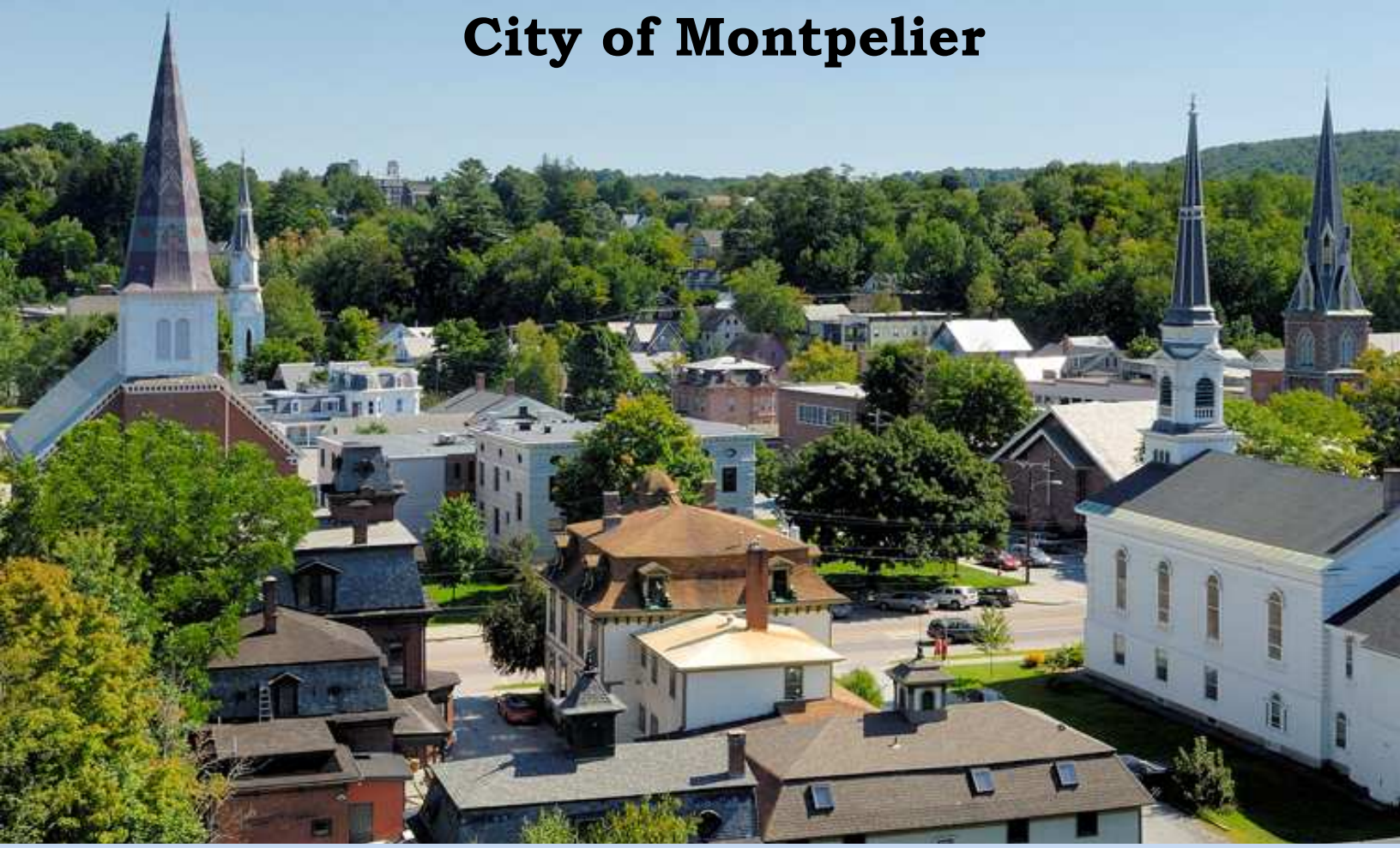
Final Application
Growth Center Designation
for the
City of Montpelier



Submitted to
Vermont Department of Housing and Community Affairs
and the
Planning Coordination Group

By
The City of Montpelier

June, 2009

LETTER OF TRANSMITTAL

June 29, 2009

Mr. Joss Besse, Director Community Planning and Revitalization
Vermont Department of Housing and Community Affairs
National Life Building, Sixth Floor
1 National Life Drive
Montpelier, Vermont 05620

Dear Mr. Besse:

Please accept this application on behalf of the City of Montpelier for Growth Center designation under the Vermont Growth Center program (24 V.S.A. §2791). I have attached a resolution passed by City Council on March 11 authorizing the application, and letters of support from the Regional Planning Commission, with copies of letters confirming our planning process under the provisions of 24 V.S.A. § 4350.

The application has been reviewed by the Montpelier Planning Commission, after a duly warned public hearing on February 9, 2009. The Planning Commission voted unanimously to send the application to the City Council for approval. In addition, the enVision Montpelier stakeholder meeting held on March 5, 2009 discussed the application, and a survey taken of those attending the meeting indicated their support for the project.

Please don't hesitate to contact me with any questions or concerns about the application. Thank you for the work you are doing to support our historic downtowns and traditional centers. We hope that Growth Center designation will allow Montpelier to continue to serve as an important hub of economic, cultural, and social life in Central Vermont for a long time to come.

Sincerely,

Gwendolyn Hallsmith

Gwendolyn Hallsmith, Director
Montpelier Community Development

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"The proposed growth center cannot reasonably be achieved within an existing designated downtown, village center, or new town center located within the applicant municipality (24 V.S.A. 2793c(e) (1)(G)(ii))."

Chapter One: Rationale for a Growth Center

Question 1.1

Discuss why a majority (51%) of the projected growth cannot reasonably occur within an existing designated downtown, village center, or new town center within the municipality specifically citing the municipality's 20-year growth projections for population, housing, and employment growth and the build-out potential of a designated downtown, village center, or new town center in the municipality.

Summary Response:

A majority of Montpelier's future growth can not fit in the designated downtown. Montpelier's designated downtown is 123 acres in size and is nearly completely built out. The City is expected to grow by 706 new housing units and 1,430 new jobs. 51% of this new development can not fit into the existing designated downtown without redevelopment of a majority of the parcels of land. Because many of these parcels are historic structures and state owned property, all located within a floodplain, and because the city would like to retain its existing character and protect historic properties, extensive redevelopment is not likely to occur.

The 1,430 net new jobs that will be created in Montpelier during the next 20 years is consistent with historic growth trends as measured from 1978 to today. A line graph showing employment totals for the City is a fairly smooth upward curve (Figure 2, p. 13). The only interruption in the general trend occurred between 1989 and 1992 when the city lost approximately 1,300 jobs over three years. This curve continues on the same trajectory as it is extrapolated from today to the year 2029. While Montpelier's total job count will continue to increase slowly over the next 20 years, the City's regional share of jobs will decline slightly from 20.1% of the region to 19.5%. Therefore, the regional impacts of commercial activity in the City are expected to have negligible effects on neighboring municipalities.

Right now, Montpelier has many more jobs than residents, and so the emphasis of this application is on fostering new residential development that meets the needs of the city's employees. It is not clear that a commensurate amount of new commercial space would be necessary to accommodate the jobs and growth.

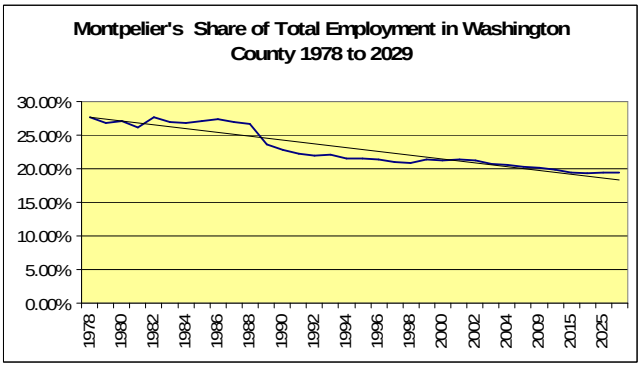

Figure 1: Montpelier's Regional Share of Employment

Population and Housing Projections

I. Overview:

Like many urban areas in Vermont, Montpelier's population declined between 1960 and 2000. From its historical high of 8,782 people (1960), it steadily dropped to an estimated total of 8,035 in 2000. Meanwhile, housing unit numbers climbed slowly, but steadily. This narrative will attempt to suggest what the next 20+ year period may hold for the City with respect to population and housing.

Table 1: Montpelier Population, Housing Units 1940---2000 (US Census)

Year	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**
Population	8006	8599	8782	8604	8241	8247	8035
Housing Units	2249	2648	2958	2974	3437	3769	3899

II. Existing Projections

In 2003, the Central Vermont Regional Planning Commission (CVRPC) contracted with Economic Policy Resources (EPR) to do town-level projections out to 2020 for communities within its jurisdiction. These are the only "official" projections for the region to date, and as such are an appropriate starting point for an exploration of this topic.

Table 2: CVRPC/EPR Population Projections for Montpelier

	2000 (Census)	**2010**	**2015**	**2020**	**Net change**
Population	**8035**	**7982**	**7899**	**7,780**	**-255**

Table 3: CVRPC/EPR Housing Projections for Montpelier

	2000	**2010**	**2015**	**2020**	**Net Change**
Housing Units	**3739**[1]	**3904**	**3979**	**4153**	**+414**
Average Household Size	**2.15**[1]	**2.02**	**1.97**	**1.87**	**-.28**

These projections appear to make the case that Montpelier's downward population trend, and low level housing unit growth (due primarily to decreasing household sizes) will continue into the future. Our research indicates that this is not the case, however. New facts, emerging trends, as well as State, Regional and Local planning goals and initiatives make a clear case that Montpelier will reclaim its role as a regional housing, employment, and

[1] Census data.

cultural center, in cooperation with neighboring communities**.** This application will attempt to show why these projections are off track and will use a more detailed approach to generate realistic projections.

III. The Case for Modification of Projection Methodology:

Four main arguments compel revisiting existing projections. First, data suggests that a **housing shortage,** coupled with declining household sizes**,** may have been largely responsible for stifling population growth in Montpelier in recent years. Next, new data appears to demonstrate that this situation is witnessing a dramatic reversal - by virtue of both **market forces** and **public policy shifts**. Finally, relevant information reveals that Montpelier has the **infrastructure capacity and available land** to accommodate substantial new growth.

A. Housing Shortage

It is our assertion that Montpelier's recent stagnant growth has had nothing to do with its lack of desirability as a place to live. In fact, the evidence suggests the opposite is true – more people would like to live in Montpelier but have not been able to find housing at an affordable cost for much of the past decade. Consider the following:

Escalating housing prices: In 2008, the average selling price of a single family home in the capital was $223,051, with a median price of $220,675. According to the 2000 Census, the median value of an owner occupied home in 2000 was $108,000, representing a doubling in value in less than 10 years. Since residents' income and wages have not doubled since the 2000 Census (reported at $51,818 for median family income), it is now difficult for the average family to afford the average home in Montpelier. But even with high prices, there are still homes selling above the asking price because of the competition for housing in the city.

Extremely low vacancy rates for rental properties: The US Census reported a vacancy rate for Montpelier of 1.8% in 2000. According to the Montpelier Housing Task Force a vacancy rate of about 5% in necessary to balance supply and demand.

Conversion of rental units to office or commercial space: A net loss of 46 apartments has occurred since 1980 because of the demand for office space and commercial space, and the proximity of some residential neighborhoods to the state capitol building, which is a highly desirable location for law firms, lobbyists, and other support services.

Dwindling Household Size: Montpelier's average household size of 2.15 persons/unit is now the smallest in the Region. To support the population and housing projections, CVRPC estimates show the average household size declining to a remarkable (if somewhat implausible) 1.87 persons per unit by 2020. This is a key element of the existing assumptions built into the official projections that we are questioning – it is unlikely that the average household size would be reduced to this level. Given higher fuel prices and

the number of homes in Montpelier designed for larger families, even with changing demographics, we believe that 1.87 persons per unit is not a realistic assumption.

Reduced construction of residential units in the 90's and early 2000's. Between 1980 and 1990, 508 residential units (over 50/year) were added in the City. Between 1991 and 2003 only 36 new units (about 3/year) were created, according to City data.

B. Changing Market Forces

Over the past four or five years there has been a dramatic change in the pace of new development in Montpelier. Between 2003 and 2007 about 119 net new residential units were created – a rate of approximately 30 per year. A recent market study conducted by John Ryan of Development Cycles in Amherst MA concluded that over a four year period, "Montpelier as a whole could realistically expect to absorb 80-100 new, age-appropriate units for older residents and 40-60 new single family homes on small, individual lots primarily for moderate and median income families."

Because of this recent boom, EPR's Housing Unit Projections for Montpelier (and some of its surrounding communities) are not tracking accurately so far, as illustrated by **Table 4.** This is particularly true for Montpelier where housing unit growth for the period 2000-2005 appears to be *underestimated* by 456%.

Table 4: EPR Projections vs. Net New Units 2000-2005

Municipality	EPR Projected Housing Unit Growth 2000-2005	Actual Constructed Units[2] 2000-2005	% Error EPR Projection
Barre Town	75	236	- 215%
Berlin	112	50	+ 53%
East Montpelier	67	74	+ 11%
Middlesex	76	73	+ 4%
Northfield	39	103	- 164%
Montpelier	**18**	**99**	**- 456%**
Total	387	636	-64%

So, it is clear that the pace and prevalence of new residential development in Montpelier has been accelerating. Not only have the last five years quadrupled the output of the previous decade, but numerous new, mostly high density, residential projects have been proposed - particularly within recommended Growth Center boundary. The following Table presents an accounting of pending proposals where the developer has indicated that they will be built in the near future.

[2] Derived from city permit data with field verification.

Table 5: **Residential Projects Pending as of April 2008 (AKA "Pipeline Units")**

Project Name	**Status**	**Potential Units**	**% Multifamily high density**	**Zone/location**
Bianchi Building	Completed	8	100%	GB/Barre St.
Capital Heights	Conditional Review	219	74%	MDR, GB /Off Berlin St.
Crestview Estates	Act 250 Permit Issued (inactive)	98 - 301	23%	LDR/Terrace St.
Sabin's Pasture	Act 250 Master Permit underway	145	65%	HDR,MDR, LDR/Barre St.
Stonewall Meadows	Sketch Plan Review	16	100%	MDR /Off Berlin St.
TOTAL UNITS		**486 to 689 units**	NA	

In a promising development for these "pipeline projects" there appears to be an upsurge in demand for urban/village living in Vermont. A recent survey by the Vermont Forum on Sprawl indicates a growing interest among Vermonters in living in such locations for the convenience and sense of community such areas afford.

Soaring energy costs are likely to be another factor that will encourage people to live closer to jobs, schools, and shopping. The Vermont ideal of a big home on a big lot on a back road is fading for many, being replaced by convenience and community.

C. Public Policy.

Accompanying (or perhaps, in part, responsible for) the change in market activity are some notable changes/developments in public policy on housing related issues. Taken together, these can be expected to foster additional development in the City. These policy initiatives include:

- Recent Montpelier municipal plan policies discouraging the conversion of apartments to office space.

- Recent statutory changes to Vermont's Planning and Development Act (Chapter 117) liberalizing rules for accessory apartments and the City's full compliance with the same. In response to these changes Montpelier has amended its zoning to allow accessory units "by right" and has established the **"***One More Home Program***"** which provides small grants to individuals for the development of accessory units.

- The establishment of the Montpelier Housing Trust Fund. This account (established in 2006 with an annual appropriation of approximately $52,000) is

used by the City to award grants to non-profit organizations to preserve, construct, or rehabilitate affordable housing.

- The Central Vermont Regional Planning Commission's (CVRPC) recently adopted Housing Distribution Plan allocates units to the City at a higher than existing percentage of Regional totals. CVRPC has done this in response to both a perceived Region-wide housing crises and a desire to locate residents in close proximity to jobs and in locations that have adequate infrastructure capacity to assimilate higher densities of development. Furthermore, the Commission has recognized that if Montpelier's population (and percentage of Regional total) continues to shrink, the flip side of this trend is that the rapid growth is being experienced in many of Central Vermont's more rural communities. CVRPC believes that such a future would threaten to undermine Vermont's primary statutory planning goal: ***"To plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside."***

- Montpelier's efforts to achieve Growth Center Designation and the subsequent establishment of a TIF District.

D. Infrastructure Capacity/Land Capability

It would be difficult to argue that infrastructure constraints will inhibit Montpelier's growth. In fact, there appears to be ample capacity in its water, sewer, and school infrastructure for the foreseeable future. The wastewater system has approximately 1.5 MGD of excess capacity (enough to accommodate over 7,000 new single family 3 bedroom residences, according to standard formulas) The water system has over 2.7 MGD excess capacity, assuming ongoing efforts to reduce leakage in the system. The total rated capacity of the City's public schools stands at 1,311 students. Current enrollment is between 1000 and 1,100 students, while the projected enrollment for 2009/2010 is 898, or 68% of capacity, based on recent trends.

In further illustrating the City's *potential* for growth it is instructive to look at the results of a build-out analysis conducted for Montpelier by CVRPC (as part of the "*Northwest Vermont Project*") in 2006. Taking into account zoning densities, road frontages, property boundaries, and land capability (based on the occurrence of various natural development constraints) it was calculated that the City could absorb almost 3,500 residential units.

IV. Housing as an Indicator for Growth in Montpelier

It is clear from the above information that the most reasonable and objective way to look at future growth projections for Montpelier is not through its historic population trends, but rather through its housing future.

We have seen, even under the EPR projections, that housing unit numbers are predicted to continue to grow in the City, even in the face of declining population. This can be attributed to a dramatically declining average household size. If the 2005 data on actual housing units constructed in Montpelier (collected through field verification by City staff) is applied to a straight *Linear Regression* model (the fit selected by our GIS program) the growth results in a net increase of 571 units (Table 6).

Table 6: Linear Regression Housing Projection, City of Montpelier 2009-2029 (Incorporating actual unit data through 2005)

Year	2009	2019	2029	Net change
Housing Units	4204	4404	4775	+ 571

While the Linear Regression model surpasses CVRPC's 2003 housing projection figures, we believe that it may still underestimate housing unit growth, and therefore future population, as well. This is because the *Linear Regression* model does not fully account for the 486 – 689 known "pipeline units", or the vast majority of the 779 units demanded by 2020 under the *Regional Distribution Plan.*

If we were to use a figure that takes an average of the "pipeline units" (588), add the "fair share" total for 2005-2020 (682) and divide by two, we would arrive at a figure of 636 new residential units by the year 2020. This number assumes little new development from projects yet unknown**.** Neither does it take into account potential housing gains resulting from policy initiatives, energy issues, or evolving consumer preferences. As such, we believe it to be a conservative assumption.

If we assign these additional 636 units to the year 2020 and apply it to calculations using base data going back as far as 1960, we get a housing projection curve that more closely matches that which would be derived from a *Geometric Projection* model. Accordingly we have applied such a model to the data through the year 2029 to arrive at the results depicted on **Table 7.**

Table 7: Geometric Model Housing Projections for Montpelier 2009-2029 (applying 636 units to 2020)

Year	2009	2019	2029	Net change
Units	4254	4627	5032	+778

These two methods, a linear regression model based on constructed units and a geometric regression model based on planned units and regional policies, provide us with a high and low boundary of probable population and housing growth.

Taking an **average** of the data points in **Tables 6** and **7,** we arrive at **Table 8,** the housing projection endorsed by the City of Montpelier for this application.

Table 8: Average of Previous Housing Projection Models 2009-2029

Year	2009	2019	2029	Net Change
Units	4229	4512	4904	+675

To determine population we multiply 675 housing units by a household size. If we apply EPR's projected household size of 1.87 for 2020 (and project it out for another decade), the population is estimated to be 9,170 in the year 2029, as illustrated in Table 9.

Table 9: Revised Population Projections for Montpelier 2009-2029

Year	2009 (2.02/hh)	2019 (2.00/hh)	2029 (2.00/hh)	Net Change
Population	8543	8437	9170	+627

This is a net increase of 627 people. However, we contend that an assumption of a household size of 1.87 people is unreasonably low, given:

- The fact that it is based on a model that doesn't appear to recognize the approach of a "bottoming out" point for this statistic, which intuitively exists.
- Inflated energy, food and other living expenses are likely to work *against* a further downward trend for the foreseeable future.

As such, the CVRPC estimates that a terminal average household size of 2.0 persons per household by 2019 is a more realistic estimate. Using this figure, **the population estimate for the City in 2029 would be 9,808 people**. This represents the **addition of 1,265 additional residents during the planning period (2009-2029).**

V. Conclusions: Population and Housing Projections

For the reasons outlined in this section, we conclude that conventional population and/or housing projections, using only historic data, are likely to be inaccurate for Montpelier. Conversely, we believe that the previous section presents reasonable estimates for Montpelier's future housing unit and population growth, respectively, through the relevant planning period.

While it is difficult to quantify market adjustments, energy futures and evolving land use policy, applying knowledge of recent permit activity, pending projects, and a Regional "Fair share" housing formula allows for more accurate, if still conservative assessment. These adjusted estimates predict that over 1,200 new people may be housed in almost 700 new housing units in Montpelier by 2029. Designation of a Growth Center for Montpelier is imperative if the City is to provide an orderly, efficient plan for accommodating such a future.

Employment Projections

To develop employment projections for the City of Montpelier, several tools and two past studies were used. The employment forecast for the six-county Northwest region of Vermont was completed by using a dynamic input-output model known as the REMI Policy Insight Model[3]. Forecasting regional employment on a macro-scale such as this is necessary because the economy does not recognize political boundaries. This regional employment analysis was created for the CVRPC in 2001 by a private consultant (Appendix 3). The City's employment projections must be established on the basis of the regional economy within which it is part.

General regression analysis was used to define the share of Washington County employment relative to the forecasted northern Vermont total employment.[4] Next, Montpelier's share of the regional employment must be determined. Using Montpelier's constant historical share of employment and an indicator of future share will likely be inaccurate. Instead, a shift share analysis was completed to determine Montpelier's share to the County's total employment.[5]

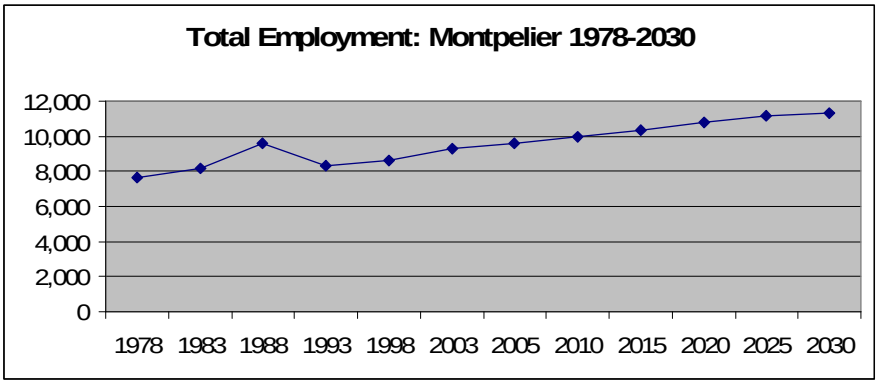

Figure 2: Long term employment trend

These local level employment projections were created in February 2005 as part of a Fiscal Impact of Growth Model that was completed for the City by Crane Associates. Total job growth in Montpelier is projected to grow to 11,349 by the year 2030. As can be observed from Figure 3 and Table 10 (pages 14 and 15), the City's employment is increasing at a decreasing rate of growth. The City suffered significant job losses from 1989 to 1992 and then returned to its traditional rate of employment growth as seen by the line graph. Table 10 also shows the regional share of employment that the City is expected to receive. Montpelier's regional share of total employment in Washington County has been on a steady decline from 1978 until today (see Figure 1 on page 5). Montpelier's share has declined from 27.6% to 20.1%.

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[3] Regional Economic Modeling, Inc., Amherst, Mass.

[4] General regression analysis is a long-standing tool in econometrics and statistics. General regression analysis examines the relationship between a dependent variable and one or more independent variables. The equation of a line of known data plotted on a graph is used to project future occurrences within a certain level of statistical accuracy. The best-fitting regression equation is selected based upon the R^2's for each equation. The R^2 or coefficient of determination is a standard statistic used in examining the fit of an estimated line to the data points. Essentially, it is a ratio of the residuals, or errors due to the regression line to the total error within a data set. The closer the ratio is to 1, the better the estimated line fits the data set.

[5] "Shift share analysis improves on the "constant share" approach by adding a shift term to account for the differences between local and regional growth rates that cause the industry to "shift" in and out of a regional economy. $(e^t_i = (1 = R^{t-t} + s^{t-t}{}_i)\, e^t_i)$[5]"

The employment projection methods used here maintain this steady decrease in regional share. No alternative growth scenarios were used to change Montpelier's historic regional context. What this means is that Montpelier's growth will have less of a regional impact on a comparative basis than it used to in the past 3 decades. Neighboring municipalities are increasing their impacts on the region and are able to attract their own array of employers. Therefore, the proposed growth center is not expected to negatively impact adjacent municipalities whether or not they have a designated downtown, village center, or new town center.

Major sectors, such as Manufacturing, Non-Manufacturing, and Government were projected using general regression analysis on the local share of these sectors based on regional employment totals. The major industrial divisions within the Non-Manufacturing sector were projected using the historical shift shares of each industry. The historical data series used in this estimation were the historical ratios between the Bureau of Economic Analysis' (BEA) full-and part-time employment data from 1978 to 2004 and the historical shares of ES-202[6] employment during the same time span.

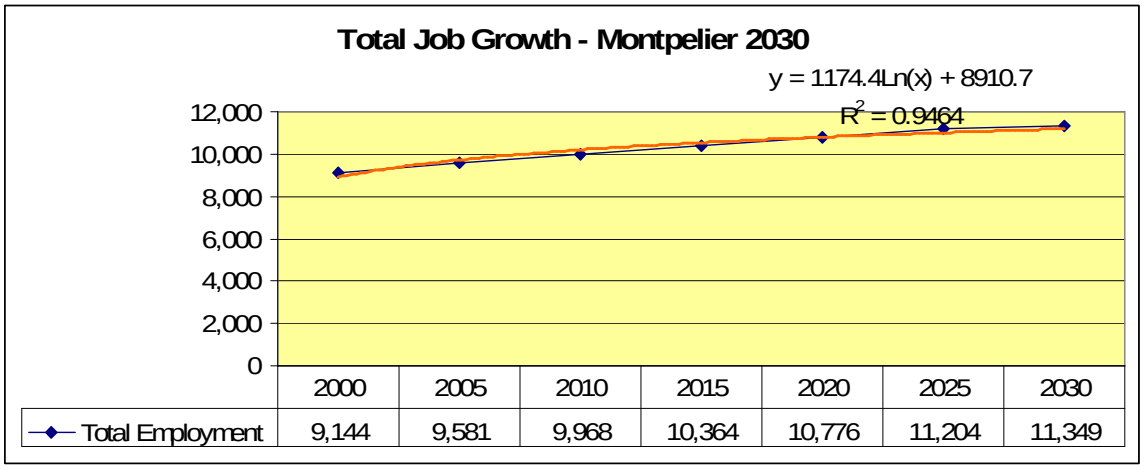


Figure 3: Employment Forecast to 2030

[6] ES-202 (now called QCEW: Quarterly Census of Employment and Wages) employment includes only those employees covered by unemployment insurance. It excludes sole proprietors, business owners, self-employed and other workers not covered. BEA data includes all workers. The shift share analysis accounts for this discrepancy.

Table 10: Total Employment 1978 to 2030[1]			
	Total Jobs Washington County	Total Jobs Montpelier	Regional Share
1978	27,822	7,685	27.62%
1979	28,607	7,650	26.74%
1980	29,203	7,902	27.06%
1981	29,438	7,681	26.09%
1982	29,850	8,231	27.57%
1983	30,383	8,193	26.97%
1984	31,087	8,324	26.78%
1985	31,981	8,652	27.05%
1986	33,157	9,095	27.43%
1987	34,371	9,244	26.89%
1988	35,879	9,583	26.71%
1989	37,108	8,785	23.67%
1990	37,383	8,531	22.82%
1991	36,783	8,199	22.29%
1992	37,031	8,147	22.00%
1993	37,860	8,344	22.04%
1994	39,312	8,486	21.59%
1995	39,626	8,509	21.47%
1996	39,832	8,541	21.44%
1997	40,718	8,527	20.94%
1998	41,288	8,597	20.82%
1999	42,078	8,994	20.37%
2000	43,136	9,144	21.20%
2001	43,399	9,266	21.35%
2002	43,696	9,261	21.19%
2003	44,866	9,294	20.72%
2004	46,036	9,434	20.49%
2005	47,206	9,581	20.30%
2009	49,664	9,891	20.14%
2010	50,279	9,968	19.83%
2015	53,424	10,364	19.40%
2020	56,766	10,776	19.30%
2025	60,316	11,204	19.40%
2029	63,335	11,320	19.50%
2030	64,089	11,349	19.50%
Net New Jobs		**1,430**	

Employment Results

The City's employment projections are based on *net new employment* in order to determine the ability of the growth center to absorb 51% of future growth. To determine total net new jobs for the City, the base year is subtracted from the total jobs in year 2030 (or 11,349 jobs). The Statute requires that the applicant forecast 20 years of growth but since the application takes about one year to complete the base year used is 2009. Because the most reliable data comes in ten year increments, the data was interpolated to determine the employment from the years 2009 to 2029. The City is expected to receive a total of 1,430 net new jobs in the next 20 years.

The same Fiscal Impact of Growth Model mentioned above also determined the City's need to accommodate new jobs. Total employment was separated into four major employment categories: Manufacturing/Industrial/Transportation; Office; Retail; and Government. Employee square footage needs were estimated based on existing square footage usage patterns in the City.

Table 11: Square footage needs by Employment Type					
Employment Growth	**Total jobs**	**1,430**			
Projection Year 2029	**Manu/Indus/Trans**	**Office**	**Retail**	**Gov't**	**Total**
Job Type Ratio	0.03000	0.40000	0.10000	0.47000	1.00
New Employees/ Job Type	43	572	143	672	1,430
SQFT per employee	667	333	400	333	
Total New Square Feet	**28,605**	**190,477**	**57,181**	**223,735**	**499,997**
51% for Growth Center	**14,588**	**97,143**	**29,162**	**114,105**	**254,999**

Total square footage needs are shown in Table 11. This analysis suggests that the City will need approximately 500,000 square feet of new employment space over the next 20 years. If the growth center absorbed 51% of this growth, that would be 254,999 square feet of interior employment space. Given current trends in the city, where we have more jobs than our population, and more people are telecommuting to distant employers from home offices, even though this level of employment growth would indicate a need for new space for employees, it is our contention that the new ***housing*** growth in the city will accommodate a higher percentage of the employment growth than in the past. This means that the new employment space will not necessarily translate into new commercial construction, even though we have included these space needs in our analysis.

Current Capacity of Designated Downtown

Question 1.1 asks the applicant to explain why 51% of the projected 20 year growth cannot "reasonably occur within an existing designated downtown, village center, or new town center." Montpelier has a designated downtown. It is delineated within the green boundaries in the map below (also Appendix 5). The Vermont Growth Center Planning

Table 12: Undeveloped Land in Designated Downtown			
Ownership	**number**	**Location**	**Acres**
Church	16	BARRE ST	0.93
Church	46	BARRE ST	0.4
Church	115	MAIN ST	0.63
Church	130	MAIN ST	0.38
Church	137	MAIN ST	0.57
Church	145	STATE ST	0.49
City	39	MAIN ST	0.783
Federal	25	SCHOOL ST	0.53
Private	74	ELM ST	0.07
Private	76	ELM ST	0.12
Private	0	LANGDON ST	0.16
Private	16	MAIN ST	0.14
Private	66	MAIN ST	0.06
Private	155	MAIN ST	1.2
Private	60	MAIN ST REAR	0.59
Private	148	STATE ST	0.6
Private		STATE ST	0.14
Private	0	TAYLOR ST	1.1
State	1	BALDWIN ST	0.19
State	3	BALDWIN ST	0.27
State	5	BALDWIN ST	0.47
State	8	BALDWIN ST	0.15
State	10	BALDWIN ST	0.28
State	12	BALDWIN ST	0.09
State	13	BALDWIN ST	0.15
State	14	BALDWIN ST	0.10
State		BALDWIN STREET	0.36
State	42	COURT ST	0.72
State	5	MATHER TER.	0.3
State	110	STATE ST	0.07
State	130.5	STATE ST	4.61
State	133	STATE ST	1.46
State	134	STATE ST	0.12
State	135	STATE ST	0.74
State	136	STATE ST	0.16
State	144	STATE ST	0.20
State		LAND NEAR CAPITOL	8.41
State	8	TAYLOR ST	1.35
State	26	TERRACE ST	0.07
VFW	21	MAIN ST	0.18
Total Acres			**29.32**
Source: Montpelier Grand List 2007			

Manual states that "a designated downtown typically plans for and is able to accommodate some growth…but is not likely to absorb most of the development in a municipality that is growing rapidly." The manual states that the goals of the Designated Downtown program "are historic preservation and economic revitalization." The lines of the City's designated downtown were originally drawn fairly tightly and the resulting net area doesn't allow from much new development.

According to the City's Grand List, there are 288 parcels in the designated downtown (see Appendix 6). There are only 18 parcels in the designated downtown not owned by the state or federal government which do not have buildings on them. They are highlighted in Table 12. Total acreage of these parcels is 8.543.

Whether the parcel is buildable or not depends on the lot size, setbacks, and the zoning district it is in. The designated downtown has 4 zoning districts: CB1, CB2, Civic, and River. Each of the four districts have different minimum lot size requirements ranging from 5,000 to 10,000 square feet, different height allowances from 3 to 6 stories, and different maximum lot coverage allowances from 50% to 100%.

There are also different set back requirements (see table 13). Some of these requirements also

change depending on the use of the building. The reader can see from this list that some of these parcels simply will not be developed. For example: the parcels at 39 Main street (.78 acres total) is the city hall, fire, and police parking areas; most of the churches (3.4 acres in total) have a very low likelihood of being redeveloped; and any parcel of .113 acres (4,999.9 sf) or less cannot be developed in any zone.

The total of these parcels mentioned here amount to 4.47 acres or half of the remaining undeveloped land. This leaves approximately 5 acres of undeveloped land distributed over 12 parcels with an average parcel size of about half an acre. This is clearly not enough land to accommodate 51% of Montpelier's next 20 years of growth or 250,000 square feet of commercial space and at least 360 housing units. Some redevelopment may occur on existing parcels but since many of the designated downtown buildings in Montpelier are historic structures this opportunity is limited. The goals of the designated downtown program were strictly adhered to during the delineation process in Montpelier.

Table 13: Zoning and Building Limitations in Designated Downtown

	Civic	CB-1	CB-2	Riverfront
Minimum lot area	8700sf	5,000sf 10,000sf for residential	10,000 sf	5,000 sf
Minimum lot frontage	75 lf	75 lf	75 lf	N/A
Setbacks	20' front and rear; 15' side	0' front 0' side 20' rear	10' front and side 20' rear	5' front 20' sides 10' rear
Maximum building coverage	50%	100%	50%	60%
Maximum Height	6 stories	6 stories	3 stories	2 stories

In addition to empty building lots, there is the potential for redeveloping parcels that are underutilized. For example, a single use, non-historic building on a half acre in the CB-1 zone can be redeveloped into a 6 story building with 40,000 commercial square feet. With each parcel having different factors limiting development or redevelopment, it is a large undertaking to determine the development potential of each parcel of land. Therefore, a computer assisted build out analysis tool was used to determine the development potential of the designated downtown. The Central Vermont Regional Planning Commission (CVRPC) owns and operates a Geographic Information Systems (GIS) build out tool that can determine the development potential of each parcel. The build out tool was designed and made by the Addison County Regional Planning Commission and is one of the build out tools recommended in the Growth Center Planning Manual (page 67).

The CVRPC used the build out tool to determine the development potential of both undeveloped land and the redevelopment potential of underutilized parcels (parcels not completely built out to its maximum allowance). The tool understands the zoning district of

each parcel and the building limitations of each zoning district to determine the development potential of the parcels and the entire zoning district. In addition to the quantitative requirements like square feet of lot coverage, building height and set back distance, a number of assumptions were necessary including:

- The degree to which a conditional use will be approved;
- The limitations of environmental constraints such as floodplains, slope, and habitat (most of the downtown is in a floodplain);
- The limitations of redeveloping historic buildings and whether it would produce a net increase of square footage;
- The percentage to which a parcel is fully built out;
- The degree to which non-conforming uses can be redeveloped;
- The ratio of commercial to residential uses on mixed use parcels
- The limitations of government owned property.

A full description of how this build out tool works is described in Appendix 2.

As one might imagine, depending on the assumptions used the results can vary. Therefore we conducted two build out analyses with a highly restrictive scenario and liberally restrictive scenario. The results are show in table 14.

Table 14: Built Out Potential in Designated Downtown

Zoning District	Highly Restrictive Scenario	Liberally Restrictive Scenario	Average Development Potential
CB-1 Potential Commercial Square Feet	7003	29054	180285
CB-2 Potential Commercial Square Feet	192	65074	65266
CIV Potential Commercial Square Feet	534	15669	8101
RIV Potential Commercial Square Feet	422	13200	6811
Total Commercial Square Feet	**8151**	**122997**	**65574**
CB-1 Potential Residential Units	5	34	19.5
CB-2 Potential Residential Units	1	10	5.5
CIV Potential Residential Units			
RIV Potential Residential Units			
Total Residential Units (all zones)	**6**	**44**	**25**

The results show a range between 8,151 and 122,997 square feet that could be developed or redeveloped in the designated downtown. This study will use the average between the two or 65,574 as the potential square feet the designated downtown could absorb.

The same analysis shows that there is potential for approximately 25 residential units of approximately 2400 square feet in size. The actually number of potential residential units is probably larger since there is a potential for conversions of 2nd and 3rd floor commercial space into residential units. However, any conversions would eliminate the potential

for a commercial unit. Table 15 shows the percent of the designated downtown that is already built and the amount of existing commercial square feet and residential units that exist in this area. It also shows the gap between the projected demand for commercial and residential space and the ability of the designated downtown to accommodate this demand.

The designated downtown is 93% completely built out in commercial space and 89% built out in residential units. The designated downtown is too small and built out to accommodate much of the projected growth in Montpelier.

Table 15: Percentage of Designated Downtown Already Built Out and 20 Year Demand

Designated Downtown	Commercial (SqFt)	Residential (Units)
Existing	908,121	205
Remaining Potential	65,574	25
% Built Out	93%	89%

20-Year Gap Analysis for Designated Downtown

Land Use Type	Projected Demand for Growth Center(51% of total)	Current Potential of Designated Downtown	Unmet Potential in Designated Downtown
Commercial (Sq Ft)	254,998	65,574	189,426
Residential (units)	360	25	335

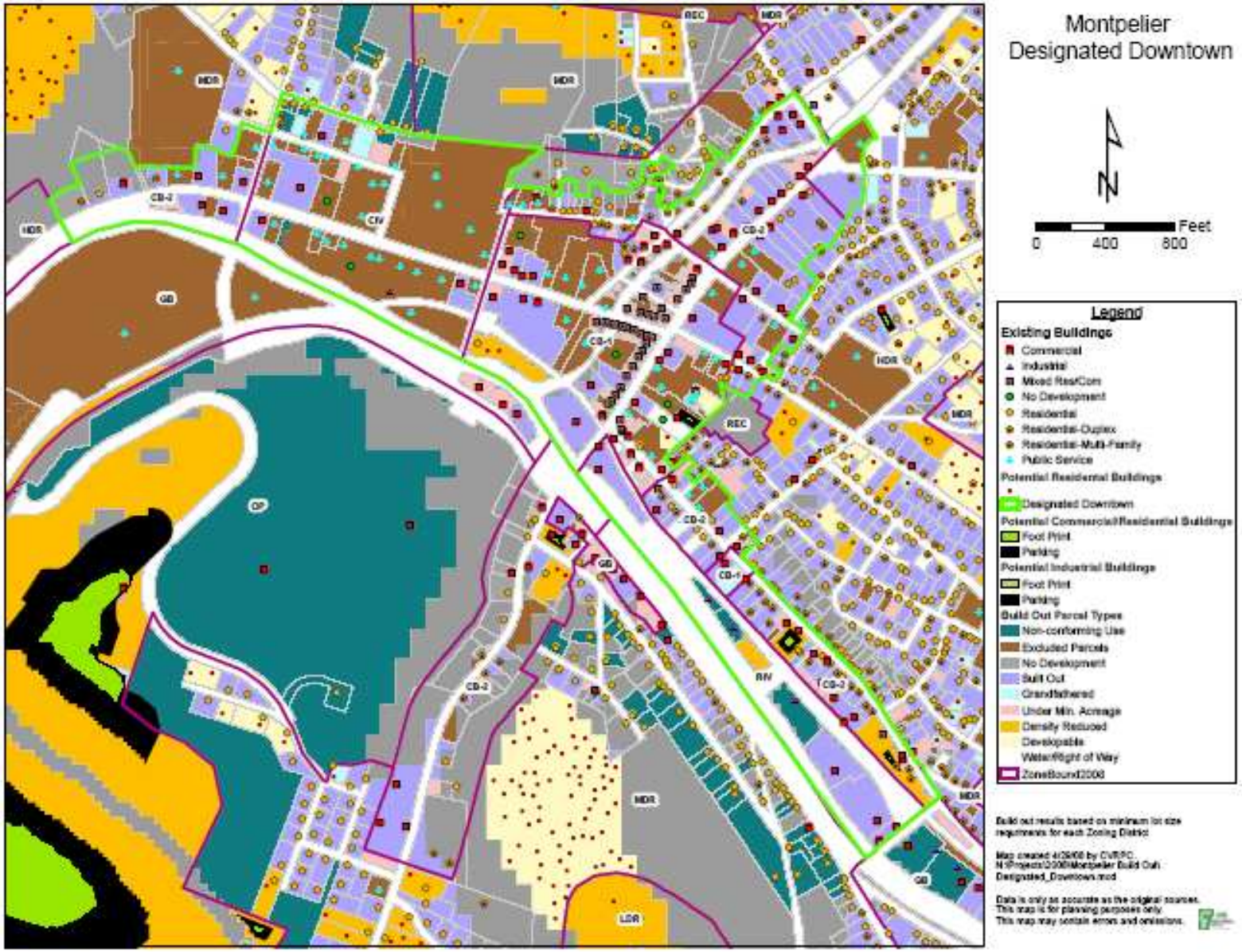


Figure 4: Build Out analysis of Designated Downtown

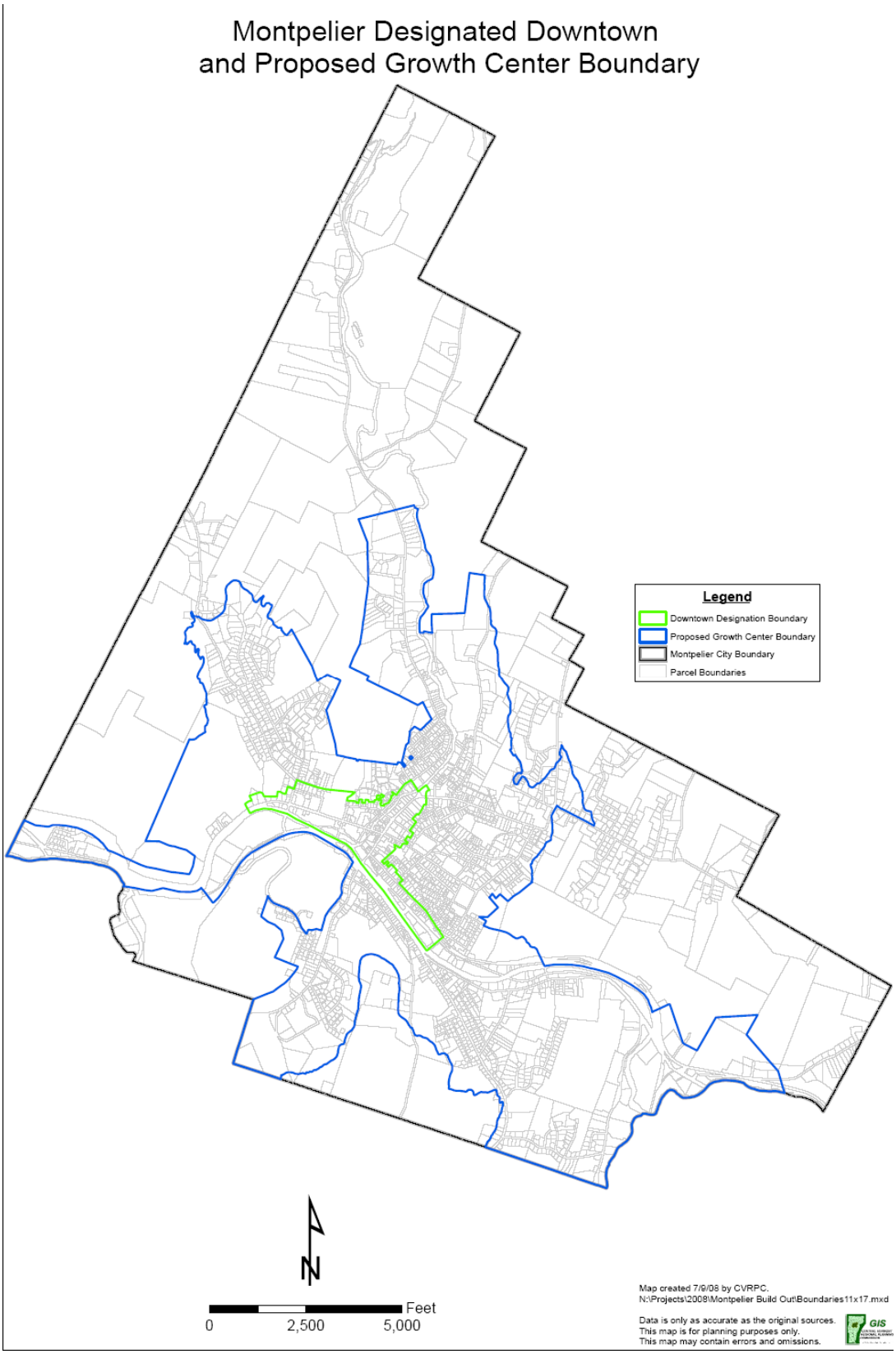


Figure 5: Map of Designated Downtown and Proposed Growth Center

Chapter Two: Size and Configuration of the Growth Center

Question 2.1

Summarize the amount of land included within the proposed growth center and its build-out potential.

Table: 16: Growth Center Land Summary	
Montpelier City	6041 acres
Growth Center size	2323 acres
Percent of City	38%

The proposed growth center is 2323 acres or 38% of the entire City of Montpelier.

Table 17 shows the development potential for commercial and industrial uses in the growth center. According to existing zoning regulations there is the potential for 366,280 square feet of commercial uses. Table 18 shows that the growth center has the potential to absorb 706 dwelling units.

Table 17: Commercial and Industrial Build Out for Growth Center Zoning Districts

DISTRICT	USE	POTENTIAL COMMERCIAL BUILDINGS FOOT PRINT (SQ FEET)	POTENTIAL COMMERCIAL BUILDINGS FLOOR AREA (SQ FEET)
CB-1 With Water and Sewer	MixedRC	22700	68100
CB-2 With Water and Sewer	MixedRC	20075	60226
CEM With Out	NoDev	0	0
CIV With Water and Sewer	Com	10446	31338
GB With Water	Com	1142	1,142
GB With Water and Sewer	MixedRC	67730	92,295
HDR With Out	NoDev	0	-
HDR With Water and Sewer	MixedRC	13709	24,613
IND With Out	Ind	7468	7468
IND With Water and Sewer	Ind	119280	80676
LDR With Out	Res	0	-
LDR With Sewer	Res	0	-
LDR With Water	Res	0	-
LDR With Water and Sewer	Res	0	-
MDR With Out	Res	0	-
MDR With Sewer	Res	0	-
MDR With Water	Res	0	-
MDR With Water and Sewer	Res	0	-
REC With Out	NoDev	0	-
RIV With Water and Sewer	MixedRC	422	422
Total Potential Commercial and Industrial Square Feet in Growth Center		**262,972**	**366,280**

Table 18 : Build Out Potential of Residential Properties in Growth Center

DISTRICT	USE	POTENTIAL UNITS
CB-1 With Water and Sewer	MixedRC	35
CB-2 With Water and Sewer	MixedRC	21
Downtown LDR	Res	15
CIV With Water and Sewer	Com	0
GB With Water	Com	14
GB With Water and Sewer	MixedRC	35
HDR With Out	NoDev	0
HDR With Water and Sewer	MixedRC	74
IND With Out	Ind	0
IND With Water and Sewer	Ind	0
MDR With Out	Res	27
MDR With Sewer	Res	45
MDR With Water	Res	0
MDR With Water and Sewer	Res	417
REC With Out	NoDev	0
RIV With Water and Sewer	MixedRC	23
Total Potential Dwelling Units		**706**

Source: CVRPC Build Out Analysis Tool

Source: CVRPC Build Out Analysis Tool

Table 19 shows that the total 20-year demand for all commercial and industrial space in Montpelier is 499,997 square feet. Current total of commercial and industrial square feet in the City is 2.35 million. Therefore, the 20 year projected demand of commercial space amounts to 21% growth over the 20 year period or approximately 1.05% per year.

There are currently 4212 dwelling units in Montpelier. The 20-year demand for residential dwellings throughout the City is 675 units which represents a 15% increase over the 20 year forecast period or .8% annual growth.

Growth center statute requires that the applicant demonstrate that a majority (51%) of this growth can be accommodated within the proposed growth center boundaries. Fifty-one percent of the projected commercial demand is 254,998 square feet; 51% of the projected residential demand is 360 units. The build out potential of the proposed growth center is 366,280 square feet of commercial space. This is 73% of the projected demand and should accommodate 28.7 years of commercial development. The build out potential for the residential zones is 706 units. This includes the residential zones and the residential units allowed in the mixed use commercial zones. This number of units equals 104% of the projected growth in the residential areas. Full residential build out of this area should take approximately 29 years.

Table 19: Growth Projections and Growth Center Build Out Potential						
	Manu/Indus/Trans (SqFt)	Office (SqFt)	Retail (SqFt)	Gov't (SqFt)	Total Commercial (SqFt)	Total Residential (Units)
Existing (Citywide)					**2,353,300**	**4,212**
20-Year Demand (Citywide)	**28,605**	**190,477**	**57,181**	**223,735**	**499,997**	**675**
% of total	**6%**	**38%**	**11%**	**45%**	**100%**	
Statutory 51% for Growth Center	**14,588**	**97,143**	**29,162**	**114,105**	**254,998**	**344**
Existing (Growth Center Only)					**1,439,764**	**1,913**
% increase in Growth Center					**18%**	**19%**

Built Out Potential of Growth Center						
Land Use	**Industrial (SqFt)**	**Commercial (SqFt)**	**Residential (units)**	**Residential in Mixed Use Zone (units)**	**Total Commercial (SqFt)**	**Total Residential (units)**
Build Out Potential of Growth Center	**88,144**	**278,136**	**563**	**143**	**366,280**	**706**
Actual % in Growth Center (20 years out)					**73%**	**104%**
Average Annual Rate of Construction					**12,750**	**24**
Years to Full Build Out of Growth Center					**29**	**29**

Question 2.2

Explain how the municipality arrived at the proposed growth center boundary and determined how much land was needed to meet the requirement of accommodating a majority of projected growth over the 20-year planning period, specifically justifying how the proposed boundary achieves the program goal of a compact center that does not encompass an excessive area of land.

The development potential within the growth center boundary was calculated through a GIS build out evaluation tool owned and operated by the Central Vermont Regional Planning Commission (CVRPC). The methodology behind this tool is described in Appendix 2. The results of the build out analysis were combined with discussions among the City Council, City Community Development and Public Works staff, and Regional Planning staff.

The first step in calculating the development potential within the growth center boundary was to **exclude** the following areas: 1) All outlying low density residential zoning districts (there is one LDR district included that is adjacent to Hubbard Park because of its proximity to the downtown and its access to infrastructure); 2) Parcels without existing road frontage; 3) Most lands not currently connected to public sewer and/or water infrastructure. A limited number of parcels without sewer and water are included in the Growth Center boundaries if it was determined that they can be easily connected. For example, parcels that are surrounded by sewer and water or parcels that are partially connected to infrastructure are included.

The amount of land needed to accommodate 20 years of growth was calculated using the CVRPC's GIS built out analysis tool to determine how much development was possible within the remaining lands. A series of tests were conducted while adjusting the boundaries to arrive at a few options.

Staff and City leaders had extensive conversations about the boundaries and the implications for the community. The consensus was that using the existing zoning boundaries where higher density development was already allowed was the best approach, along with the links to areas of growth in adjacent municipalities. The Built Environment and Infrastructure Committee of enVision Montpelier, the Planning Commission, and the City Council had the Growth Center issue on their agenda during several regular meetings and, with a few exceptions, the community supported the approach described.

Question 2.3

Identify the steps that the municipality is taking to manage any necessary extensions of infrastructure to parts of the municipality that are currently not served by water or wastewater in a manner that will discourage a scattered or low-density pattern of development.

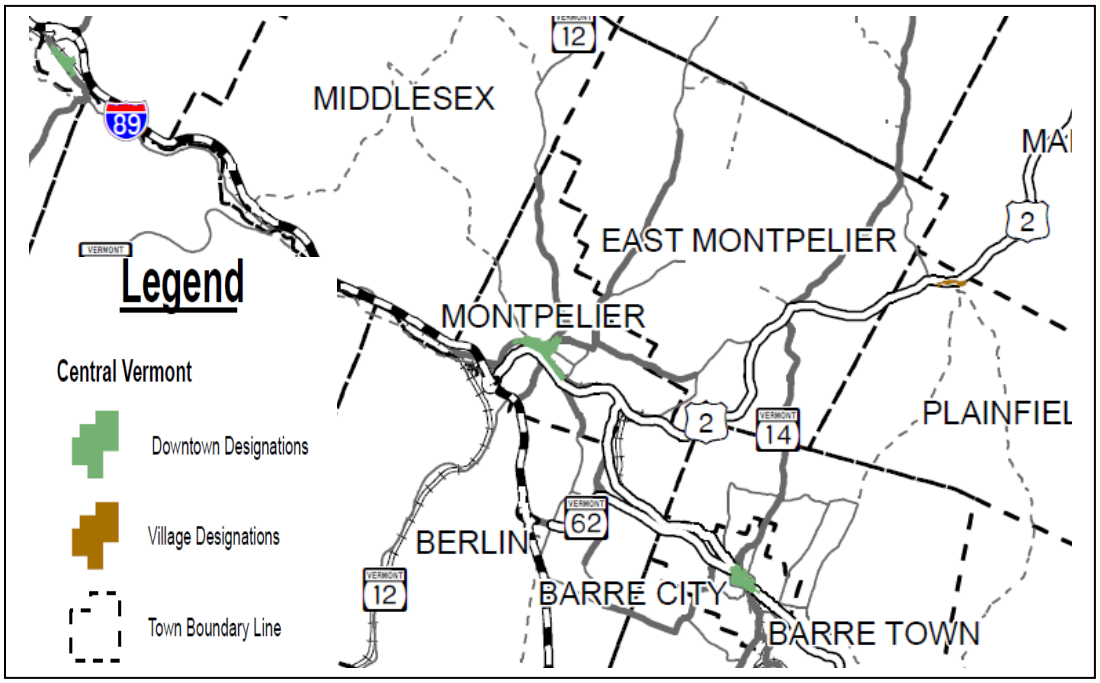
A majority of the proposed growth center (84% in acreage) is served by *both* sewer and water, 3% is served by either sewer or water. There are 31 parcels within the proposed growth center boundaries that are not served by sewer and/or water. These few parcels are included in the growth center because they are either surrounded by sewer and water infrastructure or it makes sense to plan for their eventual connection. Only a very small portion of the proposed growth center includes low density residential zones. None of the proposed growth center will require new road construction for access (some subdivision streets would obviously be required). A map of the sewer and water service areas is located in Appendix 8: Sewer and Water Map.

Chapter Three: Appropriateness of the Growth Center

Question 3.1

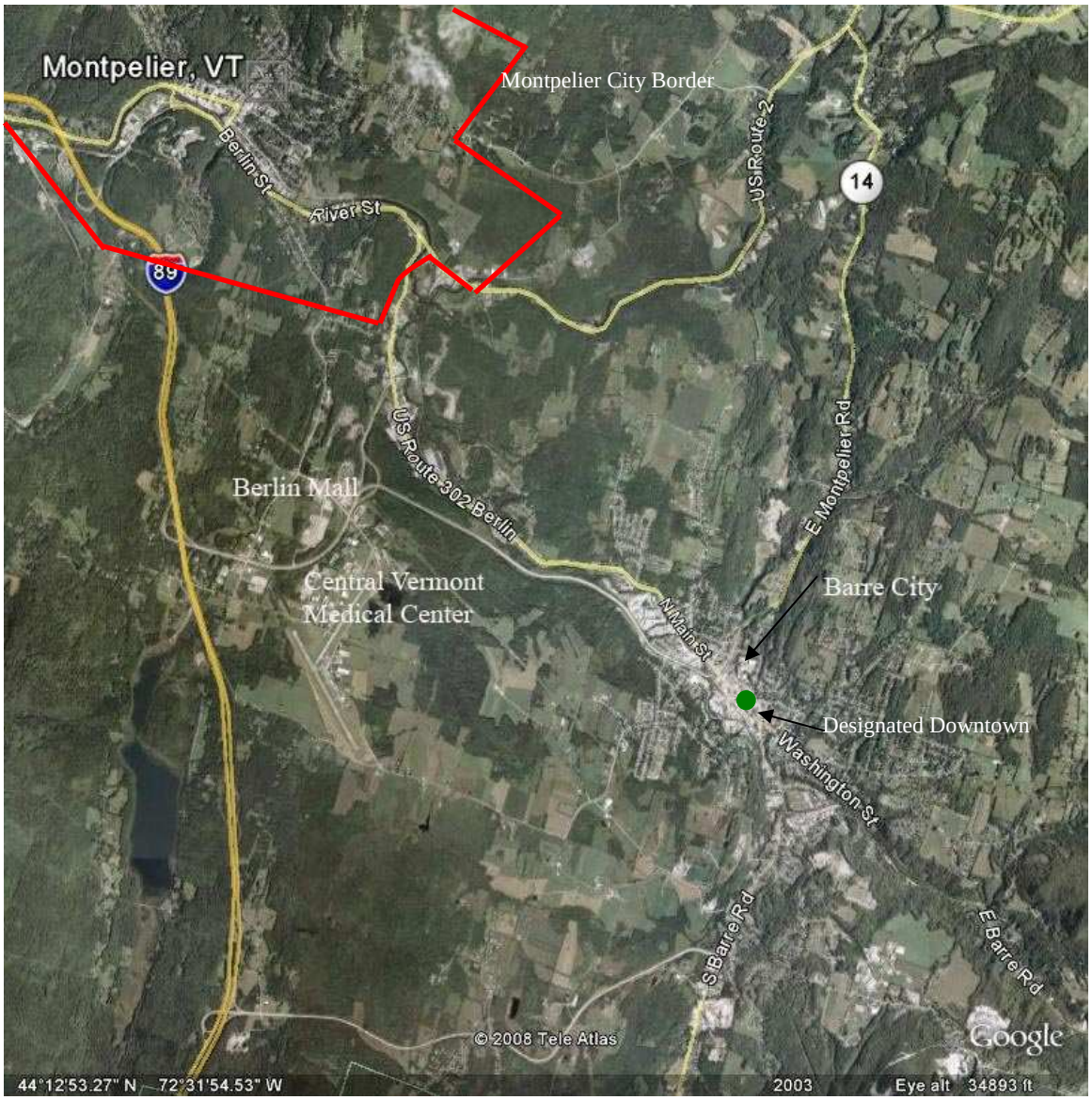
Identify all designated downtowns, village centers and new town centers in the applicant municipality and adjacent municipalities.

A Central Vermont regional map provided by the CVRPC (Appendix 9: Regional Map) entitled "Designated Downtowns and Village Centers" provides this information. Only Barre City is an adjacent municipality that has a designated downtown. None of the remaining adjacent municipalities have a designated downtown, village center and new town center. As shown in the draft Growth Center Map, Montpelier has a Designated Downtown and it is encompassed within the proposed Growth Center.



Question 3.2

Identify all major retail areas (downtowns, shopping centers, malls, big-box stores, etc.) within the applicant municipality and adjacent municipalities, specifically noting which currently function primarily as community-serving retail areas and which serve primarily as destination retail areas.



Montpelier: Montpelier's downtown serves as a major regional retail center. In addition, the downtown, as well as other commercial areas of the city, serves as the region's major commercial and employment center that attracts over 10,000 visitors on an annual daily average. The majority of retail operations occur within the designated downtown. Some additional retail occurs along Montpelier's the Route 2 corridor up to the border with Berlin. This retail is limited to convenience retail or specialized services. The eastern edge of Montpelier along the Route 2 corridor at the intersection of Route 2 and Route 302 includes a closed lumber yard and a car dealership (photo 1).

Berlin: A similar commercial land use pattern continues into Berlin after crossing the Montpelier city border. Approximately 200 yards after the border of Berlin and

Photo 1: On the Berlin/Montpelier town line looking toward Montpelier.

Photo 2: 200 yards from Berlin/Montpelier town line looking toward Berlin. Photographer is standing in the same spot; picture on left is looking toward Berlin, the picture on right is looking toward Montpelier.

Montpelier, the land use pattern of general commercial activity continues including professional offices, large scale retail (i.e.: tractor dealer), and small scale retail such as auto parts stores, convenience stores and gas stations. (photo 2). This stretch of moderate density commercial continues along Routes 302 and 62 until the Berlin Mall shopping area and the Central Vermont Medical Center. This area is 2.5 miles from the Montpelier City line and 5 miles from the designated downtown. The Berlin Mall is most likely a regional or destination shopping center. While visitation data was not collected for the Mall, it is obvious that Berlin alone with less than 3,000 people cannot entirely support it.

Barre: Barre's downtown is located approximately 5 miles from Montpelier's border and 7 miles from the designated downtown. Barre has a designated downtown with a commercially active Main Street. The downtown serves as a regional destination for retail shopping.

Question 3.3

Describe the extent to which any downtowns, village centers or new town centers (designated or non-designated) that are located outside the proposed growth center currently serve as significant employment, retail, service or civic centers for residents in the applicant municipality.

As mentioned in 3.2 above, a certain level of regional retail activity occurs in the Town of Berlin along Route 302 and the Berlin State Highway (Route 62). The closest significant regional activities include the Berlin Mall and the Central Vermont Medical Center. They are located in Berlin approximately 5 miles from downtown Montpelier and 2.5 miles from the municipal border. The hospital is a regional employer and the mall is a regional retail destination. Berlin doesn't provide any civic activities.

Barre City has a designated downtown. Barre City's downtown serves as a regional employment center since it imports slightly more employees than it exports on an average daily basis (see 3.4). Barre is the corporate headquarters for several granite manufacturers that serve a national and international customer base. The City's downtown is home to some cultural facilities such as the Barre Opera House that attract national acts and visitors from across the region and state. Retail activity in Barre is regional in nature although it attracts regional customers for only certain types of goods. A market study conducted on Barre's downtown shows that the city holds a slight lead over Montpelier and Berlin as the regional destination for hardware and building supplies (42.7%), dining and meals (41.2%), banking and financial services (34.1%), gifts and crafts (28.5%) and books (23.8%). This study included a random sample of 439 residents in the region and compared Barre to Montpelier, Berlin, and Burlington with respect to visitation and shopping patterns[7]. Other key findings were:

- Downtown Barre is the second ranked primary destination in two areas: appliances (30%) and personal services (27.9%).
- Downtown Barre ranks lowest (4th) as the primary place to shop in three categories: groceries (8.1%), music, tapes and CDs (15.9%) and clothing (17.6%).
- Shopping in several categories is closely divided among 3 or more destinations with no one area dominating. This is true for books, clothing, home furnishing, and music, tapes and CDs. While one municipality may attract more people than the others in certain categories, it isn't by a considerable amount.
- Berlin is the leading primary destination for groceries (43%) and clothing (25.3%) and an important competing shopping area for gifts and crafts, health services and music.
- Montpelier does not rank first as a primary destination for any category, but is an important source of competition for dining, books, and music.
- The Burlington area, surprisingly, is not the first ranked primary shopping area in any category, but is an important source of competition, ranking second or third, for appliances, clothing and home furnishings.

[7] Downtown Barre Market Study. July 2004. Karl F. Seidman Consulting Services.

This study helps demonstrate that Montpelier, Barre and Berlin all serve as regional destinations for specific services, retail, and employment types. All three municipalities are also non-regional for others types of commercial activities. The three municipalities act symbiotically as regional partners each with their own niche. Barre is more dominate in manufacturing employment and hardware/garden retail; Berlin is the region's top employer in the medical industries, and serves as the region's retail center for groceries, clothing and auto dealerships. Montpelier is the regional employer in government, insurance, financial, and professional services. With respect to retail, Montpelier is a regional destination but is not dominate in any one category of retail. Rather, Montpelier is a destination for a wide variety of smaller shops in a pedestrian friendly environment with entertainment and restaurants complementing the shopping experience.

The creation of a growth center in Montpelier will not alter this regional balance of commerce. The City is on a downward trend of losing its regional influence and the growth center will help stem this trend. The creation of this growth center does not attract new growth; rather it plans to accommodate the City's current employment projections into a specified boundary. Each municipality will continue to see its own projected growth pattern; Montpelier's will be located in a planned location. The proposed growth center will not (and does not have the ability to) alter growth projections in the applicant municipality or adjacent municipalities.

Question 3.4

Describe the extent to which the applicant municipality currently serves as an employment and/or residential center in the region, presenting the best available statistics regarding place of work and residence for people living and working in the applicant municipality.

This question is answered in large part through the report's Regional Employment Projections in Appendix 3 and Fiscal Impact Model in Appendix 4. To highlight the concentration of employment in the region and applicant municipality, two series of employment data were examined. The two data series are: 1) ES-202 employment data, which measures employment in establishments covered by unemployment insurance and, 2) the Local Area Unemployment Statistics (LAUS), which are data collected by the Current Population Survey measuring employed residents. The major difference between these two series is that the ES- 202 data is collected on a 'place of work' basis, while the LAUS series is collected on a 'place of residence' basis. Examining the differences between these two series enables one to gain insights into the relationship between where people work and where they live within the Central Vermont region.

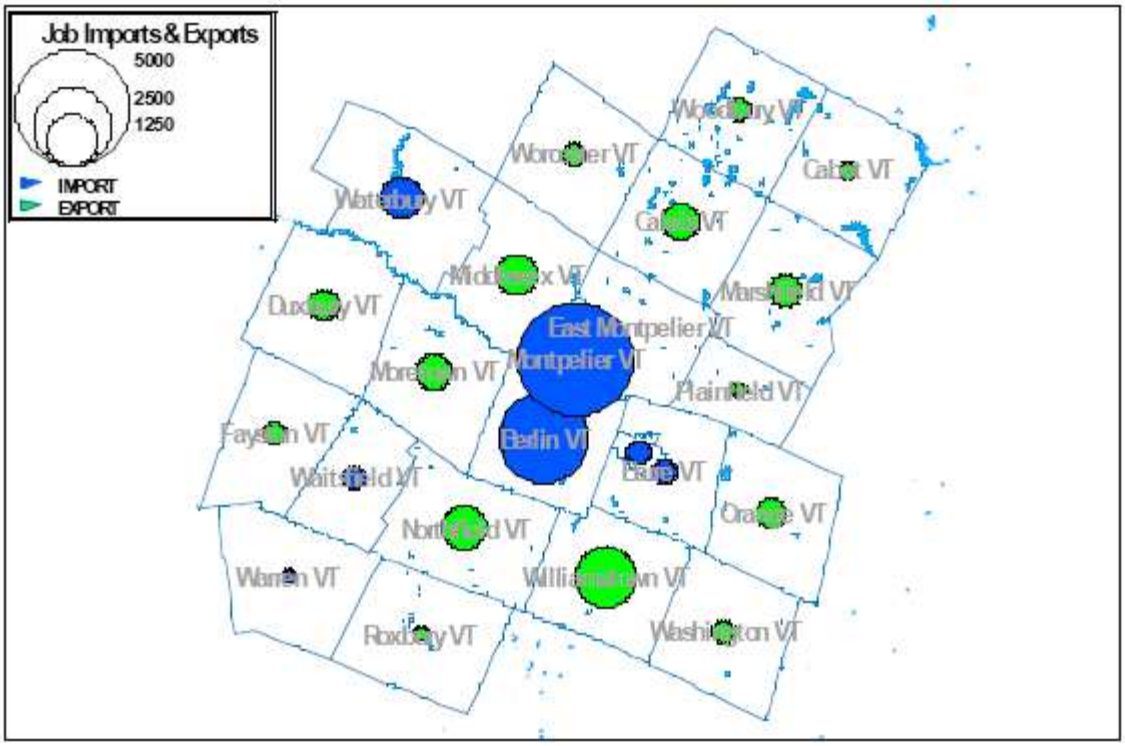


Figure 6: Job Importers and Exporters in Washington County

Jobs Imports and Exports

These two data series were compared for all the towns located in the Central Vermont region. The difference between the two series was calculated and diagramed, as shown in Figure 6. The blue circles represent the quantity of jobs imported into the municipality while the green circles represent the quantity of jobs exported. The size of the circle is directly proportional to the number of jobs. As can be seen from the map, there are six towns that can be considered 'job-importing' towns. Montpelier City is the largest job importer in the region. Berlin is second. Barre City, Waitsfield, Warren and Waterbury form the remaining areas of job importation. The remaining seventeen towns are 'job-exporting' towns, as the employment by place of residence is much greater than the employment by place of work. The job-importing towns contain the bulk of the employment, while the job-exporting towns contain the bulk of the people who fill these positions.

Montpelier's Effective Daytime Population

An analysis of Montpelier's effective daytime population was completed in 2005 as part of their Fiscal Impact study. The analysis examined travel patterns in greater detail than the employment data above. The travel patterns of residents, visitors, shoppers, and employees in and out of the city were studied. Montpelier's full time resident population was approximately 8,026 in 2002. The day time population was approximately 18,574. Nearly 10,500 people enter the city every day based on an annual average. The number is lower when the legislature is not in session or when the colleges are not in session. On the other hand, when the legislature is in session the number is larger than projected due

to the unknown number of visitors to the capitol and associated offices. The effective daytime population is the number that is used to determine the impact on the City's infra-structure and services.

Table 20: Estimation of Effective Daytime Population
City of Montpelier

	2000	*2002*	*Running Total*
Total Estimated Population	8,035	8,026	8,026
Total Local Labor Force (1)	2,142		
Total Montpelier Employment (2)		9,294	
Employment minus local labor force	7,152		15,178
Minus Outbound commuters	2,156		13,022
Plus Students commuting (3)		753	13,775
Non-ES202 employees (6)		2,421	16,196
Sub contractors (7)		440	16,636
Legislative (8) (5/12 of total)	800	328	16,964
Plus Overnight guests in hotels (4)		162	17,126
Plus Shoppers/visitors (5)		1,448	18,574
Estimated average daytime population			18,574
Daytime Population in 2015 (15% increase)			21,360

1: US Census population: Montpelier residents with jobs in Montpelier
2: VT Dept of Employment &Training, QCEW series (formerly ES-202) of total "covered" jobs in the City of Montpelier
3: School records
4: Interviews of hotel owners
5: Assumes 60% of public parking is used by this group. Very conservative estimate since private lots are not included :(ie.: Shaws, etc)
Shopper visitor estimates should factor in all private lots as well.
6: BEA Dept of Commerce
7: Interviews with large employers
8: Capitol Security

Question 3.5

Summarize the Regional Planning Commission's 20-year projections for population, housing, employment growth for the region and discuss what percentage of regional growth the municipality is planning to accommodate within its growth center by type – residential, commercial (retail and non-retail), and industrial, and how that compares to its current regional share, explaining any significant changes in regional share being planned for by the municipality.

Regional Employment

As previously explained in the employment projections above (Question 1.1), Montpelier's employment projections are completed based on its historical regional share of employment. As such, the regional impacts of employment growth in the city are already incorporated into the projections. The proposed growth center will not, and cannot, alter these projections. Montpelier has experienced a steady downward decline in regional importance as an employer. As shown in Table 10, for the past 30 years, the City's share of regional employment declined from 27.6% to 20.3%. The employment projections moving forward into the next 20 years maintains this downward decline from 20.1% to 19.5% (Figure 7).

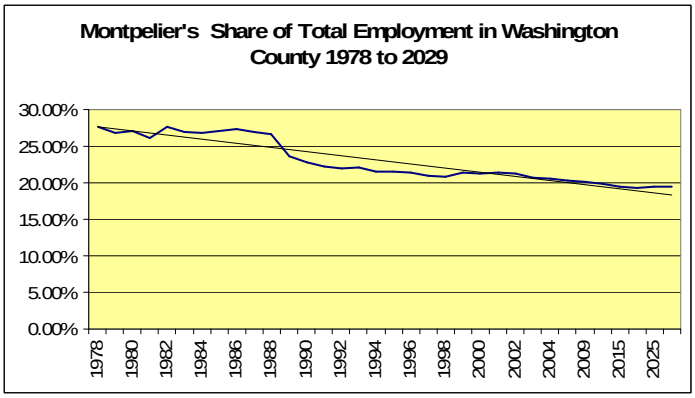


Figure 7: Montpelier's Regional Share of Employment

Although the City will gain approximately 1400 new jobs over this period, it will decrease its regional significance because adjacent municipalities will be increasing their regional share.

To the extent that the new Growth Center will increase economic development within its boundaries, it will help reduce further loss of the City's employment share to the rest of the Region. For decades, the municipalities of Barre, Berlin, and Waterbury have been increasing employment shares. We hope the growth center will help maintain Montpelier's importance as one of Vermont's traditional downtowns, Washington County's seat, and the Capitol of the State.

Population and Housing

As explained in detail above, the population and housing projections are interrelated. The City's housing projections were based on actual construction rates. It then uses those data, combined with known market preferences and policy decisions, to project 20 years

of housing construction. The population figures are a derivative of projected housing units based on an assumed average household size per unit.

The housing and population projections show that Montpelier will start to increase in numbers. The Census data of the City's population show the decades of the 80's and 90's were relatively flat in populating growth and the City even lost about 200 people between 1990 and 2000. During this time, the amount of housing units was increasing due to smaller household sizes. The number of housing units constructed in the past decade has steadily increased as measured by building permit data and field verification. In addition, there are changes in market demand that show increased interest in smaller homes, city dwellings, dwellings within walking distance to city services, and homes closer to one's place of work to reduce commuting time. This change in market demand coupled with field verified construction data leads us to believe that Montpelier may have "hit bottom" in terms of population decline and will start a slow increase in its population and regional share of population.

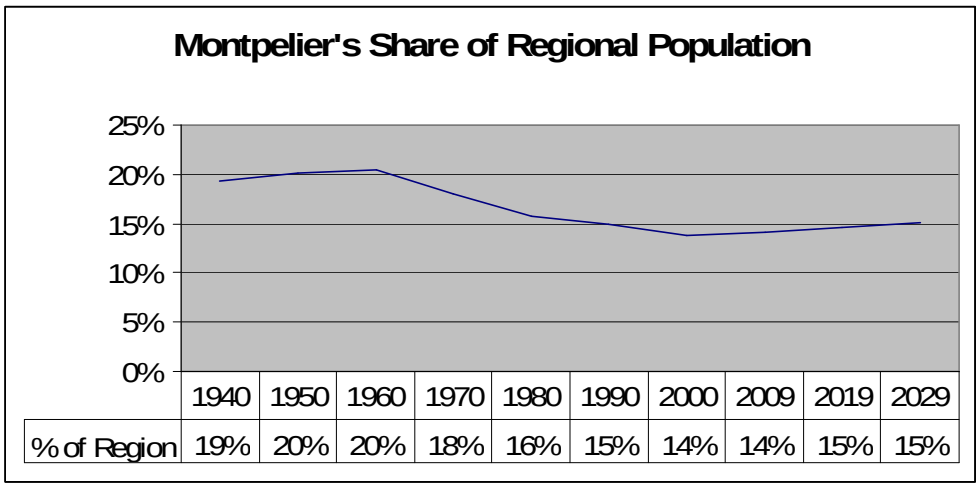


Figure 8: Montpelier's Regional Share of Population

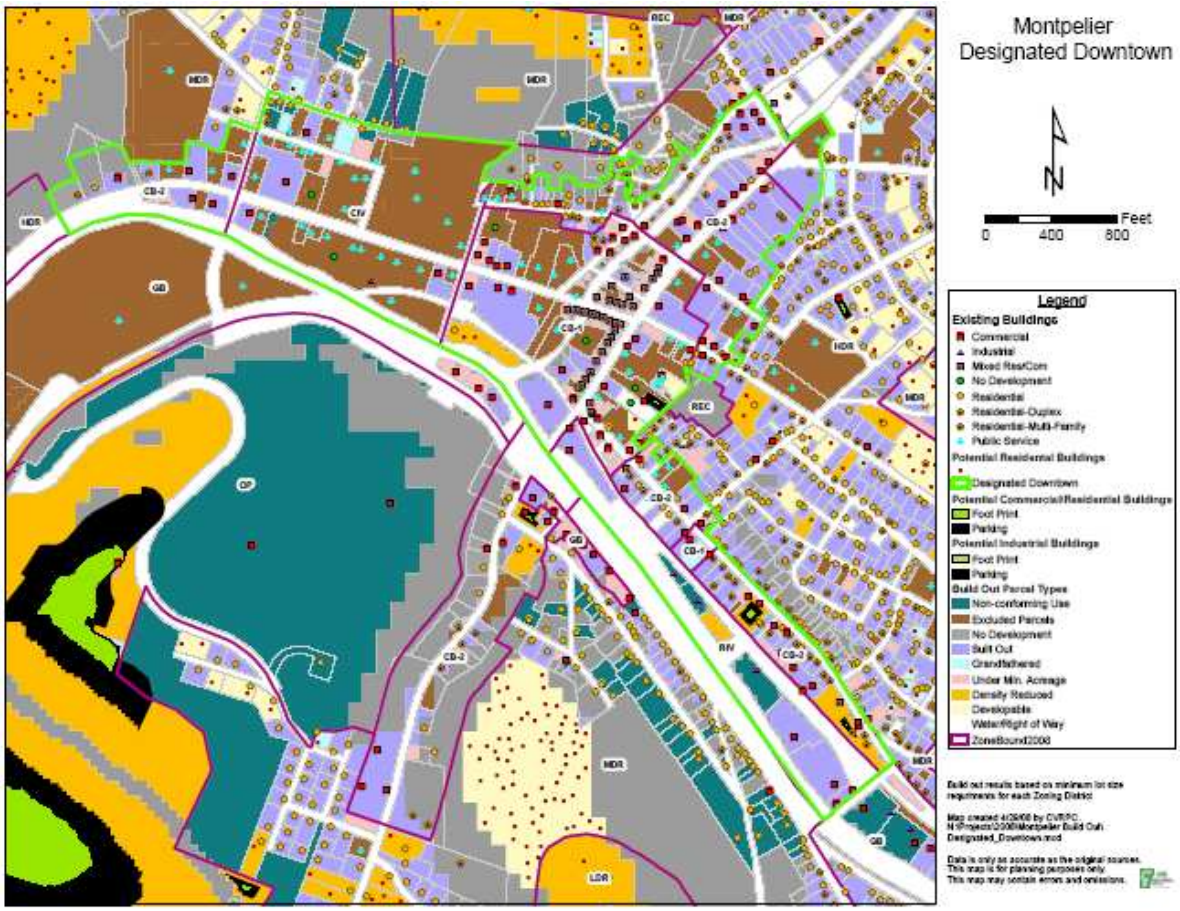
For the 20 year planning projection, we estimate that Montpelier will maintain slight positive growth in its regional share of population rising from 14% today to 15% in 20 years from now.

Chapter Four: Development Patterns

Question 4.1

Discuss the character, land uses and density of development that currently exists and will be permitted on lands within the designated downtown, village center or new town center associated with the proposed growth center, specifically citing the steps the municipality is taking to encourage infill development, adaptive reuse and/or redevelopment of vacant or under-utilized land within the designated downtown or village center, or to promote development with a 'downtown' character within a new town center.

Montpelier's designated downtown is characterized by high density mixed use commercial/residential land uses. It is a traditional Vermont downtown that has served the Washington County region as a shopping and employment center for two centuries. It has also served the State of Vermont as the State Capitol for just as long. There are several hundred structures contributing to its historic district. The designated downtown has the highest density of land uses in the city. As shown in the attached designated downtown map there is a good mix of commercial, residential, and public buildings that are well integrated in a compact semi-grid pattern of walkable streets.



As described in question 1.1 above the designated downtown has very little room for in-fill development. There is approximately 65,000 commercial square feet of development potential remaining within this area. The city's zoning regulation encourages the development of this remaining land since the potential lies within the city's central business district zoning district. This district permits the highest density potential within the city. In addition these properties are within the design control district which ensures that these last remaining buildings are built to similar architectural standards as the existing buildings. The zoning regulations regarding the design control district state that the purposes of the district are to create:

- Harmony of exterior design with other properties in the district;
- Compatibility of proposed exterior materials with other properties in the district;
- Compatibility of the landscaping with the district;
- Prevention of the use of incompatible designs, buildings, color schemes, or exterior materials;

While these regulations help "encourage infill development" the majority of future development will occur outside of the designated downtown because of the degree to which the downtown is already built out.

The designated downtown includes four zoning districts. Three of the districts allow for mixed uses (Residential and Commercial), the fourth district (Civic) allows for only commercial uses. These are the most flexible of all of Montpelier's zoning districts. They encourage development by allowing in-fill development and a mix of uses. A developer would only need one-eighth of an acre to build in two of the districts and approximately one-fifth to build in the other two.

Table 21: Zoning in Designated Downtown

DISTRICT	USE	Minimum Lot Size (acres)
Central Business 1 (CB1)	MixedRC	0.110
Central Business 2 (CB2)	MixedRC	0.230
Civic District (CIV)	Com	0.200
Riverfront (RIV)	MixedRC	0.110

Source: Montpelier's Zoning Ordinance

CB-I- Central Business 1: The city's primary government and retail center. The district also permits multi-family housing. Minimum lot area is 5,000 square feet (1/8 acre).
CB-ll- Central Business 2: A transitional district between the Civic and Central Business Districts. The district permits office and multi- family residences and other uses which would enable the preservation of the historic character of the areas where mapped. Minimum lot area is 10,000 square feet.
CIV -Civic District (Capital Complex): Office uses associated with the city's function as State Capital. Minimum lot area is 10,000 square feet.

RIV - Riverfront district: The Riverfront District defines the area along the Winooski River between Main, Granite, and the rear of Barre Streets. Minimum lot area is 5,000 square feet.

The steps Montpelier is taking to encourage infill development, adaptive reuse and/or re-development of vacant or under-utilized land within the designated downtown are as follows:

1. The creation of a Capital District Master Plan that will create linkages from the Capital District proper to the downtown; increased state office space; develop a greenway along the Winooski River; and create a Transit Center located at the intersection of the Winooski River and the Taylor Street Bridge.
2. Parking requirements are waived for redevelopment in CB1 and Riverfront districts.
3. Zoning Ordinance allows the Development Review Board to waive parking requirements for new development and allow greater flexibility for shared use parking in many areas of designated downtown.
4. The City encourages private development by identifying areas where future development could occur either as site-specific in-fill projects or larger redevelopment zones;
5. In the past 5 years, the city has taken a leadership role to prompt new development or acted in a supporting role to address needed policy changes. The recent plans for the Winooski East redevelopment, where the city has created a commission to oversee development planning and review of larger scale mixed-use development is a good example of city-state-private developer cooperation. The city recognizes that additional development in the downtown can be part of a positive future for the downtown economy, and if properly guided, can be a positive asset from the perspective of public interests, public space, economic well being, and environmental health. This position has a positive application to the City-State Master Plan.
6. Montpelier is planning to develop a Capitol Complex to relocate a number of state departments that are currently occupying isolated rental spaces outside the Capital District (CIV) but within the City of Montpelier. Currently, the State leases or rents 103,000 SF of office space. The State of Vermont, dedicated to the concept of concentrated growth rather than sprawl, would prefer to grow within the existing downtown. As a policy, the State intends to remain within the existing Capital Complex and not expand outside of these boundaries into other areas currently under private ownership.
7. The Capital District Master Plan state that “the retention of existing historic structures will be included in the CDMP for new State offices, particularly along State Street. New Buildings that face the Winooski River should have a “front” face to the south. Such development should be visually and programmatically “connected” to the riverfront area with public access along that corridor and Memorial Drive.”

8. Montpelier is accommodating as much flexibility into their downtown planning by accommodating the widest range of building scales possible, the plan states "floorplates of new buildings should be capable of adapting to a range of different department needs, sizes, and configurations (10,000 SF - 35,000 SF on 2-4 stories)."
9. The Montpelier Downtown Community Association is an active and fully staffed organization dedicated to promoting development in the downtown.
10. Montpelier's Grant and Revolving Loan program encourage infill development.

Question 4.2

Discuss the character, land uses and density of development that currently exists and will be permitted on lands within the proposed growth center but outside the designated downtown, village center or new town center associated with the proposed growth center, specifically citing the steps that the municipality is taking to encourage a settlement pattern resulting from growth center designation that is not be characterized by scattered or excessively land consumptive development.

Table 22: Zoning Districts in Proposed Growth Center

DISTRICT	USE	MINIMUM ACRES Allowed for Development	Acres	% of Growth Center
Central Business 1 (CB-1)	MixedRC	0.110	28	1.20
Central Business 2 (CB-2)	MixedRC	0.230	58	2.49
Cemetery (CEM)	NoDev	0.000	22	.94
Civic (CIV)	Com	0.200	28	1.20
General Business (GB) With Water	Com	0.460	27	1.16
General Business (GB) With Water and Sewer	MixedRC	0.340	178	7.66
High Density Residential (HDR) With Water and Sewer	MixedRC	0.200	157	6.75
Industrial (IND) With Water and Sewer	Ind	1.000	114	4.90
Medium Density Residential (MDR) With Sewer	Res	0.460	37	1.59
Medium Density Residential (MDR) With Water	Res	0.460	15	.64
Medium Density Residential (MDR) With Water and Sewer	Res	0.230	1438	61.90
Recreation (REC)	NoDev	0.000	184	7.90
Riverfront (RIV)	MixedRC	0.110	7	.30

The area outside of Montpelier's designated downtown and within the proposed growth center is characterized by a mix of commercial and high density and medium residential zones. There are 13 zoning districts in this area. Most of the lands (73%) within the Growth Center allow development on one-fifth of an acre or less. There are five zoning districts that allow development on lands between one-fifth and one acre in size. However, these districts amount to only 14 percent of the total acres of the growth center.

The Civic and CB-1 zones allow for building to be 6 stories tall. In addition the CB-1 zone allows for 100 percent building lot coverage thereby allowing all of the lot to be used for commercial square footage. For example, a 10,000 square foot lot could theoretically accommodate a 10,000 square foot building footprint that is 6 stories tall for maximum square footage of 60,000 square feet.

Ninety-six percent of the medium density residential zones will be built out at an average density of slightly smaller than ¼ acre lots (.23 acres). The remaining 4% will either be developed on ½ acre lots or the developer will extend the missing infrastructure (sewer or water) to the property to increase density. The few lots that do not have infrastructure are very close, and in some cases are surrounded by, existing infrastructure lines. We anticipate that the potential increased profits from connecting to the infrastructure will create the financial incentive to hook up and result in higher densities on these remaining lands.

A more detail description of the western edge of the growth center (Toy Town) is described below, along with the section of Route 2 that extends east of the city.

Toy Town:
Toy Town is also known as "Montpelier Junction." It is an historic mixed use residential/commercial/industrial area of the City. The zoning districts governing this area are medium density residential and general business. The area is characterized by modest housing on ¼ acre lots with small businesses along the main street. There is a small industrial area off the main street that is home to several businesses.

Photo 3: Small Businesses in Toy Town

Toy town has an historic feel with 1960's and 1970's era small businesses serving residents in 1500sf homes within walking distance. The area is also important to the future

growth of Montpelier. This area has excess land to accommodate more growth and it is already zoning is a mixed use compact development pattern to help promote 21st century planning standards. We recognize that by looking on a map the growth center appears to have a strange "tail" that indicates to some a sign of linear or scattered development along a major route (otherwise known as sprawl). However upon closer examination one can see that this is not the case. As one leaves the designated downtown heading toward this area, there are a small number of businesses in professional offices in historic homes.

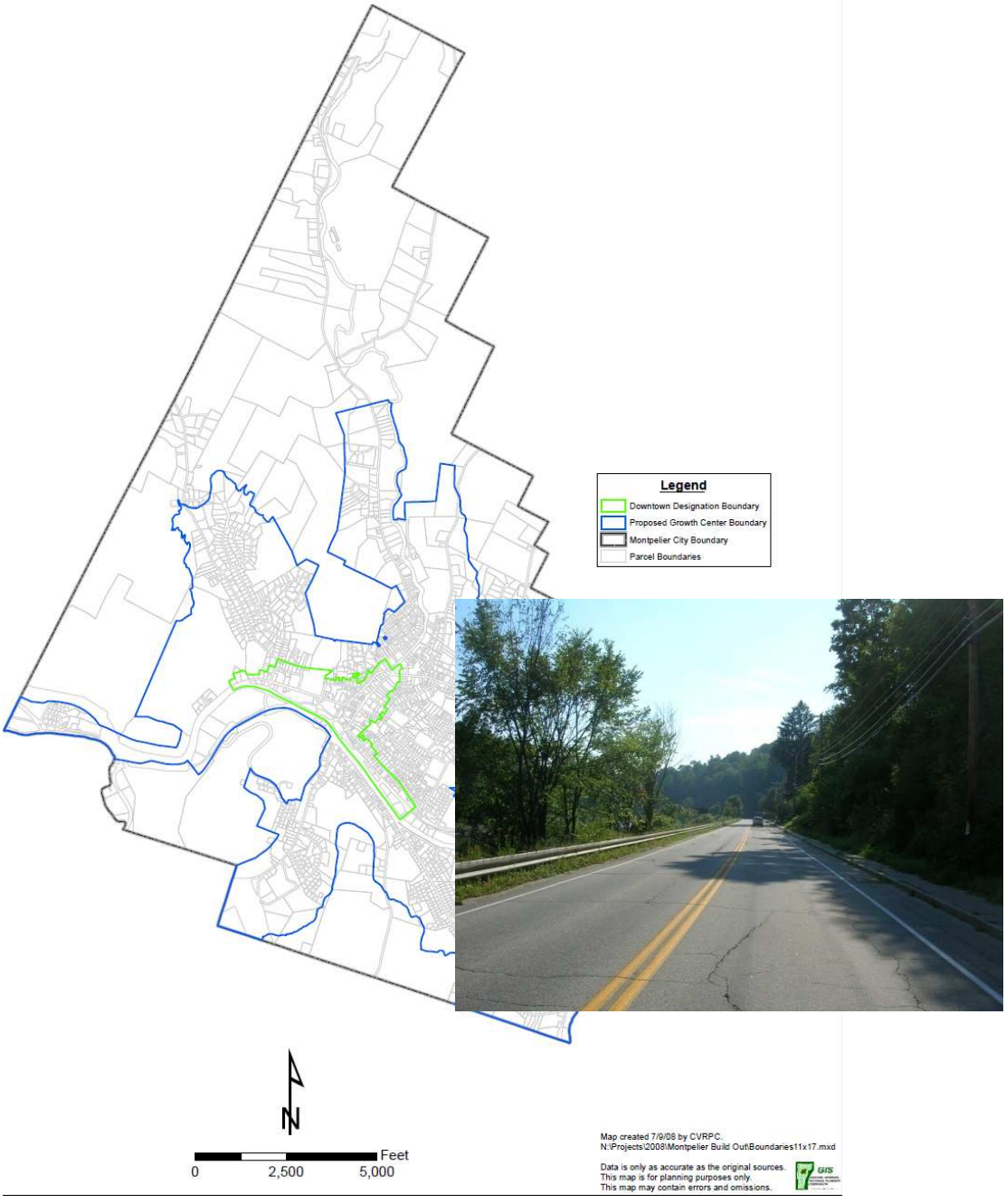


Photo 4: The "tail" alone Route 2 connecting Toy Town with the Designated Downtown

After leaving this, the traveler goes along Route 2 that is constricted by steep slopes on the right (north) and the Winooski River on the left. Development is simply not possible along this route due to natural constraints. The actual zoning along this section of road is Medium Density Residential which would require ¼ acre lots and there simply isn't enough land for a person to even apply for a permit. The future of this stretch of road is forever undeveloped. Sprawl will simply never happen along this area.

Once the traveler crosses under the I-89 highway bridge the land opens up and the traditional development pattern of Toy Town starts. Keeping this area within the growth center is important to the City because it provides for infill development in a compact mixed use pattern that can connect to existing sewer and water infrastructure.

The adjacent municipality is Middlesex. Middlesex allows for large scale industrial uses on its side of the border thereby continuing a similar land use pattern.

Photo 5: Industrial land uses on the Middlesex side of the growth center border.

Photo 6: Industrial land uses on the Montpelier side of the growth center border.

Route 2 East:

The Route 2 corridor extending east of town has a pattern of development that can be characterized as "strip development,' i.e. linear commercial and residential development that has been built without a lot of consideration to pedestrian amenities or its connection to the downtown. The high density allowed in the General Business district, however,

makes it a good candidate for redevelopment in the compact form that is the goal of Growth Centers. Minimum lot area and other dimensional requirements are only slightly larger than those required in the Central Business District.

Although this district would not be ideally suited for Growth Center designation if it contained a lot of undeveloped land, it is almost completely built out at this point (see Appendix 28: Growth Center Build Out Map). Redevelopment of this area can proceed in a manner that encourages compact residential and commercial development, and with the TIF financing allowed with designation, redevelopment is much more likely.

Growth Center Build Out Map

This map was created after the preliminary application was completed because of discrepancies discovered in the way the build out methodology worked when estimating the amount of development that could occur within the Growth Center boundaries as compared to our population projections for the next 20 years. Since the computer program being used linked development to road frontage, there were some flaws in the way it calculated the potential build out within the boundaries.

There are four categories of land use described on the Build Out Map:

Parcels Fully Built Out: These parcels are colored in purple, and represent land that has met its quota of development under the current zoning ordinance.

Developable Parcels: These parcels are colored in yellow/beige, and represent parcels where more development could occur under the current zoning ordinance.

Excluded Areas: These parcels are colored in grey, and represent parcels that were excluded from consideration of future development. This could occur for different reasons – in some, it is due to state ownership, in others it is due to conservation easements present on the land, in others there might be a significant institutional use, like Vermont College, which restrict the probability of development.

Not Developable: These parcels are colored in green, and represent parcels or parts of parcels where there are significant physical constraints – steep slopes, wetlands, etc.

Question 4.3

Discuss the character, land uses and density of development that currently exists and will be permitted on lands outside the proposed growth center, specifically citing the steps the municipality is taking to further the goal of retaining rural character outside the proposed growth center, to the extent that such a character exists.

The area of land outside the growth center is 62 percent of the City. It includes 3718 acres and is characterized mainly by low density residential, open spaces, recreation fields, agricultural lands and forests. An important step the City took to preserve its open

spaces was to complete an inventory of important open space and viewsheds. The inventory rated all the open spaces in the city according to 10 criteria.

Property	Foreground to Distant Views	Important Element In Urban Views/ Highly visible	Contributes Visual Diversity	Currently Unprotected	Total Score	Comments
Sabin's Pasture (Zorzi)	X	X	X	X	4	Upper portions of the meadow offer excellent views: mix of field and forest important
Nuissl Hill Street		X	X	X	3	High meadow; Very prominent in views all over the city.
Slinkman/Hooper (Breezy Acres Farm)	X		X	X	3	Foreground to important view of city; unsuitable for development but keeping open may be an issue
Pear Street Motors (Gove and Emmons			X	X	2	Currently compromised by storage; classic flat floodplain farmland
VINS North Branch Nature Center	X		X		2	Views over property to Worcester Range
Pembroke Farm (Goldman)			X	X	2	Some middle ground hills visible beyond meadows: large area; fairly diverse in form
England Farm			X	X	2	Provides a sense of rural character at the fringes of the city.
Nation al Life Property (south)			X	X	2	Not highly visible from public areas; good views from the meadow itself; development could potentially be visible from I-89
Hoare Farm (Foodworks)			X	X	1	Currently Proposed as Demonstration site for alternative technologies, classic river floodplain meadows.

Eight of the areas were found to be currently unprotected. Sabin's Pasture was found to hold the highest value of open space (figure 9 above).

Figure 9: Open Space Evaluation Results

The report then provided recommendation for the protections of all of the valuable open spaces. Some of the report's more important recommendations are listed here:

Sabin's Pasture:
Protection Options: Several approaches may be needed including the purchase of open space easements to protect the upper meadow areas, sledding hills, valuable woodland areas and potential linking corridors. The city must be sure it's planning and zoning documents support the protection of the important portions of this property. Development along Barre Street could be very appropriate on the piece, but it is critical that development protect the foreground views from the upper pastures. Any development in the upper meadow areas would be highly visible in addition to destroying an important scenic resource. Development should be designed to protect a visually meaningful and contiguous piece of open space. It should be large enough to retain the image of a farm meadow that visually contains the denser urban growth to the west. It may be necessary for

the City to work proactively with potential developers in order to encourage a type of development that can work on this highly sensitive piece of land.

Nuissl Meadow:
Protection Options: This property is noted in the City of Montpelier Master Plan as a proposed "Visual Open Space Buffer" (Figure 11, Open Space Network, p. 51), and as Conservation Land on the Future Land Use Map (p.77). Protection of the property through conservation easements, or other means should be secured over the open meadow and high elevation portions of the property. Given its proximity to the city boundary and other important farmland in Berlin, a combination of rural scale development and open space protection would be the best option for this property. Collaboration with the Berlin Planning and Conservation Commissions may be needed.

Goldman Property:
Protection Options: Easements would be the most logical approach to protecting both of the visually important portions of this property. Zoning and planning regulations should be updated to be sure they encourage patterns of growth that will protect the valuable scenic resources.

Carr Lot:
Protection Options: The city could purchase a "city pathway/greenway" along the riverbank; or it could encourage private development of this public outdoor space, possibly through a cooperative agreement. Funding will be required to develop the physical amenities of pathway and green or park space.

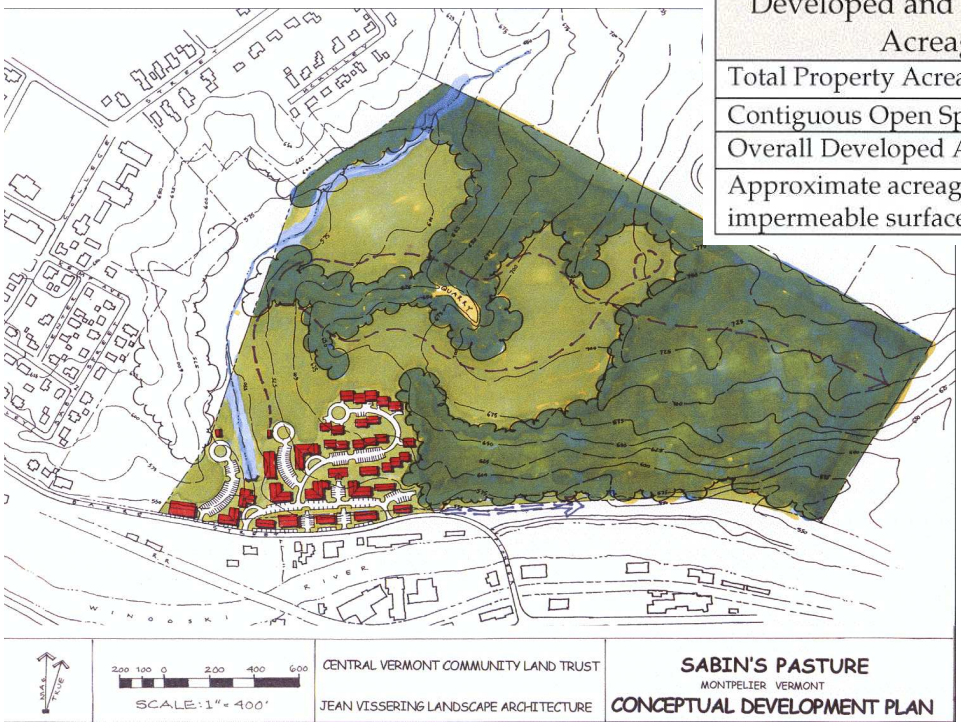
River bank Access and Management
Protection Options: An overall management and protection plan for the river needs to be developed. Protection could involve a combination of cooperative agreements with landowners, the purchase of protective easements, and the acquisition of funding for riverbank enhancement projects. A comprehensive plan is beyond the scope of the report.

Backdrop to the Statehouse:
Two currently undeveloped private properties are part of the green backdrop to the statehouse. Inappropriate development of these properties could potentially compromise this important view by distracting from the visual importance of this important focal point. Both properties are relatively high in elevation so that development could appear out of context with existing development patterns in the area.

Protection Options: Both properties are adjacent to Hubbard Park and would be appropriate additions to the park. Easements and planning options should also be explored.

The City has worked hard to implement these recommendations. Sabin's Pasture has its own master plan that went through extensive public comment. The Trust for Public Lands is currently holding an option to purchase the property for conservation. The current plan calls for developing 13 acres to help finance the preservation of the remaining

87 acres. This is an example of the City's extensive efforts to preserve the remaining valuable open spaces.



Chapter Five: Diversity of Development

Question 5.1

5.1. Summarize the desired mix of uses within the proposed growth center as envisioned in the municipal plan and allowed under the land use regulations, specifically identifying any steps the municipality is taking to encourage for mixed use development within the proposed growth center.

The proposed growth center has core areas of downtown and the central business district which allow for mixed use development. The City Master Plan promotes this type of development. Excerpts from the plan include:

Mixed Residential: The intention of these areas is to encourage high-quality residential development at densities prescribed in the zoning regulations with minimal intrusion of conflicting uses or activities. Residential uses may consist of a variety of building types, including single-family detached residences, town houses and multiple-family dwelling as determined by zoning.

Commercial: This is the central retail shopping and office area of the city and the location of a vital and diverse mixture of pedestrian-oriented uses, including residential. The area houses major institutions and local government functions in addition to commercial activities. Uses and activities which contribute to the cultural vitality for which the city is known should be encouraged because the area is in many ways the landmark area of the city. In addition to shops and financial institutions, places of entertainment, galleries, performance spaces, *and housing* should be provided.

The City promotes mixed use, smart growth standards for all of the City's future development. The Plan states that:

"There are opportunities for new development within Montpelier. …, residential and non residential opportunities may exist on infill lots within the downtown, through the redevelopment of existing property, through replacement or adaptive reuse, on undeveloped parcels adjacent to currently developed areas, and on remote parcels."

"Any proposal will be considered on its merits and according to the land use regulations in effect at the time of application. While this plan does not endorse specific developments, the following criteria should be taken into account when regarding the location of future development:

1. Development should be in conformance with the uses and standards of the city's zoning and subdivision regulations.
2. Development should utilize the city's existing street grid, or build upon it as through extensions.

3. Development should preserve density and provide access to public transportation.
4. Development should enhance rather than impair the city's natural resource and environmental attributes.
5. Development should be accommodated within the capacity of existing community facilities without the need to construct new facilities.
6. Development should preserve prime agricultural soils for existing and potential agricultural uses.
7. Development should, in addition to economic benefits, provide amenities or services of benefit to the community."

Question 5.2

Discuss the steps the municipality is taking to plan for and encourage residential development that meets the needs of a diverse population, including affordable housing, within the proposed growth center.

For quite some time, the City of Montpelier has engaged in extensive, long term efforts to promote affordable housing, and housing diversity, within its borders. These efforts include:

1. The creation of a housing task force in 1999 that monitors the supply and demand for affordable housing in the City and makes annual recommendations to the City Council.
2. The construction of 329 permanently affordable housing units over the past 35 years.
3. Several affordable housing projects are currently under development review that may add dozens more affordable units to the supply.
4. The Creation of the "One More Home" program that promotes the creation of accessory units (mother in-law apartments) on the City's single family home lots.
5. The creation of the "Housing Preservation Grant Program" that provides 0% interest loans for housing repairs and renovations for low and moderate income residents.
6. The establishment of the Montpelier Housing Authority – a local independent government agency with 5 board members appointed by the City Council who hire a Executive Director and staff. The Authority operates a wide variety of programs in its continuing effort to meet the needs for affordable housing including ownership and management of Pioneer and Gould Apartments, Lane Shops Apartments, Cummings Street Apartments, Prospect Place and two projects for Washington County Mental Health: a group home on St. Paul Street and a small apartment house on Prospect Street in Montpelier. In addition, they administer the Section 8 Existing Program which totals 122 vouchers. Last year they began offering a home ownership program option to Section 8 participants. Working along with the Central Vermont Homeownership Center, this option allows Section 8 tenants to use their vouchers to help pay their mortgage and other pertinent housing expenses.

Question 5.3

Discuss the steps the municipality is taking to plan for and encourage economic development within the proposed growth center, specifically describing how the growth center will support a healthy business climate in the designated downtown, village center or new town center associated with the growth center.

At the time of this writing, there were several vacancies for commercial space on the 2nd and 3rd floors of downtown buildings. The Executive Director of the Montpelier Downtown Community Association conducted a survey of vacant commercial space and concluding that less than 4% of the space was vacant. A 4%-5% vacancy rate is generally considered healthy for most real estate markets. Commercial real estate is more volatile so the vacancy at any one point in time should not be used as an indicator of supply.

The proposed growth center is planned to promote a vibrant and economically healthy downtown. According to the City Master Plan, the Vision for the Montpelier Economy is " to maintain, develop and enhance Montpelier's high quality of life, unique character and the blend of natural and built environment, there needs to be a variety of economic opportunities and diversity of services for the people who live in, work in and visit the city"

The City is planning to integrate the proposed Growth Center into the existing designated downtown. As demonstrated in several questions above, the designated downtown was delineated so tightly that it prevents the expansion of a vast majority of the City's future economy within its borders. The Growth Center is proposed to surround the designated downtown so that as the economy grows it will grow out from the designated downtown and essentially create a larger downtown. This is exactly what the growth center program promotes: "The most obvious structure would be a growth center that includes and completely surrounds a designated downtown…where development would expand outward from the core, as illustrated in Diagram A".[8]

The City of Montpelier is planning to promote a vibrant downtown in many ways. The City Master Plan states:

"Develop a downtown commercial area with a mix of retail, housing and professional services that attracts both shoppers from Central Vermont and tourist, and supports the needs of local residents and workers.

Improve downtown infrastructure, amenities, and environment to make a more attractive and workable destination and community. Emphasis should be placed on strengthening and improving the viability of existing businesses and filling vacancies at street level with locally owned businesses that complement other area businesses and maintain the traditional character of the area. Develop underutilized 2nd and 3rd floor spaces for professional/services providers and adverse mix of owned and rental housing units."

"Retain and support the growth of cultural activities in the downtown commercial area."

[8] Vermont Growth Center Manual, page 2.

Montpelier seeks to support a diversity of businesses by encouraging the availability and affordability of commercial space and amenities that can accommodate the growth of existing businesses and new businesses that fit the city's scale. The traditional infrastructure requirements of water and sewer already are available to the city's commercial locations."

"Other infrastructure needs that the City should support include:

1. The development of incubator space that assists businesses growing from home occupations or from small shops of four or less employees to operations employing ten to twenty people;
2. Development of exhibit and conference space that enhances the city's ability to host statewide meetings and conferences. While there are a number of existing facilities in the city, none have the capacity to provide exhibit space or host larger groups nor do they have state-of the art technology.
3. Development of a welcome center.
4. The availability, affordability and maximum public access possible for communications and technology services within the city. This includes a variety of bandwidths and methods for accessing the internet including dial-up, ISDN and cable; the location of downlink facilities in the city and support for public access interactive TV and cable facilities.
5. Accessible public restroom facilities in the Downtown."

Support Existing Businesses
In order to sustain, improve, and expand the current businesses and jobs located in our community we must emphasize and promote the advantages of our location, workforce, and our support for the arts and cultural activities. We must take steps to improve the business climate for those businesses that fit the scale of the city and provide quality jobs. Any economic incentives or assistance for new businesses coming to Montpelier should also be made available for existing businesses.

Optimum Use of Existing Commercial Areas
The City seeks to have existing commercial and industrial areas being used as fully as practical. Appropriate rehabilitation and use of existing space should be ruled out before encouraging major new development.

Downtown
The City seeks to encourage conversion of unused upper-floor space into office and residential uses. To this end, the City shall seek shared accessibility solutions, tax stabilization programs and promotion of available space.

The City's Master Plan's **Economic Development Goals & Recommendations are as follows:**

1. *Support and develop Montpelier's role in the region's economy by insuring the availability of a variety of goods and services, economic opportunities and finan-*

cial resources for current and future city residents and the businesses that serve the region.

2. *Support enterprises that make use of the traditional skills and resources of the region to produce value-added products that will maximize reinvestment in the city's community services and facilities.*
3. *Expand the community's understanding of the existing economy by identifying the opportunities, needs and constraints of the city's (a) non-retail, for-profit businesses, and (b) not-for-profit businesses.*
4. *Encourage the development and expansion of the infrastructure and facilities which are needed by business and residential development if they are compatible with local land uses, businesses and services and current zoning and the Future Land Use Plan*
5. *Support the improvement and/or development of facilities for cultural organizations, including program performance and exhibition space, workshops, teen center, and artists' studios.*
6. *Explore or find means to improve accessibility and affordability of space for small businesses and/or residential space on 2nd and 3rd floors. Explore the feasibility of the development of the Jacobs lot for multi-level garage and cooperative or shared service core including cooperatively used elevator that can serve the buildings on State and Main Street.*

Montpelier Downtown Community Association (MDCA)

The City played an instrumental role creating the MDCA in 1999, with a mission to "*enhance the quality of life for people who live, work and visit Montpelier by helping the downtown develop into the 21st century as a vital and diverse community center for retailing, cultural and entertainment activities, education, recreation, business and professional services, dining, government and residential uses."*

The City continues to support the activities of the MDCA by providing office space, budget support, and close coordination with the boards and decision-making groups who have an impact on the downtown. The MDCA promotes downtown businesses, and serves as a catalyst for advocacy when developments like a proposed Home Depot earlier last year threaten the stability of the area. During this period, the city engaged an attorney and was moving forward in opposition to the proposal in the Act 250 process.

The MDCA has played an active role in the enVision Montpelier project, including representation on the Built Environment and Infrastructure committee, which is the committee that initiated the Growth Center application, and will continue to be an important partner with the city for all developments that involve or impact the downtown. To this end, we have been working together on proposals for downtown business incubator space, a district energy plant, and the completion of the Turntable Park on Stonecutters Way.

Question 5.4

Describe the extent to which large-scale commercial, industrial or institutional, and automobile-oriented uses currently exist in the proposed growth center, and discuss the municipality's policies and regulations related to such uses, specifically identifying all locations within the municipality where such uses will be accommodated.

The proposed growth center has two small areas that are considered industrial and auto oriented. The first is two parcels of land at the southeastern portion of the growth center. One parcel is an auto dealership. This is a successful business that won't likely be changed in the near future. Nor will the business expand since there are no land opportunities to do so. Across the street from there is the second, an abandoned lumber yard (photo 1). The zoning is General Business so that businesses that are considered auto oriented would be permitted there. However, the City is actively working to improve the type of use on this one parcel so that it is more pedestrian friendly. The City's Master Plan addresses this by stating:

9.3 Business Development Opportunities

Montpelier offers Office Park, General Business and Industrial zoned designations for the development of new office complexes, commercial and/or light industrial opportunities. New development in these areas will be encouraged if it provides the following community benefits:

- *Sensitivity to conserving riverfront and other natural areas*
- *Development above the floodplain*
- *Municipal water and wastewater connection*
- *Minimal municipal infrastructure expenditures*
- *Effective and safe use of existing transportation networks including highways and rail*
- *Easy access to Pedestrian/Bike path*
- *Protection of future passenger rail service opportunity*

The other area that includes auto oriented industry is on the Middlesex border (photo 6). As explained above the industry here is a necessary part of the economy, it is consistent with the uses in the adjacent municipality, and it is within walking distance to residences and businesses. The Master Plan section 9.3 cited above also applies to this area.

These two areas amount to approximately 5% of the proposed growth center.

Chapter Six: Capital Budget and Program

Question 6.1

Describe the capacity of existing community infrastructure, facilities and services (as defined in 24 V.S.A. § 4382(4)), and summarize the municipality's plans to provide and finance the infrastructure, facilities and services needed to support projected growth and development within the proposed growth center over the 20-year planning period, citing specific provisions of the municipality's adopted capital budget and program.

Montpelier is fortunate in that is already has essentially the necessary infrastructure to support the projected growth. The City completed an analysis of the fiscal impacts of growth in 2004. In order to determine the impacts the study determined the current capacity of the City's infrastructure include sewer, water, schools, emergency services indoor and outdoor recreation spaces, roads, and sidewalks. The follow are excerpts from the City Master Plan describing the capacity of these services:

Water:
"The City's water engineering consultants estimate that the current peak demand is approximately 3 million gallons per day (MGD) in the summer months, and 2.1-2.2 MGD in the winter. The water works system was last thoroughly analyzed in the year 2000. The dependable yield of the system was estimated to be 4.2 MGD… This would allow for an approximate doubling of the service demand of the system, assuming some additional summertime conservation measures"

Sewer:
"The sewage treatment facilities on Dog River Road received a major upgrading in 1979, and are now undergoing another upgrade. The facility will continue to have a design capacity of 3.97 MOD. Current use is approximately 1.3 MOD, including about 0.15 MOD from the Berlin Fire District #1, which has the right to use a maximum of 0.6 MOD through an inter-municipal agreement."

"Given the existing capacity of the water and sewer systems, service areas can be expanded without danger of shortages or system failure. Potential water and sewer service areas are most effectively defined where infrastructure currently exists or can be easily extended without great cost and where induced development will not be detrimental to the goals and objectives of the city."

Solid Waste Management
"Montpelier generates approximately 4,268 tons of solid waste each year. Solid waste is privately hauled by eight different firms to two privately owned landfills: Waste USA in Coventry, Vermont, and North Country in Bethlehem, New Hampshire. The effective life of these facilities is estimated to be at least twenty years." "Despite local responsibilities solid waste is most effectively managed on a regional basis. The City together with the Solid Waste Management District should work with local retailers, offices and the State to encourage programs for waste reduction and should lead by example."

Emergency Services:
Determining the capacity of emergency services is not a straightforward mathematical calculation like sewer and water. There is not set formula that state a department should have X amount of staff per 1000 residents. Each municipality is different in terms of numbers of visitors, density of housing, cultural factors, age of buildings, settlement patterns, natural features, and demographics that will influence the capacity of the public safety departments to adequately serve its residents and visitors. To determine capacity to accommodate new growth the chiefs of the departments generally provide estimates on the future demands based on existing facilities. The following provides insight into their current capacity:

Police and Dispatch Services
"The Police Department is staffed by twelve patrol officers, four sergeants, three community service officers, the Chief of Police, six dispatchers, and an administrative assistant. The department operates four vehicles. The Police Department relocated into its new, 6,800 square foot building in April, 2000 at One Pitkin Court, behind City Hall. The station has most of the current practices in modern police station design for working environments, safety of employees, and security of persons in custody. The design of the facility incorporated a dedicated space for community meetings, training, and an Emergency Operations Center in the event of a declared emergency. The dispatch center is fully modernized and supports Montpelier's desire to have Enhanced 911 services. In addition the dispatch center serves the needs of Montpelier's Fire and Emergency Medical Services. The natural extension of this service is dispatching support for both Fire and EMS in 12 adjacent communities."

Fire and Ambulance Service
"The Fire Department is staffed with a fire chief, a deputy chief, a secretary, 12 career ful1-time fire fighters, and a special projects firefighter assigned to the day shift. The department employs 10 part-time emergency medical technicians, and is augmented by 20 call paid fire fighter positions, and three call paid fire police positions.

Fire apparatus include two Class A pumper trucks, one 70 ft combination aerial, pumper, hose apparatus, one fire alarm repair bucket truck, two ambulances, one utility truck and the fire chief's vehicle. The department delivers fire and ambulance service to the residents and visitors of Montpelier, and provides ambulance service through contract to the surrounding towns of Middlesex, Moretown, and Worcester. The department is a member of the Capital Mutual Aid Association, and through its membership assists and is assisted by surrounding fire departments in time of need. The effective delivery of public safety services is crucial to maintaining the quality of life in Montpelier. It is the vision of the Montpelier Fire / Ambulance Department that Montpelier will be a safe community for people to live in, work in, and visit, and a community where people will know their possessions and property will be protected from unnecessary loss or damage. The Montpelier Fire / Ambulance Department will play a significant role in making that vision a reality by providing leadership to the community in the areas of Fire Protection and Emergency Medical Services and by providing support to the efforts of other public and private agencies in their areas of responsibility."

Education Facilities
Declining birth rates have opened up capacity in the education facilities. Capacity at the schools have been at 90% and declining for the last several years. The school superintendent's office states *"Due to smaller entering Kindergarten classes, enrollment projections for the next several years would suggest reasonably flat enrollment changes, based on the total K-12 population."*

This application makes the case for population increases and adjustments to the historical declining population (question 1.1). The projected increases in populations will naturally include increases in school age children. A breakdown in age categories was not completed as part of the projections so it is impossible to state the exact percentage that will occupy the excess capacity of the schools. Nonetheless the capacity is at least 10% and likely more since the last assessment was done in 2001. An average of 10% capacity amounts to 118 students. Population projections estimate 1328 total residents over 20 years for an average of 66 new residents per year. The school age population is approximately 14% of the total or 9 students per year. Therefore, we anticipate that the current excess capacity will accommodate the new students.

Parks and Recreation
The Parks Department estimates that the recreation lands are in adequate supply. The town plan states: *"Taken together, there are approximately 400 acres of public parks and recreation areas in the city, not including the bike paths or the parks not yet completed. According to national park and recreation standards, Montpelier is very well served. The concentration of these facilities is in large areas outside the center of population suggesting that the City should continue to pursue opportunities to develop recreation space in the urban core whenever possible."*

Recreation Paths (aka Alternative Transportation Path)
"Section 1 (0.45 miles) of the Winooski East Bike Path from Main to Granite Street was completed in 1997 as part of the Winooski East Riverfront Redevelopment project (now known as Stone Cutters Way). In 1998, section 1 (0.95 miles) of the Winooski West Bike Path from Taylor Street to the Liquor Control Warehouse was completed, where it met up with the existing Old Winooski Avenue path leading to the Dog River Recreation Area (0.36 miles). Additional sections are anticipated that would connect these paths through the downtown, along the Winooski River to U S. Route 2 near Gallison Hill Road and to the Town of Berlin, and ultimately on to Barre city and town"

Energy
"Montpelier's electricity is supplied by Green Mountain Power Corporation (GMP). Two transmission substations are located in the city, on River Street and near the National Life headquarters. Utility corridors have been established in the eastern and southern portions of the city." While the capacity of future electricity is in the control of a private sector company the City does promote energy conservation. The City's Master plan states: *"The City Council should appoint an energy commission to develop an energy plan and implement other energy-related projects that promote the more efficient, economical, and environmentally sound use of existing and potential energy resources. At a*

minimum, the energy plan should address: maximizing solar and energy efficient design for new buildings, promoting land use development in the urban center, retrofitting existing buildings--including municipal, residential, and commercial-~to optimize energy efficiency, and promoting alternative modes of transportation." The State currently has a district heating plant that serves 17 buildings downtown.

Capital Improvement Plan

Montpelier's Capital Improvement Plan documents the future expenses of infrastructure development up to the year 2014. The Plan creates a budget for 214 line items and documents the funding source for each one and the year it is expected to be completed. A range of funding sources are identified including earmarked capital funds, bonds, general funds, state and federal funds. It is impractical to list all 214 projects here (10 pages in 7 point font) so it is included in the Appendix. To summarize, the City will finance and direct the construction of 6.5 million dollars in streets work; 6.4 million dollars in pedestrian and bridge work, 1.7 million dollars on intersection improvements; $322,000 on sidewalk reconstruction; $395,000 on new sidewalk construction; 1 million on buildings and grounds; 2.3 million in parking projects; and $600,000 on miscellaneous projects such as street lighting, flood mitigation and land conservation.

Question 6.2

6.2. Discuss the steps the municipality is taking to maintain a rate of growth that will not exceed the municipality's ability to provide or finance required community infrastructure, facilities and services over the 20-year planning period.

One of the most important steps the City took to ensure future development will not overtax the City's ability to provide services is the creation of a Fiscal Impact Model. In 2005, the City commissioned for the creation of a custom spreadsheet model that calculates the fiscal impacts of growth on each of the City's department's budgets, and the City as a whole. The model can forecast the overall impacts of 20 years of growth or the specific impacts of one development project. At the time the model was built the consultants ran three different growth scenarios: one at status quo growth; one at 15% growth in employment and population; and one at 15% growth in just population. In all three scenarios the City would receive a net positive fiscal impact of growth. This is because the City's infrastructure is in place and has excess capacity. Also because the City is a compact geographic area so services wouldn't be spread out. In fact, increasing the number of users on the sewer and water infrastructure will lower the rates for all users because these two programs have dedicated enterprise funds that pay for themselves. They are not part of the City's general fund so increased capacity is automatically paid for by the users of the system.

The City also has impact fees for transportation and parks which is levied on new development.

Chapter Seven: Public Spaces

Question 7.1

7.1. Identify all existing or planned public spaces located within the proposed growth center and summarize the steps the municipality is taking to plan for, provide and/ or maintain public spaces, including open space and public recreation facilities, within the proposed growth center.

The Views and Vistas report for the City of Montpelier describes in detail the open space and scenic resources and how they should b preserved. The following are excerpts from the plan for the properties in or adjacent to the growth center.

B. Important Views

Five Montpelier Views ranked highest in the Views and Vistas Survey. They are noted below along with a description of important elements in the view.

- **River Views**

River views ranked very high among those surveyed. At present bridges offer the best opportunities for viewing the Winooski River and North Branch. In some cases such as the Granite Street Bridge and Main Street Bridge, the statehouse becomes a focal point in the scene. The bridges offer a diverse range of views from the lovely waterfall from the pedestrian bridge by the Lane Shops, to highly urban views from the Langdon Street Bridge, to more open rural views along bridges off Elm Street. The views from State Street's Rialto Bridge looking toward Langdon Street and from Main Street Bridge both east and west were two of the favorites expressed in the survey.

Many sections of the river are difficult to see or get to; others are accessible but marred by visual clutter or eroding shorelines. The Taylor Street Bridge, an important downtown getaway, only has views of backs of buildings, utilities, and parking. A new multi-modal transit center is planned for the empty lot directly adjacent to the Taylor Street bridge, it incorporates a park and bike path that will allow greater access to the river view.

- **Sabin's Pasture**

Informal footpaths over Sabin's pasture behind Vermont College led to a high meadow with dramatic views of College Hall and the Statehouse dome with a backdrop of distant mountains. The view extends about 180º, with the view to the west begin the most dramatic portion. To the south and west are several high open meadows that also contribute to the scene. The foreground meadow is important to the overall view.

- **North Street**

  Just below the City line, a high meadow permits views toward downtown Montpelier. The old Breezy Acres farm (now the Hooper/Slinkman homestead) is in the foreground. It is a classic view showing the city with numerous spires nestled in the valleys of the Winooski and North Branch valleys. The surrounding hills are predominantly forested with the exception of a distinct open meadow on a high hillside to the south.

- **Berlin Street heading West**

  A sequence of views includes Sabin's pasture and Vermont College to the north, and the Worcester Range in the distance, the Winooski River and the Statehouse with its golden dome, and green backdrop. In places the Statehouse is reflected in the river. Other views noted as important include:

- Cliff Street overlooking the city,
- Town Hill Road toward Vermont College,
- Northfield Street overlooking the downtown,
- Spires and domes from Hubbard Street,
- Worcester Range view (North Branch Nature Center),
- Green Mount Cemetery to mountains and river,
- St. Augustine's Cemetery over city (*photo),*
- National Life over city and to mountains,
- Views from Elks' Club Golf course especially northeast end to Camel's Hump.

The following properties are identified as having a high priority for protection based upon the criteria described above. These properties meet at least three of the four criteria. Possible methods for protection are discussed.

1. Sabin's Pasture (Zorzi)

This is an extraordinary piece of property. It is a large open meadow with spectacular views within easy pedestrian access of downtown and Vermont College. It is visually important as seen from a distance and offers impressive views from the upper meadows. From a distance the property appears to contain the denser urban development of Montpelier, and provides pleasing visual diversity with its rolling terrain and mixture of field and forest. This visual diversity is even more apparent when one is on the property. There is a mix of vegetative types, streams and the dramatic old quarry site. Views from the high elevation meadow include the turrets of College Hall, the gold dome of the Statehouse, and the Green Mountains and Worcester Range to the west. The property could provide a greenway network connecting the upland areas to the east with the downtown and the residential neighborhoods off College Street and Towne Hill Road with the Winooski River corridor and bike path.

Protection Options: Several approaches may be needed including the purchase of open space easements to protect the upper meadow areas, sledding hills, valuable woodland

areas and potential linking corridors. The City must be sure it's planning and zoning documents support the protection of the important portions of this property. Development along Barre Street could be very appropriate on this piece, but it is critical that development protects the foreground views from the upper pastures. Any development in the upper meadow areas would be highly visible in addition to destroying an important scenic resource. Development should be designed to protect a visually meaningful and contiguous piece of open space. It should be large enough to retain the image of a farm meadow that visually contains the denser urban growth to the west. It may be necessary for the City to work proactively with potential developers in order to encourage a type of development that can work on this highly sensitive piece of land.

2. Goldman Property/Pembroke Farm Meadow

Two portions of the Goldman properties are visually important. Of most importance is the hillside facing State Street. This hillside forms an important backdrop for the city. Development on this east-facing hillside could potentially detract from the visual prominence of the Statehouse. The hillside has been proposed for development in the past, and there are rough gravel roads through portions of the property. With careful planning, portions of the property could be developed without creating serious aesthetic impacts.

The meadowlands associated with the former Pembroke farm off Terrace Street are another visually important portion of this property. Here too, well-planned development could be accommodated provided reasonable portions of the open meadowland seen from Terrace Street remain intact.

Protection Options: Easements would be the most logical approach to protecting both of the visually important portions of this property. Zoning and planning regulations should be updated to be sure they encourage patters of growth that will protect the valuable scenic resources.

3. Carr Lot/Confluence Park

The Carr lot extends from the confluence of the North Branch and Winooski Rivers to Taylor Street. Its prime downtown location and river frontage makes it a highly important piece of land for Montpelier's future. Its visual importance was ranked very high in the Views and Vistas survey. Various plans have been put forth including a "Confluence Park", landscaped walkway/recreation path and transit center. At present the use and condition of the property creates an eyesore. Maintaining public access to the riverbank in this area is extremely important. Enhancing the river edge and creating pleasant walking, viewing and recreational space will be the second step.

Protection Options: The city could purchase a "city pathway/greenway" along the riverbank; or it could encourage private development of this public outdoor space, possibly through a cooperative agreement. Funding will be required to develop the physical amenities of pathway and green or park space.

4. Riverbank Access and Management

The overwhelming interest in the rivers in the public survey suggests that the protection and enhancement of river corridors is of paramount importance. This could be accomplished in a number of different ways including protecting land immediately adjacent to river corridors, developing a greenway/river way system that provides access along most of the length of Montpelier's two rivers, enhancing riverbanks through vegetative management,

The City's Master Plan adopted several recommendations for the preservation of open space including:

1. *By the year 2002, the Conservation Commission will prepare, resource permitting, an inventory of key natural features, open areas, forests, views and vistas in Montpelier and develop recommendations for preserving these features. (This recommendation was completed)*
2. *The Planning Commission should develop specific development review standards, such as design guidelines, site plan review standards, and conditional use criteria, for development along Stone Cutters Way and all river corridors that consider appropriate locations for new structures, orientation toward the river, physical or visual access to the river, appearance and scale of new structures and site elements, and harmonious landscaping. (This recommendation was completed.)*
3. *Pocket parks should be created along the North Branch, a Gateway Park on Route 2 across from the Green Mount Cemetery, Stone Cutters Way, and other locations along the city's Rivers. Currently parks are planned for the Taylor Street property in conjunction with the development of the multi-modal transit center and a Turntable Park directly adjacent to the Pyralisk building on Stonecutter's Way preserving the historic turntable in the old rail yard. Pocket parks have been developed along the North Branch, and a Peace Park was developed near the Green Mountain Cemetery.*
4. *Design and map a landscaped riverfront walkway and park in the city's urban core in cooperation with affected private landowners and the State; determine capital needs and costs; and identify implementation tools for the creation of these improvements. Design and implement the North Branch Riverwalk. (This recommendation was completed)*

Question 7.2

7.2. If existing public buildings/uses (post office, municipal office, school, library, etc.) are not included within the proposed growth center, explain the municipality's rationale in drawing its growth center boundary to exclude them.

N/A: The proposed growth center will include the post office, city hall, state capitol building, state office buildings, a youth center, a senior center, the high school, the police headquarters, a fire station, local and state libraries, public parks and other public spaces.

Chapter Eight: Spatial Pattern

Question 8.1

8.1. Identify the focal point(s) around which the proposed growth center will be organized.

Montpelier's traditional focal points have always been the State Capitol building, Main Street, and City Hall. These traditional focal points will remain in the core of the growth center. The proposed growth center is planned to encompass the city's Central Business District, which is also the city's Designated Downtown. This area includes a compact, vibrant and walkable retail shopping district, government and private office buildings, the U.S. Post Office, restaurants, theaters, and other "night-life" entertainment. The State Capitol and Post Office are common venues for public gatherings, demonstrations, and celebrations. These areas will remain the focal points of the growth center.

Question 8.2

8.2. If the growth center is associated with an existing downtown or village center whose form is linear, summarize the steps the municipality is taking to establish a new development pattern that creates depth as opposed to continuing the linear pattern and/or describe any constraints that limit creating greater depth.

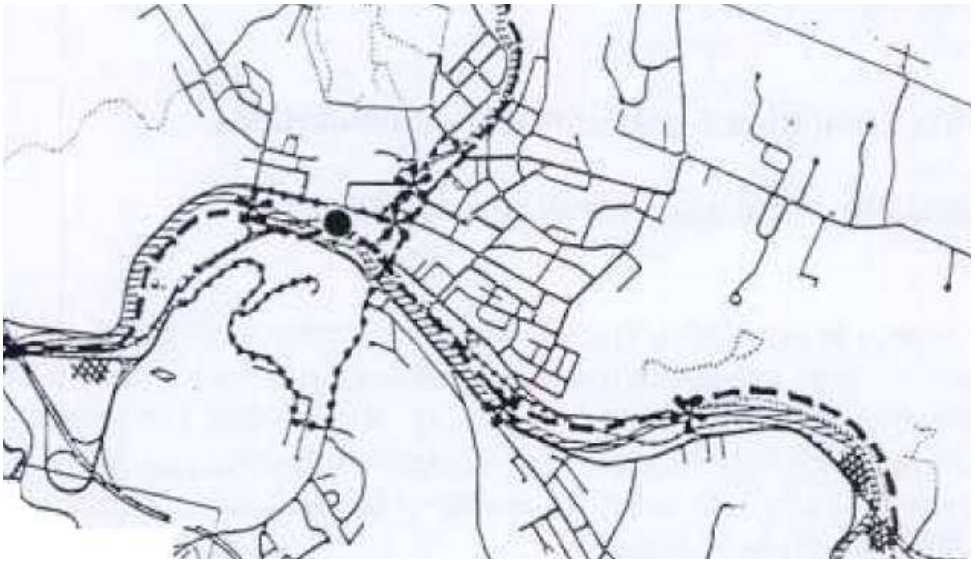
Not applicable – neither the downtown nor the Growth Center reflect a linear pattern.

Question 8.3

8.3. Describe the extent to which the municipality is planning for and/or requiring development of an interconnected street network within the proposed growth center.

The proposed growth center is clearly not linear. A review of any of the application's enclosed maps shows that the shape of the growth center extends about as far west and east as it does north and south. It follows logical boundaries such as zoning districts, topography, natural constraints and infrastructure services areas resulting in an irregular shape. While the traditional settlement pattern of commercial land uses in Montpelier follows the Winooski River/Route 2 Corridor in an east/west direction, residential uses spur off this corridor perpendicular to it.

The interconnectivity of Montpelier's street network has long been established. The Central Business District is characterized by a grid pattern of traditional city blocks while developing around sensitive natural areas, rivers, and steep topography. Residential areas are interconnected as best as possible while respecting open spaces, agricultural lands, and steep slopes.



Montpelier's Central Business District

The City is committed to continuing this pattern where physically possible. The City Mater Plan specifically states: *"New roads and streets in the city should: 1) Tie into existing street grids wherever possible. Encourage two means of egress for any road servicing twenty or more units, 2) Aim for speeds suggested for similar kinds of neighborhoods, 3) Include neighbors in design process, 4) "Revise the Zoning Regulations pertaining to street and roadway geometrics to reflect the new Vermont State Standards for the design of transportation construction, reconstruction, and rehabilitation on roads and streets."*

The plan also identifies a new street, which is very desirable, but has not yet been included in the city's capital plan:

"Barre Street Extension- A new city street will link Taylor Street to Main Street. New street frontage will bring private development opportunities, vehicular and pedestrian connections, and access to the riverfront. On-street parking and sidewalks are provided." This has not been completed, but is still under consideration.

Chapter Nine: Transportation and Other Infrastructure

Question 9.1

9.1. Describe the facilities/provisions that exist and are planned for pedestrian and other non-vehicular traffic within the proposed growth center, specifically identifying the steps the municipality is taking to promote a safe, pedestrian friendly environment within the growth center in general and specifically within the associated designated downtown, village center or new town center.

The City of Montpelier has a grid network of streets with adjacent sidewalks that makes it pedestrian-friendly. The City has employed curb extensions – bulb-outs – in the downtown that calm traffic and make it safer for pedestrians. The network of streets and sidewalks also connects the neighborhoods to the downtown in a more linear pattern. Crosswalks are painted annually and crossing guards provide access for students of the elementary and middle school. In addition, a "Safe Routes to School" grant for building bulb-outs and a radar feedback sign at the middle school has been awarded. The grant will also improve crosswalk signage at the elementary school and in adjacent neighborhoods. There is an existing bicycle and pedestrian path from the southwestern corner of the City to the downtown, and another path from the downtown to Granite Street on the southeastern side of the City. Currently, there are plans to connect the paths, and an extension to the southeast is under design.

The City provided a grant to a local bicycle coalition, Montpelier Bikes, to research ways to improve non-motorized transportation in the City and to report back with recommendations. The Montpelier Bicycle Plan includes the following recommendations:

Goals of project: The goals of the Montpelier Bikes project are:

- To remove barriers to bicycling in Montpelier, with a focus on transportation bicycling, through a mix of education, encouragement and infrastructure improvements.
- To build a bicycle culture that supports bicycling for transportation, and to integrate bicycle planning and infrastructure improvements into City government process.

Targets:

- To create a 25+ member bicycle ambassador corps for the City of Montpelier, and to leverage 375 or more hours of community service through this corps.
- To create a 10+ member junior bicycle ambassador corps involving high school and middle-school youth.
- To support at least one ongoing bicycle train to the Montpelier schools in the Safe Routes to School program.
- To provide bicycle safety education to 300 children and youth, and formally or informally to 100 adults.

- To work with the city to install 10 bicycle racks in downtown Montpelier in 2008.
- To provide solutions for 3 bicycle hotspots and 1 demonstration bicycle lanes project.
- To apply for national Bicycle Friendly Community status through the League of American Bicyclists by 2009. www.bicyclefriendlycommunity.org

Indicators: The number one indicator for this project is simply the number of people out there riding bicycles. This indicator enables the residents of the area to "vote with their feet" – their decision to ride a bicycle in Montpelier is the best overall rating of community bikeability. The Montpelier Bikes project will measure bicycling in three ways:

First, over the course of the project, we will count the number of bicyclists observed on the street / path at selected locations in town. Count days will be standardized for good weather, in part for the comfort of the counting volunteers, and also to attempt to remove weather as a variable factor.

Second, we will work with our local bicycle shops (Onion River Sports and FreeRide) to find out the number of customers buying or servicing a bicycle in 2007, 2008, and 2009.

Third, we will compare bicycling data from Montpelier's Way to Go Week in 2007, 2008 and 2009. Long-term indicator: In the long run, U.S. Census data for Montpelier for 2010 will show journey to work data, including bicycle commuting. This indicator is helpful for long-term trends, but is highly variable due to weather. Figures will likely be available in 2012.

Winooski Greenway- This urban park will include an extension of the Winooski West and Winooski East bikepath, riverwalks, pocket parks, and overlooks along the Winooski River and the North Branch. Other activities will include a central gathering area that is covered in grass during the summer but is then turned into a public skating rink during the winter. The river's edge will provide both natural buffers for wildlife and designed access points from which to reach the water or launch a boat. Pedestrian linkages will connect to the Capitol, transit center, parking and downtown.

Transit Center- The transit center will be combined with a Welcome Center and Museum. The transit center, a gateway to downtown and the Capitol Complex, includes a Vermont Transit Facility, future expansion potential for rail service, "Wheels" service, and a link to state employee satellite parking lots.

State Street Improvements- Pedestrian and streetscape design enhancements to State Street will include design plans more appropriate to the State House Lawn, a clearer connection between the Capitol Complex and downtown, and safe connectors to and from parking areas.

Gateways- The bridge connections to the Capital District and Downtown, Taylor Street, Main Street and Bailey Avenue, will receive greater definition. Additional landscaping and lighting design will provide more emphasis to these important city elements.

Pedestrian Links- A formal connection from the State House Lawn to the Winooski River Greenway will remind visitors and pedestrians of Vermont's attachment to its local surroundings. This link will be only a small part of a larger network of walkways and trails leading to downtown and even Hubbard Park.

The City created a plan in 2002 for a new bike path connecting two shared use paths that enter the downtown area from the east and west along the Winooski River. The path from the east ended about 700 feet east of Main Street, while the path from the west ended at Taylor Street, about 1000 feet west and on the other side of the North Branch from Main Street. How to bridge the North Branch of the Winooski River and to cross Main Street were the two major problems to be solved by this study. The City hired a consultant and the City Council has endorsed the preferred alignment. They instructed the City's Planning Department to pursue funding to design and implement the project. The Planning Department did so and the project is now part of the Capital Improvement Plan.

Montpelier's current 6 year Capital Improvement Plan allocates 6.4 million dollars in pedestrian, bike lanes and bridge work, 1.7 million dollars on intersection safety improvements; $322,000 on sidewalk reconstruction; and $395,000 on new sidewalk construction. Montpelier also applied for a received a Safe Route to School Grant to increase safety for school children at crosswalks. The City is committed to improving its non-motorized transportation network.

Question 9.2

9.2. Describe the current level of public transit service/facilities serving the proposed growth center and the extent to which improvements in public transit service/ facilities are planned for the proposed growth center, specifically citing any steps the municipality is taking to enable transportation alternatives within the growth center in general and within the associated designated downtown, village center or new town center.

A number of intra-regional, deviated fixed-route and commuter-route bus services are currently operated in the Capital District portion of the Central Vermont Region. The following is a summary of the current services:

- The City Commuter and the City Route Mid-Day serves the downtowns of Montpelier, Barre City, and commercial and residential areas along Route 302 in Berlin. The services operate Monday through Saturday.
    - The City Commuter route operates during the morning and evening peak periods with two buses, with a frequency of every half hour.

- The City Route Mid-day operates during the midday period with one bus, with a frequency of every 75 minutes. The route will deviate upon request.

- The Capital Shuttle is a seasonal service that operates in downtown Montpelier during the State Legislative Session (Jan – May). The shuttle operates using two loops, one traveling in the clockwise direction and the other in the counter-clockwise direction (Loop A and Loop B, respectively), and will deviate upon request. One bus operates on each loop from 7:30 a.m. to 6:30 p.m., on a frequency of every 23 minutes. Service is provided Tuesday through Friday from January through mid-April, and Monday through Friday from mid-April through mid-May. The shuttle does not operate on holidays or during Town Meeting Week. One of the primary purposes of the shuttle is to encourage the use of remote parking by long-term parkers to free up some short-term spaces in the downtown retail area. Another important purpose is to provide a convenient connection between State offices at the National Life complex and the State House, as well as encourage workers from National Life and the State offices to patronize the downtown retail area during the midday. The route is free and open to the public.
- The Montpelier Hospital Hill route provides deviated fixed-route service from Montpelier to the Central Vermont Medical Center, the Berlin Mall, and other medical and professional offices. The schedule allows time during each run for previously-scheduled door-to-door pick-ups or drop-offs. The service operates Monday through Saturday with one cutaway bus on an hourly frequency.
- The Waterbury Commuter route provides commuter-route service between Waterbury and Montpelier operating Monday through Friday in the morning and evening peak periods. The service is provided by one cutaway van on an hourly frequency. There is room in the schedule for some additional stops in Waterbury Village after stopping at the State Office Complex in Waterbury (such as Green Mountain Coffee Roasters), and the route will serve the National Life building in Montpelier on request.
- The Montpelier LINK Express is jointly operated by GMTA and CCTA and provides commuter-route service between downtown Montpelier and downtown Burlington operating Monday through Friday in the morning and evening peak periods. The service is provided by three buses on a 45-55 minute frequency.
- The Snow Cap Commuter route provides commuter-route service between Montpelier, Middlesex, Mad River Glen and Sugarbush on weekends and holiday weeks during the ski season. Two round trips per day are provided by one bus.
- Vermont Transit provides intercity bus service to Montpelier scheduling four round-trips per day between Montreal and Boston.

The City of Montpelier continues to plan the development of a Multi-Modal Transit and Visitors Center on the Carr Lot (current location of the Vermont Transit Station) in downtown Montpelier. This facility would provide a destination to integrate Vermont Transit, GMTA, bicycle path users, a Welcome Center for tourists and tour buses, and

potential retail and commercial tenants. The center would be the major transfer hub for regional coach buses, inter-regional commuter transit, and satellite parking lot shuttles for downtown employees and visitors as part of the larger parking policy.

- Amtrak's Vermonter Service operates a daily south and north bound train at Montpelier Junction adjacent to the proposed growth center.

The City is pursuing expanding the Capital Shuttle to a year round service, which might also connect adjacent neighborhoods to the downtown. Other communities in the region desire establishing commuter routes to downtown Montpelier on US 2, VT 12, VT 100B.

Question 9.3

9.3. Present the best available information on the current condition, current level of service, and current and projected traffic on routes that will serve the proposed growth center.

For over forty years the VMT showed very steady growth with the exception of the 1974 energy crisis. More recent VMT data (2003-2005) showed a significant decline, which relates to the sharp spike in fuel prices. At this time it is uncertain what the long term effect rising fuel prices will have on future traffic volumes. For this reason, new projections have not been calculated for this plan. When the 2010 Census, and a longer period of VMT data is available, an update to the future traffic volumes will be more reasonable. Currently the only segments below our excepted urban standard (LOS D) is US 2 east and west of Main St. In the future Main St. and US 302 will fall below this standard.

Considering Signalized Intersection LOS, the last detailed evaluation was done for the Downtown Montpelier Circulation Study. The two signalized intersections falling below our standards are:

- **Memorial Drive/Main Street/Northfield Street** – This intersection operates at LOS F under the existing (2003) P.M. design hour condition. However, the volume to capacity ratio is 74 percent at this intersection. The Northfield Street (northbound) Left/Through movement operates at LOS F. All other lane groups operate at LOS D or better.
- **Main Street/State Street/East State Street** – This intersection operates at LOS F with a volume to capacity ratio of 126 percent under the existing (2003) P.M. design hour condition. Movements on Main Street (southbound), State Street (eastbound) and East State Street (westbound) operate at LOS F. The exclusive pedestrian phase at the intersection causes excessive delays to the vehicular traffic resulting in long queues on Main Street and State Street.

Future conditions were analyzed for 2010, 2020 with No CDMP, and 2020 with CDMP. The following signalized intersections fall below the LOS D Urban Standard:

- **Memorial Drive/Taylor Street** – This intersection is anticipated to operate at LOS C under the future (2010) and future (2020) No CDMP scenarios. Under the future (2020) CDMP scenario, this intersection is anticipated to operate at LOS C. The Taylor Street southbound approach operates at LOS E with a v/c ratio of 104 percent under the future (2020) scenario). Traffic volumes increase by approximately 7 percent in the future (2020) CDMP scenario in comparison to the No-CDMP condition.
- **Memorial Drive/Main Street/Northfield Street** – This intersection is anticipated to operate at LOS F under all future conditions with an increase in traffic volumes. However, the volume to capacity ratio exceeds 100 percent only under the future (2020) CDMP scenario. The Northfield Street (northbound) combination left and through movement operates at LOS F with high delays under all future conditions. The Main Street southbound left turn movement operates at LOS F under the future (2020) CDMP. Traffic volumes increase by approximately 5 percent in the future (2020) CDMP scenario in comparison to the No-CDMP condition.
- **Main Street/State Street/East State Street** – This intersection is anticipated to operate at LOS F with a volume to capacity ratio exceeding 100 percent under all future conditions. The Main Street (southbound), the State Street (eastbound) and the East State Street (westbound) approaches are anticipated to operate at LOS F with high delays and v/c ratios. Traffic volumes increase by approximately 11 percent in the future (2020) CDMP scenario in comparison to the No-CDMP condition.
- **State Street/Bailey Avenue** – This intersection is anticipated to operate LOS F under the future (2020) conditions. Under the future (2010) scenario, the intersection is anticipated to operate at LOS E. The v/c ratios exceed 100 percent under all future conditions. The State Street (westbound) left turn and Bailey Street southbound movements are anticipated to operate at LOS E under the future conditions. Traffic volumes increase by approximately 12 percent in the future (2020) CDMP scenario in comparison to the No CDMP condition.
- **River Street/Granite Street/Berlin Street** – This intersection is anticipated to operate LOS F under the future (2020) conditions. Under the future (2010) scenario, the intersection is anticipated to operate at LOS E. The Berlin Street northbound and eastbound movements are anticipated to operate at LOS F under the future conditions. The v/c ratios exceed 100 percent under all future conditions. Traffic volumes increase by approximately 4 percent in the future (2020) CDMP scenario in comparison to the No CDMP condition.

Question 9.4

9.4. Address the capacity of the road network to accommodate increased traffic, specifically (a) identifying any infrastructure improvements that might be required by the state, municipality and/or private developers to accommodate increased traffic, and (b) discussing the steps the municipality is taking to plan for a transportation network that will be able to accommodate growth and development in a manner consistent with the goals of the growth center program.

Short-Term Recommendations

The following summarizes short-term improvements at the study area locations determined to operate poorly, including the status of the recommendation with respect to city action and the ongoing capital improvements program.

1. Memorial Drive/Main Street/Northfield Street

a. Optimize traffic signal and provide coordination with adjacent intersections. This has been completed and will require periodic review on a 2-3 yr cycle.

b. Provide right-turn overlap phase for westbound Berlin Street. This involves a timing adjustment of the light. It has not yet been completed, but it is not in the capital plan. We expect that it will be complete by the end of 2009.

c. Provide right-turn overlap phase for northbound Northfield Street. This involves a timing adjustment of the light. It has not yet been completed, but it is not in the capital plan. We expect that it will be complete by the end of 2009.

2. Main Street/State Street/East State Street

a. Prohibit two to three parking spaces on the State Street approach and extend the length of the right-turn lane. This was first proposed in 1980's in the regional transportation plan – but it was not supported by the City Council. It was reconsidered again with sidewalk project 2003 but again not supported by the City Council, so it is currently not in the Capital Improvements Plan.

b. Install a five-section signal head for the northbound Main Street approach such that yellow and green arrow indicators are provided. The modification as per MUTCD was completed in 2009 – dual function bulb used.

c. Change the lane assignment on southbound Main Street. It is suggested that a left-turn prohibition onto East State Street be considered. This would allow for the re-striping of south Main Street to one through lane and one right-turn lane. During the critical PM peak hour this movement is projected to be less than 20 vehicles. Alternative routing options are limited and may impact some neighborhood streets, but the magnitude of diversion will be minimal. Due to lack of viable alternatives, this suggestion has not been pursued. An

alternative of improving right turn lane storage length for combination right /thru & left lane explored but not supported due to impact of angle parking spaces on west side of Main.

3. **State Street/Bailey Avenue**

a. Provide a protected left-turn phase for the State Street westbound movement. This work was completed in 2007 together with video detection for semi-actuation.

b. Provide an overlap right-turn phase for the Bailey Avenue right-turn. This involves a timing adjustment of the light. It has not yet been completed, but it is not in the capital plan. We expect that it will be complete by the end of 2009.

4. **State Street/Gov. Davis Avenue/Taylor Street**

These recommendations are currently being considered by the Traffic Committee.

a. Review of Warrant 3 – Peak Hour as contained in the Manual on Uniform Traffic Control Devices, Federal Highway Administration indicates this intersection meets the criteria for installing a traffic signal (assuming all movements on the side streets are included). Although not considered a short-term measure, it is suggested that traffic signals be considered and the planning process begin. It is suggested that a full comprehensive traffic signal warrant study be conducted as a short-term recommendation.

b. Consider removing some parking on Taylor Street to allow for a two-lane approach. This option will improve traffic operations but may be met with opposition from nearby businesses due to the loss of parking spaces.

c. Consider the provision of left-turn lanes on State Street to allow through movements to proceed without being impacting by a left-turning vehicle. This action would require elimination of the exclusive right-turn lane and would likely require the loss of some parking spaces.

5. **Main Street/School Street**

Long delays from side streets onto Main Street are typical during peak traffic volume time periods. It is suggested that the City consider replacing the school crossing guard with a police officer that could not only assist in crossing pedestrians, but also provide traffic control for side street movements. This would require a staffing commitment by MPD or UTO would need to be contracted through Sheriff's office. It should be noted that problems at School Street are related to queuing problems from the Main Street/State Street intersection. A flashing red / all-way stop is noted as a future CIP project – see comments pertaining to Main / State intersection.

6. **Main Street/Pitkin Court**

Long delays from side streets onto Main Street are typical during peak traffic volume time periods. Volumes are low and the impact of volume is minimal. No improvements have been identified.

7. **Main Street/Blanchard Court**

Long delays from side streets onto Main Street are typical during peak traffic volume time periods. Consider installing signs and pavement markings that advise motorists that they should not block Blanchard Court. Consider directing vehicles from the parking lot to East State Street when destined to the south on Main Street. We are continuing to monitor this situation.

8. **Main Street/Barre Street**

Consider removing some parking on Barre Street to allow for a two-lane approach. This option will improve traffic operations but may be met with opposition from nearby businesses due to the loss of parking spaces. This was first proposed in the 1980's regional plan and presented to city Council for review at least once over the ensuing years but not approved. This suggestion will continue to arise until addressed possibly as part of other intersection improvements. It is currently in the Capital Plan

9. **Main Street/Stone Cutter's Way**

Long delays from side streets onto Main Street are typical during peak traffic volume time periods. No short-term improvements have been identified. With the construction of the multi-modal transit center, we are planning to relocate the bus stop to Taylor Street to remove busses currently impeding right turn lane and rendering left turn lane ineffective.

5.2 Long-Term Recommendations

The following documents recommendations that are substantial in terms of scope of work and cost. These improvements attempt to address traffic congestion in the year 2020 at locations estimated to operate at poor Levels of Service. The Appendix presents the anticipated improvement in intersection operations following implementation of the improvements.

Recommendations

Memorial Drive/Main Street/Northfield Street

1. Consider providing three approach lanes on Northfield Street. Northfield Street is currently 35 feet wide and roadway widening will be necessary. This intersection would be expected to improve to an overall Level of Service "D" following implementation of this improvement. This will require a right-of-way acquisition. It

is questionable whether there is room for three lanes and sidewalks both sides. Likely significant impact to small front lawns at houses on west side of street. It is not currently a CIP project.

2. A feasibility study should be conducted that investigates the implementation of a roundabout at this location. A preliminary analysis indicates a one-lane roundabout will operate at level of service "C" under the future 2020 CDMP scenario. A feasibility study, funded through the CVRPC, was begun in 2007 but not yet completed. The study was substantially advanced through the proposed final draft stage. Based on the results of the study revealing significant property impacts, the need for signalized pedestrian accommodations, and impractical measures needed to address commercial truck access, and extreme construction costs, no additional work has been conducted. The next step is to present the study to City Council; likely staff recommendation will be that a roundabout is not feasible and should not be pursued further at this time. Study was a CIP & CVRPC funded project – nothing planned for construction at this time.

Memorial Drive/Taylor Street

Consider peak period one-way travel lane prohibition on Taylor Street. This action will allow for the provision of two approach lanes on Taylor Street. Special signage and pavement markings will be required for both Memorial Drive and Taylor Street. Taylor Street could remain two-way from State Street to the Barre Street Extension. While the subject intersection would be expected to operate at an improved Level of Service, several issues would need resolution. Some impact to adjacent intersections will occur. The left-turn volume onto Taylor Street from Memorial Drive would likely divert to the Memorial Drive/Bailey Street intersection. Preliminary analysis indicates that the Memorial Drive/Bailey Street and State Street/Bailey Street intersections can absorb the increased traffic without significant Level of Service degradation. The right-turn volume from Memorial Drive onto Taylor Street would likely turn onto Main Street and use the proposed Barre Street Extension. It is suggested that a feasibility study be conducted on this option, before being considered.

In lieu of bridge rehabilitation, staff had recommended a new bridge (or widening of truss bridge) to accommodate the provision of a turn lane, large vehicles (trucks, busses, & personal motor homes / RVs) and to provide added traffic capacity for the proposed multi-modal center. This recommendation is related to the functional obsolescence of the existing bridge and was encouraged by the TAC. However, this suggestion ultimately was not approved by the City Council for historic preservation reasons. The bridge is now scheduled for rehabilitation. The concept of a one-way bridge should be pursued and studied as part of the Barre Street extension concept when that proposal advances through project development. The bridge is a CIP project – currently in Vtrans ROW phase.

Main Street/State Street/East State Street

Signalize the pedestrian crossing at Main Street/Langdon Street and coordinate with the State Street signal. Pedestrian crossings of Main Street will only be allowed during the exclusive pedestrian phase at the State Street intersection. This effort will require the in-

stallation of a mast arm support and two post supports for pedestrian signal heads and push buttons. Overall this intersection will continue to operate at Level of Service "F", but vehicle delays will decrease and more importantly the southbound Main Street approach will improve significantly, where acceptable Level of Service conditions will be provided. The ideas of signalizing the crosswalk by extending the approach area (stop bar location), relocating the crosswalk or signalizing as described above, was twice proposed to City Council for the reasons as noted above. The idea met with opposition from a range of individual and business owner viewpoints and was defeated on both occasions. This idea is considered unacceptable by the community and cannot be pursued by current staff in spite of the beneficial traffic efficiency improvements that would be achieved. It is not currently in the capital plan.

State Street/Bailey Avenue
Provide an additional lane on southbound Bailey Avenue. It appears that this can be accomplished with minor widening. This intersection will operate at an acceptable Level of Service following implementation of the improvement. The costs associated with road widening to include granite curb relocation and loss of green strip. The suggestion was last visited as part of development review, traffic mitigation related to a project on Terrace. It is not currently part of the capital plan.

State Street/Gov. Davis Avenue/Taylor Street
A short-term recommendation is to conduct a traffic signal warrant study. If it is concluded that a traffic signal is warranted, a public process should be initiated that attempts to gain consensus for such a change. It should be note that analysis indicates that this intersection can operate acceptably with a traffic signal. This is being considered as a future project in the capital plan, it is not in the capital plan at this time.

Main Street/School Street See Short-term recommendation.

Main Street/Barre Street
Two possible alternatives have been considered for this intersection; traffic signalization and construction of a roundabout. Capacity analysis indicates that both will operate at good levels of service in the future. Both will have impacts to on-street parking and both have the potential to develop problems from traffic queues from Memorial Drive and State Street. It is suggested that a detailed feasibility study be conducted in an effort to select a preferred option. This is in the capital plan, including the right turn lane.

Granite Street/River Street/Berlin Street
Provide an additional lane on Berlin Street. Berlin Street is approximately 42 feet wide and can accommodate three travel lanes, two approach lanes and one departure lane. Following implementation of this improvement, the intersection is expected to operate at an acceptable Level of Service. The Traffic Committee is reviewing this recommendation for inclusion in the capital plan.

State Street/Elm Street
No improvements have been identified.

Elm Street/Spring Street
It is recommended that a roundabout be considered for this location. Preliminary analysis indicates the intersection will operated well, and it appears sufficient right-of-way is available. This is not a capital project at this time.

Main Street/Towne Hill Road
It is suggested that this intersection be reconfigured according to recommendations contained in the final report, Town Hill Road – Upper Main Street Transportation Corridor Study. This concept alters the configuration of Town Hill Road such that it becomes the through movement. Capacity analysis indicates that this location will operate at an acceptable Level of Service, a significant improvement over Level of Service "F" conditions projected in the future without any change. This concept of altering right-of-way assignment was presented at a public hearing as part of the corridor study and received no public support. An alternative that addresses traffic service level and delay without resulting in a higher speed turn to and from Towne Hill Road will need to be explored. It was the overwhelming opinion of Towne Hill Rd residents that no improvement to travel convenience should be pursued by the city that would encourage traffic utilizing the corridor in favor of US Rte 2. This is not in the capital plan at this time.

Upgraded Dog River Road
The following summarizes analyses conducted related to the Upgrading of Dog River Road by increasing travel speed from 20 to 40 mph and cutting travel time in half.

This affects the path taken from/to VT 12 NB/SB to/from I-89, to the Green Mountain Drive area, and destinations accessible from Bailey Avenue

VT 12 inbound (NB) experiences the biggest absolute change in traffic, losing 95 trips, or 25%. These vehicles all use Dog River Road instead. 78 of them are bound for the interstate, 16 for zone 57.

VT 12 outbound (SB) sees a change of minus-18 vehicles, or a 4% reduction. All of these originate from Bailey Avenue or zone 57.

These volumes – 95 inbound and 18 outbound – are diverted directly to Dog River Road.

The 78 interstate-bound vehicles diverted to Dog River Road had been traveling over Derby Drive and National Life Drive (NLD) to access I-89. This reduction in westbound traffic over the National Life Hill represents 64% of the original westbound traffic to the east of the National Life Building access (e.g. Derby Drive), and 22% of that traffic to the west of the access. There is no predicted change in volume in the eastbound direction over the National Life hill.

It should be noted that a significant queue does currently develop for the left-turn movement from NLD onto Memorial Drive. This delay is not reflected directly in the model, and as a result, the diversion represented in this scenario may already be occurring.

The change in traffic on Northfield Street between Derby and Memorial Drives, and along Memorial Drive between Northfield Street and Bailey Avenue, amounts to a reduction of 1 to 2% of traffic in each direction on all segments.

The diversion of traffic from NLD/Derby Drive to Dog River Road results in a net reduction of 60 westbound trips on Memorial Drive between NLD and Dog River Road, which is about 3% of traffic. This difference disappears between Dog River Road and I-89.

In summary, the model predicts that the upgrade of Dog River Road would significantly alleviate westbound traffic flow over the National Life hill, and the left-turn movement from NLD to Memorial Drive. However, none of the other key intersections or links in the study area are predicted to be significantly affected. Our impression is that the only rationale for pursuing this idea further would be to alleviate westbound peak-hour traffic flow across National Life hill, including through the Derby Drive residential area. If this is pursued, the first step would be to determine—perhaps via a license plate O-D survey—whether any diversion would occur that is not already occurring.

This is not in the capital plan at this time.

Barre Street Extension
A component of the CDMP is the assumption that Barre Street at Main Street will be extended toward the west and ultimately connect with Taylor Street. A qualitative evaluation of such a connection was performed, primarily as it relates to the change in traffic volumes on nearby roads. According to traffic volume forecasts both with and without the Barre Street Extension, traffic volumes can be expected to decline on State Street between Taylor Street and Main Street, and on Main Street between Barre Street and State Street. Of significance is the fact that traffic volumes would decline at the problematic State Street/Main Street/East Main Street intersection. Projections indicate that approximately 100 PM peak hour vehicles would be diverted from this failing intersection. In general, this connection will improve roadway connectivity in the Downtown area and provide relief to areas experiencing traffic congestion. The successful use of the Extension will be the development of a workable intersection improvement plan at the Main Street intersection This is not in the capital plan at this time.

Question 9.5

9.5 If the municipality has adopted an official map, summarize the planned transportation infrastructure delineated on the map within the proposed growth center.

We have not adopted an official map.

Chapter Ten: Natural and Historic Resources

Question 10.1

10.1. Identify the important natural resources (headwaters, streams, shorelines, floodways, rare and irreplaceable natural areas, necessary wildlife habitat, wetlands, endangered species, productive forest lands, and primary agricultural soils) located within the proposed growth center, assess potential impacts on those resources and describe the proposed mitigation.

The maps identifying these resources are attached in the appendix and included below. Montpelier's proposed Growth Center includes the following acreage of the important natural resources in question:

Headwaters, streams, rivers, floodways:	67.90 acres
Rare and irreplaceable natural areas:	N/A
Necessary Wildlife Habitat:	24.88 acres
Wetlands:	46.25 acres (Class II & III)
Endangered Species:	Three areas, no acreage
Productive Forest Lands:	N/A
Primary Agricultural Soils:	648.16 acres

Headwaters, streams, rivers, floodways:

Two major rivers flow through downtown Montpelier, and several of their contributing streams are included within the Growth Center boundary. As a result, a large portion of our floodplain and floodway are also within the Growth Center boundary. Montpelier's zoning regulation includes provisions for the protection of streams and rivers, and we also have extensive regulations concerning stormwater mitigation, both in the zoning and within the review role played by the Department of Public Works.

The regulations in place to protect rivers and streams, as well as to control stormwater are as follows:

715.D. Erosion and Sediment Control.

Control measures shall follow the guidelines of the latest edition Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites. Temporary controls shall be established during construction. All silt fences shall be keyed into the ground and hay bales shall be staked. The smallest practicable area of land shall be exposed at any one time, and the time of exposure shall be kept as short as possible. Land shall not be left exposed during winter months.

(continued on page 85)

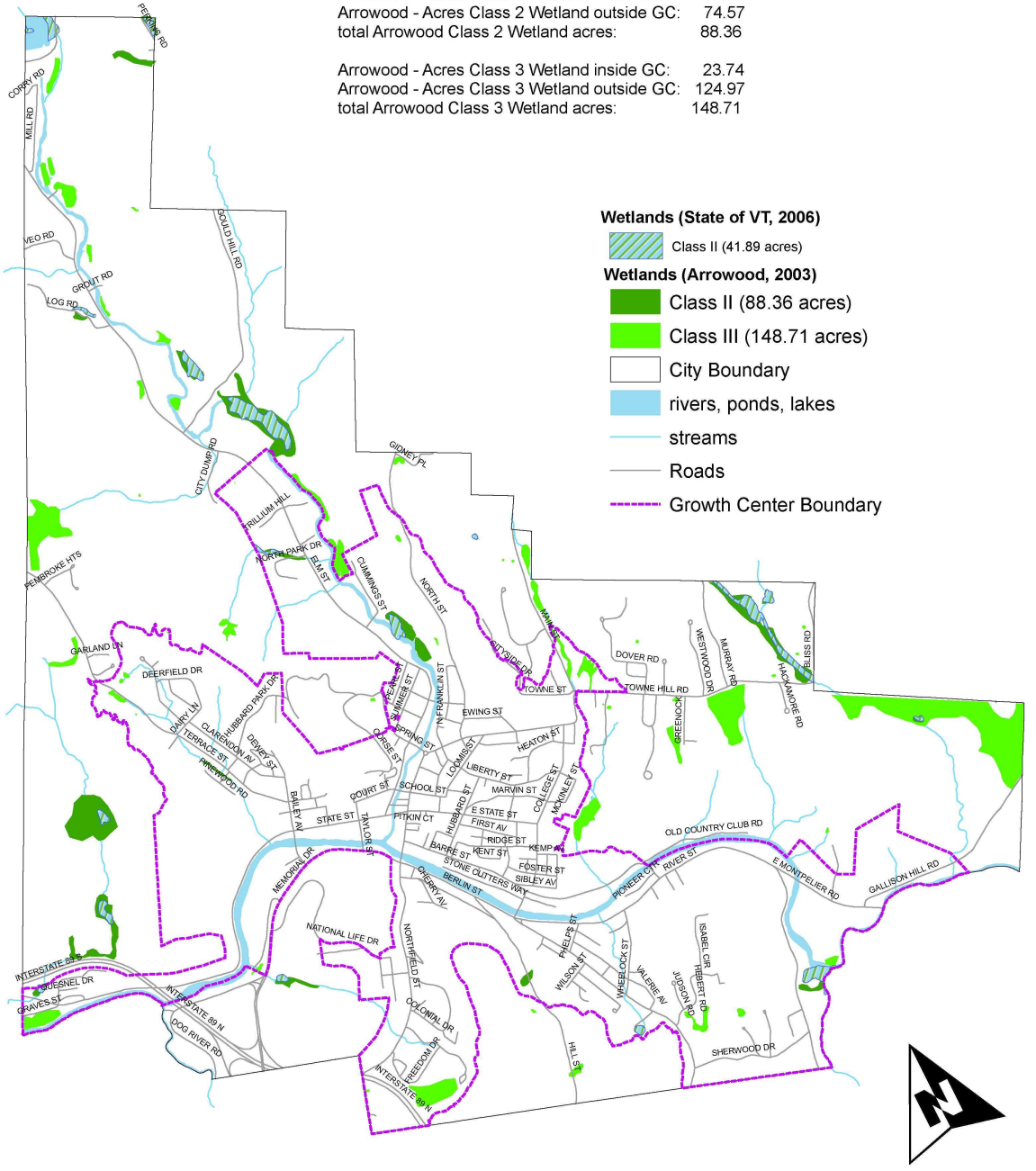
CITY OF MONTPELIER

Wetlands & Water Bodies

State of VT - Acres Class 2 Wetland inside GC: 8.72
State of VT - Acres Class 2 Wetland outside GC: 33.17
total State of VT Class 2 Wetland acres: 41.89

Arrowood - Acres Class 2 Wetland inside GC: 13.79
Arrowood - Acres Class 2 Wetland outside GC: 74.57
total Arrowood Class 2 Wetland acres: 88.36

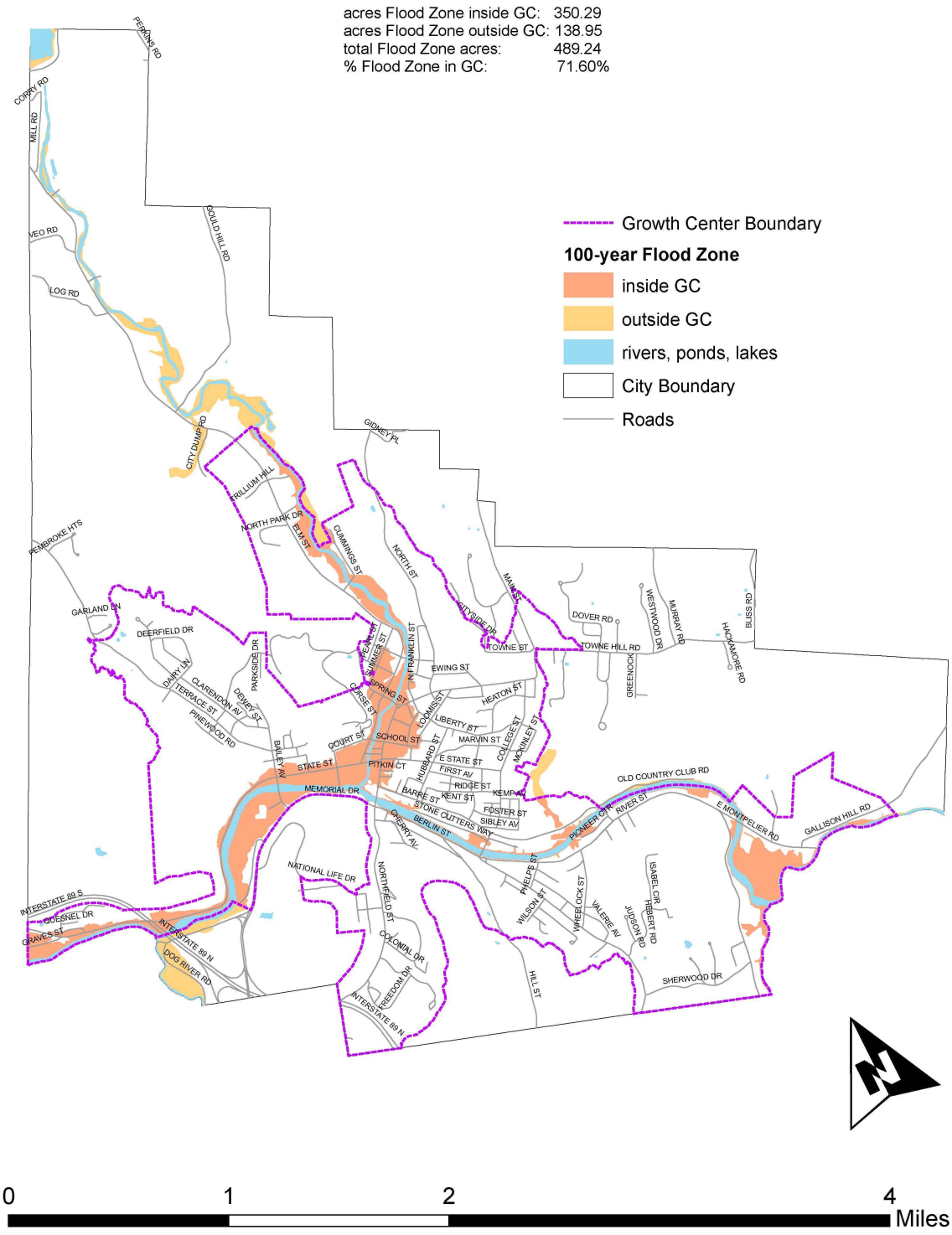
Arrowood - Acres Class 3 Wetland inside GC: 23.74
Arrowood - Acres Class 3 Wetland outside GC: 124.97
total Arrowood Class 3 Wetland acres: 148.71



CITY OF MONTPELIER

Rivers & 100-year Flood Zone

(FEMA 2007 draft data - 350.29 acres of land affected)

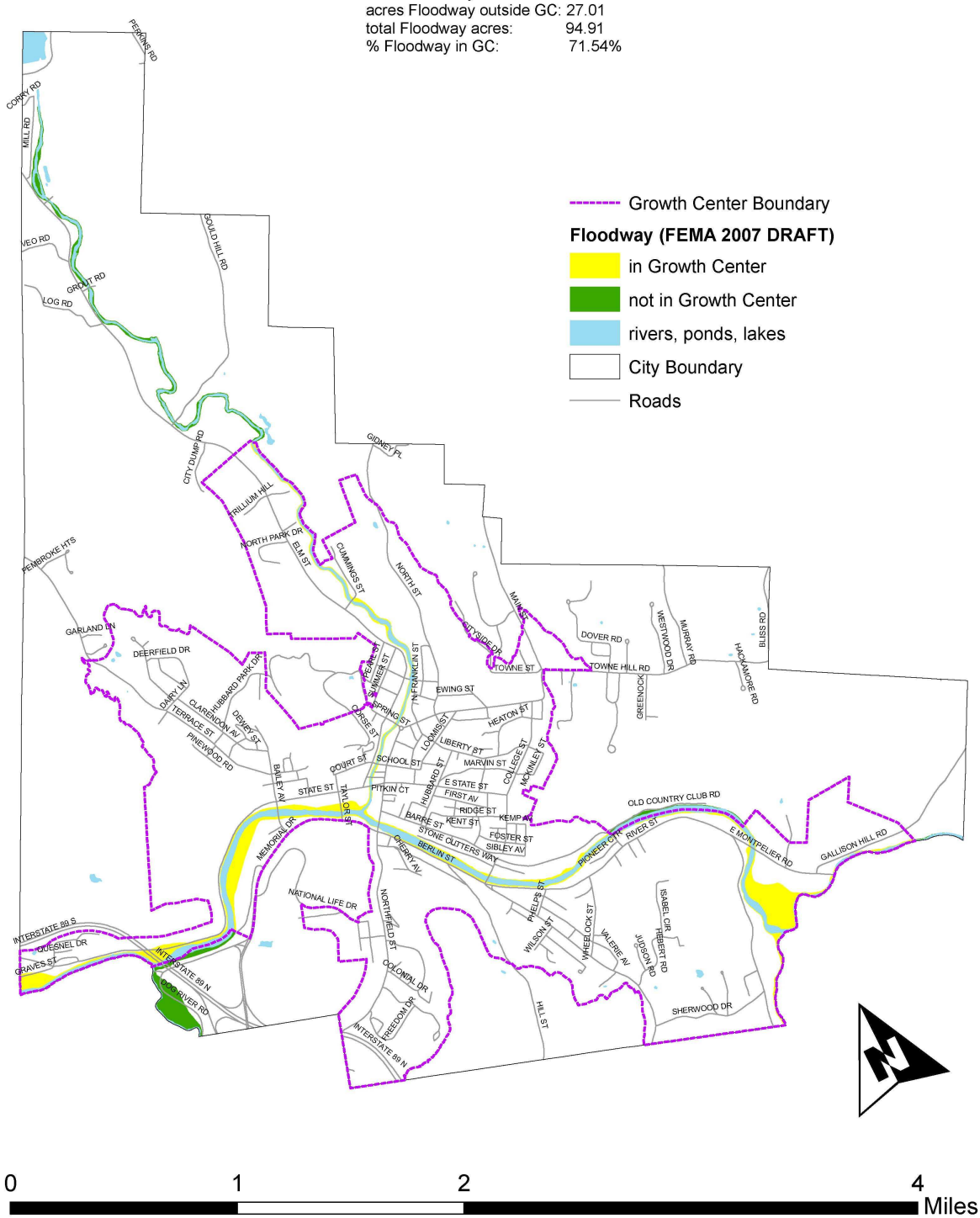


CITY OF MONTPELIER

Rivers & Floodway

(FEMA 2007 draft data - 94.91 acres of land affected)

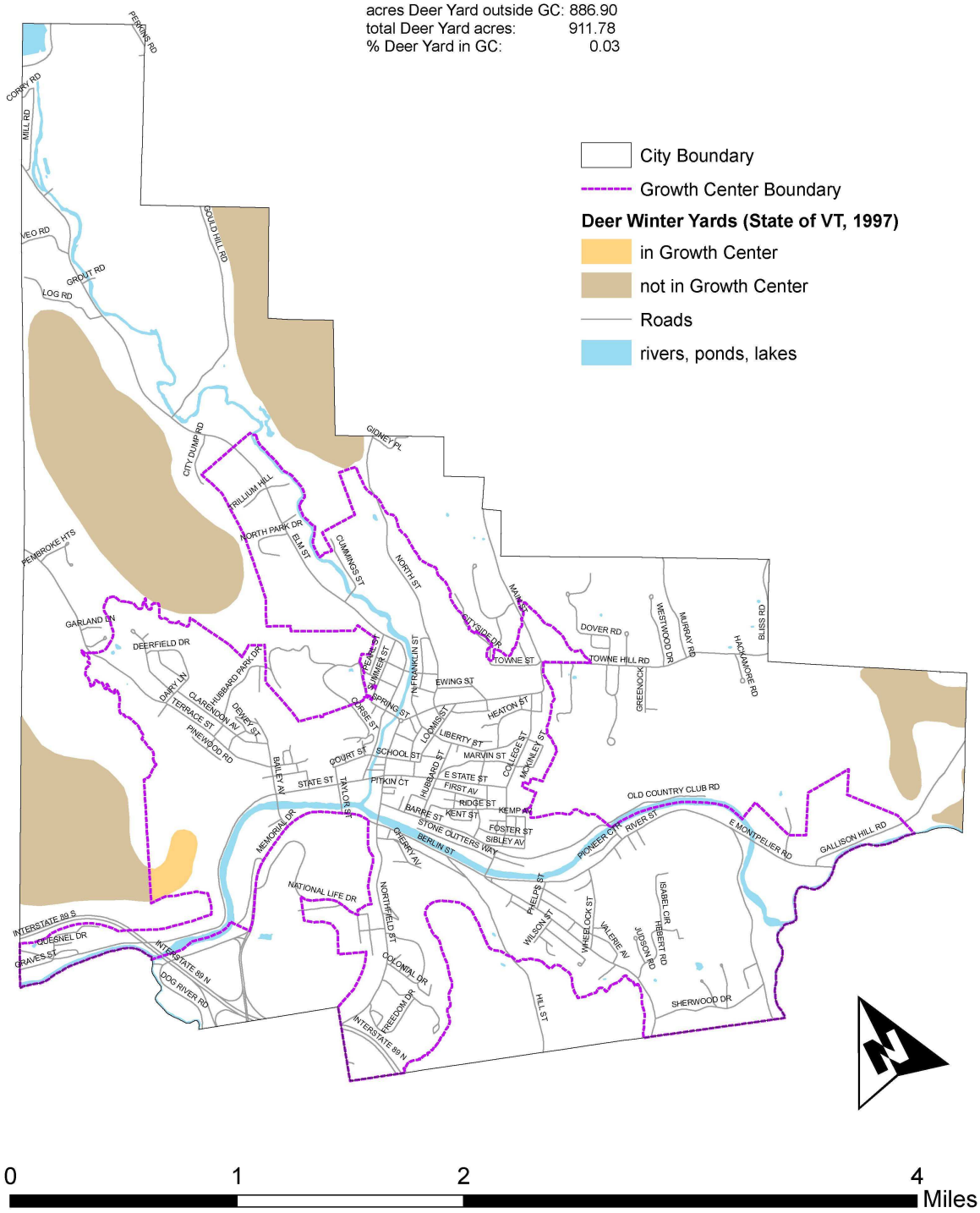
acres Floodway inside GC:	67.90
acres Floodway outside GC:	27.01
total Floodway acres:	94.91
% Floodway in GC:	71.54%



CITY OF MONTPELIER

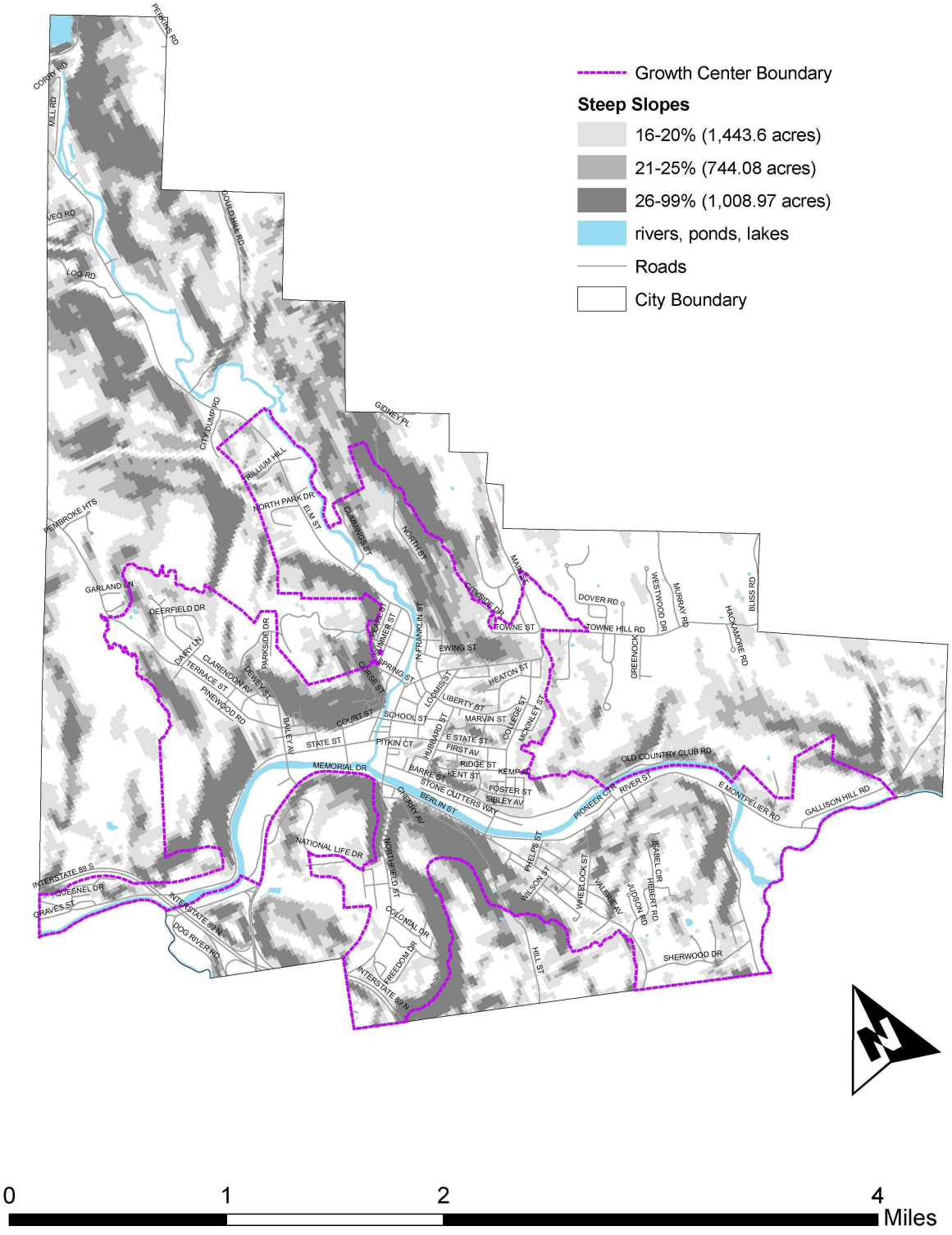
Deer Winter Yards
(total agreage = 911.78)

acres Deer Yard inside GC:	24.88
acres Deer Yard outside GC:	886.90
total Deer Yard acres:	911.78
% Deer Yard in GC:	0.03



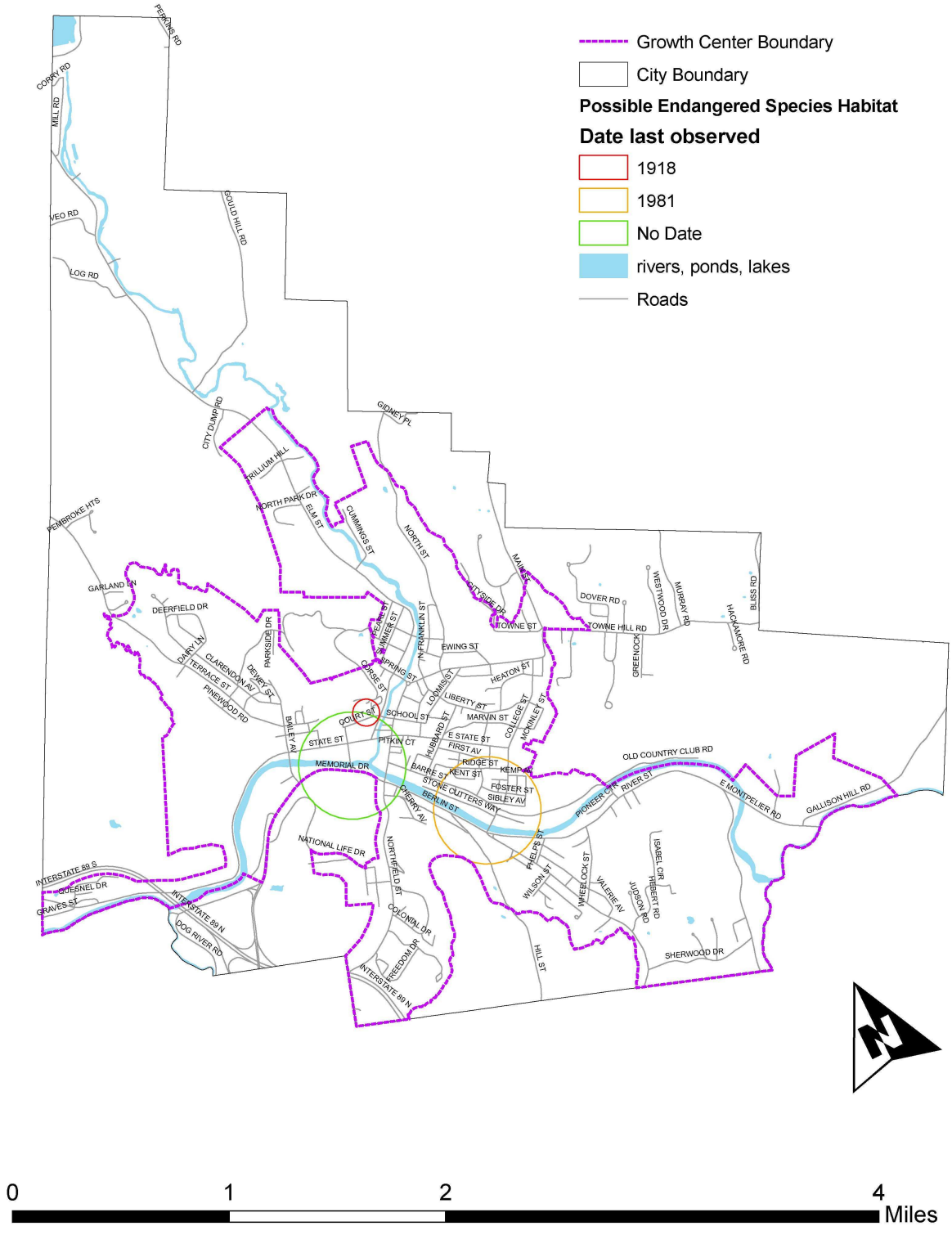
CITY OF MONTPELIER

Steep Slopes



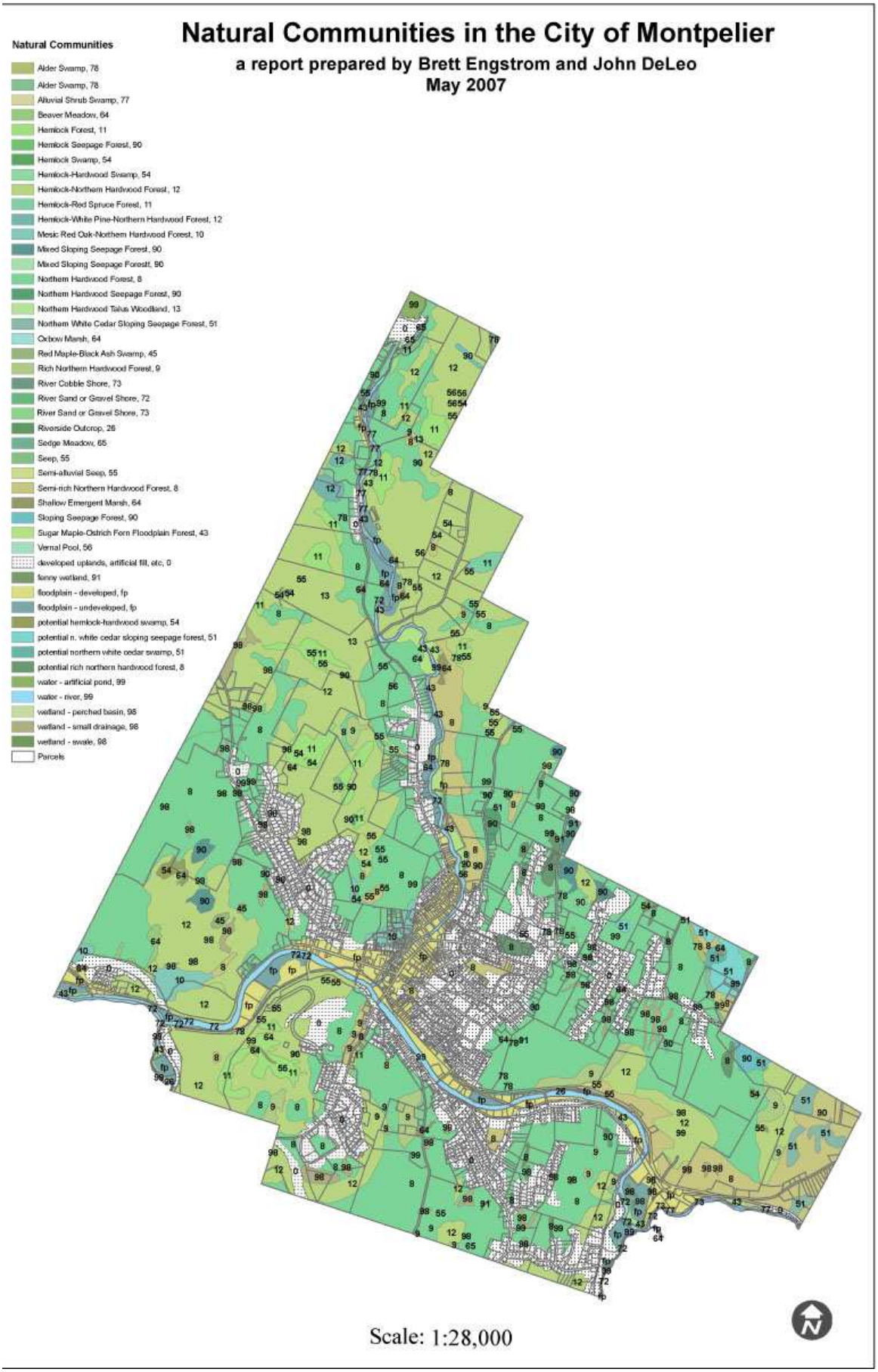
CITY OF MONTPELIER

Endangered Species Habitat



Natural Communities in the City of Montpelier

a report prepared by Brett Engstrom and John DeLeo
May 2007

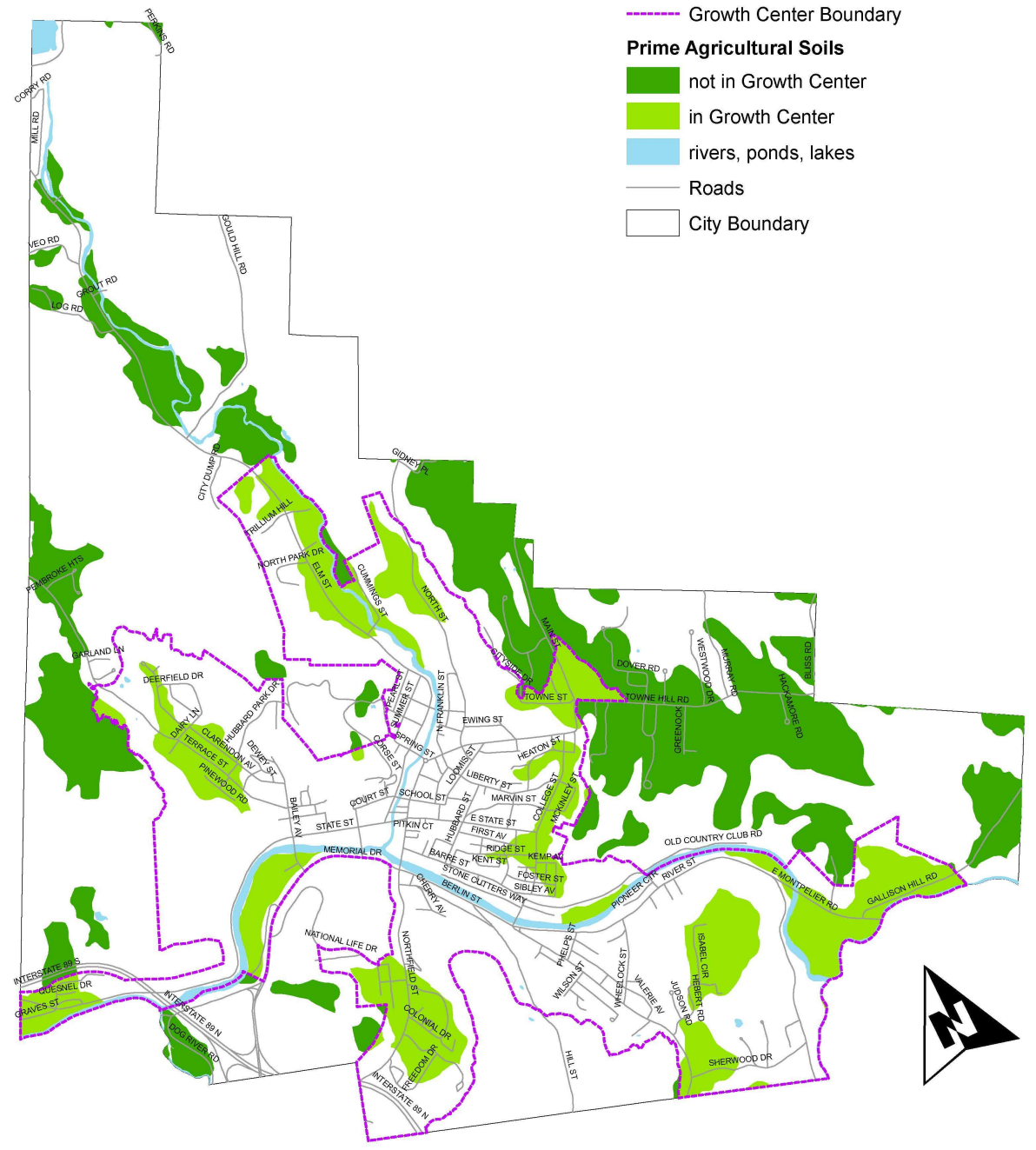


Scale: 1:28,000

CITY OF MONTPELIER

Prime Agrigultural Soils (1,658.83 acres)

acres Prime Ag inside GC:	648.16
acres Prime Ag outside GC:	1010.67
total Prime Ag acres:	1658.83
% of Prime Ag in GC:	39.1%



715.F. Rivers, Streams, and River/Stream Banks.

Development shall not encroach on banks adjacent to rivers and streams. Sufficient setbacks to buildings, streets, parking lots and other impervious surfaces shall be provided to prevent erosion and to encourage treatment on site of stormwater runoff. Temporary construction measures shall comply with Section 715.D.

In addition, the site plan review provisions also require the information about streams and rivers in any proposal, and applicants are directed to present a plan that protects these resources, both within the Growth Center boundary and outside it. Montpelier is a CRS community, which gives us an increase role in the management of floodplains in the city. We have worked hard to keep the floodplain regulations up to date and to work with landowners to make them aware of all the requirements.

The City has worked to raise the visibility of the rivers and streams within the Growth Center over the last ten years, and to implement new green space and open public space along the river to help residents and visitors appreciate the rivers more. We are working on a bike path that will run along the river, on cleaning up two Brownfields sites that currently plague the riverfront with both unsightly properties and hazardous materials. Both of the Brownfields cleanup projects will dedicate either the entire area to park and green space, as is the case with the Turntable project, or a substantial portion of the property to park development, as is the case with the Multi-modal transit center project.

The City is in the process of completing a significant update of the Master Plan, and over the next couple years, a revision of the regulatory systems regarding the protection of natural resources will be undertaken. The goals for this process have already been established by the City Council – they were adopted in August of 2008. The goal for water resources is below; developing the regulatory system that will address these goals will certainly increase the level of protection offered to these critical natural resources.

> **2008 Goal for Water Resources**
> Montpelier residents value water as a precious resource and guarantee equitable access for all living things. We live in harmony with the natural rivers, and have protected and recaptured historic floodplains. We are stewards of water, protecting its quality and quantity by maintaining the integrity of the hydrologic cycle and the integrity of our watersheds, including the waters that flow to Lake Champlain. Our water supply is sufficiently secure, flexible, and adaptable to changing conditions and circumstances.

Necessary Wildlife Habitat
The map attached includes information about most of the critical wildlife habitat in town; there is only a small area of the deer yard within the Growth Center boundary. All proposals for development both within and outside of the proposed Growth Center are required to submit information about the wildlife habitat on the property, and are directed to protect the areas. The one parcel that contains deer yard within the proposed Growth Center has received an Act 250 permit in the past, and the development met the requirements to design the development so that it avoids the deer yard.

One of the more important efforts the city has made over the last few years with respect to wildlife and plant habitat is the completion of a Natural Communities inventory. The map is on page 83, and the narrative for this inventory is included in the Appendix. This provides the city with a rich database of the biodiversity within the city, both inside and outside the Growth Center boundaries.

Within the Growth Center boundaries, the study done by Arrowood in 2003 made several recommendations for enhancing wildlife habitat in the urban core, including 1) allowing forested areas to remain forested, and encouraging the growth of additional wildlands where possible, 2) planting mast bearing trees such as hickory, oak, and American Beech along the roads, in front and backyards, and public places within the downtown, 3) planting fruit-bearing shrubs within the city, and 4) allowing dead standing and fallen trees to remain in place when safety considerations allow, 5) protecting and buffering streams and wet areas within the urban core, and 6) protecting water quality of the small streams, as well as the Winooski River and its tributaries.

Wetlands

The location of the Growth Center that straddles two major rivers means that there are several wetlands within its boundaries. The majority of the large wetlands, however, are outside of the boundaries, partially because the boundaries for the higher density zoning were designed to avoid these critical natural resources. Protection for wetlands involves local, state, and federal regulations. In addition, the Conservation Commission is planning to play a more active role in the review of proposals by attending the Technical Review Committee meetings where encroachment on wetlands and other natural resources are involved, and providing comments to the Development Review Board when necessary.

A Natural Resources Inventory conducted by Arrowood Environmental in 2003 delineated wetlands throughout the city and provided management recommendations for wetlands both within and outside of the proposed Growth Center. There is one wetlands within the Growth Center boundary that was ranked high by Arrowood, just north of Cummings Street. This area was also identified as a biodiversity conservation area in the Natural Communities Inventory.

Endangered Species

There are three sites where endangered species had been found within the Growth Center boundaries prior to the Natural Communities Inventory. Two are sites on the rivers, and one is in a neighborhood that is either fully built out or protected by Hubbard Park. The Natural Communities Inventory located some uncommon and rare plants that are also worth mentioning. The sites where endangered and rare species were found historically were revisited as part of the Natural Resources Inventory conducted by Arrowood in 2003 and are as follows:

Diphasiastrum sabinifolium Ground-fir

This is a small clubmoss that generally grows in conifer forests at varying elevations under conifer and mixed woods. It is listed as S2/S3 in the state which means this species

status is not fully known but it is rare to uncommon. There was an historical record from 1912 of this plant from the north east side of the National Life hill. Permission to visit this site was denied for this study. However, Elizabeth Thompson conducted a thorough survey of this site for *Diphasiastrum sabinifolium* in 1985 and failed to relocate the population. During the present inventory, appropriate habitat in the surrounding area was surveyed for this species but no populations were discovered. Without a more recent survey, it can only be assumed that the population has been extirpated.

Margaritifera margaritifera Eastern Pearshell

This freshwater mussel is ranked S2 in the state. This ranking indicates that the species is rare and there are fewer than 20 occurrences. It most often grows in streams with sand, gravel or cobble substrate. In 1985, about 12 abandoned shells were collected in the Winooski River just down from Main Street and High Bridge. No live specimens were found. This site was resurveyed during this study and no live or abandoned shells were discovered. There is a large population of this species in Plainfield and in the Kingsbury Branch in East Montpelier. A canoe survey along the North Branch River from Gould Hill Road to Vine Street also revealed no populations of this species. In all sites surveyed, the very similar Eastern Elliptio (*Elliptio complanata*) was very common.

Polygonum achoreum Blue Knotweed

An historical population of this rare knotweed was reported from the railroad yard between the Winooski River and Barre Street in Montpelier. This site was surveyed during this inventory and no plants of this species were found. A similar species, *Polygonum aviculare*, was found at this site. Since there is no herbarium voucher specimen for the original occurrence, it is not possible to verify the identification. It is possible that the original collection was mis-identified. In any case, this species does not currently appear to be present at this site.

Dichanthelium depauperatum Depauperate Panic Grass

A small population of this uncommon grass was found during this inventory in the railroad yard between the Winooski River and Barre Street. It was found on the north side of the tracks that are abandoned with bent grass (*Agrostis hyemalis*), panic grass (*Panicum scabriusculum*) and Canada goldenrod (*Solidago canadensis*). A small population of about eight (8) individuals was found here, all plants were in fruit. The plants are difficult to see in this location because they are short and scattered among all of the other vegetation. There may be more individuals here that were not seen. This plant is ranked S3 by the NNHP and considered uncommon in the state.

Juncus ensifolius Sword-Leaved Rush

Two small populations of this species were found along the shores of the North Branch River south of Gould Hill Road. This is a species that is common in Western North America but has only one other known station in the east (in eastern New York). This is the first record of this species in Vermont and New England. Given its current and historical distribution, however, it is thought that this species has been introduced in the east. This species is currently unranked by the NNHP.

Diplazium pycnocarpon Glade Fern

This species of fern is uncommon in the state and is listed as S3 by the NNHP. A small population of this species was found on the steep slopes of the Rich Northern Hardwood Forest in the south part of the City (Upland Natural Community Unit # 19). Though only a few individuals were found, most of the site could not be inventoried due to lack of landowner permission. It is likely that the population of Glade Fern at this site is well established and fairly stable.

Table 3. Rare and uncommon plants found in Montpelier during this inventory

Plant Species	S-Rank	# Occurrences	EO-Rank(s)	State Signif.
sedge (*Carex argyrantha*)	S2	1	CD	yes
narrow-leaved glade fern (*Diplazium pycnocarpon*)	S3	1	C	no
wild millet (*Milium effusum*)	S3	3	C , CD, CD	no
sedge (*Carex backii*)	S3	2	CD	no
sedge (*Carex laxiculmis*).	S3	2	CD	no
a moss (*Tomenthypnum nitens*)	S3	1	unknown	no

One state-level rare and several uncommon plants were observed in the City during this natural community inventory (Table 3). The only rare plant discovered was found in dry, rocky habitat in Red Oak-Northern Hardwood Forest in the west part of the City. All the uncommon flowering plants are associated with Rich Northern Hardwood Forest, while the uncommon moss occurred in one of the fenny wetlands. With the exception of the narrow-leaved glade fern, which was documented in the Arrowwood Environmental's Natural Resources Inventory: Phase II report in 2003, these are additions to the flora of the City. Data documenting the rare sedge will be sent to the Heritage Program.

Primary Agricultural Soils

Unfortunately, the majority of the primary agricultural soils within the Growth Center boundary have already been developed. The city is currently working with landowners who own prime agricultural land in town to fully assess the possibility of securing the development rights to the land prior to further development taking place.

General Zoning Provisions

One way that Montpelier's zoning ordinance encourages the protection of environmentally sensitive areas and the preservation of recreational use of open space is through a density bonus in the Cluster Development provision. Additional density of up to 15% is allowed is "the development will preserve or enhance connectivity for wildlife and enhance public access for recreation. Up to 25% of additional density is allowed if the land falls within the Conservation Lands designation in the Montpelier Municipal Plan if the DRB deems that the open space conserved by the development will preserve and enhance important natural and visual resources as well as connectivity for wildlife and public access for recreation.

In addition to the bonuses available to encourage new developments to protect and enhance the environmentally sensitive areas in town (the carrot), the Montpelier zoning ordinance also contains a detailed set of standards that all developments which require site plan review are expected to address (the stick). These standards are as follows:

715. SITE PROTECTION AND DESIGN.

715.A. Existing Features.

The development plan shall make appropriate provision for protection of the following items:

1. Streams and stream banks;
2. Steep slopes;
3. Wetlands;
4. Soils unsuitable for development;
5. Agricultural lands and primary agricultural soils;
6. Unique natural and manmade features;
7. Significant historic and archaeological sites;
8. Wildlife habitat and sensitive environmental features as identified in the Montpelier Municipal Plan;
9. Aquifer recharge areas and wellheads; and
10. Scenic features, including roads, and major ridgelines as delineated in the Montpelier Municipal Plan.

Effort shall be made to protect/preserve such areas and to provide suitable buffers while allowing reasonable development of the applicant's property.

715.B. Natural Cover.

Where possible, the natural cover shall be conserved and stormwater runoff shall be limited. This standard may not be relevant in high density districts.

715.C. Contours.

The development plan shall minimize grading and cut and fill and shall retain, to the degree possible, the natural contours.

715.D. Erosion and Sediment Control.

Control measures shall follow the guidelines of the latest edition Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites. Temporary controls shall be established during construction. All silt fences shall be keyed into the ground and hay bales shall be staked. The smallest practicable area of land shall be exposed at any one time, and the time of exposure shall be kept as short as possible. Land shall not be left exposed during winter months.

715.E. Forested Hillsides.

Development on a forested hillside shall be minimally visible and shall blend in with its surroundings in winter months. To achieve this purpose, the amount and location of

clearing adjacent to structures shall be limited to the amount necessary for reasonable use of the property. Additional tree planting may be required where needed to reduce visibility from roadways, or other public vantage points. On major ridgelines, development shall be located to protect the unbroken forested backdrop.

715.F. Rivers, Streams, and River/Stream Banks.
Development shall not encroach on banks adjacent to rivers and streams. Sufficient setbacks to buildings, streets, parking lots and other impervious surfaces shall be provided to prevent erosion and to encourage treatment on site of stormwater runoff. Temporary construction measures shall comply with Section 715.D.

715.G. Relationship to Surrounding Area.
The development and the location, height, bulk, design, and materials of the buildings shall be designed in harmony with the surrounding area.

Floodplain Standards

67.90 acres of the proposed Growth Center is floodplain, including all of Montpelier's designated downtown. Montpelier is a CRS community, so we take a more active role than many communities in the regulation of development within the floodplain. Our Planning and Zoning administrator, Clancy DeSmet, has recently completed and passed the exam as a Certified Floodplain Manager to better fulfill the role the city has in this area. The Floodplain standards are as follows:

716. FLOOD PLAIN DEVELOPMENT

716.A. Standards for Development in All Flood Hazard Areas.

In all Zone A flood hazard areas (numbered and unnumbered), the following general standards are required:

1. All new construction, substantial improvements and enclosed enlargements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure.
2. All new construction, substantial improvements and enclosed enlargements of existing structures shall be constructed with materials and utility equipment resistant to flood damage.
3. All new construction, substantial improvements and enclosed enlargements of existing structures shall be constructed by methods and practices that minimize flood damage.
4. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
5. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

6. On-site waste disposal systems shall be located to avoid their impairment or contamination during flooding.

7. New and replacement manufactured homes shall be elevated on properly compacted fill such that the top of the fill (the pad) under the entire manufactured home is above the base flood elevation.

   Recreational Vehicles: Recreational Vehicles placed on sites with special flood hazard areas shall either:

   (a) be on the site for fewer than 180 consecutive days,
   (b) be fully licensed and ready for highway use, or
   (c) be permitted in accordance with the elevation and anchoring requirements for "manufactured homes" in section B.2.(b).

8. Subdivisions.

   a. All subdivision proposals shall be consistent with the need to minimize flood damage.

   b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

   c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

   d. Base flood elevation data shall be provided for subdivision proposals and other proposed development which is greater that 50 lots or 5 acres, whichever is less.

Structures shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

716.B. Standards for Development in "NUMBERED" Flood Hazard Areas.

In all Zone A flood hazard areas where base flood elevation data has been provided (Zone A1 – A30), the following specific standards are required:

9. Residential Construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement elevated to or above base flood elevation.

10. Non-Residential Construction. New construction or substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation or, together with attendant utility and sanitary facilities, be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydro-dynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Administrative Officer.

11. Basements. All new construction and substantial improvements with fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater.

    Enclosed areas below the lowest floor which are subject to flooding shall be used solely for parking of vehicles, building access, or storage.

    Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

    A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
    The bottom of all openings shall be no higher than one foot above grade.
    Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater

Floodways. In areas designated as floodways, encroachments, including fill, new construction, substantial improvements and other developments are prohibited unless certification by a professional registered engineer or architect is provided demonstrating that encroachment shall not result in any increase in flood levels during occurrence of the base flood discharge.

Until a regulatory floodway has been designated, no new construction, substantial improvements, or other development shall be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing development and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.

Watercourse Alterations. Notice shall be given to adjacent, up- and down-stream communities and the Vermont Department of Water Resources prior to an alteration or relocation of a water-course, with copies of said notice submitted to the Administrative Officer. Assurance shall be given that the flood-carrying capacity within the altered or relocated portion of any water-course will be maintained.

716.C. Standards for Development in 'UNNUMBERED' Flood Hazard Areas.

In unnumbered "A" Zones, if base flood elevation and floodway data is available from alternative sources, the Administrative Officer shall obtain, review and reasonably utilize this data until such other data has been provided by the Flood Insurance Administration as criteria for requiring compliance with the standards in Sections 716.A and B.

716. D. Standards for Accessory Structures.

Small detached structures that do not represent a significant development investment and are not used for human habitation (garages, storage sheds, gas station pump island canopies, bus shelters, pump houses, information kiosks, etc.), or is not the primary location of a business shall meet the following development standards:

12. The structure shall be designed to have low flood damage potential.

13. The structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
14. The structure shall be firmly anchored to prevent flotation that may result in damage to other structures.
15. Service facilities such as electrical and heating equipment shall be elevated or flood-proofed.

Stormwater Management

Montpelier has made both regulatory and infrastructure investments in the control of stormwater over the last several years – the area within the growth center is especially important, given its proximity to two of the rivers that flow through town. Our stormwater standards are as follows:

723.STORM DRAINAGE

Storm sewer system and/or other drainage improvements shall be in accordance with plans approved by the Director of Public Works. In no case shall stormwater discharge into a city sewer system if a separate system exists.

723.A. Management Plan.

Where required by the Director of Public Works, a stormwater management plan must be submitted for review and approval by the Development Review Board. Stormwater control facilities must be designed to accommodate the 25 year storm event frequency or as required. All existing facilities for the conveyance of waters, both private and public, which may be affected or impacted by the development must be identified and analyzed. An historical account of off-site facilities within a drainage area (culverts, ditches and brooks, etc.) may also be required. The plan shall show all natural and constructed drainage ways, both existing and proposed.

723.B. Minimization of Stormwater Runoff.

The best available technology shall be used to minimize stormwater runoff, increase on-site infiltration, encourage natural filtration functions, simulate natural drainage systems, and minimize discharge of pollutants to ground and surface water. Best available technology may include measures such as retention basins, recharge trenches, swales and minimal use of impervious surfaces.

Stormwater drainage shall not negatively affect adjacent properties. Low points and standing water should be avoided unless specifically designed as in detention ponds, artificial wetlands, or similar facilities. Failure to maintain natural and/or engineered on-site systems as part of an approved development will be considered a violation of the permit.

723.C. Type of Drainage Systems.

Natural watercourses and drainage ways shall be incorporated into the design of drainage systems to the fullest extent possible. Where open drainage systems are proposed, minimum grades shall be provided as directed by the Director of Public Works. Closed drainage systems shall be required where directed by the Director of Public Works based upon an evaluation of building densities and drainage conditions.

723.D. Public vs. Private Drainage Systems.

Drainage systems associated with public streets shall be located within the street right-of-way or within an easement provided to the City and indicated on the plan. All public drainage systems shall be designed in accordance with the Department of Public Works specifications. Drainage systems on individual lots shall be privately owned and maintained.

723.E. Responsibility for Downstream/Off-site Drainage.

Where anticipated discharge from the development will overload existing downstream drainage facilities, the Development Review Board shall not approve the development until provision has been made for improvement of the downstream facilities. The Board may require detention ponds or other measures such that a zero percent increase in drainage flows result from the development.

723.F. Design Calculations.

All calculations for the drainage system - including upstream potential discharge, downstream capacity, and requirements for on-site facilities and easement width – shall be based on a 25 year storm or as required by the Director of Public Works.

724. EASEMENTS.

724.A. Storm Drainage.

Where natural or manmade water courses are integral to a development's stormwater management plan, the Development Review Board may require, based on recommendation from the Director of Public Works, that a maintenance and protection easement be granted to the City, retained by the applicant, or that protective covenants be established. The width of such easement shall be as directed by the Director of Public Works.

In cases of increased off-site drainage, the Development Review Board may require an applicant to acquire an easement for drainage control and disposal that would permit the flow of stormwater, or to allow an increase in drainage flow, onto an adjoining property.

We expect that the impacts of Growth Center designation on sensitive environmental resources will be positive, since the city intends to pursue tax increment financing for the further development of infrastructure to encourage more residential growth. If the city has an important role in making decisions about where development is placed in areas

with wetlands, agricultural soils, wildlife habitat, and water resources, it will be easier to insure that the development that does occur minimizes the impact on these areas.

Question 10.2

10.2. Identify the historic resources located within the proposed growth center, assess potential impacts on those resources and describe the proposed mitigation, including any steps the municipality is taking to promote the preservation, restoration and/or adaptive reuse of historic structures within the proposed growth center.

Montpelier's urban form reflects the historical, social, and political evolution of the city. The many eras of post-revolutionary history is very evident along the streets of Montpelier, and gives the city the strong historic character witnessed today. Many of the areas, or neighborhoods, reflect either distinct periods or purposes of development.

Downtown streets and property lines reflect the city's earliest gradual, informal, and increasingly dense settlement. Early streets – Elm, State, and Main – connected other post-revolutionary settlements and stayed close to rivers or headed towards easy gaps in the surrounding hills. The earliest market was at the junction of Elm and State Streets – it continues there today. Early industry capitalized on the power of the river – grist mills, tanneries, and stone finishing shops. The proposed growth center is located within these settlement areas.

The city has a wealth of handsome, historic buildings representing every major nineteenth and twentieth century architectural fashion. This dense and high quality collection of historic structures creates one of the richest historic environments in the state. These buildings are of tremendous value to residents and visitors alike. About two-thirds of the city's residents live in historic structures. Living and working in historic buildings is a way of life for residents, and protecting that historic environment has long been a community priority.

The city has invested a significant amount of money and time over the past several years producing a major inventory of the historic resources in the city. Reproducing all the data about the historic resources in the downtown and the Growth Center would be prohibitive. It is available in the City Planning Department, and is used as part of every development review we conduct. If a building that is on the historic register or has inventory information on it is in the development review process, the historic inventory information is included with the file to the Design Review Committee and the Development Review Board.

Archeological Resources

Given the city's location at the confluence of two rivers, Montpelier would be home to a rich collection of archeological resources. We have undertaken several federally funded projects along the river, which have required that we conduct an assessment of the archeological resources and that we minimize the impact on them. A review of the Vermont

Archeological Inventory and the town files shows several sites where artifacts have been found in or near the Growth Center. These include:

- FS12 (WA) isolated find of a scraper of unknown date;
- VT-WA-6 isolated find of a projectile point of unknown date;
- VT-WA-7 isolated find of a projectile point that may date to the Late Archaic.
- VT-WA-23 Sabin slate quarry – 19th century;
- VT-WA-24 State Capitol site – 18th and 19th centuries;
- VT-WA-55 historic dam – 19th century;
- VT-WA-95 Nicholas Homestead bottle workshop – mid-19th century.

These sites are scattered around Montpelier and reflect the variety of potential historic archeological sites that may be located in the project vicinity. There are certainly many more historic sites in the area, particularly associated with the historic structures in Montpelier that have not been reported due to limited archeological investigations in the vicinity. The Montpelier Historic District was listed on the National Register of Historic Places in 1978, expanded in 1989, and we have been completing another update over the last couple years which will be submitted to the National Register by the end of 2009. The boundaries of the historic district are within the Growth Center boundaries.

Resource Protection

The City of Montpelier is committed to its historic resources and built environment. Goals include the following:

- Reinforce Montpelier's neighborhoods – both residential and commercial – by encouraging diverse, compatible, and dense land uses that build upon the existing variety and character in these neighborhoods;
- Improve the process of city planning and project review to ensure that new development is compatible with the city's historic built environment and reflects the changing needs of the community;
- Develop further knowledge of Montpelier's past including its architectural heritage; and
- Continue working with the State of Vermont to plan for the needs of the Capitol Complex – including parking, traffic, public facilities and amenities, as well as, office expansion.

These goals are accomplished through several processes – including:

- The Montpelier Historic District & Montpelier Historic Preservation Commission
- Certified Local Government grants, including a recent grant that has allowed us to continue to inventory the historic buildings in our National Register District and expand the boundaries to include small adjacent areas that had been outside of the district until now. We have an extensive inventory of historic structures and buildings, and work had to keep the inventory up to date.
- Design Control District
- Integrated communication and planning with various stakeholders.

Montpelier Historic District & Montpelier Historic Preservation Commission:
The Montpelier Historic District (MHD) was listed on the National Register of Historic Places in 1978. In 1989, the East State Street Amendment was added to the district. At present, it is the largest National Register listed historic district in Vermont.

The City of Montpelier is a Certified Local Government (CLG) and has established the Montpelier Historic Preservation Commission (MHPC) under this program. The MHPC plans and advocates for the protection and appreciation of Montpelier's historic and architecturally significant resources.

The MHPC has the following duties:

- To create and maintain a system for the survey and inventory of historic properties within its jurisdiction that is coordinated with the Vermont Historic Sites and Structures Survey and the Vermont Archeological Inventory.
- To prepare in coordination with and submit to the Division a report concerning properties within the Local Government which are under consideration for nomination for inclusion on the National Register of Historic Places. The report shall be prepared in a manner consistent with relevant provisions of the National Historic Preservation Act.
- To cooperate with the Division with respect to the Division's monitoring and evaluation of the CLG Program.
- To adopt conflict of interest rules in connection with its Historic Preservation Program which incorporate the detailed requirements set out in the National Register Programs Guidelines, Chapter 3.
- To submit an annual report on or before the thirtieth day after the end of the City's Fiscal Year.

The CLG program also supports (financially and otherwise) a wide range of initiatives that the City has been anticipating for a number of years but has lacked the capacity and resources to undertake. The list of projects that will help protect and improve Montpelier's built environment and historic resources is very long. Examples include:

- Updating the design guidelines and standards of the Design Control District, including the district's boundaries;
- Improving Montpelier's lighting standards;
- Developing public information materials (print and Web-based) to promote the protection of Montpelier's significant architectural resources;
- Updating Montpelier’s sign regulations;
- Initiating public events to draw attention to Montpelier's historic resources; and
- Many other ideas and activities designed to draw attention to, protect, enhance, and/or appreciate Montpelier's historic resources.

The 2008 Boundary Increase adds 35 new resources which include 28 contributing resources (27 primary and 1 accessory) and 7 non-contributing resources (4 primary and 3 accessory) to the Montpelier Historic District, originally listed in 1978 and expanded with the East State Street Boundary Increase in 1989. The total listed properties after

1989 was 548 which included 458 contributing primary buildings, 19 contributing accessory buildings, and 7 contributing structures as well as 58 non-contributing buildings, 2 non-contributing accessory buildings and 4 non-contributing structures.

Design Control Districts:
The City of Montpelier, in accordance with 24 VSA §4414(1)(E), created the Design Control District (DCD) to guide development in an area with particular historical, architectural, urban design, visual or cultural significance. The DCD consists of areas within the Central Business Districts, the Capital Complex, the Memorial Drive gateway, the campuses of Vermont College and Woodbury College, office park districts, the river district, and other designated areas where historic preservation and design protection need to be considered in conjunction with development.

In 1976, *The Montpelier Cityscape Workbook: A Guide for Development in the Design Control District* was published as supplemental guidance for the Design Review Committee, which initially reviews projects within the DCD and is advisory to the Development Review Board (DRB).

According to the City of Montpelier's Zoning & Subdivision Regulations (Regulations), within the DCD, no structure may be erected, reconstructed, substantially altered, restored, moved, or demolished, without review of the design plans by the DRC and approval of design plans by the DRB.

The DRC and DRB evaluate projects based on the following considerations:

1. Preservation or reconstruction of the appropriate historic style if the proposed project is in the historic district or involves an historic structure;
2. Harmony of exterior design with other properties in the district;
3. Compatibility of proposed exterior materials with other properties in the district;
4. Compatibility of the proposed landscaping with the district;
5. Prevention of the use of incompatible designs, buildings, color schemes, or exterior materials;
6. Location and appearance of all utilities;
7. Recognition of and respect for view corridors and significant vistas including gateway views of the city and State House; and
8. The design standards for development within the Office Park District and for development within the Riverfront District, if applicable (See Regulations §305.F).

Additional standards apply to signs (See Regulations §504.A) and demolition projects within the DCD. For example, the demolition or replacement of any structure, or portion thereof, listed as a contributing structure on the Vermont Historic Sites and Structures Survey and/or the National Register for Historic Resources, or any application for development which involves the demolition of such structures, shall be reviewed by the DRB, under specific standards (See Regulations §310(2)(a)-(g)).

In summary, the City of Montpelier has clearly identified and inventoried its historic resources. The City's historic resources are protected, mitigated, and promoted through the CLG program, the Design Review process, and through public outreach.

Question 10.3

10.3. Explain the municipality's choices in locating the proposed growth center in relation to its potential impacts on important natural and historic resources.

Montpelier aspires to implement the principles of Smart Growth with the designation of the core area of our community as a Growth Center. The proposed Growth Center surrounds the designated downtown, and its important initial goals are to encourage further residential development, to support businesses in the downtown and bring in more taxpayers, ratepayers, and schoolchildren to support our infrastructure and schools. This clearly maintains the historic settlement patterns of compact village and urban centers surrounded by rural countryside. It targets growth to the traditional mixed use center at a scale that is convenient and accessible to pedestrians – the entire growth center is within a reasonable short walk or bike ride to the downtown.

We expect that the residential growth and infrastructure improvements that are enabled by Growth Center designation will allow us to enhance the natural and historic resources in and around the downtown, due to the new financing mechanisms available for development that Growth Center designation makes possible.

Another important consideration for designation was the areas in town where the existing zoning was already oriented toward medium and high density residential and commercial development. The boundary lines, district designations, and language for the existing zoning did take several important historic and natural features into account, including the historic downtown, the topography lines, and existing density. The designation will not allow development to occur that would have otherwise been prohibited; what it will allow is for the municipality to have more of a role in shaping the new development that does occur, and thereby minimizing impacts on important natural resources and increasing the viability of our important historic resources.

Question 10.4

10.4. Summarize the provisions of the approved municipal plan and implementing bylaws that provide reasonable protection for important natural and historic resources located outside the proposed growth center.

An inventory of the key open space resources outside the boundaries of the Growth Center was included in the discussion of Question 4.3. The historic and archeological resources, to the extent they exist, are discussed and inventoried as part of the CLG program and the historic inventories we have conducted.

Recent amendments to the Montpelier Master Plan, adopted by the City Council in July of 2005 and then amended March 8, 2006, established several goals for citywide protection of important natural and historic resources, including the following:

3.2 Natural Features and the Environment Goals and Recommendations

1. *Preserve, enhance and maintain the natural features and the integration of built and natural settings which makes Montpelier unique.*
2. *Continue to protect and maintain the City's existing parks and open space including Hubbard Park, North Branch and the Capitol lawn.*
3. *Develop a methodology and tools that allow for appropriate development while also protecting those open spaces determined to be important to the community.*
4. *Inventory the city to determine key natural features, critical habitats, recreational areas, forests, and views and vistas.*
5. *Develop criteria and recommendations to guide the City in preserving these features.*

Recommendations:

a. *Allocate the resources needed to allow the Open Space Advisory Committee to work with landowners to prepare, resources permitting complete an inventory of key natural features, open areas, forests, and views and vistas in Montpelier and develop recommendations for preserving these features and to complete the "Views and Vistas" study which currently exists in draft.* This has been completed.

b. *Identify criteria for evaluation of parcels taking into consideration such factors as: the Master Plan for the town; protection of surface waters and aquifers; wetlands and buffers; steep slopes; key views and vistas; recreation potential; unusual qualities, including vistas and view shed; historic and/or cultural significance; unique or prominent natural features; natural communities; location; and any such other factors that the Committee deems relevant.*

c. *Prepare a complete inventory of open space within the City of Montpelier and apply the specific criteria to each parcel in the inventory.* This has not been completed.

d. *By the next revision of this Master Plan, the Planning Commission and the City Council shall establish priorities and adopt tools for open space protection. Such tools may include fee purchase, transfer or purchase of development rights, acquisition of easements; conservation overlay districts or other appropriate zoning, encouragement of charitable donations and bargain sales.* This is being done with the Master Plan revision process.

Adopted Amendment; Preserve the natural and historic features that distinguish the City of Montpelier.

a. *Encourage awareness by Montpelier citizens of the city's key natural features based on objective standards and an inventory of the city.*
b. *Revitalize the Winooski River and all its associated branches as a special focus of the city. Protect our ridge lines from development.*
c. *Encourage preservation of open space by carefully balancing the community need for open space and other land uses.*
d. *Preserve the architectural heritage of the city by considering becoming a Certified Local Government, revising the zoning ordinances and design review process, and establishing a more comprehensive planning process.* This has been done.
e. *When possible, in light of public safety concerns, preserve the historic features of the bridges over the Winooski.*
f. *Promote our natural and historic, as well as cultural, attractions as a tourist and regional resource.* This is being done on an ongoing basis.

The zoning provisions that help implement these Master Plan recommendations include the following:

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The DRC and DRB evaluate projects based on the following considerations:
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2. Harmony of exterior design with other properties in the district;
3. Compatibility of proposed exterior materials with other properties in the district;
4. Compatibility of the proposed landscaping with the district;
5. Prevention of the use of incompatible designs, buildings, color schemes, or exterior materials;
6. Location and appearance of all utilities;

7. Recognition of and respect for view corridors and significant vistas including gateway views of the city and State House; and
8. The design standards for development within the Office Park District and for development within the Riverfront District, if applicable (See Regulations §305.F).

Additional standards apply to signs (See Regulations §504.A) and demolition projects within the DCD. For example, the demolition or replacement of any structure, or portion thereof, listed as a contributing structure on the Vermont Historic Sites and Structures Survey and/or the National Register for Historic Resources, or any application for development which involves the demolition of such structures, shall be reviewed by the DRB, under specific standards (See Regulations §310(2)(a)-(g)).

In general, Montpelier's zoning ordinance encourages the protection of environmentally sensitive areas and the preservation of recreational use of open space through a density bonus in the Cluster Development provision. Additional density of up to 15% is allowed is "the development will preserve or enhance connectivity for wildlife and enhance public access for recreation. Up to 25% of additional density is allowed if the land falls within the Conservation Lands designation in the Montpelier Municipal Plan if the DRB deems that the open space conserved by the development will preserve and enhance important natural and visual resources as well as connectivity for wildlife and public access for recreation.

In summary, the city places a very high priority on the protection and enhancement of our natural and historic resources. The protections we offer in the zoning ordinance are among the best in the state. In addition, the Department of Planning and Community Development has been involved in an extensive public engagement effort over the past two years called enVision Montpelier, which will result in a revised Master Plan designed to make Montpelier the first truly sustainable state capital in the country. We have over 200 citizens actively involved in developing new targets, and strategies to further the ambitious goals the City Council adopted last year.

Chapter Eleven: Agriculture

Question 11.1

11.1. Justify the municipality's choices in locating the proposed growth center in relation to the conversion of primary agricultural soils and the fragmentation of farm or forest land.

The total prime agricultural soils in the city is 1,658.83 acres, 39% of which is within the Growth Center boundaries. Unfortunately, almost all of the prime agricultural land within the Growth Center is already developed. One of the largest undeveloped parcels of prime agricultural land remaining is the home of the Two Rivers Center for Sustainability, which is a working farm with plans to expand their operations into an educational facility with a café and a root cellar to help preserve and provide fresh local produce through the winter months. A map of farms in operation is included in Appendix 10.

Question 11.2

11.2. Identify any ways in which the proposed growth center will serve to strengthen agricultural and forest industries (to the extent that they exist) and discuss the steps the municipality is taking to minimize conflicts between development and agricultural and forest industries (to the extent that they exist).

By creating new, energy efficient and attractive housing within walking and biking distance of stores and employers, the City of Montpelier will be reducing the pressure on the agricultural and forest industries in the region by both providing a greater customer base and also by keeping new development out of areas where they are operating.

Question 11.3

11.3 Describe the provisions of the approved municipal plan and implementing bylaws that limit or discourage the fragmentation of farm and forest land.

The PUD, Cluster Development provisions and Density Bonuses allowed encourage new developments to make residential and commercial development compact on larger sites, thereby preserving farmland, forest land, open space, wildlife corridors, recreational areas, and other lands designated for conservation in the Montpelier Municipal Plan (see map in Appendix 21B)). Since the passage of this zoning provision in 2006, we have been experiencing a housing recession, and no new proposals have utilized the density bonuses as of this application. The current Sabin's Pasture proposal that is going through the Act 250 Master Permit process is a cluster development, but it has not utilized the density bonus.

713.E. Density Bonuses for Cluster Development:

16. Purpose: Cluster development is intended to encourage flexibility in planned development design by permitting mixed housing types and uses which may be grouped on lots of reduced dimensions to allow for a more economic provision of street and utility network, to protect environmentally sensitive areas, and to encourage the preservation and recreational use of open space.

17. Review Criteria: In approving a plan for Cluster Development, the Development Review Board shall make the following findings:
    a. The proposed Cluster Development would result in a more desirable environment than would be possible through a conventional subdivision, which strictly conforms to the requirements of the underlying zone.
    b. The location, size, nature and topography of the open areas make them suitable for use as common areas for park, recreational purposes, conservation purposes, buffer areas and/or agricultural purposes.
    c. The proposed Cluster Development plan will develop the property in harmony with the natural environment by concentrating the development on those parts of the property which have the least natural limitation to accommodate development and by protecting those parts of the property which are environmentally sensitive such as, but not limited to, wetlands, flood plains, aquifer recharge areas, wellheads, meadows, steep slopes, visual ridgelines, prominent hilltops, stream buffers, important panoramic viewpoints, winter deer yards, wildlife corridors, and threatened and endangered species habitat.
    d. The Cluster Development shall conform to the standards outlined above and the Montpelier Municipal Plan.
    e. Open Space or Common Land: The land area not used for individual lots, construction of buildings and roads shall be permanently protected, using a conservation easement, Open Space Agreement, or other suitable legal instrument, as open space or common land for the purposes of recreation, conservation, park or public easement or forestry or agriculture. The open space or common land or any portion of it shall be held, managed and maintained by the applicant until it is protected in accordance with Section 713.B.

18. Density Bonus Amount: The Board may award an increase in the density above that normally allowed in the underlying district of up to twenty-five percent (25%) under one of the following two conditions:
    a. Up to fifteen percent (15%) if the Board deems that the open space conserved by the development will preserve or enhance connectivity for wildlife and enhance public access for recreation.
    b. Up to twenty-five percent (25%) for land that falls within the Conservation Lands designation in the Montpelier Municipal Plan if the Board deems that the open space conserved by the development will preserve or enhance important natural and visual resources as well as connectivity for wildlife and public access for recreation

In addition to the land use controls that limit or discourage the fragmentation of land, the city has created a $40,000 Conservation Fund for conserving lands and waters within the City for agricultural, forest, wildlife, recreational, or natural area use. The Conservation Commission has also worked cooperatively with the Berlin Conservation Commission and the Vermont Land Trust to conserve priority parcels in the Berlin Pond watershed, using information from the recent natural community mapping project and geographic information system analysis of parcel and stream data which identified priority parcels in the watershed for conservation. A 48 acre parcel that adjoined two previously protected parcels was conserved and added to the Berlin Town Forest to bring the total of conserved land in the 6660 acre watershed to over 1400 acres. Berlin Pond is the primary drinking water supply for the City of Montpelier.

Chapter Twelve: Planning Process

Question 12.1

12.1. List the dates of the most recent plan adoption, bylaw amendment(s), and municipal plan approval and confirmation of the municipality's planning process by the regional planning commission.

Master Plan: Adopted July 13, 2005 and amended March 8, 2006

Zoning and Subdivision Ordinance: Adopted August 21, 2006 and amended January 25, 2007 and May 14, 2008.

RPC Plan Confirmation: April, 2006

Question 12.2

12.2. Highlight any additional steps the municipality is taking to implement the purposes of the growth center program that have not been discussed in previous responses, specifically those that relate to the purposes of 10 V.S.A. Chapter 151 or the goals of 24 V.S.A. § 4302.

Montpelier's Planning and Community Development Department has initiated a project called enVision Montpelier to make the city the nation's first sustainable state capital and to update the city's Master Plan. enVision Montpelier has engaged hundreds of citizens from the Montpelier area to create a long-term community vision and action plan for the next 30 to 100 years. The plan is not yet complete, but the City Council adopted the vision and goals statements described below at their regularly scheduled meeting on August 22, 2008.

Sustainability for Montpelier means: 1) long term environmental, economic, and social health, 2) a strong sense of place and a shared vision for the future, 3) building assets and innovation, 4) healthy ecosystems and efficient resource use, 5) enhanced local econo-

mies, 6) productive partnerships among all key stakeholders in the community, and 7) public debate is engaging, inclusive, and constructive.

The vision and goals that were adopted by City Council in August of 2008 will shape the new Master Plan for the city, and reflect a deepened commitment to sustainability, smart growth, and resource protection. They will provide the foundation for a new zoning ordinance, the drafting of which will be underway by fall of 2010.

Vision for Montpelier

Montpelier is a small and vibrant community nestled in the mountains of central Vermont. With foresight and determination, we are poised to do great things in the decades to come.

Our vision is to excel as a creative and sustainable community. More specifically, we seek to safeguard the natural environment and enhance our small-town setting. We aspire to strengthen community and regional ties and expand civic participation. We aim to encourage learning and cultivate good jobs.

Together, we will strive to meet present needs and leave a worthy legacy to future generations. We hope that other communities might take inspiration from our vision and values — and the ways we put them into action.

Who We Are

Montpelier's people are drawn together by a shared sense of purpose and place. Along the banks of the Winooski and in the green hills that rise above it, the changing seasons and the landscape allow us to hike, fish, bike, and ski within the city limits. Our historic downtown is where we shop for local goods, eat healthy food from nearby farms, and chat with old friends and new acquaintances on sidewalks and street corners.

Our creative spirit is inspired by the many writers, artists, dancers, actors, musicians, and chefs in our midst. Our farmers and architects are lighting the way to healthier, more sustainable lifestyles. Our educators kindle our curiosity, add to our knowledge, and bring national recognition to our schools and colleges. We honor those who have long shaped our community, and welcome newcomers into our circle. Our children grow and thrive in a safe and friendly environment.

Our sense of what's possible spurs us to reach out to the world beyond our borders. As the state capital, we are home to government institutions, nonprofit groups, and businesses that work to strengthen communities near and far.

We are increasingly aware of our relationship with the earth, and of the urgent need to preserve its beauty and vitality. We are determined to fight prejudice and exclusion and

to embrace those among us who are hungry, ailing, lonely, or different. We are intent on securing avenues for everyone—young and old, rich and poor—to have a voice in setting priorities, resolving conflicts, and shaping decisions in the years ahead.

Goals for Montpelier

Economics and Livelihoods

- **Economic Well-Being:** Montpelier, Barre, and other adjacent communities cooperate as an economic, social, and cultural center of the Central Vermont region and provide jobs, income, housing, cultural activities, recreation, health care, goods, and services to area residents.
- **Vibrant Downtowns:** The Montpelier, Barre, and Berlin area has vibrant downtowns with many locally-owned stores that sell a wide variety of affordable goods within an accessible distance to meet resident's needs.
- **Entrepreneurial Opportunities:** The city of Montpelier is a healthy environment for new ventures; businesses, schools, and other organizations find the support they need to initiate entrepreneurial ideas that create meaningful, creative, and livable wage jobs.
- **Human Needs:** There are adequate income and human and social services in place so that over their lifespan, residents are able to meet their needs within the community regardless of age, abilities, employment, income level, and health, and involuntary poverty is a thing of the past.
- **Meaningful Work:** Work in the community is life-enhancing, meaningful, and satisfying, and residents have opportunities throughout their lifetimes to improve their skills and advance to new challenges.
- **Sustainability:** All economic activities in the city enhance the natural environment, celebrate the rivers and watersheds, and build the natural, social, cultural, human, financial, and institutional capital base for future generations.
- **Employment Opportunities:** The employment available in the region represents a ladder of opportunities from entry level to highly skilled, and offers creative, recreational, and cultural jobs in addition to those in the traditional employment sectors of government, financial services, public and private education, non-profit, professional services, social support, manufacturing, food business, and retail.

Social and Human Development

- **Sense of Community:** We have a strong sense of pride in and connection to our community and within each of our diverse neighborhoods, varied interest groups, and community affiliations. We value and encourage inclusive participation in community activities. We honor and observe our role as stewards of our richly diverse social, cultural, and natural resources. We are proud that our city is the seat of Vermont

government and we welcome visitors, employees, and enterprises attracted to Montpelier as the State capital.

- **Safe Neighborhoods:** People take an active role in planning, maintaining, and guarding safe neighborhoods. Residents, young and old, feel safe in their homes and on city streets at all times of the day or night.
- **Education:** Montpelier is a learning community where people share questions and experiment with ideas. Accessible learning opportunities support a life-long process that fosters personal success and contribution as members of the local, national, and global community.
- **Resilience:** When difficult times occur, Montpelier's strong community shines. Networks of support respond to those in need in a cohesive and timely way.
- **Health and Wellness:** People in Montpelier lead lifestyles that promote the health of the whole person across the lifespan. The city environment provides healthy sustenance and community support. When any of us is in need, friends, family, community members, and professionals provide compassionate, high quality, and affordable care.
- **Faith, Wisdom, and Spirituality:** Montpelier is a place where a wide variety of traditions, values, and spiritual practices are honored. Each of us is able to seek inner peace, meaning, wisdom, and guidance for right action in our own ways. Faith- and values-based communities actively seek to understand and support one another.
- **Aesthetic Enjoyment and Creative Self-Expression:** The natural beauty, art, and eccentric talent in Montpelier delight and inspire us. The beauty and talent in Montpelier provides a vibrant and diverse source of inspiration for all out senses. Everyone has the opportunity to participate in creative endeavors—the most important prerequisite is our enthusiasm.
- **Families and Relationships:** Montpelier is a friendly and welcoming place where people greet newcomers openly and warmly. We have a culture of neighbors reaching out to neighbors. Everyone who is able is a mentor to another. Interactions are based on mutual respect; young and old interact on a regular basis for pleasure, work, and shared wisdom. Conflicts are resolved through participatory community processes and seen as opportunities for connection and understanding. These healthy relationships help people feel a sense of belonging, interdependence, mastery of the skills and strengths they share, and generosity to their family, neighborhood, city, and global communities.

Governance

- **Self-determination:** Montpelier subscribes to the principles of democratic governance and recognizes that it cannot thrive without an informed citizenry. The city therefore promotes civic education and strives to make it as easy as possible for community members to be knowledgeable about issues of the day. Citizens likewise recognize their responsibility to play an active role in civic life.

- **Access:** Montpelier recognizes that all members of the community have a right to participate in public discourse about the city's present and future and to have a meaningful say in municipal decision-making. The city encourages residents to monitor its operations and responds promptly and candidly to public concerns. Aware that its mechanisms for civic input may not keep pace with changing demographics, it reviews and revises its procedures every few years to ensure broad participation.
- **Equity:** Montpelier realizes that communities grow stronger when all their members are able to help shape their common future. Our public officials thus work to remove barriers to participation by reaching out to all members of the community and empowering them to participate in civic dialogues and decision-making processes. Factors such as language, age, race, culture, gender, sexual orientation, time, finances, ability, knowledge, and health prevent no one from taking part.
- **Conflict Resolution:** Montpelier strives to defuse tensions and resolve disagreements in the early stages. It develops lasting and satisfactory solutions and helps people discover their own power to settle disputes.

Infrastructure and Built Environment

- **Communications:** The citizens of Montpelier are connected to each other and the rest of the world. Our communication systems are reliable and support the engagement of all people, information dissemination, social relationships, entertainment, and economic activity.
- **Energy:** Montpelier's energy is generated by renewable resources of local origin. The delivery of energy is structured to encourage efficient use and affordability.
- **Food:** Food sources derive from local, sustainable practices that provide us with a high quality, healthy, affordable, and secure supply of food.
- **Goods and Services:** People and businesses in Montpelier buy locally produced goods and services and are leaders in responsible consumption to support employment and wealth creation. We do our best to buy products from local businesses that support employment and wealth creation.
- **Housing:** Montpelier has a mix of housing that is affordable, safe, healthy, accessible, eco-efficient, in diverse neighborhoods that enhances the experience of people who live here. The housing adapts over time to reflect changes in demographics, climate, and technology while maintaining its historic character.
- **Buildings:** Montpelier's public and private buildings enhance the historic environment and cultural values which have shaped the city through time, and contribute to comfort, health, peace, and safety of our residents.
- **Transportation:** Montpelier is built at a human scale with a transportation system that serves the access and mobility needs of all people through a choice of convenient, comfortable, affordable, and efficient transportation modes. The transportation

system connects people and goods locally, regionally, and globally. Transportation needs are met safely in a manner supportive of human and ecosystem health.

- **Waste Management:** The citizens of Montpelier work toward zero waste by using materials responsibly and minimizing consumption. We reuse, recycle, and reduce the materials we consume. Wastes created are safely managed without harm to other species or systems.

- **Utilities:** Montpelier's water and waste- water, electric, and heating systems support existing and future development and provide residents with safe, high quality, reliable service.

- **Recreation, Educational, and Cultural Facilities:** Montpelier provides all age groups with state of the art facilities to achieve their highest human potential, stay healthy, and pursue creative endeavors.

Natural Environment

- **Water Resources:** Montpelier residents value water as a precious resource and guarantee equitable access for all living things. We live in harmony with the natural rivers, and have protected and recaptured historic floodplains. We are stewards of water, protecting its quality and quantity by maintaining the integrity of the hydrologic cycle and the integrity of our watersheds, including the waters that flow to Lake Champlain. Our water supply is sufficiently secure, flexible, and adaptable to changing conditions and circumstances.

- **Natural Communities and Biodiversity:** Montpelier is rich with intact ecosystems and their diverse natural communities. We protect and restore our natural heritage, rare and endangered species and communities, wildlife corridors, and the overall biodiversity of the city. There are strong links to larger ecosystems surrounding the city, and we are mindful of our regional and global assets and impacts.

- **Open Space & Recreation:** Montpelier residents and visitors have opportunities to recreate outdoors and to learn about the natural environment. There are abundant green and open spaces throughout the city for both natural ecosystems and recreation. The city parks are linked to each other, to neighborhoods, and to surrounding open spaces, forming green spaces, pathways, trails, and corridors for the benefit of people and wildlife.

- **Energy:** The energy used by Montpelier residents comes from a diverse portfolio of resources, the majority of which are renewable, have a low impact on the environment, and contribute to the positive development of our society. Residents conserve energy and demonstrate the highest level of efficiency in their homes and businesses.

- **Waste Management:** Montpelier residents work toward zero waste by using materials responsibly and minimizing consumption. We reuse, recycle and reduce the materials we consume. Wastes created are safely managed without harm to other species or systems.

- **Food:** Food sources derive from sustainable practices that provide us with a high quality, healthy, affordable, and secure supply of food. Neighborhood gardens grow local, seasonal, and fresh food for all our residents, and neighborhood food storage facilities ensure local food in all seasons.
- **Air & Climate:** Montpelier residents value the quality of clean air, recognizing it as the most basic need for survival. Treasuring clear, bright skies, we steward our air shed and responsibly address climate change. Economic and social activities protect all living things by ensuring healthy air quality indoors and out.
- **Land and Soil:** Fertile soil is vital to maintaining life. Montpelier community members are responsible stewards of land, maintaining the life-supporting processes integral to healthy, intact ecosystems. We use and share our land wisely and equitably.

PARTICIPATING COMMUNITY MEMBERS

Economics & Livelihoods Committee Members:

Mark Kaufman
John Bloch
Charles Ballantyne
Norman James
Janet Ressler
George Malek
Joseph Kiefer
Heather Pipino
Sylvia Fagin

Guests: Ken Jones, Bill Jolley, Jim Sheridan, Laurette Brady, Mary Hooper, Nat Frothingham, Bill Shurnbrooker, Gabe Malek, Bill Doelger, Catharine Lowther, Jennie Ferris, KC Whiteley, Katie Fahnestock, Linda Henzel, Adam McCullough, Danielle Baranowski, Olivia Fraser, Miranda Scott, Jenna Forest, Melissan Dezotell, Ali Dunn, Jessie Gay, Zion Keck, Diane Scolaro, Joey Klein, and Anson Tebbetts.

Governance Committee Members:

Chris Reardon
Marj Power
Chris Paterson
Neal Meier
David Borgendale
Erik Esselstyn
Ellen Tyrrell

Guests: Jim Sheridan, Anita Ancel, Ken Metzner, Anne Campbell, Nat Frothingham, John Bloch, Kathy DeWolfe, Jack McCullough, Hal Cohen, Yvonne Byrd, Paolo Miller, Sandra Markowitz, Allegra Signorino, Helen Hurley, Louie Cecese, Arealles Ortiz, Megan Canavan, Melissan Dezotelle, Liam McSweeney

Natural Environment Committee Members:

Carolyn Grodinsky
Ken Jones
John Wires
Tarin Chaplin
Geoff Beyer
Lisa Mahoney
Emma Melvin

Guests: Kris Hammer, Joe Loga, Fran Dodd, Carol Dorflein, Rebecca Leet, Sarah Galbraith, Ken Matzner, Claire Benedict, Jean Jolley, Paul Guare, Matthew Delorny, Scott Courcelle, Danny Bick, Mary Jane Olsen, Donna Barlow-Casey, Rodger Thompson, Don Robisky

Human Development and Social Systems Committee Members:

Judy Warriner Walke, Chair
Virgina Catone, Chair
Anne Campbell
Barbara Stewart
Bill Doelger
Claire Benedict
Liz Sykas-Ringgenberg
Paula Francis
Steve Metcalf

Guests: Alice Porter, Beth Boutin, Debra Lisi-Baker, Debra Sargent, Ellen Fein, Glenda Otto, Heather Herzig, Hedi Ballantyne, Hilari Farrington, Janet Ressler, Jeff Roberts, John Hollar, John Wires, Julia Blatchford, Karen Brooks, Katie Fahnestock, Kim Bent, Linn Perkins Syz, Martha Hicks-Robinson, Mary Hooper, Nat Frothingham, Sandal Cate, Ann Watson, Anne Ferguson, Arne McMullen, Brain O'Regan, Brian Gallagher, Don Lorinovich, Geoff Beyer, Kathy Fisher, Louise Prowly, Meg Baird.

Infrastructure and Built Environment Committee Members:

Garth Genge, Chair
Margot George
Alan Goldman
Mike Wetherell
Mary Jo Krolewski
Suzanne Hechmer
Charles Ballantyne

Guests: Alice Porter, Brian Leet, Bill Fraser, Clare Rock, Eric Blokland, Elizabeth Coleman, Jim Libby, Joanne Troiano, Martin Hahn, Mary Hooper, Polly Nicnol, Robert Lewis, Todd Law, Ward Joyce.

Below is a partial list of community members who have attended at least one of the enVision Montpelier Stakeholder Meetings held the past two years.

Aaron Brondyke
Abby Colihan
Adam Caira
Alan Blakeman
Alan Goldman
Alan Weiss
Alice Colwell
Alice Porter
Amy Pitton
Amy Thornton Kelly
Andrea Colnes
Andrea Voyer
Andrew Hooper
Andrew Zovistashi
Anita Ancel
Anne Campbell
Anne Ferguson
Anne Watson
Anson Tebbetts
Anthony Mennona
Barbara Stewart
Barbara White
Barney Bloom
Becka Roolf
Becky McCullough
Beth Boutin
Beth Sturgis
Bethany Pombar
Betty Woods
Beverly Pembroke Hill
Bill Doelger
Bill Doyle
Bill Jolley
Bill Jordan
Bill Merrylees
Bob Lewis
Bonnie Kynoch
Brian Abbott
Brian Leet
Bryan Mitofsky
Cara Robecheck
Carl Etnier
Carlo Rovetto
Carol Vassar
Carole Naquin
Carolyn Grodinski
Carrie Baker Stahler
Cary Brown
Catherine Lowther
Cheryl King Fischer
Chip Darmstadt
Chris Andreasson
Chris Paterson
Chris Reardon
Chris Roberston
Christine Zachai
Cindy McCloud
Claire Benedict
Clare Rock
Colette Kelly
Colin Gunn
Dan Lindner
Daniel Hecht
David Borgendale
David Hall
Deb St. Cyr
Debra Sargent
Dennis Sauer
Diane Scolaro
Dick Smith
Dona Bate
Donna Gacetta
Dorie Wilsnack
Eric Bachman
Eliot Burg
Elizabeth Coleman
Elizabeth Courtney
Ellen Fein
Ellen Lerman
Ellen Tyrrell
Emily J. Keller
Emma- Lynn Melvin
Emma Rowe
Eric Blockland
Eric Gilbertson
Eric Seidel
Erik Esselstyn
Esther Farnsworth
Fran Dodd
Frank Woods
Gail Falk
Garth Genge
Geoff Beyer
George Malek
Georgina Hease
Gerard Dehner
Ginny Catone
Giovanna Peebles
Giovanni Rovetto
Glenda Otto
Gordon Hall
Guy Trapper
Hannah Lackoff
Harold Garabedian
Heather Herzig
Heather Pipino
Hedi Ballantyne
Charles Ballantyne
Hilari Farrington
J. Riley Allen
Jack Pransky
Jack McCullugh
Jack Russell
James (Jim) Roos
James Gram
Janet Poeton
Janet Ressler
Jean Wortman
Keith Wortman
Jean Jolley
Jean Vissering
Jeff Boyer
Jeff Roberts
Cari Clement
Jeff Statter
Jen Dole
Jennie Ferris
Jeremy Hoff
Jesse Ahee
Jim Abrams
Jim Libby
Jim Roos
Jim Sheridan
Joan Kahn
Joanna Dillon
Joanne Crowley-Watkins
Joe W. Loga
Joey Klein
John Block
John Hollar
John Lindley
John Pratt
John Snell
John Waldo

John Wires
Jon Anderson
Jon Budreski
Jon Copans
Jonathan Scherbatskzay
Joyce Cahn
Judy Milstain
Judy Warriner Walke
Julia Blatchford
June Bascom
Justin Barton-Caplin
Justin Paull
Karen Brooks
Karen Topper
Karen Schwartz
Karen Vogan
Katherine Cooper
Kate Nicolet
Katie Fahnestock
KC Whiteley
Ken Jones
Ken Matzner
Ken Russell
Kenneth Saxe
Kenric Kite
Kevin O'Connell
Kris Hammer
Kristi Smith
Krystal Owen
Larry Mandell
Laurette Brady
Lauri Scharf
Laurie Lyon
Lee Crider
Lee Lauber
Leslie Breakstone
Linda Henzel
Linda Wheately
Linn Perkins Syz
Lisa Mahoney
Liz Sykas-Ringgenberg
Liza Earle
Lucia Bragg
Lynn Burke
Malcolm Fitzpatrick
Marjorie Power
Margot George
Mark Kaufman
Mark Pitton
Martha Hicks-Robinson
Mary Riby-Williams
Mary Hooper
Mary Jo Krolewski
Matt De Groot
Matthew DeLorey
Maxine Leary
Meredith Burkett
Meredith Summer
Michael Sherman
Michael Wetherell
Nancy Case
Nancy Mears
Nancy Sherman
Nancy Wasserman
Nat Frothingham
Neal Meier
Nina Thompson
Norman James
Numa Haase
Pam LaVanway
Pat Balkcom
Patrick Joy
Paul Carnahan
Paul Dupre
Paul Guare
Paul Markowitz
Paula Francis
Peter Drescher
Phil Zalinger
Phill Dodd
Pinky Clark
Polly Ellerbe
Polly Nichol
Rebecca Leet
Reuben MacMartin
Rick McMahan
Rilla Murray
Riva Rondorf
Robbie Harold
Robert Hubbard
Roberta Downey
Robin Gorges
David Gorges
Rodger Krussman
Roger Cranse
Ronnie Blume
Rory Malone
Russell Leete
Sam Buckley
Sam Graham-Sharp
Sandy England
Sarah Galbraith
Sarah Jarvis
Scott Sawyer
Sean Sheehan
Shannon Holmes
Sharon Raw Quinn
Shawn Bryan
Soren Pfeffer
Spencer Smith
Stanley Brinkerhoff
Stefanie Shea
Steph Rieke
Steve Metcalf
Steve Seicke
Steven Everett
Steven Pappas
Susan Abdo
Susan Salemeh
Suson Reid
Suzanne Hechmer
Tarin Chaplin
Theresa Murray Clasen
Thia Artemis
Tim Heney
Tina Manning
Tina Ruth
Tom Golonka
Tom Watkins
Vicki Lane
Wayne Fawbush
Wendy Blakeman
Wendy Manley
Yvonne Byrd
Zoe Bobar

See Appendix for more information.

Appendices

Included on attached CD ROM in the following order:
Appendix 1: CVRPC Growth Projections
Appendix 2: CVRPC Build Out Model Methodology and Description
Appendix 3: Regional Employment Projections
Appendix 4: Fiscal Impact Model Narrative
Appendix 5: Map of Designated Downtown
Appendix 6: Grand List of Designated Downtown
Appendix 7: Draft Growth Center Map
Appendix 8: Sewer and Water Map
Appendix 9: Regional Map
Appendix 10: Prime Agricultural Soils Map
Appendix 11: Steep Slopes Map
Appendix 12: Wetlands Map
Appendix 13: Zoning Map
Appendix 14: Zoning and Subdivision Regulations
Appendix 15: Deer Yards Map
Appendix 16: Endangered Species Map
Appendix 17: Floodways Map
Appendix 18: Historic District and Design Control Map
Appendix 19A: Natural Resources Inventory
Appendix 19B: Natural Resources Inventory Maps
Appendix 20: Sabin's Pasture Report
Appendix 21: Montpelier City Master Plan
Appendix 22: Housing Task Force Report 2004
Appendix 23: Growth Center Map with orthophotos
Appendix 24: Regional Growth Center map
Appendix 25: Capital Improvement Program FY 2008-2014
Appendix 26: Map of Parks and Civic Buildings
Appendix 27: Transportation Infrastructure: Planned and Existing Facilities
Appendix 28: Growth Center Build Out Map
Appendix 29A: Natural Communities Inventory
Appendix 29B: Natural Communities Inventory Maps
Appendix 30: Growth Center Shape File
Appendix 31: enVision Montpelier Information
Montpelier Final Application