MAD RIVER VALLEY 2019 ANNUAL DATA REPORT



Acknowledgments

This report was authored by Kati Gallagher, Community Planner at the Mad River Valley Planning District with assistance from Executive Director, Joshua Schwartz.

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Cover Photograph: Irasville & Appalachian Gap from Wu Ledges Town Forest, October 5, 2019, captured by Joshua Schwartz.

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This report was prepared by the Mad River Valley Planning District to provide information for community use and planning purposes and address requirements of its 1998 Memorandum of Understanding (MOU). Information used in this report was publicly available, except where noted. Sugarbush Resort provided data in compliance with the MOU. This report utilizes the most recent data available as of October 2019, which includes both the 2018 calendar year and 2019 data where available. For much of the U.S. Census Bureau data, the most recent and complete data available was from 2017. This report was finalized in November 2019.

In 2015, the Mad River Valley Vision Statement was developed by the community through a participatory process, drawing from each of the Town Plans, historic visioning processes, in-depth research and data, and direct input from residents to genuinely reflect the values and priorities of the MRV. The 2019 Data Report aims to build off of the MRV Vision Statement to improve the connection between historical community trends and where the community wants to go. The Mad River Valley is an innovative, vibrant, connected and caring community honoring its past, celebrating its landscape and actively pursuing its potential. Our vision is to...

- Be a welcoming community that builds a healthy and sustainable environment.
- Support the historic settlement pattern of vibrant villages surrounded by rural countryside.
- Identify and promote the Valley's historic and cultural heritage.
- Promote and maintain a diverse economy that supports existing businesses and attracts new ones.
- Enhance the Valley's year-round recreational opportunities.
- Invest in a safe, environmentally friendly, efficient, and integrated transportation network.
- Provide access to safe, affordable and energy efficient housing for current and prospective residents.
- Steward and sustainably use the Valley's natural resources and environmental quality for the benefit of future generations.

MAD RIVER VALLEY PLANNING DISTRICT BACKGROUND

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 is staffed by an Executive Director and a Community Planner. The District is governed by a Steering Committee consisting of a Selectboard Member and a Planning Commission member from each of its 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: COMMUNITY

INCLUDES ITEMS #29, 30, 35 FROM THE MEMORANDUM OF UNDERSTANDING

POPULATION

The Mad River Valley (MRV)¹ towns of Warren, Waitsfield and Fayston are nestled between the Green Mountains and the Northfield Range. As a community that is both relatively isolated and connected to the more densely populated towns in Central Vermont, the MRV faces demographic challenges similar to other rural communities while also poised to benefit from its geographic connections. The Mad River Valley's key demographic indicators include population trends, deaths and births, school enrollment, and age of residents. These trends can provide a better understanding of who the community is and how it has changed – and will continue to change – over time.

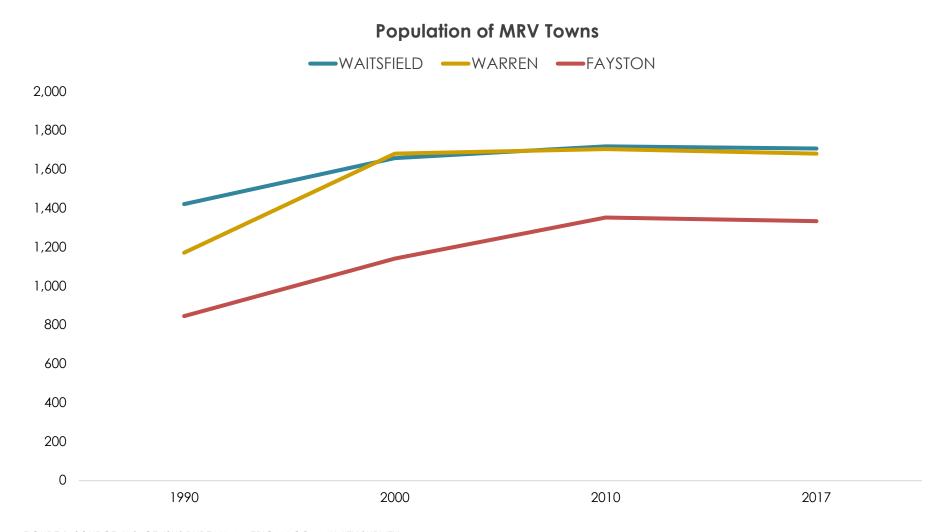




¹ For the purpose of this report, MRV, or Mad River Valley, specifically denotes the three member towns of the Mad River Valley Planning District (MRVPD): Fayston, Waitsfield, & Warren.

Figure 1 below shows a 37% increase in the combined population of the three MRV towns between 1990 and 2017, bucking the trend seen in many rural Vermont communities.

Comparatively, Washington County experienced an increase of 6% during the same time. Much of the historical population growth in the MRV has taken place in Fayston, at a rate of 58% between 1990 and 2017. However, the MRV population has stagnated since 2010, with a slight drop of 1%; this trend is consistent with neighboring towns.



Figures 2 shows birth and death numbers as recorded by municipal town clerks; the most recent data was collected October 1, 2019.

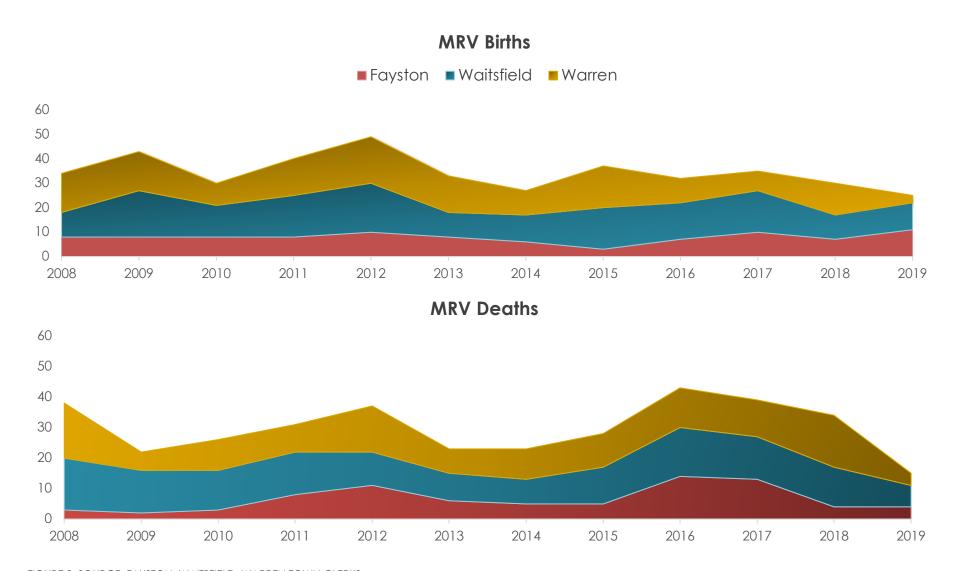


FIGURE 2. SOURCE: FAYSTON, WAITSFIELD, WARREN TOWN CLERKS

School enrollment can provide additional insight into demographic trends, as well as useful information for the management of the public schools. **Figure 3** indicates fairly stable school enrollment in the region's elementary and middle schools over the past decade, but a downward trend at the high school level despite stable overall population of Harwood Union Unified School District (HUUSD) towns.² While HUUSD middle schools saw a slight increase of 1% in the 2018-19 school year compared to previous, the high school population decreased by 3% during this time. From the 2009-10 school year to 2018-19, the combined elementary population decreased by 4%, middle school enrollment decreased by 3%, and high school decreased by 25%. The state has experienced similar changes during this time, with elementary enrollment decreasing by 4%, middle decreasing by 8% and high school declining by 18%. Since 2011-12, total statewide PreK-12 school enrollment – including independent schools – has decreased by 4%³.

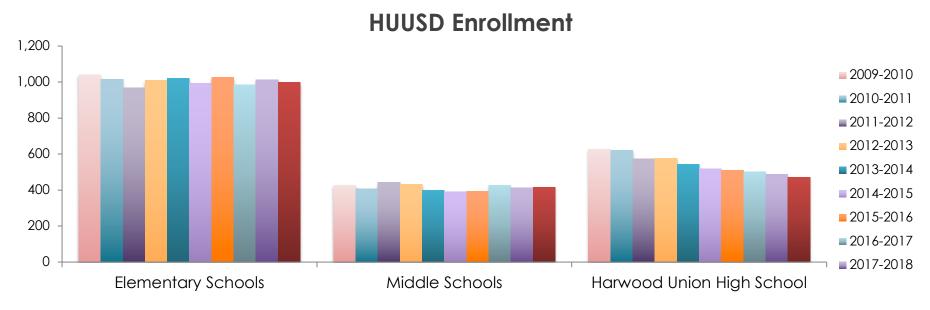
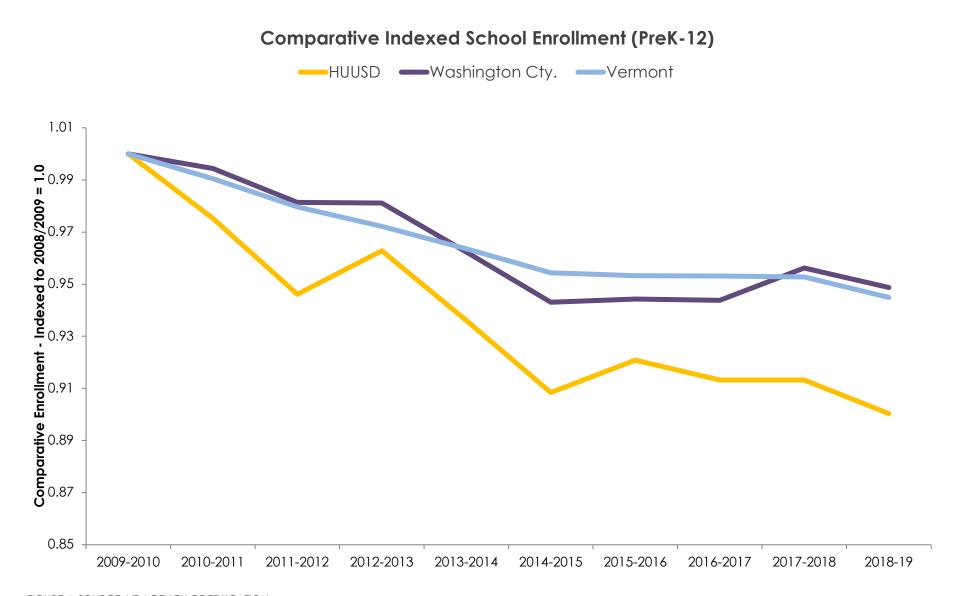


FIGURE 3. SOURCE: VT AGENCY OF EDUCATION ENROLLMENT REPORTS

² Elementary Schools include Fayston, Waitsfield, Warren, Moretown, and Thatcher Brook Elementary Schools. Middle Schools include Harwood Union Middle School and Crossett Brook School.

³ VT Agency of Education Budget Books, 2014-2019

Figure 4 provides a comparison of enrollment changes between HUUSD and the state and county, indicating a similar decreasing trend between all three regions. Indexed to the 2009-2010 schoolyear, Washington County enrollment declined by 5% and state enrollment declined by 6%. During the same period HUUSD enrollment decreased by 10%.



Another useful piece of information is the median age of the population by town, as shown in **Figure 5**. MRV towns continue to be older than Vermont overall, and much older than the nation. Waitsfield has an older population than the other two MRV towns; between 2010 and 2017, the median age jumped from 45.9 to 49.1.

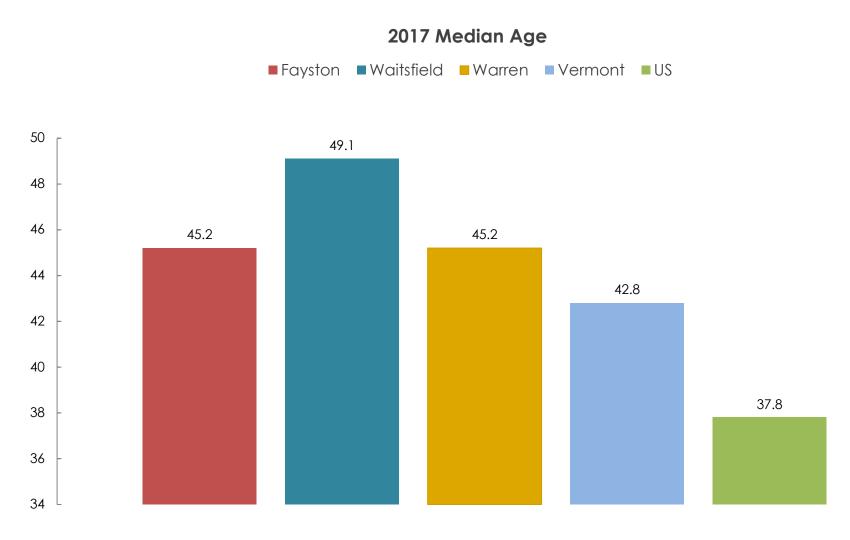


FIGURE 5. SOURCE: AMERICAN COMMUNITY SURVEY

Figure 6 breaks down the Mad River Valley population by age group, using counts from the 2000 and 2010 U.S. Census and the 2017 American Community Survey. Overall, the total MRV population increased by 5.5% between 2000-2017.

During this time, the population over age 65 increased from 10.6% to 22.1%; in Washington County and the State of Vermont, the population over age 65 increased from 12.9% and 12.7%, respectively, to 17.8% and 17.5%. The segment of the MRV population aged 25-34 decreased from 12.8% to 8.6% between 2000-2017.

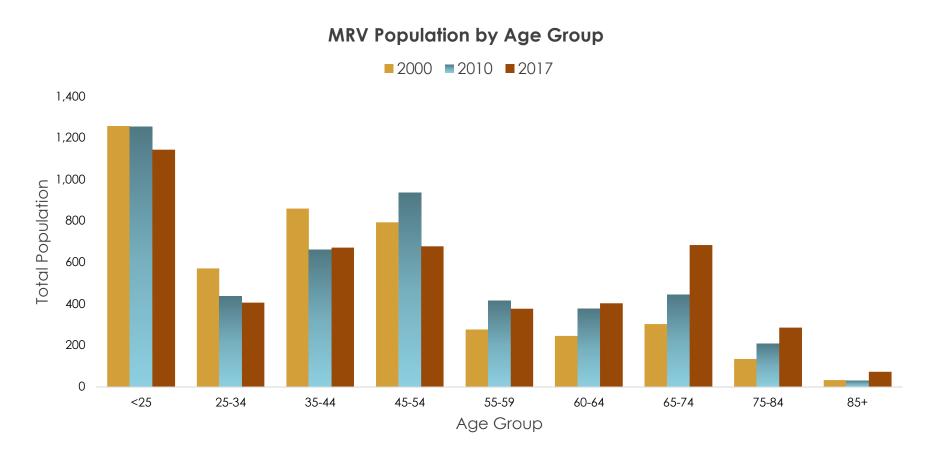


FIGURE 6. AMERICAN COMMUNITY SURVEY

A national trend experienced by the MRV has been shrinking household size; **Figure 7** shows that the average household size has decreased for all three MRV towns since 1990. The average household size of all three MRV towns have consistently been smaller than Washington County.



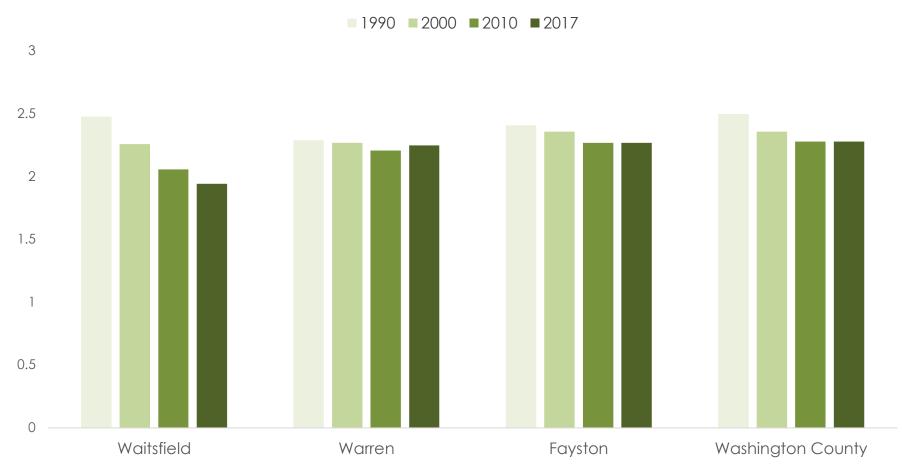


FIGURE 7. AMERICAN COMMUNITY SURVEY

COMMUNITY & SOCIAL SERVICES

The Mad River Valley hosts many community and social service organizations with missions directed toward improving the community's social and physical well-being. Community and social services data sheds light on trends related to the critical needs of MRV neighbors, as well as the impact of those working to address them. The following data was contributed by the Mad River Valley Food Shelf and Mad River Valley Interfaith Council and provides insights regarding persistent local need for social services.

The Mad River Valley Food Shelf, operated by the MRV Interfaith Council, is located at Evergreen Place in Waitsfield. The MRV Food Shelf tracks visitation by number of households and total number of individuals in each household served at monthly and quarterly intervals. The Food Shelf has served over 800 households each year since 2016. **Figure 8** shows monthly trends of individual visitors to the MRV Food Shelf between 2016 and 2019 (as of October, 2019); visitation often increases toward the end of the calendar year due to several factors, including rising utility bills.



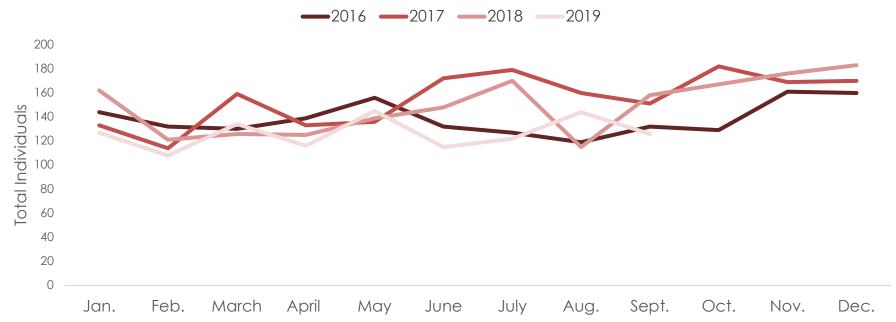


FIGURE 8. SOURCE: MAD RIVER VALLEY FOOD SHELF

The Mad River Valley Interfaith Council (MRV IC), a consortium of the Valley's faith institutions, is a community resource that provides emergency assistance funding to families when other programs cannot serve them (**Figure 9**). This includes requests for assistance with housing, food, medical, transportation, utilities, and other needs. The MRV IC provided \$26,771 through its assistance programs in 2018 - up from \$20,679 the previous year-demonstrating the persistent need for such services in the community. 32 MRV individuals were supported in 2018.



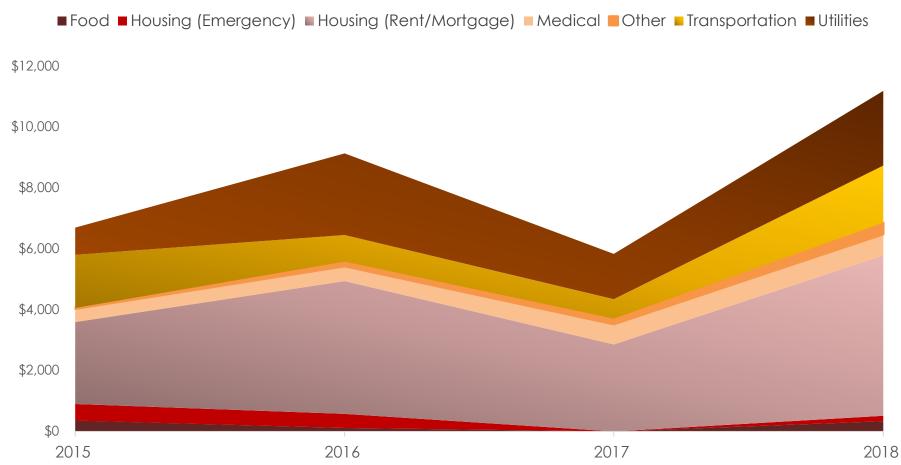


FIGURE 9. SOURCE: MAD RIVER VALLEY INTERFAITH COUNCIL

Housing

Affordable housing has been identified as a significant issue in the Mad River Valley for many years. The housing stock in the MRV is largely made up of 1960-1979 "resort era" homes that were not built with high quality materials (nearly 50% of all housing). Further, demographic changes – an aging population and shrinking household size – has shifted the type of housing demanded. The number and type of homes sold in the MRV provides another view of community trends and growth patterns.

While the number of primary homes sold in the MRV has declined since the most recent peak in the early 2000s, **Figure 10** shows slow but continued growth of sales since 2013. In 2018, there were 18 primary residences sold in Waitsfield, 14 in Fayston and 25 in Warren. In total, there were 57 primary residences sold in both 2017 and 2018. Statewide, primary home sales increased from 6,286 in 2017 to 7,401 in 2018 (an increase of 15.5%), and Washington County sales increased 6.6% during the same time period.



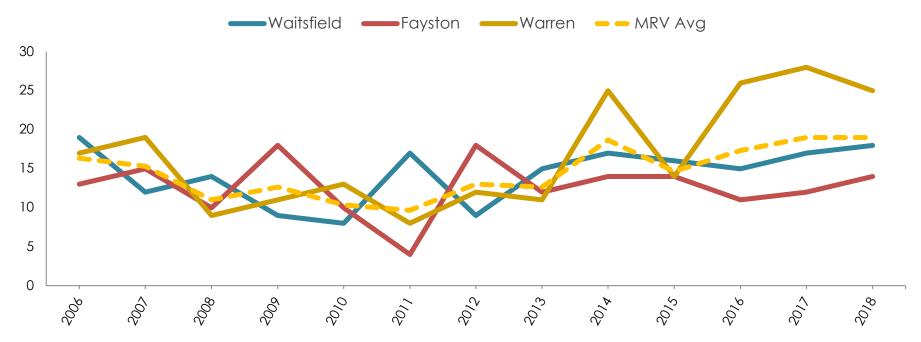


FIGURE 10. SOURCE: VERMONT HOUSING FINANCE AGENCY

Figure 11 shows the MRV's most current vacation home⁴ sales data from 2006 through 2016 (the most current year available). Warren had the greatest overall volume of vacation homes sold across the MRV during this time, as well as more market volatility. Sales remained lower but relatively stable in Waitsfield and Fayston. However, 2016 saw declines across the MRV. Most vacation homes in the MRV can be found close to Sugarbush Resort. In Warren, 32 vacation homes were sold in 2016 (versus 60 the previous year); Fayston and Waitsfield had 20 and 5 sales, respectively, compared to 26 and 6 in 2015.

On average, the MRV has significantly more vacation than primary home sales. 1,418 vacation homes were sold statewide in 2016, down from 1,877 the previous year - a decline of 24%. Washington County sales dropped by 32%, showing similar trends throughout the greater region.

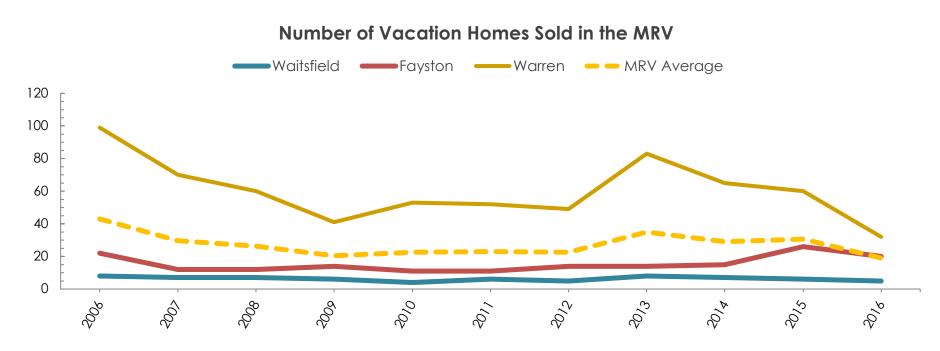


FIGURE 11. SOURCE: VERMONT HOUSING FINANCE AGENCY

⁴ Vacation homes include condominiums that are not primary residences as well as other non-primary residences.

Figure 12 shows the sales price of primary residences in the MRV leveling out following volatility during the recession. In 2018, the median home sales price in Fayston was \$292,500, \$202,000 in Warren, and \$278,000 in Waitsfield. While median prices across the MRV have decreased on average by 4% since 2006, they surged by 21% between 2017-2018. Comparatively, median primary residence sales prices in Washington County increased by only 3%, and 2% statewide, in the same period.

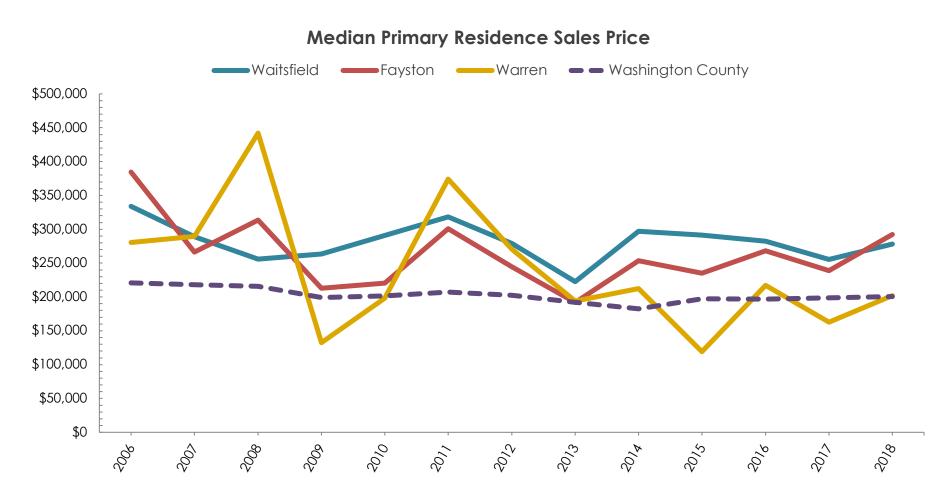


FIGURE 12. ADJUSTED FOR INFLATION. SOURCE: VERMONT HOUSING FINANCE AGENCY

Figure 13 shows the most current sales price data for vacation homes across the MRV. Waitsfield's median vacation home sales price increased to \$375,000 in 2016, aligning with Vermont's upward trend, though Warren and Fayston saw lower sales prices in 2016 (at \$150,000 and \$167,000, respectively). Outliers in the data more easily influence median sales prices because of the relatively low number of vacation homes sold in Waitsfield and Fayston. The median vacation home sales price for Washington County increased from \$205,000 to \$280,547 between 2015 and 2016.

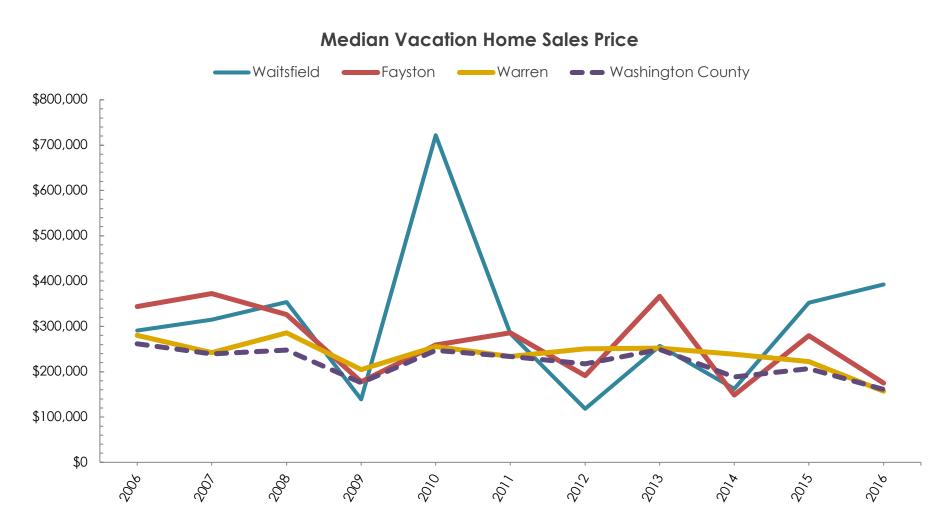


FIGURE 13. ADJUSTED FOR INFLATION. SOURCE: VERMONT HOUSING FINANCE AGENCY

Zoning permits serve as a leading indicator of new home construction in a community. **Figure 14** shows a large increase in all three MRV towns for single-family home zoning permits in 2019, as compared to 2018 (32 as of October 2019, as compared to 20 in 2018). Overall, these figures indicate a rebound in housing construction since the aftermath of the Great Recession.

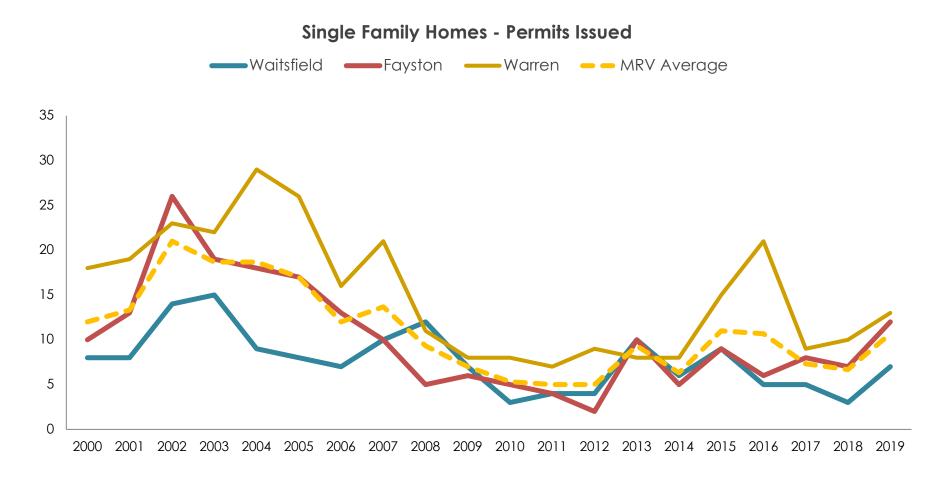


FIGURE 14. SOURCE: U.S. CENSUS BUREAU, U.S. DEPT. OF HOUSING & URBAN DEVELOPMENT, TOWN ADMINISTRATORS OF FAYSTON, WAITSFIELD, & WARREN

When the permit data is indexed to 2002 levels (the MRV's peak year in single family home permits since 2000), **Figure 15** shows the local trend in construction activity generally following the state trend until 2009, when the MRV's decrease continued. However, construction activity in the MRV has bounced back more robustly than the state overall in recent years.



Vermont -- MRV Total

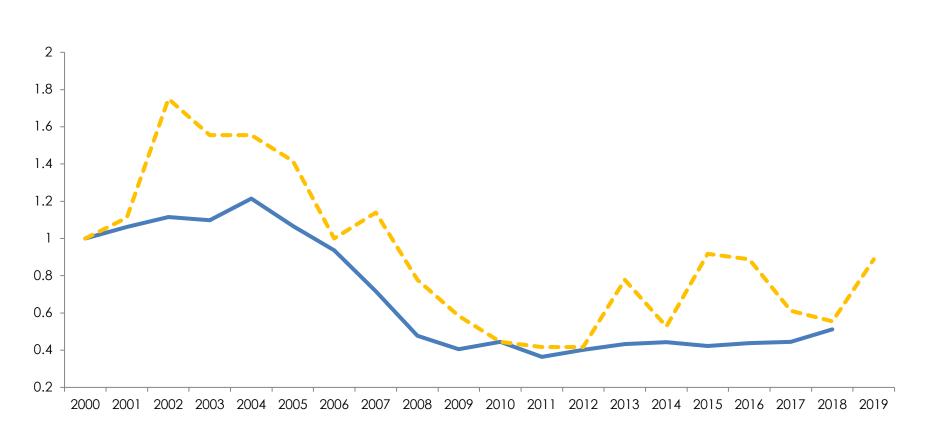


FIGURE 15. SOURCE: U.S. CENSUS BUREAU, U.S. DEPT. OF HOUSING & URBAN DEVELOPMENT, TOWN ADMINISTRATORS OF FAYSTON, WAITSFIELD & WARREN

While the raw number of single-family homes permitted is important, the total dollars attributed to those permits provide a more complete picture. **Figure 16** shows a slight increase in the average value of single-family home permits⁵ in Fayston and decreases in Warren and Waitsfield between 2017 and 2018. Since 2008, values have been markedly more volatile – especially in Warren.



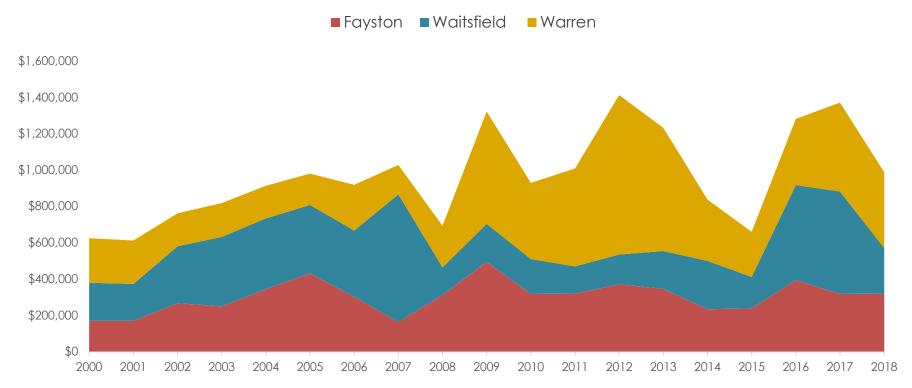


FIGURE 16. ADJUSTED FOR INFLATION. SOURCE: U.S. DEPT. OF HOUSING & URBAN DEVELOPMENT, VT HOUSING DATA

⁵ Permit valuation is the "estimated value of the residential structure as shown on the building permit. If no value is listed on the permit, we accept estimates from the permit official." (U.S. Housing & Urban Development)

Overall, the MRV added 69 total housing units between 2016-2017.

A snapshot of available housing in **Figure 17** shows that the majority of housing units in the MRV are seasonal or vacation homes (52%). The number of seasonal homes has increased as a percentage of total MRV housing units between 2010 and 2017, from 48% to 52%. Owner-occupied residences account for 38% of housing units, and only 10% are renter-occupied. Affordable rental units are important for a healthy housing market.

It is worth noting the increasing relevance of short-term rentals such as AirBnB and HomeAway, which have gained in popularity among homeowners and visitors in recent years; according to the short-term data and analytics website AirDNA, Warren and Waitsfield fall within the top 15 short-term rental towns in the state, with 490 units between them. Between 2016 and 2019, the number of short-term rentals in MRV have increased by 216%. Short-term rental units may be included as any of the above housing categories depending on their primary use.

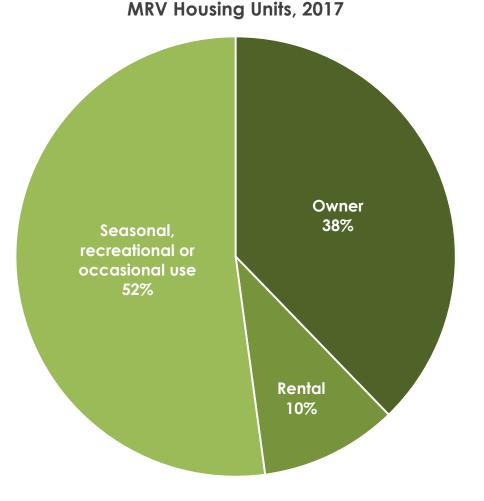


FIGURE 17. SOURCE: AMERICAN COMMUNITY SURVEY

^{6 &}quot;Seasonal, recreational, or occasional use units are units used or intended for use only in certain seasons or for occasional use throughout the year. Interval ownership units, such as timesharing condominiums, are included in this category." (U.S. Census Bureau: American Community Survey)

Sugarbush Resort collects housing data annually via surveys given to its seasonal and year-round employees. The data in **Figure 18** indicates where Sugarbush employees lived during the 2018-2019 ski season. The percentage of seasonal employees who reported living in one of the three MRV towns was 46%, while 61% of the year-round staff call the MRV home (compared to 44% of seasonal staff and 57% of year-round staff, respectively, during the previous season). In the 2018-19 season, the majority of MRV residents lived in Warren (231), with less than half in Waitsfield (106) and Fayston (77).

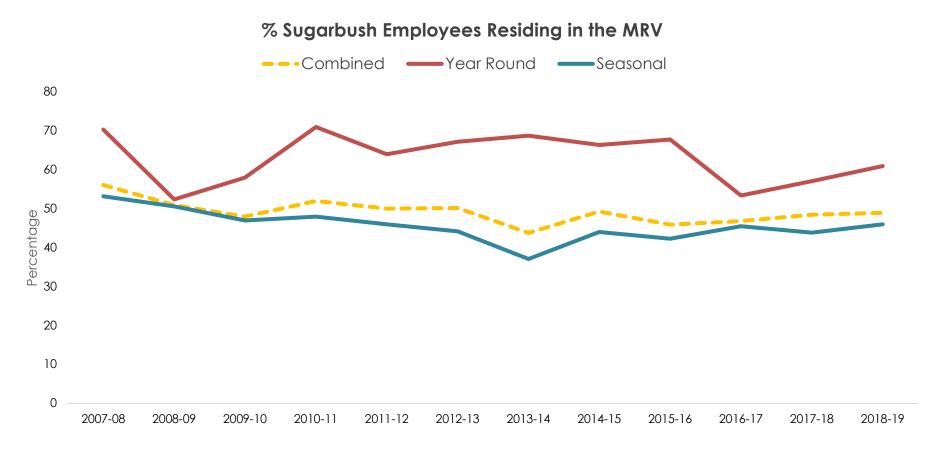


FIGURE 18. SOURCE: SUGARBUSH RESORT

Sugarbush Employees Residence by Type, 2018-19 Season

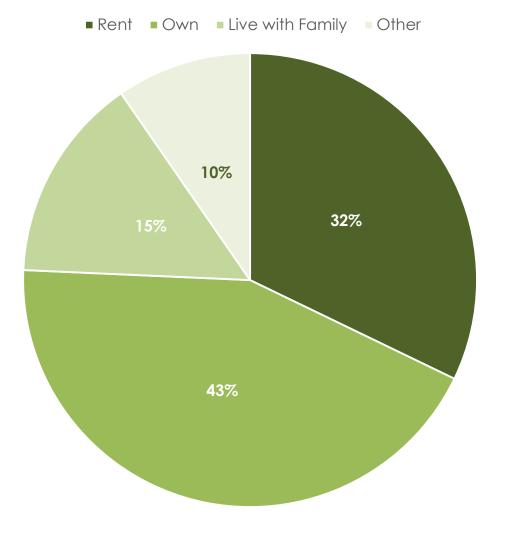


FIGURE 19. SOURCE: SUGARBUSH RESORT

Figure 19 identifies the type of housing situations that Sugarbush employees lived in during the 2018-19 season, including those who lived outside of the MRV.

The largest percentage of employees own their residence (43%), followed by rent (32%) and live with family (15%).

HOUSING AFFORDABILITY

Housing supply and affordability challenges can be attributed to a number of factors, including inflated home and land prices, low local wages, and a lack of wastewater capacity in areas suitable for infill housing⁷. Barriers to affordable housing not only negatively affects existing and potential residents, but poses challenges for local businesses seeking employees, the public school system and other facets of the community.



⁷ See the 2017 MRV Housing Study at <u>www.mrvpd.org</u> for more information. A MRV housing needs assessment is anticipated to be released by Doug Kennedy Advisors in December, 2019.

Figure 20 compares the most recent data for median gross rent⁸ in the three MRV towns as compared to Washington County. Between 2000-2017, Waitsfield and Fayston rents have increased by 27% and 21% respectively, while Warren's rents decreased by 18% (adjusted for inflation). Warren also has the most affordable rent, continuing to track below the county and statewide median. Conversely, Fayston has considerably higher median rents than Warren and Waitsfield, as well as Waterbury or Montpelier. Median rents in the MRV have increased at a higher rate than the county, which has seen prices hover around \$900 since 2010.



FIGURE 20. ADJUSTED FOR INFLATION. SOURCE: AMERICAN COMMUNITY SURVEY

⁸ Gross rent is defined by the U.S. Census Bureau as the "contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else)." The median gross rent is the middle value (50th percentile) when all rents for all unit sizes are arranged from lowest to highest.

Figure 21 below shows the 2017 Median Gross Rents for the MRV as compared to the U.S. Department of Housing & Urban Development's (HUD) definition of Fair Market Rents⁹ (FMR) for Washington County for 1, 2, and 3 bedroom units. HUD's FMR calculations are displayed by number of bedrooms per unit. A household selected to receive a federal subsidy to cover housing costs is only allowed to utilize its subsidy for units at or below the rent levels displayed in Figure 21. Despite high rents in the MRV, the Washington County FMR is higher than the Warren and Waitsfield median rents for 1-bedrooms and slightly above 2-bedroom units in Warren.



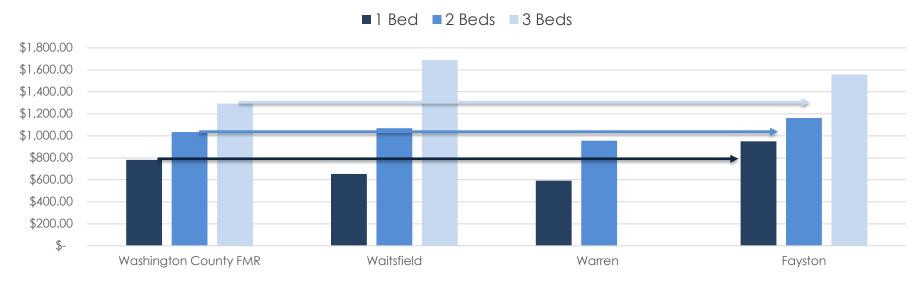


FIGURE 21. SOURCE: VERMONT HOUSING FINANCE AGENCY; AMERICAN COMMUNITY SURVEY

⁹ Fair Market Rent (FMR) is defined by the U.S. Department of Housing & Urban Development (HUD) as, "the 40th percentile of gross rents [including utilities] for typical, non-substandard rental units occupied by recent movers in a local housing market." FMRs are used by HUD to allocate federal housing assistance, and the 40th percentile is the standard used to best capture units that are of acceptable quality, while not being luxurious compared to the quality of "typical," or 50th percentile units. Fair Market Rent and thresholds for Low Income status can be found at: https://www.huduser.gov/portal/datasets/fmr.html

Figure 22 shows the change in the number of owner and renter-occupied housing units in Waitsfield, Warren, and Fayston from 1970 to 2017 as a percentage of total owner and renter occupied units. Since 1990, renter-occupied housing units as a percentage of total units has dropped from 31% to 19%, with a corresponding increase in owner-occupied units from 69% to 81%. These shifts in housing tenure could be related to the rise in popularity of online short-term rental websites removing rental units from the market (and subsequently increasing median rents), though there is not sufficient data to prove causation at this time.



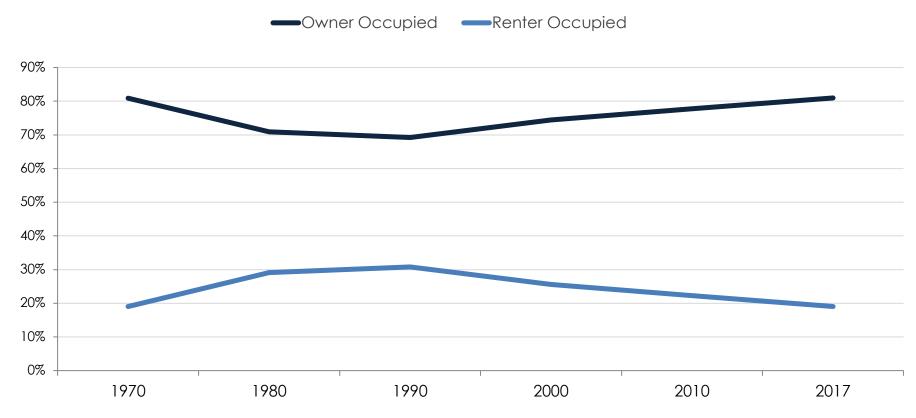


FIGURE 22. AMERICAN COMMUNITY SURVEY

Figure 23 illustrates the higher value of owner-occupied units in the MRV compared to Washington County, with Waitsfield having the highest home values in the MRV since 2010.

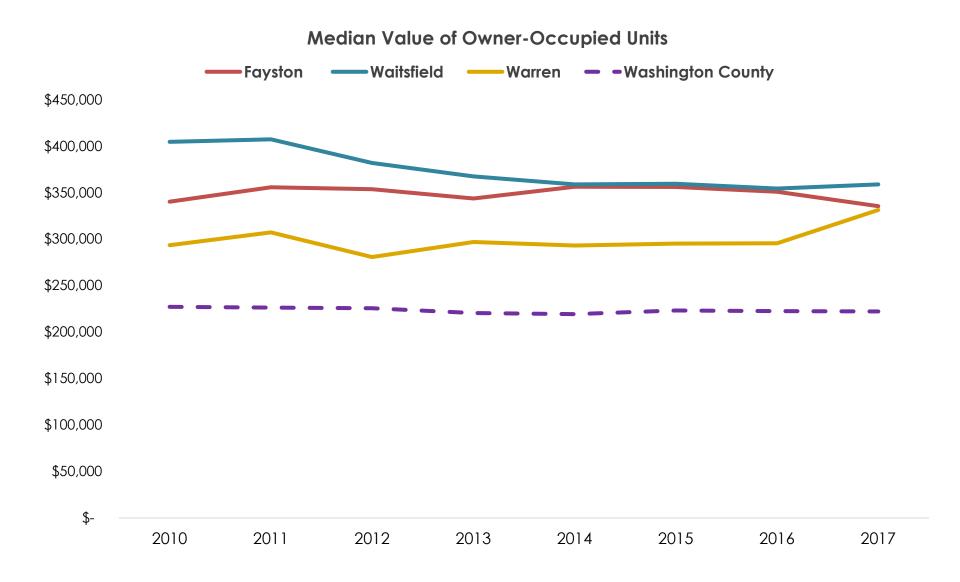


Figure 23. Adjusted for inflation. Source: Vermont Housing Finance Agency

Another metric used to analyze housing affordability is a community's "housing wage," defined by the National Low Income Housing Coalition as "the hourly wage a full-time worker (40 hours/week) must earn to afford a modest rental home while spending no more than 30% of her or his income on rent and utilities."

In 2019, the Washington County housing wage for a modest 2-bedroom apartment was \$19.92 per hour. **Figure 24** shows the 2019 Washington County Housing wage for 1, 2, and 3-bedroom units compared to the 2019 Vermont minimum wage (\$10.78 per hr.). While the housing wage for the MRV is likely to be somewhat different, the county-level data can still provide useful context.

Washington Cty. Housing Wage, 2019



FIGURE 24. SOURCE: NATIONAL LOW INCOME HOUSING COALITION, VERMONT HOUSING FINANCE AGENCY



SECTION II: ECONOMICS

Includes Items #35 & 36 from the Memorandum of Understanding

TOURISM & HOSPITALITY

Tax revenue trends illuminate the relative health of the MRV's primary tourist industries – outdoor recreation, foliage and weddings. The craft food and beverage industry also influences these trends, and with the launch of several new eating and drinking establishments in 2018, it will be interesting to monitor changes in the coming years. Weddings provide significant revenue across the state and within the MRV. The Town Clerks in Waitsfield, Warren, and Fayston issued 77 marriage licenses in 2019, slightly lower than the average of 79 between 2015-2018.





A comparison of Meals, Rooms, and Alcohol¹⁰ tax receipts illustrates steady increases between 2009 and 2018 in the MRV, as shown in **Figure 25**. Alcohol and Rooms receipts increased slightly in the MRV2¹¹ between 2017 to 2018; the majority of the increase in Alcohol receipts was experienced by Waitsfield, which had a 12% increase over the previous year. There was a 3% increase in Meals receipts for the three MRV towns during the same time.

MRV Meals, Rooms, Alcohol Tax Receipts by Source

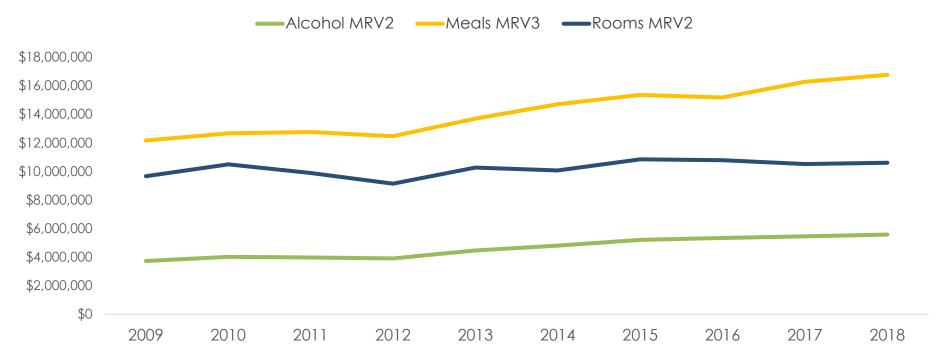


FIGURE 25. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

¹⁰ "Meals" includes prepared and restaurant meals. "Rooms" includes lodging and meeting rooms. "Alcohol" includes beverages served in restaurants.

¹¹ MRV3 refers to the towns of (Waitsfield, Warren, & Fayston), while MRV2 includes just Warren & Waitsfield. Due to the small number of businesses (<10 reporting) in Fayston, the data is suppressed due to confidentiality thresholds at the VT Dept. of Taxes.

A comparison of Waitsfield and Warren's combined Meals, Rooms, and Alcohol tax receipts in **Figure 26** illustrates the continued gains in Waitsfield since 2012, with an increase of 10% from 2017 to 2018, where Warren decreased slightly. Since 2009, Waitsfield has experienced an increase of 85% in combined Meals, Rooms, and Alcohol revenues; during the same time period, Warren's tax revenues have increased by 10%. Waitsfield's change has been more consistent year to year, while Warren has experienced more dramatic swings – likely a reflection of corresponding ski seasons.

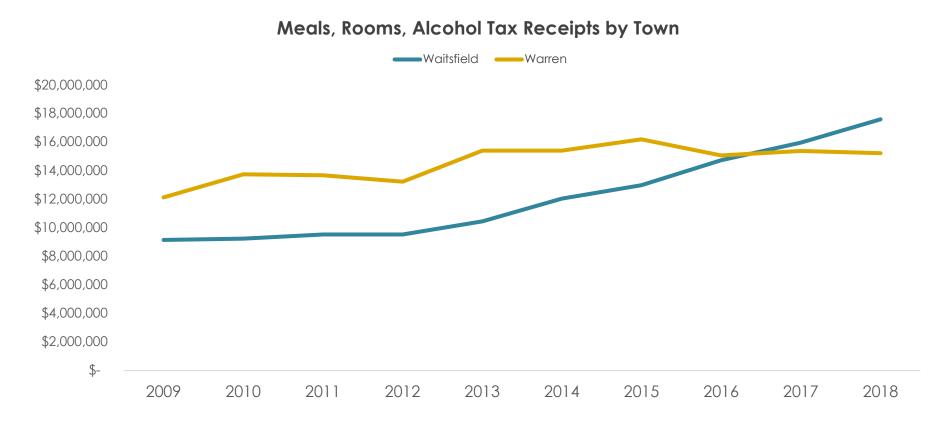


FIGURE 26. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

Figure 27 provides a regional perspective on the health of the tourism and hospitality sector over time, showing upward though stabilizing trends for Montpelier, Waterbury, Waitsfield and Warren from 2009 to 2018. Note that trends rather than total gains in dollar values should be compared as Waitsfield and Warren combined still has a smaller population than the other municipalities.



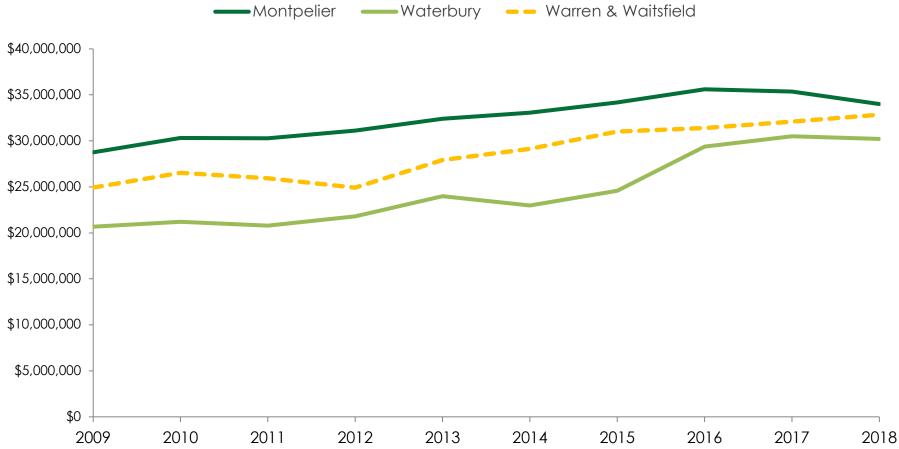


FIGURE 27. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

The robustness of the Mad River Valley's 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. **Figure 28** shows greater volatility in first quarter receipts compared to the relatively steady increases seen in the third quarter (summer months). This is likely related to the impact weather plays on winter revenues during the first quarter. Tax receipts for the first quarter of 2018 remained stable and the third quarter of 2018 saw 7% decrease in summer activity compared to the same period in 2017.



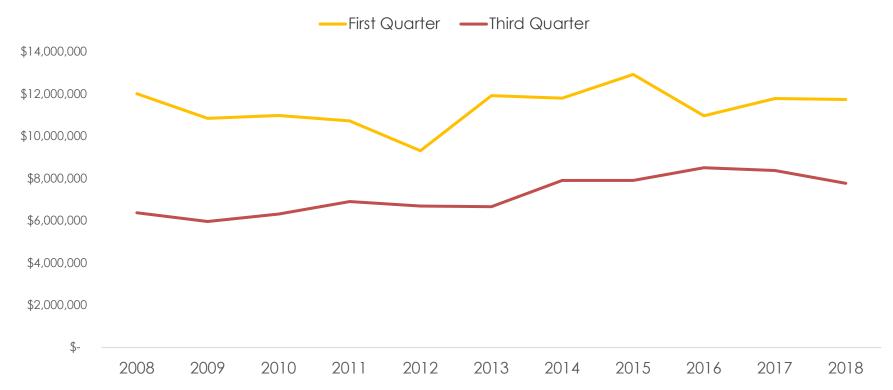


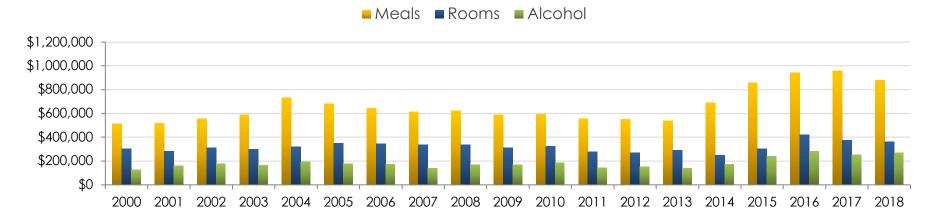
FIGURE 28. ADJUSTED FOR INFLATION, SOURCE: VT DEPT, OF TAXES

MRV tax reciepts are largely impacted by seasonality. A comparison of monthly tax revenue for Waitsfield and Warren during the month of October (**Figure 29**) provides further insight into the fall tourist and wedding season. Waitsfield saw a 5% decrease in overall October tax revenue between 2017-18, with Alcohol the only revenue stream to see an increase over the previous year (6%). However, October tax receipts have increased dramatically between 2013 to 2018 in Waitsfield, by 54%.

2018 saw a continued decrease in Warren's Meals, Rooms, and Alcohol reciepts by 9% compared to the previous year. Note that Sugarbush Resort recently combined alcohol licenses among its facilities, resulting in a reduction of the total number of reporting businesses to below the suppression threshold for the State of Vermont starting in 2017. Still, Meals revenue in Warren decreased by 33% over the previous year, while Rooms receipts increased by 9%.



Waitsfield Meals, Rooms & Alcohol Tax Receipts October Comparison



Warren Meals, Rooms & Alcohol Tax Receipts October Comparison

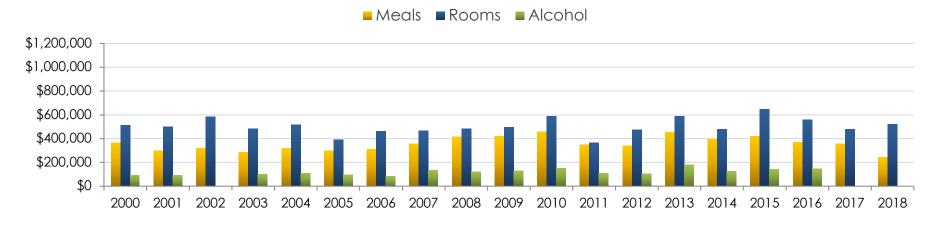


FIGURE 29. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

RETAIL SECTOR

Figure 30 provides a comparison of 2018 Gross Sales tax receipts by town. The predominance of sales tax revenue from Waitsfield illustrates the town's position as the commercial center of the MRV.

MRV Gross Sales Tax Receipts by Town, 2018

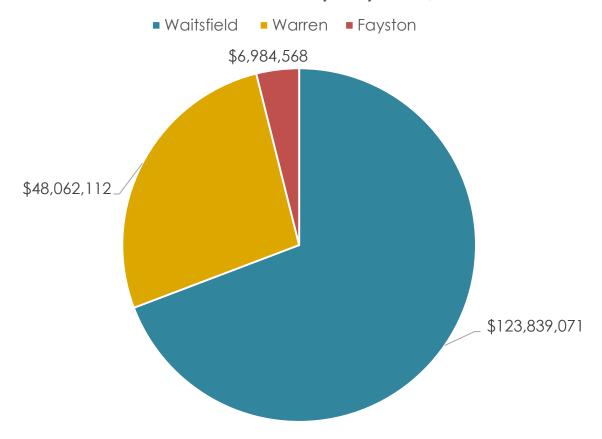


FIGURE 30. SOURCE: VT DEPT. OF TAXES

A comparison of Gross Sales and Retail tax receipts in **Figure 31** illustrates the MRV's mixed results since 2005. ¹² Gross Sales experienced a downward trend between 2005-2009, partially rebounding following the recession, but has since been on a downward trajectory. Overall, MRV Gross Sales tax receipts have fallen 28% since 2005. Retail receipts, on the other hand, have been relatively stable over time, and surprisingly did not take a major hit even during the recessionary period of 2007-2009.

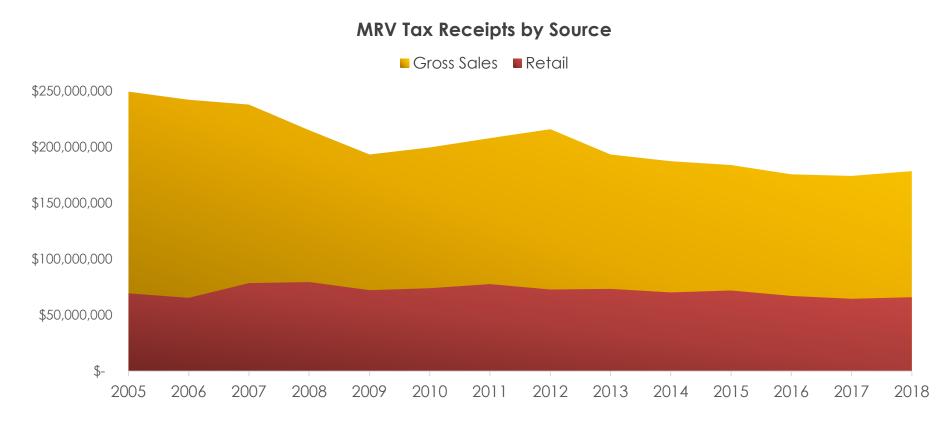


FIGURE 31. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

¹² Gross Sales tax receipts include Retail tax receipts (i.e. taxable sales); they are shown here separately for visualization purposes. Use tax receipts represent a fraction of overall Sales and Use tax receipts, and thus is not shown here.

Figure 32 provides insight into the MRV's Gross Sales tax receipts by breaking them out by town. The majority of the decrease in the MRV seen in Figure 29 can be attributed to Waitsfield, which has the largest volume of tax receipts in the region and experienced a 43% decrease in receipts since 2005 – despite increasing Meals, Rooms, and Alcohol reciepts. While a much smaller volume of receipts, Warren has experienced an upward trend during this same time period, increasing 82%. Gross Sales receipts in Fayston have increased by 24%.

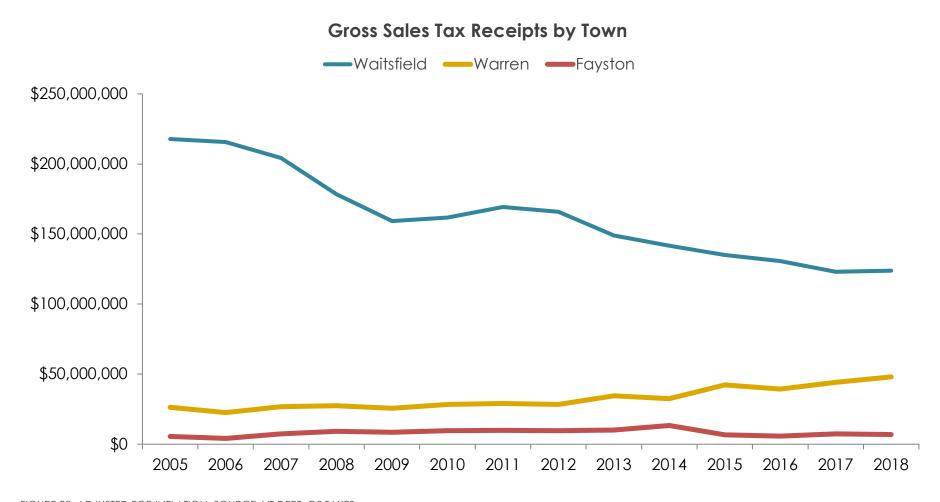


FIGURE 32. ADJUSTED FOR INFLATION. SOURCE: VT DEPT. OF TAXES

SKIER VISITS

In Vermont overall, the 2018-19 ski season drew over 4 million skier visits, a 5.2% increase over the previous season.¹³

Sugarbush Resort experienced a larger jump in skier visits than the state with an increase of 9% (shown in **Figure 33** below). Though Mad River Glen is not part of the MOU, they provide skier visit data as shown in **Figure 34**; the 2018-2019 season saw 68,000 skier visits, an 11% increase in total visits from the previous season.

On Page 44, **Figure 35** below shows snowfall depth data collected at Mount Mansfield. The graph provides a visual comparison of the 2015-16 to 2018-19 ski season, and average snowfall depth. Snowfall depth was significantly above average during almost the entire season of 2018-19. **Figure 36** Sugarbush reported 240 inches of natural snowfall accumulation through the 2018-2019 season - almost exactly the annual average for the mountain. The two data points are visualized together here for possible association.



IMAGE 1. JOHN ATKINSON

¹³ Source: Vermont Ski Areas Association

Sugarbush Resort Skier Visits

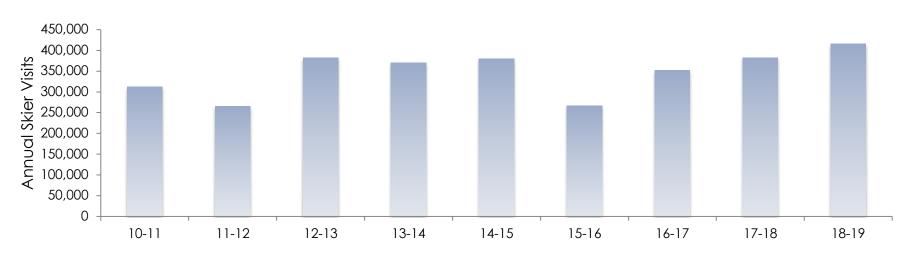


FIGURE 33. SOURCE: SUGARBUSH RESORT

Mad River Glen Skier Visits

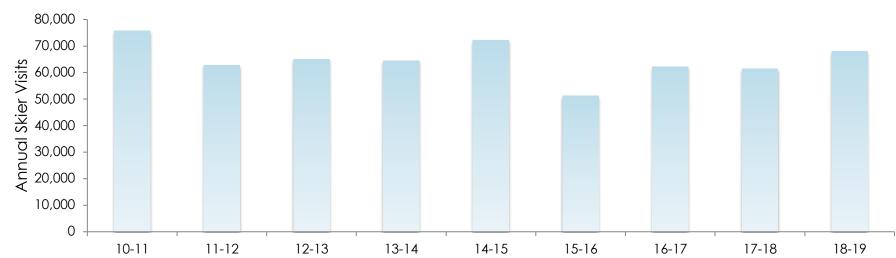


FIGURE 34. SOURCE: MAD RIVER GLEN

Mount Mansfield Summit Station Snowfall Depth

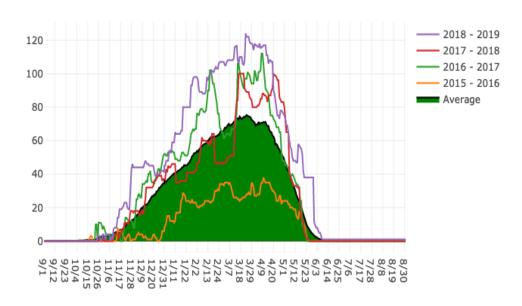


FIGURE 35. SOURCE: SKIVT-L, NATIONAL WEATHER SERVICE

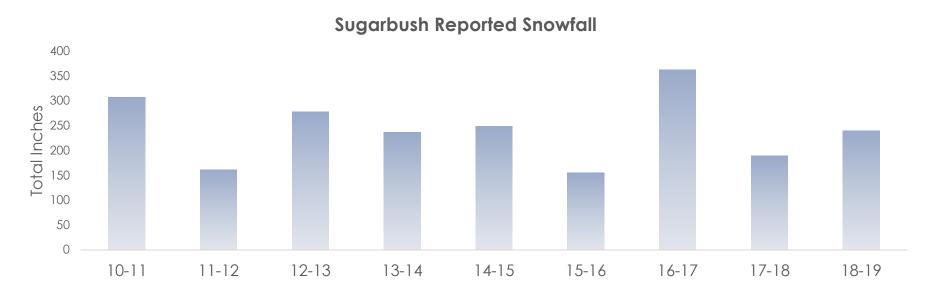


FIGURE 36. SOURCE: SUGARBUSH RESORT

Recreation Trail Use

In 2018, the MRVPD partnered with the Central Vermont Regional Planning Commission (CVRPC) and the Mad River Valley Trails Collaborative to update trail user count data taken during the 2016 MRV Moves Active Transportation Plan & Study. The four count sites profiled in 2016, along with 2 additional locations (Chase Brook Town Forest & Mad River Greenway), were analyzed in 2018 during ~2-week periods from August 16 – October 21, using the most up to date methodology to extrapolate average weekly data to annual average daily counts¹⁴. The average annual numbers account for seasonal variation in user activity as summer/fall activity is generally higher than winter/spring.



¹⁴ Both the 2018 and 2016 counts collected through the MRV Moves Study utilized the National Bike & Pedestrian Documentation Project Extrapolation Formula Workbook.

2018 pedestrian count data is illustrated in **Figure 37** below. Compared to 2016, Blueberry Lake Trails activity increased by 59%, Revolution Trail activity increased by 41%, Waitsfield West Sidewalk increased by 28%, and the Hosford Heart of the Valley Wetlands Boardwalk decreased slightly, though this is likely due to significant construction taking place on the boardwalk during the counting period in 2018 that was not occurring in 2016.¹⁵

Annual Average Daily MRV Trail User Count, 2018

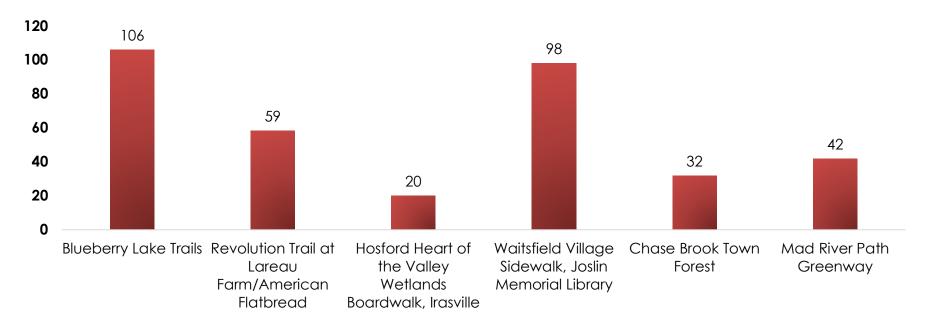


FIGURE 37. MRVPD, CVRPC, MRV TRAILS COLLABORATIVE

¹⁵ Activity levels at sites naturally differ based on their geographic location and predominant activities that take place there. Please also note that the Labor Day counts at Blueberry Lake and Revolution Trail were excluded to ensure extrapolated counts were not overestimated based on increased holiday activity.



SECTION III: EMPLOYMENT

Includes Items #35 & 36 from the Memorandum of Understanding

Total employment¹⁶ data from the Vermont Department of Labor's Economic & Labor Market Information (VTLMI) shows the number of employed MRV residents rose between 1990 and 2010, at which point it leveled out as shown in **Figure 38** below. This trend generally aligns with MRV population changes.

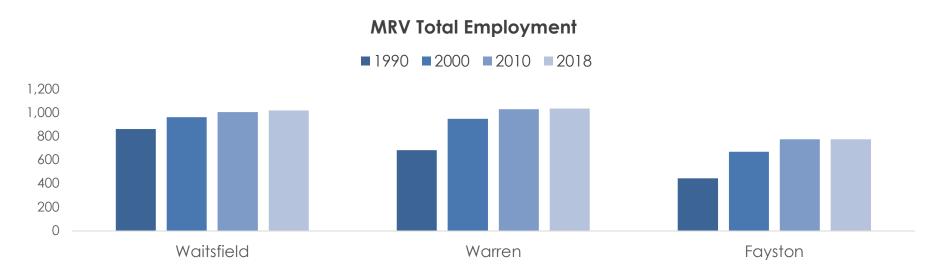


FIGURE 38. SOURCE: VERMONT ECONOMIC & LABOR MARKET INFORMATION (VTLMI)

¹⁶ 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.

Indexed to 2005¹⁷, the trend in MRV total employment shows relative stability after a slow down between 2005-2010, as shown in **Figure 39** below. The MRV had a particularly strong employment year in 2005, where the county and state have been stable since that time.

Comparative Employment Indexed to 2005

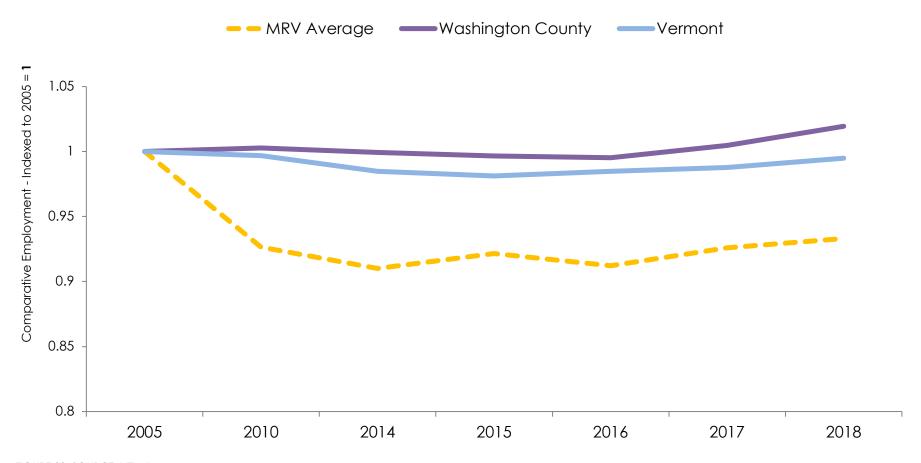


FIGURE 39. SOURCE: VTLMI

¹⁷ Between 1990-2018, 2005 was the peak of total employment in the MRV.

INDUSTRIES

Industry categories are described below, as reflected in the <u>Quarterly Census of Employment and Wages</u> (QCEW), which provides for all firms covered by unemployment insurance in Vermont. Data includes monthly employment level and wages at each worksite. Please see descriptions of each industry¹⁸ below:

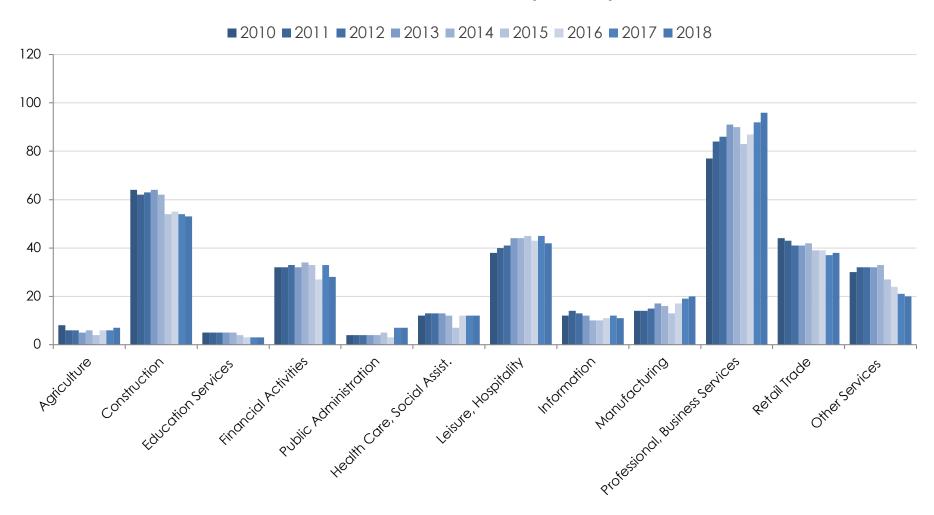
- Agriculture includes forestry, fishing, and hunting
- Construction industry includes building construction, engineering and contractors
- **Manufacturing** includes manufacturers of durable (wood products, mineral products, transportation equipment, furniture, etc.) and non-durable goods (food, beverage, 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 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.

Page | 49

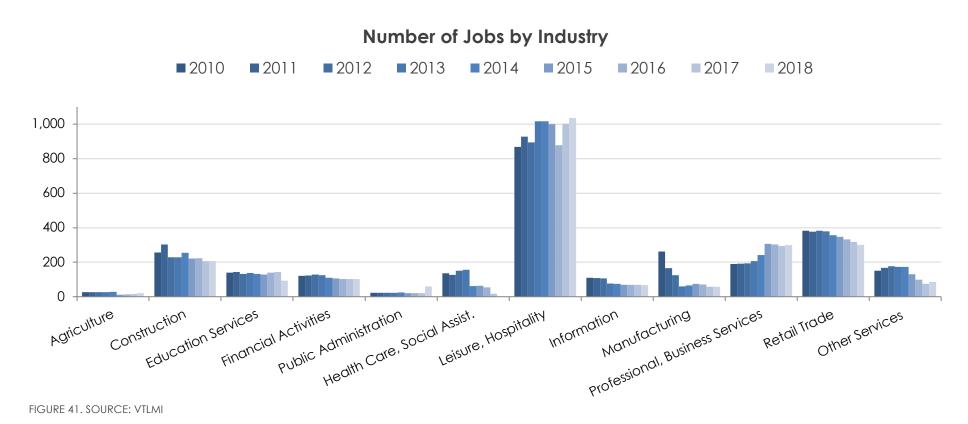
¹⁸ The following graphs do not depict all industry categories, though the key sectors chosen represent the vast majority of jobs in the MRV. A full list of industries by North American Industry Classification System (NAICS) code is available at https://www.bls.gov/iag/tgs/iag_index_naics.htm.

Figure 40 shows the number of businesses by industry in the MRV. Industries that gained businesses in 2018 include Agriculture (1), Manufacturing (1), Professional & Business Services (4), and Retail Trade (1).

Number of Businesses by Industry



While the MRV has attracted businesses in most major sectors, **Figure 41** below depicts the dominant role of the Leisure & Hospitality sector in terms of number of employees; in 2018, Leisure & Hospitality represented 45% of all covered employment plots, up from an average of 40% between 2013-17. The employment numbers are an aggregate including part-time and seasonal jobs, which contribute significantly to this sector. Though much lower than Leisure & Hospitality, Retail Trade and Professional & Business Services are the next largest industries in terms of total jobs (almost 13% of MRV covered jobs, each). The total number of covered employment jobs in the MRV in 2018 was 2,685 – up 7% since 2010 and 44% since 1990.



¹⁹ **Covered employment** is the number of jobs covered by unemployment insurance.

2018 saw a second consecutive year of loss in total annual wages, and an overall decrease of 17.6% since 2010. However, the continued strength of the Professional & Business Services sector's total wages, as depicted in **Figure 42**²⁰, suggests the retention or creation of higher paying jobs in the MRV. The Leisure & Hospitality industry also saw an increase of almost 6% in total annual wages compared to 2017. Total annual wages for the Education Services (Public), Information, Manufacturing, and Retail Trade sectors decreased in 2018.

MRV Total Annual Wages by Industry

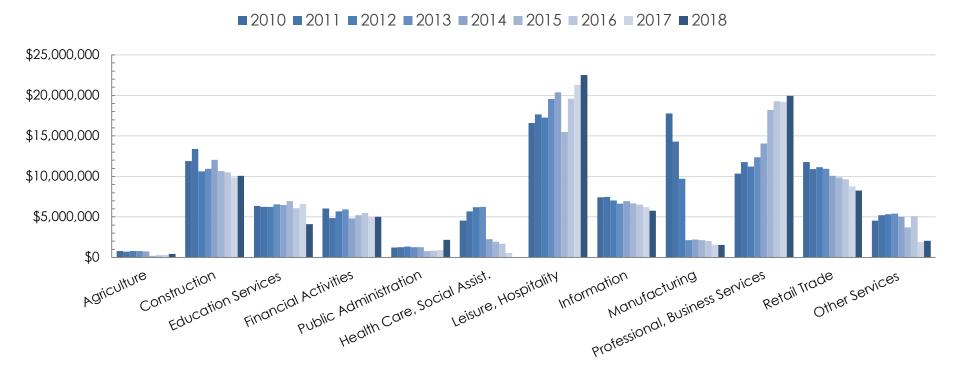


FIGURE 42. ADJUSTED FOR INFLATION. SOURCE: VTLMI

 $^{^{20}}$ In 2018, Health Care & Social Assistance sector data did not meet VTLMI confidentiality standards.

To narrow in on wage trends for individuals, we can look at the average annual wage. **Figure 43** shows 2016-2018 average annual wage data for the town of Waitsfield, as compared to the 2018 Washington County Housing Wage²¹ to provide additional context. Waitsfield is used here as a representation of the MRV as a whole, and shows the average annual wage ranging from ~\$21,000 in the Agriculture and Leisure & Hospitality sectors to over \$84,000 in the Information sector. Between 2016-18 the largest gains in average wages were in Construction (4.7%) and Professional & Business Services (3.4%); the largest decreases were in Public Administration (-19.1%), Financial Activities (-12.1%), and Information (-10.5%) sectors.

Average wages are affected by the proportion of part-time and seasonal jobs, which depresses the annual average compared to full-time jobs. Recognizing the need for affordable housing in the MRV, the 2018 Washington County Housing Wage for 1 and 3 bedrooms (\$32,320 and \$51,920 respectively) are identified in Figure 42.



²¹ The **Housing Wage** is the income needed for an individual working 40 hours a week to afford a housing unit priced at HUD's **Fair Market Rate** while paying no more than 30% of their income toward housing costs. While the above graph is not a perfect comparison as median gross rents in the town of Waitsfield are 6% higher than Washington County, it provides useful context.

Waitsfield Average Annual Wage by Industry and 2018 Washington Co. Housing Wage



FIGURE 43. ADJUSTED FOR INFLATION. SOURCE: VTLMI; VHFA

Figure 44 shows that the unemployment rate²² has continued to drop in the MRV since 2009, with Fayston being the only exception. Of the three MRV towns, Fayston had the highest unemployment rate in 2018 (3.1%); still, this is below what is considered to be a "healthy" unemployment rate.

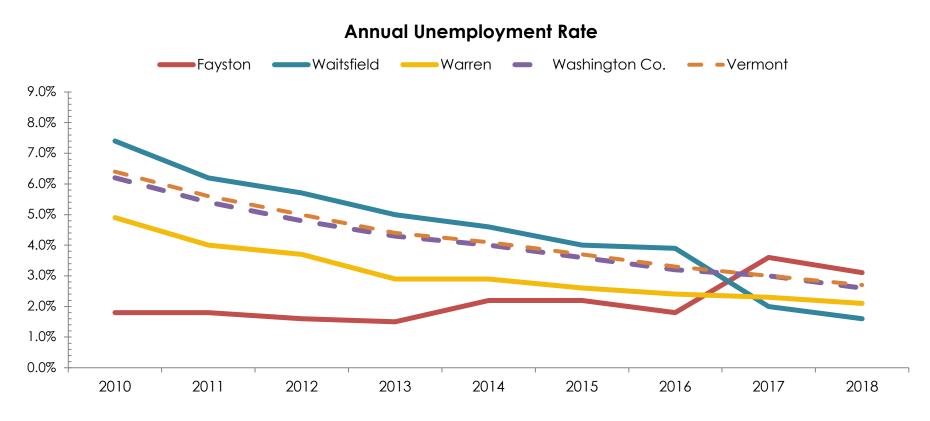


FIGURE 44. SOURCE: VT DEPT. OF LABOR, VT ECONOMIC & LABOR MARKET INFORMATION

²² The unemployment rate is "NOT the percentage of the population who are unemployed, but rather an estimate of the percentage of those who want to work, are able to work, and are actively seeking work but are unable to find employment." (Vermont Department of Labor)

WORKER FLOW

There is a daily flow in and out of the MRV of residents and employees. Worker flows are useful indicators of housing needs and employment opportunities; heavy traffic also has implications for road maintenance, supply of parking, demand for public transit, and increasing greenhouse gas emissions. 68% of MRV residents reported driving alone to work in 2017, down from 74% in 2009. Still, uses of other modes of transportation, including transit, carpooling, and biking, has not changed significantly²³.

Employment data in **Figure 45** shows more people commuting into the MRV than those commuting out for primary jobs, with 2017 being the most current year.

Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.

Employed and Live in Selection Area

Employed in Selection Area, Live Outside

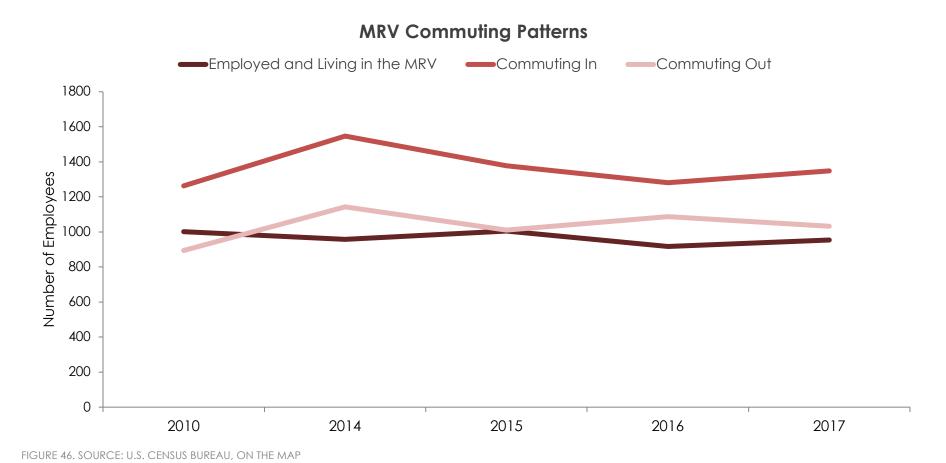
Live in Selection Area, Employed Outside



FIGURE 45. SOURCE: U.S. CENSUS BUREAU, ON THE MAP

²³ Source: American Community Survey

Figure 46 shows commuting habits over time. While the number of people employed in the MRV has remained stable since 2010, the percentage of those who also live here has decreased by 6%. Commuters coming into the MRV has increased by 5% between 2010-17, though this has not been a linear trend. Most MRV workers - almost 60% - continue to commute in. Another increasing trend has been the number of MRV residents working from home, increasing from 14% to 17% between 2010-17 (not captured in this graph)²⁴.



²⁴ Source: American Community Survey

Figures 47 & 48 below specify where MRV commuters are travelling to and from, with Figure 47 showing where residents of the MRV travel to work, and Figure 48 showing where people employed in the MRV live. These graphics depict the top 10 locations in each case. Most of the MRV residents who work outside of the MRV are employed in the surrounding higher-density areas of Burlington, Waterbury, and Montpelier. Those travelling to the MRV for work are mainly from neighboring towns or Burlington.

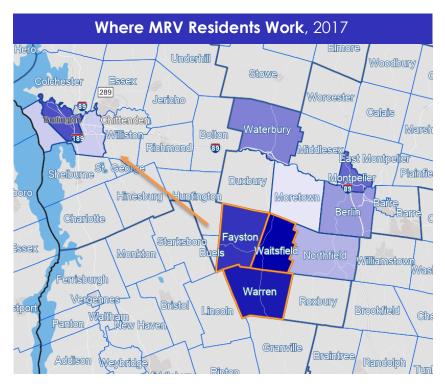


FIGURE 48. SOURCE: U.S. CENSUS, ON THE MAP

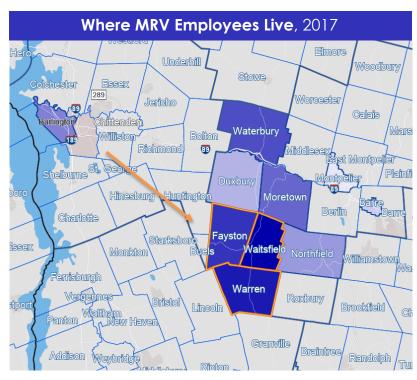


FIGURE 47. SOURCE: U.S. CENSUS BUREAU, ON THE MAP



SECTION IV: TRAFFIC & TRANSIT

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 north of 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. **Figure 49** depicts the Average Annual Daily Traffic (AADT)²⁵ for the south leg of the Rt. 100-Rt. 17 intersection from 1997 to 2018, and the west and north legs up until 2016. Traffic at all three locations has remained relatively steady over the past two decades, with decreases starting in 2006.

Average Annual Traffic Counts at Intersection of Rt. 100 & Rt. 17

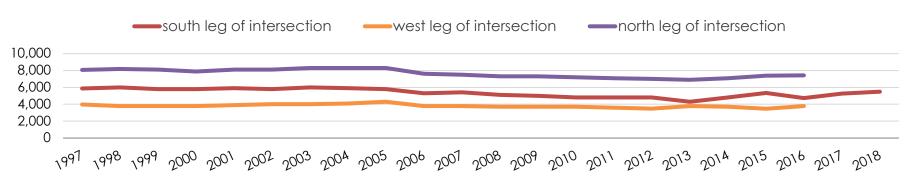


FIGURE 49. SOURCE: VTRANS

²⁵ AADT is the total volume of traffic on a highway segment for one year divided by the number of days in the year.

During the 1990s, Sugarbush Access Road experienced higher traffic counts, whereas more recent annual vehicle trips have settled lower. However, 2017 saw Access Road traffic volumes rebound after a few years of decline to an AADT 2,610 in 2017 as shown in **Figure 50**. 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; since that time traffic volumes have been relatively stable (1,152 in 2017).

Average Annual Traffic Counts on Sugarbush Access Road, Route 17

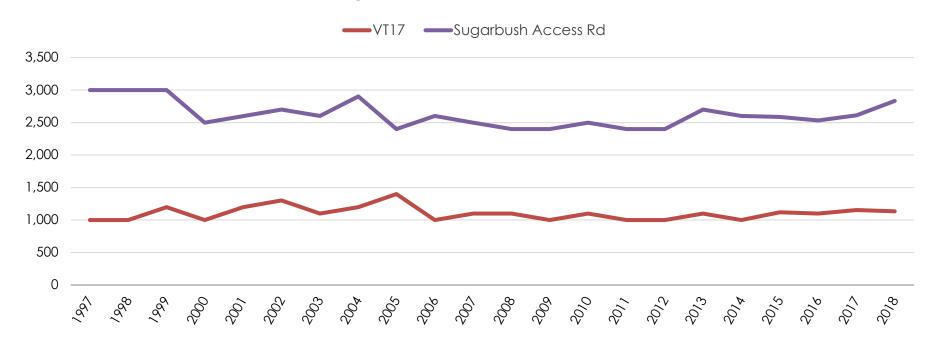


FIGURE 50. SOURCE: VTRANS

TRANSIT

Green Mountain Transit (GMT) began operating in the Mad River Valley in late 2003 under the name Mad Bus, which now serves as the MRV Bus Service. Year-round service on the Valley Floor route (connecting Warren, Waitsfield and Lincoln Peak) was offered from 2003 until 2005, when it was scaled back to winter season service (November-March) due to low ridership. GMT also operates a Volunteer Driver Service in the MRV that transports adults over 60 years of age and residents with limited mobility to medical appointments as well as other destinations when they call GMT to request a ride in advance.



Figure 51 below shows ridership from Fiscal Year 2003 to 2019 (the 2018-2019 winter season). GMT operated four free-of-charge MRV Bus routes during the 2018-19 season instead of the usual five, following consolidation of two mountain routes. FY19 saw an 8% decrease in ridership as compared to FY18, despite a 9% increase in Sugarbush skier visits.

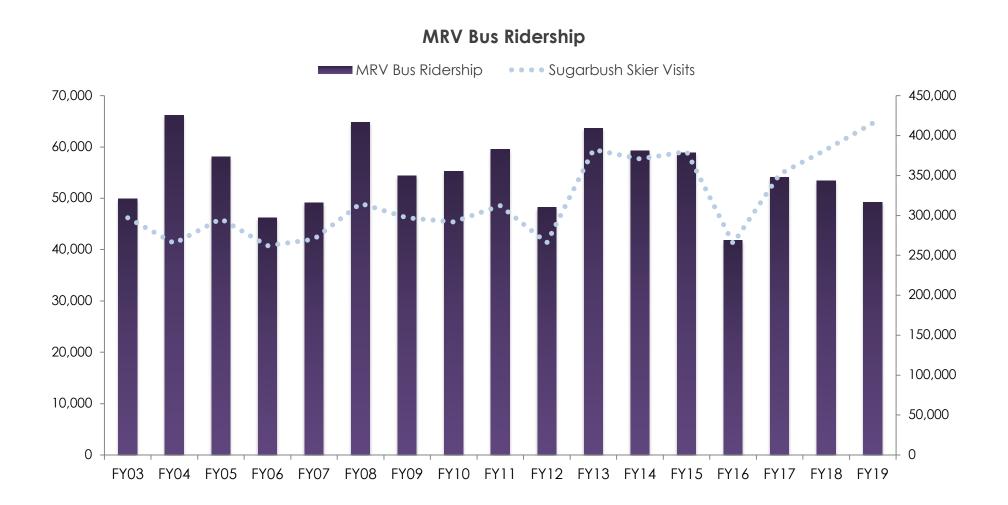


FIGURE 51. SOURCE: GREEN MOUNTAIN TRANSIT (GMT)



SECTION V: TOWN INFRASTRUCTURE

Includes Items #27 & 35 from the Memorandum of Understanding

EMERGENCY SERVICES

2018 fire department call activity depicted in **Figure 52** shows an increase in the number of calls from Waitsfield and Fayston (115 in 2018 vs. 97 in 2017) and an increase in Warren (90 in 2018 vs. 80 in 2017). A similar increase in calls was reported by the Mad River Valley Ambulance Service (MRVAS), with 507 calls across the MRV as compared to 438 the previous year.

Number of Calls to MRV Ambulance & Fire Departments

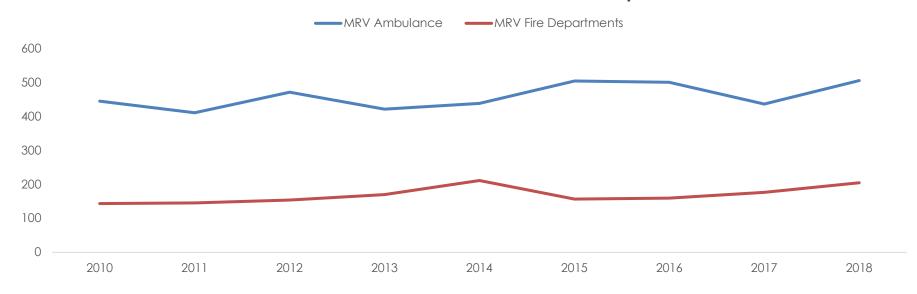


FIGURE 52. SOURCE: ANNUAL MRV TOWN REPORTS, WAITSFIELD-FAYSTON, WARREN FIRE DEPARTMENTS

CRIME

Figure 53 shows that the number of crimes against person and property²⁶ steadily fell until 2014 and then began to increase across all three towns, as reported by the Vermont Crime Information Center and Vermont State Police (VSP)²⁷. However, total crimes (including those not labeled as against person or property) has not risen during this time.

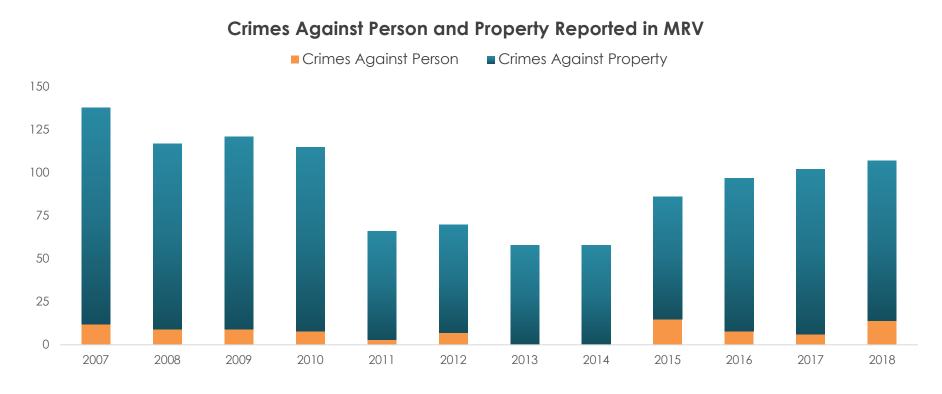
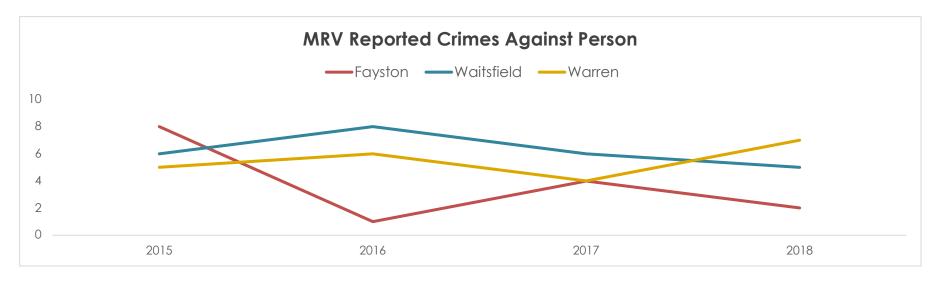


FIGURE 53. SOURCE: VT DEPT OF PUBLIC SAFETY, VERMONT CRIME INFORMATION CENTER, VT STATE POLICE

²⁶ Crimes against property include arson, bribery, burglary, embezzlement, vandalism, theft, and drug violations. Crimes against person include murder, kidnapping, robbery, rape, and assault.

²⁷ In 2014 Crime Reporting methodology changed and the VT Crime Information Center no longer geolocated criminal activity to specific MRV towns. Data after 2014 was provided by the Vermont State Police, whose data captures the vast majority of incidents in the MRV.

Figure 54 shows crime data by town, between 2015 and 2018.



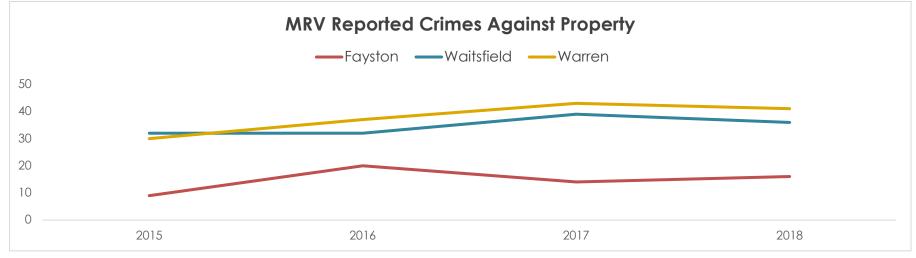


FIGURE 54.SOURCE: VT STATE POLICE

Figures 55 and **Table 3** show the Grand Lists and 2019 Tax Rates for the Towns of Fayston, Waitsfield, Warren. There were only slight changes between 2017 and 2018—Waitsfield and Warren saw increases of 0.5% and 0.6% respectively, while Fayston experienced a 1% increase.

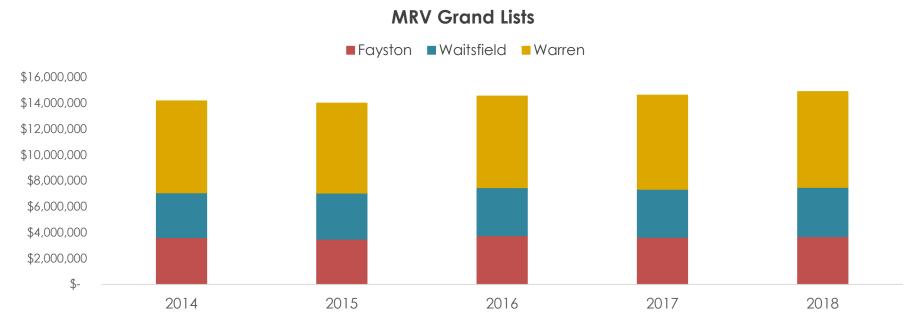


FIGURE 55.SOURCE: TOWNS OF FAYSTON, WAITSFIELD, & WARREN

| 2019 Tax Rates | | | | |
|----------------|--------------------|--------------------|-----------------------------|---------------------------|
| | Homestead Tax Rate | Municipal Tax Rate | Non-Residential Tax Rate | Common Level of Appraisal |
| Fayston | 1.6304 | 0.2652 | 1.5978 | 99.76% |
| Waitsfield | 1.6548 | 0.4343 | 1.6217 | 98.29% |
| Warren | 1.6784 | 0.4 | 1.6448 | 96.91% |



SECTION VI: ENVIRONMENT

Includes items #26, 31, 33 & 34 from the Memorandum of Understanding

ENERGY

While the State of Vermont has set statutory goals for 90% of the state's energy to be derived from renewable sources by 2050, the Mad River Valley remains behind. Increasing energy efficiency and reducing dependence on fossil fuels for electricity, heating, and transportation can help MRV residents and businesses to save money and reduce their carbon footprints. As of 2016, 26% of the energy used in the MRV came from renewable sources²⁸.



²⁸ Vermont Community Energy Dashboard, Energy Action Network

Figure 56 details the breakdown between residential versus commercial & industrial electrical consumption by town. In 2017 residential use overtook commercial use in terms of overall electrical consumption; in 2018, residential use accounted for 55% of the MRV's total usage. Of the three towns, Warren's usage is the highest at almost twice that of Waitsfield in both categories, representing 56% of the MRV's total consumption due to Sugarbush Resort.

However, electrical consumption for the MRV was down almost 8% from 2016 to 2018, with a bulk of that coming from a 32% reduction in commercial consumption in Warren; some of these savings can be attributed to technological advancements employed in snowmaking and other energy efficient facility upgrades at Sugarbush Resort. Between 2016-2018, MRV customers saved an average of \$367,942 annually for energy (electrical and/or thermal) and water use over the first year that energy efficient measures were installed²⁹.

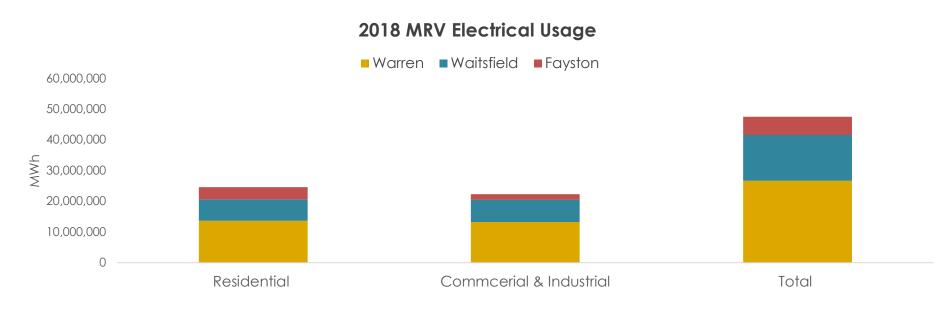


FIGURE 56. SOURCE: EFFICIENCY VERMONT, VT ENERGY INVESTMENT CORP.

²⁹ As residents and businesses transition to electric-based heating and transportation, their electricity usage likely increases; therefore, electricity consumption provides only part of the overall energy usage and savings picture.

Sugarbush resort's monthly peak energy demand for the 2017-2018 season (**Figure 57**) indicates the initiation of snowmaking in November as it did during the previous season, but with decreased overall energy usage. Peak demand was lower for nearly every month compared to the previous year. The peak use figures continue to reflect energy savings resulting from snowmaking infrastructure efficiency upgrades as well as updated building and site lighting and motor/pump upgrades. Between 2002 and 2018, sugarbush has reduced its total energy usage by 42%.

Sugarbush Monthly Peak Demand

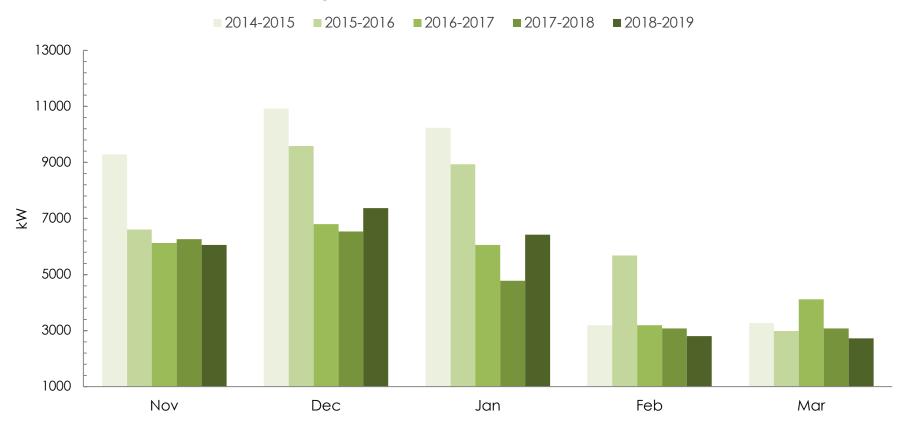


FIGURE 57. SOURCE: SUGARBUSH RESORT

WATER QUALITY

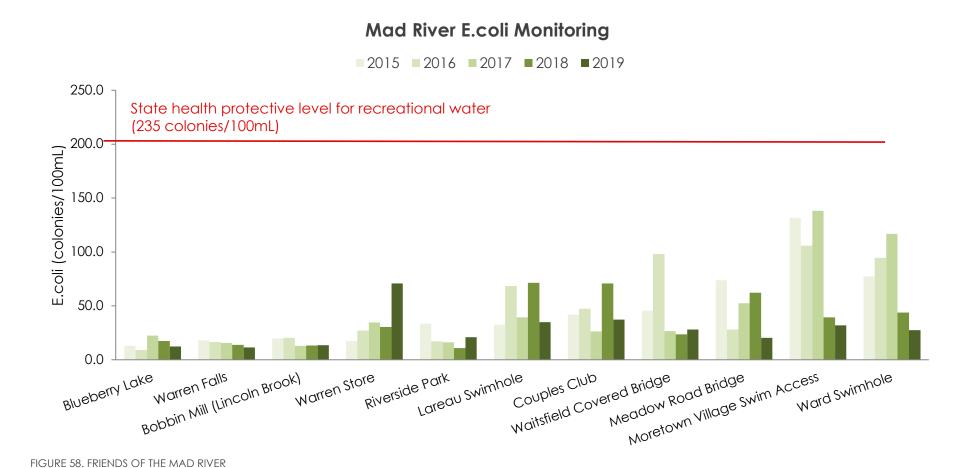
Since 1985, Friends of the Mad River³⁰ has been monitoring pollutant levels at approximately 30 sites along the main stem and major tributaries throughout the watershed as part of its volunteer-driven Mad River Watch program. Friends collects nutrient data, including phosphorus and nitrogen, for use in directing stewardship efforts across the watershed. Friends collects bacteria data, like *E.coli*, because it can be a valuable indicator of the health and safety of surface waters, especially in areas highly prized for recreational uses. It is estimated that at the state health protective level (235 colonies of *E. coli* per 100 mL water), approximately 8 out of every 1,000 swimmers are likely to contract a waterborne illness.

E. coli levels are dependent on environmental factors at the moment of sample collection; for instance, data collection on a dry, low-flow day may not capture pollution originating from stormwater run-off. The positive relationship between E. coli and stream flow at many of the tested sites suggested that the source(s) of the E. coli may be related to surface and stormwater runoff, especially from areas contaminated by manure.



³⁰ Friends of the Mad River is a member-supported, nonprofit organization, founded in 1990, dedicated to stewarding the Mad River Valley's healthy land and clean water for our community and for future generations. Friends bring people together to: learn about the health of the land and water; conserve our valued natural resources; and celebrate this special place.

Figure 58³¹ shows that *E. coli* counts generally increase from upstream to downstream areas. While 2019 *E. coli* sampling did not capture data on higher-flow days, long-term monitoring suggests that Folsom Brook (Warren), High Bridge Brook (Waitsfield), and Welder Brook (Moretown) watersheds contribute higher than normal phosphorus to the ecosystem.



³¹ Mad river upstream to downstream areas shown left to right.

LAND CONSERVATION

The Mad River Valley has a long history of participating in land conservation efforts. Beginning in the 1980's with the inception of the Mad River Valley Planning District and the creation of the Rural Resource Protection Plan, the conservation of agricultural, scenic, historic, ecological, and riparian resources was identified as an important planning goal. As a result, there is an exceptional portfolio of public lands and conserved private lands in the MRV. This collaborative effort has involved non-profit organizations and entities such as the Vermont Land Trust, Mad River Watershed Conservation Partnership, Trust for Public Land, local municipalities, state agencies, and recreational organizations such as the Catamount Trail Association, Mad River Path Association, Mad River Riders, and Mad River Valley Recreation District (MRVRD).

This portfolio of national and state lands, town forests, family farms, productive forestlands, and riparian lands contribute to the quality of life and economic vitality in the MRV. These protected private and public lands also help sustain key economic sectors identified in the 2014 MRV Economic Study, including Agriculture and Food Production, Dining and Lodging, and Health Care & Wellness.



As shown in **Figure 59**, the MRV encompasses 68,548 total acres. Approximately 4,383 acres (6% of the total land area) of privately-owned land is protected by conservation easements. An additional 11,565 acres (17% of total land area) are in public ownership by municipalities, the State of Vermont, or the U.S. Forest Service. Collectively, these conserved lands and public resources comprise 15,948 acres, or 23% of the landscape in the MRV³².

In 2019, a conservation easement on the previously conserved Anne Burling property was enhanced to facilitate the transfer of the land to new farmers. This upgraded conservation easement protected four acres of land to provide for farmer housing and ensure the long-term affordability of the land to farmers.



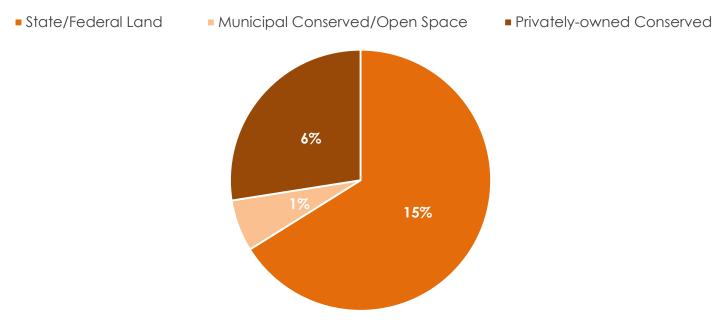


FIGURE 59. SOURCE: VERMONT LAND TRUST

³² Warren parcels include Eaton parcel (78 acres), Riverside Park (5 acres) and former Jacobs parcel (50 acres). These parcels are not subject to a conservation easement, although they are managed for public use and natural resource protection goals.