

# Acknowledgments

This report was authored by Joshua Schwartz, Executive Director of the Mad River Valley Planning District. MRVPD Intern Dara Torre assisted in the data collection and graphics production for the report.

The data used in this report originates from a variety of public sources, as well as contributions from Sugarbush Resort, Mad River Glen, Mad River Valley Chamber of Commerce, Friends of the Mad River, and the Mad River Watershed Conservation Partnership.

Cover Photography by Joshua Schwartz (East Warren Community Garden, 12/10/13).

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#### INTRODUCTION

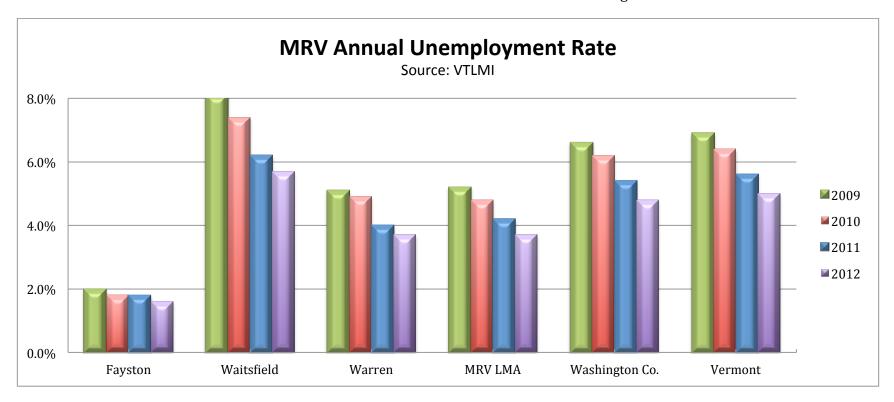
This report was prepared by the Mad River Valley Planning District to address the requirements of the 1998 Memorandum of Understanding, and provide information for community planning purposes. Information used in this report was publicly available, except where noted. Sugarbush Resort contributed greatly to the creation of this report and provided data in conjunction with the MOU. This report utilizes the most recent available as of November, 2013. As such, it focuses primarily on the 2012 calendar year, but includes economic and Sugarbush data collected in the first quarter of 2013 in order to capture the 2012-2013 ski season.

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).* 

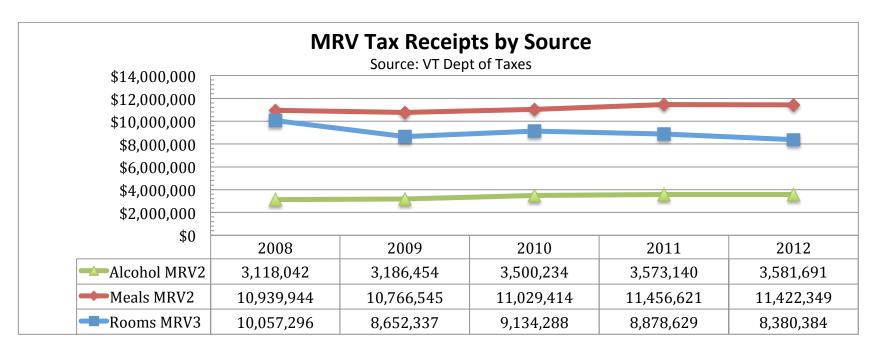
The Mad River Valley Planning District employs a full time Executive Director. The District is governed by a Steering Committee consisting of a Selectboard Member and a Planning Commission member from each of the three member Towns, a business representative from the Mad River Valley Chamber of Commerce, 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.



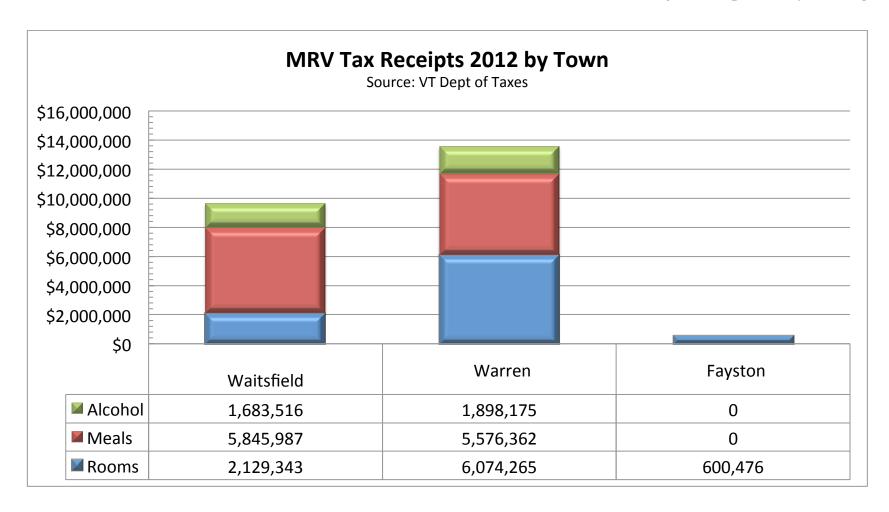
Employment data used in this report comes from the Vermont Department of Labor's Economic & Market Information Info Center (VTLMI). Post-recession, a consistent drop in the unemployment rate is evident, with the Mad River Valley Labor Market Area (Fayston, Waitsifeld, Warren & Moretown) dropping to 3.7% in 2012 versus 5.2% in 2009. The decline in unemployment is shared across the State and County, with Warren and Fayston rates tracking below the State and County rates. Waitsfield continues to post the highest unemployment rate in the Valley, at 5.7%.



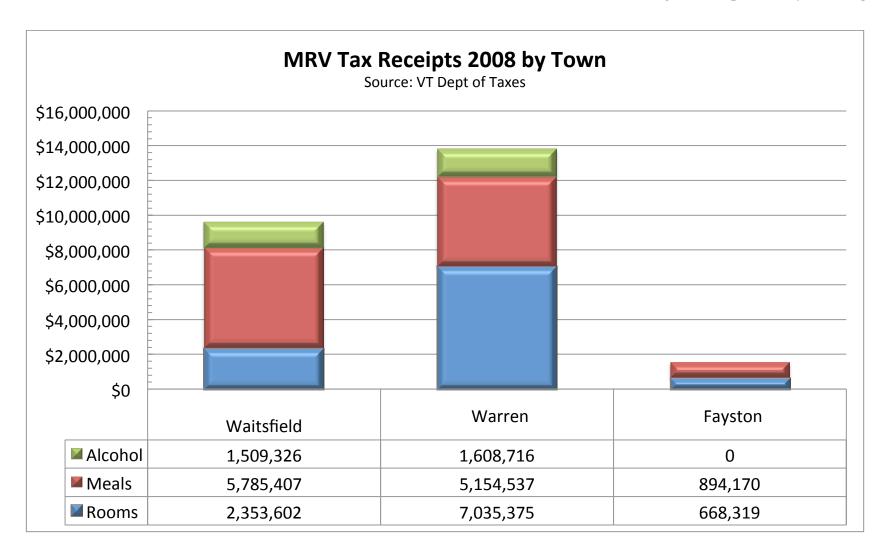
The state of Vermont collects taxes on accommodations, restaurant meals and alcohol sold within the state. While the revenue collected from these taxes in MRV towns does not directly flow to the MRV, the trend informs as to the health of our primary tourist industries, skiing and weddings, which impact each of these sectors (alcohol, meals, and rooms)<sup>1</sup>.

Revenue gains from restaurant meals and alcohol sales are evident, showing a steady post-recession rebound. Lodging revenues, however, remain in decline despite the health of the other sectors, possibly due in part to the drop in bed base over the last several years. It should be noted that Fayston tax receipts are not included in the Meals or Alcohol data, as the VT Department of Taxes does not release the data when a town has insufficient establishments to preserve anonymity. MRV3 in the graph therefore refers to the three towns (Waitsfield, Warren, and Fayston) for which lodging data is captured; MRV2 refers to Warren and Waitsfield only (Meals and Alcohol).

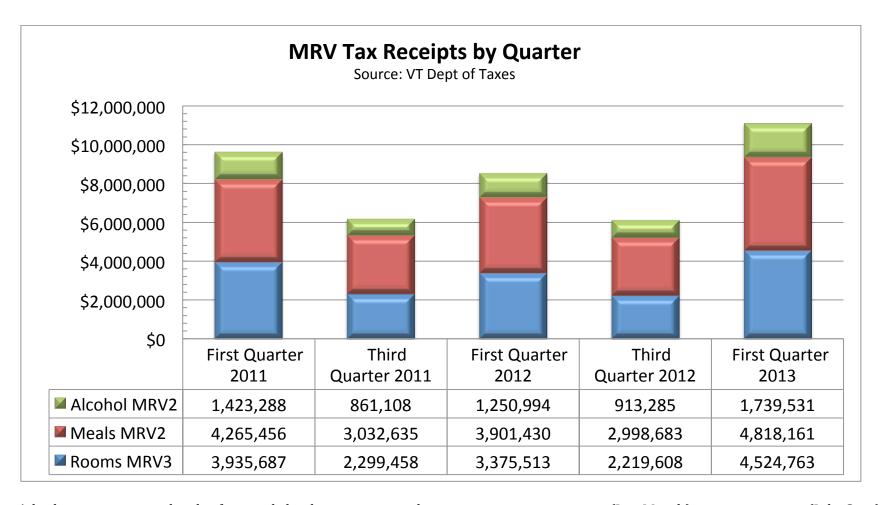
<sup>&</sup>lt;sup>1</sup> 2011 tourism summary: http://accd.vermont.gov/sites/accd/files/Documents/travel/Vermont%20Tourism%202011.pdf



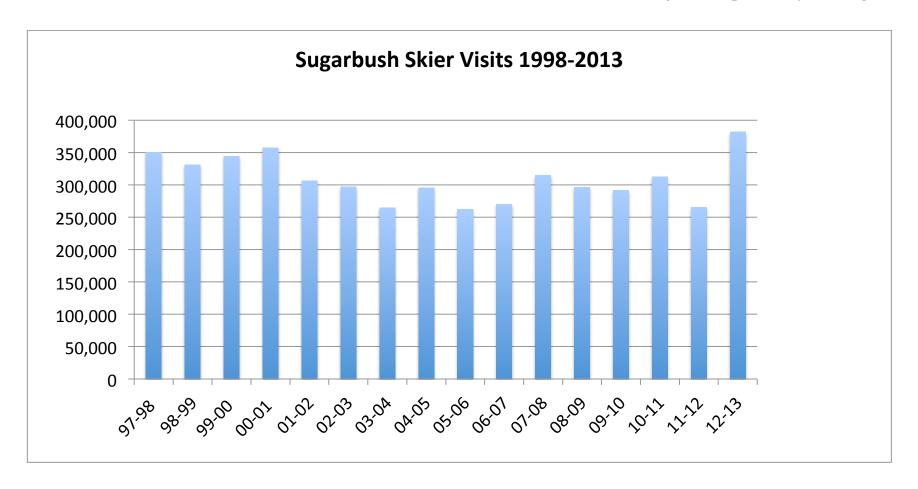
A 2012 snapshot of tax receipts by MRV town illustrates the significance of the accomodation sector within the Town of Warren. As stated previously, alcohol and meal data is not available for Fayston.



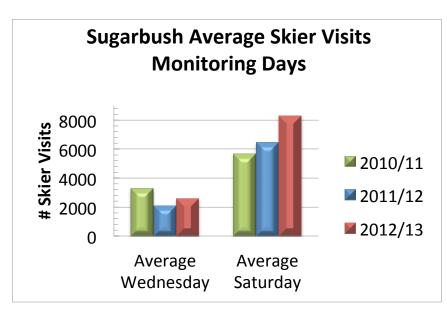
For comparison purposes, a look at the same data for 2008 shows lodging revenues down 13.6% in 2012.

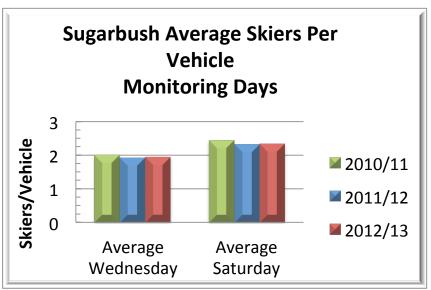


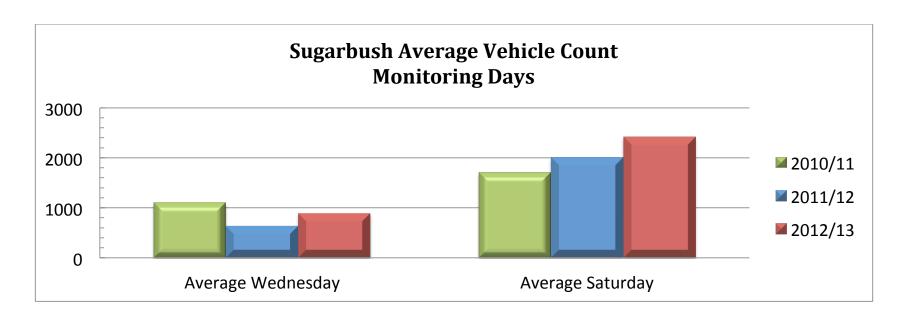
A look at tax receipts by the first and third quarter provides a perspective on winter (Jan-March) versus summer (July-Sept) activities most closely related to tourism. Despite the dominance of winter activity, the third quarter receipts provide substantial revenue for the MRV. The percentage drop in room and alcohol receipts between first and third quarter is the most significant, while meal receipts drop less significantly. Also of note is the reduction in overall receipts is the least within the third quarter. These are quarters where room receipts traditionally play a less active role. 2012-2013's superior ski season yielding gains in all sectors.

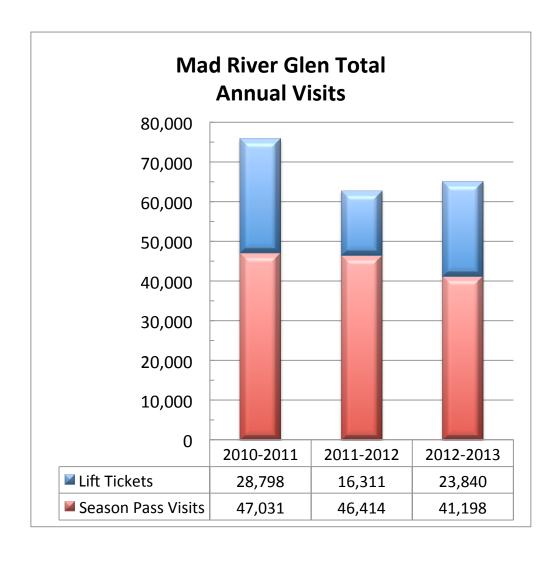


Snowstorm activity during the 2012-2013 ski season was generally well-timed for the peak holiday periods, with overall average amounts of precipitation and slightly above average monthly mean temperatures. Skier visits were up significantly (44%) over the previous season, which was much shorter at 125 days versus 164 in 2012-2013. Sugarbush received 279 inches of natural snowfall during the 2012-2013 season compared to 162 inches during 2011-2012. For the state as a whole, skier visits were up 16%, with the 2012-2013 season coming in as the second best on record since 1992, when the Vermont Ski Areas Association began collecting data.





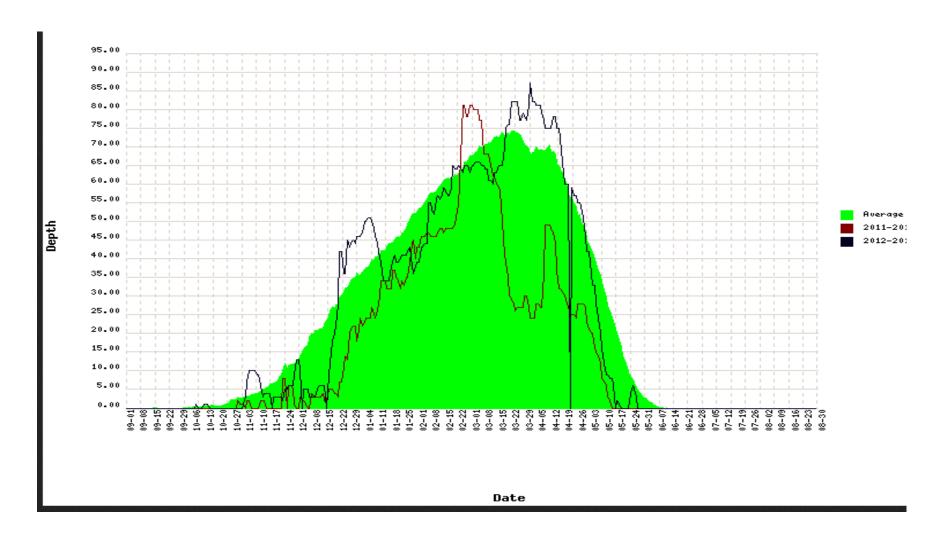




Mad River Glen is not part of the MOU, but has shared the data to the left for inclusion in this report. The data provided is not meant for comparison to Sugarbush Resort, but simply to provide a snapshot of Mad River Glen. Mad River Glen saw an increase in overall visits by 3.7% between the 2011-2012 and 2012-2013 seasons, but lags behind the statewide average increase of 16%. Despite a drop in season passes; individual lift tickets increased by 46% during this time period. Overall, season passes comprised approximately 63% of Mad River Glen's total visits.

Snowfall depth data collected at Mount Mansfield provides a visual comparison of the last two ski seasons and average snowfall amounts. Of note the lower than average snowfall depth at the beginning and end of the seasons.

# **Mount Mansfield Summit Station**



## **Wedding Industry**

The VT Dept of Tourism collected comprehensive data on the economic impact of weddings in Vermont in 2012. According to those figures, there were 5,207 weddings and estimated revenue of \$176 million.

In 2005, the Mad River Wedding Association of Wedding Professionals conducted a detailed estimate of the ripple effect of weddings in the MRV. A total of 79 functions with 8,859 guests at 6 venues captured an estimated \$4 million dollars in the lodging, meals, and retail sectors for a multiplier of over \$55,000 per event.

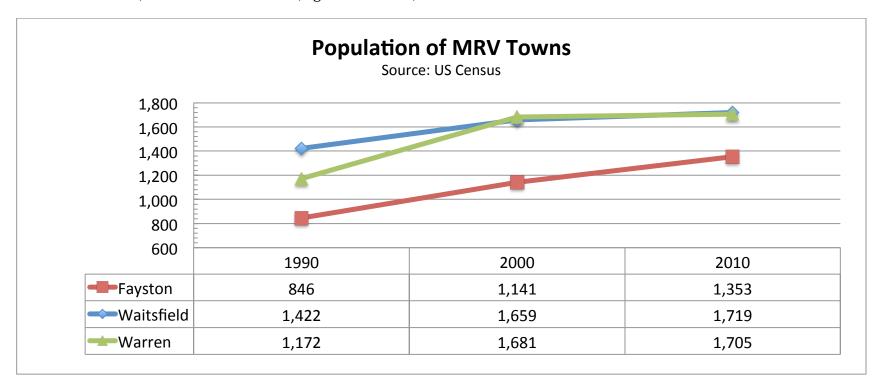
An informal survey of several popular wedding locations in the MRV (Round Barn, Sugarbush Resort, 1824 House Inn) reveals a total of 87 events in 2012; a thorough inventory of the approximately 7 main venues would yield a higher figure. With the number of events having grown since the 2005 study, wedding revenue remains a significant factor in the summer and fall.

The Town Clerks in Waitsfield, Warren, and Fayston issued 98 marriage licenses in 2012.

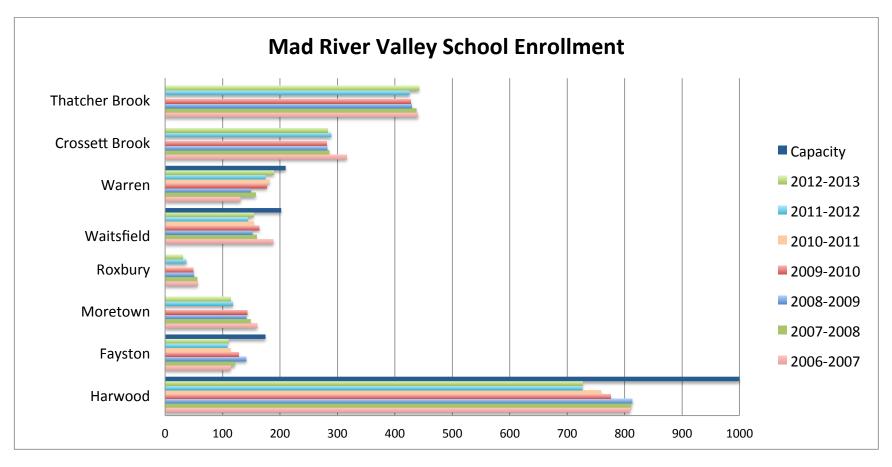
## **SECTION II: POPULATION & HOUSING**

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 growth estimates, school enrollments, number of homes sold, age of residents, and births and deaths in the MRV.

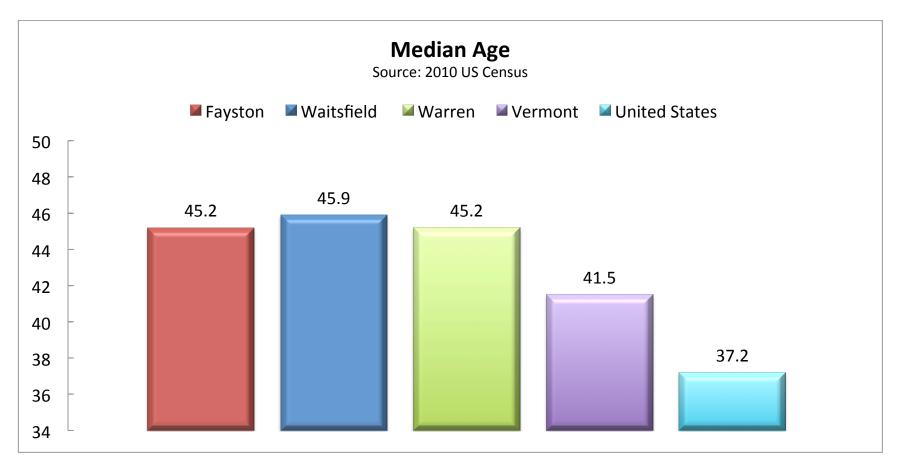


The majority of population growth in the Mad River Valley has taken place in Fayston, at a rate of 18.6% between 2000 and 2010 (34.9% over the previous period). The combined population of the three Mad River Valley towns has increased by 6.6% between the last two most recent US Census counts. This is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



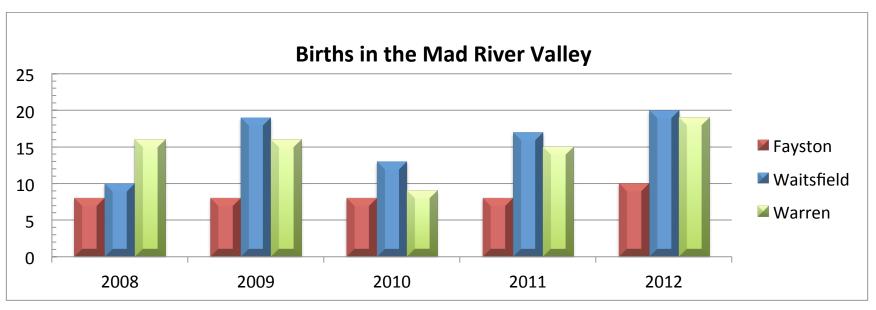
Another indicator of population change is school enrollment<sup>2</sup>. Warren has continued to experience increased enrollments, while Fayston has started to increase after a low point in 2011. Waitsfield enrollment is also on a more recent upward trend, while Moretown continues to lose students. Harwood Union combined Middle & High School continues a downward trend, losing approximately 12% in the past five years. The capacity data was provided by each school.

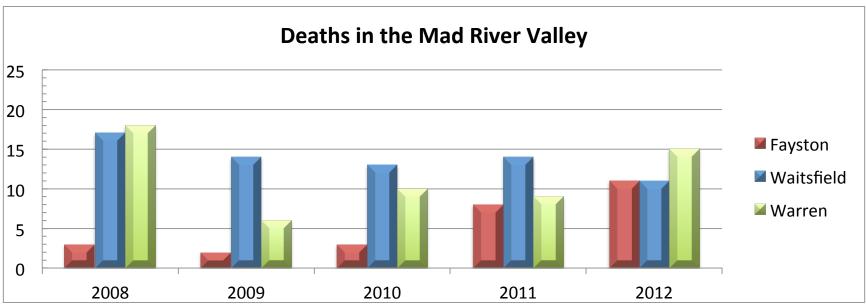
<sup>&</sup>lt;sup>2</sup> Enrollment numbers originate with the VT Dept. of Education's Public School Enrollment Report. By looking at overall population growth along with school enrollment, MRVPD can get a better sense of the type of changes occurring in its population.



Another useful piece of information is the median age of the population of MRV towns, which shows at least in 2010 (the most recent year available), MRV towns continue to be older than Vermont overall.

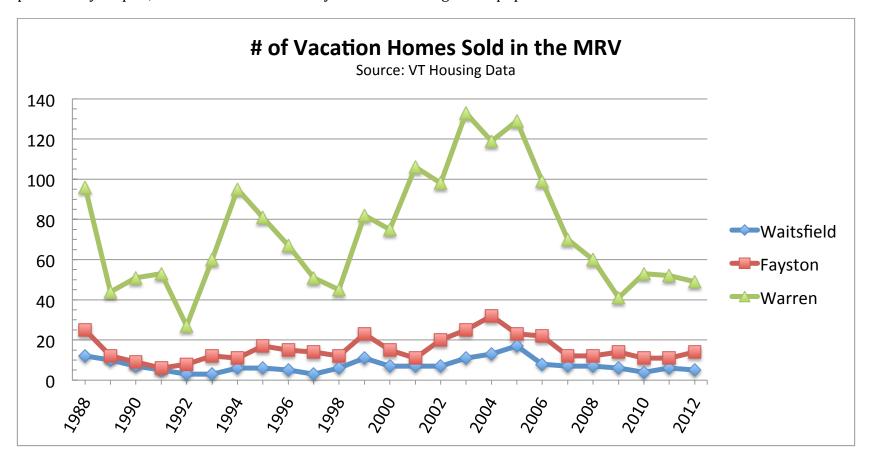
In total, the Mad River Valley's population has grown by about six and a half percent, the median age in the Valley is about 45 years (versus 40 years in 2000) and school enrollments are experiencing a slight uptick.



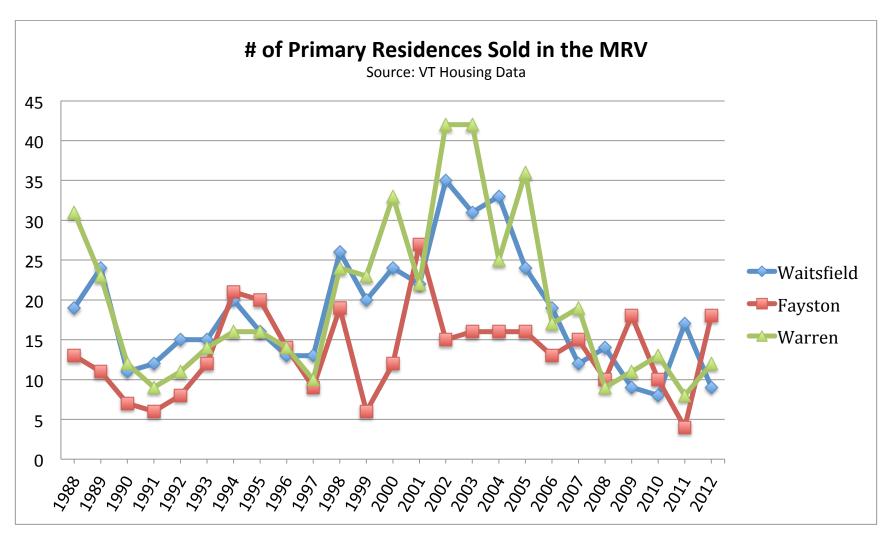


#### Housing

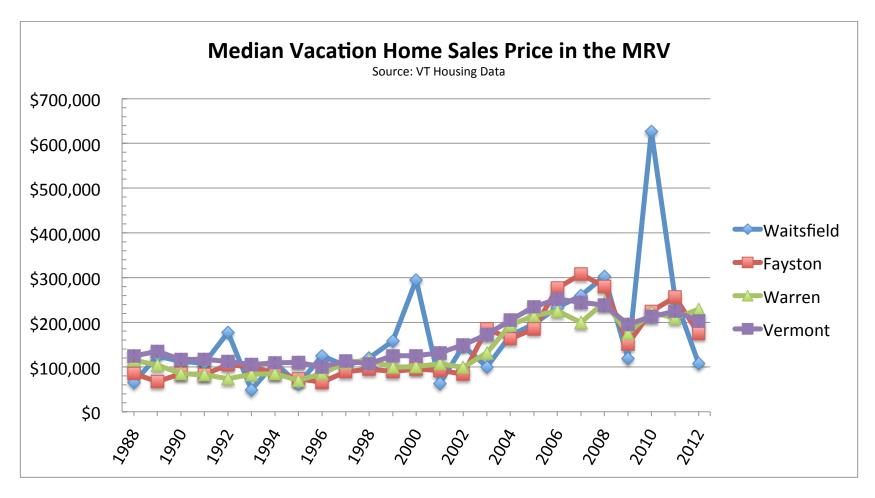
The number and type of homes sold in the MRV provides another view of growth patterns and trends. Vacation home data is particularly helpful, as these owners are likely not included in general population or school enrollment statistics.



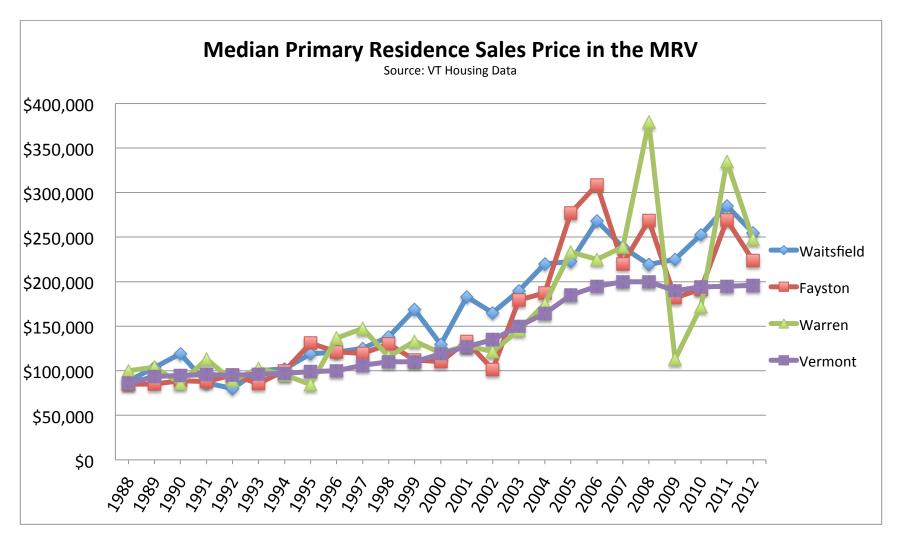
As this chart shows, the number of vacation homes sold is slowly recovering from the recession of 2008-2009, with Warren experiencing the steepest declines and Fayston seeing a slight increase in the last year. Vacation homes include condominiums that are not primary residences, as well as other non-primary residence homes. Most of these vacation homes are found closest to Sugarbush Resort.



The number of primary homes sold has declined somewhat in recent years, especially in Warren and Waitsfield, back to 1990s levels. The most recent decline appears to be leveling, especially in Fayston. For reference, in 2012 there were 5 vacation homes sold in Waitsfield, 14 in Fayston and 49 in Warren. In the same year, there were 9 primary residences sold in Waitsfield, 18 in Fayston and 12 in Warren.

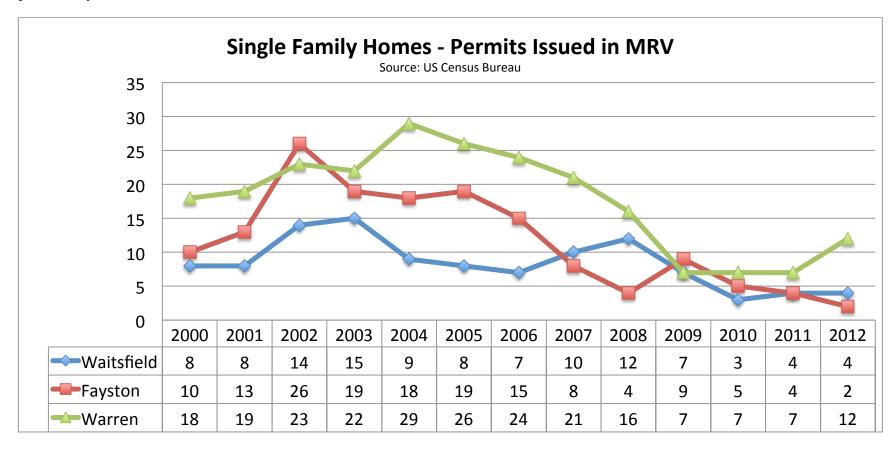


The MRV towns are largely following the state median for vacation home sales prices (\$203,000 in 2012), with the exception of Waitsfield, which has varied considerably over the last few years. The median vacation home sales price has rebounded somewhat since the 2009 nadir, but the MRV remains well below its 2007-2008 peak. For reference, in 2008, the median vacation home price in Waitsfield was \$303,000, versus the state average of \$239,000, falling to \$108,000 in 2012. In Fayston, the median vacation home cost \$280,000 and in Warren it cost \$245,000 in 2008, vs. \$175,000 and \$229,000, respectively in 2012. The median vacation home price for Vermont overall fell from \$239,000 in 2008 to \$203,000.



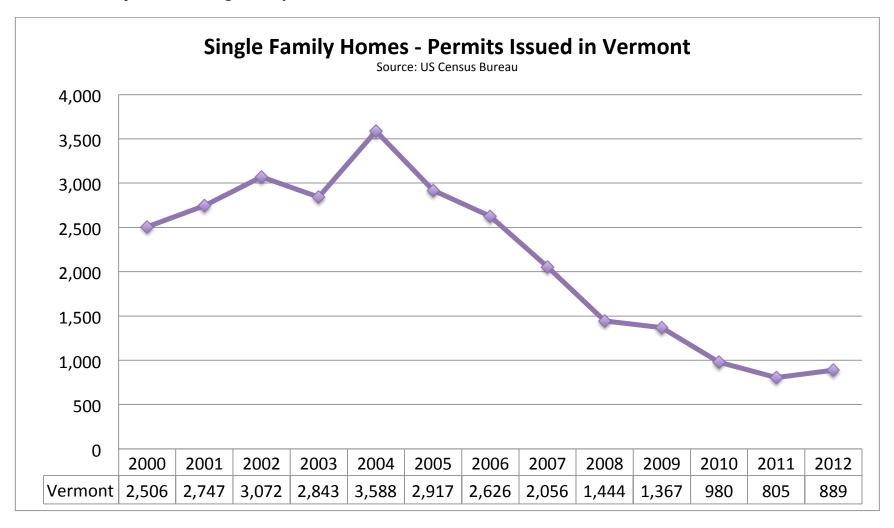
Primary residence sales prices have overall had a much stronger recovery since 2009 in the MRV, particularly in 2011, with all three towns well above the state average of \$195,000. 2012 saw a drop in all three towns, but still remained above the statewide average. For reference, the median home in Waitsfield cost \$255,000 in 2012 and \$223,500 in Fayston, while Warren's median home price was \$247,500. The overall average for Vermont was \$196,000.

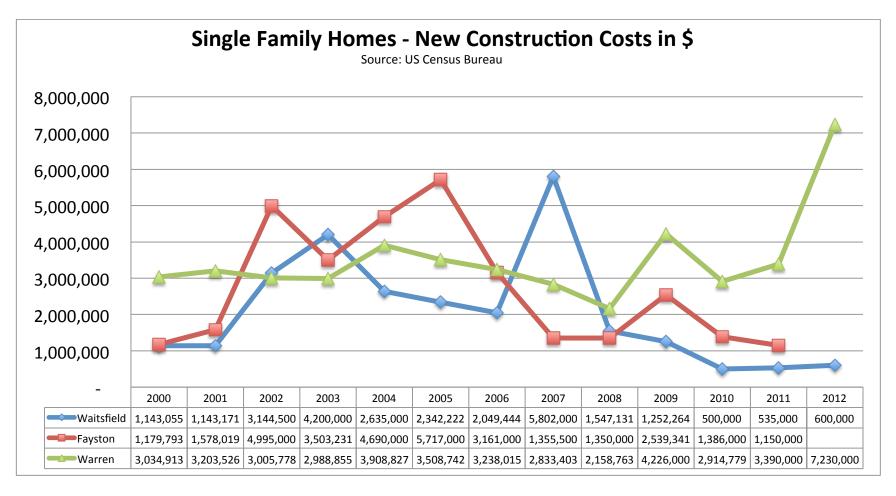
One leading indicator of new home construction is zoning permits. This chart shows that while the number of permits issued for Waitsfield has remained relatively constant over the last few years, Warren has experienced a significant uptick during this period. Fayston has seen a decline since 2009<sup>3</sup>.



<sup>&</sup>lt;sup>3</sup> Permit numbers for this graph originate from the <u>US Census Building Permits Survey</u>. 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.

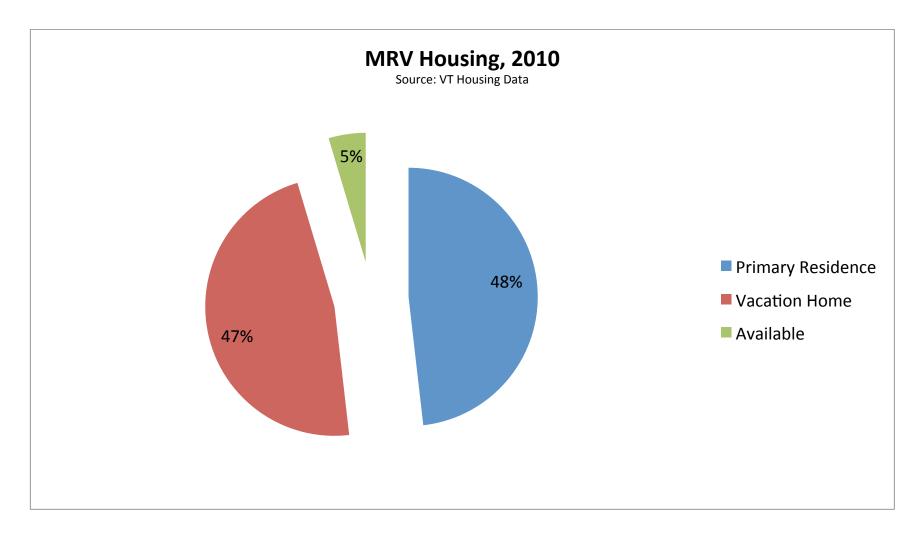
The issuance of permits for single family homes in the MRV have charted a similar course to those issued statewide.





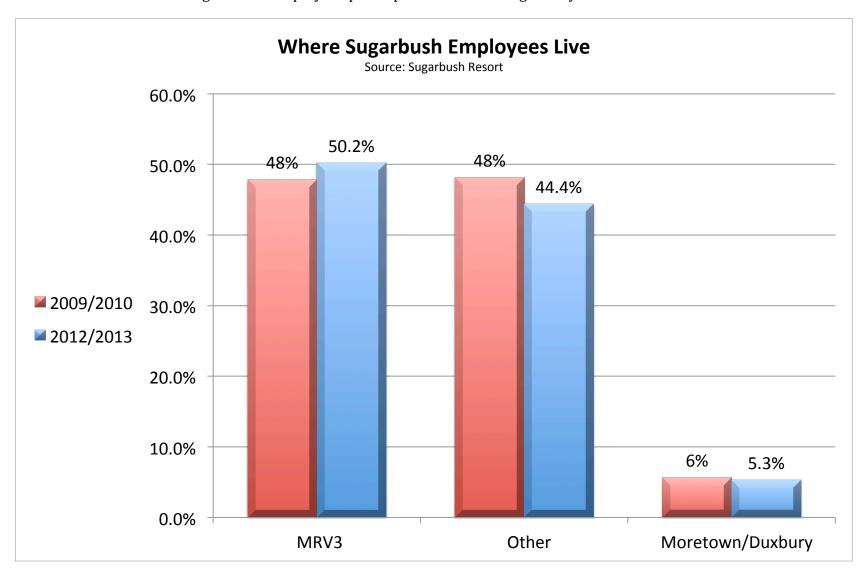
While the raw number of single-family homes permitted is important, the total dollars attributed to those permits is also an important figure.<sup>4</sup> While the number of permits in Warren has generally been in a downward trend since 2004, the cost of construction has risen substantially, especially in 2012.

<sup>&</sup>lt;sup>4</sup> Do note Fayston doesn't have a number for 2012. This is due to the discrepancy between the <u>US Census Building Permits Survey</u> 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.

Data from Sugarbush Resort suggest the majority of its employees are choosing to live in one of the three MRV towns (50% in 2012-2013 season, versus 44% in 2009-2010 season). There is no statistical difference among those who rent versus those who own a home. 711 of Sugarbush's employees participated in its housing survey.

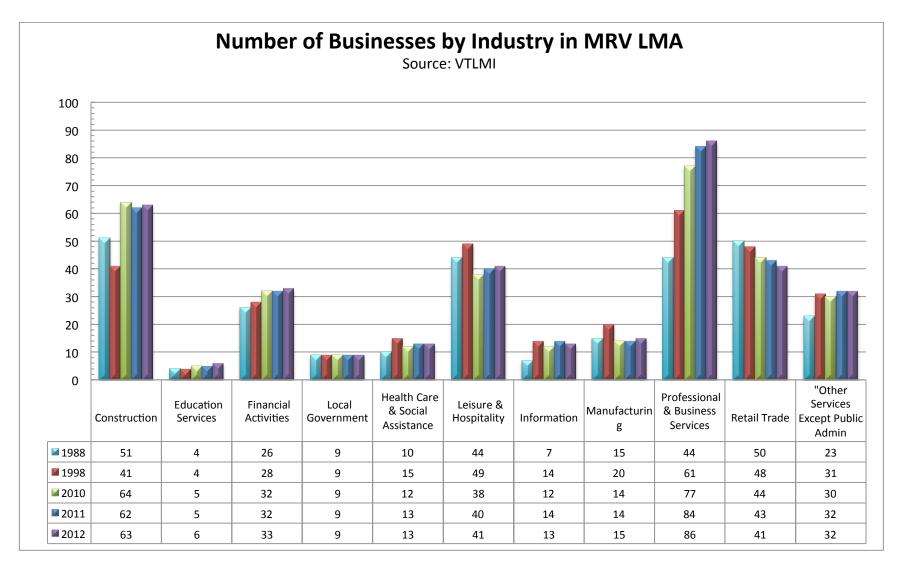


## **SECTION III: EMPLOYMENT**

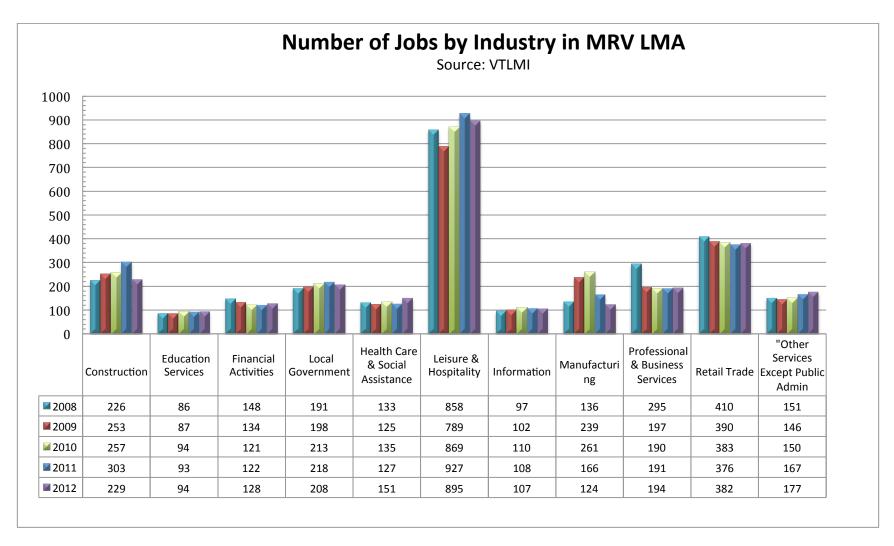
The Employment section includes Items #35 & 36 from the Memorandum of Understanding.

The employment and wage data below is based on the Mad River Valley Labor Market Area (MRVLMA). The MRVLMA includes Moretown and not just the three towns used for the rest of this report. Only industries that are well represented in the MRV are included in the charts below. Descriptions of each industry is as follows:

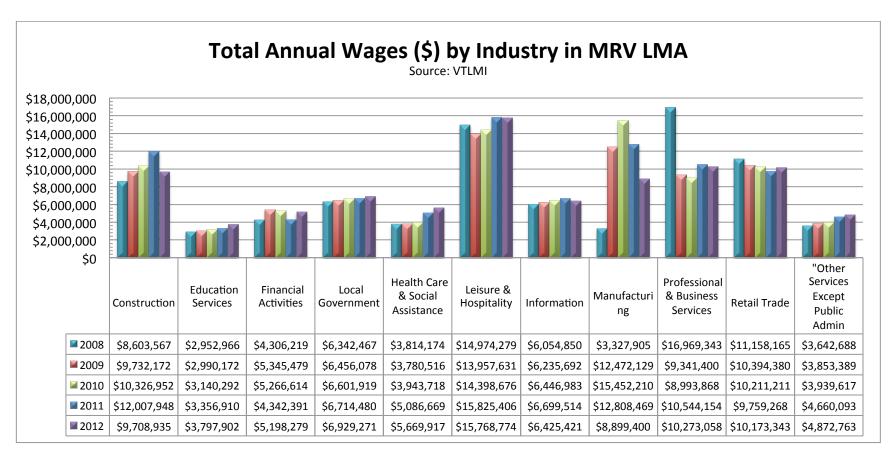
- Construction industry includes building construction, engineering and contractors
- Manufacturing includes manufacturers of durable (wood products, mineral products, transportation equipment, furniture, etc.) and non-durable goods (food, beverage, tobacco, and printing)
- Retail trade includes sellers 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 includes non-government schools, technical or trade 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 includes government elementary and secondary schools and public administration



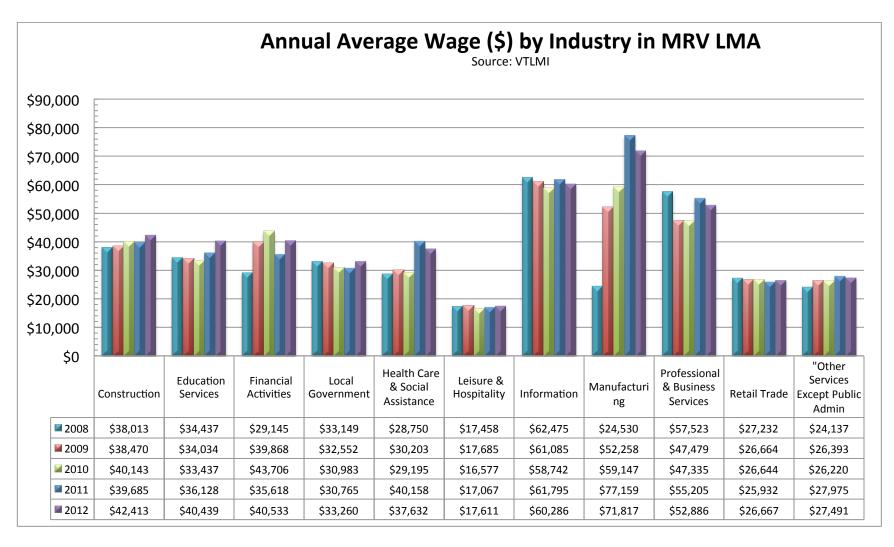
Over the past 20 years, the number of firms in each industry has remained fairly steady. However, the largest and continued increase between 1988 and 2012 is in the Professional & Business category. Construction and Financial Activities firms have also grown, while Retail establishments has continued to drop each year.



While the Mad River Valley has attracted businesses from most major sectors, the employment landscape remains dominated by the Hospitality sector. Other than a spike in 2011 (Irene recovery), Construction job numbers have remained steady, along with Retail. After a big decline in 2009, jobs in the Professional & Business Services sector appear to be slowly climbing, which is echoed by the Financial Activities sector.



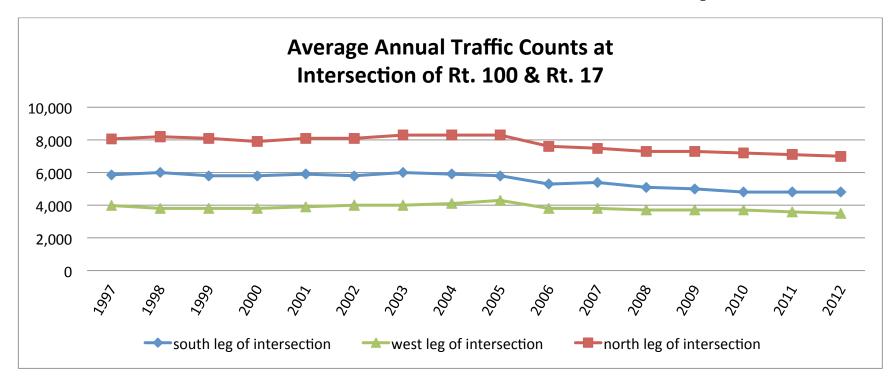
The strength in the Information and Financial Activities wages suggest the retention or creation of higher paying jobs in the MRV, even though there's been a decline in the numbers of those jobs that occurred in 2009. Manufacturing experienced a spike in 2010, actually surpassing those of the largest sector (Hospitality). There appears to be an inverse relationship between Manufacturing and Professional & Businesses Services – this relationship is worthy of additional exploration. Of note, 2012 saw a 69% increase from the previous year in the total wages for Food Manufacturing jobs in the MRV, and a 30% increase in the number of jobs. Food Manufacturing is a subset of Manufacturing.



The average wage in the Mad River Valley ranges from under \$18,000 in the Leisure & Hospitality industry to over \$70,000 in the Manufacturing industry. The Leisure & Hospitality industry employs the most people, and along with Retail and Local Government, shows the most wage stagnation.

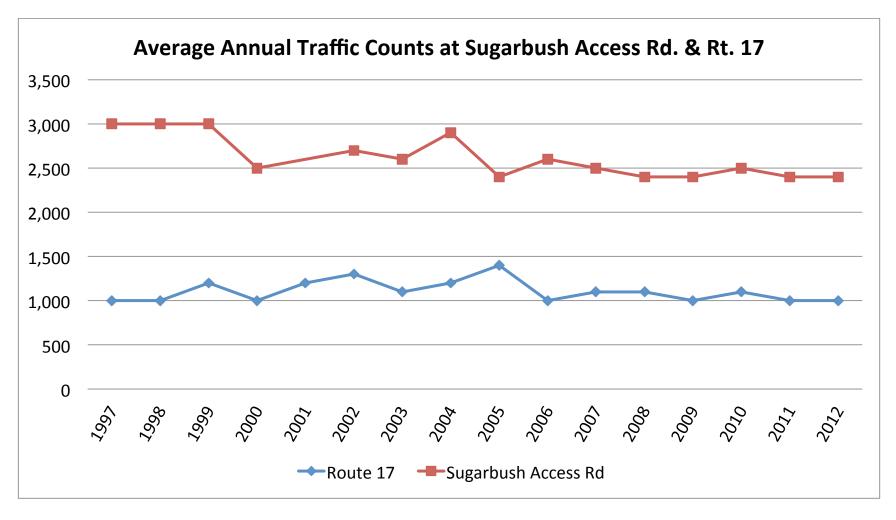
# SECTION IV: TRAFFIC & TRANSIT

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 2012. 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 has experienced relatively steady use since 1997, with a slight decline in the last 5 years.



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 Rt. 17 has settled back at approximately 1,000 average annual vehicles.

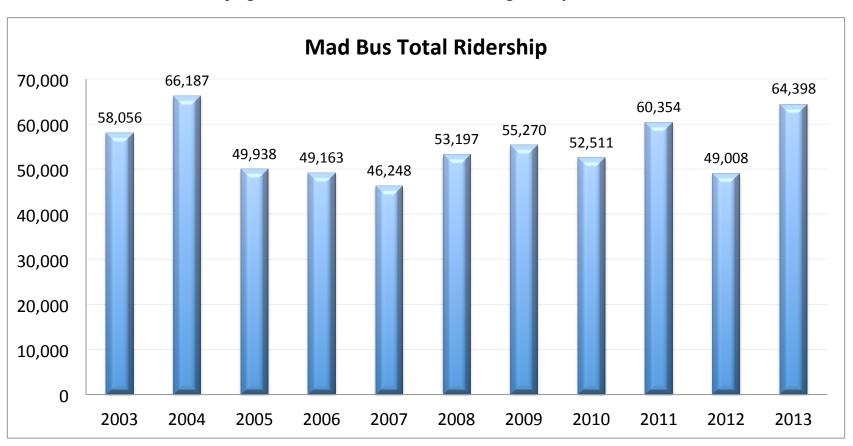
#### EFFICIENCY OF TRANSPORTATION INFRASTRUCTURE

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 </ 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 asneeded 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.

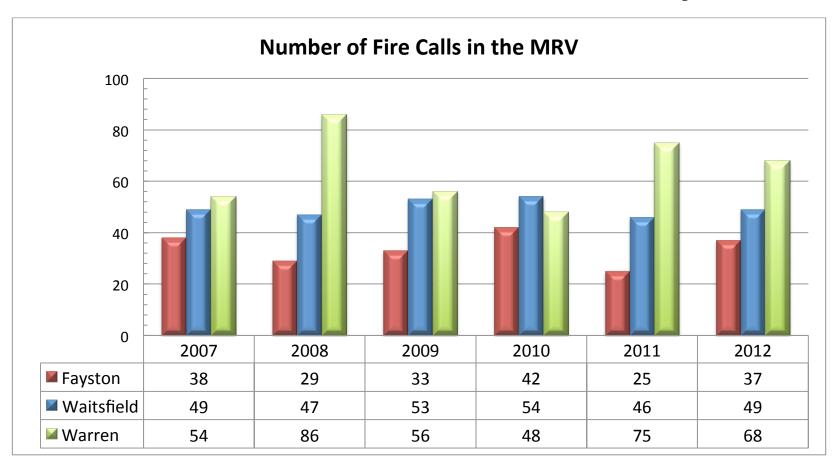
#### **TRANSIT**

The Green Mountain Transit Authority (GMTA) 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 seasonal service due to low ridership. The chart below shows ridership from 2003 through FY2013. GMTA operated 8 Mad Bus routes during the 2012-13 season, all free-of-charge except the SnowCap Commuter. In 2012, the Mad Bus added service to Mad River Glen. The strength of the 2012-2013 ski season is reflected in the FY2013 ridership figures, which rival those of 2004 during which year-round service was in effect.

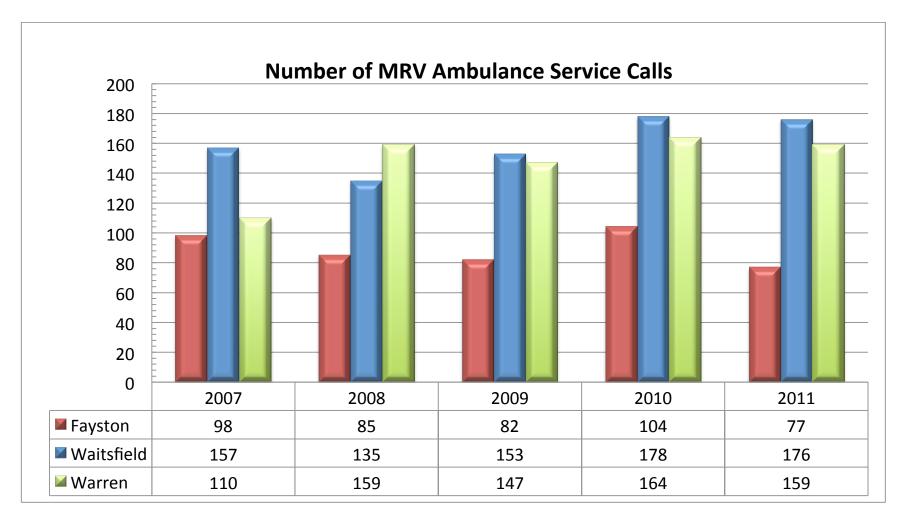


SECTION V: TOWN INFRASTRUCTURE

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

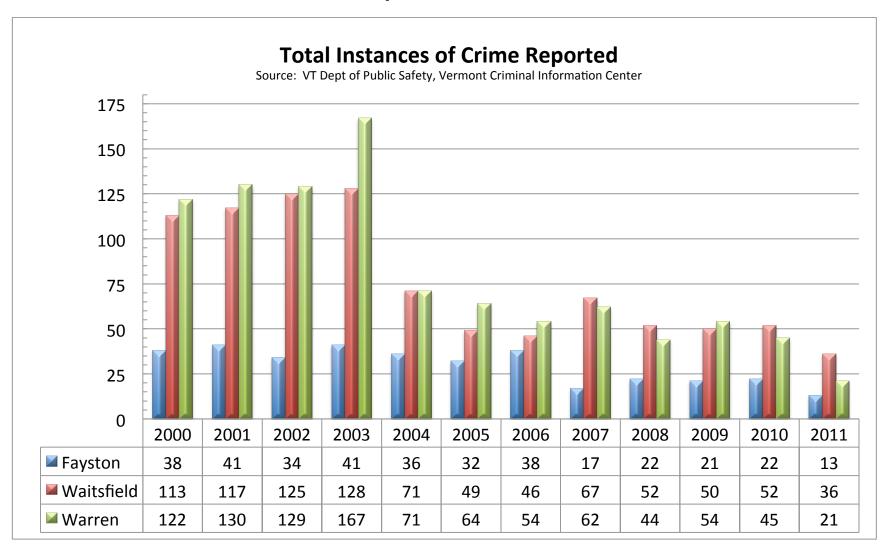


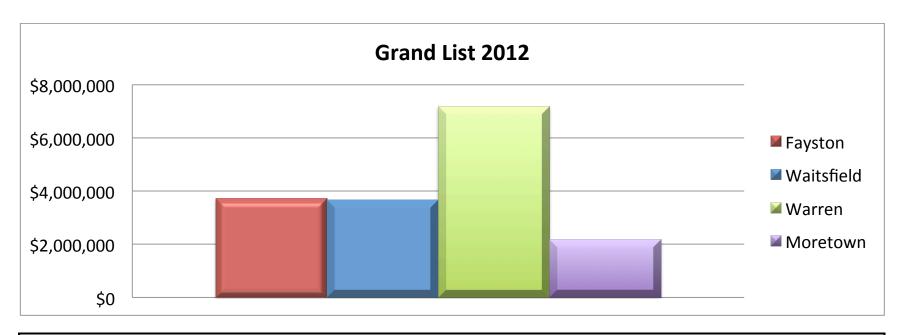
The total number of fire calls for 2012 is 154, slightly higher than the previous year (146), moderating after a spike in 2008 that resulted from a high incidence of calls in Warren.



The number of ambulance service calls has increased since 2007, during which a total of 365 calls were reported, versus 2011 with a total of 412 calls. In 2012, Mad River Valley Ambulance Service (MRVAS) provided data on the total of MRV calls, 473, which is a record high number (15% increase over 2011).

On the other hand, the number of crimes has steadily fallen over the last decade in all three towns, as reported by the Vermont Criminal Information Center. 2011 (the latest year for which data is available) confirms this trend, with Fayston falling to 13, Warren to 21, and Waitsfield to 36 total instances of reported crime.





2012 Tax Rates						
	Homestead Tax Rate	Municipal Tax Rate  Non-Residential  Tax Rate		Common Level of Appraisal		
Fayston	1.3675	0.1803	1.3666	100.98%		
Waitsfield	1.2688	0.3190	1.3216	104.42%		
Warren	1.2600	0.2500	1.4100	97.54%		
Moretown	1.5400	0.2271	1.5100	91.11%		

## SECTION VI: ENVIRONMENT

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

#### **ENERGY**

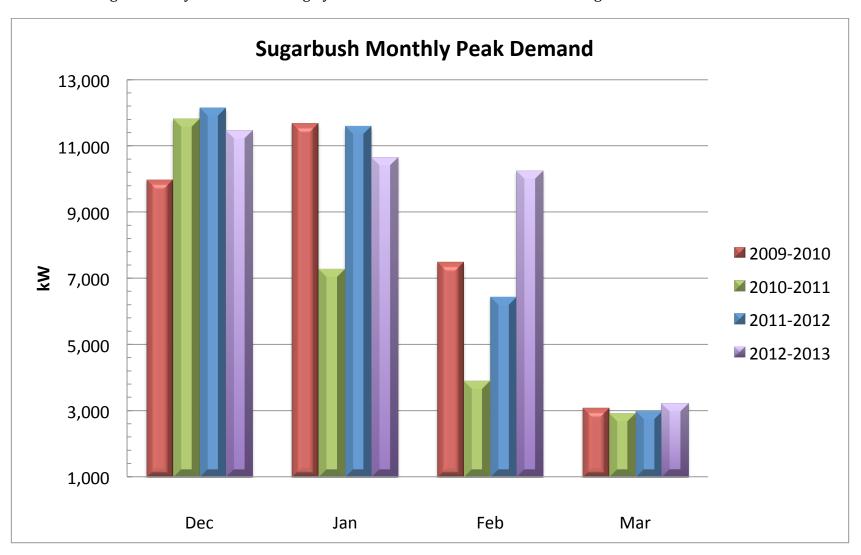
The table below identifies MRV energy consumption in 2012 in terms of electricity and transportation. Electrical consumption data came from the Renewable Energy Atlas of Vermont and Vermont Energy Investment Corporation (VEIC), while transportation data was based on calculating population and average mpg figures from US Department of Transportation. Transportation contributes a larger portion of the MRV energy consumption, constituting nearly 4 times the electrical consumption of Fayston. Of note, electrical energy consumption is down 1,520 MW between 2012 (56,391) and 2008 (57,911).

MRV Energy Consumption Comparison (2012)				
	Electrical <sup>1</sup> (MWh) Transportation <sup>2</sup> (MWh)			
Fayston	5,732	19,730		
Waitsfield	15,238	25,067		
Warren	35,376	24,863		
Total	56,391	69,660		

The MRV info below details the breakdown between residential electrical consumption versus commercial & industrial consumption by town. In sum, Warren consumed 63% of the MRV's total energy utilized in 2012. As shown below, the MRV's total annual consumption by commercial/industrial (52%) and residential (48%) customers is nearly equal, though there is increased commercial demand in winter attributed to ski resort activity.

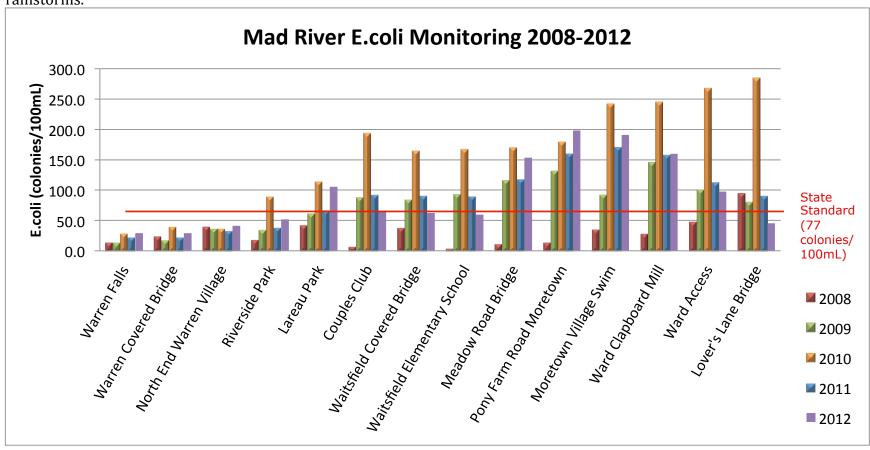
MRV Electrical Consumption (2012)						
	Residential <sup>1</sup> (MWh)		Commercial & Industrial <sup>1</sup> (MWh)		Total (MWh)	% of Total
FAYSTON	4,239	15%	1,493	5%	5,732	10%
WAITSFIELD	7,800	29%	7,483	25%	15,283	27%
WARREN	14,901	55%	20,475	69%	35,376	63%
Total MRV	26,940	100%	29,451	100%	56,391	100%

Sugarbush Resort's monthly peak energy demand for the 2012-2013 season increased from the previous year in February and March. The large February increase can largely be attributed to increased snowmaking activities.



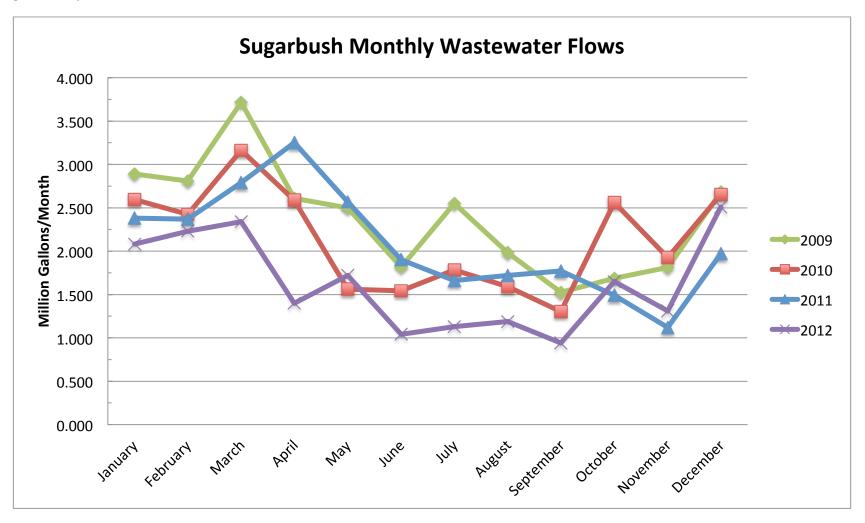
# WATER QUALITY

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 according to the Vermont Water Quality Standards is no more than 77 colonies of *E.coli* per 100 mL water. Across the state, 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." At the Mad River, most sites saw a seasonal geometric mean above 77 colonies/100mL in 2010 due to significant rainstorms.



#### SUGARBUSH RESORT WASTEWATER FLOWS

The chart below identifies monthly influent flows for Sugarbush Resort treatment facilities, 2009-2012. Sugarbush Resort's wastewater flows have been relatively consistent over the past four years, with 2012 tracking lower most months than in previous years.



#### LAND CONSERVATION

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 watershed. (The Mad River watershed includes Waitsfield, Warren, Fayston, Moretown and a portion of Duxbury.) As of 2013, approximately 7,287 acres (11% 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 protected by conservation easements. An additional 10,543 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 (9,636 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	Total Acres in "Current Use"
Fayston	23,360	2,998	73	1,707	4,778	20%	10,208
Waitsfield	17,220	550	696	1,212	2,458	14%	6,667
Warren	25,368	6,995	0	1,253	8,248	33%	5,797
Three Town Total	65,948	10,543	769	4,172	15,484	23%	22,672
Five Towns*	121,756	19,651	892	6,395	26,938	22%	47,143

<sup>\*</sup>Fayston, Waitsfield, Warren, Moretown and Duxbury