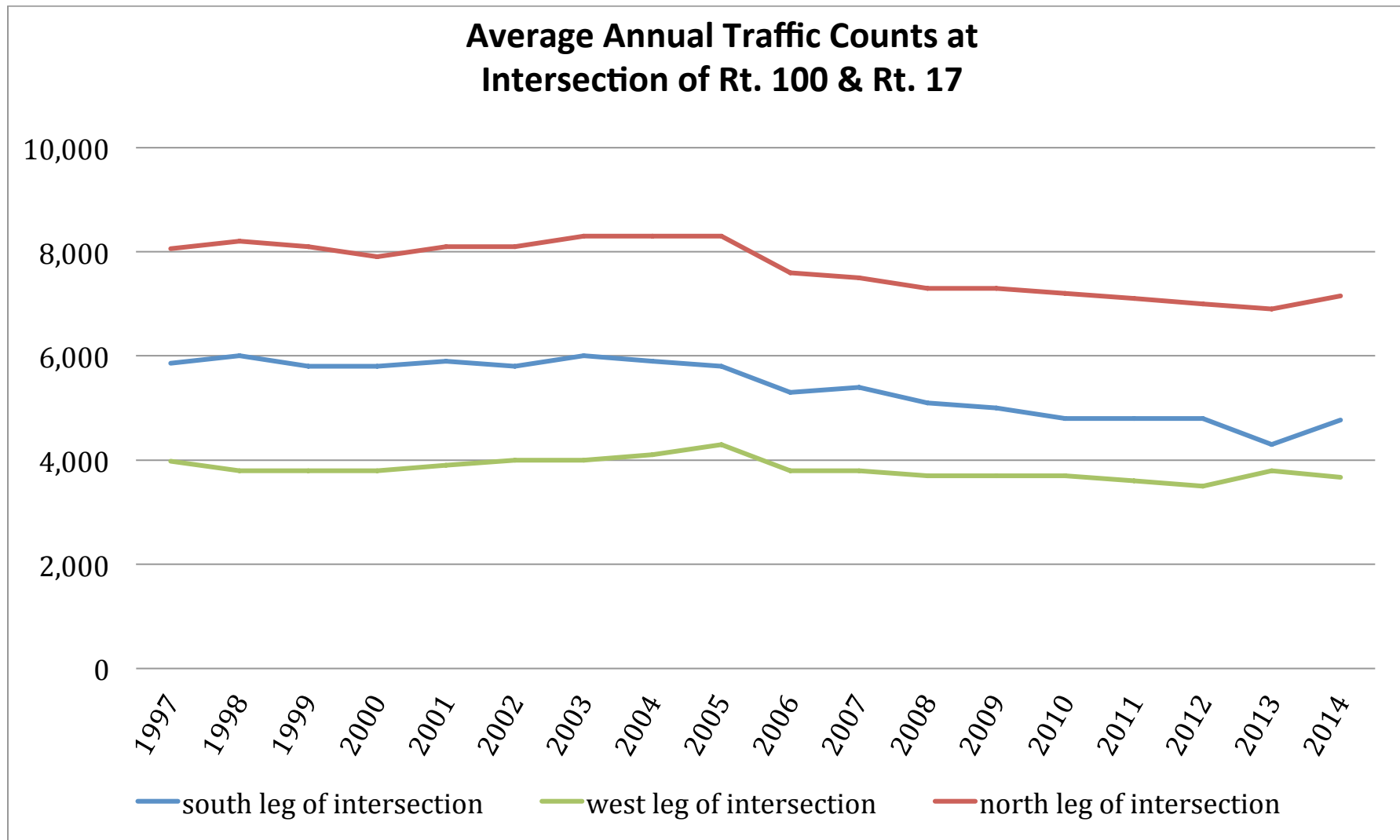


The unemployment rate has continued to drop since 2009. Of the three MRV towns, Waitsfield has the highest rate. The overall MRV average is lower than that of the county and state.



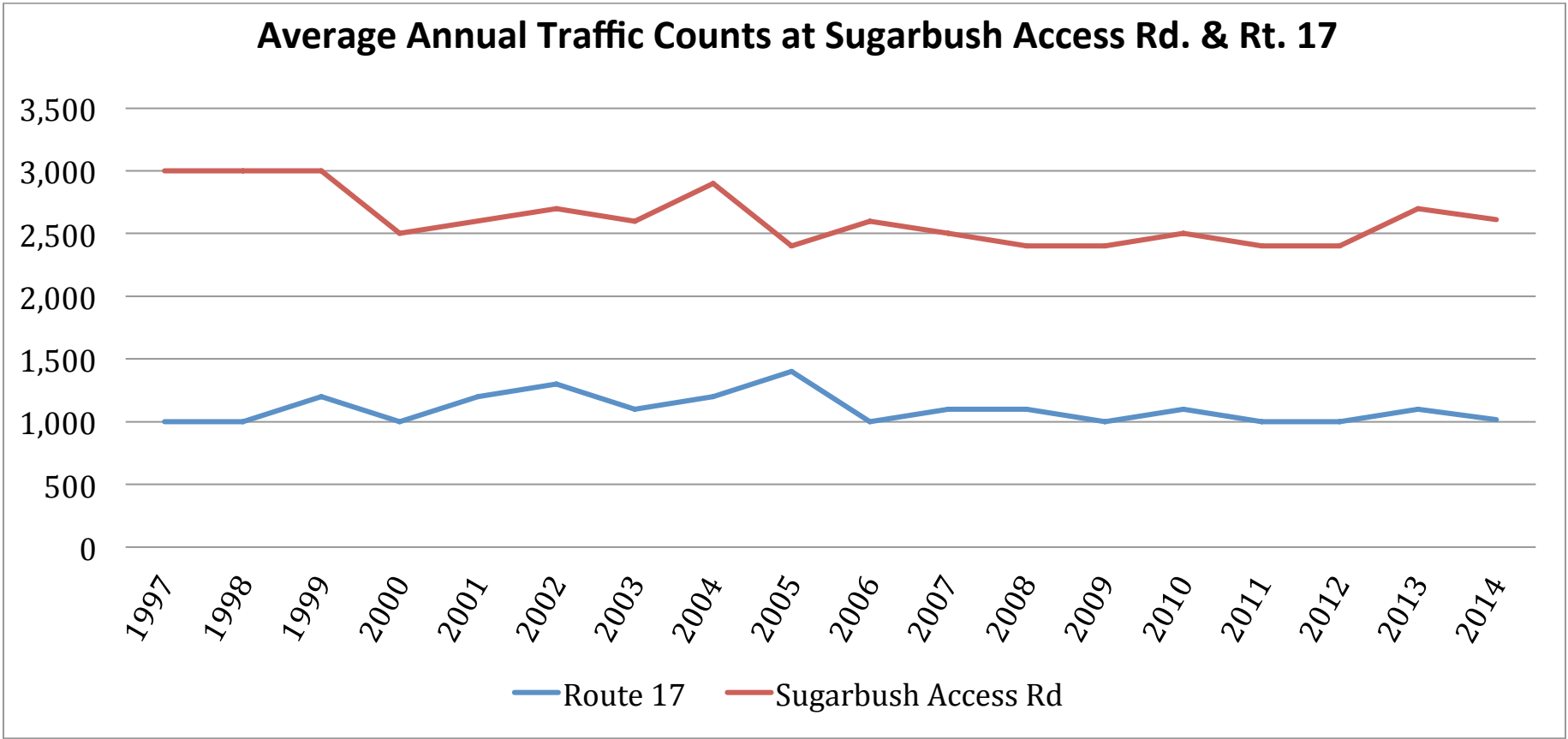
SECTION IV: TRAFFIC & TRANSIT

The Traffic and Transit section includes Items #24, 25 & 32 from the Memorandum of Understanding.



ANNUAL TRAFFIC SUMMARY

As specified in the 1998 MOU, this report contains data from traffic counters in the following key locations: the intersection of Route 100 and Route 17, the Sugarbush Access Road above the Sugarbush Inn, and Route 17 west of German Flats Road. The counter located on the Sugarbush Access Road west of Route 100 has been deactivated and is not included in this analysis. The charts above and below describe the Average Annual Daily Traffic (AADT) from 1997 to 2014. AADT is the total volume of traffic on a highway segment for one year divided by the number of days in the year. The Route 100 and Route 17 intersection depicted on previous page has experienced relatively steady use since 1997, with a slight increase in 2014. Of note, the north and west leg counters were operational for only 9 months of 2014, hence the volume can be assumed to be even higher than depicted.



During the 1990s, Sugarbush Access Road experienced higher traffic counts, whereas more recent annual vehicle trips have settled lower. Average annual daily traffic measured on Route 17 west of German Flats Road increased by more than 100% over 30 years, from 680 in 1976 to a high of 1,400 in 2005. Traffic on the Sugarbush Access Road shows a spike in 2013.

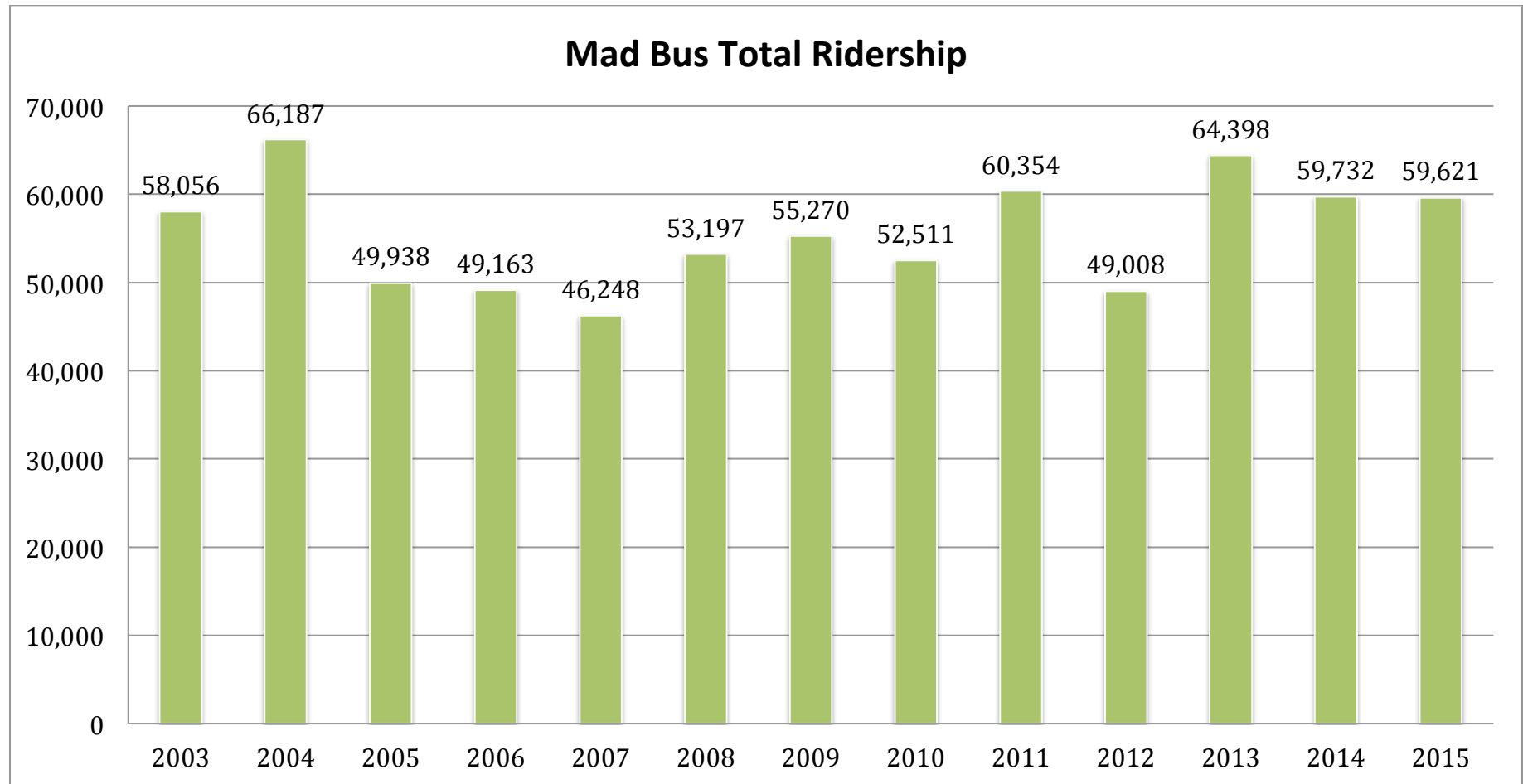
EFFICIENCY OF TRANSPORTATION INFRASTRUCTURE

One common indicator that is used to measure the efficiency and convenience of transportation infrastructure is level of service (LOS). LOS utilizes a grading system to categorize the flow of traffic. The Highway Capacity Manual and AASHTO Geometric Design of Highways and Streets ("Green Book") list the following levels of service for roadways: A= Free flow; B=Reasonably free flow; C=Stable flow; D=Approaching unstable flow; E=Unstable flow; F=Forced or breakdown flow. LOS measured at signalized and unsignalized intersections is graded based on estimated wait times; at an unsignalized intersection, a wait time of \leq 10 seconds is grade A, whereas a wait time of $>$ 50 seconds is grade F

The Central Vermont Regional Planning Commission performs evaluation of changes in LOS at MRV intersections on an as-needed basis. Since traffic generally flows unobstructed except at the busiest times of year, the LOS for all transportation infrastructure throughout the area are considered to be at grade A.

TRANSIT

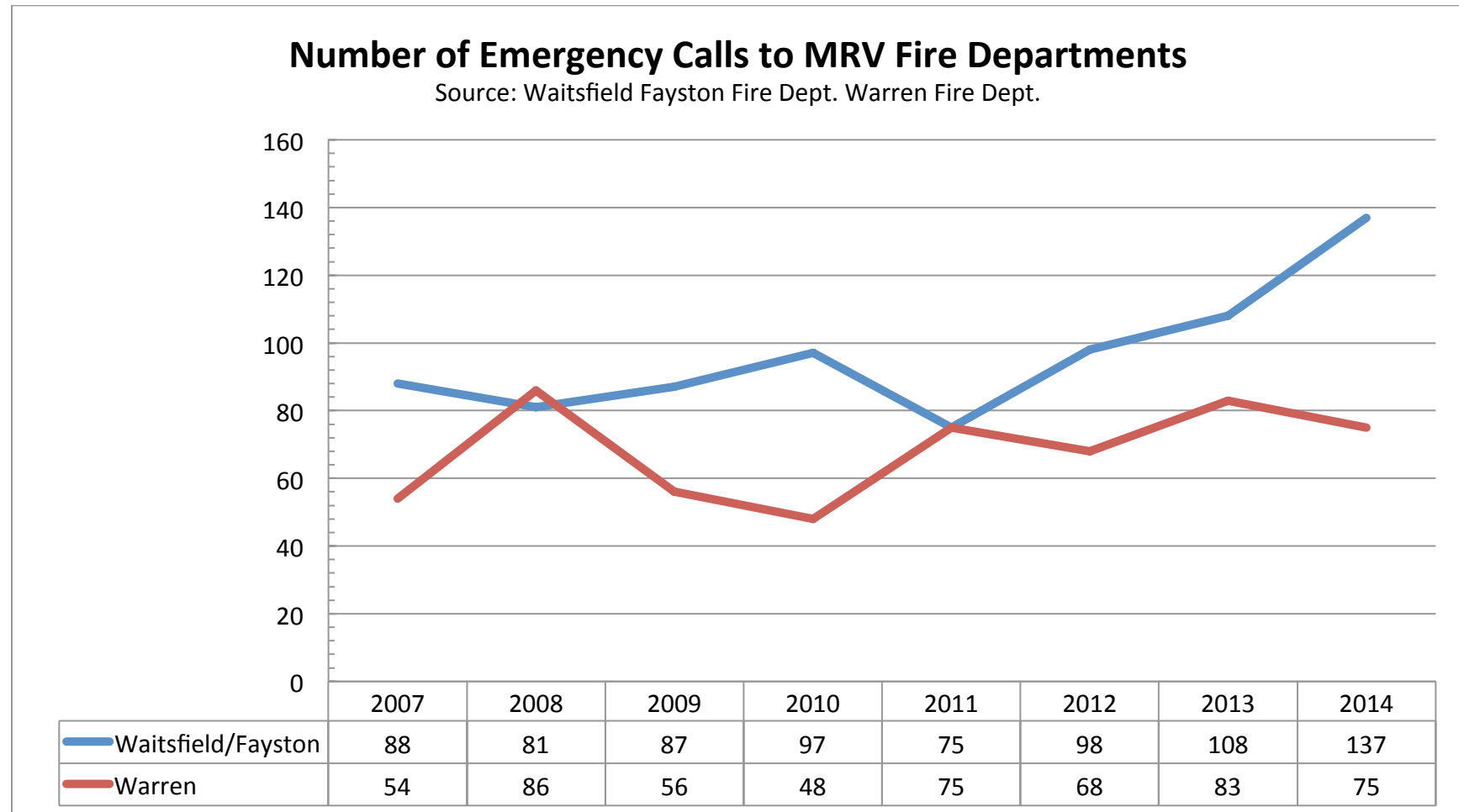
Green Mountain Transit (GMT) began operating service in the Mad River Valley in late 2003 under the name Mad Bus. Year-round service on the Valley Floor route (connecting Warren, Waitsfield and Lincoln Peak) was offered from October 2003 until April 2005, after which it was scaled back to winter season service (Nov-March) due to low ridership. The chart below shows ridership between FY2003 - FY2015. GMTA operated 8 Mad Bus routes during the 2014-15 season, all free-of-charge except the SnowCap Commuter. The 2014-2015 season shows consistent ridership compared to the previous season.



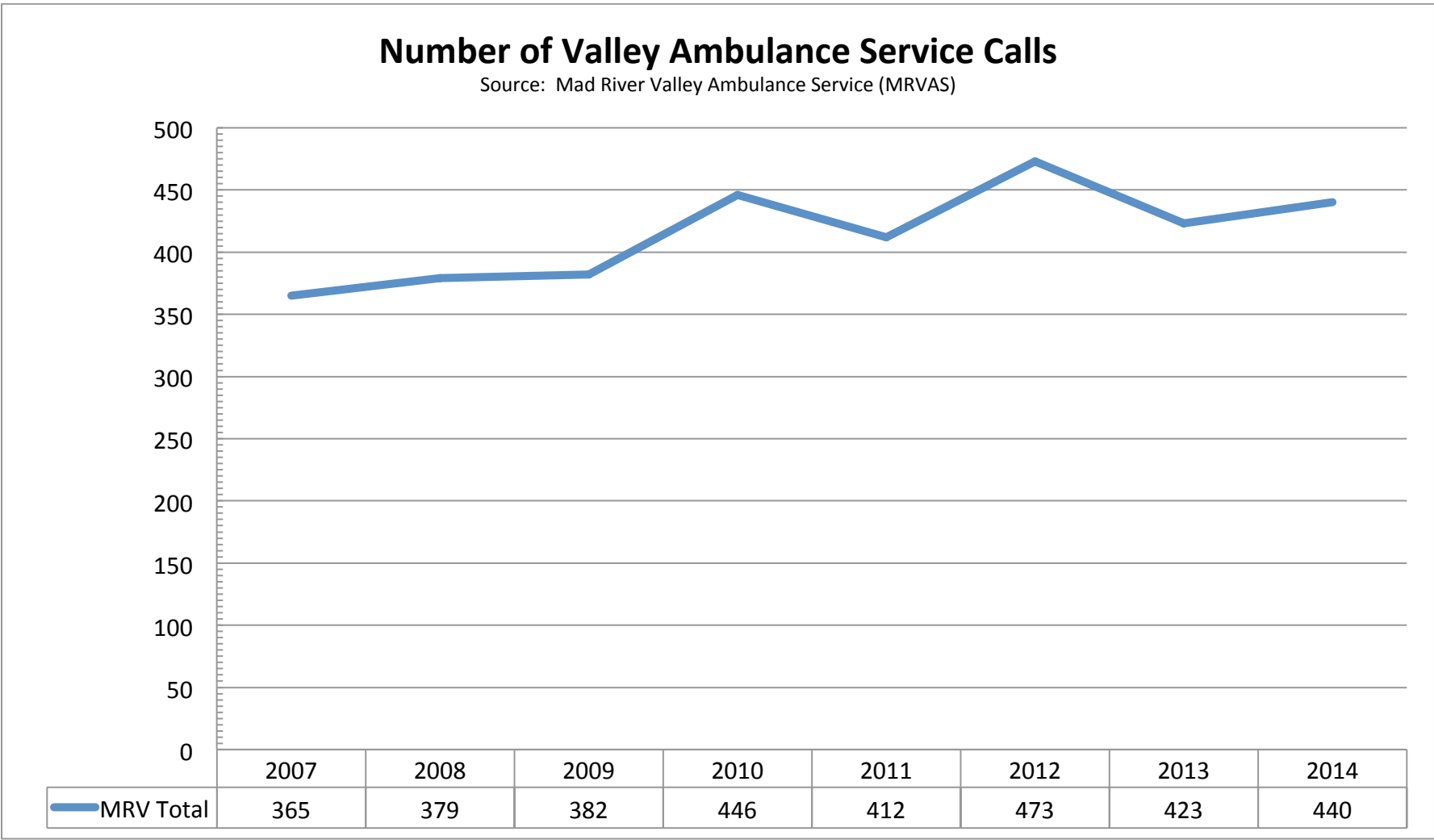
SECTION V: TOWN INFRASTRUCTURE

The Town Infrastructure section includes Items #27 & 35 from the Memorandum of Understanding.

EMERGENCY SERVICES



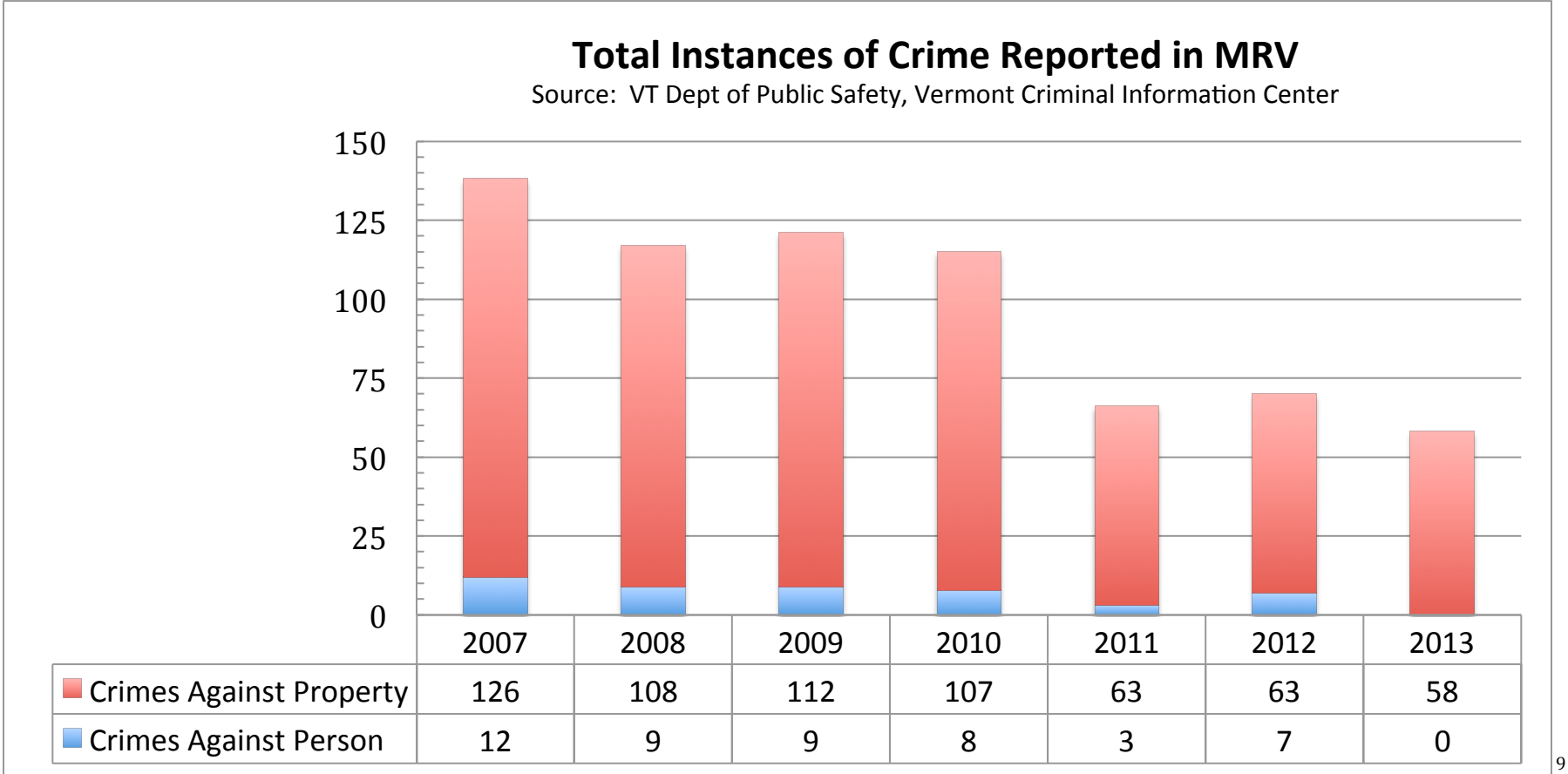
Emergency calls activity for 2014 shows a spike in the number of calls in Waitsfield/Fayston and a slight decrease in Warren over the previous year.



In 2014, Mad River Valley Ambulance Service (MRVAS) provided data on the total of MRV calls, 440, showing a small increase over the previous year. Overall, ambulance calls have trended up since 2007.

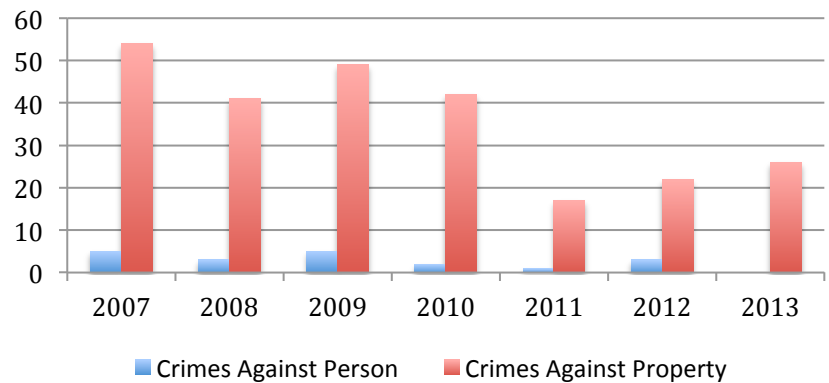
CRIME

On the other hand, the number of crimes has steadily fallen over the last decade across all three towns, as reported by the Vermont Criminal Information Center. 2013, the most recent year for which data is available, confirms this trend. See next page for info by town.

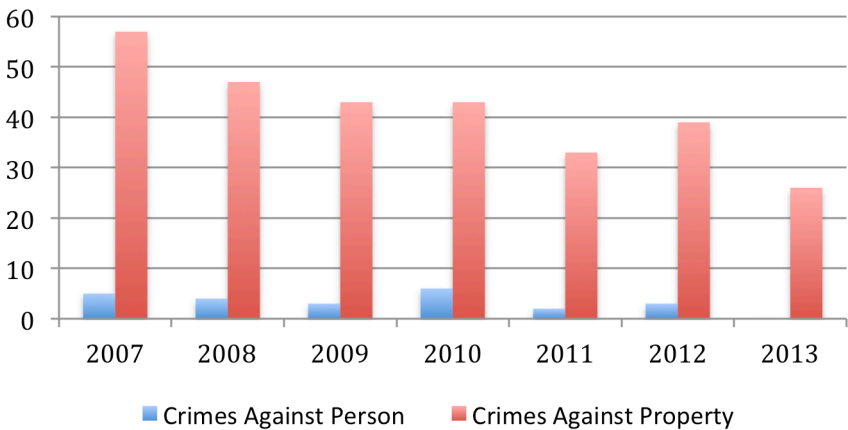


⁹ Crimes against property include arson, bribery, burglary, embezzlement, vandalism, theft, and drug violations. Crimes against person include murder, kidnapping, robbery, rape, and assault.

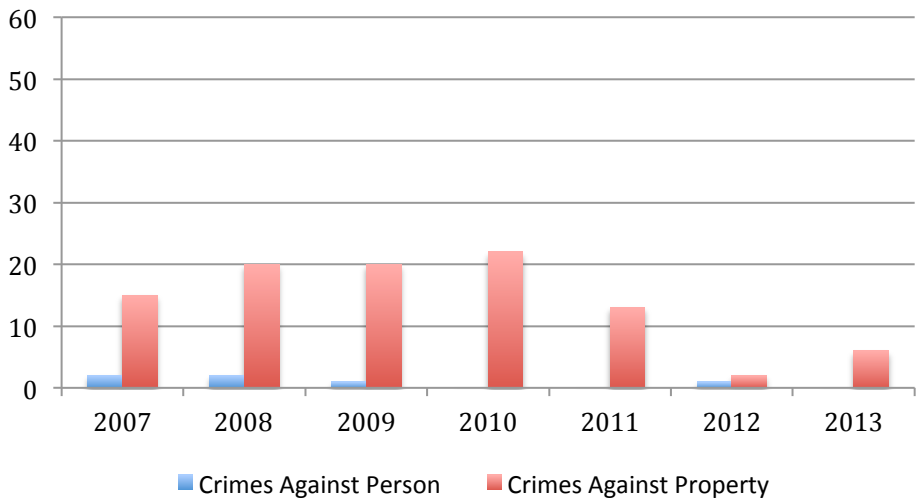
Warren

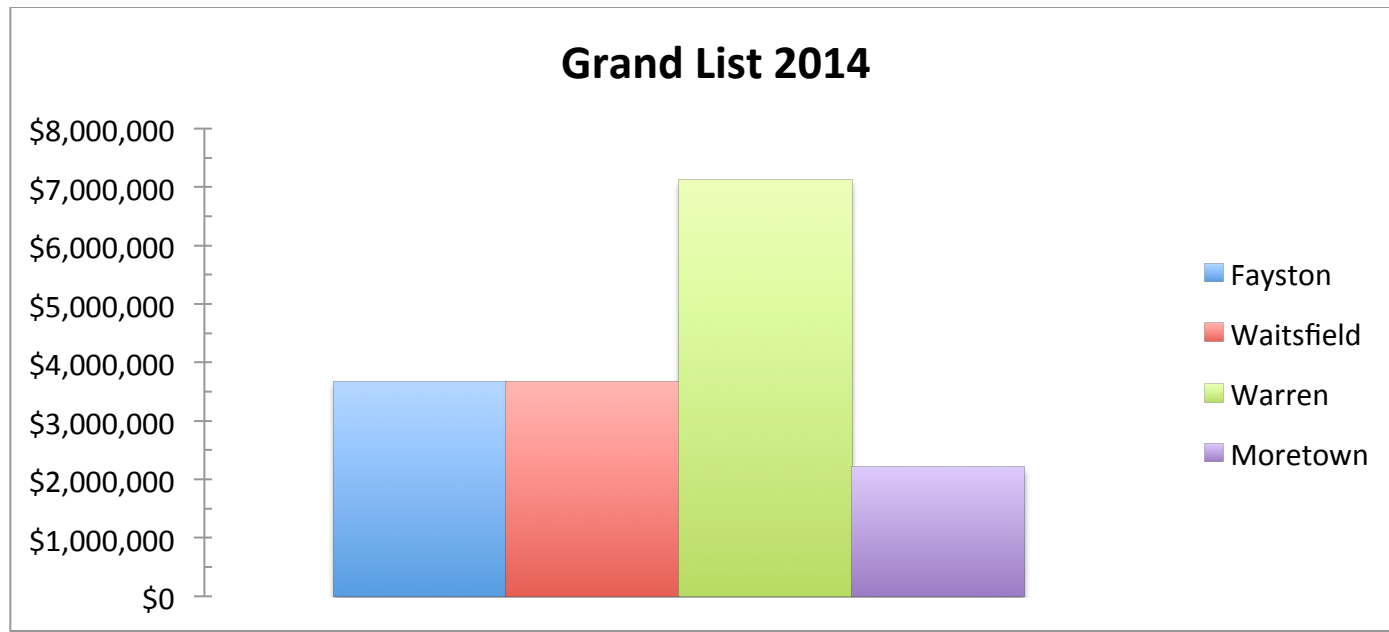


Waitsfield



Fayston





2014 Tax Rates				
	Homestead Tax Rate	Municipal Tax Rate	Non-Residential Tax Rate	Common Level of Appraisal
Fayston	1.5312	0.2304	1.4314	105.84%
Waitsfield	1.4847	0.4232	1.4150	107.07%
Warren	1.4567	0.3900	1.4888	101.76%
Moretown	1.6480	0.2629	1.4717	102.94% ¹⁰

¹⁰ Waitsfield converted to a fiscal year calendar during 2014, requiring an 18-month budget.

SECTION VI: ENVIRONMENT

The Environment section includes Items #26, 31, 33 & 34 from the Memorandum of Understanding.

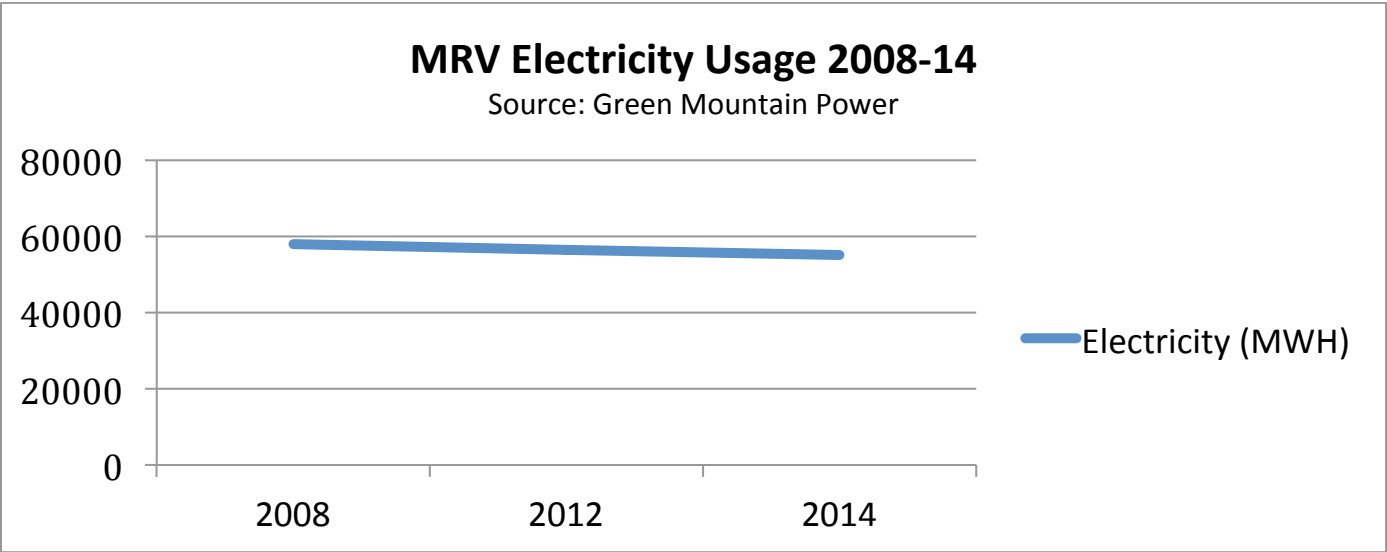
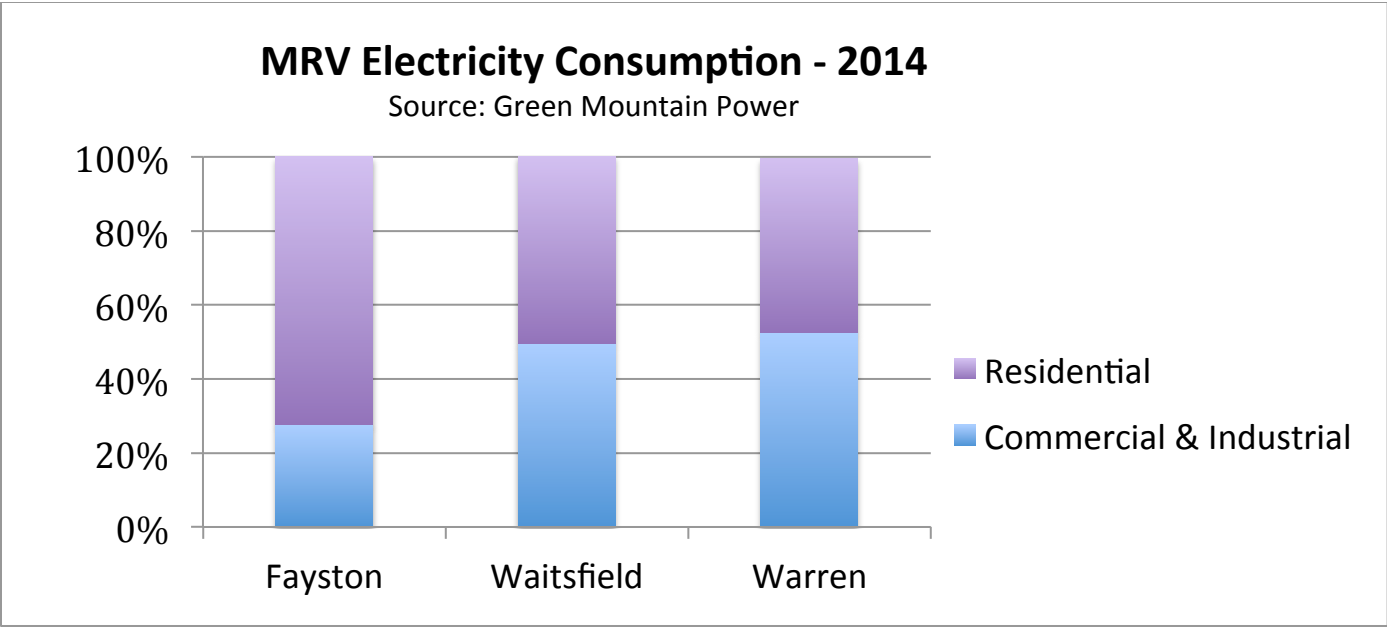
ENERGY

The table below identifies MRV energy consumption in 2014 in terms of electricity use. Electrical consumption data was provided directly by Green Mountain Power for 2014, and indirectly via the Renewable Energy Atlas of Vermont and Vermont Energy Investment Corporation (VEIC) in previous years. A small portion of Fayston is serviced by Washington Electric Cooperative (WEC); that usage data is not reflected below.

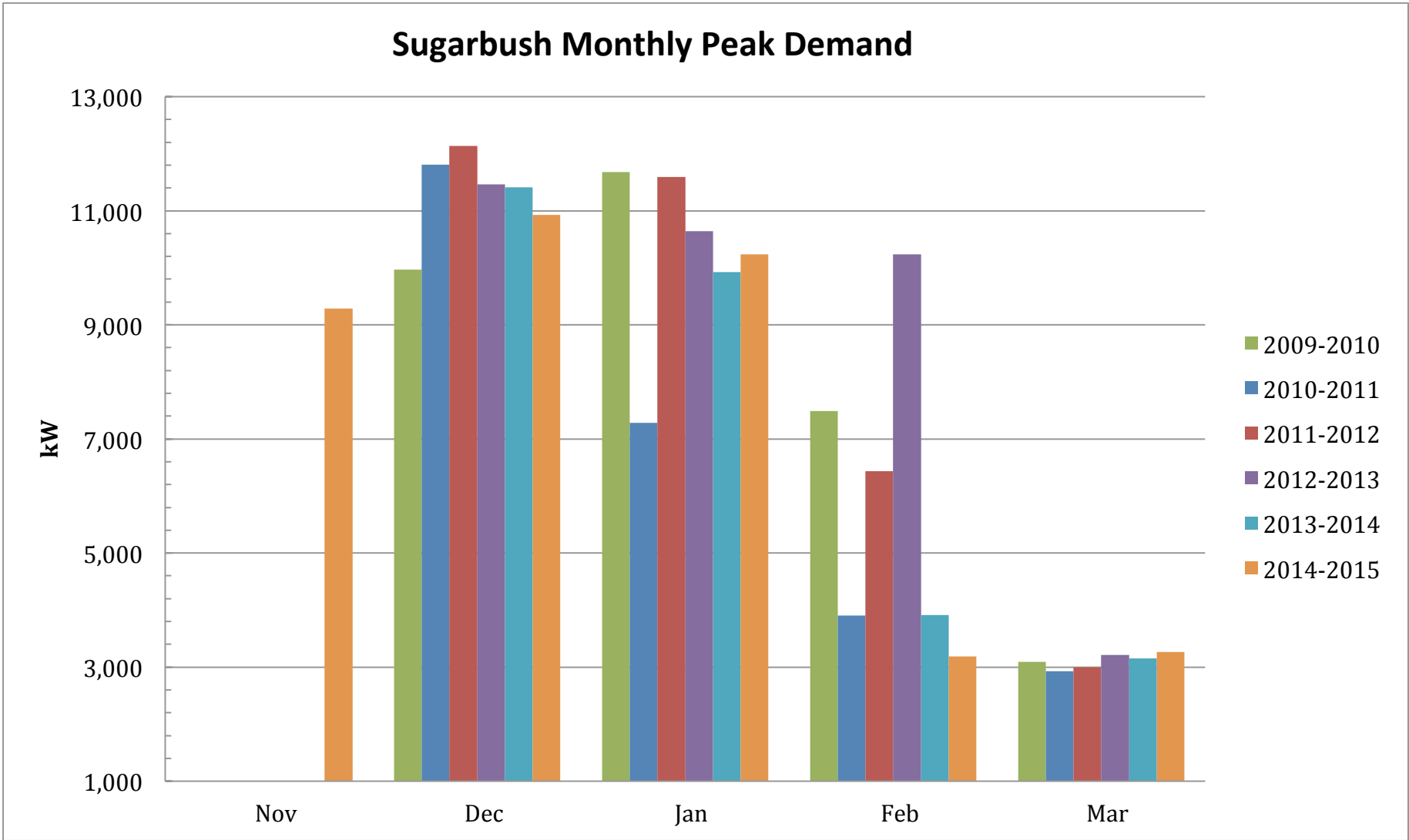
The MRV info below details the breakdown between residential electrical consumption versus commercial & industrial consumption by town. The MRV's total annual consumption by commercial/industrial (49%) and residential (51%) customers is nearly equal. Of the three towns, Warren usage is the highest, at almost twice that of Waitsfield in both categories.

MRV Electrical Consumption (2014)						
	Residential (MWh)		Commercial & Industrial (MWh)		Total (MWh)	% of Total
FAYSTON	4,335	15%	1,656	6%	5,991	11%
WAITSFIELD	7,781	28%	7,618	28%	15,399	28%
WARREN	15,943	57%	17,681	66%	33,623	61%
Total MRV	28,060	100%	26,955	100%	55,014	100%

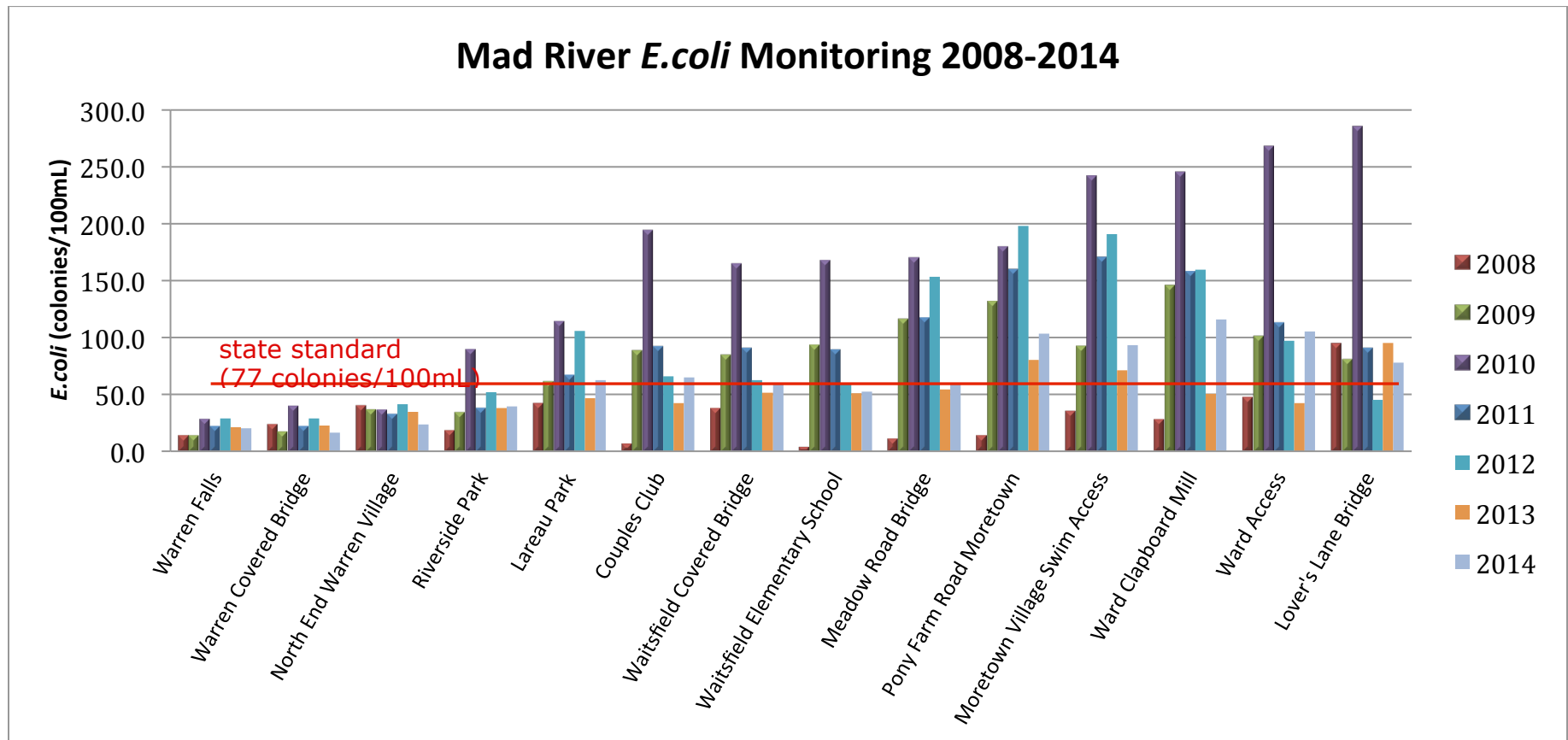
Waitsfield and Warren have roughly proportional splits between residential and commercial customers; Fayston is primarily residential. Overall electrical energy consumption is depicted on the following page, showing a downward trend since 2008. In 2014, voters in Waitsfield and Warren approved funding for new solar arrays for municipal power generation in each town that went operational in 2015. Although comprehensive town-level data for solar is not available for 2014, the state saw an increase in solar by 58% in 2014. Vermont added 38 megawatts (MW) of solar electric capacity, bringing its total to 70 MW, according to a [US Solar Market Insight](#) report. Of the new capacity added, 27 MW were utility scale, 6 MW were residential and 4 MW were commercial.



Sugarbush Resort's monthly peak energy demand for the 2014-2015 season decreased from the previous year in both December and February, with small increases in January and March. There was no snowmaking in February or March.



Since 1985, the local watershed group Friends of the Mad River has been monitoring *E.coli* bacteria levels at 37 sites along the main stem and major tributaries throughout the watershed. *E.coli* is an indicator of pollution from fecal matter (livestock, wildlife, human); a high level of *E.coli* indicates the likelihood of a high level of disease-causing pathogens that can sicken swimmers. The standard for *E.coli* in recreational waters per Vermont Water Quality Standards is no more than 77 colonies of *E.coli* per 100 mL water. Statewide, swim beaches are temporarily closed when a single sample is found to be above this level, and sites that show a seasonal geometric mean above this standard may be formally recognized as “impaired.” The impact of severe rainfall events is evident in 2010. 2014 saw increases at more than half of the testing sites compared to the previous year.



LAND CONSERVATION

The Mad River Valley was one of the first communities in Vermont that considered its conservation goals in concert with its objectives for development and economic growth. Beginning in the late 1980s, the MRVPD joined together with the Vermont Land Trust to advance and support the conservation of working farms, riparian lands, swimming holes and recreational trails, and forests for public enjoyment and ecological health. The Mad River Watershed encompasses 92,000 acres. The three towns of Fayston, Waitsfield and Warren comprise 65,948 acres, or 71% of land within this watershed¹¹. As of 2011, approximately 7,698 acres (12% of the total land area in the 3 towns) of municipal, state and private land in the three towns of Waitsfield, Warren and Fayston are under protection through conservation easements. An additional 7,193 acres of public land in the MRVPD towns are not subject to a conservation easement, but are a part of State and National Forest systems. Conservation easements in the entire Mad River Watershed are held by the Vermont Land Trust (10,033 acres), the Town of Warren (253 acres), and the Green Mountain Club (531 acres).

	Total Acres	State/Federal Land	Municipally-owned Conserved	Privately-owned Conserved	Total State/Federal & Conserved	% State/Federal Land & Conserved
Fayston	23,360	2,998	73	1,987	5,058	22%
Waitsfield	17,220	550	696	1,212	2,458	14%
Warren	25,368	6,995	0	1,253	8,248	33%
Three Town Total	65,948	10,543	769	4,452	15,764	24%
Five Towns*	121,756	19,651	892	6,666	27,209	22%

*Fayston, Waitsfield, Warren, Moretown and Duxbury

¹¹ The Mad River watershed includes Waitsfield, Warren, Fayston, and portions of Moretown, Duxbury and Granville

