



2008-2009 Annual Data Report for the Mad River Valley

Prepared For: Mad River Valley Planning District

November 2009



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This report was primarily authored by Erin Roche and William Sawyer at the Center for Rural Studies at the University of Vermont. Caitrin Noel, Intern at the Mad River Valley Planning District, was instrumental in assessing the data and provided data and narrative for several sections of the report. Guidance and direction were provided by Joshua Schwartz, Executive Director of the Mad River Valley Planning District.

Data for this report was taken from a variety of public sources, as well as contributions from Sugarbush Resort, Mad River Glen and the Mad River Valley Chamber of Commerce. The Valley Futures Network and Friends of the Mad River also contributed to this report.

Cover Photography by John Atkinson



Table of Contents

Executive Summary.....	1
Introduction	2
Section 1: Economics	3
Section 2: Housing and Population.....	7
Section 3: Employment.....	13
Section 4: Traffic and Transit	16
Section 5: Town Infrastructure	18
Section 6: Environment.....	20



Executive Summary

The Mad River Valley (MRV) has seen a recent increase in revenues and its economy appears healthier than Vermont's overall. While the Valley has attracted business from most industries, its employment landscape remains dominated by the hospitality sector. Winter occupancy rates in the MRV were above five year highs in 2008. And in terms of skier visits, the 2008-2009 season mirrors that of the previous season, based on skiers counted on Sugarbush Resort monitoring days.

Slight increases in population, while larger than Vermont's overall, have been estimated since the 2000 Census. Most of the population growth has likely come from adult migration into the Valley. An increase of sales of primary residences in the MRV between 2002 and 2005 suggests that the population may have grown faster than estimated, though in more recent years home sales have retreated to more usual numbers. Housing in the MRV remains tight, with just 1% of housing available at a given time (2000). Sugarbush Resort employees, however, are usually able to secure housing in the MRV with 82% of those employees surveyed residing in the MRV during the 2008-2009 season. One cause for concern is the continued high cost of housing in the MRV, which seems to be moving further above the Vermont average over time.

Traffic does not appear to be a bottleneck to quality of life in the Valley, as traffic is typically at its optimal "free flow" speed. Some public transportation options exist, though services are limited, for both seasonal riders and senior/disabled riders.

Environmentally, Mad River Valley residents seem to be mobilizing around energy concerns, with several non-profits forming to address energy conservation in the MRV. Sugarbush Resort energy and wastewater flows have remained stable over the past 2 years, though more years of data will demonstrate whether this is a long term trend.



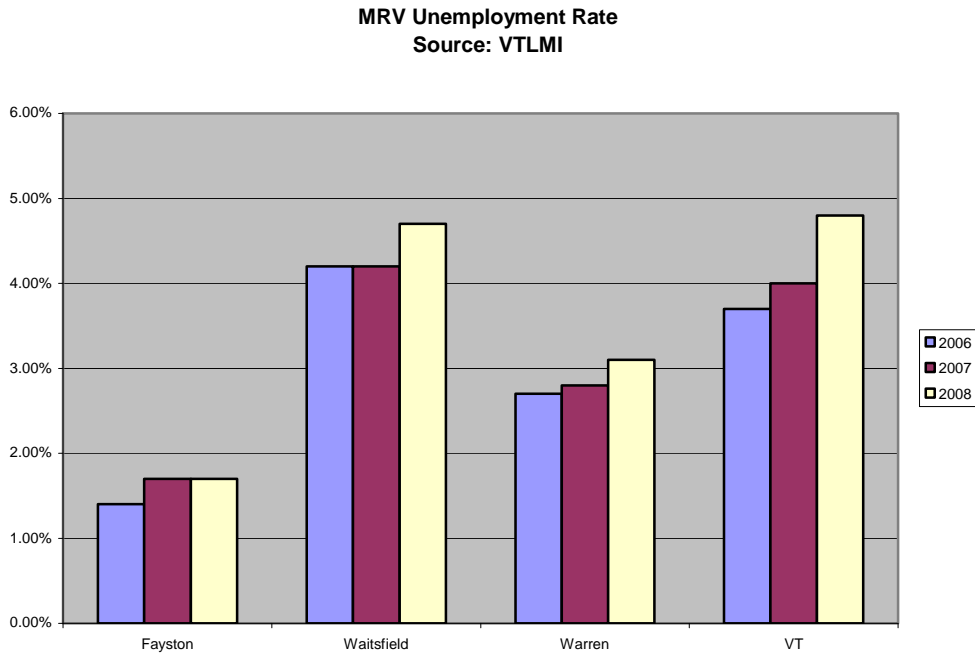
Introduction

This report was prepared for 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.

The Center for Rural Studies is a nonprofit, fee-for-service research organization that addresses social, economic, and resource-based problems of rural people and communities. Based in the College of Agriculture and Life Sciences at the University of Vermont (UVM), the Center provides consulting and research services in Vermont, the United States, and abroad. Primary emphasis is placed upon activities that contribute to the search for solutions and alternatives to rural problems and related issues.

Section I: Economics

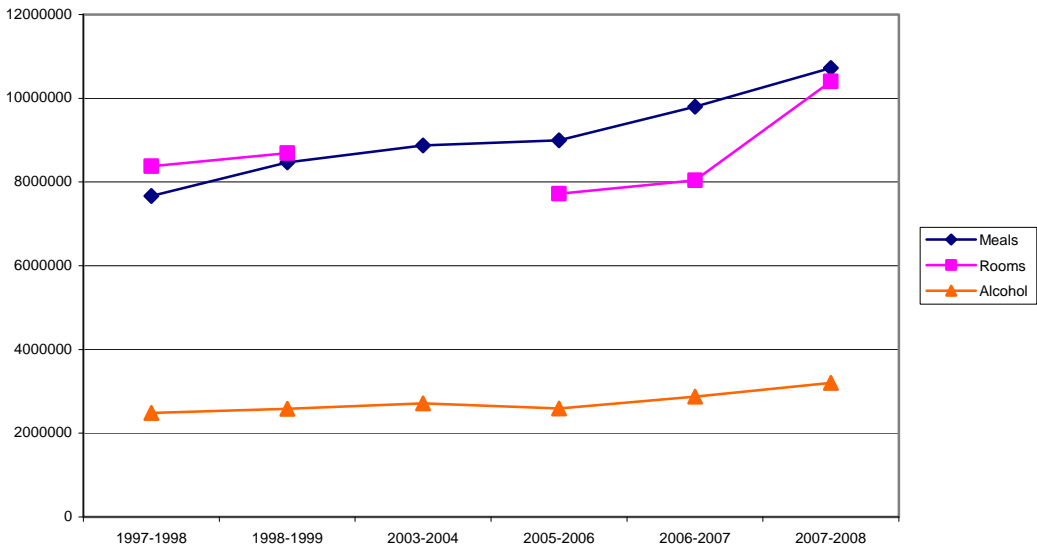
The Economics section includes Items #35 & 36 from the Memorandum of Understanding.



Employment data used in this report comes from the Vermont Department of Labor (VTLM I). Overall, at the time of this writing, the unemployment rate in the Mad River Valley remains below that of Vermont. Although the rate has increased in each of the Valley towns, the rate of increase for each town has been lower than that of Vermont as a whole. Note that the Vermont data is inclusive of data from the Mad River Valley towns.

The unemployment rate in July 2009 (the most recent month available) was 6.5% for Vermont overall. Fayston was 1.6%, Warren was 5.1% and Waitsfield was 9.5%. Due to current unemployment trends, it is likely that the 2007 and 2008 numbers will be adjusted upward when the VT Dept. of Labor releases the 2009 annual numbers in 2010. Unemployment figures are updated by the state when it deems appropriate to do so.

MRV Taxes
Source: VT Dept of Taxes

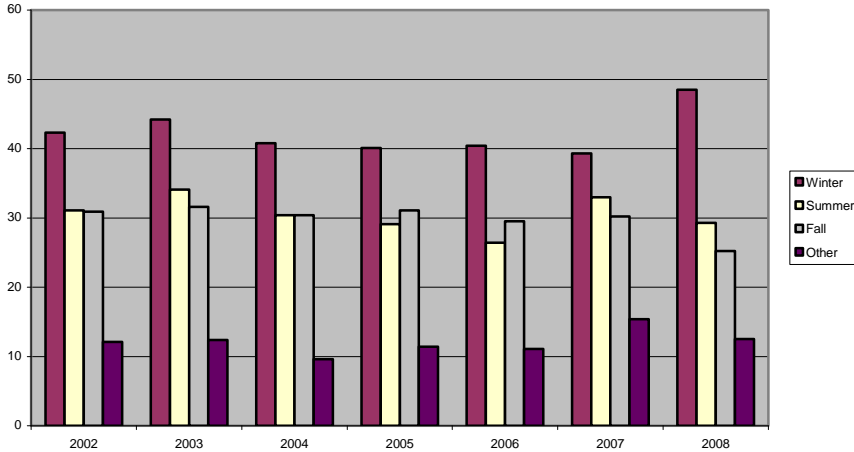


The state of Vermont collects taxes on accommodations, restaurant meals and alcohol sold within the state. While the revenue collected from these taxes in MRV towns does not directly flow to the MRV, the trend informs as to the health of these sectors in the MRV.

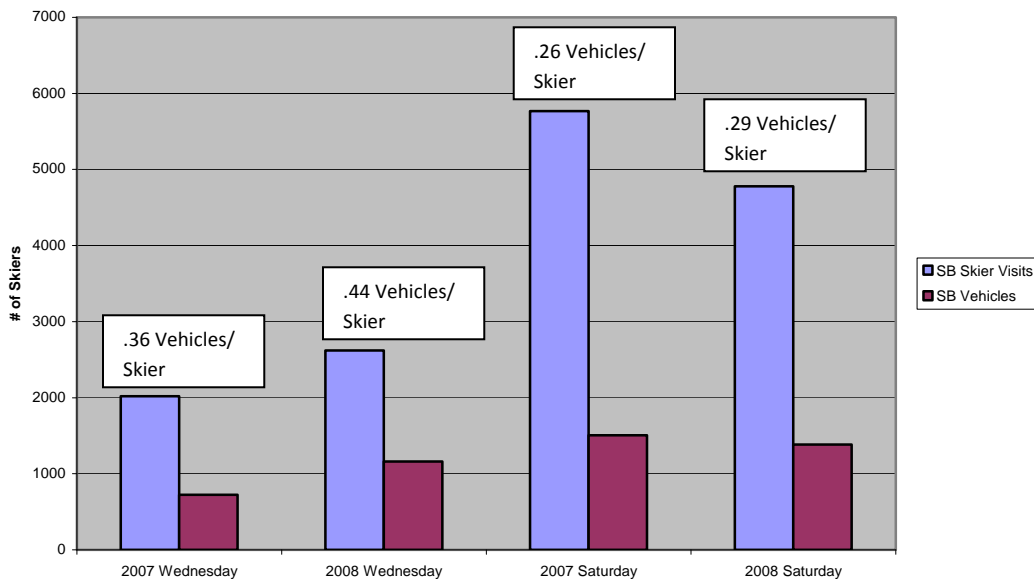
The general trend shows increasing revenue from overnight accommodations and restaurant meals, while revenue from sales of alcohol shows just a slight increase over time. It should be noted that Fayston tax receipts are not included in the Meals or Alcohol data, as several years of data were not available as the state did not release the data when a town has insufficient establishments to preserve anonymity.

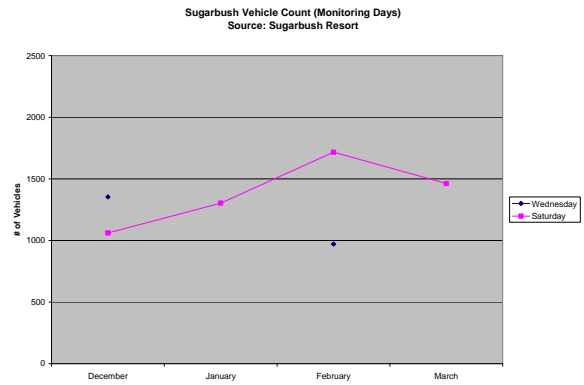
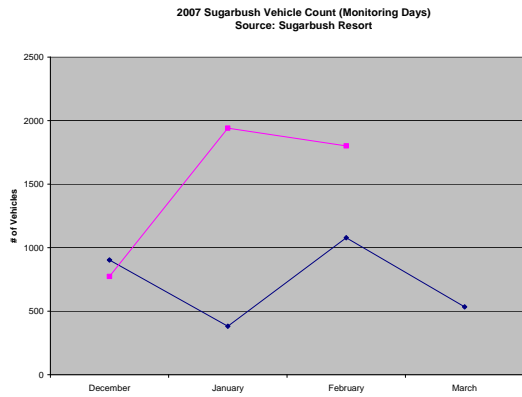
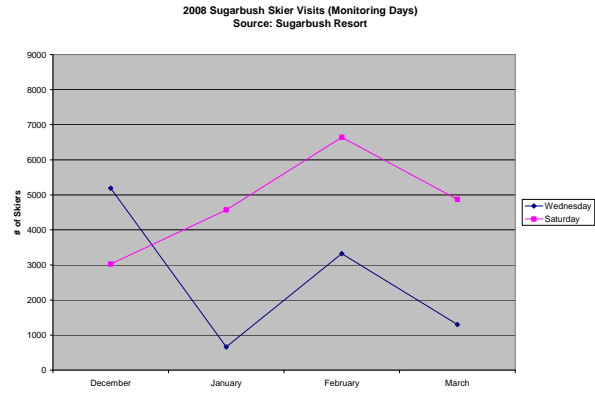
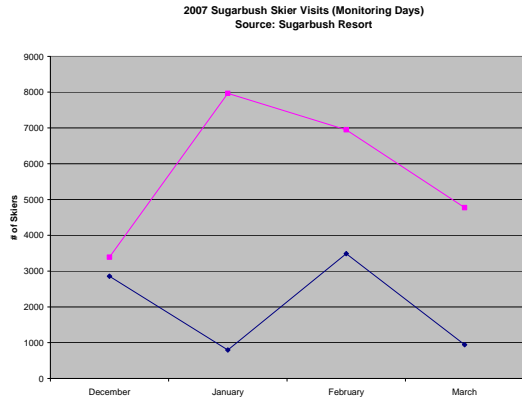
Tourism remains a driving force behind the Mad River Valley economy. Based on data provided by the Mad River Valley Chamber of Commerce, 2008 saw an increase in winter occupancy of 9 percentage points. However, other seasons were down or flat during 2008, compared to previous years. Historically winter occupancy is approximately 40%, while summer and fall occupancies are approximately 30%. The “other” season includes May and November, as defined by the Chamber of Commerce.

Mad River Valley Occupancy Rate by Season
 Source: Mad River Valley Chamber of Commerce



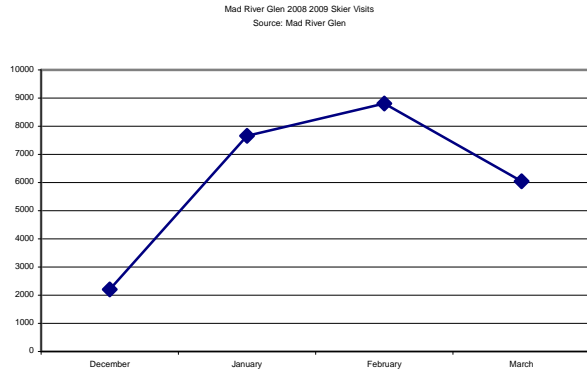
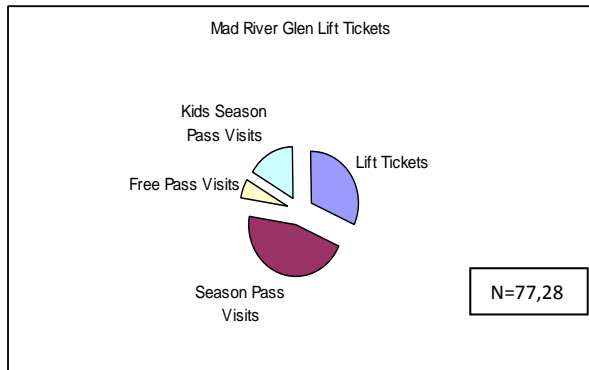
Average Sugarbush Skier Visits and Vehicle Counts (Monitoring Days)





Sugarbush Resort reported receiving 287 inches of natural snow in 2008-2009, 2 inches more than in 2007-2008. While snowfall remained unchanged, the winter weather pattern presented many challenges in 2008-2009, with unusual freeze thaw cycles in December, January and February which caused challenges with snow cover on the mountain. There were above normal moisture levels, but the precipitation did not necessarily fall as snow. By contrast, in 2007-2008 Sugarbush Resort reported a generally favorable weather pattern.

Total annual skier visits for Sugarbush Resort in 2007-2008 were 314,934, compared to 296,340 in the 2008-2009 season. Sugarbush skier visits and vehicle counts are counts done on one Wednesday and one Saturday per month and do not represent the total visits or vehicles for each month.



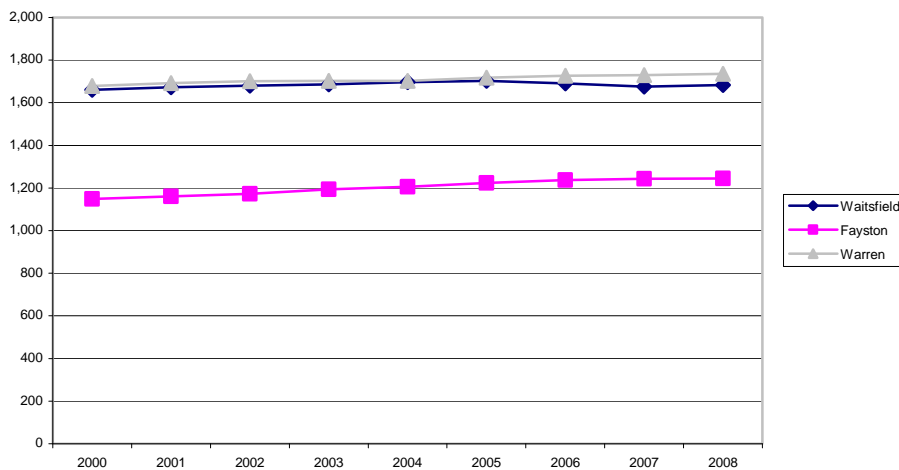
Mad River Glen is not part of the MOU, but graciously provided the above data for this report. The data provided is not meant for comparison to Sugarbush Resort, but simply to provide a snapshot of Mad River Glen. Mad River Glen experienced nearly 25,000 skier visits in the 2008-2009 season, plus nearly 50,000 visits from season pass holders.

Section II: Housing and Population

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

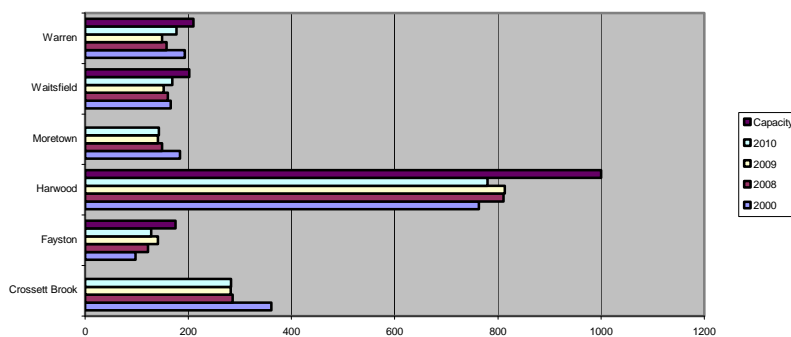
To analyze trends in housing and population, this report reviews several different indicators, including growth estimates, school enrollments, number of homes sold, age of residents, and births and deaths in the MRV.

Population Growth Estimates
Source: US Census



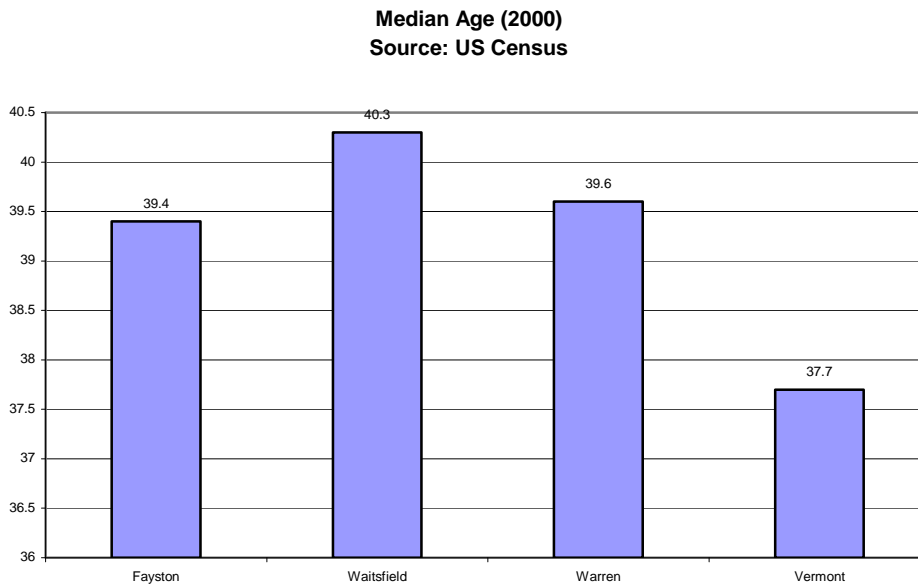
Since the last census count in 2000, population growth has been estimated for towns in the MRV. Overall the MRV was expected to see its population increase from 4488 to 4654 in 2008, a 3.7% increase over eight years. This rate of increase is nearly twice the growth estimate for Vermont overall in the same time period (1.9%). These numbers are revised every year by the U.S. Census Bureau and will be checked against the next national headcount during the 2010 Census. In 2011, data from the 2010 census will become available.

Mad River Valley School Enrollment



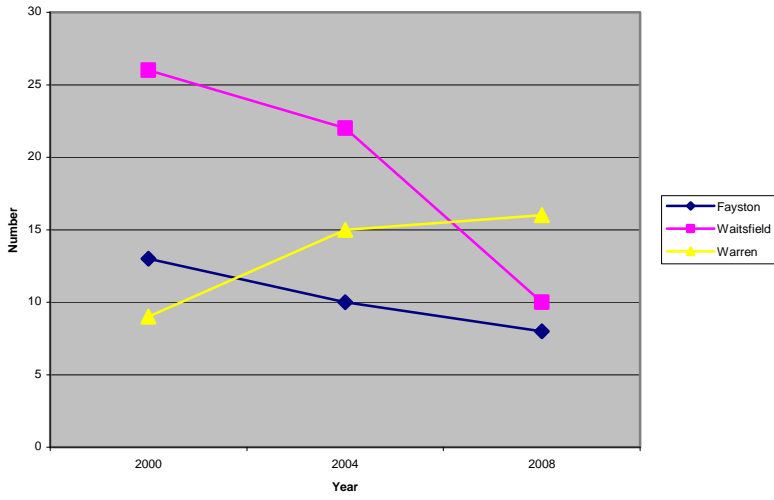
Another indicator of population change is school enrollment. Enrollment in MRV schools has remained fairly constant in the past 2 school years, with only Fayston seeing a small increase in enrollment. For all elementary schools except Fayston, enrollment is currently at or below 2000 levels. The capacity data was provided by each school.

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 2000, MRV towns were older than Vermont overall.

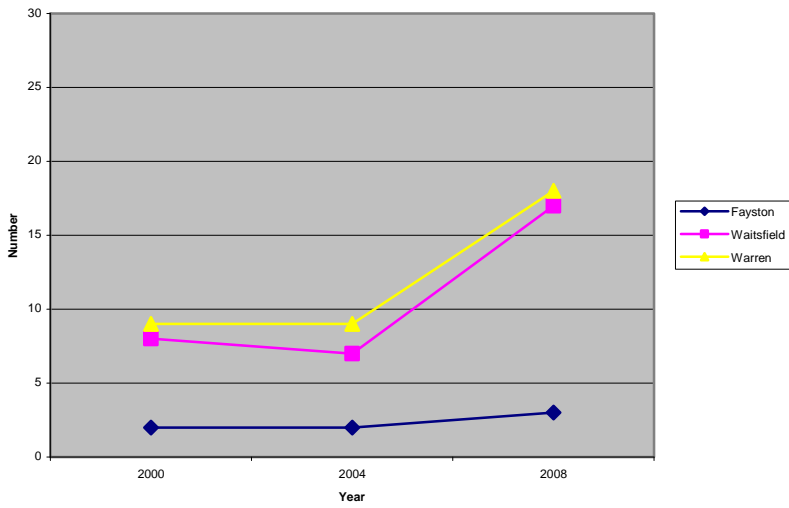


In summary of this section of the report, the Mad River Valley's total population is only expected to have grown by about four percent, the median age in the Valley is about 40 years and school enrollments have been unchanged in the past two years.

Births in Mad River Valley
Source: VT Dept of Health, Town Reports

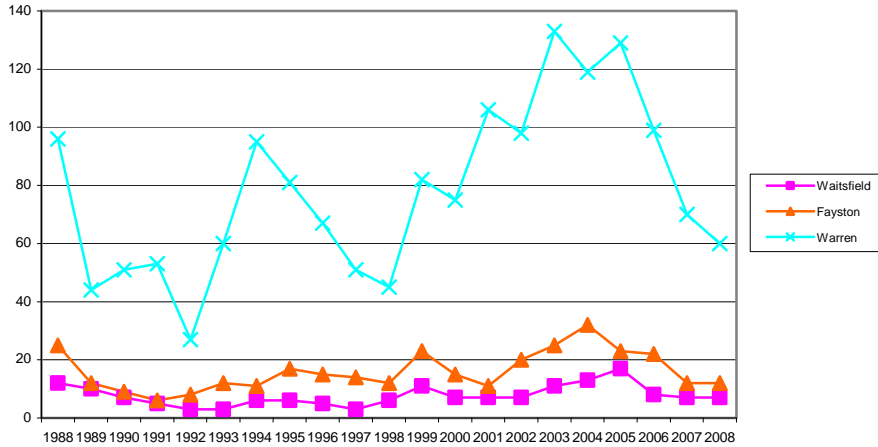


Deaths in Mad River Valley
Source: VT Dept of Health, Town Reports



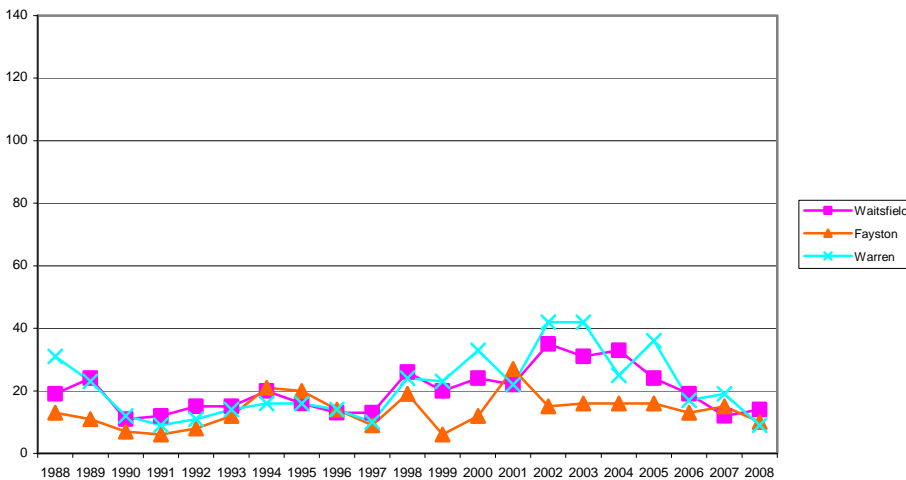
The number and types of homes sold in the MRV provides additional insight into the growth of the Valley. Vacation home data are particularly insightful, as these owners are likely not included in general population or school enrollment statistics.

Vacation Homes Sold
 Source: Vermont Tax Department



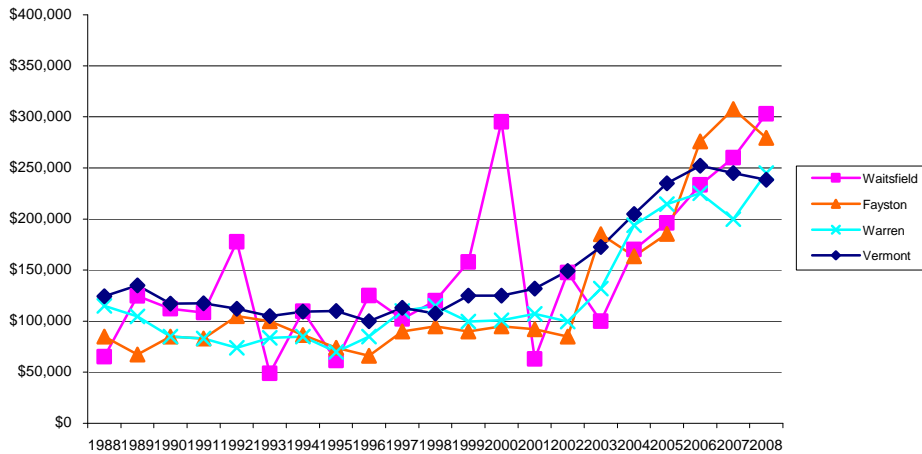
As this chart shows, the number of vacation homes sold has declined for each of the three towns, with Warren experiencing both the biggest increases and declines. Vacation homes include condominiums that are not primary residences, as well as other non-primary residence homes. Most of these vacation homes are found closest the Resort. The most recent year reported is 2008. Based on national and statewide trends, 2009 is expected to be a volatile year for home sales.

of Primary Residences Sold
 Source: VT Housing Data



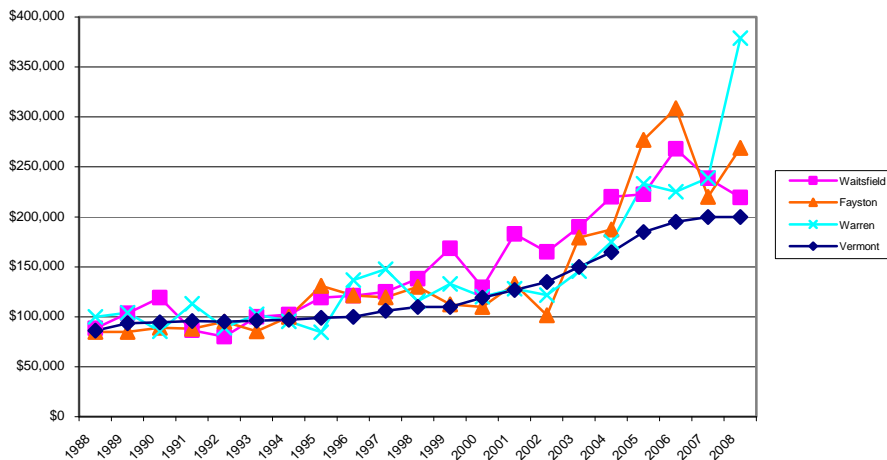
With the exception of the volatility of the vacation home sales in Warren, sales of primary and vacation homes have remained fairly constant. The number of primary homes sold has declined somewhat in recent years, especially in Warren, back to 1990s levels. For reference, in 2008 there were 7 vacation homes sold in Waitsfield, 12 in Fayston and 60 in Warren. In the same year, there were 14 primary residences sold in Waitsfield, 9 in Fayston and 9 in Warren.

Median Vacation Home Sales Price
Source: Vermont Tax Department

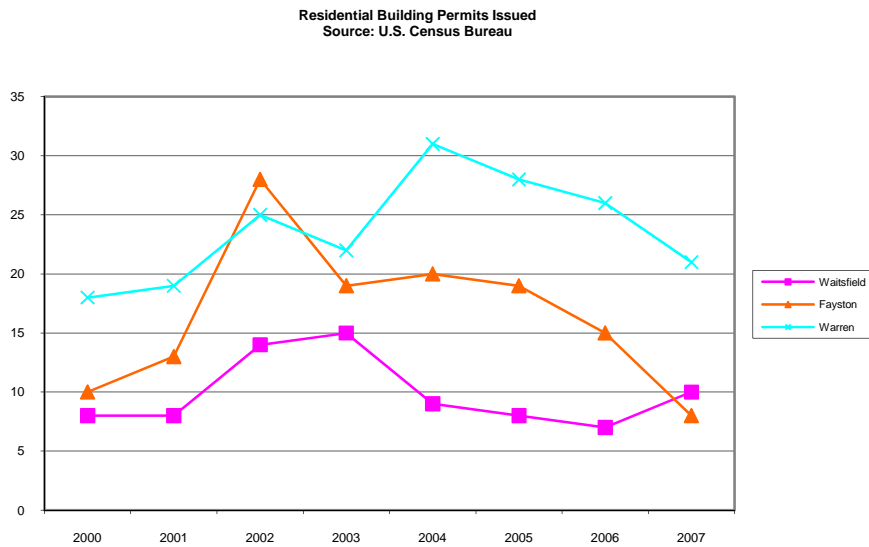


For reference, in 2008, the median vacation home price in Waitsfield was \$303,000. In Fayston, the median vacation home cost \$280,000 and in Warren it cost \$245,000. On the other hand, the median vacation home price for Vermont overall was \$239,000.

Median Primary Residence Sales Price
Source: Vermont Tax Department

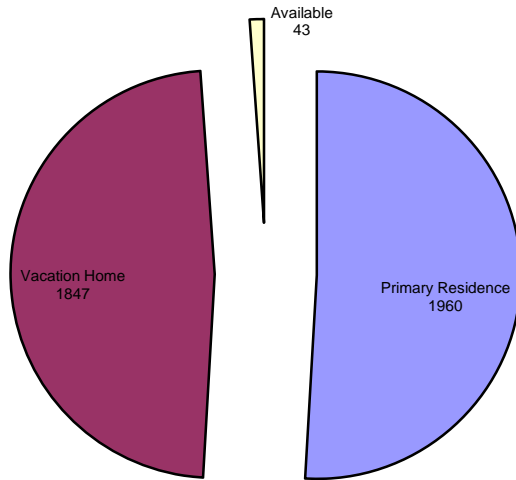


Unlike the number of homes sold, the price of homes in the Valley for both primary and vacation homes has climbed since 1998. Historically, home and vacation home prices in the MRV have tracked with statewide prices. However, in recent years, home prices in the MRV have been consistently above the Vermont median. For reference, the median home in Waitsfield cost \$219,000 in 2008 and \$269,000 in Fayston, while in Warren’s median home price was \$379,000. The overall average for Vermont was \$200,000.



One leading indicator of new home construction is zoning permits. This chart shows that while the number of permits issued for Waitsfield remained relatively constant each year from 2000 to 2007, Warren and Fayston both experienced declines in that time period. With the most recent data from 2007, this trend does not reflect a likely dip in permitting for 2008-2009 due to the prevailing economic climate.

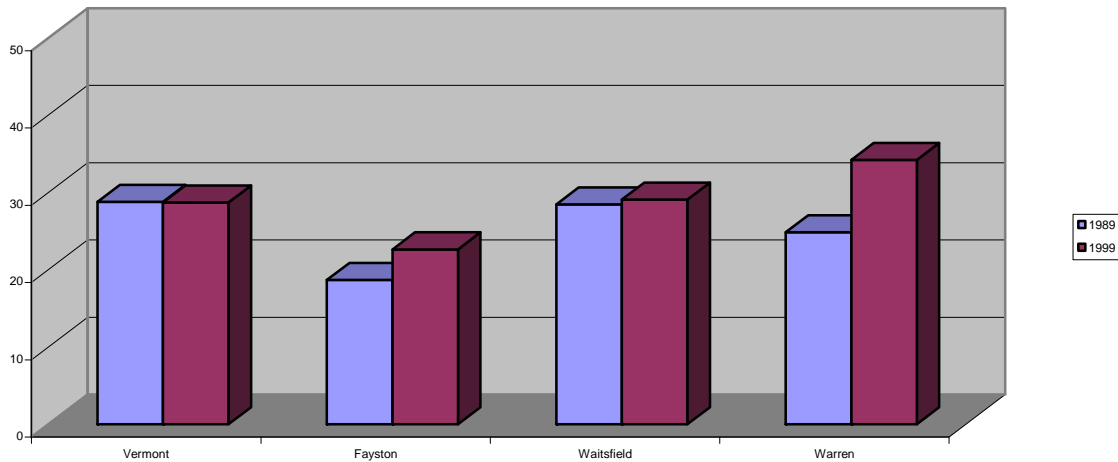
Mad River Valley Housing, 2000
 Source: U.S. Census Bureau



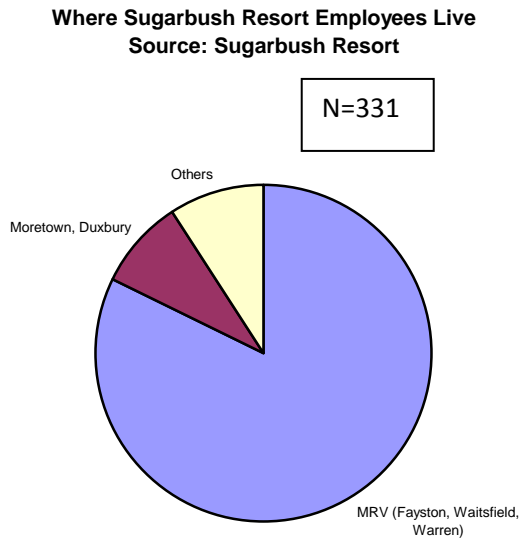
A snapshot of available housing shows that in 2000, housing was split evenly between full-time and seasonal occupancy, with just a small percentage of housing available at the time of the Census.

Affordability of housing is an ongoing concern. While sale price and housing availability provide some insight into the affordability of homes in the Valley, another metric is to look at what percent of residents' income goes to pay for housing. Thirty percent of income is a commonly accepted threshold for what is considered affordable housing. The chart below shows that, historically at least, residents of the MRV are just about as likely as Vermonters overall to pay 30% or more of their income for housing. Note that the most recent data available is from 1999.

Percent Paying 30% or more of income for housing



Data from Sugarbush Resort suggest that there is enough housing in the MRV for most of its employees. Based on a survey of its employees, in 2008-2009 season 82% of its employees who completed the survey lived in one of the 3 MRV towns. There is no statistical difference of residence among those who rent versus those who own a home.



Section III: Employment

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

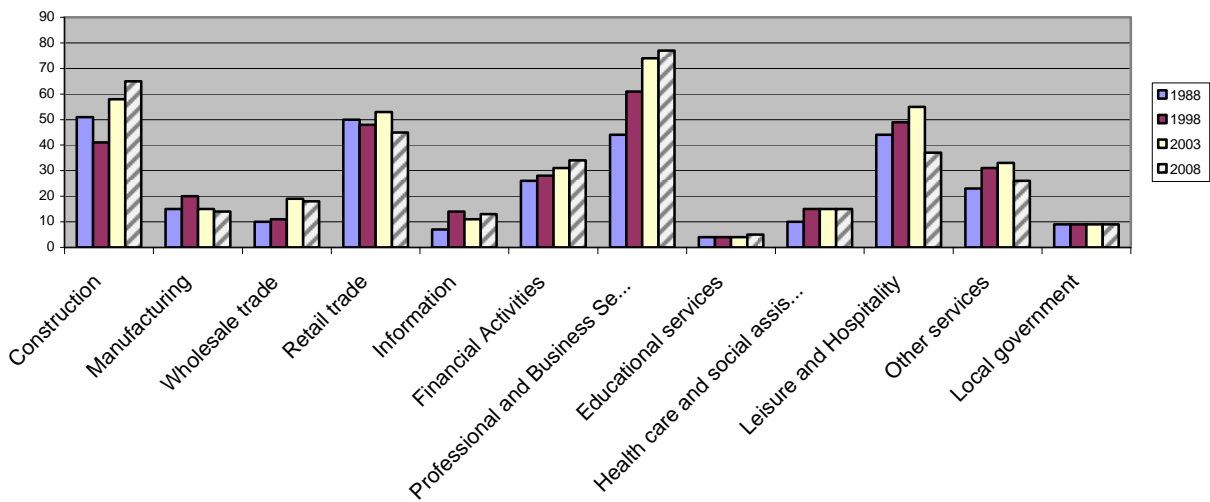


As discussed earlier in this report, the unemployment rate in the Mad River Valley has increased somewhat over the past few years. However, not only is the unemployment rate lower in the Mad River valley than in Vermont overall, but the increase in 2008 was far less in the Mad River Valley than in Vermont overall. This may in part be due to the better than average ski season in 2008. Again, note that the Vermont data includes the Mad River Valley.

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 which are well-represented in the MRV are included in the charts below. Descriptions of each industry presented is as follows:

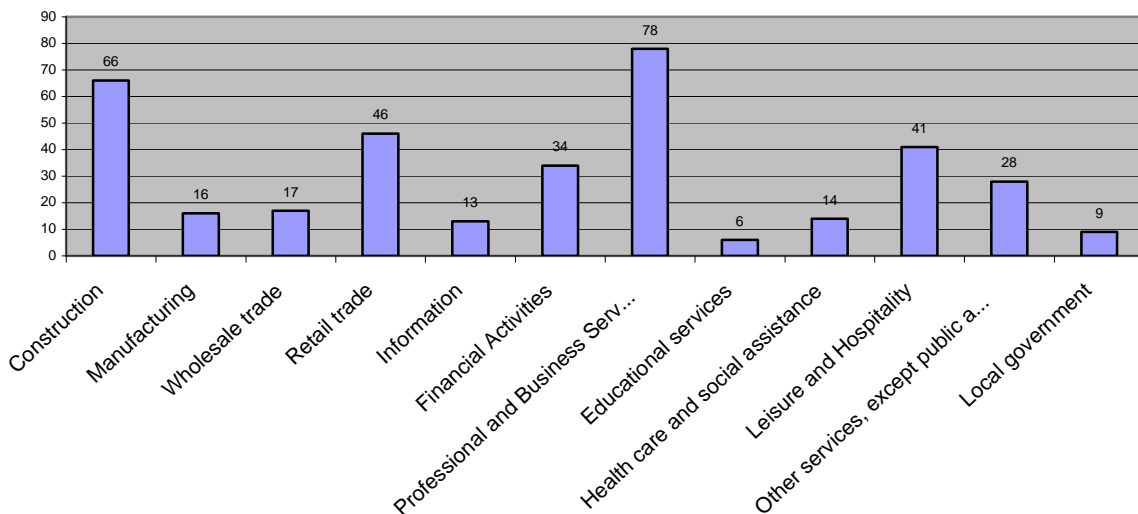
- Construction industry includes building construction, engineering and contractors
- Manufacturing includes manufacturers of durable (wood products, mineral products, transportation equipment, furniture, etc.) and non-durable goods (food, beverage, tobacco, and printing)
- Retail trade includes sellers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

Number/Type of Businesses in MRV (LMA)
Source: VTLMI, 2008



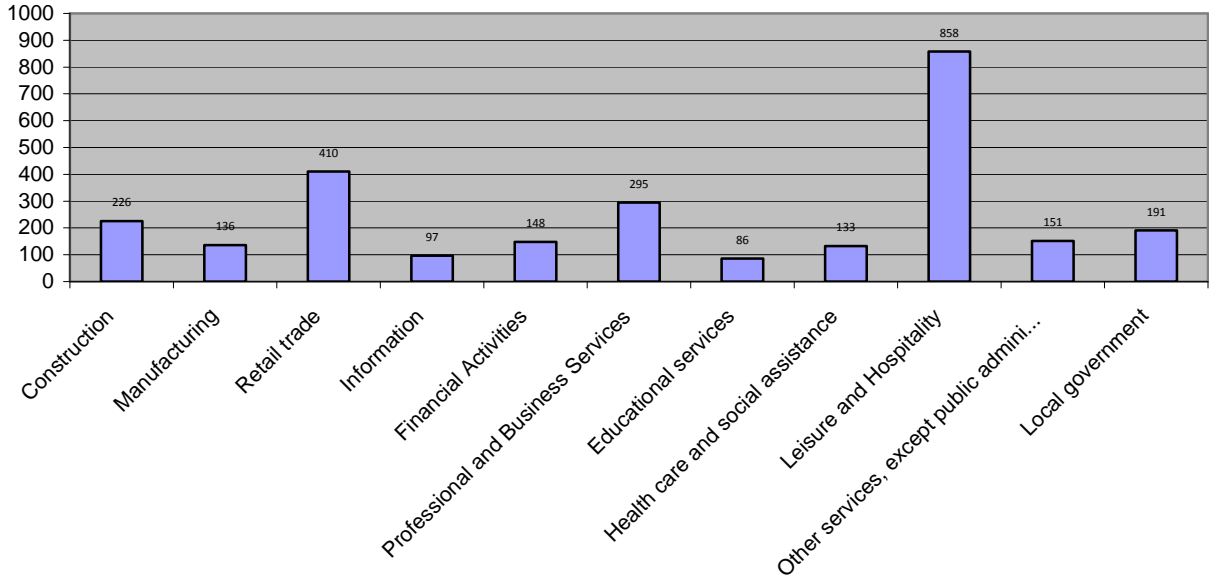
Over the past 20 years, the number of firms in each industry has remained fairly steady. However, the professional services industry has gone from 44 firms in 1988 to 77 firms in 2008. The leisure and hospitality industry saw an increase through 2003, however, the number of firms has declined in the past 5 years.

and Types of Businesses in MRV (LMA)
Source: VTLMI, 2008

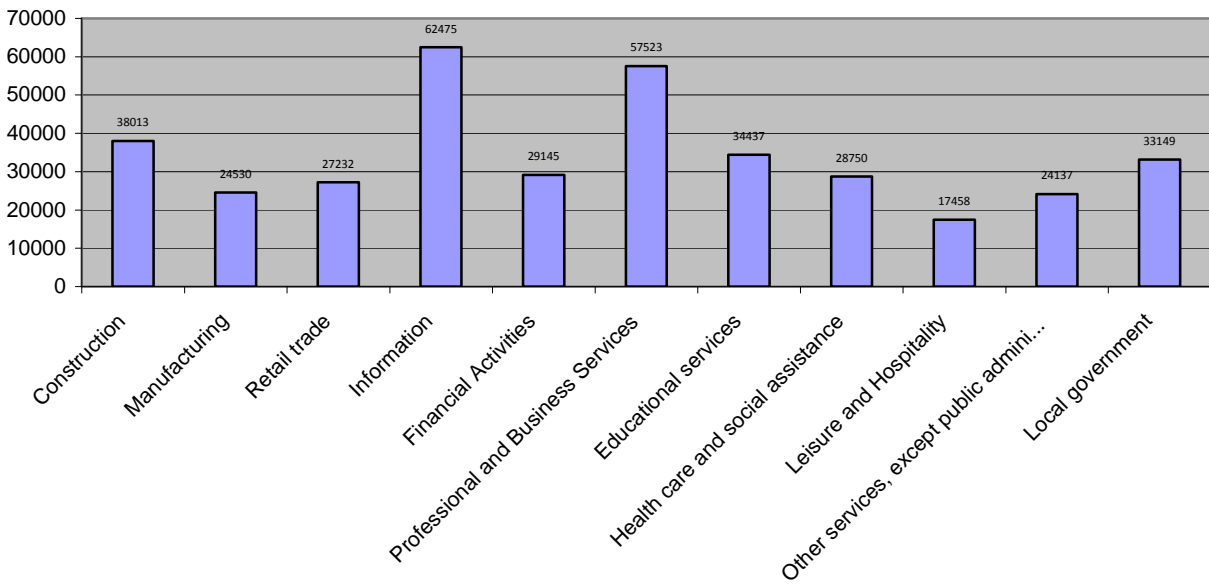


While the Mad River Valley has attracted businesses from most major sectors, the employment landscape remains dominated by the hospitality sector. There are a sizeable number of business services firms, but on average, each firm only has about four employees.

of Jobs by Industry (LMA)
Source: VTLM, 2008

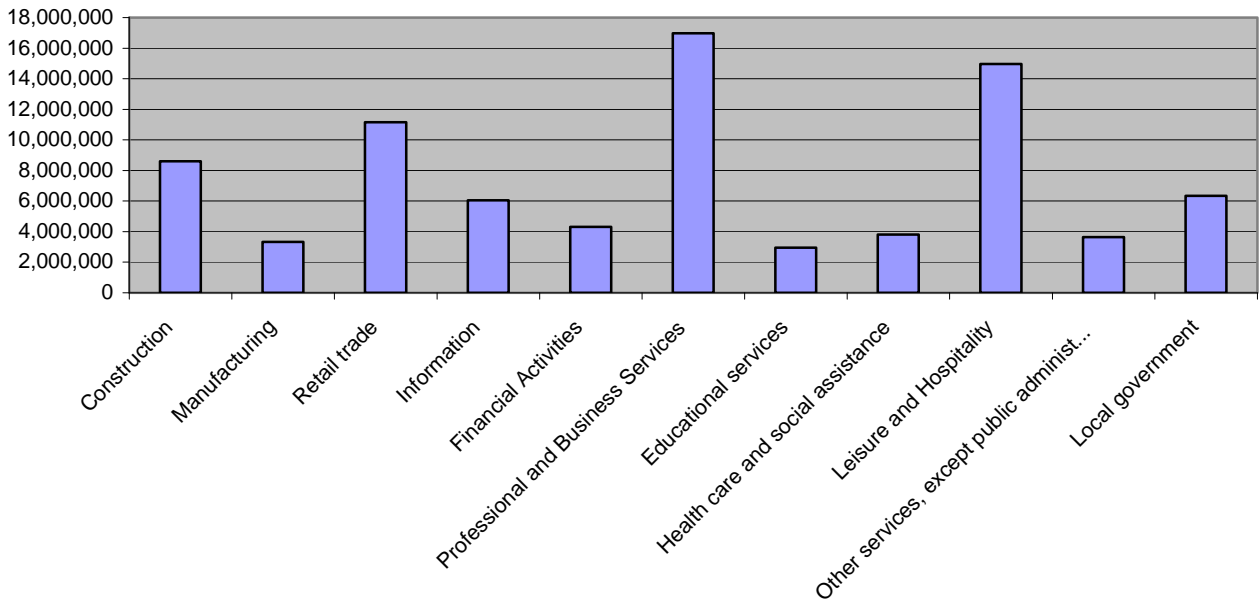


Annual Avg Wage by Industry (LMA)
Source: VTLM, 2008



The hospitality industry employs the most people in the Mad River Valley, but at the same time has the lowest average wage. The average wage in the Mad River Valley ranges from just under \$20,000 in the hospitality industry to over \$60,000 in the information industry. The third largest employment sector, Professional Services has the highest total wage (number of employees multiplied by the average wage).

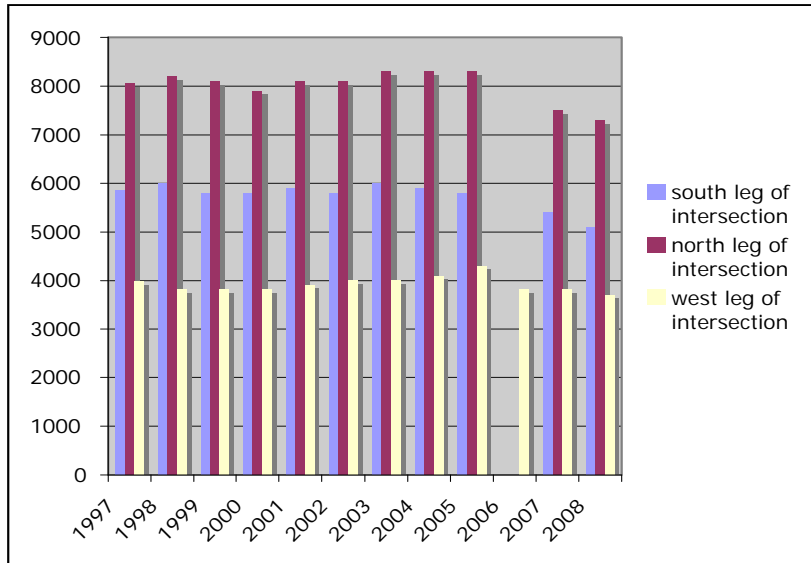
Total Annual Wages by Industry (LMA)
Source: VTLM, 2008



Section IV: Traffic and Transit

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

AADT: Intersection of Route 100 and 17

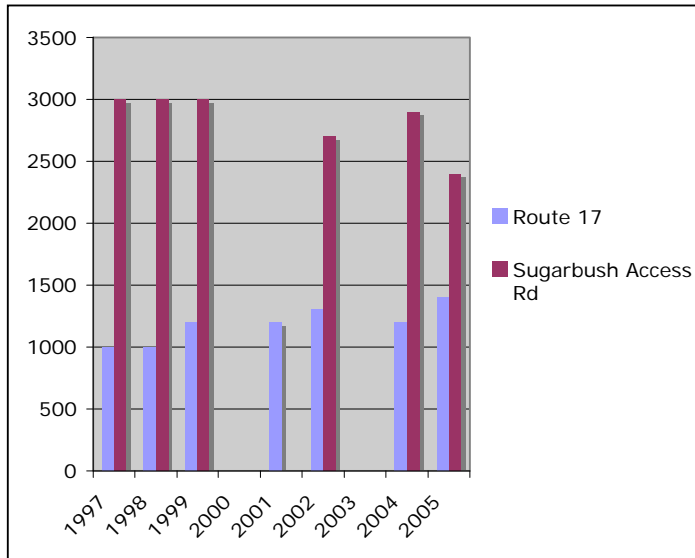


Annual Traffic Summary

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 1975 to 2008. 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 vehicle traffic in 2007 and 2008 (no data exists for 2006).

AADT: Route 17 and the Sugarbush Access Road



There was a slight increase in vehicle traffic on the Sugarbush Access Road in the 1990’s, whereas more recently (2005), annual vehicle trips dipped closer to 1980’s levels. Average annual daily traffic measured on Route 17 west of German Flats Road has increased by more than 100% over 30 years, from 680 in 1976 to 1400 in 2005.

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

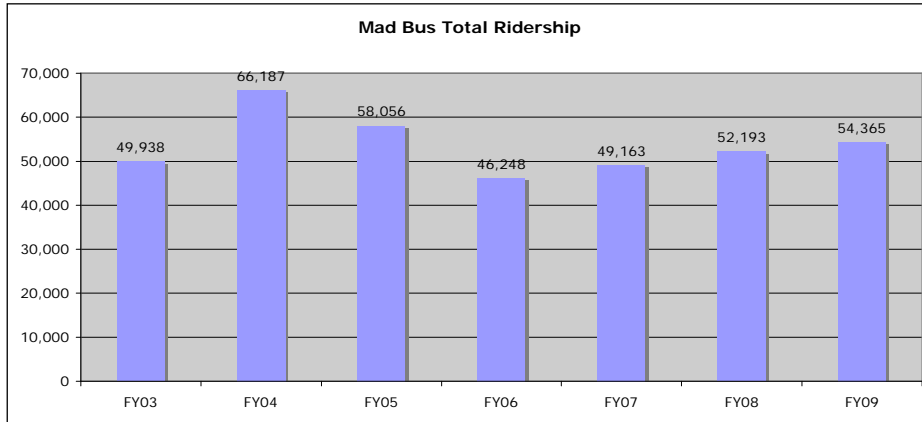
Evaluation of changes in LOS at MRV intersections is performed by the CVRPC on an as-needed basis (Steve Gladczuk, personal communication). Since traffic generally flows unobstructed except at the busiest times of year, the LOS for all transportation infrastructure throughout the area are considered to be at grade A.

Transit

Mad Bus Service

The Green Mountain Transit Agency (GMTA) is a private not-for-profit organization providing public transportation services in Washington, Lamoille and Orange Counties. GMTA began operating service in the Mad River Valley in late 2003 under the name of the Mad Bus. Year-round service on the Valley

Floor route (connecting Warren, Waitsfield, and Lincoln Peak) was offered from October 2003 until April 2005, at which time it was scaled back to seasonal service due to low ridership. The chart below shows ridership from 2003 through 2009. However, since 2005 all service operated by GMTA in the Valley has been seasonal service. In FY08, GMTA operated 6 Mad Bus routes, all free of charge except the SnowCap Commuter. During FY08, the Mad Bus ridership increased by 6%, (52,193 in FY08 versus 49,165 in FY07).



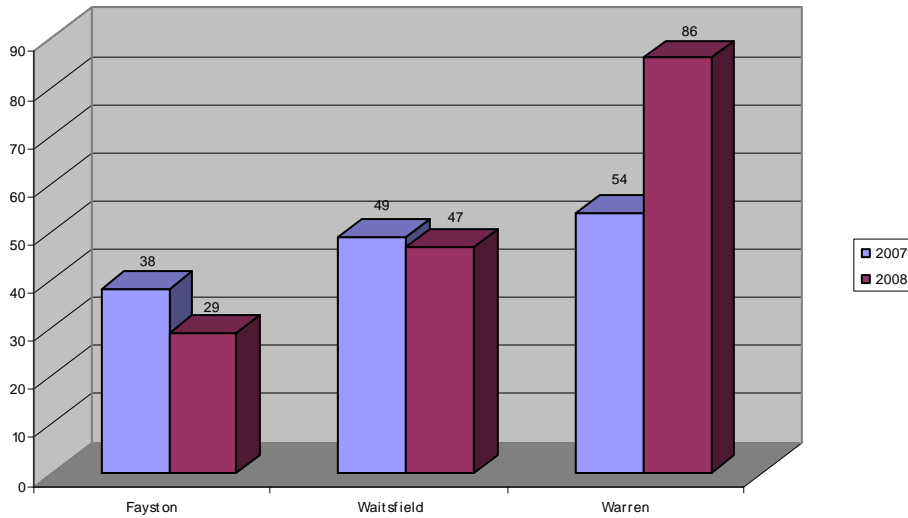
Elderly and Disabled Service

In addition to the MadBus service, GMTA also provides medical transportation service to those who qualify, meal site programs, the senior center and shopping trips. In FY08, GMTA provided Medicaid and Elderly and Disabled transportation service to 37 residents in Fayston, Waitsfield and Warren totaling 2,159 trips or 51,864 miles.

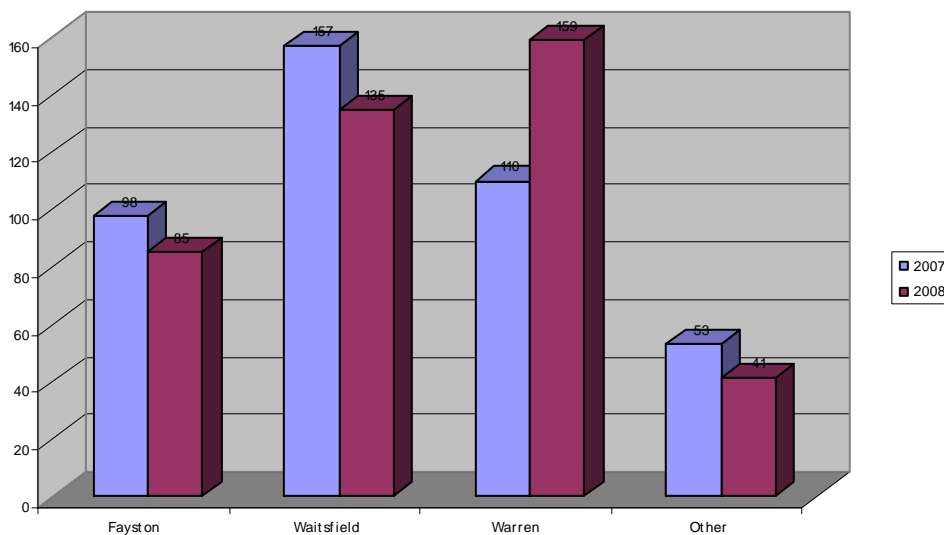
Section V: Town Infrastructure

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

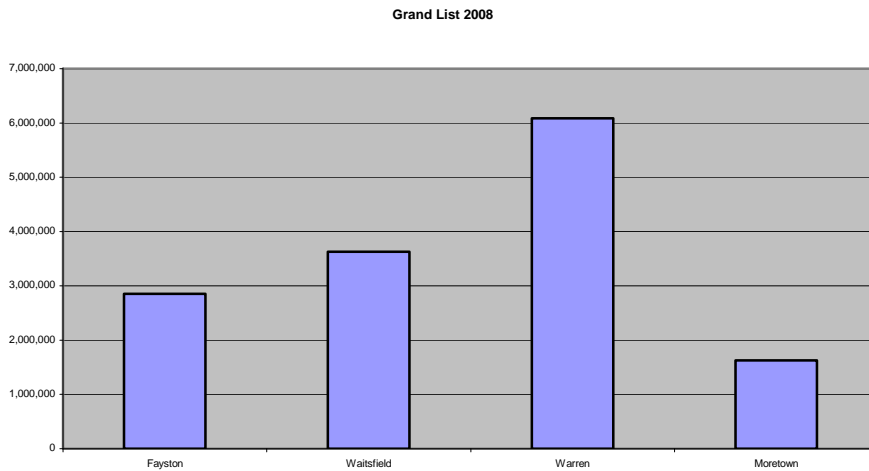
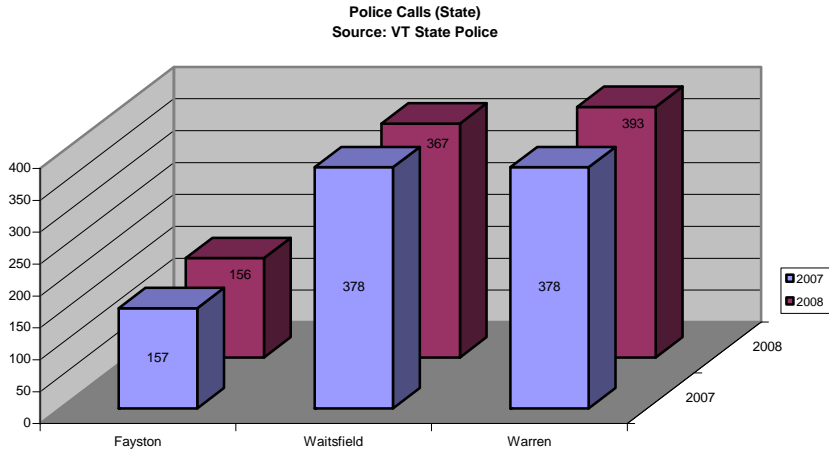
Number of Fire Calls



Number of Valley Ambulance Service Calls



While the number of fire and ambulance calls has increased for Warren, the good news is that it has decreased or remained the same for Fayston and Waitsfield. Further, the number of police calls has remained fairly constant in all three towns over the past two years.



2008 Tax Rates

	Non-Residential Tax Rate	Homestead Tax Rate	Municipal Tax Rate	Common Level of Appraisal
Fayston	1.7829	1.7280	0.2800	72.1400
Waitsfield	1.2760	1.1834	0.2850	98.8000
Warren	1.3024	1.2057	0.2429	105.8300
Moretown	1.6223	1.5475	0.2654	75.0100
Waterbury	1.2091	1.0758	0.2916	103.0900
Duxbury	1.2689	1.1432	0.3630	96.9300
Roxbury	1.7617	1.6425	0.8425	72.0600
Granville	1.3230	1.4569	0.3800	97.9500

Section VI: Environment

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

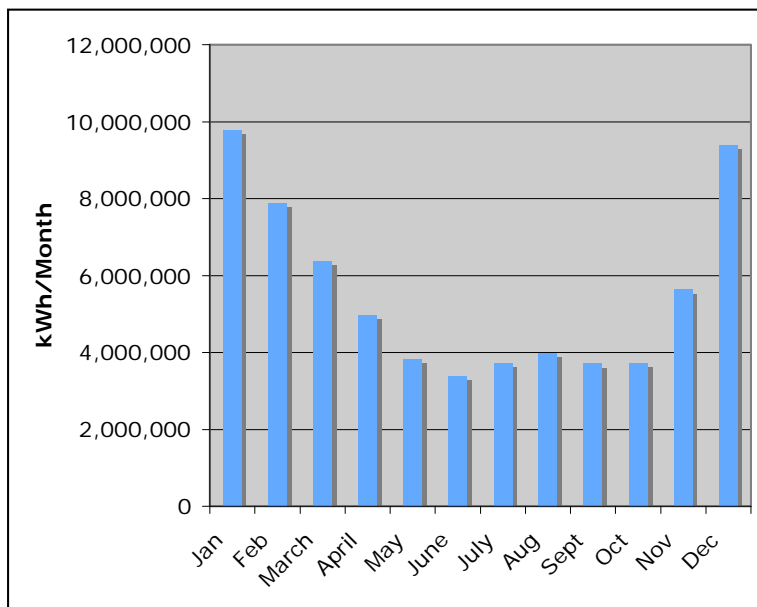
Energy

Energy efficiency was an area of focus for several groups in the Valley in 2008. “Carbon Shredders” is a non-profit, volunteer led organization whose goal is to reduce the combined energy usage and CO2 footprint of the network members by 10% by 2010 (the “10 by 10” initiative).

Another group working to increase energy efficiency and create a sustainable energy future is the Valley Futures Network (VFN) Energy group, also known as Localvolts. The Energy Group is one of several working groups that comprise VFN. VFN is a grassroots, citizen effort jointly sponsored by the Center for Whole Communities, the Mad River Valley Planning District, the Mad River Valley Chamber of Commerce, the Vermont Community Foundation, and Northfield Savings Bank. The focus of the VFN is on “building a healthy and sustainable 21st century future for our Mad River Valley communities.”

Mad River Valley Monthly Energy Utilization (2006-2008 average)

Source: Valley Futures Network



VFN recently completed *The Mad River Energy Study* which provides up-to-date information about the current state of energy usage, opportunities for projects, available resources, completed projects, and suggested next steps. The information was collected to help plan a sustainable energy future. The results of the study show that MRV energy consumption is highest during winter months. As shown on the Valley Futures Network website, the total annual consumption is nearly equal between commercial (51%) and residential (49%) customers, though

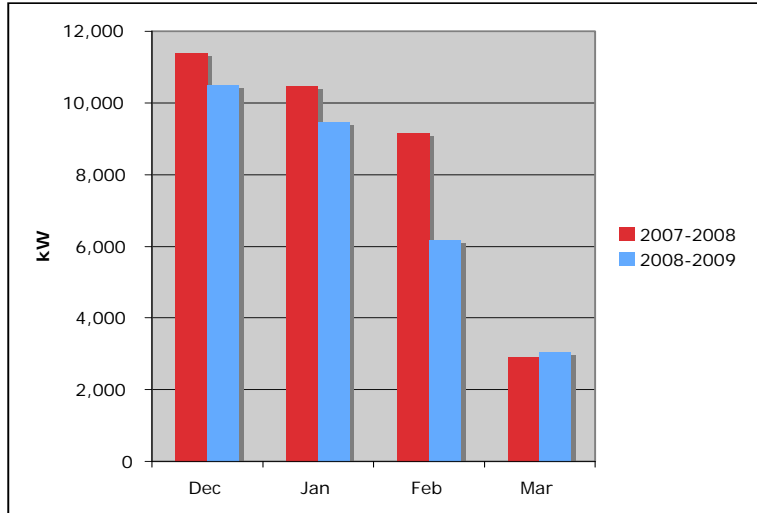
there is increased commercial demand in winter attributed to ski resort use.

The Community Biomass Project, a three year collaborative project begun in 2008 between MRV, UVM and the Northern Forest Alliance, has collected baseline data suggesting that as much as 9,660-21,000 cords (or 23,000-25,000 green tons) of low-quality wood growth could be grown in the Mad River Valley each year, enough to heat approximately 2,415-5,250 homes.

Monthly peak demand for the 2008-2009 season decreased from 2007-2008 levels in December, January and February.

Monthly Peak Demand

Source: Sugarbush Resort



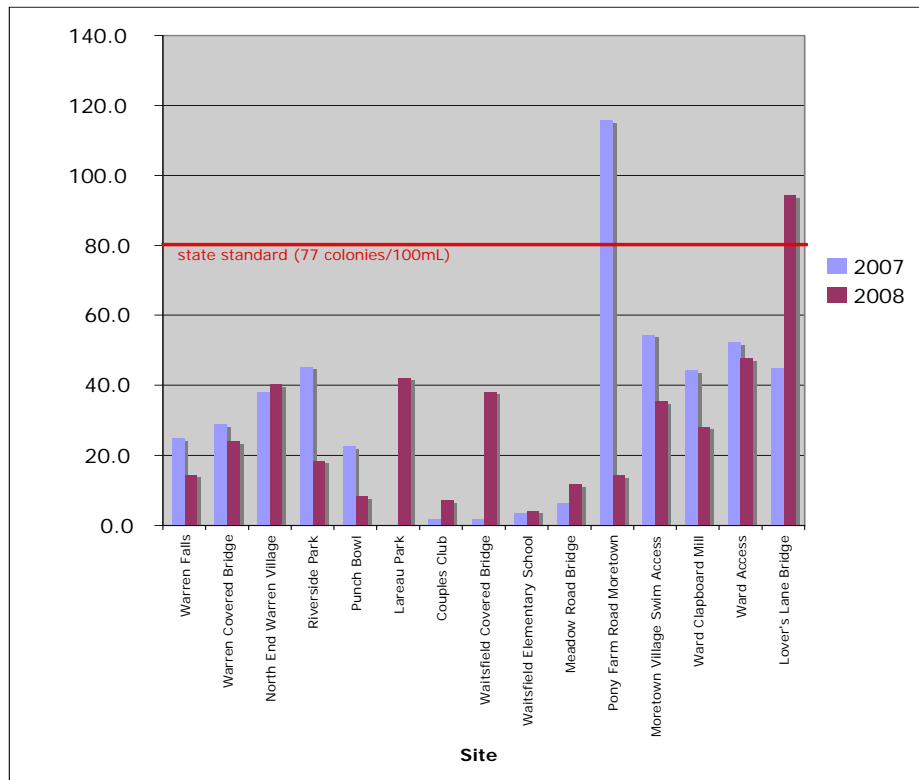
Water Quality

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, two sites show a seasonal geometric mean above 77 colonies/100mL: the Pony Farm Road site (Moretown) in 2007 and the Lover’s Lane bridge site (Moretown) in 2008. Currently, the main stem of the Mad River from Moretown downstream to the mouth is listed on the 303 (d) List of Impaired Surface Waters in Need of a TMDL (total maximum daily load) Plan.

Seasonal geometric mean *E.coli* levels in the Mad River, 2007-2008

Source: The Friends of the Mad River



River Flows and Snowmaking Withdrawals

Weather during the 2008-2009 ski season was a key factor in increased snowmaking productivity and efficiencies. A colder than normal winter with a noticeable lack, or loss, of natural snow called for increased snowmaking at both Sugarbush Resort areas compared to previous years. Snowmaking operations were suspended on February 14, 2009, at Lincoln Peak and on January 20, 2009 at Mt. Ellen.

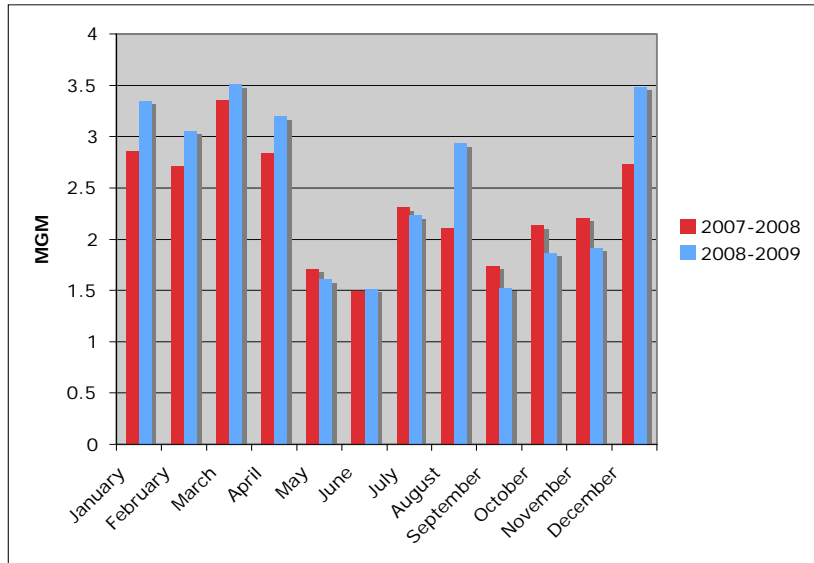
Sugarbush Resort provides the MRVPD with electronic copies of the monthly withdrawal monitoring reports (snowmaking reports) along with the annual snow making reports. These reports are also submitted to the VT Agency of Natural Resources – Water Quality Division, a requirement of snowmaking related permits.

Sugarbush Resort Wastewater Flows

Sugarbush Resort’s wastewater flows have been relatively consistent over the past two years, although the months of August and December saw marked increases over the previous year. The chart below shows the monthly influent flows for Sugarbush Resort treatment facilities, 2007-2009.

Sugarbush Resort monthly wastewater flows 2007-2009 in million gallons per month

Source: Sugarbush Resort



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 the watershed. (The Mad River watershed includes Waitsfield, Warren, Fayston, Moretown and a portion of Duxbury.) As of 2009, approximately 7,291 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 7,193 acres of public land in the MRVPD towns are not subject to a conservation easement, but are a part of State and National Forest systems. Easements in the entire Mad River Watershed are held by the Vermont Land Trust (9,513 acres), the Town of Warren (253 acres), and the Green Mountain Club (531 acres). A total of 10,297 acres of municipal, state and private land in the Mad River watershed are protected by conservation easements. An additional 16,301 acres of public land in Warren, Waitsfield, Fayston and Duxbury are protected as part of State and National Forests.

Conserved Lands

	Total Acres	State/Federal Conserved	Municipal Conserved	Privately-owned Conserved	Total Conserved	Current Use	% Town
Fayston	23,360	2,998	73	1,297	4,368	11,300	19%
Waitsfield	17,220	0	696	1,172	1,868	7,609	11%
Warren	25,368	6,995	0	1,253	8,248	6,987	32%
Three Town Total	65,948	9,993	769	3,772	14,484	25,896	22%
Five Towns*	121,756	19,101	857	5,945	25,903		28%

*Fayston, Waitsfield, Warren, Moretown and Duxbury

