

Waitsfield Town Plan

Adopted December 18, 2017



Waitsfield Town Plan

Adopted by the Waitsfield Selectboard on December 18, 2017

Approved by the Central Vermont Regional Planning Commission on [date]

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1. Introduction

The Town of Waitsfield has a rich history and heritage grounded in the Vermont doctrine of freedom and unity. Our agrarian past has left a legacy that is prominent in our landscape and continues to influence the character of our community. While we are indebted to our past, the town's recent history has been one of transition.

The changes that have affected the town mirror those influencing the state as a whole. Our resource-based economy, founded on agriculture and forestry, is now built on recreation and an enviable quality of life. Thus, Waitsfield has been transformed from a quiet farming town to a resort destination, bedroom community and, increasingly, a center for innovation and commerce. This transformation has not been without costs to tranquility, the landscape, and the insular nature of the community. Waitsfield has managed, however, to retain many of the best elements of its past and merge them with a modern economy driven by tourism, technology, accessibility, and respect for our natural and social heritage.

As we look to the future, we can conclude that change will become more rapid and that the consequences of town decisions will become more profound. To best confront the future, the town should look to its past, to the path provided by our forebears. In this way, we can arrive at the following principles that are found throughout this plan:

- Open debate, accessible institutions and democracy are the bases of our local government;
- Economic and cultural opportunities for local citizens enrich the entire community;
- Access to quality education, a livable wage and safe and affordable housing are critical elements of a civil society;
- All current and future residents of the town share the same rights and responsibilities, regardless of status or background;
- As our economy becomes more globalized, focusing on sustainable development and the careful stewardship of local resources will become increasingly important;
- The town's heritage, as defined by the historic settlement pattern of concentrated villages surrounded by an open countryside and forested mountains, is among its greatest resources; and
- Individual rights and responsibility to the community should be balanced, as provided by local, state and federal law.

1.A. Authority, History & Purpose

Authority. Authority to adopt and implement the town plan is provided by the Vermont Planning and Development Act (hereafter referred to as The Act), 24 VSA, Chapter 117.

History. Waitsfield's first plan was the original town charter of 1782, which established a subdivision plan for the town and prescribed how private property would be developed. The modern era for town planning began when the town adopted its first town plan in the early-1970s. In 1980, the town began to coordinate its planning program with other Mad River Valley towns through the Valley Growth Study, which resulted in a major revision to the town plan in 1983, and a subsequent update of that plan in 1988.

In 1993, the Planning Commission undertook a comprehensive re-write of the plan. The result was a plan with a much broader scope and level of detail than the prior plan. It served the community well, and was re-adopted with minor amendment in 1998. In 2005, the Planning Commission completed a significant update of the 1993 plan, and incorporated the outcome of the many planning and community outreach efforts that occurred during the previous decade.

Purpose. The town plan is the principal policy statement for the Town of Waitsfield. It articulates the aspirations of the community, and provides a framework for achieving those aspirations. It is intended to guide how the town addresses such diverse community issues as land development, the provision of municipal services and facilities, environmental protection, economic development and transportation.

In developing this plan, an attempt was made to look beyond the typical eight-year time frame of many municipal plans. The Planning Commission tried to consider the factors that will affect the town's growth well into the future, and to define how we as a community should work to influence those factors. In addition to guiding local officials and citizens in making decisions regarding our future, the town plan is intended to be relied upon as the basis for making decisions in a number of specific settings. Such uses of the plan include the following:

- Provide the framework for planning the future of the town.
- Guide local decision-making in local regulatory reviews. While the Town Plan is not a regulatory document, it does provide a basis for determining compliance with plan policies in specific regulatory settings.
- Serve as the basis for local decision-making during the Act 250 review process, most importantly guiding the Planning Commission and Selectboard in making determinations of compliance with the town plan.
- Provide a foundation for updating and revising land use regulations.

- Assist in the ongoing update and implementation of the capital budget.
- Assist with the formulation of local policies and programs.
- Serve as the primary resource document for private parties desiring to learn of the town and its goals and policies.
- Establish a basis for the town's interactions with neighboring towns and with other levels of government.

Format. This plan contains a short town history; 10 chapters addressing a range of topics, including all plan elements required by the Act; and an implementation section (chapter 13) that includes a prioritized list of policy implementation tasks. A list of relevant planning studies and other reference materials is provided as Appendix A. A series of maps is presented in Appendix B, and Appendix C contains the results of the 2009 public opinion survey.

Each chapter presents background information and analysis, which provides a basis for plan goals, policies and tasks. The narrative included in these chapters is not intended to serve as specific policy statements. Such policy statements are located at the end of each chapter as goals and policies. For the purpose of the Waitsfield Town Plan:

- **Goals** express broad, long-range community aspirations relative to one or more categories of topics. They should be considered aspirational statements for the community.
- **Policies** are statements of the town's intent, or position, with regard to specific issues or topics. In certain settings, such as during Act 250 proceedings and local zoning and subdivision reviews, policy statements shall serve as the basis for determining a project's conformance with the plan. While other sections of the plan, including goal statements, provide useful context for understanding policies, the policies alone serve as the final statement regarding the town's position.
- **Implementation tasks** are specific actions to be taken by an identified entity to support one or more policies and achieve the community's long term goals. Where feasible, the municipal entity responsible for carrying out the implementation task is identified. Where a partnership with a private entity is desirable, such partnership is noted as being encouraged. Tasks are designed to assist the town to achieve its long-term goals. Failure to implement a specific task, however, does not alter or negate a specific plan policy.

1.B Participation & Coordination

Participation. Waitsfield residents have a rich tradition of democracy and participation in town government. Spirited debate, and occasional discord, is a predictable part of resolving important community issues. This plan builds upon that history of public discourse and supplements it with a focused public outreach effort designed to solicit greater community input regarding key issues facing the town's future. In advance of revising the plan, the Planning Commission distributed a survey to town residents and property owners in October 2009 that covered the wide range of topics addressed in this plan. A report summarizing the survey results is included as an appendix to this plan.

Before holding formal public hearings on this plan, the Planning Commission advertised that a preliminary draft was available and solicited the advice of town residents and landowners, interest groups and affected parties. Local nongovernmental organizations, especially those that have been identified as playing a potential role in partnership with the town to implement specific tasks, were also invited to review the draft and provide comments on the preliminary draft.

As is usually the case, there is room for additional public involvement at all levels of the planning process. The use of surveys and questionnaires, public forums and greater coordination between interest groups and the town has ensured the past participation of town residents in local decision-making. The ongoing coordination with local citizen groups, businesses and regional agencies will ensure that such involvement continues to shape town policies.

Regional Coordination. The Town of Waitsfield has been meeting regularly with the neighboring towns of Fayston and Warren to discuss issues of mutual concern for more than 25 years. This relationship was formalized by the creation of the Mad River Valley Planning District (MRVPD) in 1985. The MRVPD is a unique entity that has undertaken a number of planning initiatives designed to address issues of shared concern among the towns of Waitsfield, Warren and Fayston.



In addition to the wealth of information available through these planning efforts, this cooperative relationship allows Waitsfield to coordinate its local planning program with those of neighboring towns through the MRVPD's staff and Steering Committee, thereby ensuring plan compatibility with Fayston and Warren. This coordination has resulted in, for example, the recognition of Irasville as the Mad River Valley's commercial "downtown" in Fayston's, Warren's and Moretown's town plans.

Some formal relationships between the towns exist in order to address specific community needs such as the Washington West Supervisory Union and the Mad River Resource Management Alliance. In addition, several non-governmental organizations, such as the Friends of the Mad River, focus their efforts on the larger watershed, which includes all Mad River Valley towns. The Waitsfield-Fayston Fire Department and the Joslin Library are resources shared by Waitsfield and Fayston.

The policies set forth in this plan were crafted to ensure compatibility with the plans of neighboring towns, as required by state statute. Compatibility with neighboring towns is particularly important with regard to land use, where incompatible policies could result in conflicting development activities and land uses along town boundaries. Waitsfield's land use plan calls for agriculture, forestry, low- to moderate-density residential development and very limited non-residential uses along the boundaries of Moretown, Northfield, Warren, Fayston, and Duxbury. These uses and densities are similar to those allowed in adjacent towns along the boundary.

Finally, the town continues to play an active role with the Central Vermont Regional Planning Commission. Through that involvement, potential conflicts with neighboring towns outside of the Mad River watershed can be addressed. More importantly, the town has considered the policies of the Central Vermont Regional Plan, and has subsequently drafted a town plan that is compatible and consistent with the regional plan.

State Planning Goals. Under the Act, Vermont towns are encouraged to plan in accordance with the state's planning goals and include specified elements within their plans. While this plan was developed foremost to meet the needs and reflect the desires of the Town of Waitsfield, careful attention was also made to ensure that all specified elements have been included, and that the goals, policies and tasks set forth in subsequent chapters are consistent with state planning goals.

Acknowledgments. This plan was formed largely in response to the active participation of Waitsfield residents and landowners over the years. That participation takes many forms, such as serving on local boards, attending hearings and meetings, returning completed surveys, and of course voting, and is the foundation of local planning. A special thanks to those Waitsfield citizens who continue to help shape our community's future.

The town history in Chapter 2 was first drafted by Rick Thompson in 1993. Historic photographs were made available by Jack Smith and the Waits-field Historical Society. Aerial photographs were taken by Alex McClean through a project funded by the Mad River Conservation Partnership. Other photos were provided by David Garten, Sandy Macys, Dennis Curran and Beverly Kehoe.

Finally, this plan, and several of the planning studies and documents it references, was funded in part by Vermont Municipal Planning Grants awarded by the Vermont Department of Housing and Community Affairs.

1.C Goals

- 1.C-1 The widespread involvement of Waitsfield citizens and landowners at all levels of the local planning and decision-making process.

1.D Policies

- 1.D-1 Provide opportunities for citizen input at every stage of the planning and decision-making process, and ensure that decision making occurs in an open, public environment.
- 1.D-2 Adopt a town plan which is consistent with state planning goals. This plan has been determined to be consistent with those goals.
- 1.D-3 Recognize that statutory hearings are a minimum level of public involvement and strive to exceed that level in all instances where public interest is evident. Public forums, direct mailings, broadcasts on Mad River Television and notices placed in local newspapers will be used to inform the public of governmental activities on a regular basis.
- 1.D-4 Review the town plan and related planning documents on a regular basis, and modify them as appropriate to address changing circumstances.
- 1.D-5 Continue to participate in the Mad River Valley Planning District to support regional cooperation and communication on matters of area-wide concern.
- 1.D-6 Continue active participation in the Central Vermont Regional Planning Commission to coordinate local planning activities with those of neighboring towns and the regions, and continue to support regional organizations which most efficiently provide services and facilities to local residents and those of surrounding

towns (e.g., Waterbury-Mad River Valley Solid Waste Alliance, Mad River Valley Recreation District, Waitsfield-Fayston Volunteer Fire Department, etc.).

- 1.D-7 Provide neighboring towns with an opportunity to comment on local matters of concern through notification of pending decisions which may affect them.

2. Historic Development

2.A Geologic History

Two of Vermont's highest peaks lay six to ten miles west, their rounded foothills forming the town's western border. Above the hills to the east, the land flattened into a broad, mile-wide plateau that spanned the length of the township beneath the low ridges of the Northfield Mountain Range. Originally, Waitsfield included lands east of those mountains, but geographical proximity later resulted in their annexation to Northfield in 1822 and 1846. Today, Waitsfield encompasses about 15,540 acres.

The summits surrounding Waitsfield belong to the Green Mountains, a backbone of double mountain ranges that longitudinally bisect Vermont. In turn, these grey ledge summits represent the northern extension of a much longer continental cordillera stretching in eastern America from Alabama all the way north through Vermont into Canada. These Appalachian Mountains are 500- to 900-million years old. Their worn, grandfatherly knobs are thought to be the weathered cores of an ancient mountain range, which may have towered to Himalayan heights. They would have been raised from continental crusts that were buckling under the tremendous stresses of proto-continental collisions in the long, convoluted, geologic history of earth.

Perhaps the most dramatic chapter of Waitsfield's natural history was written by the great continental ice sheets that covered all of New England 10,000 to 15,000 years ago. A mile thick glacier of ice flowing from the general direction of Camel's Hump gouged the Mad River Valley clean of all vegetation and soil. The islands of Nantucket and Martha's Vineyard give testimony to the great piles of glacial debris scraped from New England and deposited at sea. Once climates warmed, the glaciers melted northward in retreat, redepositing the sands, silts, clays and stones that became the parent material of the Mad River Valley's soils.

At one time, a large meltwater lake flooded the Mad River Valley. Some glacial features can be seen throughout town. Kame terraces and a huge glacial erratic (a boulder whose rock is not native to its resting location) can be seen just west of the elementary school. Gravel pits and clay banks along the brooks are remnants of this deposition. Channel scars from old lake bed currents and meltwater courses can be seen throughout the valley meadows.

2.B Pre-Colonial History

Little evidence of Native American activity has been discovered in Waitsfield though it is known that Algonquians, roaming on the western fringe of their tribal territory, periodically

lived or passed through the area. Fine campsites would have been found along the Mad River, but the river's periodic flooding may have destroyed, buried or carried away any evidence of use. A recent archaeological study of the town-owned Munn property, however, turned up a chert projectile point and a quartz biface knife, both of which date from the Middle to Late Archaic period (ca. 5500—900 B.C.).

Archaeologists believe other sites may be found within Waitsfield in the future; a map of the Mad River Valley showing areas of high archaeological sensitivity was prepared by the state archaeologist in 1988. An initial assessment of the Mad River Valley's archaeological potential, *Archaeology in Vermont's Mad River Valley from Paleo-Indian Times to the Present*, was completed for the Mad River Valley Planning District in 1990.

2.C Formation of the Town

On February 25, 1782, Col. Benjamin Wait, the Honorable Roger Enos and about 70 others were granted a charter by the Governor, Council and General Assembly of the State of Vermont for the township of Waitsfield. At the time, Vermont had not been accepted into the United States of America. Vermont was a self-declared republic with its own constitution, currency and self-government.

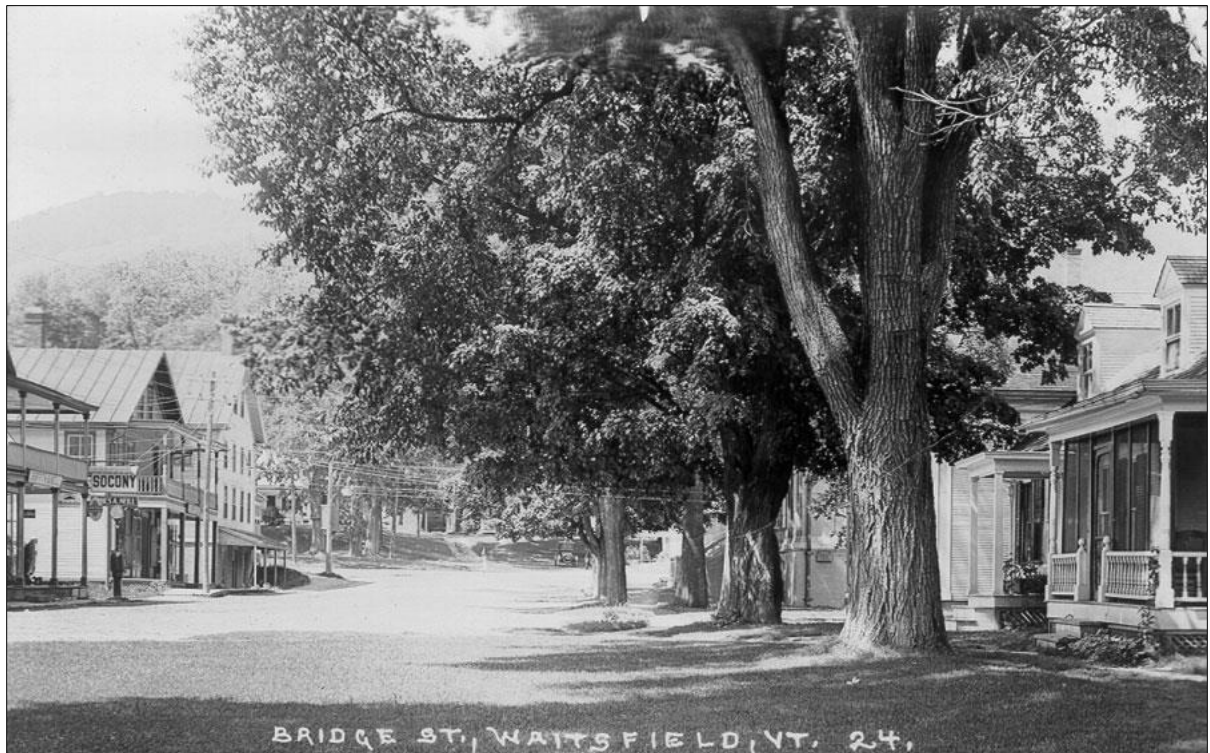
First surveyed by William Strong in 1788, Waits-field included approximately 23,000 acres of hills and valley covered in virgin woods. The valley was oriented and drained to the north by a flood-prone, 'mad' river and was surrounded by 2,000- to 4,000-foot mountains. The river ran in a narrow floodplain near the western town line closely guarded by steep hills.

2.D Early Settlement

General Wait. In 1789, less than a year after Strong's survey, General Benjamin Wait led a small group of settlers, mostly family members or friends from his home in Windsor, Vermont, into the area. General Wait may have built the town's first log house upon a hillock north of the village, which now holds the cemetery bearing his grave. He soon constructed the first frame house in Waitsfield on a small terrace about half a mile west of that log cabin site. Three sons and a half-brother built upon lots nearby. By 1791, Vermont had finally been accepted into the Union, and the first federal survey of the 14th state showed 13 families and 61 people living in Waitsfield.

General Wait was 53 years old when he moved from the Connecticut River westward over the mountains. He had recently resigned his rank of brigadier general for the Third Brigade of Vermont Militia, the culmination of a military career that had started in the French and Indian War and carried on through the War for Independence. He had been a renowned and

successful resident of Windsor, having served as a representative to Vermont's constitutional conventions. He continued to be a civic leader in Waitsfield, being elected Selectman and representing his new town in the State Legislature. He died in 1822, at the age of 86. His home was moved off the terrace sometime near 1830 to its present location next to the village cemetery. A second story was added about that time. The Wait house is among those structures that comprise the Waitsfield Village Historic District listed on the National Register of Historic Places.



Other Early Settlers. With southern New Englanders hungry for land, settlement of all corners of Waitsfield soon followed General Wait's arrival. By 1795, the poll tax list showed 50 voters. By charter, homesteaders had to clear and cultivate a minimum of five acres. A house at least 18 feet square had to be built upon a lot. Sam and John Barnard built north along the river near the Moretown line. Samuel Pike and his sons from Brookfield, Massachusetts (General Wait's birthplace) built homes on the hillsides below Scrag Mountain in the east. Francis Dana was located on lots 143 and 144 in the far southwestern corner of town, high on the western hill which parallels the Mad River upstream to Warren. Moses Chase was established at the base of Bald Mountain in the northeast.

At first, town life centered around the Wait family lots. General Wait's home was used for town meetings until 1798. The first church services were held in his barn. What little commerce was available was here as well. Slightly northeast, at the foot of nearby ledges, Samuel Chandler of Worcester, Massachusetts, and Henry Mower of Woodstock, Vermont,

had the first store in town. Edmund Rice, a cabinet maker, town clerk, merchant and surveyor, lived close by. The Carpenter tannery and a potash works were within the vicinity as well. North along the old county road, another store was established in 1815 by Hebard, Baldwin and Woodward. This building held the first Post Office for Waitsfield in 1818.

The Common. The frequent flooding of the Mad River may have kept the first settlers away from the floor of the valley. Instead, many built their homes on the high plateau east of the river. The first real village center was established up on the Common in the early 1800s. It remained as the town's political and social center for 40 years. In 1798, a donated piece of land on the Common was cleared and the cemetery that is there today laid to its western side. A meetinghouse for the town was built in 1807 in front of the cemetery. Roderick Richardson Sr. had a store on the Common by 1806. Potash works, tanneries and a blacksmith shop were there as well. Palmer Hill, a small knoll east of the Common at the foot of Old Scrag, was densely settled with the growing Bartlett, Quimby, Wheeler, Grandy and Palmer families.

Peak Population. The population of Waitsfield peaked during first half of the 1800s. In 1840, there were 1,048 people in town, a number that has been surpassed only in recent times. Starting in the mid-1800s, many citizens left Waitsfield for more promising lands out in the Midwest, attracted by the Erie Canal and the reports of fertile lands in Ohio, Indiana, Illinois and Minnesota. Two of Benjamin Wait's sons left, while a third, Ezra fathered the first child in town, Catherine Cutler Wait, born October 21, 1790.

2.E Industry and Commerce

To help build a successful community, the proprietors of Waitsfield voted a tax of two pence an acre. One half of this money was to be used building roads and bridges. The rest was used to attract business and industry. As the clearing of land is the most prevalent occupation of any woodland frontier, potash works were quickly established to wash the ash and char of the bonfires with lye. The residue used in the making of soap was then traded into southern New England for tools, clothes and seed. Lumber mills were also important to frontier communities. They not only gave land owners a commodity (logs) to barter for other goods, they also milled the board feet of lumber that became the comfortable frame homes, meetinghouses, churches and businesses: the infrastructure every new town needs to attract emigrants.

Water Powered Mills. Six brook-sized streams fed the Mad River from the slopes of the surrounding mountains. Three fed from the west and three from the east, spaced at fairly equal margins from the southern town line to the north. With flooding such trouble on the Mad River, these small streams became important sources of power for early mill works. General Wait may have had the first sawmill in town just east of the present High Bridge on

Clay Brook, a shallow stream, which flows off Scrag Mountain and empties into the Mad River just north of the village.

In 1793, as a result of the tax subsidy, John Heaton Jr. built the first grist and saw mills on Mill Brook in Irasville. Until then, grains were milled in an old hollowed out birch stump near the covered bridge, or taken many miles south through the Kingston Mountains (Granville Woods), where the nearest grist mill was found in Hancock. Turned over to successive owners, Heaton's Mills became known as Green's Mills, then Richardson's. It occupied a site just upstream from the present location of the Baird lumber mill today.

Irasville. Helped by the presence of these mills, the hamlet of Irasville grew into some prominence. Named for Ira Richardson, who had a 'commodious' homestead along the flats, Irasville became the center for the Methodist Church when in 1835. First Elder Rufus Barrett donated land for a Methodist cemetery and oversaw the construction of a barn which became the Methodist meetinghouse. In 1870, the Methodists built the large white church in Waitsfield Village. Their old barn still stands in Irasville. It is occupied today by The Store.

Waitsfield Village. During the first three decades of the 19th century, more and more farms were established among the hills, and the demand for services grew. The village of Waitsfield slowly took form. Roderick Richardson had a house there by 1817. In 1831, he built a store next door. The building was damaged by fire in 1845 and the present two-story brick structure was built. It is now the Masonic Hall. In 1851, Richardson also moved a building from Irasville to the corner diagonally across from the Masonic Hall. This large building became a hotel. Its ground floor was used for 50 years as a hall for town meetings.

A few hundred yards north of the Richardson buildings, a Union Meeting Hall was built in 1836. At the turn of the century, the Odd Fellows Association purchased this red brick building and a second story was added. Dan Richardson built a brick house next door in the 1840s.

There was a blacksmith's shop across the river by 1838 and a Congregational parsonage by 1840. George Kidder lived in a house next door to the parsonage. Today it is a half-brick, half wooden building. The wooden part is the oldest, having been used by Kidder as a store and a post office as he was made postmaster in 1822. Across the road from Kidder's, at the foot of Mill Hill, Roderick Richardson built a large complex of grist and lumber mills in 1829-30. In order to supply his mills with power, he and his two partners hand dug a canal to the river, passing behind the post office. The slough is visible today. By 1850, Waits-field village had become the commercial and social center of the town.

2.F Transportation

Early roads were surveyed and built through taxation. By 1796, a bridge had been built over the Great Eddy of the Mad River carrying a road through what is now the village center. Perhaps from fear of flooding, the village did not become established until the 1820s and '30s. By 1797, the earliest road in town ran south from the Barnard place near the Moretown line up along the west bank of the river, bending westward onto the terrace to pass General Wait's house, from which it proceeded south, curling past his son's place which would have been near the present village parsonage. From here a fork of the road turned south over a small knoll and out onto the Irasville flats, then pitched down the 'Dugway' and crossed Mill Brook on a bridge built near Green's Mills. It then climbed the steep hill towards the Francis Dana place.

As noted, there was a bridge over the Mad River at this time. Another fork of the old county road crossed the river and continued up over Mill Hill southeast, following the general direction of the present East Warren Road until it curved up onto Roxbury Mountain passing what is now the former Folsom/Great Lakes Carbon Farm on Sherman Road. This road over to Roxbury was the first highway that ran into or out of the Mad River Valley. The old bridge at the Great Eddy was destroyed several times by fire and flood. A covered bridge, which remains today, was built on the site and is the second oldest covered bridge in the state of Vermont. The bridge was restored in the early 1970s. With federal grant funds awarded in 2008, efforts were initiated to rehabilitate the bridge, cantilevered sidewalk, decking, and abutments in 2010. Despite damages and delays caused by Tropical Storm Irene in August 2011, work is expected to be completed in 2013.

A north road was quickly laid out from the Roxbury/Kingston highway, across the eastern plateau to the Common, branching up Palmer Hill along the way. Another headed southerly from the Common, back down into the Mad River Valley towards the Great Eddy bridge. In 1803, a road was extended northeast from the Common, entering Moretown high on the slopes under the knob of Bald Mountain. What are now the main routes through the village were not established until 1837.

Throughout the 1800s, there was frequent talk of rail lines into the Mad River Valley, but finances were never found for the various schemes. Granville Gulf effectively sealed off any major southern exit for the Mad River Valley. Eventually a good highway was established north along the Mad River through Moretown, and goods and supplies soon found transport to the railhead in Middlesex.

2.G Agriculture

The history of agriculture and industry in Waits-field closely follows the patterns for Vermont as a whole. Initially, the pioneer settlers were engaged with the clearing of lands for subsistence farming. Virgin forests were chopped over and burned, their ash sent to the potash works, becoming the first marketable product of the farmers. The clearings were then planted with a variety of grains: wheats, barley, hay, rye and oats as well as corn and potatoes. Maple sugar was made in the spring. (Maple syrup was too perishable, so the sap was boiled longer to the sugar stage). These products were often used as currency to pay taxes or bills, and directly bartered for other goods.

The number of farms increased from 95 in 1850 to 135 in 1880. Agricultural societies were chartered and exposition fairs were held throughout town to display products and animals. By 1870, it is estimated that Vermont was 70 percent cleared land and only 30 percent forest – a ratio that is the reverse of today.

Sheep. Sheep raising was the first dominant agricultural activity. To attract farmers, the town again turned to tax incentives, allowing in 1804 a deduction of one dollar per sheared sheep off any taxpayer's property assessment. The Merino sheep did well with the Vermont climate and stony soil. Sheep were necessary for their wool to make clothes, as cotton goods were only available far away in the bigger towns of southern New England. In lieu of money, wool was often bartered locally for supplies.

The sheep industry remained strong throughout Vermont until the middle of the 19th century when rangelands in Texas began to dominate the supply of wool. During this period, farmers often drove their excess range stock to market in southern New England some 200 miles away.

Dairying. With the loss of the sheep industry, farmers in Vermont and the Mad River Valley turned to dairying. As there was no refrigeration at the time, milk products were quickly turned into less perishable butter and cheese. For the next 30 years, Vermonters produced the majority of dairy products for New England. Local farmers increased their dairy herds. To meet container demands, many mills in Waitsfield turned to the manufacture of butter and cheese tubs.

Just before the turn of the 20th century, agriculture changed again. Refrigeration meant milk could be stored in the fluid stage. The new DeLaval cream separators allowed raw milk to be skimmed of cream in large quantities. Until then, most butter and cream were produced on the farm. These new machines allowed for centrally located creameries, which could process the products of many farms at one time. Cream skimming stations were built throughout Waitsfield. By 1893, a creamery was operating in the village. In 1897, several

Waitsfield farmers founded a cooperative and built a creamery in the northern part of town, near the present Hartshorn farm.

Previous Century. Throughout the 20th, and into the 21st century, farming has been in decline in Waitsfield. Empty cellar holes, crumbling barns, and neglected stone walls and fences can be found among the thick brush and woods that are now growing up in the old pastures and meadows. Of the 135 farms of Waitsfield in 1880, only about a dozen remain active today. Farms are larger in acreage, and may produce as much as the many smaller farms once did a century ago.

Unlike previous decades, few farm operations went out of business in the 1990s and as the decade came to a close several new commercial vegetable farms and organic beef operations had been established. Horses have also become an increasingly common sight throughout the Mad River Valley; one Vermont Department of Agriculture estimate found that the Mad River Valley now has the highest density of horses in the state. It appears that agriculture in Waitsfield is again transforming itself in response to changing economic and social conditions.

2.H Education

From the beginning of the town's settlement, schools were important to residents. All town charters granted by the State of Vermont held a reserve of land to be used for schools. College lands were set aside as well, though as major colleges became established in the state, the lands were often sold off. As early as 1797, Francis Dana, General Wait, and three others formed a committee to divide the town into school districts.

Each district was responsible for building its own school and attracting a teacher. Initially, schools were held in private residences. Over time, one-room schoolhouses were built close to the geographical center of each district. Then, chimneys and stoves were added, allowing winter sessions in the buildings. In 1802, there were 201 pupils in four districts. In 1812, there were 269 in five.

In 1847, the Village District voted to build a new two-story school. Complete with belfry, this building was built next to the village cemetery north of town. Each floor was one room. The upper floor was often used for advanced classes in the 1850s and '60s. These classes eventually disappeared and the building was used exclusively for grammar grades until a two-year high school program was created in 1906. The Old High School still stands today, converted into residential condominiums.

2.I Military Service

Military service has long been important to Waitsfield citizens. In fact many of the original settlers had served under General Wait, or taken part in the Revolutionary War. For many of the early decades in town history, local militia were organized and drilled on June training day.

Though the War of 1812 was somewhat unpopular, a part of Waitsfield's "Floodwoods" militia was sent to support Plattsburgh, New York, in battle with the British. They arrived too late to join in the fighting. Ten percent of Waitsfield's men served during the Civil War. Ten sons died in fighting, while ten more died of disease. In the two World Wars of the 20th century, 130 men served and eight died in combat. Twenty-eight served in Korea. Fifty-three served during the Vietnam War, and two Waitsfield men died in Southeast Asia.

2.J Ski Industry

In the second half of the 20th century, a new industry became the focal point of Waitsfield's economy. In 1948, the Mad River Glen Ski Area was opened on the slopes of Stark Mountain southwest of town. Thus began an era of recreational, tourist-oriented development that continues today. Two more ski areas were added southward (Sugarbush on Lincoln Peak and Glen Ellen on Mount Ellen) and their webs of white ski trails economically bind Waitsfield and the other Mad River towns to their success.

Waitsfield is now the commercial center of the Mad River Valley. The old mills, meetinghouses and homes of the village are shops and restaurants. In the late-1960s and early '70s, the Post Office, grocery and hardware store all moved out of the village into new shopping centers upon the Irasville flats.

Thousands of tourists come to town on weekends now to ski at the Mad River and Sugarbush Ski Areas, dine in restaurants and sleep in old farmhouses renovated into country inns. Summer tourism is also important with vacationers coming to hike the Green Mountains, fish the Mad River Valley's streams, bicycle on its roads and trails, canoe the Mad River, play golf, attend an annual arts festival, or simply relax in the country air.

2.K Recent History

In August 1989, the Town of Waitsfield celebrated its bicentennial. Two hundred years from the date of Benjamin Wait's entry into Waitsfield, a small parade saw descendants of five original town settlers recognized. Families of Jonathan Palmer, Benjamin Wait, Samuel Barnard and others still live within the town. Guest speakers saluted the town's perseverance

and established its importance for the future of Vermont. A historical exhibit of town memorabilia attracted more than 600 visitors.

Waitsfield is now in its third century as an organized community. Recent decades have brought a period of continued change, as the population of the town and surrounding Mad River Valley communities continued to grow. Vermont aesthetics and the expanding demographics of Waitsfield have attracted a population estimated at 1,719 in 2010, according to the U.S. Census. A wide variety of businesses and activities are located here. Waitsfield is now home to high-tech computer and energy companies, specialty food stores and bakeries, garden centers, construction companies, craft shops, real estate and financial services, a movie theater and playhouse and award winning maple syrup manufacturers.

During the past 15 years, the Mad River (formerly Fly In) Industrial Park finally began to reach its potential as several small manufacturing and wholesale businesses flourished, bringing the number of jobs in the park to well over 100, although that number was reduced by the departure of Northern Power in 2008. Irasville, Waitsfield's commercial center since the 1970s, also experienced the first significant development in nearly 20 years, including the conversion of the former Valley Inn to senior housing, the establishment of the area's third bank and a variety of other retail, office, manufacturing and residential development.

New houses have been built among the old pastures and woodlots, along with associated private roads to access them. A volunteer ambulance service and a medical center have been organized to serve the public's health. Waitsfield also has one of the most modernized, independent phone companies in the nation; phone service was established locally by 1900. Zoning ordinances have been drafted and district planning coordinated to help assure and control growth.

Land conservation became a household term when the town allocated \$20,000 in 1991 to acquire development rights from a local dairy farm, thereby keeping the former Ed Eurich Farm in agriculture. The conservation of the Eurich Farm was part of the Maple Avenue conservation project, which saw the protection of nearly 1,000 acres in the vicinity of the Common Road. Other notable properties protected were the Donald Joslyn Farm and the newly created, town-owned Scrag Forest which now encompasses more than 600 acres of the Northfield Range and was the result of one purchase and three separate gifts to the town.

Additional conservation efforts helped to secure public access to the Mad River (including the Lareau Swimhole, which was developed as a public park in 2002), to protect important forest land and trail access (through a gift to the town of the so-called Wu Ledges Forest and acquisition of conservation and public access easements on adjoining properties), and to support local farmers. In 2010 the town contributed \$20,000 to the preservation of the Hartshorn farm property as agricultural land.

Physiographic, economic, and cultural change has prevailed throughout the history of Waitsfield. Great floods of the Mad River have washed out many of the bridges and roads and buildings of the community, striking violently in 1850, as well as in the notorious flood of 1927 that devastated the whole of Vermont. Again in 1998, the Mad River reminded town residents that despite our modern technologies and declining reliance on the land for our livelihood, the forces of nature still have a profound impact on our lives. Early on the morning of June 25, a torrential rain fell on the Mad River Valley. The resulting 500-year flood covered portions of Route 100 and inundated Waitsfield Village. Despite widespread property damage, no lives were lost. And, in case Waitsfield residents had forgotten, we were again reminded of the Mad River's central role in our community in the flood of May 2011, and a devastating flood from Tropical Storm Irene in August of that same year. However, Waitsfield maintains its commitment to improving its resiliency to flood impacts.

3. Population

3.A Population Trends

The year 1960 is often cited as a turning point in Vermont history. That year marked the first time in a century that Vermont's population increased between census periods. For the preceding 100 years, the state experienced out-migration as the country expanded westward and people left the countryside for industrial jobs in the cities, resulting in steady population decline. The year 1960 was also the start of Waitsfield's second period of population growth, as shown in Table 3-1. The Census states that Waitsfield's population was 1719 people in 2010, and was estimated to be 1,701 in 2015.

Table 3-1. Waitsfield Historic Population

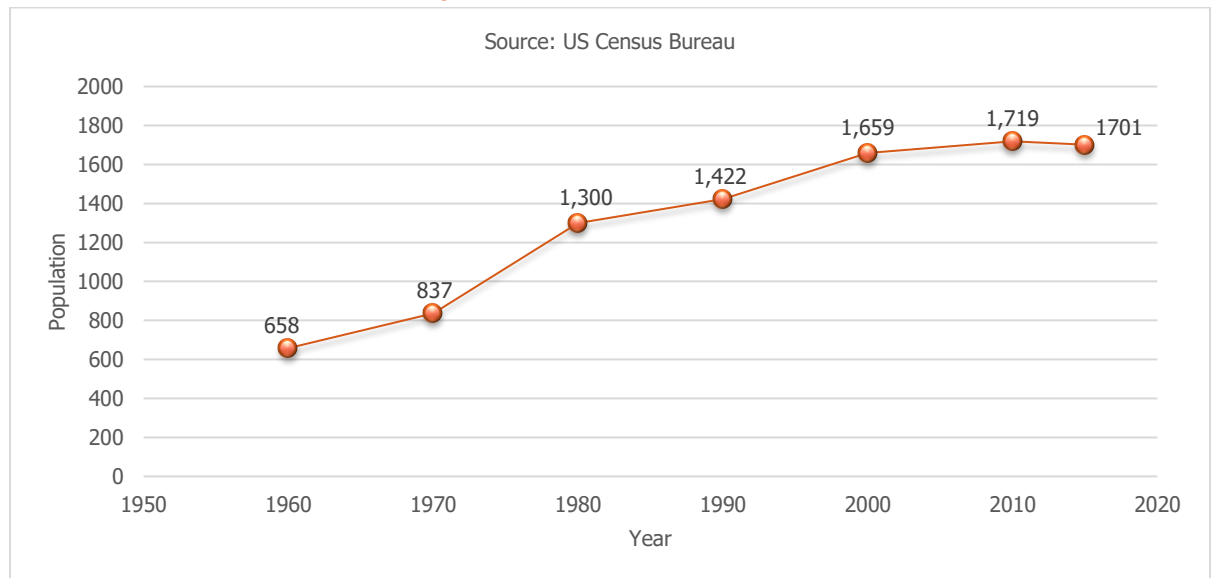


Table 3-2 illustrates population growth since 1960 in Waitsfield relative to the Mad River Valley, Washington County, and the state. More recently, the entire Mad River Valley experienced rapid population growth in the 1990s but Waitsfield continued to grow at a slower rate than the other two Valley towns, Fayston and Warren. Since 2000, it appears that this trend has continued, although the rate of growth Valley-wide has slowed considerably. The town's lower growth rates are explained largely by the greater availability of land for development in Fayston and Warren, which have fewer acres committed to farming than Waitsfield. The town's growth rate in the '90s was higher than the rates in either Washington County or Vermont, a trend that appears to have continued since 2000. The town's population growth during the 1990s, as in the 1980s, was due largely to a natural increase (number of births exceeding the number of deaths) in the population. However, due

to renewed in-migration, people moving into town also contributed to local population growth in the 1990s. The number of births has decreased over the last several years (see Table 3-3) and the number of deaths has risen in the late 2000s, reflecting the aging population. As a result, in-migration has become a larger component of population growth in Waitsfield during the 2000s and will likely continue to be.

Table 3-2: Comparison of Population and Average Annual Growth Rates

	1950	1960	1970	1980	1990	2000	2010	1950s	1960s	1970s	1980s	1990s	2000s
Waitsfield	661	658	837	1,300	1,422	1,659	1,719	0.0%	2.4%	4.5%	0.9%	1.6%	0.4%
Mad River Valley	1,331	1,285	1,717	2,913	3,440	4,481	4,777	-0.4%	2.9%	5.4%	1.7%	2.7%	0.6%
Washington County	42,870	42,860	47,659	52,393	54,928	58,039	59,534	0.0%	1.1%	1.0%	0.5%	0.6%	0.3%
Vermont	377,747	389,881	444,731	511,466	562,758	608,827	625,741	0.3%	1.3%	1.4%	1.0%	0.8%	0.3%

Source: US Census

Table 3-3. Waitsfield Vital Statistics

Year	Births	Deaths
2000	26	8
2001	16	8
2002	26	4
2003	24	13
2004	22	7
2005	19	11
2006	15	9
2007	10	17
2008	15	15
2009	19	14
2010	13	13
2011	17	15
2012	21	11
2013	10	9
2014	20	14

Source: Vermont Department of Health Vital Statistics Annual Reports and Waitsfield Town Annual Reports

3.B Population Profile

A statistical profile of Waitsfield's population as documented by the 2010 Census and a comparison to the Mad River Valley, county, and state population is presented in Table 3-2. This data should be updated when more current information becomes available. Waitsfield's population in 2010, compared with that of the county and state, was:

- Somewhat older with a higher median age and relatively fewer children.
- Less "native" to Vermont with relatively more residents having been born out-ofstate and in foreign countries.

- More formally educated with higher percentages of residents having obtained high school and college degrees.
- Generally wealthier with having higher per capita and median family incomes.
- Less impoverished with relatively fewer individuals, families, children and elderly below the poverty level.
- Similarly lacking in ethnic diversity with minorities representing only two percent of the town's population.

Age Distribution. The population characteristic that is perhaps most important for planning purposes is the town's age distribution and how this distribution has changed over the past 20 years (see Table 3-4). The most striking aspect has been the growth in the 50-64, and 65+ age groups, and the corresponding decrease in the younger age groups. Waitsfield's population, following nationwide trends, is aging. This trend is attributable to a number of factors, including the natural aging of the baby boom generation, many of whom moved to Waitsfield in the 1970s, started families and stayed.

Table 3-4: Age Profile of Waitsfield Residents

	<5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85+
1990	110	106	91	67	60	131	152	174	122	91	86	45	52	43	53	16	14	9
	8%	7%	6%	5%	4%	9%	11%	12%	9%	6%	6%	3%	4%	3%	4%	1%	1%	1%
2000	87	107	98	88	83	97	119	139	180	156	130	86	43	64	49	37	40	12
	5%	7%	6%	5%	5%	6%	7%	9%	11%	10%	8%	5%	3%	4%	3%	2%	2%	1%
2010	92	104	105	100	65	73	80	117	109	164	158	153	134	108	56	53	24	10
	5%	6%	6%	6%	4%	4%	5%	7%	6%	10%	9%	9%	8%	6%	3%	3%	1%	1%

Source: US Census

The aging of the population is evident locally in the recent decline in births and school enrollments, as well as a tight local labor market for seasonal and entry-level jobs. The town's age distribution is also important for anticipating future trends and planning for future needs. Waitsfield, and the rest of the Mad River Valley, is somewhat unique because of the area's recreation resources, which appeal to a demographic that may be choosing where to live based more on lifestyle preferences than employment opportunities. This is especially evident when examined in a regional context.

It is likely that Waitsfield, along with other Mad River Valley towns, will continue to attract aging baby boomers, including a growing number of "empty-nesters" who are more mobile, and seek more leisure time activities, an attractive environment, and a high quality of life. Looking to the future, Waitsfield should anticipate that in-migration will become a more important component of population growth over the next several decades. Current trends also suggest that there will be an ongoing demand for more cultural and recreational facilities and services, and an increasing need for services to support an aging and elderly population over the next 20 years.

3.C Population Projections

The most recent population projections for Waitsfield and the Mad River Valley were derived from related forecasts prepared for the Central Vermont Region, and represent a “status quo” forecast based on past trends. Based on the most recent projections, Waitsfield is expected to maintain a relatively stable rate of population growth through 2030, with an average annual growth rate of 1.2 percent or an average increase of 25 people per year. The town will continue to grow more slowly than its neighbors. At these rates, the population will exceed 2,000 by the year 2020. Policy changes, infrastructure improvements, zoning density changes, the construction of municipal water and wastewater systems in Irasville and/or Waitsfield Village, or the significant loss or gain of jobs in the region, could alter these projections.

3.D Seasonal Population

While the number of full-time residents is traditionally used for planning purposes to determine a community’s size, needs, and rates of growth, seasonal and visitor populations can also place significant demands on local facilities and services.



Although Waitsfield’s 159 seasonal housing units represent only 8.3 percent of second homes in the Mad River Valley, the town offers approximately 30 percent of The Valley’s commercial lodging beds. Waitsfield is also a regional commercial center, serving the needs

of nearly all of The Valley's seasonal and year-round residents. It is estimated that the Mad River Valley's temporary population can reach 13,000 during the peak tourist season. Past growth projections often assumed that future vacation housing would be located adjacent to recreation attractions, and therefore result in only minor seasonal population increases in Waitsfield. Experience has shown, however, that any growth in population or seasonal visitation in the Mad River Valley affects town infrastructure, services, and facilities. The larger effective population, the year-round population plus the total visitors who could be expected to be in town for a sustained (as opposed to peak) period, is a critical factor in determining the town's capacity for future growth, and the impact of future regional development on Waitsfield.

3.E Goals

- 3.E-1 Accommodate a sustainable level of population growth in a manner that fosters a diverse population that includes people and families from a range of income and age groups, and that does not over-burden community facilities, services or the town's natural and cultural resources.

3.F Policies

- 3.F-1 Anticipate and plan for a year-round population growth rate of 0.5 to 1.5 percent per year (approximately 20 to 30 new residents each year) over the next 20 years.
- 3.F-2 Coordinate with neighboring Mad River Valley communities to accommodate a reasonable effective (full-time + seasonal residents) population, and peak populations, in a manner that benefits local residents and businesses and does not overburden town services and facilities.
- 3.F-3 Encourage, through land use and housing goals and policies, a socially and economically diverse population that includes families with children, young adults who grew up in the community, senior citizens and those new to town.

3.G Tasks

- 3.G-1 Monitor population and housing estimates, and annual permit data to identify correlation between housing development and population growth on an ongoing basis. [Planning Commission]

- 3.G-2 Consider appropriate mechanisms, including regulatory tools, to manage the rate of development in the event that population growth exceeds an average annual rate of 1.5 percent on a sustained basis (3 consecutive years). [Planning Commission]
- 3.G-3 Periodically review and update birth rates and enrollment projections. [Planning Commission, School Board]
- 3.G-4 Exercise party status in the Act 250 development review process and other state regulatory proceedings, as appropriate, to ensure that the town's growth needs and limitations are properly addressed relative to this plan. [Selectboard, Planning Commission]

4. Housing

4.A Overview

Housing is one of life's necessities, yet safe, affordable housing and the American dream of home ownership are increasingly beyond the reach of many Vermonters, including many local residents. Waitsfield has long recognized the need for a variety of housing alternatives to support a socially and economically diverse community.

The 1991 report, *A Future for Affordable Housing in the Mad River Valley*, documented a variety of housing issues, including the need for more affordable, elderly and employee-assisted housing. This report has been revisited periodically, with the most recent update by the Mad River Valley Planning District in 2017 entitled "Mad River Valley Housing Study 2017," which documents successes but also the fact that, despite all efforts, housing remains unaffordable for many Valley residents and employees of Valley businesses. This study involved community outreach and data analysis as part of the planning process and identifies trends in the market and the gap between what people can afford and current housing costs in the Valley. It also includes a number of key recommendations, which the Town should reference in its future planning efforts.

4.B Current Housing Situation

In 2001, the Mad River Valley was beginning to see the effects of escalating house values, which continued to rise through 2006 and remain high still today. One of the primary factors driving this sharp increase in prices is the fact that housing development is not keeping pace with population growth and the rate of household formation. Housing prices have also been pushed upward by the in-migration of new year-round and vacation home buyers from outside of The Valley who have the financial resources to outbid would-be buyers dependent on local wages, which are generally lower than regional and national norms.

Between 2000 and 2010, Waitsfield's year-round population increased by 60 people (around 6 people per year), and the number of households increased by 4 per year. As shown in Table 4-1 below, population growth was very strong in the 90s, but has stabilized in the last several years. Population projections prepared by the Vermont Agency of Commerce and Community Development, and compiled in the *Mad River Valley Planning District 2016 Report*, indicate that growth is expected to remain stable, in the 3-5% range. Following national and statewide trends, the average household size in The Valley has continued to

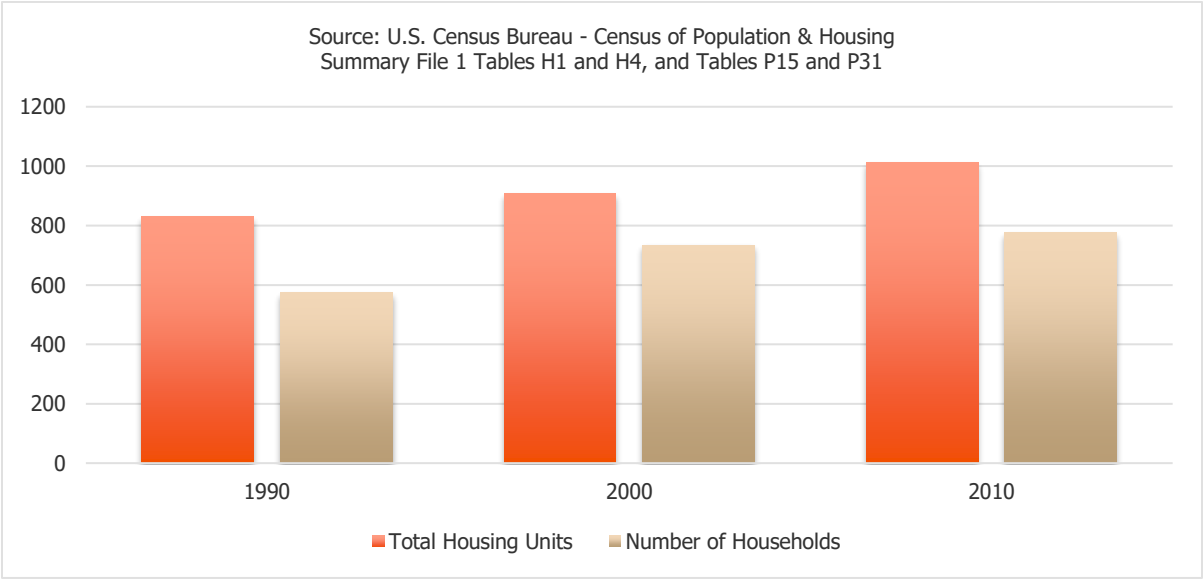
decline over the years, due to an aging population and changing household composition. Waitsfield continues to have the lowest average household size in The Valley.

Table 4-1: Population

Year	Waitsfield	% Change	Washington County	% Change	Vermont	% Change
1990	1,422	10%	20,948	12%	21,0650	18%
2000	1,659	17%	23,659	13%	24,0634	14%
2010	1,719	4%	25,027	6%	25,6442	7%

Source: US Census Bureau, American Community Survey, VT Housing Data, Census of Population & Housing, Summary File 1 Table P1

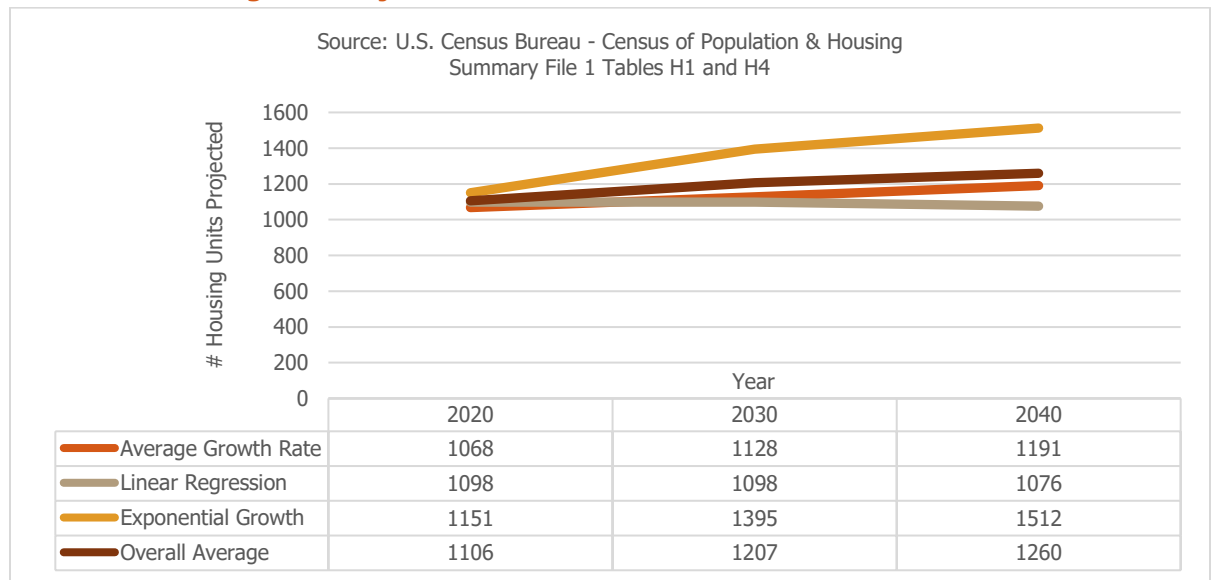
Table 4-2: Total Housing Units and Number of Households in Waitsfield



Housing Projections. Comparing projections prepared for Waitsfield using Census data (see Table 4-3), the Town’s year-round housing stock could grow as much as 17 dwellings per year between 2010-2040, using high end estimates, to as little as 2 units per year, using low end estimates. The 2016 Central Vermont Regional Housing Distribution Plan calls for Waitsfield to plan for the construction of 312 additional year-round homes between 2000 and 2020. However, between 2000 and 2015, 133 permits for single-family homes were issued in town, and only 35 since 2010, indicating a decreasing trend.

Policies promoting increased residential development in Irasville Village, the Village Business District, the Village Residential District, and residential hamlets, particularly if supported through new infrastructure, could dramatically alter both the rate and pattern of local housing development.

Table 4-3: Housing Unit Projections in Waitsfield



4.C Housing Characteristics

At the start of the 2000s, the shortage of year-round housing was spurring both the construction of new homes and the conversion of seasonal units to year-round homes. During the 1990s, around 60 percent of the new homes built in Waitsfield were single-family detached units and 40 percent were attached or multi-family units. The Census also showed a decrease in the number of seasonal and vacant homes in town.

Single-family detached homes currently comprise more than two-thirds of the Town's housing stock, but Waitsfield does have a relatively higher percentage of attached or multi-family units than the surrounding area. Such units have been developed over the years through new construction, including mixed-use development, the adaptive reuse of historic structures such as the old high school, and the conversion of older single-family homes into multi-family units.

Local permit data indicates that most of the housing built in Waitsfield since 2010 has been single-family detached homes. Waitsfield's 2016 Grand List included 681 residential properties, an increase of 24 from 2009. There were 13 fewer seasonal and vacation homes on the 2016 Grand List than in 2009.

Table 4-4: Age of Housing Stock

Year	Waitsfield	As Percent of Available Units in Waitsfield	As Percent of Available Units in the Mad River Valley
Prior to 1959	266	26%	12%
1960-1979	415	40%	49%
1980s	162	16%	21%
1990s	93	9%	10%
2000-Present	103	10%	8%
Total	1039		

Source: U.S. Bureau of the Census – American Community Survey

The number of mobile homes, generally considered a relatively affordable housing alternative, decreased during the 1990s, and in 2000 they accounted for slightly less than five percent of the Town’s housing stock. This was a relatively high percentage for the Mad River Valley, but is less than that for the county or state. There were 81 mobile homes listed in the 2016 Grand List.

There has been recent interest in utilizing tiny houses as a way to add affordable housing stock to Waitsfield. Tiny houses have a smaller environmental footprint and do not require the same amount of maintenance as a large home. One of the biggest challenges to increasing the supply of affordable tiny houses is acceptance into the International Code Council Building Code, set to happen in 2018, and how they are treated relative to local zoning bylaws and state wastewater regulations. Access to shared water and wastewater systems might also be necessary to achieve a significant improvement in cost savings when compared to normal, small accessory dwellings.

4.D Housing Affordability

Income and Housing Costs. In the early 2000’s, housing costs escalated while household income only grew slightly, widening the housing affordability gap. However, recent Census data shows a slight reversal, supported primarily by an increase in median household income, which between 2006 and 2016, grew by eleven percent, while home sale prices fluctuated significantly with market trends in a similar 10-year period. The comparison between the 2006 sale price¹ and the 2016 sale price actually shows a decrease, down by 15%, but still remains 32% higher than state averages, and 44% higher than the county average.

Income levels in Waitsfield have historically been, and continue to be, higher than county and state averages. The median reported value of an owner-occupied home in 2000 at

¹ Adjusted to 2016 dollars

\$157,800 was the highest in the Mad River Valley and 42% above the state median, at that time. Current data shows that the median value of owner-occupied homes has increased considerably to \$341,500, and still remains the highest in the Valley. The table below shows the comparison of median household income to median value of owner-occupied housing unit price to median gross rent (adjusted for inflation), and the widening affordability gap.

Table 4-5: Housing Affordability in Waitsfield (adjusted for inflation)

	2000 (adjusted for 2013 dollars)	2009-2013	% Change
Median Household Income	\$61,657	\$70,139	14%
Median Value of Owner-occupied Housing Units	\$213,476	\$341,500	60%
Median Gross Rent	\$771	\$888	15%

Source: US Census Bureau, American Community Survey, VT Housing Data²

The trend of higher income levels, but even higher housing values continues. According to data from the Vermont Department of Taxes, the median family adjusted gross income in Waitsfield in 2013 was 20% higher than the state median. The median sale price of a primary residence in Waitsfield in 2015 was 39% higher than the median price statewide.

Renters have experienced significant challenges in the housing market over the past decade. The 2006 housing study found that one-bedroom apartments were renting for \$450 to \$800 per month, while two-bedroom apartments and condos were asking \$725 to \$1,000 per month. The 2017 housing study, in comparison, found that studios are renting for \$650, one-bedroom apartments are now renting for \$1,155, while two- and three-bedroom apartments are \$1,000 and \$1,224, respectively. In addition, the number of units available for rent remains limited. The study concluded that the “biggest change has been the significant decrease in the percentage of units available for under \$500-749, as well as the corresponding increase in units for rent over \$1,000.”

Affordability. A common definition of “affordability” assumes that a household should not pay more than 30 percent of its gross income on housing costs. Home ownership is often not a viable option for many households at or below reported incomes and wage levels, even under current subsidized home ownership programs. Census data confirms that the percentage of households in town paying more than 30 percent of their gross income on housing is high. 31.7% of local homeowners and 30.5% of renters are paying more than 30 percent of their household income on housing; 10% of homeowners and 11.8% of renters are paying more than 50 percent of their household income. A person living in Waitsfield would need full-time employment earning \$46,200 per year, or \$22.21 per hour, to be able to afford a one-

² <http://www.housingdata.org/profile/resultsMain.php?town=023080>

bedroom apartment. The Vermont minimum wage is less than half that rate at \$10 per hour, further demonstrating the gap in affordability.

4.E Special Needs Housing

The 2017 Housing Study identified the need for a greater range of housing options and the importance of increasing the stock of smaller housing units in The Valley. The study also notes the importance of affordable housing in attracting and retaining young people and highlights the significant decrease in the number of homes owned by people younger than 35. Some of the existing affordable housing options in Waitsfield include:

Evergreen Place. This 18-unit apartment building offers subsidized rentals for senior housing and is owned and operated by Downstreet Housing & Community Development.

Verd-Mont. The 29-unit Verd-Mont Mobile Home Park is owned and managed by Downstreet Housing & Community Development.

Mad River Meadows. The 24-unit Mad River Meadows, located in Irasville, is the Town's only fully subsidized housing project. It has 10 one-bedroom, 8 two-bedroom and 6 three-bedroom units. Two of the units are handicap-accessible and 12 are designated for elderly residents.

Seasonal employee housing issues, associated largely with ski area employment, may affect the local rental market. Sugarbush and Mad River Glen have both endeavored to provide housing for their seasonal employees but relatively low average wages in the recreation industry and limited availability of affordable housing creates an on-going challenge for employers.

While independent and assisted living housing is now available locally for elderly residents with lower incomes, there are no state licensed residential care facilities in town that provide personal care, limited medical care and 24-hour supervision. The nearest facilities of this type are located in Northfield, Montpelier and Waterbury.

Efforts to address affordable housing in The Valley remain ongoing. The Mad River Valley Housing Coalition, a 501 (c) (3) non-profit corporation formed under the auspices of the Planning District, has been actively focused on affordable housing issues in the Mad River Valley. Accessory dwellings are an option to increase affordable housing choices in Waitsfield. In fall 2009 this group developed *Open a New Door: A Guide to Creating & Renting Accessory Apartments in the Mad River Valley*. This resource guide provides comprehensive information to assist homeowners who may be considering creating an accessory apartment to rent. This group launched a program in February 2012 called the

Affordable Land Initiative to help provide very low-cost land for affordable housing. Thanks to a land donation from Sugarbush, one project was completed in 2013.

There has been an on-going effort to increase the availability and support for residential development in Irasville and Waitsfield Village but development has been limited by the availability of suitable properties due to the lack of water and wastewater resources in these areas. 48% of respondents to the 2009 town survey by the Planning Commission indicated that they were supportive of municipal wastewater in Irasville and Waitsfield Village but only 14% would support municipal taxes or fees to subsidize affordable housing. This translated into the rejection of the creation of a municipal wastewater system that would have allowed for denser populations within Irasville and more options for affordable housing. Instead, the Town has utilized a funding mechanism to encourage shared septic systems among homeowners, and has established the Waitsfield Community Wastewater Loan Program. This voluntary program for local property owners provides 20-year fixed-rate low-interest loans for shared wastewater projects that meet specific Town criteria.

The Mad River Valley 2017 Housing Study outlined a wide range of initiatives that can be considered by towns in The Valley in order to increase the availability of lower cost housing. The recommendations ranged from Planning & Infrastructure, to Regulatory, and to Development.

4.F. Goal

- 4.F-1 To ensure the availability of safe, livable, and affordable housing that satisfies the diverse needs of the Waitsfield community, manages growth, encourages energy efficiency, and is compatible with the character of the community.

4.G Policies

- 4.G-1 Encourage a variety of housing types to meet the needs of a diversity of social and economic groups, particularly for Waitsfield residents of low and moderate income, individuals and families employed by local businesses, and local residents with special needs, including elders.
- 4.G-2 Plan for and accommodate Waitsfield's fair share of regional housing growth, including affordable housing development. Work with non-profit partners and stakeholders to locate, finance, and construct new affordable housing.
- 4.G-3 Retain the Town's existing subsidized housing in perpetuity as affordable units. Support the development or redevelopment of new low-cost housing including

subsidized units and other low-market housing, such as accessory dwellings, to meet the needs of all residents.

- 4.G-4 Allow siting of manufactured housing in locations similar to those used for conventional single-family dwellings.
- 4.G-5 Encourage upper story accessory dwellings in the Village Business and Irasville Village Districts, and require upper story accessory dwellings in retail and office spaces in the Village Residential District.
- 4.G-6 Accommodate higher densities of residential development, including multi-family dwellings and infill development, in designated village centers and rural hamlets through the Town's land use regulations.
- 4.G-7 Allow the conversion of single-family to multi-family dwellings, including rental units, in designated village districts, given adequate infrastructure and the character of historic structures is maintained or enhanced.
- 4.G-8 Include a variety of housing types within planned unit developments. Density bonuses will be provided to encourage the provision of affordable units within these developments.
- 4.G-9 Allow siting of tiny houses in locations similar to those used for conventional single-family dwellings. Accommodate higher densities of tiny house development in designated areas through the Town's land use regulations (Zoning Bylaws).
- 4.G-10 Consider and support, as appropriate, the housing development opportunities identified for priority parcels in the 2017 Mad River Valley Housing Study.
- 4.G-11 Continue to encourage Waitsfield Village and Irasville Village as zoning-based Housing Priority Areas, as described in the 2017 Mad River Valley Housing Study.
- 4.G-12 Encourage and support adaptive reuse of appropriate structures for housing, including, where feasible, the rehabilitation of older rental stock for workforce housing.
- 4.G-13 Encourage property owners to invest in and rehabilitate their older rental units for workforce housing.
- 4.G-14 Encourage hamlet-type development in the Agricultural-Residential district with shared wastewater systems, including the areas identified in the 2005 Burnt Rock Hamlet Zoning Study.

- 4.G-15 Encourage development that is compatible with historic context, existing architecture, and community character.
- 4.G-16 Encourage partnerships with non-profit housing agencies to provide assistance with financing affordable housing projects, as feasible.
- 4.G-17 Collaborate with the Mad River Valley Planning District and surrounding communities to monitor growth trends and potential impacts, and to meet housing goals.
- 4.G-18 Investigate and support development of wastewater resources in town centers.
- 4.G-19 Promote accessory dwellings as an option for affordable housing.

4.H Tasks

- 4.H-1 Update the master plan for Irasville, including decentralized wastewater systems, to accommodate higher densities of residential and mixed-use development, that includes housing, in appropriate locations within Irasville. [Selectboard, Planning Commission]
- 4.H-2 Conduct an inventory of development capacity within the Agricultural-Residential District to determine appropriate sites for areas able to support rural hamlets. [Planning Commission, Conservation Commission]
- 4.H-3 Implement the regulatory recommendations identified in the 2017 Mad River Valley Housing Study, including:
 - Further reducing zoning density in the Village Residential (VR) and Irasville Village (IV) Districts from 1/2 and 1 acre respectively to 1/4 in both districts.
 - Reducing setbacks in Irasville where increased density and additional housing is desired.
 - Implementing performance standards for minimum lot size based on access to municipal/shared water or wastewater systems.
 - Reviewing the need to accommodate tiny homes into the zoning bylaws.[Planning Commission]
- 4.H-4 Consider regulating short-term rentals to make them allowable, as well as offsetting the effect of short-term rentals on the local housing market. [Selectboard, Planning Commission]

- 4.H-5 Apply for a Neighborhood Development Area designation from the Agency of Commerce and Community Development if minimum lot sizes are reduced in Waitsfield Village (existing Village Center designation) or in conjunction with a future Growth Center designation for Irasville. [Planning Commission, Selectboard]
- 4.H-6 Identify and maintain an inventory of substandard rental housing and seek opportunities (financial or otherwise) for improvement. [Selectboard, Town Administrator, Planning Commission]
- 4.H-7 Enforce the Vermont Department of Health minimum health and safety standards as they apply to rental residential units. [Selectboard, Town Administrator, Town Health Officer]
- 4.H-8 Identify opportunities for Dual Purpose Projects (as identified in the 2017 Housing Study), particularly conservation projects that set aside acreage for development in the future or convey acreage for affordable housing. [Planning Commission, Conservation Commission]
- 4.H-9 Develop a definition of “tiny house” and identify designated areas for higher density tiny house development. [Planning Commission]

5. Economic Development

5.A Overview

Considering Waitsfield's relatively small size and rural character, the Town maintains a surprisingly diverse economic base. While tourism remains a dominant industry in the Mad River Valley, Waitsfield has experienced significant economic diversification in recent decades. This is due in part to Irasville's function as the Mad River Valley's "downtown" for commercial and service businesses, and recent development activity in our only industrial park, Mad River Park. Second homeowners contribute to the local economy, as well.

5.B Labor Force, Employment, and Wages

The Vermont Department of Labor reported that 1,050 Waitsfield residents were in the labor force in 2016; the labor force excludes retired individuals and others aged 16 or older who are not employed or actively seeking employment. This number is down only slightly by 50 from 2010, and the labor force has remained relatively stable, but the unemployment rate has dropped nearly in half. The *Mad River Valley 2016 Annual Data Report* (MRVPD Report) published by the Mad River Valley Planning District suggests that "compared to state and county employment trends, the Mad River Valley experienced higher pre-recession employment and has remained stable since 2010".

Table 5-1: Labor Force and Unemployment

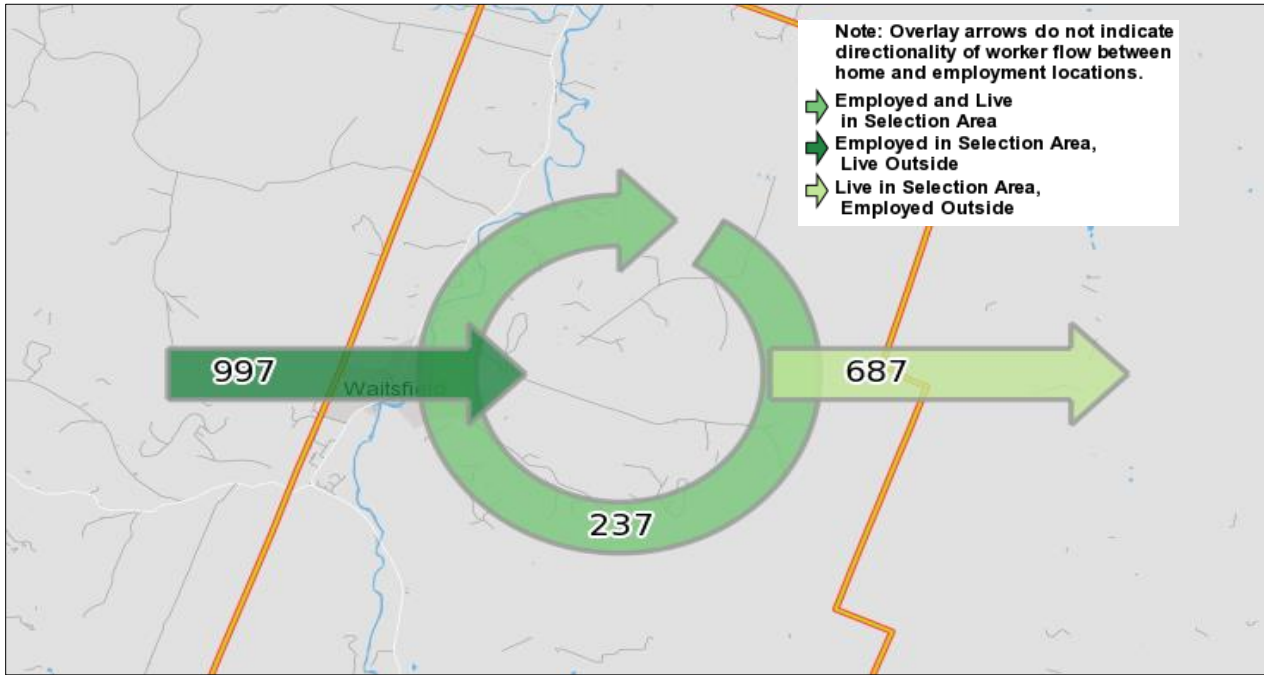
Year	Waitsfield Labor Force Total	Unemployment Rate		
		Waitsfield	County	State
1990	920	6.4%	5.4%	5.0%
2000	990	3.1%	2.7%	2.8%
2010	1,100	7.9%	5.9%	6.1%
2016	1,050	4.1%	3.2%	3.3%

Source: VT Department of Labor, Economic & Labor Market Information

According to 2011-2015 American Community Survey 5-Year Estimates, 49.3% of the labor force are employees of a private company, 11.3% are employees of a private not-for-profit, 15.8% work for government, 11.8% are self-employed in their own incorporated business, and another 11.8% are self-employed in their own unincorporated business or are unpaid family. The percentage of Waitsfield residents who are self-employed is slightly higher than that for the county or state, and it is likely to remain due to the ability of many internet-focused professionals and small businesses who desire to work from home.

Waitsfield is an employment center in the Mad River Valley and is a “net importer” of jobs, meaning the number of jobs in town exceeds the number of town residents in the labor force. Around half of the current jobs in the Mad River Valley are located in town. The MRVPD Report confirms that more people are commuting “in” than those commuting “out”. (pg. 44) However, the number of commuters coming in to work has not increased nearly as much as those who are now commuting out of the area to work, and those who live and work in Waitsfield has decreased to some extent. This may be due in part to the number of workers who are now self-employed or retired, which the data does not include.

Figure 1. Inflow/Outflow Jobs in 2014



Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Table 5-2: Waitsfield Inflow/Outflow Job Counts Comparison

	2004		2014		Change of Share
	Count	Share	Count	Share	
Employed in the Selection Area	1,461	100.0%	1,234	100.0%	0%
Employed in the Selection Area but Living Outside	1,152	78.9%	997	80.8%	+2.4%
Employed and Living in the Selection Area	309	21.1%	237	19.2%	-1.9%
Living in the Selection Area	781	100.0%	924	100.0%	0%
Living in the Selection Area but Employed Outside	472	60.4%	687	74.4%	+14%
Living and Employed in the Selection Area	309	39.6%	237	25.6%	-14%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Waitsfield's growth in smaller, entrepreneurial ventures is an indication of the transformation of the local economy being seen across Vermont. Local establishments in Waitsfield grew by nearly 8 percent between 2010 and 2016, from 209 businesses in 2010 to 225 in 2016; this does not include sole proprietors and other exempt employers. The rate was significantly higher than Washington County's 4 percent and much faster than the 3.7 percent across all of Vermont, as shown in Table 5-3 below.

Table 5-3: Establishments, Employees and Average Wages

Year	# of Establishments			# of Employees			Average Wages		
	Waitsfield	County	State	Waitsfield	County	State	Waitsfield	County	State
1980	131	1,781	15,496	702	21,674	189,024	\$29,500	\$29,000	\$30,600
1990	171	2,257	20,871	932	27,202	245,872	\$29,800	\$32,700	\$33,500
2000	189	2,478	23,806	1,268	32,079	296,468	\$32,200	\$35,000	\$35,800
2010	209	2,493	24,159	1,242	31,750	293,088	\$42,997	\$37,251	\$39,425
2016	225	2,591	25,047	1,391	32,949	307,969	\$42,346	\$48,309	\$45,059

Source: VT Department of Labor, Economic & Labor Market Information

Wages in Waitsfield and the Mad River Valley have not experienced the same level of growth seen in the county and state as a whole. The Vermont Department of Labor reported that the average job in Waitsfield paid about \$42,346 in 2016, as compared to \$48,309 in Washington County. A summary of average wages by economic sector in the Mad River Valley is presented in Table 5-4.

Table 5-4: Waitsfield Establishments, Employees, and Average Wages by Sector

Year	# of Establishments			# of Employees			Average Wages		
	2000	2010	2016	2000	2010	2016	2000	2010	2016
Agriculture & Forestry	1	4	4	(c)	11	14	(c)	\$20,569	\$20,003
Construction	20	32	29	(c)	126	160	(c)	\$39,528	\$45,902
Manufacturing	10	12	14	142	112	71	\$20,160	\$22,819	\$27,286
Wholesale Trade	5	9	12	(c)	(c)	(c)	(c)	(c)	(c)
Retail Trade	41	34	32	259	302	257	\$20,251	\$28,921	\$29,947
Transportation & Warehousing	3	1	1	(c)	(c)	(c)	(c)	(c)	(c)
Information	9	10	10	138	106	69	\$52,742	\$60,269	\$90,363
Finance and Insurance	6	10	11	30	24	24	\$39,358	\$100,515	\$95,512
Real Estate, Rental & Leasing	11	14	14	33	57	38	\$16,522	\$28,302	\$41,362
Professional & Business Services	38	37	51	99	108	238	\$34,188	\$52,844	\$59,455
Education & Health Services	10	9	9	66	79	93	\$22,863	\$36,185	\$44,229

Table 5-4: Waitsfield Establishments, Employees, and Average Wages by Sector

Year	# of Establishments			# of Employees			Average Wages		
	2000	2010	2016	2000	2010	2016	2000	2010	2016
Leisure & Hospitality	19	18	23	192	154	231	\$13,425	\$14,511	\$20,491
Other Services	12	16	14	72	72	87	\$16,188	\$22,182	\$27,305
Government	5	4	4	62	76	84	\$23,187	\$35,777	\$46,706

Source: VT Department of Labor, Economic & Labor Market Information

(c) Data cannot be released, does not meet confidentiality standards.

Livable Wage. There is growing concern in the state regarding the ability of full-time workers to earn an income sufficient to meet a family's basic needs, commonly referred to as a "livable wage." The Vermont Joint Fiscal Office identified that the 2016 livable wage for a two-person household, with no children and employer-sponsored health insurance is \$13.03 per hour (per person), and \$21.16 per hour (per adult) for a two-adult, two child household.¹ In all cases, the livable wage is higher than the state's minimum wage of \$10 per hour. Focusing economic development activities on sustaining and creating well-paying jobs is especially critical in Waitsfield to ensure that local residents can meet their basic needs, especially in light of local housing costs and rising health care costs.

5.C Tax Receipts

In addition to employment and wages, another useful measure of economic activity may be found in the sales generated by local businesses. Table 5-5 shows the steady gains Waitsfield has had over the last decade, with a notable upswing in more recent years.² Table 5-6 shows tax receipts reported for 2016, which indicates a predominance of meals revenue in Waitsfield for that year.³ According to the MRVPD Report, compared to 2015, Waitsfield saw an significant increase across all three tax categories, with alcohol receipts increasing by 17%, meals receipts increasing by 9%, and rooms receipts increasing by 39%.⁴ (pg. 5-5) Table 5-7 shows a comparison of monthly tax revenue during the month of October over a 15 year period, which provides further insight into the importance the fall tourist and wedding season has on the Waitsfield economy.⁵ (pg. 10) Waitsfield businesses have obviously benefited from year-round population growth in the Mad River Valley over the past decade, as well as from the significant contributions from second homeowners and their tenants.

¹ http://www.leg.state.vt.us/jfo/reports/2017%20BNB%20Report%20Revision_Feb_1.pdf

² Data and information compiled by the Mad River Valley Planning District, and published in the 2016 Data Report.

³ Ibid

⁴ Ibid

⁵ Ibid

Table 5-5: Waitsfield Annual Meals, Rooms, Alcohol Tax Receipts (Inflation Adjusted)

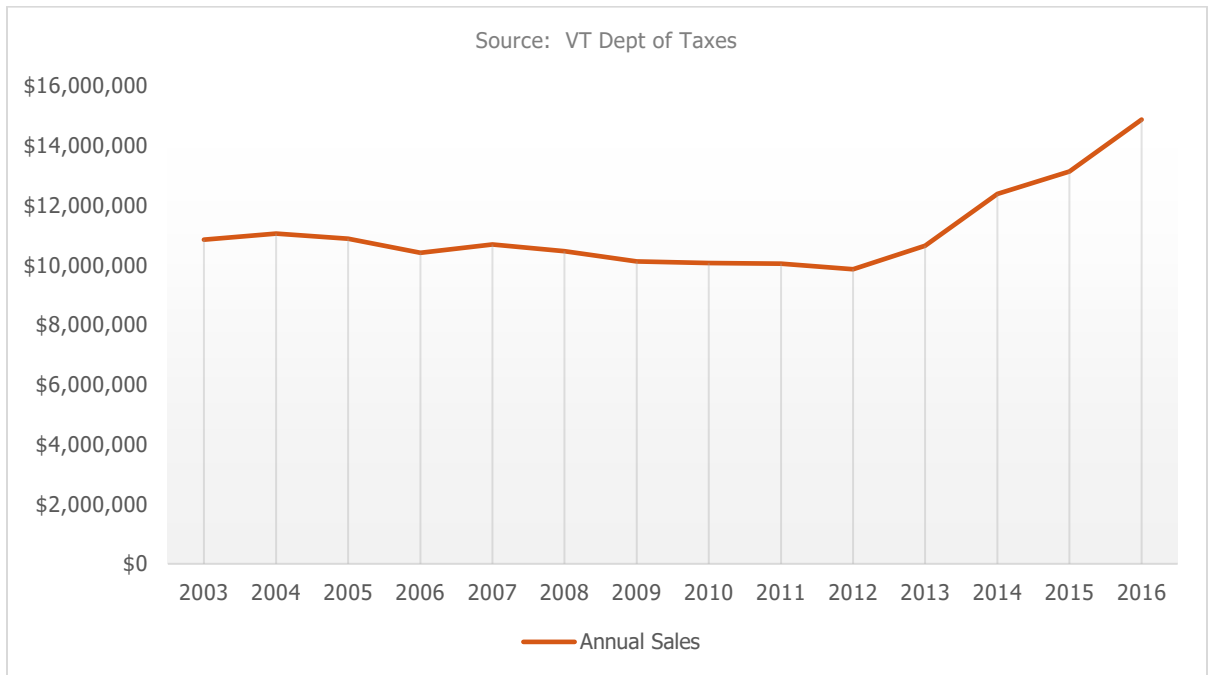


Chart excerpted from the *MRV Annual Data Report*, pg. 7, with permission from the Mad River Valley Planning District

Table 5-6: Waitsfield 2016 Tax Receipts

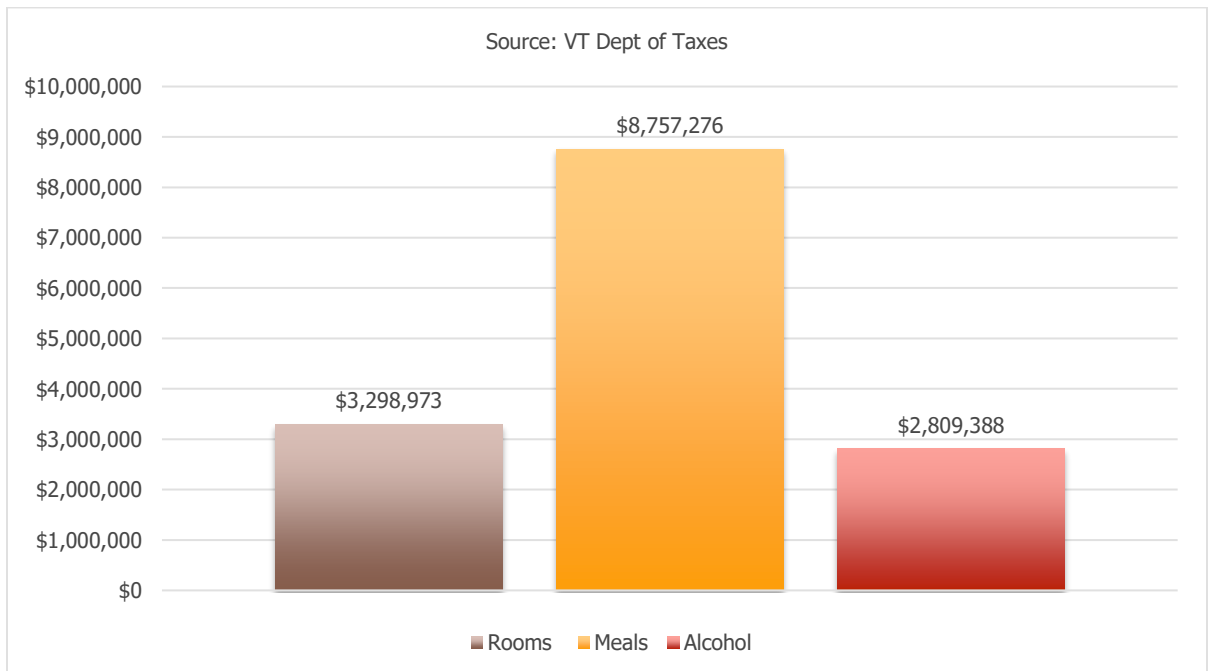


Chart excerpted from the *MRV Annual Data Report*, pg. 5, with permission from the Mad River Valley Planning District

Table 5-7: Waitsfield Annual Tax Receipts October Comparison (Inflation Adjusted)

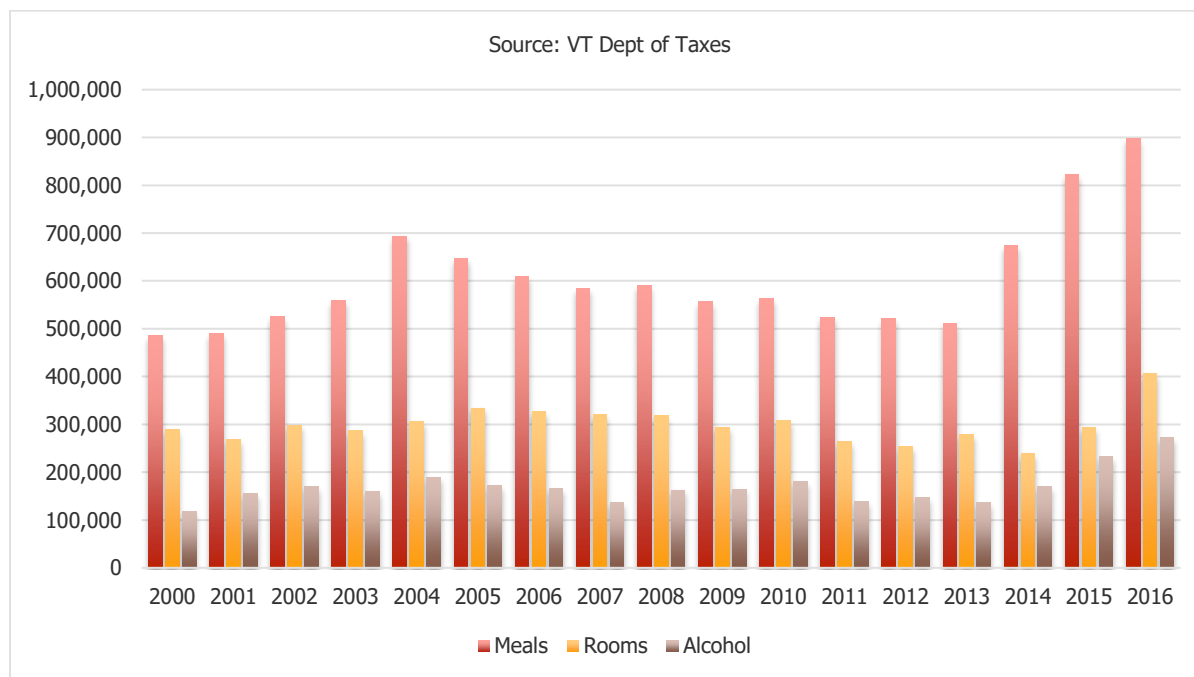


Chart excerpted from the *MRV Annual Data Report*, pg. 10, with permission from the Mad River Valley Planning District

5.D Economic Outlook

An economic study prepared for the Mad River Valley, and commissioned by the Mad River Valley Planning District, was completed in June 2014 to: 1) understand the Valley's economic profile and health, 2) identify industry sectors and their importance, 3) establish an economic baseline, and 4) recommend policies and initiatives based on the results.⁶ The Study highlighted several very important findings and observations about the economy (excerpted from pg. 71-74):

- The economy cycles on a seasonal basis and will continue to do so. Recognizing that seasonal influences drive economic outcomes is necessary in the development of effective policies.
- The agriculture/food system market is in dynamic transition, is growing and supports other, larger economic sectors like recreation and tourism. Supporting this emerging market through land use policies and inter-agency cooperation will help workings lands remain in agricultural use, while at the same time add to the vitality of the local economy.

⁶ *Mad River Valley – Economic Study*, June 2014, prepared by SE Group, Birchline LLC and Doug Kennedy Advisors (the Study)

- The recreation and tourism sectors are the mainstays of the economy. Recognizing evolving visitation patterns while at the same time supporting greater year-round economic activity such as non-winter recreation, activities and events should be a priority.
- The large percentage of work-at-home professionals and telecommuters is unique to the Valley and is supported by the recreation, innovation and value-added agriculture economies. There is also a large number of professionals who commute out of town who are “importing” income. While not a major player in the local economy, this sector coincides with “quality of life” measures that make Waitsfield an attractive community to live and work in, like good schools, good recreational environment, scenic landscape and sense of community.
- The manufacturing sector has seen dynamic change. While a few prominent businesses started in the Valley and moved elsewhere, it has been a catalyst for innovation and a way of attracting entrepreneurs. Many small incubator businesses have developed here and stayed. While the lack of supportive infrastructure, highway accessibility and energy costs are clearly factors for the move of large companies, in the absence of these expansions, understanding the positive attributes that this dynamic incubation provides can be a basis for new and innovative growth.
- Retail, like recreation and tourism, will continue to be a mainstay of the economy. Retailers oriented to non-locals are more susceptible to seasonal variation and fluctuations in revenue and employment. Understanding the balance in retail between local and visitor and seeking opportunities to appeal to both is critical.

As a follow up to this report, the Mad River Valley Planning District and Mad River Valley Chamber of Commerce held an *Economic Summit & Community Picnic* to present the results of the study and gain additional public comments and further insights.⁷ The Summit highlighted and supported the economic findings and emerging trends, opportunities, and challenges, including:

- Highlighting the importance of “quality of life” in attracting and retaining residents and businesses;
- Expanding the non-winter tourism/recreation sector of the economy;
- Supporting growth in agriculture/food systems; and
- Diversification in small light-industrial and year-round businesses.

5.E Agriculture

Agriculture was the Town’s primary industry until the middle of the last century and the rise of tourism in the Mad River Valley. While the number of people employed in farming is

⁷ <http://www.mrvpd.org/Vitality.php>

small, agriculture remains an important economic activity that maintains the pastoral landscape of the valley and the Town's rural character. As shown in Table 5-8, the most recent census provides some evidence of the trend towards increasing numbers of small, diversified farms and local food production. Although dairy farming continues as a mainstay of Mad River Valley farming operations, vegetable, cheese, and other farm products have grown in importance in recent years.

Table 5-8: Agricultural Statistics Gross

	1997	2002	2007
Number of Farms	33	35	33
Farms (1 to 49 acres)	16	16	15
Farms (50 to 999 acres)	16	19	18
Farms (1,000+ acres)	1	0	0
Full Owner	13	16	23
Part Owner	17	15	10
Tenant	3	4	0
Farming as Principal Occupation	17	22	16
Operator Living on Farm	19	25	25
Farms with Cropland Harvested	15	17	16
Cropland Harvested (1 to 49 acres)	8	8	12
Cropland Harvested (50+ acres)	7	9	4
Farms with Woodland	20	21	19
Cattle & Calf Inventory	12	10	9
Beef Cow Inventory	7	6	6
Milk Cow Inventory	4	6	3
Hogs & Pigs Inventory	2		1
Sheep & Lambs Inventory	2		8
Hens & Pullets Inventory	5		6
Horses & Ponies Inventory	11	16	9
Corn Silage	3		2
Hay & Alfalfa	13		16
Vegetables	3		1
Berries	1		2
Maple Trees Tapped	9	7	11

Source: Agricultural Census (05673 zip code)

Value-added agriculture is also becoming more popular and shows great promise for growth. The success of the summer Waitsfield Farmers Market as well as CSA (Community Supported Agriculture, subscription sales of meat and vegetables by local farms) has increased the available local food options. The Mad River Localvores organization was created by Valley residents to support the use of locally produced food. In 2011, the Mad

River Food Hub was started to provide local food producers with storage, processing, and related services. Due to the decline in primary commodity farming, adding value to agricultural products is a worthwhile endeavor. It offers higher return on investment, provides opportunities to open new markets and extend the marketing season, as well as the ability to create new recognition for the farm (e.g. winery tours). Supporting new and emerging markets, as well as alternative uses for products already grown in town, is just as important as preserving farmland.

5.F Sustainable Development

Waitsfield's economy is largely reliant on tourism dollars, particularly in connection with active outdoor recreation. The winter season attracts skiing and snowboarding visitors to Sugarbush and Mad River Glen, cross-country skiers to Ole's and Blueberry Lake's cross-country centers, and snowmobilers to the local VAST trails. Spring and summer visitors engage in numerous pursuits, including bicycling, mountain biking, hiking, camping, trail running, canoeing, kayaking, golf, and tennis. Fall visitors stream through the area in significant volumes for "foliage season," which provides a scenic backdrop to nearly all outdoor pursuits. In all seasons, patrons of outdoor activities support Waitsfield retailers, restaurants and lodging businesses, gifts and casual shopping outlets, and support services such as fuel and groceries.

Active outdoor recreation and leisure, which our economy relies heavily, is often synonymous with sustainability. The concept of sustainability is ever popular as communities attempt to strike a balance between often competing, yet mutually dependent, matters of economic, social and environmental concern. Sustainable development is commonly defined simply as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." With regard to the local economy, sustainable economic development may be characterized by activities and industries which:

- Maximize use of local resources in a manner that does not deplete those resources;
- Are energy efficient, and emphasize the use of local renewable energy sources;
- Maintain high standards of environmental health and do not degrade the quality of our water, air and soils or the viability of native wildlife populations;
- Provide goods and services that are needed locally, and which provide an alternative to goods produced outside of our community or region;
- Reinforce traditional settlement patterns;
- Employ local residents and pay a livable wage;
- Are locally owned and controlled, and reinvest in the community;
- Highlight the importance of "quality of life"; and

- Contribute to the vitality of our community, including the social fabric and well-being of the entire population.

Economic development that emphasizes sustainability should take precedence over other economic activities that do not exhibit the characteristics listed above. To the extent the Town may exercise discretion when working with businesses and local and regional development agencies, local officials should always seek to achieve a high level of sustainability.

5.G Municipal Programs

Traditionally, Waitsfield's town government has not aggressively pursued a program of economic development, focusing instead on supporting the local economy through land use policies, infrastructure development and, to a limited extent, tax policy. Past efforts, and opportunities for future economic development activity, may be categorized and summarized as follows.

General Wait House. The purchase and restoration of the historic General Wait house provided office and meeting space for Mad River Valley non-profits and service providers, and exhibit space for the Historical Society. It also contains The Valley's only public rest room and provides tourist information.

Waitsfield Community Wastewater Loan Program. In an effort to address emerging environmental issues, land-use restrictions, and aging septic systems within Waitsfield Village and Irasville, as well as a means to pay off existing wastewater debt without burdening local taxpayers, the Town adopted a creative financing program known as the Waitsfield Community Wastewater Loan Program. This voluntary program for local property owners provides 20-year fixed-rate low-interest loans for shared wastewater projects that meet specific Town criteria. At the same time, loan repayments coupled with available State and Federal funding provides funds to pay off the existing wastewater debt from the work done on the failed centralized wastewater project.

Capital Improvements. The Town maintains an annual capital improvement program to plan for anticipated capital improvement needs. In recent years, the Town has reinforced the function of Irasville and Waitsfield Village as town centers through the planned construction of sidewalks, road and intersection improvements, and streetscape improvements. Continued planning for such improvements, including those necessary to implement the land use, housing and community facilities policies of this plan, will directly support the Town's economic development goals and policies.

Tax Increment Financing (TIF) District. It has become increasingly important for the Town to find alternative revenue sources to fund capital improvements. Securing a TIF district for

Irasville and possibly Waitsfield Village districts would provide a new revenue stream to fund capital improvements within that district without increasing the tax burden for landowners.

Community Services. Due to its central location, past land use, and development policies, Irasville and Waitsfield Village serve as a service and commercial center for the Mad River Valley.

Tax Stabilization. The Town has maintained a tax stabilization program for working farms since the early 1980s. This program, which reduces the property tax on commercial agricultural activities, not only supports farmers, but also helps to maintain the Town's rural landscape. The Town also has the authority to enter into stabilization agreements with other types of local businesses, although the ability of municipalities to exempt property owners from the property tax is limited to the municipal portion of the tax bill unless the Town makes up any loss to the state property tax.

Community Development Grants. Waitsfield has sponsored two successful community development grant applications to maintain or provide housing to low and moderate-income households and the elderly, respectively. Proceeds from the loan payments may be used for eligible community development activities, including business assistance (subject to program requirements). Additional opportunities for community development grants could not only increase support for the Mad River Valley's housing shortage, but could also increase the revenue stream available for community development activities.

Mad River Valley Chamber of Commerce. The Mad River Valley Chamber of Commerce, located in Waitsfield, serves the greater Mad River Valley business community. It is a membership organization working to encourage and represent responsible business activity; retain existing businesses and attract new businesses while preserving the rural character of the area; and promote the Mad River Valley as a year-round destination vacation area in harmony with the environment and the unspoiled rural resources of the community.

Mad River Valley Planning District. The MRVPD was formed in 1985 by the towns of Fayston, Waitsfield, and Warren to carry out a program of planning for the future of the Mad River Valley. The program is directed toward the physical, social, economic, fiscal, environmental, cultural, and aesthetic well-being of the member towns and is outlined in the form of a Memorandum of Understanding among the three towns, the Sugarbush Resort, and the Mad River Valley Chamber of Commerce.

State & Regional Programs. Waitsfield is a participating member of the Community Capital of Central Vermont revolving loan fund, which provides financial and technical assistance to local businesses that employ persons of low- and moderate-income. The Town also provides

annual support to the Central Vermont Economic Development Corporation, which assists with business recruitment, financing and marketing.

Village Center/Growth Center Designation. Waitsfield Village, Irasville and Mad River Park are delineated as growth centers (albeit with different land use policies) in current town planning documents. Additionally, Waitsfield Village received state “village center” designation in 2007, which makes owners of included properties eligible for tax credits for the rehabilitation of historic buildings and increases the Town’s ability to secure funding for projects benefiting the village from some state programs. The designation also brings additional financial incentives, training and technical assistance needed to attract new business and vitality to our community. These town and state designations could be strengthened with further state designation of the Waitsfield Village and Irasville areas as a growth center. The growth center program provides access to a variety of benefits and incentives to encourage smart growth development patterns, including eligibility for a tax increment financing district and Act 250 benefits for new development.



Rural Resource Protection. Waitsfield, together with other Mad River Valley communities, has been a statewide leader on matters related to rural resource protection and environmental conservation. Such programs serve to maintain the Town’s environmental well-being, scenic beauty, and high quality of life, all of which enhance the Mad River Valley’s business climate and desirability as a resort destination.

5.H Goal

- 5.H-1** A stable, diverse, and sustainable local economy that continually seeks to retain existing, as well as attract new, responsible businesses and employment opportunities that pay a livable wage.

5.I Policies

- 5.I-1** Support the creation and expansion of businesses and industries, in appropriate locations, which pay a livable wage to local employees and incorporate sustainable business practices. Such assistance may include tax stabilization, grant procurement and/or revolving loan assistance, particularly through the Mad River Valley Chamber of Commerce.
- 5.I-2** Support sustainable economic development through a future land use plan that includes the following policies:
- 5.I-2.a** Locating compact, mixed-use development and infill in the villages.
 - 5.I-2.b** Discouraging dispersed, automobile-dependent development outside the villages.
 - 5.I-2.c** Preserving open space, farmland, scenic and historic resources and critical environmental areas.
 - 5.I-2.d** Accommodating a variety of transportation modes.
 - 5.I-2.e** Supporting the reuse of vacant and underutilized properties.
 - 5.I-2.f** Promoting ways to enhance Waitsfield’s identity that improve quality of life and attract more visitors.
 - 5.I-2.g** Accommodating businesses that support and enhance the character of Waitsfield.
 - 5.I-2.h** Creating a range of quality housing opportunities and choices for a diversified population.
 - 5.I-2.i** Support the creation and construction of wastewater resources in our town center.

- 5.I-3 Maintain and expand the local tourism industry by supporting efforts to protect the Town's historic and natural resources, and expanding recreational and cultural opportunities for residents and visitors.
- 5.I-4 Support strategies to improve the economic viability of agriculture and forestry, including maintaining and expanding economic incentives (e.g., use value appraisal), promoting access to local markets (e.g., continuation of farmers market, use of local farm products in local schools) and maintaining an adequate land base (e.g., through land conservation and land use regulations).
- 5.I-5 Support the provision and upgrade of telecommunications technologies and infrastructure, provided that new facilities not diminish the Town's scenic landscape (e.g., the placement of telecommunications towers that exceed the height of nearby mountaintops and ridge lines is prohibited).
- 5.I-6 Encourage the operation of small-business incubators to foster the creation and growth of locally owned business enterprises through available space and shared services and facilities.
- 5.I-7 Continue to participate in and support, to the extent practical, regional economic development and business assistance programs (e.g., Central Vermont Economic Development Corporation, Community Capital of Central Vermont).
- 5.I-8 Support the vitality of light manufacturing/small business incubator facilities in town, focusing on the Irasville Business Park complex or in a designated portion of Irasville, pursuing partnerships with private business interests and state or federal development agencies.
- 5.I-9 Support the continued incorporation of local agricultural products in the school lunch program.
- 5.I-10 Accommodate and facilitate development and successful operation of uses identified as crucial to reducing seasonality and increasing economic resilience, such as those identified in the June 2014 *Mad River Valley – Economic Study*, which include:
- Facilities suitable for hosting events and functions
 - Hotels, hostels, motels, and lodging
 - Wellness-related businesses
 - Sports and recreation facilities, indoor and outdoor, including skating rinks, swimming, tennis, biking, skiing, or disc golf

- Agriculture and associated support systems necessary for value-added agriculture, including certified slaughter, food processing or distribution, indoor cultivation, and agricultural research facilities as well as on- and off-premise sites for the sale of locally-produced or locally-processed products.
- Forestry, forest products, and associated support systems.

- 5.I-11 Continue to work with MRVPD and surrounding communities to enhance Waitsfield's role as a downtown to other valley communities.
- 5.I-12 Promote infill development within the existing Industrial, Village Business, and Irasville Village Zoning Districts.
- 5.I-13 Improving transportation and multi-modal networks and connectivity to commercial centers in Waitsfield Village and Irasville Village to accommodate pedestrians, bicyclists, and other active transportation options (e.g. the Mad River Path).
- 5.I-14 Work cooperatively with regional and state agencies to facilitate and promote infrastructure and market opportunities that support value-added agriculture.
- 5.I-15 Continue to support local foods businesses and start-ups and look for ways to support these businesses and keep them in the community.
- 5.I-16 Enhance Waitsfield's Internet presence and find ways to market and promote the Town.
- 5.I-17 Support the continued use of Mad River Park for industrial development.

5.J Tasks

- 5.J-1 Update the master plan for Irasville, including decentralized wastewater systems, to accommodate higher densities of residential and mixed-use development, that includes housing, in appropriate locations within Irasville. [Selectboard, Planning Commission]
- 5.J-2 Explore forming an Economic Development Authority in conjunction with other Mad River Valley towns and the Mad River Valley Chamber of Commerce to take better advantage of state and federal economic development programs. [Selectboard, Town Administrator, Planning Commission, Chamber of Commerce*]

- 5.J-3 Actively support the development of a light manufacturing/small business incubator facility in town, pursuing partnerships with private business interests and state or federal development agencies. [Selectboard, Town Administrator, Planning Commission]
- 5.J-4 Review all town assistance programs, including tax stabilization policies and administration of future revolving loan funds, and develop a funding policy that focuses assistance for sustainable economic development. [Selectboard, Town Administrator, Planning Commission]
- 5.J-5 Review, maintain, update, and implement the Town's capital improvement program. [Selectboard, Town Administrator, Planning Commission]
- 5.J-6 Maintain and promote Village Center Designation as a tax incentive to foster business growth and development. [Selectboard, Planning Commission, Chamber of Commerce]
- 5.J-7 Review the required minimum parking ratios and maximum impervious cover limitations for adaptive re-use of sites and buildings in areas where these standards may hinder redevelopment and where re-use and redevelopment is beneficial, such as in Irasville and Waitsfield Village. [Planning Commission]
- 5.J-8 Identify and designate an area for special events in Waitsfield and/or opportunities for the creation of a Village Green. [Planning Commission]
- 5.J-9 Develop a plan to enhance the appearance, function, and commercial viability of Irasville and Waitsfield Village by improving and/or upgrading parking, sidewalks, streetscape, pedestrian amenities, trails, and streets. [Selectboard, Town Administrator, Planning Commission]
- 5.J-10 Review and update zoning standards to ensure value-added agriculture and non-traditional on-farm activities are supported. [Planning Commission]
- 5.J-11 Contemplate expanding commercial uses within the Waitsfield Village Center, as identified in the 2014 Vermont Downtown Action Team Report. [Planning Commission]
- 5.J-12 Create and maintain innovative promotional materials, including enhancement of the Town's website, to attract new businesses and support existing businesses. Utilize the 2014 Vermont Downtown Action Team Report for specific strategies. [Selectboard, Town Administrator, Planning Commission]

- 5.J-13 Review the Town's land use regulations (Zoning Bylaws) to determine whether revisions are needed to carry out the policies set forth above. [Planning Commission]

6. Education

6.A Overview

Providing quality public education for children and youth is among the most important functions of government in a democratic society. Waitsfield has long performed this task extremely well. As part of the Harwood Unified Union School District, Waitsfield provides pre-k through 6th grade programming at the Waitsfield Elementary School in Waitsfield Village. Starting in the 2017-2018 school year, students can choose to attend any school within the District.

Middle school (grades 7-8) and secondary (grades 9-12) education is provided at either Crossett Brook Middle School or Harwood Union School, located on Route 100 in Duxbury. Waitsfield, together with Duxbury, Fayston, Moretown, Warren, and Waterbury comprise the Washington West Supervisory Union, which administers Harwood.



6.B Enrollment

Grades K-6. Figure 6-1 presents enrollment trends and projections. After peaking at 166 students in 1997/98, the elementary school's K-6 enrollment has declined. In recent years the number of students has averaged around 112 along with approximately 20 children enrolled in the school's pre-K program. Given the number of births over the last several years, K-6 enrollment is anticipated to continue falling and may drop below 120 by the 2012/13 school year.

Grades 7-12. The number of students that Waitsfield sends to Harwood has peaked at around 125 students in recent years. Enrollment over the next several years is expected to decline below 120. Within five years, as the students now in elementary school move on to Harwood, Waitsfield will likely be sending around 110 students.

Future Trends. The reduction in number of students is consistent with the demographic trends presented in Chapter 3. The percentage of the local population within the 18-34 year-old cohort, prime child bearing years, has declined sharply. Although the number of women having children in their mid- to late-30s is much higher than two decades ago, Waitsfield's

ongoing shift to an older population is not likely to result in enrollment growth in the near future.

This could change, however, should the Town experience significant in-migration of families with children. Policies to promote greater diversity in the housing stock, including units affordable for young families, could cause enrollments to climb, although such increases are not likely to be immediate.

Table 6-1: School Enrollment

	pre-K	K	1	2	3	4	5	6	K-6	7-12	Pre-K-12
2009-2010	15	19	27	25	14	28	17	24	154	118	287
2010-2011	15	15	18	25	25	12	28	15	138	129	267
2011-2012	12	16	16	17	16	25	27	12	129	126	255
2012-2013	26	16	16	17	16	25	27	12	129	127	256
2013-2014	15	21	15	18	19	16	26	27	142	128	270
2014-2015	17	19	18	14	16	20	17	24	128	122	250
2015-2016	31	8	19	17	15	15	20	18	112	113	225
2016-2017	30	14	10	19	16	15	15	22	111		
2017-2018		19	14	10	19	16	15	15	108		

Source: Waitsfield Town Annual Reports and Vermont Department of Education

6.C Waitsfield Elementary School

The Waitsfield Elementary School is administered by Harwood Unified Union School District. Waitsfield has two elected representatives to the 14-member board. The school underwent a major renovation and expansion in 1991, which brought the facility's capacity up to 185 students. That expansion, which increased the building from 13,300 square feet to the existing 22,100 square feet, added three new classrooms, a new library, expanded gymnasium and stage area, an art/music room and additional administrative space. The property was expanded in 2016 when adjacent property was acquired in order to install a new section of the Mad River Path, Wait's Way.

6.D Harwood Union High School

Facilities. Harwood Union High School was opened in 1967. The school was upgraded and expanded in 1996/97, and now has a capacity of between 900 and 1,000 students, depending upon program configuration. In addition to Waitsfield, the high school serves students from Fayston, Duxbury, Moretown, Warren and Waterbury.

Programs. Harwood's academic program includes college preparatory, business, and limited vocational courses. The school has invested in technology, including the creation of a technology reserve fund. Expanded program offerings are available through various agreements with other educational facilities.

The high school offers special education services through the Learning Resource Center located within the school complex. The Harwood Community Learning Center in Waterbury, an alternative school for students in grades 10-12 provides academic and work experience for students who would benefit from an alternative to a traditional school setting. Additionally, transportation is provided for Harwood students to attend vocational programs in Barre and, in some cases, Burlington. Harwood does provide some vocational opportunities on site, although these are limited.

6.E Cost of Education

It would be difficult to overstate the level of local concern related to educational funding. Property taxes have been identified in the two most recent community surveys as one of the major challenges facing Waitsfield. While dissatisfaction with taxes is likely as old as taxation itself, the passage of Act 60 in 1997 has resulted in overwhelming concern that the current system of funding education is not sustainable.

Act 60 was enacted in response to a decision by the Vermont Supreme Court, which decreed that all children should have access to substantially equal educational opportunities. Act 60 sought to accomplish this through a statewide property tax, which is used to help fund a block grant based on the number of pupils in a school district. Act 60 also instituted a sharing pool for spending above the block. The funding formula was changed by Act 68 and Act 130.



Under the current system, if a school decides to spend more than the state block grant per pupil, then a proportional amount must be paid into the sharing pool - an amount known as the local share. There are two statewide tax rates, one for residential property and another for non-residential property (which includes vacation homes). Local school budget increases are paid for only by residential property taxpayers. The impact of education funding on the Town may be seen in Table 6-2, which shows annual education costs to Waitsfield property owners.

Table 6-2: School Costs

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
PK-6 Spending	\$1,744,653	\$1,696,535	\$1,846,187	\$1,897,287	\$1,863,902	\$2,050,052	\$1,972,621

Source: Waitsfield Town Annual Reports and Vermont Department of Education,

6.F Adult Education

Continuing and Professional Education courses are offered in Waitsfield by the Yestermorrow Design/Build School on topics of architecture, construction, design, woodworking, and planning. The Refuge at Knoll Farm in Fayston operates a retreat center that provides a place for creative leadership. There are no public institutions offering continuing adult education in the Mad River Valley. However, there are options which include the local Community College of Vermont's Waterbury campus, the University of Vermont, and several other private colleges in Burlington, Northfield, Middlebury and the Vermont Technical College in Randolph. Opportunities for "distance learning" on-line and through Waterbury's Vermont Interactive Television site are also growing each year.

6.G Goal

- 6.G-1** The availability of high quality educational facilities and programs to enable all Waitsfield residents, especially children and youth, to become competent, productive and responsible citizens.

6.H Policies

- 6.H-1** Continue to provide sufficient and appropriate PK-12 school facilities to meet current and anticipated enrollments.
- 6.H-2** Support programs and efforts to strengthen the central role that the Waitsfield Elementary School plays in the community, including providing access to school facilities for community events and activities in a manner that does not interfere with the school's primary function of educating the Town's youth.
- 6.H-3** Support activities to engage middle and high school students in community activities.
- 6.H-4** Support local and state efforts to reduce reliance on the local property tax to fund education, and actively promote alternatives to current statewide property appraisal formulas which discriminate against local property owners.

- 6.H-5 Support creativity, innovation and imagination when planning for future educational needs of the Town's student population, and encourage efforts to strengthen the important role played by schools in fostering community and a shared purpose among local residents.
- 6.H-6 Improve efficiencies through coordination with neighboring school districts and Hardwood Union Unified School District to the extent practical.
- 6.H-7 Encourage Waitsfield businesses to engage our schools in order to enrich the K-12 educational experience for students, demonstrate relevance of the curriculum, and foster an interest in the variety of jobs available locally.

6.I Tasks

- 6.I-1 Continue to monitor enrollment and population trends, and to make regular enrollment projections to ensure that the school system is prepared for significant changes in enrollment trends. [School Board, Planning Commission]
- 6.I-2 Consider appointing high school students as ex-officio (non-voting) members of local boards. [Selectboard]

7. Facilities and Services

7.A Overview

A primary purpose of this plan is to identify services currently available to town residents, evaluate the effectiveness of the Town and other providers in delivering those services, anticipate future demands, and assess whether those demands can be met efficiently. Waitsfield residents enjoy a range of services and facilities, including an efficient municipal government, excellent emergency services, access to a variety of social, recreation and health care services, and state-of-the-art telecommunications infrastructure.

Despite the wide range of excellent services available, the Town faces several challenges regarding specific facilities and services. The lack of municipal water and wastewater hinders efforts to foster a compact settlement pattern, which can result in sprawl and a corresponding loss of the Town's rural character. Local government and education are largely dependent on property tax revenues to fund their operations and taxpayers are stressed by a growing tax burden. Continued growth in the community will require an ongoing assessment and upgrade of specific facilities.

7.B Town Government

Administration. Waitsfield is governed by a five-member Selectboard, which is responsible for preparing the Town's budget, setting policy, administering town finances and a variety of related duties. A full-time Town Administrator reports to the Selectboard and is responsible for the day-to-day management of town affairs. Town staff also includes a full-time appointed Town Clerk and a full-time appointed Treasurer. Currently, the Clerk and Treasurer serve as each other's assistants. A full-time Road Foreman reports to the Selectboard and manages a three-person road department. A full-time Planning and Zoning Administrator, who is hired by the Selectboard, reports to the Town Administrator.

Like most small communities, Waitsfield is heavily dependent upon volunteers to fulfill many governmental duties. Several dozen local residents are elected or appointed to serve on boards and committees, and to represent Waitsfield on regional organizations. This dedication and sense of duty helps define our community, and keeps local institutions open and accessible.

Planning and Zoning. Waitsfield has an active land use planning and community development program that dates back to the late 1960s. Most planning functions are carried out by a volunteer Planning Commission. A Development Review Board is responsible for reviewing

proposed projects in light of the Town's land use and subdivision regulations. With the formation of the Mad River Valley Planning District in the mid-1980s, the Planning Commission has been able to augment its planning capacity with professional assistance.

Conservation. The Conservation Commission is composed of up to nine appointed members, with lead responsibility for stewarding certain lands of the municipality which have natural resource, historic, educational, cultural, scientific, architectural, and/or archaeological values in which the public has an interest. Under its responsibilities to administer particular municipal lands, properties, and other rights, the commission is actively engaged in planning for the management of 793 acres of public land located on the slopes and ridgeline of the Northfield Range (Scrag Mountain Town Forest), alongside the Mad River (Wu Ledges Town Forest, Austin Parcel, Tardy Parcel) and alongside Brook Road (Woliner Parcel), plus easement monitoring on 25 acres adjacent to the Wu Ledges Town Forest (Lawton Parcel) and 10 acres behind the Valley Professional Center (Dowdell/Baked Beads parcel).

In 2012, the Selectboard approved a long-term (10-15 year) management plan for the Scrag Mountain Town Forest. In 2015-16, the Commission spearheaded the first timber harvest and the establishment of a private sugaring license on portions of the Town lands. The Commission also initiated a "Scrag Forest Gateway Project" which resulted in the Town's purchase in 2017 of a 110-acre parcel to enhance public access to the Town Forest, recreational opportunities, and forestland protection. Revenues from the timber harvest and sugaring license are helping to support stewardship and management costs on the Town's Scrag Forest lands.

In 2015, the Selectboard approved a long-term (10-15 year) management plan for Wu Ledges Town Forest. The Commission has begun implementing enhancements to public access and is working toward establishing an official trail network in the Forest.

Other Volunteer Positions. A wide range of other functions are carried out by volunteers appointed or ratified by the Selectboard, including the Fire Warden, Tree Board, Constable, Road Commissioner, Energy Coordinator, Emergency Management Director, Emergency Management Coordinator, Health Officer, Mad River Recreation District, Dog Warden, and Green Up Coordinator. Other, more ceremonial, appointed positions include Fence Viewer, Weigher of Coal, and Inspector of Lumber.

Fiscal Condition. In Vermont, the principal mechanism for funding local government is the property tax. While certain types of outside assistance are available (including state highway aid, fees for services, miscellaneous special purpose grant programs), approximately 80 percent of Waitsfield's annual municipal budget is funded through the local property tax. The fact that non-tax revenues consistently make up around 20 percent Waitsfield's budget

is largely due to an aggressive effort on the part of town government to identify and secure alternative revenue sources, such as grants, to fund specific projects.

Table 7-1 shows annual municipal expenditures between 2004 and 2009. The Town has maintained a relatively stable budget for the past several years; approximately one-third of the budget is dedicated to road maintenance.

Table 7-1: Waitsfield Municipal Budget

	2011	2012	2013	2014	2015	2016	2017 (Projected)
EXPENSES							
Total Operating Budget Expenses	\$1,104,231	\$1,089,584	\$1,210,673	\$528,400	\$1,196,062	\$1,167,269	\$1,306,899
Total Reserve Fund Allocations	\$178,500	\$230,500	\$206,500	--	\$169,000	\$166,500	\$201,000
Total Debt Expenses					\$108,031	\$273,767	\$320,785
Total Capital & One-Time Expenses	\$233,413	\$144,517	\$286,759	\$90,212	\$236,018	\$318,957	\$154,242
Special Article Expenses	--	--	\$5,000	--	\$7,500	\$10,000	--
Total Expenses	\$1,518,401	\$1,464,601	\$1,708,933	\$618,612	\$1,716,612	\$1,936,494	\$1,981,926
REVENUES							
Total Operating Revenue	--	--	--	\$78,490	\$270,240	\$325,426	\$294,367
Total Debt Revenues	--	--	--	--	\$17,347	\$16,642	\$21,266
Total Capital & One-Time Revenues	--	--	--	\$2,744	\$67,015	\$286,322	\$148,121
Special Articles Revenue	--	--	--	--	--	--	--
Total Revenues	\$329,346	\$308,314	\$441,171	\$81,234	\$354,692	\$628,389	\$463,753
Tax Revenues	\$1,077,503	\$1,163,071	\$1,219,424	0	\$1,482,762	\$1,297,563	\$1,326,263

Source: Waitsfield Town Annual Reports

Capital Budget & Program. To limit fluctuations in town expenditures, thereby stabilizing tax rates, the Town has adopted a capital budget and program on an annual basis for more than 20 years. The capital budget and program is a planning tool to help the Town anticipate future capital expenditures and to schedule them so to avoid sharp increases in the tax rate during any one year. When combined with a capital reserve fund, the Town can spread capital costs over a number of years, further stabilizing the municipal budget. It is also a mechanism for considering capital expenditures in the context of this plan to ensure that \$78,490 budget decisions are consistent with the Town's planning goals.

7.C Town Properties

The Town owns several properties used for a variety of civic, recreation, conservation, working forestland, and cultural purposes. The following is a partial list of town properties and a description of relevant considerations related to each.

Town Office. The Town Office was formerly located in the first floor of the Joslin Memorial Library. Limitations associated with that site and vulnerability to flooding, which occurred most recently during Tropical Storm Irene in August 2011, led to the determination that expansion of the library building would not be an option to accommodate new town office operations. The Town began actively planning for a new municipal facility in 2010. A Town Office Task Force, appointed that same year, hired Maclay Architects to evaluate the suitability of various sites in Waitsfield Village and Irasville.

Following more in-depth analysis and public input, the Selectboard accepted the Town Office Task Force's recommendation that the Town purchase an option for the site in Waitsfield Village owned by Wrenn Compere adjacent to the Flemer Field Community Green and occupied by a farmstand, to allow further study as the preferred site for a new town office. An anonymous donor purchased the farmstand property specifically for the new Town Office site. The project was funded primarily from a CDBG-DR grant award in the amount of \$873,200 and a Town Office bond in the amount of \$650,000. The new two-story, 5,142 square foot building is fully ADA accessible. As part of a group net-metering arrangement with Green Mountain Power and the Town's solar array, the building will be completely net-zero in terms of energy consumption. The state-of-the-art facility was completed in July 2016 and operations began in the new building that same month.

Joslin Memorial Library. The Joslin Memorial Library, located in Waitsfield Village, is administered by a Board of Trustees. A private organization, Friends of the Joslin Library, provides support on a regular basis. A part time librarian maintains library hours Monday through Saturday. Library staff is supplemented by a dedicated group of volunteers who perform a variety of tasks. Without these volunteers, the high level of service library patrons have grown accustomed to would suffer.

The library houses over 9,700 books, supplemented by an interlibrary loan program with other libraries in the state. The library offers children's programs including a pre-school story hour, a Saturday reading program for school-aged children in addition to a summer program. The library also provides internet access, a large collection of audio book tapes, home book delivery for elderly and disabled residents and, also with support of a foundation grant, a newly expanded adult program. In addition to private fund-raising and income from various endowments, a large portion of the Library's operating costs are provided by the towns of Fayston and Waitsfield.

General Wait House. The historic General Wait House, the original home of Waitsfield's founder, Benjamin Wait, was purchased in 1995. Funded with the assistance of an enhancement grant from VTrans, a grant from the Vermont Housing Conservation Board, town funds, and private donations raised by the Waitsfield Historical Society, the building accommodates display space for the Historical Society, the Mad River Planning District office, the Friends of the Mad River office, the Mad River Path office, public rest rooms, community meeting space and office space for rent-paying tenants.



The main house was restored to serve the aforementioned functions; the attached barns were only stabilized and remain in need of restoration. The Waitsfield Historical Society made much progress in 2010 restoring the Carriage Barn for expanded display space for the Historical Society, and additional space for larger community meetings and functions than can be accommodated within the main house. In addition, the Carriage Barn roof was replaced in 2009. Federal stimulus funds in 2010 helped provide for the weatherization of the main house, including new insulation, installation of an energy efficient boiler, and new storm windows. Any future renovations should provide a worthwhile community service, improve the outward appearance of the building, and enhance the northern gateway to Waitsfield Village. The General Wait House should continue to manage and have a detailed upkeep and maintenance plan in order to properly care for this important community resource.

Town Garage. The Town's highway department, discussed in Chapter 8, is housed in a garage located off the Tremblay Road, near its intersection with North Road. Built in 1986 after a fire destroyed the previous garage, the garage is located on a 10.8-acre parcel. The current facility is barely adequate to meet current needs, and additional space will be needed in the near future. The current location can accommodate expansion as it becomes necessary. A

new solar array was constructed on-site in 2014 by Aegis Renewable Energy. The 102.3 kW DC ground mounted system includes 330 310-watt solar modules designed to produce 102,106 kWh per year off-setting the electricity needs of the Waitsfield Elementary School, Waitsfield-Fayston Fire Station, Town Garage, General Wait House, Joslin Memorial Library, the Town Office, and the metered lights at the Waitsfield Village Covered Bridge.

Cemeteries. Waitsfield owns and maintains four cemeteries:

- Irasville Cemetery, on Route 100 in Irasville;
- Village/Mill Cemetery, on Bridge Street just east of Waitsfield Village;
- General Wait Cemetery, behind the fire station in Waitsfield Village; and
- Common Cemetery adjacent to Waits-field Common.

The Waitsfield Cemetery Commission is the body responsible for the maintenance and management of the cemeteries. The Town is fortunate that, due to decisions of current and past cemetery commissioners, Waitsfield has a perpetual care fund that is among the largest in Vermont. Although the Town has a cemetery endowment fund which provides funds for maintenance of the cemeteries, increased expenses and lack of growth in the fund may require additional funds or support from the Town at some point in the future.

Capacity exists in each of the cemeteries, although space is limited in all but the Common Cemetery (which was expanded with the purchase of nearly an acre in the early 1990s). Total remaining capacity, however, is approximately 521 spaces. The Cemetery Commission may need to seek expansion of existing cemeteries, consideration of the use of mausoleums, or an additional cemetery location as a last resort in order to provide for future burial needs.

Other Properties. In addition to the Waitsfield-Fayston Fire Department, which is discussed below, the Town owns several parcels used for conservation, recreation, and other community uses. These parcels are described in appropriate sections of this plan.

Public Parks/Spaces. The Selectboard accepted the donation by the Flemer family in 2009 of a 7-acre parcel of open common land on the north end of Waitsfield Village. A grant from the Trees for Local Communities Foundation and community partnerships resulted in the development of a fruit orchard in 2010 on the western boundary of the Flemer Field Community Green. There is also a small park adjacent to the Joslin Library, and the two undeveloped commons located at the intersections of the Common at Joslin Hill and East Roads. The Town acquired the former barber shop parcel on Bridge Street adjacent to the Big Eddy Covered Bridge in 2012 and was awarded a grant in 2014 to develop the small parcel into a public park (“Lovett Park”); site development was completed in July 2017. The so-called Munn Site is a 12-acre vacant parcel located on Route 100 by Kingsbury Road which was originally purchased for use as a centralized wastewater treatment plant. After a failed bond vote, the property has not been developed and remains open field down to the

Mad River. The Town-owned pond at Carroll Road and Main Street serves as common land in Irasville. The Town should consider ways it or additional lands could serve as a focal point for future pedestrian-oriented, village-style development in Irasville as called for in this plan.

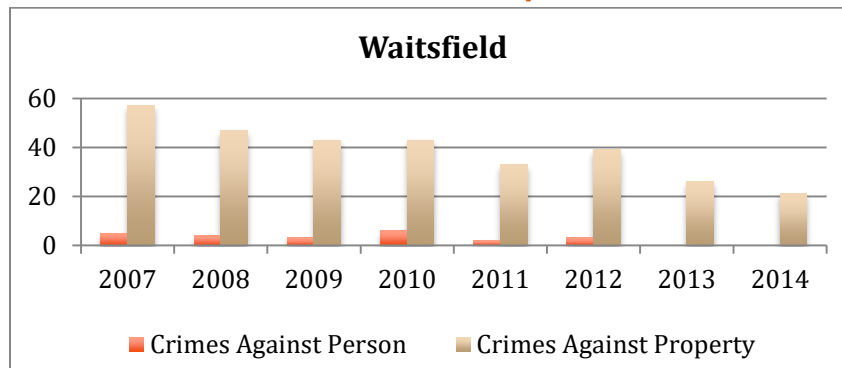
7.D Public Safety

Law Enforcement. The Vermont State Police are responsible for law enforcement in the Mad River Valley. The State Police operate out of the Middlesex Barracks located on Route 2 in Middlesex, and are primarily responsible for all law enforcement matters in our area, particularly major criminal investigations.

Waitsfield has contracted with the Washington County Sheriff's Department for local police coverage for nearly two decades. The goals of this program are to enforce traffic safety and provide emergency response services in a cost-effective without the burden of a local police department.

Table 7-2 indicates the extent to which the number of crimes in Waitsfield has declined steadily in recent years and the predominance of property crimes (arson, bribery, burglary, embezzlement, vandalism, theft, and drug violations). Waitsfield's crime rate remains lower than state and county averages.

Table 7-2: Total Instances of Crime Reported in Waitsfield



Source: VT Dept. of Public Safety, Vermont Crime Information Center

Waitsfield-Fayston Fire Department. Fire protection services are currently provided by the Waitsfield-Fayston Volunteer Fire Department. The department covers both Waitsfield and Fayston and maintains a mutual assistance agreement with other nearby fire departments. Fayston funds 40 percent of the annual operating and capital costs of the department. This 60/40 split was determined by the approximate percentage of responses within each town. In addition to the funding agreement, many Fayston residents serve as volunteers. As both

towns grow, the breakdown of calls should be monitored to ensure that funding remains fairly allocated.

Presently, the department is staffed by 19 active volunteers and responds to around 98 incidents in a typical year. Over the past decade, the department has seen its average number of calls per year increase by 70 percent, while the number of personnel has decreased significantly. Volunteers are reimbursed a nominal fee for time spent on emergency responses; however, the bulk of time spent on administration, training and maintenance is voluntary.

In order to maintain the excellent level of service presently provided, the number of volunteers should be monitored and additional fire fighters actively recruited. In particular, it is important for the department to include volunteers that are in town and available to respond to emergencies during normal workday hours. Recruitment is done through advertising and events such as Labor Day at the Irasville Country Store.

Fires actually represent only a minor component of fire department calls and the department most frequently responds to motor vehicle accidents. Several calls are also related to malfunctioning heating systems that are resolved before a fire starts. In addition to emergency response, the department has emphasized fire prevention and education. The past performance of the fire department has been exceptional, and there is no reason to believe that performance will change in the coming years.

Table 7-3: Emergency Response Statistics

	2012	2013	2014	2015	2016
Waitsfield-Fayston Volunteer Fire Department					
Motor Vehicle Accident	31	25	47	29	24
Fire Alarm (smoke)	22	34	26	23	26
CO Detector	4	5	4	11	5
Power line emergency	8	6	11	8	4
Chimney Fire	4	4	2	4	4
Structure Fire	9	5	10	3	4
Ambulance Assist	3	3			4
Propane Leak/Gas Odor	2	1	7	2	2
Smoke Investigation		1			3
Kitchen Fire	1				
Car Fire		2	1	6	3
Equipment Fire			1		1
Wildland Fire		3	4	3	1
Unauthorized Burn					3
Brush Fire	4				
Dumpster Fire	1				
Flooding		2	1		1
Good Intent	4		15	9	
Elevator Emergency				2	
Appliance Fire/Malfunction	1	1	2	4	

Table 7-3: Emergency Response Statistics

Service Call	4				3
Waitsfield Calls	49	49	81	62	48
Fayston Calls	37	38	38	31	31
Buels Gore M/A			2	2	0
Granville M/A		1			
Middlesex M/A					1
Moretown M/A	9	2	12	11	6
Northfield M/A			1		
Warren M/A	3	4	3	0	2
Total Calls	98	108	137	106	88
Mad River Valley Ambulance Service					
Total Calls	473	423	440	440	502

Source: Waitsfield Town Annual Reports

Major equipment, which is maintained in the fire station located adjacent to the General Wait House in Waitsfield Village, includes a 2013 International tanker pumper, a 2003 1,000-gallon International pumper, a 1987 Ford pumper, and a 2000 Chevrolet van. A 1943 Ford Model A pumper is also maintained, which symbolizes the department's years of dedicated service to the community. Annual contributions to a reserve fund, in the average amount of \$15,000, are made toward future equipment replacement.

Ambulance & Rescue Services. The Mad River Valley Ambulance Service is organized as a non-profit corporation and provides 24-hour service to residents and visitors of the Mad River Valley.

The service operates from a facility in Waitsfield Village, which was purchased in 2001. In addition to providing four garage bays, space is available for equipment storage, administrative offices, and meeting and training facilities. The facility has an emergency generator, base station radio and 25 pair phone cable so that it can operate as an emergency operations center during a disaster. Rescue equipment currently in use includes three fully equipped ambulances, a rescue/extraction vehicle (not used for transport) that carries heavy equipment, a "mass-accident" trailer, off-road rescue equipment, a dispatch radio and field radios, as well as a substantial amount of emergency medical equipment.

The service has grown considerably over the years to meet the needs of the growing community. Since its inception in 1971, the annual number of calls has increased by 81 percent. The service currently has a roster of 60 volunteers Valley-wide. The average first responder response time is 7 minutes, while the ambulance response time is less than 17 minutes. One reason for such a fast first responder time is the local dispatch service, which notifies volunteers in scattered locations around the Mad River Valley of a call. Since the late 1990s, E-911 emergency response service has been available in The Valley.

Emergency Shelter. The Town of Waitsfield has an approved Local Emergency Operations Plan that was adopted in March 2016. The Waitsfield Elementary School serves as the Town’s primary emergency shelter and the Town Office is the Emergency Operations Center. The newly constructed town office has an elevator and backup power generation.

7.E Solid Waste

Efforts to reduce the amount of waste before it enters the waste stream and recycle the broadest range of waste in a cost-effective manner will become increasingly important as population increases.

Waitsfield is a member of the Mad River Resource Management Alliance (“MRRMA”). The alliance is a six-town district formed through an inter-local agreement in 1994. Other member towns are Duxbury, Fayston, Moretown, Warren and Waterbury. Northfield and Roxbury were added to the MRRMA in 2010. The alliance is responsible for the preparation, adoption, and regular update of a Solid Waste Implementation Plan, which is required under the state’s solid waste law and is submitted to the Vermont Agency of Natural Resources for review and approval.

A representative and alternate from each town serves on the alliance board, which meets bi-monthly to set policy, determine programs and oversee the activities of a part-time administrator. A per capita assessment is charged to cover administrative and program costs.

Free or low-cost disposal of appliances, tires, electronic waste, and collected roadside trash is also provided in association with annual alliance-sponsored events such as Green Up Day, Household Hazardous Waste Collection Days, and tire collections. The alliance works with the Association of Vermont Recyclers, and is a member of the Northeast Resource Recovery Association, which helps market some recyclable commodities.

Hauling, recycling, and landfill services are provided under agreement with Earth Wise, Inc.. Trash collection services also are provided by other private haulers. A regional transfer facility, located in Waitsfield’s Limited Business District and operated by Casella Waste Management, provides area residents with a convenient solid waste disposal site as well as a place to recycle materials. In 2012, the Vermont Legislature unanimously passed the Universal Recycling Law (Act 148), which effectively bans disposal of three major types of waste materials over the course of six years: “blue bin” recyclables by July 2015, leaf/yard debris and clean wood by July 2016, and food scraps by July 2020.

7.F Sewage Disposal & Water Supply

Municipal Wastewater Treatment. Currently, all of the Town's sewage disposal needs are addressed by individual on-site systems. Lacking a central wastewater collection and treatment facility, town officials have studied the feasibility of developing such a facility to serve the high-density portions of town, especially Irasville and Waitsfield Village. In 1999, the Town secured funding from the Vermont Agency of Natural Resources' revolving fund to study the feasibility of developing a municipal wastewater disposal facility to serve Irasville and, possibly, Waitsfield Village. As a result of preliminary analysis, the Town purchased a 12.2-acre parcel (the Munn site) located south of Irasville for \$126,000 in November, 2000 as a potential wastewater treatment site.

In 2008, a two-phase plan to provide a sewer system in Irasville and pipe the waste to Munn field for treatment was developed. The total two-phase system was estimated to cost approximately \$12 million. With grants and users funding the bulk of the project, a bond vote was held in March 2008 to finance the balance of the Phase I cost of \$5.7 million project but was defeated. The Selectboard deferred reconsideration of a municipal wastewater system while proceeding with the municipal water system, which was approved in November 2008 after being narrowly defeated in two prior votes.

In 2011, a plan for a town-sponsored loan program to finance privately-owned, shared, decentralized wastewater systems was developed as an alternative to a municipally-owned system. The same year, a wastewater study entitled "Assessment of Decentralized Wastewater Options: A Survey of Needs, Capacity, and Solutions for Historic Waitsfield Village and Irasville, Vermont" was completed. The townspeople voted at the 2012 Town Meeting to approve allowing the Town to bond up to \$250,000 to develop this program and this amount was subsequently supplemented by \$750,000. The wastewater loan program allowed property owners in the Town center to borrow funds to build or repair wastewater systems and pay off the loans over 20 years to the Town which in turn borrowed from the State of Vermont's revolving loan fund. Six property owners took advantage of this program through 2016 with the funding that was available.

On-Site Disposal. Shared wastewater options are continuing to be explored to serve designated growth areas in Irasville and Waitsfield Village as well as future designated residential hamlets; however, many properties in Waitsfield will continue to be served by on-site, in-ground disposal. In 2002 the Vermont Legislature amended the state's on-site septic rules to require all new development, regardless of lot size, to meet state septic system standards. This effectively eliminated the "10-acre loophole," which exempted lots greater than 10 acres from any design standards.

The new standards also allow for a number of alternative septic system designs which allow for the placement of septic systems on land that could not have met the previous standards. As a result of the rule changes, on-site disposal systems may now be located on hundreds of acres in Waitsfield previously unsuitable for on-site systems.

Water Supply. In 2008, Waitsfield voters approved the bonds for construction of a municipal water system to serve Irasville and Waitsfield village, and construction of this project began in 2010. The \$7.6 million project will be paid for by \$4.5 million in federal grants, connection fees, and a \$3.014 million loan.

The municipal water system begins at the Reed Road wellhead and follows the Town's rights-of-way along Long Road, down Bushnell Road to a new storage tank constructed on the Town-owned former LeClair gravel pit site. From the tank, the transmission main follows a right-of-way to Tremblay Road, where it meets Route 100 and continues on to Waitsfield Village (including Old County Road), Irasville, and Eagles Resort. Hydrants and bollards provide fire protection along the route.

Outside the existing service territory for the new municipal water system, development will continue to rely on private wells.

7.G Community Services

Local Health Services. The Mad River Valley Health Center, Inc. (MRVHC) in Waitsfield is a non-profit community-owned facility leasing space to a variety of healthcare providers. The mission of the MRVHC is to provide a quality facility to ensure the availability of local health care to residents of the Mad River Valley, neighboring towns and visitors. The health center is governed by a community Board of Directors composed of individuals representing the towns of Warren, Waitsfield, Fayston, and Moretown. Healthcare providers at the health center include the Mad River Family Practice (owned by University of Vermont - Central Vermont Medical Center), a physical therapist, an alternative healthcare practice and mental health providers.

Other health care services available to local residents include:

- **Ambulance.** The Mad River Valley Ambulance Service provides 24-hour emergency response throughout the Mad River Valley.
- **Dentist.** Valley Dental Associates provides full service general dentistry.
- **Hospitals.** Hospitals serving Mad River Valley residents are University of Vermont - Central Vermont Medical Center in Berlin, Gifford Memorial in Randolph, Fletcher Allen Health Care/University of Vermont Medical Center in Burlington and the Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire.

- **Urgent Care.** University of Vermont - Central Vermont Medical Center operates several ExpressCare facilities locally: two in Berlin, and one in Waterbury Center. The walk-in care clinics are open 7 days per week for adults and children with minor illnesses or injuries who are unable to get an immediate appointment with their primary care doctor. No appointment is necessary.
- **Pharmacy.** Kinney Drugs is a community pharmacy with full prescription drug services and an on-site pharmacist.
- **Central Vermont Home Health and Hospice.** Home health care services which include therapy (physical, speech, occupational) and), counseling, and consoling the elderly; homemaker service (meals, shopping, housekeeping); Hospice consoling and counseling the terminally ill and their families; and child birthing classes.
- **Vermont Department of Health.** Well Child Clinic (preschool immunization), WIC Programs (prenatal and preschool nutritional programs).
- **Washington County Mental Health.** 24-hour emergency service, out-patient clinic, substance abuse programs, job placement, day and hospital-based programs, day hospital and resident programs.
- **Evergreen Place.** Evergreen Place is located at 5305 Main Street, Route 100 in Irasville, and is one of Downstreet Housing & Community Development's subsidized rental apartments in which the rent charged is equal to 30 percent of the household's adjusted income. Evergreen Place offers 17 one-bedroom apartments and one two-bedroom apartment for seniors.



Day Care. Presently, only two home child care operators are registered in the Town—a reduction from past years, when as many as five home child care services were registered in Waitsfield. Currently, six licensed facilities operate in Waitsfield, including the after-school program which uses the elementary school. It is not known how adequately child care needs are now being served.

Senior Services. The Mad River Valley Senior Citizens Inc. is a non-profit corporation which operates to coordinate and provide services for the elderly population of Fayston, Moretown, Warren and Waitsfield. Funding is provided through a combination of local, state, and federal grant funds and donated time and energy of Valley residents. The most important program provided to seniors is the operation of the Senior Center and the senior meals program, both of which operate out of Evergreen Place.

Social Services. Most social services are provided by state government through a variety of programs coordinated through the Agency of Human Services. In addition to state

programs, all of which are delivered from offices located elsewhere in Washington County outside the Mad River Valley, several private non-profit organizations provide varying types and levels of assistance to local residents. Several of these Central Vermont (“CV”) service providers receive annual appropriations from the Town.

- Circle
- CV Adult Basic Education
- Capstone Community Action Council
- CV Council on Aging
- CV Economic Development Corp.
- CV Home Health & Hospice
- Family Center of Washington County
- Good Beginnings of CV
- Green Up VT
- Green Mountain Transit Agency
- MRV Health Center
- MRV Senior Citizens
- Northern VT RC&D Council
- People’s Health & Wellness Clinic
- Retired Senior Volunteer Program
- Sexual Assault Crisis Team
- VT Center for Independent Living
- Washington County Youth Services

In addition, the following two organizations are located within the Mad River Valley and provide assistance exclusively to Valley residents:

- Valley Community Fund, a non-profit organization serving residents of the Mad River Valley. Funded entirely through contributions, the Community Fund provides financial assistance to local residents experiencing financial hardship.
- Mad River Valley Food Shelf, coordinated by the Valley Clergy Council, distributes donated food and groceries to Valley residents in need of such assistance.

Cultural Organizations. Mad River Valley residents enjoy access to a wide range of homegrown cultural resources and events. While not directly supported by the Town on a regular basis, the following organizations provide a variety of performances and exhibits:

- Vermont Festival of the Arts, which, in cooperation with the Mad River Valley Chamber of Commerce sponsors an annual arts festival.

- Valley Players, a theater group operating out of the Odd Fellows Hall in Waitsfield Village.
- Green Mountain Cultural Center, which sponsors a variety of exhibitions, performances and classes in the restored round barn in Waitsfield.
- Mad River Chorale, a local chorus group.
- Phantom Theater, an experimental theater group based in a restored Warren barn.
- Skinner Barn, which hosts a variety of performances and events in a restored barn on the Common Road.
- Waitsfield Farmers Market, which not only provides a direct market for local farmers, cooks, artisans and crafts people, but also provides an opportunity for local residents and visitors to congregate and socialize.
- Yestermorrow Design/Build School, which has hosted public events and lectures for the local community since 1990.
- Madsonian Museum of Industrial Design.
- Big Picture Café and Theater.



In addition, several individual artists and businesses support a strong community arts culture. Artists studios, which often include display space, are located throughout town, although several are concentrated in Waitsfield Village. Musicians regularly perform at Mad Mountain Tavern, Shepherd's Pub, and the Big Picture Theater, which also functions as the Mad River Valley's only movie theater.

Community Center. A community center could serve as a gathering place and central recreation facility for The Valley's youth. It could also serve as a multigenerational facility that could serve as a recreational, social and cultural resource for a broad cross section of the community.

7.H Communications & Media

Waitsfield is served by both traditional and more modern forms of communication that inform the community and connect residents with each other and the wider world. In fact, most Mad River Valley residents have access to high-quality, modern telecommunications technologies.

Newspapers. *The Valley Reporter*, a weekly newspaper since 1971, is the Town's official newspaper for public warnings, notices, and announcements. Waitsfield also receives limited local coverage in the Times-Argus, central Vermont's daily paper based in Barre.

Other state and national papers are available through local outlets. Traditional newspapers have been largely replaced by online news media and statewide coverage.

Telephone Service. Waitsfield Telecom, Waitsfield's local, privately owned telephone company, was founded in 1904. In 1994 the company expanded to include GTE's former Central Champlain Valley service area, forming Waitsfield/Champlain Valley Telecom (WCVT). The company now has 72 employees and almost 5,000 access lines in the Mad River Valley.

Wireless Services. Because of local topography, cellular phone service remains spotty in certain areas in the Mad River Valley. New towers have been installed at Mad River Glen, Mt. Ellen, and in Fayston to improve service by the two largest providers, AT&T and Verizon Wireless.

Radio, Television & Cable. Because of the mountainous terrain, Waitsfield residents without cable or satellite service get limited radio and television reception. Waitsfield Cable, owned and operated by Waitsfield Telecom, has been serving the Mad River Valley since 1980. The company currently offers within its service area, for monthly fees, cable television, digital cable and radio, and pay-per-view options. Mad River Valley Television ("MRVTV"; Channels 44 & 45) is the Valley's designated public access station. MRVTV, on the air since 2000, provides community access to local airwaves and coverage of local government, school and community events. The station is managed by a board of directors, and maintains a studio and production equipment for use by community groups and individuals.

Town residents outside the cable service area have access to other wireless television services for the price of dish installation and a monthly service fee.

Internet & Web Services. Internet service is provided by Green Mountain Access, which was founded in 1997 as an affiliate of Waitsfield Telecom and has grown from a local ISP to a statewide company that offers many of the latest internet technologies. Residential internet services currently offered in town include dial-up access, high speed digital service lines (DSLs), roaming access, and web hosting. Local businesses, in addition, may also have access to dedicated (ISDN and T1) lines, frame relay services for higher speed service. Satellite providers also offer internet service.

Waitsfield Elementary School has access to on-line services and resources through K12net, an extension of Vermont's GOVnet, which supports local and distance learning programs. The Joslin Library also provides public access. The Town of Waitsfield has an official website that provides a wealth of information about town government, local businesses, community groups, and more.

7.I Recreation

The Mad River Valley offers a rich variety of recreation opportunities to year-round residents, seasonal home owners and visitors. A brief inventory of available facilities includes:

- Two major downhill ski areas;
- Two cross country skiing facilities;
- An 18-hole golf course;
- More than 60 tennis courts;
- An airport offering gliding;
- Several riding stables;
- Biking and mountain biking;
- A clean river system suitable for fishing, paddling, and swimming (the Mad River has been identified as one of Vermont's premier swimming resources) with many sites open to public access;
- Miles of trails, footpaths and old logging roads, including the Mad River Greenway in Waitsfield;
- Ball fields located at the privately owned Couples Club; and
- Several community recreation fields owned by the Recreation District in Mad River Park.



Public Facilities. Public recreation facilities in Waitsfield are limited, although in recent years the Town has expanded the number and type of facilities available. Existing facilities include:

- Ball fields and recreation facilities located at the Waitsfield Elementary School, which are available for public use during non-school hours and the summertime.
- Scrag Town Forest, consisting of 750 acres acquired by the Town (see Chapter 11). The forest offers back country pedestrian recreation opportunities. Access was enhanced in 2011-2012 with the creation of a small parking area and trail access at the end of Bowen Road and it was expanded and enhanced again in 2017 through the Scrag Town Forest Gateway Project.
- Wu Ledges Town Forest: 125 acres of conserved woodland, offering trails leading to an outstanding scenic vista from a rock outcropping that overlooks the Mad River and its confluence with the Mill Brook. A small parking area for these lands has been established at the end of Hastings Road, and the Conservation Commission is continuing efforts to identify and establish other access points.

- The Lareau Swimhole Park, constructed with the assistance of a VTrans enhancement grant in 2003, in addition to two adjacent parcels (former Austin and former Tardy properties) that provide less formal access to the Mad River.
- Lovett Park next to the Big Eddy Covered Bridge which serves as a public river/swimming access point.
- 7.3 acres at the Flemer Field Community Green off of Route 100 (the old polo fields) and the community orchard project that was planted in 2010.

Private Not-for-Profit Facilities. Another facility open to the public is the Couples Club, an eight-acre multi-purpose field located in the floodplain of the Mad River in Irasville which offers two baseball fields, a small pavilion and river access. The property is managed by the Couples Club, a private organization, and is exempted from property taxes by the Town on an annual basis. The Valley Little League has entered into a long-term lease with the Couples Club to ensure it will remain available for youth baseball.

The Skatium, an outdoor skating facility is located in Irasville and maintained by a not-for-profit organization. The Skatium has artificial ice and a Zamboni, but is susceptible to weather conditions due to the lack of a cover. The Skatium organization has identified enclosing the facility as a priority, which should be encouraged concurrent with efforts to improve the area's appearance, especially during non-winter months.

Trails. The Mad River Path system is an extremely popular path along the Mad River, recently expanded by the Mad River Path Association (a non-profit, membership-based organization) to include connections and trails elsewhere in the Mad River Valley. The Greenway is maintained through a partnership between the Mad River Path Association and landowners. Similar partnerships maintain a village path network and increasingly in uplands such as the Fayston Town Forest and other Town and private lands throughout the Valley. This network could form the core of what could eventually be a single pathway linking Irasville with Warren Village to the south and the Fayston Elementary School to the west, and linking Waitsfield Village with Moretown Village and Harwood Union Middle and High School to the north.

Some additional trails exist on the Scrag Mountain and Wu Ledges Town Forests, and the Conservation Commission is working with partners including the Mad River Path Association and the Mad River Riders to expand the official trail networks on those lands.

The Town would benefit from developing a Town trail system, starting with the Path connecting Irasville and downtown Waitsfield, where there is copious public engagement with important Valley businesses that support dining, shopping, and entertainment. New investment in these areas could increase opportunities for walking, biking, and public enjoyment of commercial areas in close proximity to each other and to natural resource areas including open space, natural wetlands, the Mad River, and wildlife habitat. It is crucial for the Town, in cooperation with its nonprofit partners, to continue improving

walkability and non-motorized access throughout Waitsfield, consistent with this Plan and the growth of the region's recreation economy.

An assortment of additional easements and license agreements for trails and paths around town have been made, although an extensive, integrated network has not been completed. Through continued partnerships with the Path Association and landowners, such a network could be developed in the future. In addition to trails, Class 4 Roads which are not maintained for year-round travel, as well as Town roads in year-round use, also provide popular recreational opportunities, especially in the Forest Reserve District, and could be included in the Mad River Path system. The Town and the Mad River Path Association should work with other recreation organizations to provide public information about the Town and Valley trails systems, to interpret and maintain trails throughout the Valley, and to adopt consistent, informative signage for residents and visitors.

Several miles of winter trails for skiers and snow-machines are maintained by the Vermont Association of Snow Travelers (VAST) on private land in Waitsfield and surrounding towns. Part of an extensive statewide network, the local trails are maintained by the local VAST chapter—the Mad River Ridge Runners.

Recreation Programs and Planning. The Town, together with Fayston and Warren, formed the Mad River Valley Recreation District in 1993. The purpose of the Recreation District is to support local recreation facilities and programs, and to identify and pursue opportunities to expand existing facilities or create new facilities. The District has provided funds to improve the Couples Club fields in addition to providing support to other private non-profit recreation organizations such as the Skatium. In 2017, they acquired 10 acres at the Mad River Park to construct an 80-space parking area and permanently secure several recreation fields for youth and adult sports. This area will continue supporting Valley-wide youth recreation opportunities and could be connected to the Mad River Path system with a trail around the Park.

7.J Goals

- 7.J-1** A full range of community services and facilities appropriate for a small town that are provided in a cost effective and environmentally sound manner without creating an undue burden on local taxpayers.
- 7.J-2** Facilities and services that reinforce the Town's land use, development, and natural resource protection goals and policies.

7.K Policies

- 7.K-1** Plan facilities and services to accommodate anticipated future growth and to avoid unreasonable burdens on the Town's taxpayers. To this end:
- 7.K-1.a** The scale, timing and location of development shall be controlled to ensure that the resulting demand for services and facilities does not exceed the municipality's ability to provide them; and
 - 7.K-1.b** In the absence of public facilities, the developer shall fund the cost of the facility(ies) needed to accommodate the new development unless the Town determines that the proposed development will provide community benefits which outweigh or offset the cost of the required facility(ies).
- 7.K-2** Coordinate the provision of facilities and services with the land use and development goals and policies outlined in this plan, including the reinforcement of growth centers. To this end:
- 7.K-2.a** Facilities that require regular access by the general public and are compatible with compact, mixed use development, such as municipal offices, post offices, community centers and fire stations, should be located in Waitsfield Village or Irasville;
 - 7.K-2.b** Facilities that do not require regular access by the general public, such as highway maintenance, or are not compatible with compact, mixed use development, such as solid waste transfer facilities, shall be located in appropriate centralized, nonresidential locations, preferably in the Industrial District or Limited Business District.
- 7.K-3** Provide services and facilities in an efficient and cost-effective manner while ensuring a high level of service. To this end:
- 7.K-3.a** Capital expenditures will be programmed to avoid sharp fluctuations in the property tax rate;
 - 7.K-3.b** Alternatives to the property tax to fund local services and facilities (including user fees, state/federal grants and loans, impact fees and negotiated exactions, special taxing districts, private foundations and assistance from non-governmental and/or local option taxes) will be used wherever practical, providing they do not place an additional burden on residents of limited financial means or undermine other policies of this plan;
 - 7.K-3.c** Wherever practical, services and facilities to address Valley-wide growth and development will be provided in conjunction with neighboring towns.

- 7.K-3.d Statewide efforts to restructure state educational funding to reduce the reliance on the local property tax are strongly supported.
- 7.K-4 Recognize the importance of making the most effective and efficient use of existing services, structures and facilities and utilities before expanding capacity or constructing new buildings or facilities. In the event a new building(s) is required, it shall be designed to reflect the community's historic and architectural heritage, a strong sense of permanence, and to serve as a symbol of civic pride.
- 7.K-5 Continue to use the General Wait House primarily for civic, community and cultural purposes, including public rest rooms, community meeting space, cultural activities, celebration of community history and heritage, and public information. To that end, restoration of the attached barns for one or more of these purposes is encouraged.
- 7.K-6 Maintain town funded emergency services, including fire and police protection, in a manner that continues their current level of service as the community grows. Explore opportunities to coordinate increased law enforcement services and efforts with other towns in the Mad River Valley.
- 7.K-7 Develop municipal wastewater systems to serve the Town center areas of Irasville and Waitsfield Village, in order to meet current needs as well as allow for additional growth in residential and commercial properties. Once constructed, the system capacity shall:
- 7.K-7.a Be allocated in accordance with the land use, housing, and economic development policies of this plan; and
 - 7.K-7.b Be managed, together with the operation of the facility, to ensure maximum protection of water quality in the Mad River and its tributaries.
- 7.K-8 Continue to maintain a municipal water system.
- 7.K-9 Explore opportunities for the Town to acquire land for conservation, recreation, and community facilities. Priority should be given to parcels which provide multiple values to the community.
- 7.K-10 Manage undeveloped and semi-developed town-owned properties, including Scrag Mountain and Wu Ledges Town Forests, the Lareau Swimhole, and other conservation and recreation parcels for the protection of ecological resources and sustainable use.

- 7.K-11 Support the efforts of trail organizations to create a network of walking and bicycling paths in the Mad River Valley, including extending the Mad River Greenway to link Waitsfield Village with Moretown Village to the north, and with Warren Village to the south. To this end, the Town will:
- 7.K-11.a Hold easements on segments of the path right-of-way;
 - 7.K-11.b Encourage inclusion of trails and pedestrian connections as part of local development review processes; and
 - 7.K-11.c Incorporating path segments into management plans for town-owned land.
 - 7.K-11.d Encourage and support information about trail networks, including safe, planned use of Town roads for walking and biking in the Valley-wide trails system.
- 7.K-12 Continue to work with the Mad River Valley Recreation District, Couples Club, and other organizations to ensure recreation fields remain viable and accessible to local residents and youth sports leagues.
- 7.K-13 Continue to encourage the efforts of VAST to provide an integrated network of winter recreation trails in a manner that does not adversely impact neighboring homeowners and the natural environment, and allow VAST trail use of Class 4 roads on a case-by-case basis to avoid conflict with other users of the road and neighboring residential properties.
- 7.K-14 Limit changes to the classification, maintenance, or use of Class 4 roads that would result in an increase of automobile use unless existing recreational uses are maintained or replaced or mitigated with comparable recreation opportunities. The upgrade and/or reclassification of Class 4 roads within the Forest Reserve District shall not be permitted to allow year-round vehicular access and land development.
- 7.K-15 Manage town cemeteries, and expand if needed, to ensure that burial opportunities will exist for the foreseeable future.
- 7.K-16 Continue to participate as a member of the Mad River Valley-Waterbury Solid Waste Alliance, including the alliance's efforts to reduce waste generation and provide environmentally sound waste disposal opportunities.
- 7.K-17 Encourage continued operation of the Valley Transfer Station in its present location, and encourage a privately-operated bottle redemption center in conjunction with the Transfer Station, or at a separate location in Irasville or Waitsfield Village.

- 7.K-18 Encourage public and private social service providers, including state, regional and local agencies and nongovernmental organizations, to continue providing services to local residents. To this end, the Town will continue to consider funding such organizations on an annual basis, and will support efforts to improve local delivery of such services through partnerships with local organizations.
- 7.K-19 Support the development and operation of a multigenerational community center within Irasville or Waitsfield Village.
- 7.K-20 Encourage the Mad River Valley Health Center to continue to meet the needs of local residents.
- 7.K-21 Integrate wireless telecommunications facilities (e.g. cellular) into the existing built environment.
- 7.K-22 Support the expansion of telecommunication service in the community, including broadband Internet access, and efforts to ensure greater public access.
- 7.K-23 Continue to work with and provide support to community arts and cultural organizations.
- 7.K-24 Support and continue to help fund Mad River Valley Television's (Channels 44 and 45) efforts to broadcast meetings of public interest.
- 7.K-25 Keep the Munn Field property in town ownership as a potential shared wastewater facility resource.
- 7.K-26 Encourage the creation of recreation facilities that foster fitness and well-being (e.g. fitness courses) in a manner that is integrated throughout the community.

7.L Tasks

- 7.L-1 Continue to work cooperatively with neighboring towns and the region on issues of mutual concern, and explore additional opportunities to share facilities and services with neighboring towns. [Town Administrator, Selectboard, Town Boards and Commissions]
- 7.L-2 Continue to support shared, privately-owned wastewater system framework to serve Irasville and Waitsfield Village. [Town Administrator, Selectboard, Study Committee]

- 7.L-3 Revise the Waitsfield Subdivision Regulations to include updated facility and infrastructure standards, including those related to stormwater runoff, wastewater disposal, impact on community services and facilities, and trails, sidewalks and pathways. [Planning Commission]
- 7.L-4 Prepare maps for the Irasville Village District depicting options for future public improvements, including roads, sidewalks, paths and park areas, and a town green/common. [Planning Commission]
- 7.L-5 Explore the adoption of stormwater regulations and other recommendations as a result of Ridges to Rivers study. [Planning Commission]
- 7.L-6 Assess the feasibility of on-going maintenance and renovation of Wait House. [Selectboard, Waitsfield Historic Society*]

8. Transportation

8.A Overview

Like many rural communities in Vermont, Waitsfield is not directly served by rail or a commercial airport. It is served by public transit and a regional bicycle/pedestrian network, but in a limited capacity. This creates challenges in terms of providing access to opportunities, goods, services, and other resources that improve quality of life and the characteristics that make Waitsfield a desirable place to live. Recognizing this dependence on the automobile, the Town should coordinate land use planning with traffic and transportation policies as a means of providing pedestrian connectivity, promoting transit, and ensuring traffic safety and efficiency throughout the community. This chapter examines the Town's transportation network, including state and local roads, traffic safety, and non-motorized travel and transit, and evaluates current conditions and issues relating to that network.

8.B Roads and Highways

State Highways. Primary access to the Town is provided by Route 100, which runs the length of the state and serves most tourist destinations along the eastern border of the Green Mountains. Route 100 links the Mad River Valley with Interstate 89 in Waterbury (Exit 10) and Middlesex (Exit 9), both approximately 10 miles to the north. It provides access to passenger rail service in Waterbury, as well as commercial air service and regional population and employment centers in Chittenden County and Montpelier. Route 100 not only serves town residents, but also provides the primary access to The Valley for visitors from Montreal and southern New England.

In addition to serving as the Mad River Valley's principal arterial highway, Route 100 functions as Main Street through Waitsfield Village and Irasville. This results in high traffic volumes during peak periods, as well as potential conflicts between through-traffic and turning movements at busy commercial intersections. It also impacts pedestrian and bicycle safety and raises concerns about efficiency within village centers, addressed in more detail below.

Access to Waitsfield is also provided from the west by Route 17, which crosses the Green Mountain Range over Appalachian Gap in Fayston, providing a link between Route 100 and Mad River Glen and Mount Ellen.

Town Roads. Waitsfield maintains around 30 miles of town roads, including 9.45 miles of Class 2 and 20.22 miles of Class 3 roads. A summary of road mileage by classification and function is included in Table 8-1 below.

Table 8-1 Waitsfield Road Classification

	Mileage	Function	Aid
State Highways (Rts. 100 & 17)	7.83	Arterial	Federal/Primary
Class 2 Town Highways	9.45	Collector	Federal/Secondary
Class 3 Town Highways	20.22	Local Access	Town/State
Class 4 Town Highways	7.16	Access/Recreation	Town
Legal Trail	0.60	Recreation	Town
Private Road		Local Access	Private
Total	45.26		

Source: Vermont Agency of Transportation, Town of Waitsfield General Highway Map, 2007

Class 2 and 3 roads are maintained for year-round travel. Class 2 roads serve as major collectors providing access between towns. These include the North Fayston Road, Bragg Hill Road, North Road and East Warren Road. Class 3 roads are all other roads except state routes that are negotiable in all seasons. In most instances, regardless of classification, the Town owns a 50-foot right-of-way (either as an easement or in fee simple) to accommodate town roads.

Waitsfield's roads are generally in good shape and adequate to accommodate current traffic volumes. While the Town does not maintain a formal, long-term road improvement program, the Selectboard, Town Administrator and Road Commissioner have attempted to schedule road maintenance in an efficient and cost-effective manner that minimizes year-to-year fluctuation in the municipal property tax rate.

Further, the Meadow Road bridge over the Mad River has been identified as deficient by the Selectboard and VTrans. A plan for the rehabilitation or replacement of that bridge has not been prepared, although such a plan should be developed.

Class 4 Roads. Unlike other town roads, Class 4 roads are not maintained for year-round travel. With important exceptions (e.g., minor portions of both Rolston Road and Old Center Fayston Road), most Class 4 road mileage is located within the Town's Forest Reserve District and provides recreational opportunities and access for traditional forest-based land uses (e.g., forestry, hunting). Presently, the Selectboard has three management strategies contained in its Road Policy for Class 4 Roads: municipal winter maintenance without improving the road to class 3 status (Rolston Road); allowing private winter maintenance

through a maintenance agreement (Palmer Hill Road); and no winter maintenance (most Class 4 roads).

Development on Class 4 roads may result in year-round use that require road upgrades and additional maintenance to allow for access by emergency vehicles. It can also interfere with recreational use. Options include regulating or prohibiting year-round development requiring such access, and/or downgrading selected Class 4 roads to legal trails. These options are especially important with regard to Class 4 roads that access properties located in the Forest Reserve District, where road policies should be consistent with the Town's land use policies.

One exception to this, however, is the Rolston Road, which is located entirely within the Agricultural-Residential District and serves to link Route 100 with the East Warren Road. Maintaining this road for year-round traffic is important for ensuring access between these two areas of town, especially in the event of damage to the Waitsfield covered bridge and/or the Meadow Road bridge.

Private Roads. With few exceptions, roads constructed within the past 30 years are privately owned and maintained. This relieves the Town of construction costs and long-term maintenance responsibilities; yet it is still necessary to ensure that private roads meet minimum public standards for emergency access and safety, and do not adversely affect the public road network.

Standards for the development of private roads are addressed in the Town's subdivision regulations. Such roads are typically maintained by a property or homeowners association, over which the Town has little control. Given that public access can also be denied, the Town should consider taking over private roads within designated village areas and/or where the entire community will benefit from an expansion of the Town road network. Currently, the Selectboard may take over private roads provided such roads have been constructed to town standards.

Road Maintenance. The maintenance of the road system is one of the Town's largest annual expenses, next to schools. In FY2016, the Road Department spent \$364,512, with only 19 percent of the total funded through state aid to highways. The Town maintains a road department staffed with three full-time employees, including the road foreman and two maintainers. They are also assisted by a volunteer road commissioner appointed annually by the Selectboard. The capital improvement program includes a schedule for replacing equipment. Reserve funds have been established to fund these acquisitions.

Flooding events in recent years have resulted in extensive damage to town road infrastructure requiring costly repair or replacement. The frequency of flash flooding, the likelihood of such events forecast to increase in frequency and magnitude as a result of

climate change, and the high costs associated with repairing or replacing undersized local transportation infrastructure, justify adoption of best practices for managing transportation infrastructure. Examples include new or replacement of existing structures using: (a) bridges; (b) larger diameter bottomless arch culverts; (c) culverts that are sized to convey a minimum Vermont Agency of Transportation design storm that allows for the passage of sediment, ice, and debris; and, (d) other road maintenance actions such as ditches and slopes, that are consistent with the Town road and bridge standards described in the most recent Vermont Transportation Agency's Handbook for Local Officials. In addition to increasing the resilience of infrastructure to high flow events, and thereby reducing costs in the mid-to-long-term, such actions can also provide important ecological benefits by eliminating barriers to the movement of fish and other aquatic organisms (as required by the Federal Water Pollution Control Act), as well as terrestrial animals within and along stream corridors that roads cross.

Scenic Roads. The following roads have been identified as scenic:

- East Warren Road
- North Road
- Common Road
- Floodwoods Road
- East Road
- Meadow Road
- Brook Road
- Cross Road
- Palmer Hill Road
- Rolston Road
- Sherman Road
- Main Street (Route 100) north of Waitsfield Village District to the Moretown town line and south of the Irasville District to the Warren town line.

These are also depicted on Map 7 in Appendix B. While the reasons for designating a road as scenic are specific to each individual case, common features that contribute to a road's scenic character, including stone walls and canopy trees, are often found within the right-of-way. As such, they are susceptible to detrimental road maintenance practices, including removal, to accommodate widening, ditching and/or paving. The Selectboard approved a scenic roads policy and created a Scenic Roads Commission in 2006 in order to formalize review of road repairs, maintenance and upgrades that might affect the scenic nature of the designated roads.

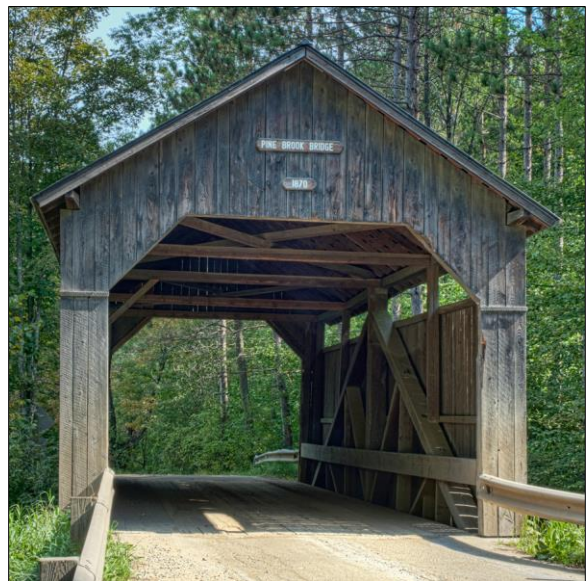
Of particular relevance to the preservation of scenic roads is the question of whether existing gravel roads should be paved. This frequently involves work beyond resurfacing, including widening, ditching and upgrading the subsurface. To balance road maintenance and traffic

safety needs with scenic preservation, a cost-benefit study that considers the aesthetic impacts of road improvements may be needed prior to the upgrade of a scenic road. Such analysis could be performed as part of a regular road program review.

The designation of scenic roads also plays an important part in the state review of applications for proposed projects with regard to the proposed project's impact on aesthetic impacts in an area (under the *Quechee Lakes* analysis). Development along these roads should be considered thoughtfully to ensure that the scenic character and visual integrity of viewsheds along scenic roads are not unduly adversely impacted.

Mad River Byway. The Mad River Byway is one of a collection of scenic Vermont roads recognized by the US Department of Transportation for their archaeological, cultural, historic, natural, recreational or scenic qualities. It winds 36.5 miles through Middlesex, Moretown, Waitsfield, Buel's Gore, Fayston, Warren and Granville via Routes 2, 100, 100B and 17. The Mad River Byway designation bestowed in 2006 provides the opportunity to apply for federal funding for corridor management initiatives. Recently funded projects include the development of information kiosks, interpretive displays, wayfinding signage, and an information brochure. This program is winding down but future initiatives could include economic development efforts, village enhancements, tourism and recreation promotion, and multi-modal transportation improvements.

Covered Bridges. Waitsfield maintains two covered bridges currently in use. Both are listed on the National Register of Historic Places. The most heavily used bridge, which crosses the Mad River in Waitsfield Village, is reported to be the longest continuously used covered bridge in Vermont. Built in 1833, the Big Eddy Covered Bridge was last renovated in 2016. Given its 184 years of service, and the more than 2,000 cars which cross it on an average day, this bridge represents one of the better infrastructure investments made by the Town over its long history. The Pine Brook covered bridge, built in 1870, has provided similar value.



8.C Traffic Conditions and Safety

Traffic Congestion. Waitsfield historically has been concerned about the high traffic volumes in town, especially along commercial sections of Route 100 where traffic volumes are at their highest (see Table 8-2).

Table 8-2 Average Annual Daily Traffic

Highway Segment	2015	2012	2010	2008	2006	2004	2002	2000
Route 17								
Fayston Town Line to Route 100	3,500	3,500	3,700	3,700	3,800	3,500	3,400	3,800
Route 100								
Warren Town Line to Route 17	5,300	4,800	4,800	5,100	5,300	5,300	5,800	4,700
Route 17 to Mad River Green	7,400	7,000	7,200	7,300	7,600	8,300	8,100	6,500
Mad River Green to Bridge Street	6,400	6,700	7,100	7,200	7,800	8,600	8,400	8,700
Bridge Street to North Fayston Road	6,400	6,300	6,200	6,100	7,000	7,100	6,400	7,100
North Fayston Road to Moretown Town Line	5,800	6,200	6,100	6,000	6,000	6,100	5,500	6,600

Source: VTrans 2015 (Route Log) AADTs State Highways, June 2016

The Town, through the memorandum of understanding with other Mad River Valley towns and Sugarbush Resort, has attempted to control traffic at key intersections during peak weekend hours throughout the ski season with the aid of traffic control officers from the Washington County Sheriff's Department. This has been an effective traffic management practice in past years.

Another strategy to ease traffic congestion is the construction of alternative routes, the benefits of which were made apparent with the construction of the alternative access to Mad River Green shopping center in 1999, which has served to reduce congestion at the access immediately across from Irasville Common. Maintaining a viable transit system and improving pedestrian and bicycle circulation would also reduce automobile congestion within Irasville and Waitsfield Village.

For large special events, traffic control arrangements may be required as a condition of the Public Festival Permit issued by the Selectboard under the Public Festival Ordinance. This program ensures that traffic safety is maintained during periods of uncharacteristically high traffic.

Finally, reviewing development proposals to ensure that they will not overburden the capacity of existing roads and intersections is an important traffic management tool. Generally, intersections outside of the Town's villages should be maintained at an above-average level of service (LOS) during the design hour. (LOS refers primarily to the time

required to navigate an intersection at peak and non-peak times of day.) A reduction to average or below average service may be appropriate in some instances within the villages. Private developers that propose projects that will exceed capacity may be required to mitigate the impact of their development and/or fund necessary improvements to increase road and intersection capacity.

Truck Traffic. Another growing controversy involving local roads is the conflict between large trucks traveling on rural town roads and the residential and scenic nature of those roads. This conflict is likely to intensify as more residential development occurs in rural sections of Waitsfield. According to trip generation rates, every single-family home can be expected to generate approximately 10 automobile trips per day on adjacent roads. Therefore, not only will residential development serve to intensify the interaction of commercial trucks and automobiles, the greatest cause of increased traffic on town roads will undoubtedly be residential development.

Truck traffic, moreover, raises special issues related to greater wear on public roads and the impact on the quiet character of residential neighborhoods. Due to load restrictions on several bridges, including both covered bridges, most truck traffic uses the Tremblay Road/North Road/Common Road/East Warren Road to access most of the Town east of Route 100.

Access Management. The frequency, location and design of highway accesses, or curb cuts, has a direct bearing on the safety and efficiency of both town roads and state highways. Several techniques for managing highway access, most of which may be applied through the Town's land use regulations, road policies, and ordinances include:

- Minimum sight distances at driveway or street intersections;
- Maximum number of driveways per lot;
- Mandatory shared driveways;
- Maximum curb-cut widths;
- Minimum and maximum driveway lengths;
- The installation of turning lanes;
- Easements to allow for future road extensions or connections to adjoining lots;
- Minimum or maximum on-site parking, shared-parking, and parking design;
- Minimum areas for loading and unloading; and
- Curbing, landscaping, and buffers to visually define and enhance access points.

Approval by the Selectboard is required for access onto town roads, and by VTTrans for access onto state highways. To receive approval, the access also must be consistent with local land use regulations. Continued attention to access management by the Development Review Board will balance the needs of motorists, pedestrians and bicyclists and improve safety and highway efficiency.

Traffic Calming. Techniques to maintain relatively slow traffic speeds in settled areas, enhance pedestrian safety, and improve the overall environment are often referred to as “traffic calming.” Such techniques include narrowing vehicle traffic lanes, widening or installing sidewalks, and adding medians, on-street parking, roundabouts, raised and/or textured pedestrian crosswalks, bulbouts, street trees and street furniture. Traffic calming is important in a variety of contexts:

- At busy intersections where pedestrian crossings may conflict with traffic flow and turning movements;
- Along Main Street (Route 100) within Waitsfield and Irasville, where traffic volumes are high, but pedestrian traffic and circulation is encouraged; and
- Along neighborhood or rural residential roads, to reduce traffic speeds and maintain the road surface.

The *2000 Waitsfield Street Tree Master Plan* establishes detailed planting plans for the Route 100 corridor through Irasville and Waitsfield Village. The *2006 Waitsfield Village Parking and Circulation Study* also identified traffic-calming measures. Sidewalks, crosswalks, curbs, and on-street parking areas need to be more clearly defined in Waitsfield Village, and established in Irasville, as called for in the *2007 Irasville Master Plan*. The *2014 Vermont Downtown Action Team Report* also reaffirmed the need for streetscape enhancements and the implementation of traffic calming measures, like pedestrian-scale lighting, well-marked crosswalks, street furnishings, and canopy trees. Traffic calming measures will be incorporated in the Town’s sidewalk project, described below, and should be considered in any improvements to Route 100 and connecting side streets within designated village areas and Irasville Village.

Parking. The Town, through its zoning regulations, requires that most land uses provide off-street parking. In some areas, including some properties in Irasville, this has resulted in excessive paved area. To alleviate this, the Town’s land use regulations were revised to provide the Development Review Board with greater discretion regarding the amount of parking required. While ensuring that private developments are able to accommodate the resulting demand for parking, greater use of shared parking facilities, including municipal lots, and on-street parking would create a more efficient development pattern. It may be appropriate to further reduce parking requirements where shared parking and/or transit service is provided.

Waitsfield Village, to a much greater degree than Irasville, has benefited from municipal parking (adjacent to the Masonic Lodge), shared parking (Bridge Street Marketplace) and on-street parking (on Bridge Street and Route 100). Additional opportunities for public parking should be explored in Waitsfield behind the Joslin Memorial Library and Federated

Church, behind the Village Grocery on Parsonage Lane, and on Old County Road (also known as Loop Road).

In Irasville, greater use of on-street and shared parking, coupled with an expanded sidewalk network, should be incorporated into future master planning. In both village centers, better wayfinding and improved sidewalk connections would make better use of existing parking areas and reduce the need for additional parking associated with new development. The development of a safe, convenient commuter lot in an appropriate location should be explored.

8.D Transportation Alternatives

Pedestrian and Bicycle Travel. Enhancing opportunities for local pedestrian and bicycle travel offers many benefits to the community. These include increasing opportunities for interaction between local businesses and customers; reducing traffic congestion, air pollution, and our collective reliance on non-renewable fossil fuels; fostering healthy living; providing recreational amenities for residents and visitors; and reinforcing historic, pedestrian-scale settlement patterns. As expressed in the recently published *2016 Mad River Valley Active Transportation Plan*, pedestrian and bicycle links also spur economic development benefits through increased tourism, business retention and growth, and encouraging local shopping opportunities.

Waitsfield has encouraged efficient and safe pedestrian travel within Waitsfield Village and Irasville. In 1993, the Town began planning with VTrans to upgrade and extend existing sidewalks, and to pave bicycle lanes, along Route 100 from Bragg Hill Road to the elementary school. Construction began in 2012 with the sidewalk now complete.

Additional extensions to link this sidewalk with nearby commercial and residential uses should be pursued, as called for in the Irasville Master Plan. As Irasville develops, pedestrian facilities, including interconnecting sidewalks and a non-motorized “greenway,” should serve as dominant organizational elements. To support non-motorized travel, it is important that safe pedestrian crosswalks be installed at appropriate locations along Route 100.

The Mad River Path Association has made significant progress toward the establishment of an interconnected network of walking, hiking and bicycling paths in the Mad River Valley, including a system of paths linking The Valley’s villages and schools. A key element of this network is the Mad River Greenway, a path that parallels the Mad River on the north end of Waitsfield. Already widely used as a transportation and recreation resource, when fully extended, the Mad River Path will serve as an important pedestrian and bicycle connection from Waitsfield Village to Moretown Village and Harwood to the north, Fayston Elementary School and area ski resorts to the west, and Warren Village to the south.

Several main sections of the path in Waitsfield have been completed. Continuing to work with the Mad River Path Association to extend the path from Moretown to Warren, through acquisition, easements or landowner agreements, is encouraged as the Town is supportive of the association's efforts to complete and permanently protect the Mad River Path.

Waitsfield also is fortunate to possess many miles of informal walking paths and trails. Class 4 roads provide excellent walking opportunities, especially in the Northfield Range where Class 4 roads such as the Bowen, Palmer Hill, East and Sherman Roads offer access to the largely undeveloped mountains. Also, the Dana Hill Road serves the Howe Block of the Camel's Hump State Forest.

In addition to Class 4 roads, many miles of private logging roads and trails are available to the public through the generosity of landowners. However, private roads are often at risk of being posted; public access may be prohibited as landowner-user conflicts arise.

In the future, the Town should consider formalizing many of these informal trails through the dedication of permanent easements as residents have expressed strong support for a linked trail network. The 2016 *MRV Moves Active Transportation Plan* lays out a vision for an integrated network, connecting on-road and off-road segments, with specific recommendations and steps the Valley towns can take to achieve such a network. The continuing subdivision of land poses both a risk to this informal network and an opportunity to obtain path easements as a condition to subdivision approval. In addition, public education to discourage inconsiderate recreational use of private trails (e.g., littering, leaving gates open), is important if local residents are to continue to benefit from the generosity of landowners.

Another method of formalizing trails on private property is the use of temporary easements; a practice the Vermont Association of Snow Travelers (VAST) has used with much success. The VAST network includes a number of winter-use trails along the Mad River north of Waitsfield Village, with links to the Green Mountain Range in Fayston and over Northfield Gap east of the river.

Local Transit. Waitsfield, together with other Mad River Valley towns, has long supported the operation of an effective transit service. The 2003 Short Range Transit Plan for the Central Vermont Region recommended five transit routes, two of which (a spine from Warren to Waitsfield and a commuter link) would be year-round. The three other routes would provide seasonal service to the ski resorts. The Mad River Valley Transportation Advisory Committee (MRVTAC), formed under the auspices of Central Vermont Regional Planning Commission, continues to work to bring year-round transit services to The Valley.

Several different entities have provided public transportation service in the Mad River Valley since 1999. In 2003, Green Mountain Transit (GMT) absorbed service in The Valley, which

was named Mad Bus in 2001, and GMT continues to run it today. They provided year-round service connecting Warren, Waitsfield, and Lincoln Peak from October 2003 until April 2005, at which time it was scaled back to seasonal service from December to April due to low ridership. Since 2005, GMT has sought funding for a year-round commuter route between the Mad River Valley and other central Vermont communities but its requests have yet to be funded.

The GMT Mad River Valley Service winter ski season route operations are funded through federal, state and local funds. Approximately 85% of the local funds come from Sugarbush and the remainder comes from contributions from local establishments. The numerous Mad Bus routes, all free of charge, serve visitors and residents in the Mad River Valley who seek alternative transportation to work, play, or shop.

GMT also provides medical transportation service to those who qualify either for Medicaid, Elderly and Disabled funds, or both. GMT collaborates with area organizations, such as the Central Vermont Council on Aging, to offer rides for medical treatment, meal site programs, senior center, and shopping trips through volunteer drivers and/or cab service.

Additional commuting options for Waitsfield residents can be found on the State of Vermont's commuting and ridesharing resource, Go Vermont (<http://www.connectingcommuters.org/>). Go Vermont is a free matching service designed to connect commuters interested in a variety of ridesharing options including carpools and van-pools.

Rail and Air. Amtrak passenger rail service to several New England cities, New York City and Washington D.C. is available in Waterbury Village and Montpelier. The nearest air passenger and freight services are located at the Burlington International Airport in South Burlington, and the state-owned E.F. Knapp Airport in Berlin. The Warren Airport—a private, seasonal airport in Warren used primarily for recreational purposes, including commercial soaring—also provides air transportation options.

8.E Goal

- 8.E-1 A safe, efficient, convenient, and environmentally responsible transportation and multi-modal network accessible to all Waitsfield residents, visitors, and businesses.

8.F Policies

- 8.F-1 Pursue a program of multi-modal transportation planning which integrates road and infrastructure improvements with land use, housing, economic development

and resource protection goals and policies, and which is coordinated with surrounding towns and the region.

- 8.F-2 Maintain covered bridges for continued use in their present locations.
- 8.F-3 All public and private roads and driveway intersections should be maintained and constructed in accordance with applicable local and state laws, including the Vermont State Standards (VSS). As provided in the VSS, road and highway improvement projects shall be designed in a manner that is sensitive to the social and environmental context of the highway segment.
- 8.F-4 Support transportation improvements that enhance and increase the appeal of the community to visitors, new business operations and residents. Improvements within village centers shall be designed in a manner that reinforces the scale, context and character of the village(s), promotes safe pedestrian and bicycle circulation and incorporates traffic calming. Encourage tree plantings, green strips, crosswalks, and sidewalks, particularly in Waitsfield Village and Irasville.
- 8.F-5 Promote the safety and efficiency of state highways and town roads through appropriate traffic control strategies, including continued use of traffic control officers during peak periods during large events and activities that generate high traffic volumes.
- 8.F-6 Significant capital improvements should be scheduled in advance through the capital budgeting process.
- 8.F-7 Prohibit development and land uses that would unduly adversely impact traffic safety, the condition of town roads or over-burden road capacity unless appropriate mitigating actions can be implemented.
- 8.F-8 Ensure that expansion of the Town's road network occurs in an integrated and coordinated manner; specific road connections should be identified and pursued by the Town in conjunction with private developers.
- 8.F-9 Scenic roads should be maintained to protect, to the extent possible, those features located within the right-of-way, which contribute to the roads scenic features (e.g., canopy trees, stone walls, viewscapes).
- 8.F-10 Development within scenic road corridors should be designed to protect and harmonize with identified scenic features within those corridors (e.g., open fields, ridge lines and hilltops, historic structures or districts), and should not have an

undue adverse effect on the scenic and natural beauty of the area. Protection measures shall be implemented through the Town's land use regulations.

- 8.F-11 Reclassify Class 4 roads, or substantially upgrade such roads, to make them accessible to automobiles on a year-round basis, only if such upgrade does not result in the loss of existing recreation values and is in accordance with the Town's adopted Class 4 Road Policy. The upgrade and/or reclassification of Class 4 roads shall not be permitted to allow year-round vehicular access and land development within the Forest Reserve District.
- 8.F-12 Provide and maintain an interconnected network of sidewalks and other pedestrian and bicycle paths in Irasville and Waitsfield Village, including incorporation of identified road and sidewalk connections into development and subdivision plans. New development shall provide such sidewalks and paths to be connected to existing or planned facilities.
- 8.F-13 Continue to support the creation of an integrated walking path network—through acquisition, easements, landowner agreements, or other approaches— linking Waitsfield Village and Irasville with Mad River Valley schools, the village centers of Warren to the south and Moretown to the north, and other community centers and resources, including the Lareau Swimhole, Skatium, and Harwood Union Middle and High School, as part of the transportation and recreation plan for Waitsfield and the Mad River Valley. The 2016 *MRV Moves Active Transportation Plan* should be used for guidance when developing this network. To this end, the efforts of the Mad River Path Association are strongly endorsed. An off-road path along Route 100 and the Mad River are a priority.
- 8.F-14 Support the continued operation of a dependable and affordable transit system linking Waitsfield Village and Irasville with the Mad River Valley's ski areas and regional population and employment centers. To this end, shelters and designated stops, sidewalks, and park & ride facilities within village centers should be created and/or expanded.
- 8.F-15 Support flexibility in the Town's land use regulations for parking lot design, parking space sizing, and space requirements to promote compact parking footprints. Consider requiring pervious surface for parking that will be used infrequently or only at peak times.
- 8.F-16 Support parking management strategies that focus on the utilization of existing parking infrastructure instead of its construction.

- 8.F-17 Continue to coordinate transportation planning with other Mad River Valley municipalities and the Central Vermont Regional Planning Commission with priority for the following routes: Waitsfield/Warren, Waitsfield/Moretown, Waitsfield/ Montpelier, and Waitsfield/Waterbury.
- 8.F-18 Involve landowners likely to be affected by major transportation construction projects early in the project planning process.
- 8.F-19 Use road maintenance practices that factor in the frequency of flash flooding, the increased frequency and magnitude of high storm flows resulting from climate change, and the high costs associated with repairing or replacing undersized transportation infrastructure. Road maintenance practices shall incorporate road and bridge standards from the most up to date Vermont Agency of Transportation's Handbook for Local Officials (The Orange Book) and the guidelines from the Vermont Better Roads Program, which promote the use of erosion control and maintenance techniques that save money while protecting and enhancing water quality.
- 8.F-20 Promote traffic calming measures to control vehicular speeds on Route 100 through Irasville and Waitsfield Village, such as raised pedestrian crossings, curb extensions (or bulbouts), or street trees.
- 8.F-21 Support appropriate signage for trails and paths.

8.G Tasks

- 8.G-1 Continue regional transportation planning through the Mad River Valley Planning District, the Central Vermont Transportation Advisory Committee (TAC), and Central Vermont Regional Planning Commission. [Planning Commission, TAC representative, town MRVPD representatives, Selectboard]
- 8.G-2 Complete the planned construction of the Route 100 sidewalk. [Planning Commission, MRVPD representatives, Selectboard, Mad River Path Association*]
- 8.G-3 Work with other Mad River Valley towns, CVRPC, and VTrans to ensure that the function of Route 100 as a primary road is supported and that corridor issues are addressed in a cooperative manner. [Planning Commission, Town TAC representative, Selectboard]

- 8.G-4 Develop a clear class 4 road policy which identifies under what circumstances such roads may be upgraded, maintained and/or reclassified in accordance with the policies set forth above. [Selectboard, Planning Commission]
- 8.G-5 Encourage, through the development review process, the dedication of easements to permanently protect pathways and trail connections for non-motorized use. [Planning Commission]
- 8.G-6 Work to ensure that the Green Mountain Transit system is continued and expanded, as needed. [Planning Commission, Town TAC representative, MRVPD*, Selectboard]
- 8.G-7 Implement bike and pedestrian route signage and pavement markings for major and minor on-road network, as detailed in the 2016 *MRV Moves Active Transportation Plan*. [Planning Commission, Selectboard]
- 8.G-8 Evaluate truck circulation within the community and consider policies or actions to prevent or mitigate adverse impacts, including designated truck routes. [Road Commissioner, Selectboard]
- 8.G-9 Prepare and implement an updated traffic calming plan for Waitsfield Village and Irasville that incorporates a complete street approach. [Planning Commission, Selectboard, Tree Board]
- 8.G-10 Enforce speed limits. [Selectboard, Constable]
- 8.G-11 Identify, develop, and implement parking management strategies that focus on the utilization of existing parking infrastructure or alternative modes of transportation instead of new construction. [Planning Commission, Selectboard, MRVPD, Town TAC representative]
- 8.G-12 Develop and update an inventory of public parking areas and identify maintenance and improvement strategies for access, circulation, stormwater infrastructure, capacity, shared use, and other improvements. Assess potential park & ride facility locations. [Planning Commission, Road Commissioner]
- 8.G-13 Conduct a vulnerability assessment for the Town that identifies and maps road segments at high, medium, and low risk from climate impacts, and develop and implement operations and maintenance strategies that lessen those impacts, such as more frequent cleaning of storm-drains, debris removal, improved plans for weather emergencies, and performance monitoring. [Road Commissioner, Selectboard]

- 8.G-14 Continually monitor, inspect, and improve dangerous roadway features including narrow lanes, limited shoulders, sharp curves, exposed hazards, pavement dropoffs, steep slopes, and limited clear zones along roadsides. [Road Commissioner, Selectboard]
- 8.G-15 Investigate and actively pursue grant funding opportunities that will help improve and enhance the transportation network and multi-modal systems, including design, maintenance, and traffic calming measures. [Planning Commission, Selectboard, Town Administrator]
- 8.G-16 Ensure the Town works closely with the Vermont Agency of Transportation in their access permit process to preserve the safety and mobility along State Highways, and to maintain community character. [Selectboard]
- 8.G-17 Encourage businesses and other destinations to install bicycle racks. Evaluate and propose changes to the land use regulations needed to facilitate the installation of bike racks. [Planning Commission, Selectboard]
- 8.G-18 Explore establishment of a transportation reserve fund to provide matching funds for priority projects as opportunities arise. [Planning Commission, Selectboard]
- 8.G-19 Install and maintain safe, well-marked bicycle lanes along Route 100, Route 17 and, to the extent practical, along paved class 2 town roads. [Road Commissioner, Selectboard, Town Administrator]
- 8.G-20 Develop a plan for the rehabilitation or replacement of the Meadow Road bridge over the Mad River, which has been identified as deficient. [Road Commissioner, Selectboard, Town Administrator]

9. Energy

9.A Overview

Historically most of Waitsfield's energy needs were met locally—forests were felled for fuel, the Mad River was dammed for hydropower, and the annual harvest relied on the physical labors of man and beast. Twentieth century modernization, in the form of the electric light bulb and the internal combustion engine, transformed local energy consumption. Rural electrification connected the Town to an expanding power grid, and an ever-growing reliance on fossil fuels for home heating and cooling, electricity, and transportation linked the Town to the global energy market.

International events, disruptions in oil supplies, and the rising costs of gasoline and heating oil are harsh reminders that such heavy reliance on these finite energy sources is not sustainable. Local businesses and residents of limited means are especially vulnerable to market conditions and fuel shortages. The cost of energy derived from fossil fuels has and will continue to increase as we move toward and pass peak production of oil and gas reserves. In addition, foreign fuel sources are unstable, and subject to huge price swings and supply shortages beyond our control.

Recognition of the threat of climate change has increased in the last ten years. Current patterns of energy consumption are widely understood to produce emissions that contribute to global warming. As a result, there is heightened interest nationally and statewide in the development of solar, wind and other low-emission, renewable energy resources and more fuel efficient and alternative fuel vehicles. Motor vehicles are the state's largest source of toxic and carcinogenic air pollutants. Based on annual per capita vehicle miles traveled, the average vehicle emits around a half ton of pollution each year. Vehicle emissions, even at low levels, pose a threat to local health, contribute to acid rain, and can cause widespread damage to crops and forests. Over the past decade, an increasing number of electric and flexible fuel vehicles have come on the market as viable alternatives to the traditional combustion engine.

Reliable, affordable, and sustainable sources of energy are vital to Waitsfield's economy, social wellbeing, and future development. At present, factors influencing energy cost and availability are largely beyond the control of the local community. The Town's energy future is inextricably linked with energy policies and economic forces at the state, federal, and international levels. Waitsfield, however, can influence the community's energy outlook by taking steps to:

- Promote energy conservation and increased energy efficiency, e.g., through building energy audits, weatherization and equipment replacement;
- Encourage or require lot layouts and building siting, design and construction techniques that maximize access to onsite renewable energy resources and incorporate emerging technologies;
- Diversify our local renewable energy portfolio beyond wood, to include appropriately sited solar, hydro, and wind power development; and
- Provide safe and convenient alternatives to automobile travel for local trips.

9.B Energy Supply and Demand

Overall energy demand continues to increase despite rising energy costs, and increased energy efficiencies resulting from technological improvements. This is largely due to the amount of driving we do (transportation fuel consumption) and an increase in the electronic appliances, equipment and gadgets we use (electricity use). Statewide energy consumption is tracked by the Vermont Department of Public Service and Efficiency Vermont. The department updated the state's comprehensive energy plan, "The Vermont Comprehensive Energy Plan", which was adopted on December 15, 2011. Local energy consumption is tracked annually to a limited extent by the Mad River Valley Planning District.

Electricity. Green Mountain Power Corporation (GMP), a subsidiary of the Québec energy company Gaz Métro, is the second largest electric utility in the state and the primary supplier of electricity to the Town. GMP serves all of Waitsfield except for a small area along and Airport Roads, which is supplied by Washington Electric Coop.

GMP acquires energy from a variety of traditional and renewable sources, including HydroQuebec and the Vermont Yankee nuclear facility. Vermont finalized negotiations with HydroQuebec in 2010 for a power purchase agreement that will provide nearly one-third of the state's energy needs through 2038. This agreement will ensure a future supply of relatively low-emission electricity to the state, at prices that are competitive with those in neighboring states. As this plan is being written, the future of Vermont Yankee is less certain. Initially scheduled to close in 2012, Vermont Yankee recently received a federal license renewal to extend its operations through 2032. Entergy Corporation, the plant's current owner, is challenging the state's legal authority to require plant closure in 2012.

GMP is actively pursuing alternative sources of electricity to offset anticipated lost power generation from the eventual closure of Vermont Yankee, and to strengthen its renewable energy portfolio, as outlined in its 2007 Integrated Resource Plan (IRP). GMP has since signed an agreement to purchase power from the Seabrook nuclear plant in New Hampshire and is actively developing other sources, including in-state renewables. GMP recently made

an offer to purchase Central Vermont Public Service (CVPS), the state’s largest utility, subject to Vermont Public Utility Commission (PUC) approval.

The primary transmission line serving the Mad River Valley is a 34.5 kV line that enters Waitsfield from Northfield, in the vicinity of the Northfield Gap Road. Power is distributed locally through a substation in Irasville (#39) that serves nearly three thousand meters. The local system was last upgraded in the 1980s and has some remaining reserve capacity—no major transmission or distribution system improvements are planned over the next five years.

GMP does plan to replace existing electric meters with digital wireless “smart meters” through its smart grid program, GMPCconnects. When GMPCconnects is up and running it will use fiber optic cable and digital technology to relay information back and forth between individual customers, Green Mountain Power, and electric grid components – including information about equipment performance, electric demand and use. GMP has also installed three public charging stations for electric vehicles in Vermont (the closest in Montpelier) under a pilot program, “GMPEV”, to promote statewide electric vehicle (EV) infrastructure. Information is available to communities on station siting and permitting considerations and suggested performance criteria. A local initiative, entitled MRVEV, is exploring the possibility of creating an all-electric vehicle car share in the Mad River Valley.

Total electricity demand in Waitsfield varied between 16,000 and 16,500 megawatt hours (MWh) annually from 2004 through 2008. Waitsfield accounts for 25% of the Mad River Valley’s electricity consumption, and 18% of the county total. Local demand is evenly divided between residential and commercial uses. Average household consumption in 2008 was 7,003 kWh—down 3% from 2004, in part due to reported efficiency savings. The Town’s peak electric load occurs during the winter months, indicating that a number of buildings still rely, at least partially, on electricity for heating (2009 Mad River Valley Energy Study, Vermont Renewable Energy Atlas). Electricity remains the most costly form of space heating, with propane now running a close second (VT Fuel Price Report, May 2011).

Fuel. The Mad River Valley Planning District recently compared 2008 electricity and transportation energy consumption for each town by calculating the equivalent in MWh of fuel consumed. Waitsfield’s transportation fuel consumption equaled 35,040 MWh—more than twice its electrical consumption (2010 MRVPD Annual Report). This underscores the fact that our collective reliance on motor vehicles, and our individual driving habits, are in large part responsible for much of our energy consumption and associated environmental impacts.

Vermont has no petroleum infrastructure, and relies on external sources for transportation and most home-heating fuel supplies. Three local oil and gas distributors supply Waitsfield residences and businesses. Fuel prices continue to fluctuate, but have increased dramatically

over the past year – especially for regular unleaded gasoline (36%) and heating fuel oil (35%)—while the federal government has proposed cutting home heating assistance for low income households (LIHEAP) by 50% in FY12.

Available data indicate that over the past two decades Waitsfield households have increased the number of vehicles they own and the number of per capita miles they drive (Table 9-1). The US Bureau of Transportation Statistics reports that the number of registered vehicles in Vermont rose by 6% while the total miles driven by Vermonters increased 16.6% from 1998 to 2007. Light trucks (pick-ups, vans and sport utility vehicles), with lower fuel efficiency than most automobiles, now comprise a larger percentage of vehicles on the road. This suggests that our aggregate fuel efficiency is decreasing, leading to increased transport fuel consumption and fuel emissions.

Table 9-1: Waitsfield Households by Number of Vehicles

	1990		2000		2010		2015 Estimate	
0 Vehicles		2%	30	4%	39	5%	44	6%
1 Vehicle		38%	245	33%	287	36%	250	33%
2 Vehicles		41%	349	48%	360	45%	339	43%
3+ Vehicles		19%	110	15%	110	14%	153	19%

Source: US Census (2010 from American Community Survey and 2011-2015 American Community Survey 5-Year Estimates)

Table 9-2 shows that the overwhelming majority of employed town residents (81%) commute to work alone – and that the number of single drivers has increased steadily since 1980, while the number of local carpoolers has declined. The average estimated commute time for Waitsfield workers is now around 21 minutes (American Community Survey, 2005-09). There are few alternatives available; public transit serving the Mad River Valley runs only during winter months. Travel between home and work accounts for a significant portion of local transportation energy consumption—a characteristic of most rural communities in the United States. Given rising fuels prices, this also suggests that transportation costs represent a significant and increasing burden to many local households.

Table 9-2: Mode of Travel to Work for Waitsfield Residents

	1990		2000		2010		2015 Estimate	
Work at Home	107	13%	100	10%	107	11%	160	15%
Drove Alone	577	71%	723	74%	769	76%	746	71%
Carpool	90	11%	104	11%	65	6%	86	8%
Transit	8	1%	0	0%	17	2%	0	0%
Walk	27	3%	40	4%	37	4%	44	4%
Other	3	0%	10	1%	12	1%	8	1%

Source: US Census (2010 from American Community Survey and 2011-2015 American Community Survey 5-Year Estimates)

Census data also provide limited information on the types of fuel used by town residents for home heating (Table 9-3). The data suggest a major shift during the 1990s from the use of wood as a primary heating source to the use of gas (bottled, tank or LP). By 2000, more than

50% of occupied housing units in town were heated with gas. Census estimates through 2009 suggest that this is still the case—half of Waitsfield’s occupied households heat with gas, while most others (30%) use fuel oil. Only 10% of local households now use wood as their primary heating source. The shift to gas for space heating over the past two decades reflects a statewide trend tied to new home construction, which is incorporating cleaner, more energy efficient fuels and heating systems. Many homes built in the 1960s and 1970s relied on inefficient electric heat, a practice that is generally no longer allowed under state energy standards for residential construction. These standards apply to all new homes and additions over 500 square feet.

Table 9-3: Waitsfield Home Heating Fuel

	1990		2000		2010		2015 Estimate	
Gas	144	25%	373	51%	402	50%	380	48%
Electricity	89	16%	86	12%	43	5%	49	6%
Fuel Oil / Kerosene	176	31%	198	27%	251	32%	166	21%
Coal	0	0%	0	0%	0	0%	0	0%
Wood	161	28%	77	10%	93	12%	184	23%
Solar	0	0%	0	0%	0	0%	0	0%

Source: US Census (2010 from American Community Survey and 2011-2015 American Community Survey 5-Year Estimates)

Although it remains an important supplemental source of heat for many Waitsfield households, the use of wood tends to fluctuate in relation to the price of oil and gas, and local availability. A 2009 survey conducted by the Community Biomass Project, which included Waitsfield households, indicates that the use of wood may be increasing in relation to rising gas and fuel oil prices—72% of survey respondents reported using cordwood during the 2008-09 winter season, averaging 4.3 cords per household. New wood stoves and furnaces, if properly installed and maintained, provide effective and efficient home heating. Outdoor wood furnaces are also gaining in popularity and, like woodstoves, are now regulated for air quality.

The economic, social and environmental consequences of such heavy reliance on fossil fuels have prompted state efforts to diversify Vermont’s energy portfolio to include in the mix more efficient natural gas systems, cogeneration systems that produce electricity and heat, and greater reliance on renewable energy sources including wood, wind and solar power.

9.C Energy Efficiency & Conservation

Energy conservation, by reducing energy consumption, increases available energy supplies. The state’s energy conservation efforts in recent years have very successfully focused on demand side management to increase energy efficiency and reduce overall energy demand. Efficiency Vermont, the state’s energy efficiency utility, offers a number of programs and financial incentives for local government, businesses and residents to increase energy efficiencies and reduce energy costs. The state has also enacted energy efficiency standards

for commercial and residential construction that are administered through the Vermont Department of Public Service.

The need for energy efficiency and conservation is also recognized locally. Widespread participation by local residents in the 2009 Vermont Community Energy Mobilization pilot project helped bring energy efficiency improvements and direct savings to almost seventy Mad River Valley homes. The all-volunteer project brought together dozens of local volunteers and was supported by free products, training and other resources provided by Efficiency Vermont.

Waitsfield has an Energy Coordinator and an Energy Committee, appointed in 2007, who have contributed significantly to local energy efficiency and conservation efforts. With the support of the Select Board, town staff and other parties, the Energy Committee is addressing energy efficiency needs in municipal buildings. Comprehensive energy audits of the Joslin Memorial Library, the General Wait House, and the Waitsfield/Fayston Fire Station led to energy-saving improvements at all three buildings. Re-insulation of the library attic, primarily funded by a Vermont Community Climate Change Grant, greatly diminished heat loss in that building. Energy Efficiency & Conservation Block Grants in excess of \$60,000, secured in 2010 through the American Recovery and Reinvestment Act, funded energy retrofit projects at the Town garage, fire station, and General Wait House.

The Town, in 2011, voted to establish its own energy reserve fund, with an initial allocation of \$5000, for future municipal energy efficiency and renewable energy projects. Prior to this, energy retrofits included in the capital budget were funded through annual operating funds.

9.D Renewable Energy

The potential for renewable energy resources in Waitsfield include woody biomass, wind, solar and hydropower. As a result of rising fuel prices, new technologies, and the ability of utility customers to sell excess power back to the grid via net metering, renewable energy systems have become more economically viable. Federal and state subsidies, including tariffs and tax credits, allow renewable energy projects to better compete with heavily subsidized fossil fuel and nuclear energy development.

Biomass. For much of Waitsfield's history, wood was the principal local source of household heat. Although only 10% of local households currently use wood as their primary heating source, it remains a relatively low cost alternative to fuel oil and natural gas. There is increased interest statewide in using woody biomass – including wood chips and pellets made from low grade wood and sawmill waste – for heating, electricity, and combined heat and power applications. There is currently one woodchip/pellet supplier in town.

Waitsfield also has a large amount of forested land which, under effective management, could provide a sustainable source of energy in the future. The Biomass Energy Resource Center has estimated the net available low grade (NALG) wood supply that can be sustainably harvested for each town in Vermont, using a model developed with the Department of Forests Parks and Recreation and the Vermont Center for Geographic Information. Under this model Waitsfield's "woodshed" was mapped at 7,325 acres, which could generate up to 18,000 green tons of low grade wood annually, with moderate harvesting on public land and little harvesting on private parcels less than 50 acres. This yield could potentially generate 126,000 BTU of thermal heat or 9,000 MWh of electricity annually.

The Community Biomass Project, a three-year research project of the University of Vermont, Vermont Family Forests, and the Northern Forest Alliance, conducted a more detailed analysis of potential woody biomass production in five Mad River Valley towns, including Waitsfield. According to project studies, the Town's total reported annual harvest of cordwood from 2005 through 2008 was 861 cords – an average of 215 cords (or 517 green tons) annually—representing 10% or less of annual low-grade wood production. Related modeling more conservatively estimated that the five Mad River Valley towns could sustainably generate between 23,000 and 50,000 green tons of low quality wood per year (2009 Community Biomass Project wood harvest and assessment reports).

Extensive harvesting, if not properly managed, can lead to environmental degradation and decreased forest health through nutrient loss, increased storm water runoff and soil erosion, stream sedimentation, water pollution, habitat loss, and the reduction in quality of the Mad River Valley's scenic viewshed. Woodlot management, and adherence to accepted state management practices for logging operations, reduce the adverse impacts of harvesting, and can enhance the capacity of local forests to meet a variety of community and landowner objectives.

The Energy Committee is discussing recent study findings regarding the Mad River Valley's woody biomass resource—i.e., firewood, chips, and pellet material—as distinct from timber saw logs. The data gathered will help the Town and communities throughout the region better manage this resource should the demand for local woody biomass increase. The committee is also investigating options to use a portion of the available fuel source to heat local buildings, municipal and otherwise. Several Washington County schools, including Harwood Union High School, have transitioned to wood (chip or pellet) heating systems under Vermont's "Fuels for Schools" program. Automated wood-fired systems are proving to be an affordable heating alternative to conventional systems in such settings.

Other potential, but more limited, sources of biomass energy include waste vegetable oil from local restaurants, grass and oil seed production. It is estimated that the 2,000 acres of

agricultural soil in town best suited for canola, soybean and sunflower oil production could yield more than 100,000 gallons of oil annually (Vermont Renewable Energy Atlas).

Hydropower. The Mad River and its tributaries once supplied water power for Waitsfield's earliest industries. Today these industries are gone, and while a hydro facility still exists downstream in Moretown, none currently operate in town.

There may be potential in the Town for small scale “micro-hydro” development that supplies individual users, but the Mad River lacks the deep gorges and falls that are necessary to support larger, commercial operations. Also, while hydropower is often cited as a clean energy source, the environmental impacts of dam construction, operation and management—including the effects of changing water levels on river flow, stream habitat, water quality, and adjoining riparian areas—are not as benign as once thought and are given greater consideration in state and federal dam licensing proceedings.

Solar. The contribution of solar energy to Waitsfield's total energy supply is growing. More structures are being sited, oriented and designed to incorporate passive solar construction techniques for space heating and natural lighting. Passive solar building design and solar thermal heating systems can significantly increase energy efficiencies and reduce costs. Until recently, the upfront costs of solar photovoltaic (PV) systems were generally too costly for the average homeowner, but emerging technologies and state, federal and utility incentives have made grid connected net-metered PV systems more affordable.

As of July 2011, the PUC had issued certificates of public good for 21 net-metered solar PV installations in Waitsfield, ranging in capacity from 2.5 to 142 kW, with a total reported generating capacity of 392 kW. This includes a certificate issued in 2010 (CPG NM-1133) for a 72.28 kW municipal system that was to be installed at the Town garage property on Tremblay Road, but did not go forward for a number of reasons, including changes to proposed power purchase agreements. The Energy Committee, who worked diligently on this project, continues to support a municipal renewable energy installation that will help offset energy costs.



Technological advances, including the incorporation of photovoltaic components in roofing and siding materials, may make solar power an even more viable source of electricity in the near future. An initial GIS analysis done for the Vermont Renewable Energy Atlas identified 968 building sites in Waitsfield that are potentially suitable for roof-mounted solar arrays

and 687 acres that may be suitable for ground-mount solar (Vermont Renewable Energy Access).

The siting of some existing solar installations, particularly along Route 100 (the federally designated Mad River Byway) has raised concerns about the impacts that such facilities can have on the Town's scenic, historic, and agricultural resources. As a result, the Planning Commission has developed community siting standards, for consideration by the municipality and the PUC, that are intended to avoid and mitigate potential impacts of facility development, while promoting new installations in appropriate locations.

Wind Power. Wind power, like hydro and solar power, is a low-emission energy source that is not depleted with use. Several years ago, the Vermont Department of Public Service conducted a statewide wind resource assessment, including the mapping of Vermont's most favorable wind resource areas. The optimum sites for large, commercial wind are high elevation areas with steady, moderate to high winds (14.5+ mph), in proximity to access roads and transmission lines. The report states that the two potential sites for wind development are in the Northfield Range near the transmission line and, based on wind speeds, in the Green Mountain Range to the west.

As a result of recent improvements in turbine technology and federal subsidies designed to offset purchase and installation costs, wind power is now receiving a significant amount of attention both locally and statewide for utility (commercial) and smaller-scale (up to 500 kW) net-metered electrical generation. Large, commercial wind power has received greater attention in Waitsfield as a result of a preliminary proposal by a private wind developer exploring the viability of installing a series of wind turbines along the Northfield Ridge. Waitsfield residents have expressed significant concerns regarding wind power's potential visual, health, environmental, and economic impacts. Wind development at the size, scale, and extent of the conceptual proposal for the Northfield Range highlight these concerns that the character of the Town would change dramatically with the installation of industrial wind turbines along the Town's ridgelines. In response to these concerns, the Planning Commission has developed the Waitsfield Community Standards (see 9.G) for siting renewable energy projects. These standards are for municipal and PUC consideration and specifically exclude wind and solar facility development at elevations over 1700 feet (the Forest Reserve District), consistent with long-established policies to limit all new development in high elevation areas.

9.E Energy Programs & Initiatives

Efficiency Vermont. Created by the PUC in 1999, Efficiency Vermont is the first statewide energy efficiency utility in the nation. Energy conservation programs are financed by the

state's electric utilities through an energy efficiency charge that is passed on to ratepayers. Current programs available to Waitsfield residents and businesses include:

- **Efficient Products**—energy efficient product information and discount coupons.
- **Vermont Energy Star ® Homes Program**—technical assistance and rebates to homebuilders and buyers who build energy efficient homes.
- **Commercial Energy Opportunities**—technical and financial assistance to commercial and industrial businesses to improve the efficiency of existing and new facilities.
- **Dairy Farm Program**—technical assistance, financial incentives and low-interest financing for energy efficient farm equipment.
- **Residential Energy Efficiency Program (REEP)**—technical and financial assistance to developers, owners and managers of low-income multi-family housing to reduce energy costs.
- **Income-Eligible Services**—technical and financial assistance to low-income Vermonters who are participating in the state's weatherization program to make additional electricity-saving improvements.
- **Emerging Market Initiatives Program**—identifies, evaluates and tests innovative energy efficiency technologies and practices to promote their use.

Energy Assistance Programs. Rising energy costs are a particular burden for individuals, households and homeowners with limited or fixed incomes. A number of energy assistance programs are available to income-eligible households; most are administered through the Central Vermont Community Action Council in partnership with state and federal agencies and area utilities. These include, but may not be limited to:

- **Fuel and utility assistance programs**—to help pay for seasonal and emergency heating fuel supplies and electrical service. Heating programs rely heavily on federal Low Income Home Energy Assistance Program (LIHEAP) appropriations. Emergency funds are also available through state-funded general assistance programs.
- **WARMTH program**—a statewide program that raises emergency funds through individual donations to assist households through direct payments to fuel suppliers and electric utilities.
- **Weatherization assistance programs**—available to owners or renters (with landlord participation) including free energy audits, free lighting and appliance upgrades, and renovation services. These programs are funded through federal weatherization programs, the state's weatherization trust fund, and utility assistance programs.

Federal funding for both fuel assistance programs and the community action agencies that administer these programs is at risk under current federal budget proposals. State and local government may be called on in the very near future to fill funding gaps, or to find other innovative ways to address the energy needs of local households.

Transportation. Limited transportation alternatives exist that allow Waitsfield residents to become less dependent on motor vehicles to get around. Since most of the Town’s energy use is related to transportation fuel consumption, every effort should be made locally to promote ride sharing, alternative modes of transportation, and less auto-oriented patterns of development. There has been considerable effort in the Mad River Valley to provide alternatives to the automobile for local trips, including extensions of the Mad River Path network, sidewalk projects along Route 100, the incorporation of bike lanes in planned road upgrades, and participation in the Safe Routes to Schools program. A local rideshare and volunteer driver program, and the development a centrally located park-and-ride facility that also serves as a transit stop, could help provide rides and facilitate carpooling for destinations within and beyond The Valley. Go Vermont, administered through the Vermont Agency of Transportation, provides state and local information on car-pooling, ride sharing, van-pooling, and special public transportation needs, as described in more detail in Chapter 8 (Transportation).

Land Use & Development Patterns. Compact, mixed-use development, as envisioned for Irasville, can reduce reliance on the automobile, vehicle miles traveled, and inherent system energy costs—including energy costs associated with maintaining roads and related infrastructure. Targeting economic and residential growth within areas intended for more concentrated development allows people to walk to their destinations, and makes public transit services between growth centers more economically feasible.

At the site level, a south facing building orientation and landscaping can effectively reduce energy demand. Clustering, and other energy efficient development patterns can be encouraged and/or required through local zoning and subdivision regulations.

Buildings & Equipment. In addition to energy codes for new residential, commercial and public buildings, there are a number of other programs offered by the state to promote municipal energy efficiency and the use of renewable energy resources, such as the School Energy Management Program and programs that support the conversion of school heating systems to wood-burning systems.

Municipal energy savings can continue to be realized through regular energy audits of municipal buildings and the use of “life cycle costing” practices that incorporate long-term energy savings in the fiscal analysis of facility construction and equipment purchases. Such costing methods often demonstrate that long-term energy savings more than offset the higher initial purchase or construction cost of energy-efficient equipment and building improvements. The Town’s new energy reserve fund will help cover the cost, and leverage other funds, for planned improvement projects.

Residential and commercial development that exceeds minimum state requirements can also be encouraged through incentives offered under local zoning and subdivision regulations and local energy assistance programs.

Renewable Energy. Waitsfield residents approved a motion in 2010 to solicit bids for a solar installation designed to meet the electricity requirements of town-owned properties. The Town was not able to take advantage of this opportunity but, with the support of town voters and the Town's Energy Committee, will continue to pursue the installation of one or more municipal renewable energy systems to help offset municipal energy costs. The Town's energy reserve fund can also be used for this purpose.

Recent discussions about alternative energy have also generated initial support for a community-based, group net-metered "solar orchard" as one way to increase the Town's capacity for local energy generation while addressing the visual impacts that typically accompany both large-scale and distributed power generation projects. The intent is to identify one or more parcels of land that could serve as primary locations for the bulk of solar power development in the community. This would offer landowners within environmentally sensitive areas, along scenic corridors, or with parcels that are too small or without access to enough sunlight, a chance to develop solar power resources while minimizing impacts on natural resources, neighboring property owners, or the community at large. Identifying appropriate locations poses significant challenges that will necessarily require community engagement and a long-term vision that is compatible with the type and location of development called for in the Town Plan.

Property Assessed Clean Energy (PACE) Program. In 2011, Waitsfield residents authorized the Town to establish a Property Assessed Clean Energy program that will provide low-cost loans to local homeowners for efficiency improvements and renewable energy system installations, to be repaid over time through an annual assessment on the property tax bill. Waitsfield residents reaffirmed this authorization with a subsequent vote at Town Meeting. As enacted by the state, this program is expected to get underway in 2012, to be administered by the Town in association with Efficiency Vermont (operated by the Vermont Energy Investment Corporation).

9.F Facility Siting & Development

Energy generation and transmission systems that are linked to the electrical grid are preempted from local land use regulation. They are instead regulated by the PUC under 30 V.S.A. Section 248 (Section 248 review). These include net metered distributed energy installations, as well more commercial, utility-scale generation, transmission and distribution facilities. The PUC must consider project conformance with municipal and regional plans prior to issuing a Certificate of Public Good.

Municipal Participation. The Town does not have statutory party status in PUC (Section 248) proceedings, but does receive notice of most applications (petitions) before the board. The Town may participate informally by providing comments on a proposed project, or request more formal status as an intervenor with rights to participate and appeal. Town participation in the state’s review process, based on adopted community standards under this plan, is the best way to ensure that local conservation and development objectives are considered and weighed by the Public Utility Commission. The Planning Commission has developed specific community standards for energy facility siting and development in Waitsfield, below in Section 9.G, that are to be considered in the municipal review of applications before the PUC, in crafting local regulations for off-grid facilities, and in the siting and development of municipal and community-supported generation facilities.

9.G Waitsfield Community Standards

Purpose. The purpose of these municipal energy policies is to promote the development of renewable energy resources and energy facilities in the Town of Waitsfield, while limiting the adverse impacts of such development on public health, safety and welfare, the Town’s historic and planned pattern of development, environmentally sensitive areas, and our most highly-valued natural, cultural and scenic resources – consistent with related development, resource protection and land conservation policies included elsewhere in this plan. These policies are to be considered in undertaking municipal energy projects and programs, in updating the Town’s land use regulations to address renewable energy development, and in the review of new or upgraded energy facilities and systems by the Town and the Public Utility Commission under 30 V.S.A. § 248.

General Standards. The Town will consider supporting the following types of energy development, in order of priority:

- Increased system capacity through state, utility and municipally-supported energy efficiency and conservation programs.
- Individual and group net-metered renewable energy projects, community-based projects, and other small-scale distributed renewable energy systems serving individual users, in appropriate, context-sensitive locations
- In-place upgrades of existing facilities, including existing transmission lines, distribution lines and substations as needed to serve the Town and region.
- New community-scale energy facilities, including new transmission and distribution lines, substations, hydro dams, wind and solar farms, co-generation facilities and biomass plants that are designed to meet the expected needs of the Mad River Valley communities

To the extent physically and functionally feasible, existing utility systems, including transmission lines, distribution lines and substations, shall be upgraded or expanded on site or within existing utility corridors before new facilities or corridors are considered.

The Town of Waitsfield will endorse or permit the development and installation of energy facilities that conform to community energy facility development and siting standards through participation in PUC (Section 248) proceedings or, where applicable, through local financing and incentive programs and regulations.

Public Health and Safety Standards

Use Classification. A small net-metered or off-grid renewable energy facility, including a solar array, small wind facility or combined system intended solely to serve an individual residence or business, will be considered an accessory structure allowed in all zoning districts in which structures are allowed.

Height. Zoning district height limitations under local bylaws, where applicable, should be waived for renewable energy facilities, as enabled under 24 V.S.A. § 4414.

- The maximum tower height for net-metered, or similar off-grid wind energy facility shall not (a) exceed 120 feet in total height, as measured vertically from the ground to the rotor blade tip at its highest point, or (b) extend in total height more than 30 feet above the existing tree canopy or other obstructions within 300 feet of the tower, whichever is greater.

Setbacks. Except for transmission and distribution lines and utility connections, all energy facilities – including substations, commercial, utility and net-metered generation facilities and accessory structures – must meet minimum setback requirements for the zoning district(s) in which they are located. In addition:

- All ground-mounted wind energy facilities must be setback at least 1.5 times the total facility height, as measured vertically from the ground to the rotor blade tip at its highest point, from all property lines, occupied buildings on adjoining properties, overhead utility lines, public and private rights-of-way and established trail corridors, unless easements are secured from adjoining property owners.
- Guy wires used to support wind towers are exempt from minimum district setback requirements, but shall be set back at least 20 feet from all property lines.
- A building-mounted wind turbine or solar panel must meet minimum setback requirements for the building on which it is mounted. The installation of a net-metered or similar off-grid energy system on a nonconforming structure will not constitute an increase in the degree or amount of nonconformance under local regulations.

- Setback requirements for renewable energy facilities may be reduced by the Town, as allowed under 24 VSA § 4414 as necessary to access a renewable energy resource, if the reduction in the setback distance is functionally necessary for system operation, represents the minimum necessary to allow for facility siting, and adverse impacts to adjoining properties, structures, facilities, and uses can be avoided through structural design and orientation, landscaping and screening, the use of glare and noise reduction techniques, or other accepted mitigation measures, or an easement is secured from the adjoining property owner.
- Facility setback distances from property lines, or from occupied structures in existence at the time of application, should be increased as necessary to mitigate identified public health and safety hazards or nuisances to adjoining property owners (e.g., noise, vibration, glare, shadowing and shadow flicker, ice throw).

Ground Clearance. The blade tip of any wind turbine shall, at its lowest point, have a ground clearance of no less than 30 feet, as measured vertically from the ground to the tip of the rotor blade at its lowest point.

Access. New generation facilities shall be sited in a manner that avoids or, to the greatest extent physically feasible, minimizes the need for new and extended access roads and utility corridors.

- Facility access should be provided from existing access roads where physically feasible, and access roads and utility corridors should be shared, to minimize site disturbance, resource fragmentation, the creation of additional edge habitat, and the introduction and spread of invasive exotic species.
- Identified impacts to public highways from facility construction, operation and maintenance, including highway improvements required to accommodate the facility, shall be mitigated by the developer.
- Public access to generation and transmission facilities, including substations, must be restricted as necessary to protect public health and safety.

Noise. Noise generated by any energy facility, including wind energy systems, shall not exceed the lesser of (a) 45dB(A) as measured at any property line, or (b) 5 dB(A) above the ambient sound level, except during a short-term event such as a utility outage or a severe wind storm.

Shadow Flicker. Wind energy facilities shall be sited or screened so that shadows cast by rotor blades will not result in shadow flicker on occupied buildings located in the vicinity of the project.

Burial. Utility controls and onsite line connections shall be wireless or buried, except at the point of connection with distribution lines.

Signs. Energy facilities and structures shall not be used for display or advertising purposes. Signs, except for owner and manufacturer identifications and safety warnings that do not exceed one square foot, are prohibited on all structures.

Lighting. In accordance with the Town's dark sky policy, energy facilities, including wind and transmission towers, are not to be artificially lighted except as necessary to meet Federal Aviation Administration requirements.

- An Obstacle Collision Avoidance System (OCAR) as approved by the FAA shall be used to avoid visual lighting impacts. If an OCAR cannot be approved, the FAA lighting alternative that results in the least amount of visual disturbance, and minimizes project visibility from public roads and vantage points, shall be incorporated in system design.
- Substation lighting should be the minimum necessary for site monitoring and security, should be cast downward, and must not result in light trespass or glare on adjoining properties.

Codes. Energy facilities must comply with all manufacturer specifications, state or industry safety and electric codes, and utility connection requirements. Documentation of code compliance may be required for facilities subject to municipal review.

Interference. Facility operation shall not reduce or interfere with television, radio, telemetry, or other telecommunications signals, including public safety communications systems.

Decommissioning and Abandonment. Generation facility permits or certificates must include provisions for system abandonment, decommissioning and site restoration including, for larger systems (e.g., >100 kW), required sureties for facility removal and site restoration.

Facility Siting Standards

Site Designation. Sites planned for or intended to accommodate planned energy facility development, including the location of existing and planned commercial and net-metered generation facilities and utility corridors, are to be shown on site development and subdivision plans reviewed by the Town.

- Incentives (e.g., waivers, density bonuses) should be provided under local regulations for energy efficient development, and for the incorporation of net-metered renewable energy facilities in new development.
- Waitsfield's bylaws also should be updated to preserve solar and wind access for existing and proposed renewable energy facilities to the extent authorized under state law.

Upland Exclusion Areas. All new energy facilities – including wind towers, transmission and distribution lines, accessory structures and access roads – are specifically prohibited in the Forest Reserve District, above 1,700 feet elevation, in conformance with long-standing town policies to limit all high elevation and ridgeline development due to its undue adverse scenic and environmental impacts. Any energy development over 1500 feet in elevation shall not result in undue adverse impacts to surface waters, ground water and mapped source protection areas, core forest areas, inventoried wildlife habitat and travel corridors, and mapped scenic resources.

Hazard Areas. With the exception of transmission and distribution lines, new energy facilities that are not attached to existing or permitted structures shall not be located in:

- Special Flood Hazard Areas (SFHAs), including floodways and floodway fringes identified on Flood Insurance Rate Maps (FIRMs) for the Town. Any allowed facility located within these areas must meet minimum National Flood Insurance Program (NFIP) requirements, as reviewed and permitted by the municipality or the state.
- Fluvial erosion hazard areas identified on Waitsfield FEHA maps.
- Very steep slopes, with natural (pre-development) grades in excess of 25%.

Conservation Areas. Energy facilities are to be sited to avoid where physically feasible, or to otherwise minimize encroachment and mitigate the adverse impacts of facility development on:

- Surface waters, wetlands and associated setback and buffer areas, as specified for all development under town bylaws.
- Primary agricultural soils as mapped by the USDA Natural Resource Conservation Service for the state.
- Significant wildlife habitat, including core habitat areas, and travel and migratory corridors, as identified from state inventories and data sets, local inventories, and site investigations associated with facility development.
- Onsite mitigation – e.g., through facility clustering, relocation, buffering and permanent conservation easements – is preferred. Off-site mitigation measures should be required where on-site mitigation is not physically feasible.

Agricultural Land and Open Space. Energy facilities, including solar arrays and other generation facilities, transmission and distribution lines, accessory structures and access roads are to be located on non-agricultural land or along field edges to avoid fragmentation of, and to minimize and mitigate adverse impacts to agricultural land and open fields.

Forestland. Energy facilities, including wind towers and other generation facilities, transmission and distribution lines, accessory structures and access roads are to be located

along existing tree lines, or on otherwise disturbed forestland, as necessary to avoid the fragmentation of, and to minimize and mitigate adverse impacts to productive timber stands and critical forest habitat.

- Forestland intended for commercial biomass production must be sustainably managed and harvested in a manner that preserves critical forest habitat and long-term forest health.

Visual Impacts. Applicants must demonstrate through site planning, facility siting and proposed mitigation that the visual impacts of new and upgraded energy facilities will be minimized as outlined in the standards set forth below:

- All energy facilities and accessory structures are to be designed and constructed of materials, colors, and textures that blend into the surrounding natural or built environment to the extent feasible. Wind towers, turbines and blades shall be of a neutral, non-reflective and unobtrusive color (e.g., white, off-white or gray).
- Facilities are to be sited to outside of, or to the edge of scenic views or viewsheds so that they are not a prominent focal point.
- The facility should not extend above the background horizon line.
- The facility should be screened from view through the use of existing topography, structures, vegetation or strategically placed tree, shrub and ground cover plantings that do not block distant views.

Designated Scenic Areas. The documented historic, rural and scenic character of the following areas in the Town of Waitsfield shall be preserved under any form of new energy development. New energy facilities sited within or as viewed from these areas shall not create a significant physical, visual, audible, or historically incongruous or incompatible intrusion into these areas. New facilities, including generation facilities greater than 20 kW, substations and transmission lines, are specifically prohibited within or as viewed from these areas unless significant associated impacts can be avoided, for example through facility siting, screening or line burial.

- Designated historic districts, including the Waitsfield Village Historic District, the Waitsfield Commons Historic District, and the Mad River Valley Rural Resource District, which are also listed on the National Register of Historic Places;
- Town-owned conservation land, including Scrag, Wu Ledges, Austin and Tardy parcels;
- Significant views within the Mad River Scenic Byway Corridor (Routes 100 and 17), a National Scenic Byway, as identified in the byway corridor management plan; and
- Views from locally designated scenic roads, as listed under Chapter 8 of the plan, or as subsequently designated by the Waitsfield Select Board.

Historic Districts, Sites and Structures. Energy facilities, including wind systems and solar photovoltaic (PV) or thermal panels, that are located in the Town's three designated historic districts, or on properties with federal or state-listed historic structures, are to be sited in accordance with current Secretary of the Interior's Standards for Rehabilitation, and the following:

- The historic character of listed properties and structures shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- Ground installations are preferred to roof-mounted installations on historic structures. Ground installations, to the extent functionally-feasible, shall be installed in locations that minimize their visibility, such as a side or rear yard, and be screened from view of public rights-of-way and adjoining properties.
- Roof-mounted systems may be placed on new construction, non-historic buildings and additions.
- Solar panels and other roof- or wall-mounted structures shall not be placed on primary building facades, including street-facing walls or roofs, unless there is no other suitable location on the site or structure.
- Roof- or building-mounted systems on an historic structure shall not physically damage the structure, alter its character-defining features, including existing roof lines or dormers, nor obstruct significant architectural features such as overlaying windows or architectural detailing. Attachment points must be minimized and allow for future system removal.
- Roof-mounted Installations are to be placed below and behind parapet walls and dormers, on rear-facing roofs, where feasible. Panels are to be mounted flush with and at the same angle as the existing roof surface and, on flat roofs, set back from the roof edge to minimize visibility. They should not be visible above the roofline of the primary facade. Panels and mounting systems must be compatible in color to established roofing materials to minimize their visibility.

9.H Goals

- 9.H-1** Promote sustainable development in Waitsfield by reinforcing traditional land use patterns and municipal development policies, maximizing energy conservation through weatherization of existing structures and appropriate siting of new development, encouraging appropriate development and use of renewable energy resources, protecting natural and cultural resources, and offering transportation alternatives to the single-occupant vehicle.

- 9.H-2 Ensure the long-term availability of safe, reliable and affordable energy supplies to meet the needs of the Town and neighboring communities.
- 9.H-3 Reduce municipal energy consumption and costs, community reliance on fossil fuels and foreign oil supplies, and greenhouse gas emissions that contribute to climate change – through increased energy and fuel efficiency, energy conservation, and active transition to alternative fuels and renewable energy sources.
- 9.H-4 Sustainably develop Waitsfield’s renewable energy resources and local distributed energy generation capacity – including municipal and community generation and supporting smart grid technology – consistent with adopted plan policies and community energy facility and siting standards.
- 9.H-5 Avoid or minimize the adverse impacts of energy development on public health, safety and welfare, the Town’s historic and planned pattern of development, environmentally sensitive areas, and Waitsfield’s most highly valued natural, cultural and scenic resources, consistent with adopted plan policies and community standards for energy development, resource protection and land conservation.
- 9.H-6 Minimize the impacts of potential fuel shortages on emergency services, critical public functions, and local residents and businesses.

9.I Policies

- 9.I-1 Encourage energy efficiency and conservation as primary considerations in new municipal construction projects, equipment purchases and operations. Life cycle costing shall be used by the Town in evaluating capital expenditures as appropriate.
- 9.I-2 Encourage, to the extent practical, the use of energy efficient municipal vehicles (e.g., hybrid, bio-diesel).
- 9.I-3 Development should be directed toward designated growth centers and limited in the least accessible areas of the community to minimize the need for new road infrastructure and reliance on the private automobile.
- 9.I-4 Support land use and conservation policies that encourage ongoing forest management to maintain a local source of fuel-wood.
- 9.I-5 Support land use and conservation policies that encourage agricultural uses on prime agricultural soils to increase the supply of and access to locally produced

food and reduce the total food transport miles required to sustain Waitsfield families.

- 9.I-6 Encourage small scale and appropriately sited development of renewable energy generation, including, but not necessarily limited to, solar panels, wind turbines and micro-hydro. Guidelines for the development of such resources should minimize:
 - 9.I-6.a Undue adverse visual impacts on adjacent properties, scenic corridors and Mad River Valley viewsheds;
 - 9.I-6.b Forest fragmentation, environmental degradation, and habitat disruption;
 - 9.I-6.c Impacts to sediment transport and aquatic organisms' passage in streams; and
 - 9.I-6.d Their use of land with prime agricultural soil.
- 9.I-7 Prohibit free-standing solar and all wind energy generation structures in the Forest Reserve District above 1,700 feet elevation.
- 9.I-8 Continue to ensure that expansion and development activities at Sugarbush do not exceed the current or planned capacity of local electrical supplies and transmission facilities through the Memorandum of Understanding administered by the MRVPD.
- 9.I-9 Discourage the use of electricity as a primary heating source.
- 9.I-10 Facilitate walking and cycling, as alternatives to automobile travel for local trips, by providing adequate path, sidewalk and bike lane infrastructure connecting major commercial and residential developments throughout the Mad River Valley.
- 9.I-11 Facilitate the development of a solar orchard by working with interested citizens to identify appropriate sites and eliminate policy and legal obstacles that limit access to federal and state tax incentives.
- 9.I-12 The Town – in collaboration with the Mad River Valley Planning District, the Central Vermont Regional Planning Commission, neighboring communities, and utilities serving the Town – will participate in long-range utility planning to ensure that adopted plan policies and community standards are identified and considered in future energy planning and development.
- 9.I-13 Existing and proposed municipal policies, programs and regulations will be evaluated for their effect on municipal energy use, and revised as needed to

promote reduced energy consumption, increased energy efficiency, and the sustainable development and use of local renewable energy resources.

- 9.I-14 Energy and fuel efficiency will be primary considerations in municipal construction projects, equipment and vehicle purchases and facility operations.
- 9.I-15 The Town will collaborate with the Mad River Valley Planning District, area utilities and service providers to promote community energy literacy, and to provide information about available energy assistance and incentive programs, state energy codes and energy system permitting.
- 9.I-16 The Town will develop and implement a PACE program as approved by voters in 2011, and consider other available incentives (e.g., tax credits, property tax exemptions), to help finance or offset the cost of eligible efficiency, weatherization or renewable energy projects
- 9.I-17 The Town will participate in Public Utility Commission (Section 248) review of new and upgraded generation and transmission facilities as necessary to ensure that adopted community standards are given due consideration in proposed energy facility development. This may include joint participation with other affected municipalities, the Mad River Valley Planning District, and the Central Vermont Regional Planning Commission.
- 9.I-18 New energy facility development within or that may affect the Town of Waitsfield must conform to adopted community standards for energy facility siting and design (attached) to receive municipal support or approval.
- 9.I-19 The Planning Commission, in association with the Energy Committee, will identify and map those areas of town that are suitable for the siting and development of renewable energy facilities and resources in conformance with adopted plan policies and community standards.
- 9.I-20 The Town will continue to pursue local generation capacity on municipal property, and actively assist in the planning and development of a community-based, group net-metered solar orchard facility that conforms to adopted plan policies and community facility siting and development standards.
- 9.I-21 New development shall not exceed the capacity of existing and planned generation, transmission and distribution systems. Development with high energy demand must maximize energy efficiency, incorporate on-site generation, or undergo project phasing in relation to planned system upgrades as necessary to mitigate anticipated service or facility impacts.

- 9.I-22 New development must be designed and constructed to at minimum meet state energy standards, through site and building design, material selection and the use of energy-efficient lighting, heating, venting and air conditioning systems. Electrical heating is strongly discouraged as a primary heating source.
- 9.I-23 New development shall be located and designed to reduce transportation energy demand, vehicle miles traveled, fossil fuel consumption and greenhouse gas emissions.
- 9.I-23.a Irasville and the Waitsfield Village Residential and Commercial Districts, representing the Town's historic and designated growth areas, are targeted to accommodate the majority (more than 50%) of new development, including higher density mixed use, pedestrian-friendly residential and commercial development, to be supported by existing and planned infrastructure, sidewalks, and public transit services. Auto-dependent sprawl outside of these districts shall be avoided.
- 9.I-23.b New development outside of Village Districts will be concentrated [clustered] in locations (e.g., hamlets, industrial parks, PUDs) that can physically support energy efficient, pedestrian-oriented development to be served by common or shared parking areas and walkways, and accessed by existing or planned bike lanes, public paths or transit routes.
- 9.I-23.c Municipal and community facilities open to the public shall be located in designated village districts, within walking distance of the village center [or must be accessible by public transit].
- 9.I-23.d Local employers should provide programs or incentives for ridesharing and public transit use, opportunities for telecommuting and teleconferencing and, where applicable, on-site employee housing, to reduce employee vehicle miles traveled.
- 9.I-24 The Town will continue to work with the Mad River Valley Planning District and area transit providers to re-establish year-round transit service, and to identify, plan for, and develop needed transit routes and facilities, including local park-and-ride facilities. Local rideshare or volunteer driver programs also should be considered.
- 9.I-25 The Town will incorporate “complete street” principles for street design that are intended to safely accommodate all transportation system users– including pedestrians, cyclists and transit riders as well as motorists – in planned town highway improvements.

- 9.I-26 The Town will continue to collaborate with the Mad River Path Association, the Mad River Valley Planning District, neighboring towns and local landowners to plan for, maintain and develop an interconnected regional path network, in part to provide a transportation alternative for Valley residents.
- 9.I-27 The Town, through its Energy Committee will work with the Planning District, the Central Vermont Regional Planning Commission, and area utilities to establish the regional infrastructure needed to support alternative fuel vehicles (e.g., charging stations), to include one or more publicly accessible, centrally located sites in Waitsfield.
- 9.I-28 The Town will work in cooperation with local agencies, emergency service providers, and regional suppliers to develop emergency contingency plans that ensure access to critical energy supplies and measures to reduce nonessential energy consumption in the event of an abrupt energy shortage.
- 9.I-29 The Town will consider zoning and subdivision amendments to include standards for small on-site renewable energy systems that are not regulated by the PUC; to promote more energy efficient types and patterns of development; to protect access to renewable energy (e.g., solar, wind); to provide for the incorporation of net-metered renewable energy systems in subdivision and site plan design, and to provide incentives for energy efficient construction that exceeds minimum state standards, that maximizes access to renewable energy resources (e.g., solar orientation), or that incorporates individual or group net-metered renewable energy systems in subdivision design.

9.J Tasks

- 9.J-1 Track municipal energy use and costs, and develop an overall energy budget to manage the Town's energy consumption, which may include the addition of local generating capacity. [Energy Coordinator, Energy Committee]
- 9.J-2 Evaluate existing and proposed municipal policies and programs for their effect on municipal energy use, and revise as needed to promote reduced energy consumption, increased energy efficiency, and the sustainable development and use of local renewable energy resources. [Energy Coordinator, Energy Committee]
- 9.J-3 Develop a strategic 5-year municipal energy action plan that more specifically guides energy efficiency investments and improvements, and the transition to and development of renewable energy resources. [Energy Coordinator, Energy Committee]

- 9.J-4 Identify and map those areas of town that are suitable for the siting and development of renewable energy facilities and resources in conformance with adopted plan policies and community standards. [Planning Commission, Energy Committee, Conservation Commission]
- 9.J-5 Promote community energy literacy, and provide information about available energy assistance and incentive programs, state energy codes and energy system permitting. [Energy Coordinator, Energy Committee]
- 9.J-6 Maintain the Town's energy reserve fund, and incorporate planned efficiency improvements (e.g., facility retrofits, renovations, and equipment upgrades) in the Town's capital budget and program. [Energy Committee, Planning Commission, Selectboard]
- 9.J-7 Implement the PACE program as approved by voters in 2011, and consider other available incentives (e.g., tax credits, property tax exemptions), to help finance or offset the cost of eligible efficiency, weatherization and renewable energy projects. [Energy Committee, Energy Coordinator, Selectboard]
- 9.J-8 Pursue local generation capacity on municipal property, and actively assist in the planning and development of a community-based, group net-metered solar orchard facility that conforms to adopted plan policies and community facility siting and development standards. [Energy Coordinator, Energy Committee, Conservation Commission, Selectboard]
- 9.J-9 Work collaboratively to establish the regional infrastructure needed to support alternative fuel vehicles (e.g., charging or fueling stations), to include one or more publicly accessible, centrally located sites in Waitsfield. [Energy Coordinator, Energy Committee, Selectboard]
- 9.J-10 Develop procedures for municipal participation in Public Utility Commission proceedings and the review of proposed projects for conformance with adopted community standards. [Energy Coordinator, Planning Commission, Selectboard]
- 9.J-11 Amend zoning and subdivision regulations to (1) include standards for small on-site renewable energy systems that are not regulated by the PUC; (2) promote more energy efficient types and patterns of development; (3) protect access to renewable energy (e.g., solar, wind); (4) provide for the incorporation of net-metered renewable energy systems in subdivision and site plan design, and (5) provide incentives for energy efficient construction that exceeds minimum state standards, that maximizes access to renewable energy resources (e.g., solar orientation), or

that incorporates individual or group net-metered renewable energy systems in subdivision design. [Planning Commission, Energy Committee]

- 9.J-12 Explore incentives to local employers (e.g., reduce on-site parking requirements) in exchange for programs to reduce their employees' reliance on single occupancy vehicles for commuting (e.g., ride-share programs). [Energy Committee, Planning Commission]
- 9.J-13 Revise Chapter 9 (Energy) of the Town Plan to comply with the Vermont Comprehensive Energy Plan and the Regional Energy Plan.

10. Cultural & Historic Resources

10.A Overview

Waitsfield's traditional settlement pattern contributes significantly to the town's scenic character. Historic settlements, open farm fields, forested hillsides and ridgelines, and tree-lined roads are all important scenic resources.

The preservation of the town's historic and scenic character is important to promote tourism, to preserve the agricultural land base, to enhance recreational opportunities, and to protect important natural and cultural landscape features.

Waitsfield has several resources dedicated to preserving the town's rich social and cultural history, including its historic sites and structures. The Waitsfield Historical Society, a volunteer organization with over 100 members, is committed to preserving and celebrating local history. The society, housed at the town-owned General Wait House, sponsors a variety of special events and educational programs.

The 1988 *Mad River Valley Rural Resource Protection Plan* identified the Mad River Valley's historic and archaeological resources, scenic resources, agricultural and open land, and river and trail resources. This collaborative effort mapped, prioritized, and developed strategies to implement protection goals. This effort was furthered by the Watershed Conservation Partnership's 2005 publication *Conservation Opportunities: An Inventory of Natural and Cultural Features in the Mad River Watershed*.

The *MRV Rural Resource Protection Plan* effort led to the founding of the Mad River Valley Rural Resource Commission ("the Commission"), the first multi-town Certified Local Government created under the National Historic Preservation Act. The Commission is made up of representatives from Waitsfield, Warren, and Fayston, and is staffed by the Mad River Valley Planning District. The Commission's mission is to advocate for the protection of historic resources, to assist towns in protecting these resources, and to provide educational opportunities. The Commission's work includes updating initial sites



and structures surveys, compiling oral and video histories, inventorying the Mad River Valley's historic barns, and supporting National Register District Nominations.

10.B Settlement Pattern

Waitsfield's historic settlement pattern of clustered villages surrounded by an open river valley and forested uplands has been well-established since the 19th century. The town's agrarian heritage and rural character have been maintained largely through the preservation of its working landscape. Waitsfield's villages developed at a scale and density that is pedestrian friendly, with defined streetscapes and public spaces, prominent public buildings, and a variety of goods, services and employment opportunities.

Upland development also played a role in the evolution of the Mad River Valley's settlement. This is illustrated by Waitsfield Common and is laid out in the Commission's 2013 MRV Hill Farm Research Project.

10.C Archaeological Sites

Knowledge about the town's distant past is limited. Buried archaeological sites are often uncovered only when disturbed by site development work. As a result, these important sources of information about the town's past are not readily identifiable, but can be easily destroyed through subsequent development.

An initial assessment of the Mad River Valley's archaeological potential in 1990 investigated two previously reported prehistoric sites and five new historic sites. It was concluded that numerous sites likely exist in the Mad River Valley, including within the following areas:

- Level, undisturbed, well-drained soils near water bodies or other strategic resources;
- High terraces (700+ feet above msl) bordering ancient Lake Vermont shorelines;
- Locations adjacent to major river confluences;
- Known mill sites; and
- Sites of structures that are no longer standing, as identified from historic maps.

Also of historic significance, though not well-documented, are other cultural landscape features, including: stone walls, fences and corner posts or witness trees that once marked field and property boundaries; foundations and cellar holes; quarry sites, old road beds; and other visible remnants of past land use and occupation.

10.D Historic Sites & Structures

Waitsfield has a wealth of historic resources that includes hundreds of documented historic sites and structures, and others that have yet to be identified or catalogued. Some of the town's most historic structures have been accepted for listing on the National Register of Historic Places, including its two covered bridges (Pine Brook and Big Eddy), the Joslin Round Barn, the Jones-Pestle Farmstead, and Lareau Farmstead. Properties listed on the National Register of Historic Places, both individual nominations and contributing structures within Historic Districts, receive three important benefits: 1) consideration in planning for federal projects, 2) eligibility for certain tax provisions (i.e. Federal Historic Tax Credits), and 3) qualification for federal grants in preservation.

The Vermont State Register of Historic Places includes all structures contributing to the National Register of Historic Places, as well as 78 additional historic structures located throughout town. Most structures identified in the state's inventory are historic homes, but several farm complexes, school houses, and public buildings are also listed. The Commission's 2003 Historic Sites & Structures Survey provided the foundation for these listings.

The Commission completed the 2001 Mad River Valley Barn Inventory identifying 74 barns of historic significance in Waitsfield. Many barns included in the survey are no longer actively used for agricultural purposes. There are several examples in town of barns which have been successfully converted to non-agricultural use, while retaining their historic integrity including: the Joslin Round Barn, which houses the Green Mountain Cultural Center; and the Skinner Barn which is used for performing arts and events. Such adaptive reuses, as allowed under the town's land use regulations, may help preserve these historic structures.

10.E Historic Districts

Waitsfield is home to three historic districts listed on the National Register of Historic Places: the Waitsfield Village Historic District, Mad River Valley Rural Historic District, and the Waitsfield Commons Historic District. All are shown on Map 7 in Appendix B.

The Waitsfield Village Historic District encompasses approximately 75 acres and 71 structures within its boundaries including historic homes, stores, public buildings, barns and outbuildings. Contributing structures date from 1790 to 1930.

Prominent buildings include the Village Meeting House/Waitsfield United Church of Christ, the Joslin Memorial Library, the General Wait House, and the buildings of the Bridge Street

Marketplace. The district also includes, near its center, the Great Eddy Covered Bridge, which is the oldest continually operated covered bridge in Vermont.

The Mad River Valley Rural Historic District, listed on the National Register in 1994, stretches four miles and incorporates roughly 2,000 acres along Route 100 in Waitsfield and Moretown. The district includes a collection of well-preserved historic farmsteads representing the agricultural history of Vermont. Most structures date from the early- to mid-1800s, although there are a number of late-19th century barns.

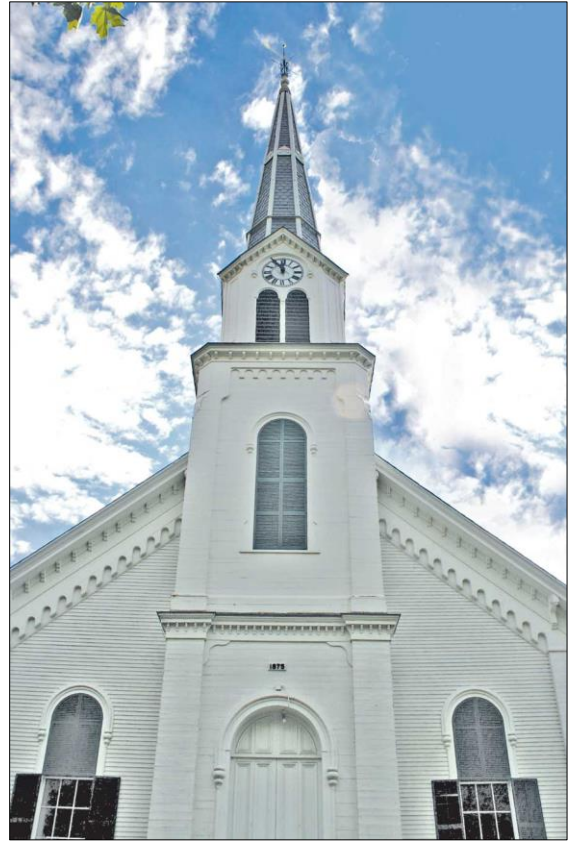


The Waitsfield Common Historic District was the first settlement in The Valley by those of European descent and is an example of an 18th century hilltop settlement. The district contains five vernacular Federal-period houses dating from 1793 to 1810, an 1810 farmstead, a cemetery dating from 1793, and a 1798 public common (divided into two parcels by town roads). All three of the town's historic districts are also listed on the National Register of Historic Places.

10.F Scenic Resources

Waitsfield's traditional settlement patterns and associated rural landscape consist of several key features that have been identified as distinct scenic resources in a variety of studies and public opinion surveys over the past 20 years, including the 1988 Rural Resource Protection Plan, Waitsfield's three National Register Historic Districts, and several community surveys. It is the protection of each of these distinct features that will ensure the preservation of Waitsfield's scenic landscape and its rural character. The designation of scenic resources also plays an important part in the state review of applications for proposed projects with regard to the proposed project's impact on aesthetic impacts in the area (under the *Quechee Lakes* analysis). Development in these areas should be considered thoughtfully to ensure that the scenic character and visual integrity of viewsheds in these areas are not unduly adversely impacted. These resources include:

- Open farmland and meadows along scenic roads identified in Chapter 8, which often serve as the foreground for expansive views, especially those in the following areas:
 - Mad River Valley Rural Historic District,
 - Watisfield Common Historic District,
 - Along East Warren Road uphill from The Round Barn;
- Scenic roads listed in Chapter 8, especially those of a scale and character that discourage high speed travel while offering a pleasant walking and recreational environment;
- Forested knolls, steep mountain-sides and ridge lines which provide the unbroken background for most distant views, most significantly land above an elevation of 1,500 feet and lower hillsides and forested knobs that rise steeply to the east of the Mad River (between the river and the Waitsfield Common/East Warren plateau) and are highly visible from Route 100;
- The historic context of development, including compact villages surrounded by open land and the relationship of clustered farm buildings (of mixed scale and massing) surrounded by farmland;
- The Mad River and adjacent riparian land and floodplain;
- Individual buildings listed on the National Register of Historic Places which, because of their scale, character or historic significance, serve as a visual and cultural focal point in the landscape; and
- The night sky, defined by clear, dark skies and bright stars.



10.G Cultural Resource Protection

Public opinion surveys conducted in 2009 and earlier confirmed that there is a great deal of local support for preserving the town's rural character, its traditional settlement patterns, and historic, scenic and recreational resources. There are a variety of regulatory and non-regulatory options available to encourage, or in some cases require, the protection of local cultural resources.

In recent years the town has pursued a number of these options, including the establishment of a local conservation fund for the municipal purchase of land (e.g., the Scrag Mountain and Wu Ledges municipal forests, Lareau swim hole, and Mad River Park). The fund has also been used to support Vermont Land Trust's purchase of conservation and/or recreation easements on working farms (Maple Avenue Farm multiple-property conservation project, Hartshorn Farm, etc.). The following regulatory tools and voluntary programs are also available to help preserve the town's rural character and resources:

- The town's land use regulations include a Historic Waitsfield Village Overlay District, the purpose of which is to maintain the historic character of the Waitsfield Village Historic District as listed on the National Register. The regulations provide standards and a required review process for exterior alterations. Also, the proposed demolition of any contributing structure must meet associated review standards intended to require the documentation and/or preservation of historic structures within the district.
- Listing on the National Register may afford some protection in the review of federally and/or state funded development projects, and also ensures that property owners are eligible for available state and federal assistance, including preservation grants and tax credits.
- Additional state assistance is available for historic properties within designated villages under Vermont's Downtown Program and Waitsfield has obtained designation for Waitsfield Village.
- Village Center Designation was obtained in 2007 that applies to Historic Waitsfield Village and provides a number of benefits to owners of historic properties and extra consideration for grant applications.
- The Mad River Watershed Conservation Partnership also promotes land conservation as a means of preserving The Valley's rural character.
- The Mad River Valley Rural Resource Commission is also an entity available for protecting local cultural resources.



- The town created a local tax stabilization program for land kept in agriculture.

10.H Goal

- 10.H-1 Identify, protect and preserve Waitsfield's cultural landscape and resources, including its traditional settlement pattern, historic built environment, and scenic features.

10.I Policies

- 10.I-1 Design development to be consistent with Waitsfield's traditional settlement pattern, including historic densities and scales of development, Vermont vernacular design, local road networks, and streetscapes, particularly within designated historic districts.
- 10.I-2 Preserve the integrity of historic buildings to the extent feasible while allowing for on-going use and maintenance. Adaptive reuse shall be allowed where appropriate, including the re-use of historic barns, to preserve structures that no longer serve their original function.
- 10.I-3 Document any building listed on the state historic sites and structures survey prior to demolition (to identify and record significant historic and architectural details, preferably in consultation with the Vermont Division for Historic Preservation or a qualified historic preservationist) Copies of the documentation should be provided to the Waitsfield Historical Society for safekeeping.
- 10.I-4 Promote clustered development to avoid undue adverse visual impacts to scenic resources, including open fields, steep hillsides and ridge lines, as viewed from public vantage points. Screening, buffer areas and/or landscaping may be required where appropriate to minimize visual impacts.
- 10.I-5 Promote renewable energy generation and telecommunication facilities and utility line extensions in a manner that avoids impacts to cultural and scenic features, including avoiding installation within the Forest Reserve District at elevations of 1,700' and above. In no case shall telecommunications towers be lighted or exceed an elevation of 10 feet higher than the nearest forest canopy.
- 10.I-6 Encourage the location of utilities serving development underground, where feasible.

- 10.I-7 Protect and maintain those scenic features within the rights-of-way of designated scenic roads, including but not necessarily limited to road width, surfacing materials, bordering trees, walls and fences in accordance with an adopted municipal scenic road maintenance program.
- 10.I-8 Maintain and/or re-establish tree canopies along public roads in accordance with an adopted tree planting program, and along new roads as required under local land use regulations.
- 10.I-9 Protect visual access to the night sky through the careful design and control of lighting to prevent glare and minimize sky glow. Lighting shall be carefully designed to avoid new light pollution (e.g., glare, sky glow), and reduce existing light pollution, through the use of appropriate techniques, including cut-off fixtures, down-casting, and limiting levels of illumination.
- 10.I-10 Signs should be harmonious with the historic character and pedestrian scale of the town's village centers, and should be consistent with traffic safety,.
- 10.I-11 Promote private use of available historic preservation assistance programs (e.g., Historic Preservation Tax Credits, Barn Again grant program).

10.J Tasks

- 10.J-1 Continue to inventory, catalogue and map Waitsfield's historic and scenic features. [Rural Resource Commission*, Waitsfield Historical Society*]
- 10.J-2 Update land use regulations as needed to further protect Waitsfield's historic and scenic resources. [Planning Commission, Conservation Commission, Selectboard]
- 10.J-3 Update the town's tree planting and maintenance program, particularly as needed to re-establish tree canopies along public roads and rights-of-way. Implement the Waitsfield Street Tree Master Plan. [Tree Board, Selectboard]
- 10.J-4 Seek funding as needed for the redevelopment or conservation of historic properties, to conserve significant rural resources, through the purchase of land or interests in land (e.g., conservation easements, development rights). [Conservation Commission, Selectboard, Mad River Watershed Conservation Partnership*]
- 10.J-5 Develop a plan for renovating the Wait House for public and cultural purposes. [Selectboard, Waitsfield Historical Society*]

- 10.J-6 Promote private use of available historic preservation assistance programs (e.g., Historic Preservation Tax Credits). [MRV Rural Resource Commission*, Historical Society*]
- 10.J-7 Explore the establishment of a “Town Green” in Irasville to serve as a center for community events and outdoor gatherings. (see Map 9). [Planning Commission]

11. Natural Resources

11.A Overview

Waitsfield lies within the heart of the Mad River Valley, defined by the Northfield Range to the east, and the main range of the Green Mountains to the west. The physical features of Waitsfield's landscape have greatly influenced local patterns of human activity, settlement and commerce. Waitsfield Village developed around the most reliable source of power at the time, the Mad River. The town's traditional agricultural base, which once extended into the surrounding hills, is today largely confined to its most productive soils, found along the river valley and the broad plateau around Waitsfield Common. Those areas least desirable for development, Waitsfield's remote and rocky uplands, form a scenic backdrop and include productive forest lands, headwaters and important wildlife habitat.

Though waterpower has long been replaced by other sources of energy, and the town has slowly shifted away from its agricultural base, the physical landscape and the quality of the natural environment continue to attract visitors and residents and influence local development patterns. Waitsfield's natural setting offers a range of cultural, environmental, recreational and economic opportunities, while at the same time posing a number of significant constraints and challenges.

The town's natural landscape is enhanced by its built environment. This integration of natural and cultural features create a distinct sense of "place" that is unique to Waitsfield. The following describes the natural features that contribute to the town's unique sense of place, and options for conserving and protecting these resources for existing and future generations.

11.B Climate

Climate and weather patterns are important planning and design considerations because of their effect on such things as soil erosion, wildlife populations, plant growth, air quality, stormwater runoff and flooding, groundwater supplies, road maintenance, energy demand for cooling and heating, access to alternative energy sources and the viability of weather dependent industries such as skiing.

Vermont's northern climate is dominated in winter months by cold, dry Canadian air, and in summer by warm moist air from the Gulf of Mexico. Weather patterns vary locally with topography and relief. Located on the eastern side of some of the state's highest mountains, Waitsfield experiences slightly lower average winter temperatures and higher rates of

precipitation than other parts of Vermont. On average, the town receives over 43 inches of precipitation (measured as rainfall) annually.

Much attention has been given to global climate change in recent years. The effects of climate change are already evident in Vermont, including more intense storms linked to rising average temperatures. Over the next 50 years, climate change models have projected that the average temperatures in the state will increase five to nine degrees Fahrenheit. Such an increase would reduce the number of months with average low temperatures below freezing from the current six to four, and increase the number of months with average highs above 80°F from two to three or four.

While some human residents may not miss the extra months of winter weather, the plants and animals around us will. Climate change is expected to alter the frequency and magnitude of storm events, rain-on-snow events, ice storms, and even the timing and frequency of droughts. Climate change is also expected to alter the town's natural environment by changing the plant species that can thrive in Waitsfield, the migrating patterns of birds, the timing of the budding and flowering of plants, the temperature of rivers and ponds, and countless other changes throughout the interconnected web of life.

If climate change proceeds as currently anticipated, the climate and natural environment in Vermont will become more like that of the mid-Atlantic region by the end of the 21st century. For more than 50 years, Waitsfield has been a winter tourism and recreation destination, but climate change has the potential to undermine this critical component of the Mad River Valley's economy.

Waitsfield should anticipate that a changing climate will bring dramatic social, economic, and environmental change to The Valley which indicates a need for diversification of the local economy, action to limit future emission of climate changing air pollutants, and steps to enable our human and natural communities to be as resilient and to adapt as effectively as possible to the changes that are likely coming.

11.C Air Quality

Weather patterns, especially wind, impact air quality. Like most of Vermont, Waitsfield's is fortunate to enjoy exceptional air quality. The town lies within a Class II attainment or clean air region as defined by Vermont's Air Quality Implementation Plan. As such, moderate changes in existing air quality are permissible, although a maximum level of pollution cannot be exceeded in accordance with Vermont's Air Pollution Control Regulations.

Given the absence of large-scale pollution generators in the community, local air quality concerns are limited mainly to emissions from traffic, inefficient or improperly operated

heating systems and some agricultural practices. While no existing problems have been identified, the cumulative effect of these sources may increase with additional growth.

Of more immediate concern are impacts on air quality resulting from pollution generated far from Vermont. Most notably, the coal-burning power plants of the Midwest have been cited as the main cause of airborne pollutants that are detrimental to the health of forests and pond ecosystems, particularly fragile high-elevation ecosystems, throughout the Northeast. These impacts, in addition to global climate change, are arguably the largest air quality-related challenges facing Waitsfield in the next several decades.

11.D Topography

Waitsfield, Warren, Fayston, and the northern part of Granville comprise the upper watershed of the Mad River, which drains northward into the Winooski River and ultimately into Lake Champlain. Much of Moretown and a portion of Duxbury also share the watershed to the north. Waitsfield's topography is characterized by a mountainous eastern border, marked by the ridge line of the Northfield Range; the broad plateau west of the range that runs from East Warren to the south of Waitsfield Common; the Mad River Valley below; and a series of steep, intermittent ridges and hills bordering the river valley, leading west into Fayston.

Elevation. Elevation in Waitsfield ranges from a height of 2,911 feet above mean sea level at the summit of Scrag Mountain, the town's most prominent peak, to 608 feet at the point where the Mad River flows into Moretown. Differences in elevation affect local climate, weather and growing seasons, which vary throughout town. Traditionally, settlement has been concentrated between the elevations of 650 and 1,500 feet. Land over 1,500 feet in elevation (4,507 acres) remains largely undeveloped, although some residential development has occurred in recent years. Land over 2,500 feet in elevation (393 acres) is somewhat protected from incompatible development through Act 250, although that law does not prohibit development.

Slope. Waitsfield's steeper slopes and hillsides are poorly suited for most types of development, posing serious limitations for site clearance, construction and the installation of infrastructure and utilities; and serious risks for stormwater runoff, slope failure, soil erosion, and the sedimentation of surface waters. The U.S. Natural Resource Conservation Service (NRCS) has identified general development constraints and management recommendations for different slope categories.

According to the NRCS, careful management to limit site disturbance is necessary on slopes in excess of 15 percent. All construction activities should be avoided on slopes in excess of 25 percent. State regulations also prohibit the installation of on-site wastewater systems on

slopes in excess of 20 percent. General areas of steep slope are identified on Map 3 in Appendix B; however site assessments may be needed to determine slope limitations and management requirements for a particular development site.

In addition to physical constraints, development on steep slopes and prominent ridge lines can adversely impact the town's scenic landscape. Development in such areas, particularly at higher elevations, is often highly visible from numerous vantage points, and contrasts dramatically with the scenic backdrop provided by unbroken forest cover. Land above an elevation of 1,500 feet and the steep hillsides and prominent knolls rising from the valley floor have been identified through computer-based visual sensitivity analysis and community visual assessments as being especially vulnerable. Special measures have been incorporated in local land use regulations to prevent such development, or otherwise minimize its aesthetic impact through careful siting, landscaping and screening.



11.E Water Resources

Clean, plentiful water is a basic resource that is too often taken for granted. Waitsfield's water resources include abundant, naturally replenished surface and ground water supplies that sustain the natural environment and support a variety of human activities. Surface waters include upland headwaters and tributaries of the Mad River, the main stem of the Mad River, and small ponds scattered throughout town. Local ground waters include one of the largest identified aquifers in the state. The quality of these waters, which is thought to have improved over the past 30 years, must continue to be maintained and enhanced.

Rivers and Streams. Waitsfield is located entirely within the Mad River watershed (with the very minor exception of limited high elevation acreage located east of the ridge line of the North-field Range which is within the Dog River watershed). The Mad River, which flows 7.5 miles through town, is fed by upland headwaters and a number of major tributaries located partly or entirely within the town, including Folsom, Pine and High Bridge Brooks, which form in the Northfield Range, and the lower sections of Mill and Shepard Brooks flowing in from Fayston (see Map 6 in Appendix B). The Mad River and each of its major tributaries are distinct in character, and serve a number of important ecological, cultural, recreational, and aesthetic functions.

Most surface waters in Waitsfield are designated by the state for management purposes as Class B waters, which are intended to support a variety of environmental, public and recreational uses. Headwater streams, defined by the Vermont Environmental Board as all year-round and intermittent streams above an elevation of 1,500 feet, are provided limited protection if a development is subject to Act 250 review. Headwaters above 2,500 feet in elevation are defined as more pristine Class A waters.

Surface waters can serve as a barometer of environmental well-being. The 1991 report, *Watching the River's Health: The Condition of the Mad River and How to Improve and Protect It*, resulted in the formation of the Friends of the Mad River, a nonprofit river advocacy group. The organization's mission is to restore and maintain the physical, chemical and biological integrity of the river system, and build public support for clean water.

In 1995, a river management plan, *The Best River Ever*, was developed that identified the following major problems and threats to the river and its tributaries:

- Accelerated erosion and stream sedimentation resulting from poor construction, road and land management practices;
- Impacts from stormwater including altered hydrology and sedimentation;
- Lack of stream bank vegetation, resulting in stream bank erosion and higher water temperatures that affect local trout habitat;
- Threats to biodiversity and ecosystems from invasive species such as *Didymosphenia geminata* (rock snot) and Japanese knotweed;
- Water pollution from failing on-site septic systems, stormwater runoff, and poor agricultural practices;
- Threats to public river access from development, overuse, misuse and changes in land ownership;
- Other threats, from contaminants, excessive water withdrawal for snow making, and gravel removal; and
- Lack of information and education about the river, including how the river functions, and how we contribute to the river's problems.

The *Best River Ever* also included over 100 specific recommendations to address each of these areas, many of which have been implemented.

The Friends of the Mad River have sponsored a number of programs and projects over the years to monitor and enhance water quality, support recreational uses, and learn more about how the river functions. These include:

- Annual river cleanups;
- Assisting riparian landowners with stream bank stabilization and tree planting projects;

- Completion of extensive geomorphic (physical) assessments of the river leading to the development of the Upper Mad River Corridor Plan;
- Wildlife monitoring through sponsorship of Keeping Track®;
- Publication of a Mad River resource guide for teachers;
- Publication and distribution to every household of a guide for protecting the Mad River; and
- The Mad River Watch Program, which is an ongoing lay monitoring program that collects and publicly reports water quality data.

High bacteria (E.coli) counts have long been documented through local monitoring data and also in a 1998 study of selected tributaries of the Mad River. This pollution results from failing septic systems, agricultural runoff, and other sources. Currently the Folsom Brook and the Mad River, from the covered bridge in Waitsfield Village to its mouth, are included on the state's list of impaired waters targeted for improvement. These surface waters are listed because monitoring data indicate that bacteria levels currently exceed state water quality standards and impair the use of these waters for swimming and other contact recreation.

A total maximum daily load (TMDL) will be developed that will establish maximum pollutant levels from various sources and/or land uses. TMDL development will involve pollutant source assessments, the calculation of pollution loading rates that meet water quality standards, and associated source reduction requirements.

Gaining public access to the river and protecting its riparian zone is also a local priority. For many years, the only permanent access to the Mad River in Waitsfield was the Couples Club Recreation Field. In 1993, the town acquired the six-acre Lareau Swim Hole parcel for use as a wayside park. Since then, the town has also acquired: the five-acre former Austin parcel adjacent to the swim hole; a deeded access to the river on the former Woliner (now Neill) parcel, which includes a segment of the Mad River Greenway and a small parking area for the greenway adjacent to the Meadow Road; a seven-acre parcel with river frontage immediately upstream of the swim hole (Tardy parcel); and the former barber shop parcel on Bridge Street adjacent to the Big Eddy Covered Bridge in 2012 which was awarded a grant in 2014 to develop the small parcel into a public park ("Lovett Park") with public river access available. One hundred twenty-five acres of nearby woodland known as Wu Ledges, with approximately one-half mile of river frontage on the east side, was donated to the town in 2004. The combination of the Wu Ledges, Austin,



Lareau and Tardy parcels protects from development approximately six-tenths of a mile of river frontage on the east side and about 0.15 mile on the west side, with about 300 feet protected on both sides.

In December of 2000 the town purchased the Munn site, a tract of 12.2 acres located at the intersection of Rt. 100 and Kingsbury Road, for the purpose of possible gravel extraction, recreation, wastewater disposal and/or scenic protection. This parcel has approximately 800 feet of frontage on the east side of Mad River.

Phase I and Phase II geomorphic assessments of the Mad River and some of the tributaries were recently conducted with financial assistance of the Department of Environmental Conservation's Ecosystem Restoration Program. Those studies resulted in the mapping of the fluvial erosion hazard area for the Mad River.

Groundwater. Fractured bedrock in the high elevations of the Northfield Range and gravel deposits in the lowlands and along the valley floor serve as the principal recharge areas for local groundwater supplies. Groundwater sustains base flows for the Mad River and its tributaries. It also currently provides potable water supply to all Waitsfield's homes and businesses, through a combination of private and small community wells and springs.

While the town benefits from generally abundant groundwater supplies, this dependence on scattered wells, particularly along Route 100 and in village areas, poses risks of potential groundwater contamination from a variety of sources. Once a groundwater source is contaminated, re-mediation, if feasible, is typically very expensive. There are a number of known contamination sites in Waitsfield, most of which are associated with leaking underground fuel storage tanks. The state requires remediation and/or monitoring of these sites to prevent further contamination of groundwater and potable water supplies.

Groundwater supplies are also affected by periods of drought. During droughts many shallow wells and springs may temporarily dry up. With climate change, weather patterns are expected to change, but it is difficult to predict at the local level whether this will result in increased or decreased precipitation.

Given the density of development and the lack of a comprehensive plan for wastewater disposal, the groundwater source areas in Irasville and Waitsfield Village are particularly at risk for contamination. Concerns over potential contamination have been a driving force in the effort to provide these centers with municipal water. After more than a decade of planning, design, funding acquisition, and permitting, construction of a new municipal water system began in 2010 to serve the Irasville and Waitsfield Village growth center.

Vital to the protection of groundwater sources is an awareness of their recharge areas. Aquifer recharge areas are zones that contribute to subsurface supplies. A recharge area

consists not only of the land area directly above the aquifer through which precipitation percolates, but also of upland areas from which runoff drains towards the aquifer. Uses of these lands, which may have the potential for spills of toxic or dangerous substances, also have the potential to pollute the aquifer. Excessive impermeable surfaces (e.g. from parking lots, buildings, etc.) deplete the groundwater supply. Also, as there is exchange between surface and ground waters, land uses that pollute upstream waters may in time damage downstream aquifers.

Aquifer recharge areas have yet to be adequately mapped, but source protection areas (SPAs) have been delineated as required by the state to protect public community water systems serving 15 or more service connections, or 25 or more users year-round. Under new state and federal regulations, source protection plans also must be developed for non-transient, non-community public water systems, which serve more than 25 people for at least six months of the year. SPAs are delineated for the Fly-In business park, Verd-Mont mobile home park, the elementary and Spring Hill schools, the shopping centers in Irasville, Mad River Meadows, the Eagles, and Butternut Hill.

Within designated SPAs, special consideration must be given to prohibiting, or carefully managing, development and practices that could contaminate local ground water supplies. These include poorly designed or failing septic systems, underground storage tanks, and the storage of hazardous materials and road salt.

Vermont's groundwater protection law (10 VSA, Chapter 48) sets forth general policies for SPAs, and the Agency of Natural Resources (ANR) has published recommended land use guidelines for SPAs. In addition, in 2008 the Vermont Legislature passed Act 199 that enhanced groundwater protection in Vermont by declaring groundwater to be a public trust resource that must be managed by the state for the benefit of all Vermonters.

Act 199 also established a large groundwater withdrawal-permitting program that requires any commercial groundwater withdrawal of more than 57,600 gallons per day (gpd) to obtain a permit from ANR. One of the criteria that a large groundwater withdrawal must meet is that the withdrawal must conform to any town or regional plan. As such, Vermont municipalities have the authority to control where and to what extent large groundwater withdrawals occur through their town plan, as well as the ability to regulate commercial extraction through zoning.

11.F Earth Resources

Geologic Features & Hazards. The bedrock underlying Waitsfield consists largely of highly metamorphosed graywacke, phyllite, gneiss and schist. Despite its location in the heart of the Green Mountains, there are no large-scale commercial rock quarries or mineral deposits

in town. Only two small-scale quarry operations exist, both of which are operated on a limited basis. The Mad River does offer the recreational collector a chance to find small amounts of placer gold in return for a hard day's work; hand panning for recreational purposes does not require a state permit but landowner permission should be sought and granted prior to any panning.

Geologic hazards are minimal, though isolated rock falls and slides are common on steep or unstable slopes. Regional earthquakes, typically centered in the Adirondack Mountains or southern Quebec, occur with enough frequency and strength that public infrastructure, buildings and utility systems should incorporate basic seismic standards for earthquake resistance.

Sand and Gravel. Sand and gravel, found in association with glacial and stream deposits, are locally more abundant and economically viable to extract for commercial and municipal purposes. The total extent of these deposits is unknown, although soils maps indicate roughly 2,200 acres of sand and 1,900 acres of gravel is known to exist here. There are two permitted, privately owned sand and gravel pits in town, but only one is active.

Historically, gravel extraction from the Mad River was common. In the 1980s, it was recognized that gravel extraction was depriving many of the state's river systems of the sediment needed to maintain its geomorphic stability and causing extreme streambed degradation. Gravel extraction from the rivers and streams is now carefully regulated by the state.

Upland extraction operations also raise a host of potential conflicts. Active extraction operations result in noise, dust, truck traffic and visual blight. Such operations also can create safety hazards, affect groundwater supplies, result in the deterioration of local roads and infrastructure, create tensions with neighboring landowners, and impact an area's rural character for residents and visitors.

However, road maintenance and construction projects are dependent upon sand and gravel, which if not available locally must be hauled from more distant locations at great expense. In order to maintain safe, attractive roads in a cost-effective manner, the town has secured a reliable and economic source of gravel located east of Route 100 on the former Howard-Tucker parcel, which is accessed from the AmeriGas property south of Armstrong Road. The Town obtained permits for sand and gravel extraction in 2009, and anticipates that the site will provide the Town's road and construction needs for a minimum of twenty years.

The adverse impacts of sand and gravel operations can be addressed to a certain extent through local and state regulations, good management practices and mitigation. These tools can help to ensure that extraction operations have minimal impact on the local area and neighboring properties, and that sites are adequately reclaimed to allow for subsequent use

once extraction is completed. Nonetheless, proposed operations must be carefully evaluated on a case-by-case basis to determine their compatibility with local circumstances and priorities.

11.G Soils

Agricultural Soils. Within the Mad River Valley, Waitsfield contains the greatest concentration of soils defined by the National Resource Conservation Service (NRCS) as prime agricultural soils.

This includes 1,200 acres of prime agricultural soils and another 3,100 acres of soils of state-wide agricultural importance. Most of these soils are found in valley bottomlands, but also extend along the broad plateau south of Waitsfield Common (see Map 4 in Appendix B).

The town's less fertile upland soils went out of production a century ago with the abandonment of hill farms, but local farmers continue to rely on the best soils to remain economically viable. The location of active farmland in town strongly correlates with the location of prime agricultural soils. Because these soils are relatively well-drained and support on-site septic systems, they are also inexpensive to develop for a variety of other uses. Subdivision and associated development continue to threaten productive farmland, particularly outside of designated floodplain areas.

Prime agricultural soils are a finite resource. Once converted to other uses, they are rarely returned to agriculture. They sustain and enhance local capacity for food production, and support existing and future farming operations. For these reasons, the town's best agricultural soils must be protected from other forms of development.

Farmers are also required to observe accepted agricultural practices, including the maintenance of buffer strips along waterways, to help minimize soil erosion and loss from farming operations.

Forestry Soils. NRCS also has identified the best soils to support commercial forestry, including many upland soils that are too shallow, rocky or steep to support other types of development. As a result, prime forestry soils are generally less threatened by development, but are more sensitive to site disturbance and erosion. To help prevent soil erosion, the state has adopted acceptable management practices to prevent soil erosion and maintain water quality on logging jobs.

Septic System Suitability. Currently, all the town's sewage treatment needs are addressed through individual or clustered on-site systems. Soil suitability for on-site septic systems, as determined from state design standards, varies widely throughout town. Map 5 in Appendix

B gives an indication of soil suitability for on-site septic systems under state standards. Under this soil classification system, approximately half of the total acreage of Waitsfield is considered either marginally suitable or unsuitable for on-site systems. The majority of the unsuitable soils are located on very steep slopes, with the heaviest concentration being above 1,500 feet in the Northfield Range.

State standards adopted in 2002 reduced required isolation distances to bedrock and groundwater and allow for alternative technologies, which may open up more land to development over time. Local land use regulations should adequately safeguard these areas from incompatible forms of development rather than relying on state septic regulations to limit development.

11.H Forest Resources

Forest is the dominant land cover in Waitsfield, accounting for almost 12,300 acres, or approximately 75 percent, of the town's total land area. Forest resources provide a number of benefits, including an economic return for local landowners, air and water quality, stream flow attenuation, wildlife habitat and connectivity, absorption and storage of carbon from the atmosphere in plant tissue, recreation opportunities for town residents and visitors, and an important visual backdrop to most scenic vistas. In assessing issues relating to forest resources in town, an understanding of concerns relating to timber management and ownership patterns is important and is addressed under the land use chapter of this plan (Chapter 12).

Forest Fragmentation. Forest fragmentation refers to the division of large tracts of contiguous forest land into smaller, disjointed parcels, or their conversion to non-forest cover that diminishes the forest's capability of supporting sustainable forest management, species diversity of both plants and animals, and a host of ecosystem functions. In particular, the fragmentation of productive forestland through subdivision into smaller and smaller pieces and multiple ownerships is a growing problem nationally and in Vermont. According to the U.S. Department of Agriculture, the amount of forest cover in Vermont is decreasing for the first time in approximately 100 years, and the Winooski River watershed is Vermont's most threatened watershed with regard to likely forestland fragmentation.

Forest Management. Sound forest management results in a stable economic return for landowners, local resources to support local industry, and perhaps most importantly, an incentive for keeping large tracts of land free of development and available to the public for recreation, wildlife, scenic enjoyment, other "ecosystem services." However, poor forest management can result in the degradation of biological diversity and can damage scenic landscapes.

Generally, a sound forest management plan should consider multiple objectives, including sustainable timber production, the protection of water quality, maintaining a diversity of wildlife habitat, recreational opportunities, and aesthetic enhancement, depending on the site specifics of the parcel in question and the landowner's vision and needs. Whatever the objectives of a forest property owner, developing and implementing a forest management plan in consultation with a qualified forestry professional is one of the best means of managing a forest parcel for long term, sustainable forest health and production. Such a plan also provides an opportunity to balance timber production with other important objectives including wildlife protection and recreation.

Private Forest Lands. The majority of forestland in Waitsfield is under private ownership. While much of the private forest is made up of large parcels associated with single-family residences, many undeveloped parcels of managed timber lands also exist. Much of this privately-owned forestland is located in the Northfield Range, although large tracts of managed woodlands are located adjacent to the valley bottom. Of the privately-owned forestland in town, more than 4,000 acres are currently enrolled in the State's Use Value Appraisal ("current use") program, and are therefore managed in accordance with a forest management plan approved by the county forester. In addition to land under forest management, small saw mills currently operate in Waitsfield, providing a value added industrial base utilizing local forest resources

Municipal Forests. In 1991, the town received a gift of 360 acres located on the southwest portion of Scrag Mountain, including much of the ridge-line south of the summit. Since then the town purchased an additional 20-acre parcel, and then adjacent parcels of 60 acres and 200 acres were donated to the town in 2008, expanding the municipal forest to approximately 640 contiguous acres of rugged high-elevation land straddling the Northfield ridge. In 2017, the town and Vermont Land Trust negotiated a deal securing an additional 110 acres on the south and west portion of the property, bringing the total acreage of the Scrag Mountain Town Forest to 750. This land provides multiple benefits and opportunities to the town involving recreation, wildlife, scenic and watershed resources, and resource management (e.g., timber harvesting, sugaring). Primary access for public recreation and town forest management is now available through the newly acquired 110-acre "Scrag Forest Gateway Parcel" at the north end of Bowen Road. There is no deeded access to land on the east side of the ridge, but if access cannot be arranged with abutting landowners Vermont statutes may enable the town to access these lands for timber harvesting purposes.

As mentioned in the Water Resources section above, the town also acquired most of the 140-acre Wu Ledges Town Forest through a donation in 2004. The Wu Ledges Town Forest encompasses substantial frontage along the east side of the Mad River and much of the hillside that provides the eastern backdrop to Irasville. In addition, as part of the Hastings Meadow subdivision, the town acquired fee title to an adjacent 14-acre forested parcel, a conservation easement on an adjacent undeveloped 25-acre parcel, and trail rights on some



neighboring private land. Together, these lands include a diversity of forest types and natural communities, and a network of public trails for hiking, snowshoeing, skiing and mountain biking. A small public parking area is now available at the end of Hastings Road.

The Conservation Commission has lead responsibility for stewardship and management of the Scrag and Wu Ledges Town Forests on behalf of the town. Over the past decade, the Commission oversaw the completion of extensive inventories of the natural communities, bird habitat, and timber resources of these parcels, which then provided the foundation for the development of comprehensive management plans for each one. These plans, which integrate the various inventories with information on other attributes, such as recreational opportunities along with public input on goals and uses were completed in 2012 for the Scrag Mountain Town Forest and 2015 for the Wu Ledges Town Forest.

Public lands like the Scrag and Wu Ledges Town Forests provide a variety of benefits through management of their natural resources and open space amenities and by serving as buffers between more developed areas. These public lands require fewer and less costly services than more intensively used private properties, and thus serve to diminish the need for on-going taxpayer support. Municipal revenue is being realized through periodic sales of carefully managed renewable timber and a sugaring license with a private sugarmaker, thus contributing to Vermont's highly-valued working landscape and forest products industry while providing funds to support stewardship and management of the Town lands. Tourism

and recreation opportunities, supported by the public access and visual amenities available from undeveloped town forest lands, are a major element of the Mad River Valley's economic structure. Well-considered uses of those lands, including public participation in the planning and management process, will help to maintain and improve the quality of The Valley lifestyle.

Opportunities to expand municipal forests through the purchase or gift of land may exist. Public input should be considered prior to acquisition of additional lands. Transparency in the decision making process related to additional land acquisition should be considered critical to such a project. Any expansion should be followed by a comprehensive management plan, and should result in the acquisition of lands that will meet the town's policies and objectives with respect to its valuable natural assets.

Camel's Hump State Forest (Howe Block). Approximately 550 acres of the Camel's Hump State Forest are located in Waitsfield, in the Howe Block, along the Fayston boundary immediately south of Irasville on Dana Hill. This land is under multiple use management, subject to a Land Management Plan developed by the Vermont Department of Forest, Parks and Recreation. In addition to protecting much of a highly visible hillside, the state forest is actively used by local residents for hunting, hiking, skiing and biking.

11.I Environmentally Sensitive Areas

Environmentally sensitive areas include those areas or features that serve important ecological functions, and are especially susceptible to degradation from land use and development activities. As such, they are generally considered for protection through both regulatory and non-regulatory means.

Wetlands. Wetlands historically were viewed as worthless, mosquito-ridden bogs best suited for draining and filling for more productive uses. Wetland areas are now known to serve a variety of important ecological functions, including but not limited to storm water management and flood control, surface and ground water recharge and protection and wildlife habitat. Thus, they are now protected under state, federal and local regulations. Wetlands also present significant development constraints associated with poor drainage and high water tables.

There are no extensive wetland areas in Waitsfield, but many smaller wetlands are scattered throughout town (see Map 6 in Appendix B). The largest concentrations are found in the flood plains of the Mad River and in poorly drained areas in higher elevations south of Bald Mountain, including Printice Swamp.

As of the writing of this plan, there are roughly 640 acres of mapped wetlands regulated by the state as shown on the Vermont Significant Wetland Inventory (VSWI) map for the town.

This VSWI map is being updated and it is expected that more of the small wetlands, not previously shown, will be included. Even when this process is complete, site specific information and delineations may be required for the review of impacts associated with a particular development. Protection is provided through the designation of buffer areas at least 50 feet in width within which very few activities are allowed.

The loss of wetlands, especially upland (palustrine) wetlands, is an issue of national, state and local concern. In some circumstances, where full protection is not feasible given other considerations, mitigation resulting in no net loss of wetland area or function may be appropriate. Wetlands have been identified in areas designated for development within Irasville. In 2001, a functional evaluation of delineated wetlands in Irasville was completed, which showed that the majority of the wetlands in the district were classified as wet meadows and had limited wetland functions.

To the extent feasible, Irasville's wetlands should be incorporated in site planning, design, and storm water management systems. However, in order to achieve higher densities of concentrated development as envisioned for this area, some may need to be developed and mitigation of impacts provided. Further planning for Irasville should continue to explore options for wetlands protection and mitigation with state and federal officials.

Floodplains and Flood Hazard Areas. Flooding is Waitsfield's most common form of natural disaster and the most costly and dangerous to public health and safety. Flooding is also part of a natural process to dissipate the potentially damaging energy carried by raging rivers and minimize water quality degradation.

Waitsfield has experienced flooding and attendant damages stemming from high rainfall events, rain on snow events, higher than normal spring runoff events, and higher than normal precipitation that was associated with tropical storms and hurricanes. The frequency and magnitude of flooding can also be associated with the amount of impervious cover that inhibits infiltration, resulting in greater stormwater runoff.

There are generally two types of flooding in Vermont -- inundation and fluvial erosion. Inundation flooding occurs when floodwaters rise to levels that can flood roads and basements, whose velocities can be destructive to buildings and dangerous to people. Flooding can also cause fluvial (river-based) erosion, particularly if the stream channel is unstable. Fluvial erosion can threaten public infrastructure (e.g. roads, bridges, and culverts), private homes and business, and public safety and can result in significant property damage.

Those areas of the floodplain that may be inundated with floodwaters are called 'flood hazard areas.' The Federal Emergency Management Agency (FEMA) manages the mapping of these areas and uses data to create flood hazard maps that outline the community's range of flood frequencies up to and including the one percent annual chance flood (i.e. base flood). These maps, called Flood Insurance Rate Maps (FIRMs, or DFIRM for digitized maps), are used by the insurance industry to rate flood policies according to the flood risk of the property to be insured. The land area covered by the floodwaters of the base flood is identified on the FIRM as the Special Flood Hazard Area (SFHA). The SFHA is the area where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. This is the regulatory standard also referred to as the "base flood elevation." Waitsfield's mapped base flood elevation plain extends mostly along the Mad River and the lower reaches of its major tributaries (see Map 6 in Appendix B). The town's FIRM is available in the town offices for review. The FIRM can also be viewed on the Vermont Flood Ready Atlas or the FEMA Flood Map Service Center website.¹



In addition to the risks associated with inundation, there is the related hazard posed by storm-swollen streams and rivers, which may unexpectedly deepen, over-widen, or jump their banks and cut new channels. Due largely to human influences and invasives propagation with less resilient root masses, many stream and river channels are no longer stable. Their instability creates an erosion hazard during major storms, which are becoming more common as a result of climate change. Fluvial (river-related) erosion hazards often

¹ http://floodready.vermont.gov/assessment/vt_floodready_atlas#atlas and <http://msc.fema.gov/portal/search#>

exist in locations that are unlikely to be inundated with flood waters. Eroding stream banks are also a significant source of sediment and polluting nutrients entering major rivers and lakes, which decreases water quality.

The FEMA FIRM only shows those areas at risk for inundation and do not adequately identify areas at risk of erosion. Through the direction of the Vermont General Assembly, the Agency of Natural Resources (ANR) has identified and mapped areas with the highest fluvial erosion hazard, which they have called “river corridors.” River corridors “encompass the area of land surrounding a river that provides for the meandering, floodplain, and the riparian functions necessary to restore and maintain the naturally stable or least erosive form of a river thereby minimizing erosion hazards over time.”² In simple terms, river corridors show the land most vulnerable to erosion from flooding. Preventing further encroachment into the river corridor will minimize fluvial erosion hazards and property loss from flooding, enhance public safety, maximize channel stability, and maintain or improve water quality and habitat function

Management efforts, directed toward long-term solutions that help curb escalating costs and minimize the danger posed or damage caused by storm-swollen streams, can help reduce flood and erosion hazards along river and stream corridors, improve water quality and aquatic habitat, and enhance aesthetic and recreational values of the town’s rivers and streams.

Waitsfield experienced a significant flood in 1998 and a more recent flood in the spring of 2011, followed by a devastating flood from Tropical Storm Irene in August of that same year. In response to the effects of this flooding across the State, Act 16 was signed into law on May 6, 2013, to promote planning for the potentially severe impacts of flooding. This act requires towns to address flood resiliency in municipal plans adopted or readopted after July 1, 2014. Waitsfield is committed to improving its resiliency to flood impacts and has adopted policies to better protect identified areas. The town has also adopted flood hazard area regulations to limit development within flood hazard areas, as required for municipal participation in the federal flood insurance program. These regulations are intended to protect life and property, and to allow property owners to obtain National Flood Insurance Program (NFIP) flood insurance and mortgages at relatively affordable rates. In 2010, the town adopted new floodplain and fluvial erosion hazard regulations and maps as mandated by the Federal Emergency Management Agency (FEMA) and the NFIP. The town updated its flood hazard bylaws and added a fluvial erosion hazard bylaw to reduce the impacts associated with flooding.

Given the increasing cost of taxpayer-funded flood recovery, Waitsfield is also committed to developing and implementing flood hazard mitigation to reduce and avoid the costs

² <http://floodready.vermont.gov/RCFAQ>

associated with the damage that would otherwise occur to homes, businesses, and public infrastructure in the wake of a flood. Hazard mitigation is defined as taking sustained actions to reduce or eliminate the long-term risks to people and property from flooding. Flood hazard mitigation includes strategies that use the beneficial functions of landscape features such as floodplains, river corridors, wetlands, and shorelines to cost-effectively reduce the impacts of flooding. These features provide the town with a first line of defense to dampen the damaging effects of flooding by storing floodwaters, as well as the sediment, nutrient pollution loads, and debris carried by floodwaters. Nationwide, one dollar spent in mitigation saves four dollars in avoided costs from flood damages. In May of 2017, Waitsfield adopted a Local Hazard Mitigation Plan to provide more direct and specific detail regarding flood resilience for the town including specific information on vulnerabilities and corrective actions to be considered.

The following table is current data about Waitsfield from an Expanded Community Report as posted on Flood Ready Vermont. Currently, Waitsfield has the highest ERAF reimbursement rate of 17.5%, which means the town has adopted all five of the mitigation measures: Road and Bridge Standards, Local Emergency Operations Plan, National Flood Insurance Program, Local Hazard Mitigation Plan, and River Corridor Protection.

Expanded Community Report from Flood Ready Vermont³

Flood Hazard Mitigation Actions	Action Dates		Responsible	ERAF Status
1. 2013 Road and Bridge Standards	02/24/2014		Waitsfield	Yes
2. Local Emergency Operations Plan	04/10/2017		Waitsfield	Yes
3. National Flood Insurance Program	06/01/1978		Waitsfield	Yes
4. Local Hazard Mitigation Plan	05/01/2017		Waitsfield	Yes
5. River Corridor Protection		Interim		Yes
ERAF Rate for Actions 1 - 4: 12.5%	Actions 1 - 5: 17.5%	ERAF Rate for Waitsfield:		17.5%

19	Buildings in the Special Flood Hazard Area (SFHA) (estimated from e911 sites).
15	Flood Insurance Policies in SFHA (Zone A, AE, AO, A 1- 30)
79%	Percent of buildings in the SFHA with flood insurance in force.
1	Critical or public structures in SFHA or 0.2% flood hazard area (est. from e911 sites.)
2%	Percent of buildings in the SFHA.
06/01/1978	National Flood Insurance Program (NFIP) (Enrollment Date)
DFIRM	Flood Insurance Rate Map Standard (Digital FIRM (DFIRM), Rough Digital, Paper)
Waitsfield	NFIP Status: Regular Program
NA	Community Rating System (CRS)

³ <http://floodready.vermont.gov/> - retrieved 7/7/17

Yes	Local Emergency Operations Plan (LEOP) ERAF Status valid for Waitsfield?
04/10/2017	LEOP - annual update after Town Meeting and before May 1.
Yes	Local Hazard Mitigation Plan (LHMP) ERAF Status valid for Waitsfield?
05/01/2017	LHMP - Valid for 5 years from FEMA final approval date
FEMA Formal Approval	LHMP - Status of review (Plans currently in review are valid for ERAF).
Yes	River Corridor Protection in Waitsfield?
Interim	River Corridor Interim Protection Status for ERAF valid for Waitsfield?
10/01/2012	Municipal Plan - Valid for 5 years from adoption date
05/17/2010	Zoning Adoption / Amendment Date
May 2010	Hazard Area Regulation Adoption / Amendment Date
Yes	2013 Road and Bridge Standards
35.410	Town Highway Mileage in Waitsfield
02/24/2014	Waitsfield Road and Bridge Standards and Adoption Date
2/8/2016	Waitsfield Certificate of Compliance with Road and Bridge Standards and Date
2/8/2016 12:00:00 AM	Town Highway Network Inventory Date
80%	Town Highway Structures Grant Rate (State match 80% or 90%)
70%	Class 2 Roadways Grant Rate (State match 70% or 80%)
dick.hosking@vermont.gov	Project Manager email for VTrans Maintenance District 5

Stormwater. The town adopted the Vermont Transportation Agency's Road and Bridge Standards contained in the most recent edition of The Orange Book for Local Officials to reduce stormwater impacts on town road infrastructure. The town is also working with the University of Vermont to conduct a stormwater management master plan for the town.

In April 2015, the Selectboards of all five Mad River Valley (MRV) towns voted to support an application to High Meadow Fund to develop a long-term approach for building flood resilience and water quality in the MRV by improved and coordinated stormwater management. The grant was awarded in July 2015 and the River to Ridges Initiative was formed. Since that time, this taskforce of interested citizens and municipal representatives coordinated by Friends of the Mad River, has been engaged in monthly meetings to identify readily-achievable strategies for reducing community vulnerability to stormwater runoff, develop information and resource-sharing strategies for municipalities, and prepare for impending state regulations related to cleaning up Lake Champlain Basin's waters.

In 2017, the five-town Ridge to River Initiative developed its pilot program, Storm Smart Program, to reduce damage to our community in light of climate change. This program works with area homeowners to help them address soil erosion problems. In addition to these efforts, they are developing a Valley-wide stormwater master plan in order to control runoff and reduce adverse impacts from flood events.

Wildlife Habitat. Waitsfield is home to a wide variety of plant and animal species and natural communities (distinct assemblages of plants and animals in particular environmental settings) that contribute to local biological diversity and ecological integrity, and support traditional activities such as hunting, fishing, foraging, bird-watching and other wildlife viewing. Forested upland areas harbor a wide array of bird species; mammals, such as black bear, deer, bobcat, moose, coyote, fisher, and rumored catamount populations; and many species of reptiles, amphibians, and insects. The Mad River and its tributaries support natural and stocked populations of brook, brown and rainbow trout. Wetland and river corridors, open lands and field edges also provide critical habitat for a variety of species. Wetlands supporting wildlife habitat, although not common in Waitsfield, are essential for the survival of mink, otter, beaver, black bear, moose, ducks, herons, other wading birds and shore birds, a variety of amphibians and reptiles, and other species.

Human activities, however, can have devastating impacts on local wildlife populations, including:

- The fragmentation and loss of contiguous habitat areas due to subdivision and development;
- The fragmentation or interruption of seasonal travel corridors;
- Habitat degradation from air and water pollution; and
- The introduction of exotic species.

The extent of knowledge about wildlife habitat in Waitsfield and the Mad River Valley has been significantly bolstered by the 2007 Natural Heritage Element Inventory and Assessment for Waitsfield and Fayston prepared by Arrowood Environmental. The purpose of this inventory was to map and assess the natural heritage elements that are important to the preservation of biological diversity. The scope of the project included the identification, inventory, assessment and ranking of five resource elements: wetlands, vernal pools, upland natural communities, wildlife habitat and connecting lands and rare elements.

The Arrowood study provides an overview of the various natural communities found as well as specific habitat types (land with physical characteristics that are critical to the survival of one or more species). While the study includes several maps of different natural features, those maps are not necessarily comprehensive in that extensive fieldwork was not conducted as part of the study. Therefore, delineation of natural heritage resources still must occur on a site-by-site basis, and unmapped resources likely exist in Town. The study does, however, identify the physical features that comprise the significant wildlife habitats in Waitsfield, including:

- **Core Habitat**, described as “forested wildlife habitat that is far removed from human activities and their artifacts, such as roads, houses and active farmland.” This includes all of the Forest Reserve District and some adjacent land, especially Mount

Waitsfield and the steep valley wall adjacent to the Mad River east of the North Road, as well as much of the land encompassing the Wu Ledges Town Forest and adjacent areas especially to the south.

- **Deer Winter Habitat**, or deeryard, is generally found on south or west facing slopes below elevations of 2,000 feet, where coniferous forests predominate. Not only are such areas critical to deer, but nearly half (169 species) of Vermont's vertebrate wildlife species rely on coniferous forests for at least part of their life needs. Due to their relatively high concentration, deeryards in Waitsfield serve a regional function. Covering approximately 4,000 acres, deeryards are concentrated primarily along the steep slopes parallel to the Mad River, and in the Folsom Brook drainage area.
- **Wetlands** identified in the study include several different types that are important to wildlife, including floodplain forests, seeps, wetland complexes, oxbow communities and vernal pools, which typically contain water only seasonally.
- **Mast Stands** are concentrated stands of masting trees (e.g., American beech) that provide fruit or nut production. When concentrated into a stand, these trees provide a critical food supply for a variety of wildlife, including deer, turkey and bear. Mast stands are of particular importance to local bear populations, which tend to prefer stands that are isolated from human habitation. Eight mast stands were identified in Waitsfield, most — but not all — within larger areas defined as core habitat.
- **Forested Riparian Habitat**. As noted in the section of this chapter that addresses “rivers and streams,” riparian vegetation is not only important for maintaining water quality and temperature — and therefore fish populations — but also for providing necessary habitat for amphibians, several mammals, including river otter, long-tailed weasels, moose and big brown bats, and a variety of bird species. Establishing stream buffers that limit encroachments and maintain vegetation is an effective way to protect this resource.
- **Grassland Habitat**, which consists of active farmland used for pasture or hay, is important to a variety of mammals and birds (some species, including deer, fox and bear, even use agricultural land planted in row crops).
- **Rare & Endangered Species Habitat** sites are inventoried by the Vermont Non-Game and Natural Heritage Project. Because of the vulnerability of the species in question, the precise locations of identified habitats are made available only to relevant officials and experts, and are not published or made available to the general public. To date, no rare or threatened habitats have been identified in Waitsfield, although a complete inventory has not been undertaken.

- **Ledge, Talus & Cliff Habitats** are used as nesting sites for a number of bird species, as well as denning sites for bobcats and porcupine. It is important that an adequate buffer be established — a minimum of 100 feet — to avoid disturbance from development activities. These areas include several craggy outcrops on the steep lower valley wall rising east of the Mad River, and in the Northfield Range.
- **Wildlife Travel Corridors** are places where landscape and land use characteristics combine to form an area where wildlife can move across roads to and from habitat areas. Three categories of corridor locations were identified: (1) general corridors likely used by a range of species; (2) potential travel corridors for bear and deer; and (3) travel corridors for amphibians moving between upland and wetland habitats. Although 27 “likely” travel corridors have been identified in Waitsfield, field verification of the location and function of travel corridors is needed.

The Arrowwood study includes management recommendations that can help landowners manage their property in a manner that maintains the ecological functions for wildlife. The study also identified “contiguous habitat units” that describe large areas where several different habitat types are combined to form a unit of relatively continuous wildlife habitat. All or a portion of 14 different contiguous habitat units have been identified in Waitsfield. This provides a useful context for understanding how various wildlife habitats interrelate in supporting the Mad River Valley’s wildlife populations. As discussed in Chapter 8, maintenance of road infrastructure such as culverts and bridges should be done in a way that anticipates the increased frequency and magnitude of high storm flows that are likely with climate change (e.g. using larger diameter and/or bottomless arch culverts). Such actions can offer a win-win solution by reducing maintenance costs in the mid-to-longterm and providing ecological benefits by improving conditions for the movement of aquatic and terrestrial animals within and along stream corridors that roads cross.

As is true of other shared natural resources like the Mad River and our mountain ridgelines, it is important for Waitsfield and the neighboring towns to think about wildlife habitat and natural heritage resources not only on a town-by-town basis but also in a broader, collective context. Such an integrated perspective—one that is not confined by town boundaries—is essential if we and our neighbors throughout the Mad River Valley and beyond are to sustain the diversity of habitat and species that is a defining part of our sense of place. The Arrowwood study for Waitsfield and Fayston, and a parallel one that Arrowwood completed for Warren in 2008, provide an excellent foundation of knowledge from which to advance this type of shared approach to the conservation of wildlife habitat and key natural heritage assets.

The Mad River Valley towns took an important step in this direction through the Forests, Wildlife, & Communities (FWC) Project starting in 2008. The FWC Project was a collaboration among the Mad River Valley Planning District, local and state conservation

organizations, state and federal agencies, and representatives in the town of the Mad River Valley to implement a regional and landscape level approach to wildlife and forestland conservation by engaging and assisting landowners, residents, and local officials about community-oriented and landowner-based strategies for forestland and wildlife habitat conservation. One output of the FWC Project was the development of maps that bring a valley-wide lens to the individual Arrowwood studies. Through the support of the VT Fish & Wildlife Department and various FWC Project partners, the maps help prioritize previously mapped resources and serve as a valuable resource for municipal and watershed level planning. The 2011 Tiered Ecological Priorities Map, developed as a planning tool for municipal governments in the Mad River Valley, identifies areas that ecologists have deemed important for conservation. The map prioritizes resources into four levels, reflecting what are believed to be the most important places for maintaining The Valley's fish and wildlife populations and biological diversity. A second map, Ecological Conservation Focus Areas, identifies the degree of co-occurrence or overlapping of several ecological principles. It shows areas appropriate for conservation action, such as where to focus technical assistance or voluntary land acquisition. Together, the information in these maps provide a platform from which the towns and landowners can consider appropriate actions—whether individually or collectively—to sustain the Valley's vital habitats.

11.J Invasive (Non-Native) Species

While some non-native species don't pose a danger in their new host environments, many persist and proliferate to the detriment of native species, natural communities, and ecosystem functions. These organisms can pose a risk because they often have no natural predators and can out-compete native species, greatly reducing biodiversity and altering "ecosystem services" such as forest productivity and outdoor recreation. Thus, these species—which can include both terrestrial and aquatic plants and animals—have been labeled "invasive, non-native species."

Invasive, non-native species pose a number of environmental, economic, and human health threats. Unfortunately, Waitsfield and the rest of the Mad River Valley are not immune to the effects of invasive non-native species, and the threat from them is growing. The list of such species that are already present in the Mad River Valley is extensive – for instance, Japanese knotweed, glossy buckthorn, honeysuckle, Japanese barberry, Didymo (or "Rock Snot"), winged euonymus or "burning bush," purple loosestrife, and wild chervil. And others that could have a transformative effect on our forests—such as Asian longhorn beetle, emerald ash borer, and hemlock wooly adelgid—are not here yet but may not be far off.

While some species like knotweed are already widespread, the good news is that many are not yet prolific locally and so offer an opportunity for effective management to prevent or limit their spread. Before the threat and impacts of existing and new invasive, non-native

species intensify, the Town should do whatever it can independently and in collaboration with others (e.g., the other Mad River Valley towns, appropriate state agencies, nonprofit organizations like the Friends of the Mad River and the Vermont Chapter of The Nature Conservancy) to develop and implement an effective prevention and management regime. Potential elements include:

- Surveying the presence and location of invasives in town (and the Mad River Valley more broadly). Seek input from foresters and other land managers on what they are finding.
- Developing an “Early Detection/Rapid Response” protocol to limit and control small-scale outbreaks of invasives before they proliferate into larger, more difficult problems.
- Addressing invasives in the development and implementation of management plans for town-owned lands.
- Linking with the emerging statewide citizen science monitoring initiative for invasives, which will include a mapping component and protocols for assessment.
- Working with the town road crew to adopt and implement best management practices to prevent the spread of invasives (e.g., ensuring all fill that is moved in town is “weed-free,” cleaning equipment, changing mowing regimes). The New Hampshire Department of Transportation’s 2008 publication “Best Management Practices for Invasive Plants” is one source for formulating BMPs.
- Replacing any plantings in front of town-owned buildings that have invasives. Use this project as an example to help the public understand and prevent the spread of invasives.
- Promoting the use of natives by any applicants that are seeking design approvals through the town. At the very least, make sure that the list of approved plants does not include known invasives.
- Educating landowners about invasives by having information on the town website.
- Conducting and publicizing an invasives management/restoration project on town lands.
- Encouraging residents to replace any invasives on their property with native species.
- Exploring the establishment of a Valley-wide Cooperative Invasive Species Management Area (CISMA) to promote collaborative planning, management, and outreach to prevent or reduce the spread of invasives.

In the summer of 2017, the Selectboard approved a plan forwarded by the Conservation Commission to use carefully controlled, targeted chemical treatment to manage invasive plants on the town-owned Austin parcel, which caused a strong backlash among residents. The Conservation Commission held a special public forum and multiple regular meetings on the topic, and recommended to the Selectboard to reverse course and pursue the use of manual and mechanical treatment methods instead of herbicides. From this experience, an

important first step in treating invasive species – particularly near the Mad River and other waterbodies – is to try manual and mechanical methods rather than chemical treatment.

11.K Goals

- 11.K-1 The responsible stewardship and sustainable use of Waitsfield's natural resources in a manner that protects and enhances the town's and the broader Mad River Valley's environmental well-being for the benefit of future generations.
- 11.K-2 The conservation of natural features that contribute to Waitsfield's and the Mad River Valley's ecological health and biological diversity.
- 11.K-3 Flood resiliency, mitigation, and restoration following flood events such as the one that occurred in May 2011 and Tropical Storm Irene which occurred in August 2011. Particular attention should be paid to protecting the flood-prone Historic District in Waitsfield.

11.L Policies

- 11.L-1 Identify and protect important natural resources, including prime agricultural soils, forest resources (soils, products, habitat), significant wildlife habitat, floodplains, river corridors, water resources and other features described in this plan.
- 11.L-2 Accomplish the protection of identified natural resources through measures and programs that support, where appropriate, the sustainable use of those resources, including management of productive forests, agricultural use of productive soils, commercial and non-commercial recreational use of land and water, and the generation of renewable energy in appropriate locations.
- 11.L-3 Support the continuation and expansion of the state current use program ("Use Value Appraisal") to tax farm and forest properties at their productive value rather than their development potential. Encourage the participation of Waitsfield property owners in that program.
- 11.L-4 Collaborate with and support the efforts of local, regional and statewide conservation organizations to protect open space in Waitsfield through voluntary programs (e.g., purchase or donation of fee title or development rights). Priorities for open space protection include:

- 11.L-4.a Productive agricultural land and working farms;
 - 11.L-4.b Primary agricultural soils, including those not presently in production, unless such soils are located on parcels identified as appropriate areas for future development ;
 - 11.L-4.c High elevation land (above 1,500 feet) in the Northfield Mountain Range;
 - 11.L-4.d Significant wildlife habitat and travel corridors (as defined in this chapter);
 - 11.L-4.e Trail corridors, river accesses and areas for dispersed recreation (e.g., hunting, hiking, biking and other non-motorized activities);
 - 11.L-4.f Riparian lands, river corridors and floodplain;
 - 11.L-4.g Identified scenic viewsheds; and
 - 11.L-4.h Undeveloped parcels adjacent to existing conserved lands.
- 11.L-5 Pursue land conservation projects in accordance with the overall policies of this plan, including, but not necessarily limited to, those related to land use, housing and economic development.
- 11.L-6 Support the efforts of the Mad River Valley Planning District, Mad River Valley Rural Resource Commission and other organizations to implement and update the Mad River Valley Rural Resource Protection Plan.
- 11.L-7 Explore the benefits of expanding of the Green Mountain National Forest proclamation boundary to encompass land located east of Route 100 which would allow the Town to obtain and/or facilitate federal technical and conservation assistance and Forest Service funds.
- 11.L-8 Ensure that the extraction of finite earth resources, including sand and gravel, is conducted carefully to minimize adverse impacts on surrounding properties and the community at large, and to ensure restoration of the site upon completion of the extraction activity. Development of such resources should be carefully sited to retain, to the extent possible, future access.
- 11.L-9 Prohibit land development and removal of forest cover on slopes of 25% or greater.
- 11.L-10 Enact, incentivize and support measures to preserve primary agricultural soils for continued and future agricultural use and prevent the fragmentation and development of these resources through the town's land use regulations.
- 11.L-11 Design land subdivisions and land development, outside of designated growth centers, to minimize development on and fragmentation of land characterized by primary agricultural soils.

- 11.L-12 Prohibit land development on wetlands, unless it can be done with appropriate permitting and mitigation, particularly with regard to any critical ecological function that may be compromised by development.
- 11.L-13 Design all land subdivision above an elevation of 1,500 feet carefully to minimize or mitigate adverse impacts to significant wildlife habitat, productive forest land, scenic viewsheds, shallow soils and headwater streams. Appropriate methods to avoid or mitigate such impacts include clustering development on the least sensitive portion of the site and retaining the bulk of the subdivided parcel(s) as open space.
- 11.L-14 Prohibit land development, including the construction of roads and extension of utilities, above an elevation of 1,700 feet, with the exception of activities related to non-commercial recreation, forest management and low-impact seasonal camps.
- 11.L-15 Design land subdivision and land development to avoid undue adverse impacts to significant wildlife habitat and wildlife travel corridors, including those in the 2007 Natural Heritage Inventory, and contiguous habitat units located outside of designated growth areas, including village and industrial districts and appropriate areas for residential hamlets. An adverse impact to significant wildlife habitat is any consequence of development that would demonstrably reduce the ecological function of habitat on a particular parcel. An adverse impact to contiguous habitat units (or core habitat) is one that would result in a demonstrable reduction in the ecological function of the area, or the type of impact that, along with other impacts in the area, would lead to a cumulative reduction in the ecological function of the habitat in the contiguous habitat unit.
- 11.L-16 Design local incentives to encourage the conservation of large, unfragmented landscapes.
- 11.L-17 Protect and enhance the quality of Waitsfield's surface waters through the maintenance and restoration of vegetated buffers and river corridors along all streams and rivers.
- 11.L-18 Prohibit the removal of gravel from the Mad River and tributaries in excess of volumes presently allowed by the state.
- 11.L-19 Design land subdivisions and land development to control storm water runoff, increase infiltration and avoid adverse off-site impacts to water quality. Post-development storm water should infiltrate or flow off the property at similar rates and locations to pre-development conditions.

- 11.L-20 Consult with the Friends of the Mad River and local fishery groups on projects that may potentially impact the Mad River and tributaries.
- 11.L-21 Support the efforts of the Friends of the Mad River and other organizations to implement and update the *Best River Ever: A Conservation Plan to Protect and Restore Vermont's Beautiful Mad River Watershed* and the *Ridge to River* initiative.
- 11.L-22 Support the establishment of municipal water and the further investigation of wastewater options to serve designated growth centers as a means of avoiding contamination of ground and surface waters.
- 11.L-23 Maintain the existing classifications of the town's surface waters, with the exception of headwater streams above an elevation of 1,500 feet which should be upgraded to Class A.
- 11.L-24 Develop and implement a plan to allow the encroachment into wetlands with limited ecological functions within the Irasville Village District. Such a plan should include clear strategies for the maintenance or replacement of any lost ecological functions either within or outside of the district.
- 11.L-25 Design land development within mapped water supply source protection areas carefully to avoid groundwater contamination, and uses posing a high risk of contamination.
- 11.L-26 Control the extraction of groundwater for commercial purposes carefully to ensure that water is extracted at sustainable rates and to prevent the depletion of water supplies in the community.
- 11.L-27 Promote sustainable forest management to ensure the maintenance of water quality, the enhancement of wildlife habitat and the avoidance of adverse impacts on scenic resources, including upland areas in the Northfield Mountain range. (See Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont).
- 11.L-28 Continue to evaluate development proposals against the policies of this plan during local and state regulatory processes to ensure that such proposals are in conformance with the plan.
- 11.L-29 Manage town-owned conservation properties (Scrag, Wu Ledges, Austin, Tardy) for a responsible, sustainable mix of public values in accordance with management plans prepared by the Conservation Commission with appropriate public input.

- 11.L-30 Collaborate with other Mad River Valley towns and appropriate public and private organizations to further the sound stewardship across municipal boundaries of shared natural assets including the Mad River, mountain ridgelines, wildlife and habitat.
- 11.L-31 Control and, where possible, prevent and eliminate invasive, non-native species in Waitsfield and the Mad River Valley through town actions, public engagement with landowners and other residents, and collaborative efforts with other towns and partners. Manual and/or mechanical means are the preferred methods of invasive and non-native species management and are to be utilized unless these means are demonstrated to be infeasible in a specific application due to associated costs and available services.
- 11.L-32 Limit development in SFHA and river corridors, as delineated on the most recent FEMA DFIRM maps and ANR mapping.
- 11.L-33 Existing homes and businesses at highest risk of flood damage (i.e. those within SFHA or river corridors) should be identified and prioritized in coordination with the ANR River Management Section and the Regional Planning Commission for mitigation actions such as elevation/relocation or purchase and demolition.
- 11.L-34 New development and substantially improved existing structures within the SFHA must be flood proofed to at least two feet above the base flood elevation.
- 11.L-35 Continue to prevent development of critical facilities in the SFHA and river corridors.
- 11.L-36 Establish and sustain a flood hazard area education and outreach effort to foster flood damage mitigation and ensure property owners are better prepared for future flood damage.
 - 11.L-36.a Coordinate with the Regional Planning Commission in hosting flood mitigation workshops for residential landowners and business owners, to educate them on measures to reduce flood risk and damage.
 - 11.L-36.b Encourage property owners to review the flood hazard and river corridor maps and consider flood proofing their property, implementing storm water management techniques, and/or purchasing flood insurance.
- 11.L-37 Support the purchase properties or development rights of properties within the SFHA and river corridor to permanently prevent development in those areas.

- 11.L-38 Agriculture, recreation fields, parks, and open space are all appropriate uses of flood hazard areas, provided no new structures are constructed and no fill is introduced.
- 11.L-39 River corridors, flood plains, wetlands, and upland forest areas that attenuate and moderate flooding and erosion shall be protected and, where appropriate, restored.
- 11.L-40 All development in Class I or II Wetlands should be avoided. Wetlands that provide critical flood storage functions shall remain undeveloped or have compensatory storage constructed so as to achieve no net loss of such wetland function. In the long term, restoration and enhancement of additional wetlands should be pursued in order to improve Waitsfield's flood resilience.
- 11.L-41 Work with ANR, the Regional Planning Commission and landowners to lessen flood risk by restoring natural channel functions through removal of berms, dams, and levees, where practical.
- 11.L-42 Maintain bridges, roads, ditches, and culverts to Town Road and Bridge Standards in order to avoid incurring additional flood damage costs associated with failure of these critical structures.
- 11.L-43 Consistently maintain and update town bridge and culvert inventories. Use this information to develop a schedule to replace undersized and failing culverts and drainages.
- 11.L-44 Address structural deficiencies in infrastructure and transportation as soon as possible.
- 11.L-45 Continue on-going emergency preparedness and response planning.
- 11.L-46 To minimize loss from flooding and erosion, ensure zoning regulations for flood hazard and fluvial erosion areas are continually reviewed and updated to comply with state standards, requirements, and recommended guidelines for SFHA and river corridors.
- 11.L-47 Develop building and land development regulations that address post-disaster rebuilding.
- 11.L-48 Consider enrolling in the "Community Rating System" as a tool to reduce flood insurance premiums, and strive for a class 1 rating.

- 11.L-49 Prevent the storage of valuables in flood-prone areas (e.g. town archives, library collections, etc.).
- 11.L-50 Address the storage of unsecured objects in the floodplain. Engage local farmers in discussions about the mutual benefits of storing hay bales and other materials and equipment outside of the special flood hazard area and river corridor.
- 11.L-51 Develop and maintain mutual aid agreements with neighboring communities.
- 11.L-52 Continue to protect natural and beneficial functions for mitigating flood hazards.
- 11.L-53 Promote hazard mitigation as a cost-effective measure to improve the town's resilience to flooding.
- 11.L-54 Protect the Historic District using hazard mitigation strategies, including flood-proofing and/or elevating structures.
- 11.L-55 Support the goals of the Forests, Wildlife, & Communities Project, utilizing the Tiered Ecological Priorities Map for conservation planning and development review proceedings. Reference the Ecological Conservation Focus Area Map when focusing on technical assistance or ascertaining cost-efficient utilization of the town's conservation resources.

11.M Tasks

- 11.M-1 Enact, through zoning and/or subdivision regulations, measures to preserve primary agricultural soils for continued and future agricultural use and minimize the fragmentation and development of these resources. [Planning Commission]
- 11.M-2 Form a committee, to include willing landowners, to develop a multi-property management and conservation plan for lands in the Forest Reserve District. [Conservation Commission, Planning Commission, Tree Warden]
- 11.M-3 Develop a revised master plan for Irasville that includes water, wastewater, and stormwater systems designed to correct and avoid contamination of surface and groundwaters. [Selectboard, Town Administrator, Planning Commission]
- 11.M-4 Implement appropriate actions to meet the requirements set by the Agency of Natural Resources (ANR) TMDLs (total maximum daily load) for the Mad River and larger Winooski River watersheds. [Planning Commission, Selectboard]

- 11.M-5 Consult with the Friends of the Mad River and local fishery groups on projects that may potentially impact the Mad River and tributaries. [Planning Commission, Friends of the Mad River*]
- 11.M-6 Integrate fish and wildlife inventory data and information into strategies that encourage the preservation of these resources and wildlife corridors in the area. [Conservation Commission, Planning Commission]
- 11.M-7 Participate in the review and revision of the Camel's Hump State Forest (Dana Hill Forest) management plan to ensure that wildlife habitat, recreation opportunities and aesthetic resources are protected and enhanced. [Selectboard, Town Administrator, Conservation Commission]
- 11.M-8 Coordinate with land conservation organizations to ensure that conservation projects in Waitsfield are consistent with the goals and policies of this plan. [Selectboard, Town Administrator, Planning Commission, Conservation Commission, Mad River Watershed Conservation Partnership*]
- 11.M-9 Maintain a reserve fund to support local land conservation efforts, with annual allocations included in the capital budget and program. [Selectboard, Town Administrator]
- 11.M-10 Explore ways to educate landowners, especially new arrivals to the community, about techniques for good land stewardship and natural resource conservation. [Planning Commission, area real estate brokers*]
- 11.M-11 Develop, implement, and continually update flood hazard mitigation plans when possible. [Planning Commission, Development Review Board, Selectboard]
- 11.M-12 Review and compare the Agency of Natural Resources and Agency of Transportation's guidelines on transportation infrastructure maintenance and development. Determine which should be used in Waitsfield. [Planning Commission, Friends of the Mad River*]
- 11.M-13 Explore the establishment of a Valley-wide Cooperative Invasive Species Management Area (CISMA) to promote collaborative planning, management, and outreach to prevent or reduce the spread of invasives. [Conservation Commission, Planning Commission, Friends of the Mad River*, Vermont Chapter of The Nature Conservancy*, Vermont Agency of Natural Resources*, The Mad River Path Association, Mad River Valley]

- 11.M-14 Work with VTrans and the Regional Planning Commission to improve the flood capabilities of state or Town-owned transportation infrastructure. [Selectboard, Town Administrator, Planning Commission]
- 11.M-15 Request hydraulic studies, estimate costs, and seek funding for the replacement of all undersized culverts and drainages. [Selectboard, Town Administrator, Planning Commission]
- 11.M-16 Rebuild/install culverts and bridges that are designed at a minimum to meet VTrans Hydraulics Manual and ANR Stream Alteration Standards. [Selectboard, Town Administrator, Planning Commission]
- 11.M-17 Develop or update a capital improvement plan that addresses: the replacement of undersized culverts and structurally deficient bridges; the protection of vulnerable sections of public roads; the purchase of river corridor easements; and other measures to finance priority mitigation strategies for municipal infrastructure and facilities. [Selectboard, Town Administrator, Planning Commission]
- 11.M-18 Review and update the town's flood hazard and fluvial erosion regulations to be consistent with the most recent state standards, requirements, and recommended guidelines for SFHA and river corridors. [Planning Commission]
- 11.M-19 Participate in Valley-wide stormwater master planning. [Selectboard, Planning Commission]

12. Land Use

12.A Overview

Planning for future land use must consider all aspects of the Plan. It must balance the needs of the community, support opportunities for economic growth and development, provide access to transportation options, while safeguarding the resources and character that make Waitsfield such a special place to live, work, and visit. Identifying a common plan for the use and development of land, and achieving that plan through government policies and regulations, is among the most important, and controversial, planning issue faced by local communities. Waitsfield anticipates, and welcomes, well-planned growth and development that combines the creation and enhancement of walkable and diverse places with the need to build sustainable infrastructure and buildings that maintain and promote the rural character of the town.

12.B Character of the Area

Waitsfield is a rural community with a working landscape, a regional commercial center, a bedroom community, a tourist destination, and is home to a variety of species, habitats and natural resources. This is reflected in the primary land uses and types of land cover that presently exist. A prevailing characteristic of Waitsfield is the extensive forest cover, especially in mountainous areas and on steep slopes rising from the valley floor. The town's



aesthetic character, however, is defined by the contrasting patchwork of forest with large areas of farmland, especially in the vicinity of Waitsfield Common and the valley floor, and an attractive built environment. Commercial development is concentrated in existing centers, Waitsfield Village and Irasville, and in the Limited Business and Industrial Districts. Residential development is widely distributed throughout town, although concentrations exist in the village centers and in rural areas served by major roads near the villages.

The character of the area plays an important part in the state review of applications for proposed projects with regard to the proposed project's impact on aesthetic impacts in an area (under the Quechee Lakes analysis). Development should be considered thoughtfully to ensure that the aesthetic values and visual integrity that define the character of the area are not unduly adversely impacted. To that end, the future land use plan for the town builds on historic precedent and past planning efforts and is based on the desire to maintain and reinforce the town's traditional settlement pattern, which is characterized by the following distinct features:

- Compact, mixed use village centers, and industrial areas, served by major transportation routes;
- A rural landscape surrounding the village centers, encompassing working farms, open meadows and forest and low density residential development;
- Small, compact residential "hamlets" located in appropriate locations throughout the rural landscape; and
- The least accessible and most fragile areas, including the mountainous eastern boundary, remaining essentially undeveloped.

The Villages. Waitsfield Village historically served as the town's commercial and service center, although much of the retail and commercial base has shifted to Irasville in recent decades. But most community services, including the fire department and ambulance service, library, town offices and elementary school, remain in the village.

Waitsfield Village is listed on the National Register of Historic Places as a Historic District. The village exemplifies a classic New England development pattern characterized by a compact development center, dominant public buildings and contrast between the village and surrounding countryside. While the village's historic character is largely intact, much of the contemporary development at the northern end deviates from the traditional styles found elsewhere in the village.

Waitsfield Village also received state "village center" designation in 2007 (see map that follows), which makes owners of included properties eligible for tax credits for the rehabilitation of historic buildings and increases the town's ability to secure funding for projects benefiting the village from some state programs.



An important element of the village's historic character is the sharp contrast between the compact village and the surrounding countryside. The wooded hillside west of the village, and farm fields to the east, are subject to conservation easements and will remain undeveloped. The Mad River and the exposed ledges and winding character of Route 100 to the south also define strong boundaries and a clear southern gateway to the village.

The area to the north of the village, however, including agricultural land bordering Route 100, is critical to maintaining the sharp distinction between the village and the surrounding countryside. The northern boundary of the Waitsfield Elementary School property and the row of pine trees north of the Waitsfield Telecom property create a strong northern gateway.

Irasville Village has served as Waitsfield's principal growth center for nearly 30 years. Centrally located in the Mad River Valley at the crossroads of Routes 100 and 17, Irasville is the result of farsighted land use policies and public and private investment initiated in the 1970s and continuing through today. Encompassing approximately 190 acres, Irasville was envisioned as a compact, mixed use village serving the commercial, cultural and housing

needs of the Mad River Valley. Nearly 200,000 square feet of mixed-commercial space, over 80 residential dwellings, and several recreation facilities have been constructed in Irasville since it was first designated as a growth center.

Irasville not only serves Waitsfield residents. The neighboring towns of Fayston, Moretown and Warren all recognize Irasville as their communities' "downtown" in their respective town plans. This function as the Mad River Valley's downtown has been supported with strategic infrastructure improvements, including road construction to establish a partial grid street network, and planned sidewalk construction to provide pedestrian access within Irasville and a pedestrian connection to historic Waitsfield Village. The lack of community wastewater or water systems, however, coupled with the lack of integrated storm water management, have resulted in a fragmented development pattern and limited capacity to accommodate growth pressure. The Town has recently utilized a funding mechanism to encourage shared septic systems among homeowners, and has established the Waitsfield Community Wastewater Loan Program, which should help in improve development options. This voluntary program for local property owners provides 20-year fixed-rate low-interest loans for shared wastewater projects that meet specific Town criteria.



Several master planning efforts have been initiated for Irasville in the years since it was first designated as the town's growth center, dating back to at least the early 1980s. The first comprehensive physical design for Irasville prepared in 1997 proposed a compact downtown characterized by an interconnected grid of streets and sidewalks, well defined streetscapes, two village greens and multi-story buildings housing a mix of commercial, civic and

residential uses. That planning effort was expanded and further refined in the *2002 Master Development Plan for the Irasville Growth Center: A Vision for a New Village*. The 2002 plan illustrates many of the design concepts that should characterize future development in Irasville, although further refinement of the plan is still needed. The goal of each of these efforts was the preparation of a master plan that:

- Illustrates the desired future development pattern within the district in a manner that reflects an efficient use of land and a high density, pedestrian oriented village center;
- Defines the development characteristics that should provide the necessary foundation for improved building and site design standards under the town's development regulations;
- Establishes a framework to ensure that development results in an interconnected network of roads and paths, which in combination will reduce reliance on the automobile and provide local alternatives to Route 100;
- Identifies open space that should be incorporated into development plans, including both formal (e.g., village green) and informal (natural area, wetland) types of open space; and
- Addresses facility and infrastructure needs, including storm water management facilities needed to address the potential water quality impacts of high density development in a coordinated manner.

While no single master plan has been formerly endorsed by the town, several key design concepts and development issues have been identified during the various master planning efforts. These are consolidated into a conceptual plan as shown on Maps 10 and 12 in Appendix B. Defining features of this desired settlement pattern include:

- An interconnected network of roads and pedestrian paths;
- Well defined streetscapes, defined by closely spaced buildings fronting close to the road, sidewalks, street trees and, where possible, on-street parking;
- Opportunities for rear-yard "in-fill" development where defined streetscapes are not present or practical;
- Formal and informal open spaces, including a village green(s) and greenway network, possibly encompassing "green infrastructure," such as storm water facilities;
- Multi-story buildings;
- A pedestrian scale of site and building design;
- A mix of uses, including upper-story dwellings where practical; and
- A density of development that is considerably higher than adjacent districts, especially the Agricultural-Residential District.

To achieve these development features, finalization of a master plan will be required, and the town's development regulations will need to be updated to reflect desired patterns. In addition, key development constraints, most significantly the wet meadows between Mad River Green and the Carroll Road, may need to be developed, provided that the ecological function of the wetlands can be mitigated.

Not only are the scale, design, location and orientation of buildings critical to Irasville's emerging settlement pattern, but also the location and design of open space is critical as well. Future development should incorporate two key open space features into the overall design of the district—the establishment of a public green, or common, which can be used for community events, gatherings and recreation, as well as a less formal green-way and path network that would provide a natural contrast to developed areas.

12.C Land Use Districts

In an effort to facilitate future growth that promotes the character of the town, and to continue to encourage appropriate densities and land use patterns within the town and villages, the following land use districts are delineated (see Map 11 in Appendix B):

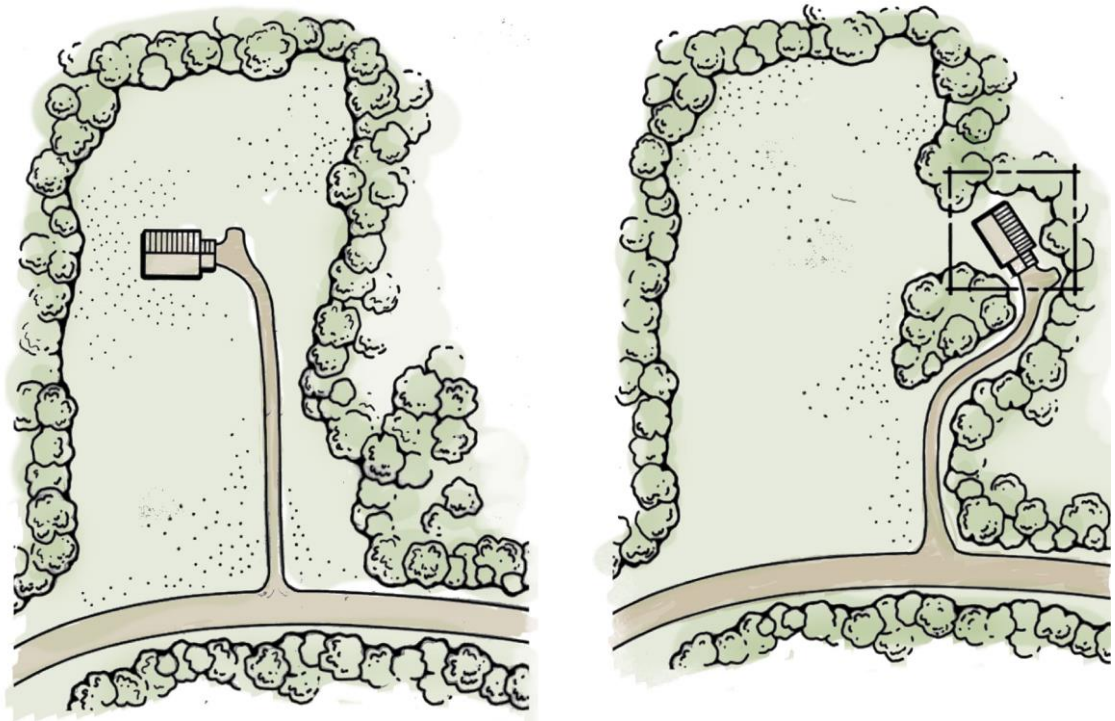
Agricultural-Residential District (AR). The largest land use district in Waitsfield, encompassing approximately 10,860 acres, is the Agricultural-Residential District. Within this district is the majority of the town's cleared land, including several active farms, significant wildlife habitat (especially deer yards), the majority of the town's housing units, and a handful of small businesses. The landscape within the Agricultural-Residential District is a critical element of Waitsfield's rural character and special charm.

As its name implies, this district was established to accommodate two dominant land uses, agriculture and housing. With single-family homes on lots of varying sizes being the dominant type of housing, maintaining a balance between these two land uses, while maintaining the district's rural character, is an ongoing challenge.

The **purpose** of the Agricultural-Residential District is to provide for low density residential development; to permit the continuance and expansion of agricultural operations; to encourage clustered housing units to preserve open space; to preserve the significant scenic resources of this district, including scenic roads, historic structures, and open spaces; and to protect natural resources. The following policies apply to the AR district:

- Continued support and protection of working farm and forest land and avoiding the fragmentation and development of land containing significant areas of primary agricultural soils.

- Limit land uses to agriculture, forestry, residences, land based uses (e.g., recreation, extraction) and very limited commercial or public facilities that are compatible with the rural, residential character of the district or support primary residential or agricultural uses.
- Prevent the conversion of farmland by encouraging residential development in appropriate locations or areas established for development e.g. building envelopes (see illustration that follows).



The illustrations above show how a building envelope can be used to allow for a house site while preserving the agricultural use of an open meadow.

- Ensure through subdivision regulations that new development does not adversely impact sensitive natural areas, that adequate sewage disposal and water supplies exist, that new roads and utilities are coordinated with improvements on neighboring properties, and that farm and forest land remains available for production.
- Consider decreasing density minimums within the district. Dimensional requirements should be developed in the zoning regulations that specify minimum density in coordination with maximum lot size, and/or require clustered or conservation subdivisions, to ensure residential development does not result in fragmentation of critical resources and maintains an overall low-density development pattern in the AR district.

- Promote clustered housing or residential hamlets with higher densities in appropriate areas, such as the areas identified in the 2005 Burnt Rock Hamlet Zoning Study.
- Discourage moderate density residential development in inappropriate areas, which include:
 - Productive farmland, especially along the Mad River/Route 100 corridor and the Common and East Warren Roads;
 - Areas with steep slopes and extensive deer yards; and
 - Higher elevation ridges and knolls which rise above the Mad River and are highly visible from Route 100.
- Ensure that commercial activities, including home-based businesses, are compatible with residential neighborhoods in rural settings. These may include small lodges and inns and certain recreation and cultural facilities.



The illustration above demonstrates how clustering of development on the least sensitive portion of the subdivided parcel minimizes the impact and fragmentation of important features.

Forest Reserve District (FR). The Forest Reserve District is defined as all land with an elevation of 1,500 feet and above, a total of approximately 4,800 acres, most of which is located in the Northfield Range. The district boundary was established due to geographic and geological characteristics which make these upland areas poorly suited for development. This is especially true at elevations above 1,700 feet, which deserve special consideration regarding land use and development. Distinguishing features of the Forest Reserve District include:

- Extensive areas of steep slopes, especially above an elevation of 1,700 feet;
- Thin, highly erodible soils;
- Over 32 miles of small, fragile headwater streams;
- Highly visible and scenic hillsides and ridge lines;
- Very limited access to maintained roads, with no maintained roads serving land above 1,700 feet;
- Large tracts of productive forest land and, according to the Vermont Biodiversity project, extensive areas of core wildlife habitat.

The **purpose** of the Forest Reserve District is to protect significant forest resources and water supply watersheds at higher elevations and to limit development in areas with steep slopes, shallow soils, unique or fragile resources, headwater streams, wildlife habitat, and poor access to Town roads and community facilities and services. The following policies apply to the FR district:

- Land use and development shall be limited to forestry, outdoor recreation, small seasonal camps, and year-round residential dwellings.
- No residential development is permitted above 1,700 feet or on steep slopes (15% or more).
- Roads and utilities shall not extend at or above elevations of 1,700 feet except to provide seasonal access to camps, forestry operations and for recreation.
- Development shall be carefully controlled to avoid adverse visual impacts, degradation of water quality, and the large-scale fragmentation of wildlife habitat and productive forest.
- All development, buildings and structures (including roads and utilities) in the FR must be sited in a manner that maximizes or preserves the site's most productive or potentially productive land, minimizes fragmentation of critical resources and maintains as much contiguous open space as possible.
- All development shall be minimally visible from offsite locations and not adversely affect important scenic vantage points, roads and viewsheds.
- When land is subdivided, provision should be made to ensure access for future forest management and to avoid potential conflicts between land uses;
- Residential development shall occur at low densities (maximum of one unit per 25 acres), although house lots should remain small with the balance of the land being held in larger parcels, to avoid the fragmentation of forest land. PUDs are an appropriate means for clustering development in this manner.
- Promote sustainable forest management to ensure the maintenance of water quality, the enhancement of wildlife habitat and the avoidance of adverse impacts on scenic resources, including upland areas in the Northfield Mountain range. (See "Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont").
- Maintain, to the greatest extent practical, public access to recreational opportunities.



Industrial District (IN). The Industrial District, which contains Mad River Park, is located with direct access to Route 100 from Airport Road. It was designed to accommodate industrial and other high intensity land uses in an area that would not adversely impact the quality of life found in more rural areas, and was located in an area that would not generate high traffic volumes in already congested areas, or detract from the historic character and pedestrian scale of Waitsfield Village and Irasville.

The Mad River Valley Recreation District (MRVRD) recently purchased a 10-acre piece of land at Mad River Park, which has been used for youth leagues during the spring and fall. The park attracts 10,000 player visits per year between soccer, lacrosse and other recreational uses. Recreation district ownership will provide and manage new opportunities for broader community uses of the site, such as adult leagues, pickup games, as well as summer tournaments or camps that could enhance recreation and support economic activity in The Valley. The construction of an 80-car parking lot is also anticipated.

The **purpose** of the Industrial District is to promote well-paying, year-round employment in the Mad River Valley by encouraging the concentration of light industrial, manufacturing, high-intensity, and other compatible uses in an appropriate location that will have minimal negative impact on surrounding properties and the rural character of the community. The following policies apply to the IN district:

- Future development within the district should be primarily non-retail commercial and a variety of light industries and other compatible uses.
- Commercial uses, especially those which generate high traffic volumes from customers or require frequent access to the general public, such as retail and some office uses, should be limited to enterprises that are intended to provide services and goods to on-site employees rather than the general public.
- To ensure that the build-out of the park occurs in a logical, efficient manner, a master plan should be prepared prior to additional subdivision and site development. Such a plan should provide a conceptual build-out of the park, including lot and road configuration, which could be implemented over time and revised if needed.
- To avoid the impacts of excessive noise, odors, vibration or similar results of industrial processes, development shall comply with well-defined performance standards to address potential impacts, which should be measured and enforced at the boundaries to the district.
- Site design shall be of very high quality and reflect the most efficient use of the land. This is important as the district is comprised of a finite land area, and future expansion may pose conflicts with neighboring properties.
- All development shall be sited, designed, and landscaped to be minimally visible from Route 100, and shall not have an undue adverse impact on the visual character of the adjacent Mad River Valley Historic District.

Irasville Village District (IV). Irasville Village District encompasses a full range of land uses, including the Mad River Valley’s principal commercial and service enterprises, a mix of single- and multi-family dwellings (including several upper-story apartments), office space for a range of professional and business enterprises, and a limited amount of light manufacturing space.

The focus of most past development activity has been along both sides of Route 100 from the intersection of Bragg Hill north to the Couples Club driveway. This area provides the greatest opportunity for new construction and infill development. Another distinct area or neighborhood in Irasville is located below the upper terrace on which Mad River Green and Village square are located. Fiddlers Green is a low-density commercial complex housing offices and service businesses such as a car wash and laundromat. To the north of Fiddlers Green is a predominately residential area in which approximately 50 dwellings are located. Land to the north, served by the Dugway and Butcher House Roads, provides another opportunity for residential neighborhood development. A generalized land use plan developed in 2002 for Irasville, identifying appropriate areas for residential, industrial, commercial and mixed-use development, is included as Map 12 in Appendix B.

The **purpose** of the Irasville Village District is to function as the Mad River Valley’s primary commercial center and the town’s growth center to enable coordinated expansion of residential development, shopping facilities, and other commercial uses that minimize traffic impacts, and which concentrate development into a more compact village setting. Development shall enhance traditional Vermont village patterns and Vermont vernacular design, and maintain continuity with Waitsfield Village. The traditional village pattern shifts away from automobile-oriented development in favor of a denser, more pedestrian-oriented pattern. The following policies apply to the IV district:

- Irasville should be developed and maintained as the area’s downtown core with a mix of uses that include a full range of commercial services, civic and cultural facilities, offices, multi-family housing, and upper-story dwellings where practical.
- Density of development shall be considerably higher than adjacent districts, especially the Agricultural Residential and the Adaptive Redevelopment Overlay Districts.
- Additional infill development consisting of commercial, office and residential uses is appropriate on land with frontage on the Fiddlers Green Road, but in a manner that uses land more efficiently than past development, like multi-story buildings.
- Additional opportunities for residential in-fill development shall also be encouraged where well defined streetscapes are not present or practical. Such opportunities include the rear yards of existing buildings and on lots occupied by other uses.
- Future development or re-development should occur in a manner that minimizes, or reverses, potentially adverse impacts of monolithic structures through building

design that reduces the mass and scale of large buildings and implements extensive landscaping and screening to create a more pedestrian scale and village-like setting.

- Development should be designed to include well-defined streetscapes, defined by closely spaced buildings fronting close to the road, where practical, with sidewalks, street trees and, where possible, on-street parking.
- Include, maintain and connect an interconnected network of roads, pedestrian paths, and multi-use trails like the Mad River Path.
- Industrial uses, including service industries that do not provide on-site services or products to customers, should be limited to the area along the Fayston boundary between Mad River Canoe and Allen Lumber, and should not be allowed to encroach further to the east toward Route 100.
- Open space opportunities including one or more formal village greens of a size and character sufficient to serve as a community focal point and gathering place for events such as the farmers' market should be considered. A greenway network possibly encompassing "green infrastructure," such as storm water facilities, should also be integrated.
- Future road connections shall be considered before any new development eliminates a desirable connection opportunity.
- Provisions for water and/or wastewater systems remains the most important infrastructure need and should continue to be addressed effectively and resourcefully.
- Wetlands mitigation and storm water management issues must be addressed to help shape how the district develops and evolves over time.
- New utility extensions should be located underground, and the feasibility of burying above ground utilities should be explored.

Limited Business District (LB). The Limited Business District is a small (45+ acres) area located east of Route 100, between Irasville and the Warren town boundary. The area was initially designated due to its central location within the Mad River Valley, although the intent was to limit development to commercial uses then in existence. Over the years, the area has grown to include a mix of uses that currently includes light industry, offices, a few residences and public facilities, including a VTrans maintenance facility and the Mad River Valley's only trash transfer station.

Due to past development, and state permit conditions associated with wetlands and deer yards located in the district, only limited land is available for future development. Existing uses may seek to expand over time, however, and some vacant and/or semi-developed land is available for additional development.

The **purpose** of the Limited Business District, which is characterized by a distinct land use pattern, is to enable the continued operation and limited expansion of existing businesses,

and to allow for the establishment of a limited number and type of new small businesses. The following policies apply to the LB district:

- Site design shall consider the following:
 - Landscaping and screening to avoid any adverse visual impacts along Route 100;
 - The elimination of curb cuts where shared access with neighboring properties is possible;
 - A restriction of retail sales and other traffic generators;
 - Avoiding additional “frontage” lots which could reinforce a linear pattern of highway “strip development”; and
 - Minimizing the impact on neighboring properties as a result of excessive or obnoxious odors, noise, or lighting.
- Continue to consider, with landowner input, the redrawing of district boundaries.

Village Business District (VB). The Village Business District, at only 7.4 acres, contains between 80,000 and 90,000 square feet of commercial and institutional floor space in Waitsfield Village. Much of this total is comprised of professional office space and municipal services. Existing retail uses are located throughout the village, especially on Bridge Street and along Route 100 north of Bridge Street. Most of these businesses are craft and specialty shops primarily catering to out-of-town visitors. The Bridge Street Market Place, a commercial complex in the core of the village consisting of four historic structures renovated with the aid of federal historic preservation tax credits, was designed as a retail center. Because of a high demand for office space, much of the marketplace is occupied by non-retail uses. While these firms do not contribute to the village’s attraction as a commercial destination, they do provide high quality employment unaffected by the cyclical nature of the tourism industry.

The **purpose** of the Village Business District is to promote a mix of uses in the traditional center of Waitsfield Village while preserving the area’s historic character, architectural resources and ability to function as a livable community. A mix of residential, civic, cultural, and commercial uses are allowed, providing such uses are compatible with existing uses. The following policies apply to the VB district:

- Continue as a retail, service and employment center for the Mad River Valley.
- Specialty shops should be encouraged to occupy the storefronts along Bridge Street and Route 100, and professional and business offices should occupy rear areas and second floors.
- Design measures to ensure compatibility between differing uses should be employed; these should include landscaping, access consolidation, building design, noise and lighting management and other methods to promote compatibility.
- Consider modest expansion of the district to enhance the economic potential of the area, but only if such expansion will not detract from the historic character of the village, or the residential character of the village residential district.

Village Residential District (VR). The Village Residential District is established to maintain the residential character of the village outside of the historic commercial core in the vicinity of Bridge Street, and to encourage additional residential development. The presence of the polo field in this district presents an opportunity to establish a formal village green. This has begun with the donation of the polo field and the creation of the Flemer Field Community Green.



The **purpose** of the Village Residential District is to maintain and enhance the residential and historic character of Waitsfield Village outside of the commercial core, and to allow for additional residential, public, institutional, and very limited commercial uses in a manner that supports the historic settlement pattern of the Village and maintains the Village's ability to function as a livable community. The following policies apply to the VR district:

- Maintain the existing housing base of the village, and discourage the conversion of residential properties to solely commercial uses.
- Maintain a mix of residential, civic and commercial uses, while limiting retail and office uses to parcels adjacent to Route 100 and within mixed use buildings which contain residential dwelling(s).
- Maintain the well-defined village boundaries and sharp contrast between the compact village and surrounding rural countryside.
- Establish a formal village green.

Adaptive Redevelopment Overlay District (ARO). The Adaptive Redevelopment Overlay District encompasses an area of nearly 560 acres along the Route 100 corridor between Irasville and the Warren town line. This district is superimposed over other land use districts. The distinguishing feature of this district is the presence of several commercial and cultural

facilities: the Featherbed Inn, Lareau Farm Inn/American Flatbread, Mad-bush Inn, and the Yestermorrow Design/Build School.

The **purpose** of the Adaptive Redevelopment Overlay District is to allow for the adaptive redevelopment of former commercial lodging establishments along Route 100 in a manner that promotes and exemplifies principles of sustainable development and design, while also maintaining the rural and scenic character of the Route 100 corridor. The standards of this district only apply to former commercial lodging (hotel or inn) properties that:

- (1) were established prior to January 1, 1980, and
- (2) have frontage on Route 100, and
- (3) meet minimum acreage requirements as defined in zoning.

Development within this district is intended to sustain and enhance resource-based uses of the land including farming, forestry and local value-added production; to promote the conservation and efficient use of energy, water and renewable resources; to reduce and limit waste; to demonstrate techniques of sustainable site and building design; to accommodate moderate or high density clustered residential development and appropriate non-residential uses in appropriate locations; and to promote community outreach and awareness of the techniques of sustainable development and design. In addition to the policies of the underlying base district, the following policies also apply to development within the ARO district:

- In addition to agriculture, forestry, residential and land-based uses (e.g., recreation, extraction), allow for lodging and limited commercial uses as part of redevelopment as a PUD in order to promote mixed uses in former lodging properties.
- Provide for the creation of clustered residential hamlets in appropriate locations, while balancing those higher-density developments with lower-density development and land conservation elsewhere in the district.
- Ensure that land subdivision and residential development is designed in a manner to protect land characterized by fragile features (e.g., floodplains, wetlands, steep slopes), and to avoid the fragmentation and development of land containing significant areas of primary agricultural soils.
- All development within this district must occur within a Planned Unit Development, in conformance with an approved master plan.
- Development shall be designed to reinforce the district's rural character and historic working landscape, characterized by wooded hillsides and hilltops, open fields and a visual and functional relationship of structures to the surrounding landscape.
- In order to maintain the rural character of the area along Route 100, a portion of the development must be maintained as largely contiguous or connected open space.
- New development should be well screened and landscaped, and take full advantage of natural site conditions and not detract from the character of adjacent properties.

Building site and design shall blend and be fully compatible with the context and visual quality of the surrounding area.

- Commercial uses may be allowed at very low densities, preferably in association with the preservation of open space.
- Industrial businesses shall be small-scale that are compatible with the rural setting, promote well-paying jobs, low-density, and associated with value-added processing of local products.
- Traffic generated shall not result in unreasonable traffic congestion and pedestrian circulation must be integrated.

Flood Hazard Overlay District (FHO). Flood hazards due to inundation present a significant risk to life and property, particularly in the villages. The Flood Hazard Area Overlay District includes designated Special Flood Hazard areas (SFHAs) subject to a one percent or greater chance of flooding in any given year (i.e., 100-year flood plains) as depicted on the most recent National Flood Insurance Program maps issued by the National Flood Insurance Program for the Town of Waitsfield. This district is superimposed over other land use districts.

The **purpose** of the Flood Hazard Overlay District is to: (1) promote public health safety and welfare; to (2) prevent increases in flooding caused by uncontrolled development in special flood hazard areas; to (3) minimize losses due to floods; to (4) manage all special flood hazard areas in conformance with adopted municipal and hazard mitigation plans; and to (5) ensure that the Town of Waitsfield, its residents and businesses can obtain available federal flood insurance, disaster recovery and hazard mitigation funds through community participation in the National Flood Insurance Program. In addition to the policies of the underlying base district, the following policies also apply to development within the FHO district:

- Risk to people and property must be minimized.
- Any appropriate development within a flood-prone area must be designed accordingly, such as structures and other vulnerable assets being built above flood level, and must meet or exceed the National Flood Insurance Program (NFIP) regulations.
- Uses and activities in the FHO must not affect floodwater flow and storage capacity, or increase the flood hazard on other properties.

Fluvial Erosion Hazard Overlay District (FEHO). Flooding can also cause fluvial (river-based) erosion, particularly if the stream channel is unstable. Fluvial erosion can threaten public infrastructure (e.g. roads, bridges, and culverts), private homes and business, and public safety and can result in significant property damage. The FEHO applies to all mapped Fluvial Erosion Hazard Areas in the Town of Waitsfield, as depicted on the most current Fluvial Erosion Hazard (FEH) maps accepted by the Vermont Agency of Natural Resources

River Management Program and on file at the town office. This district is superimposed over other land use districts.

The **purpose** of the Fluvial Erosion Hazard Area Overlay District is to: (1) implement adopted municipal and hazard mitigation plans; to (2) protect mapped fluvial erosion hazard areas that are highly sensitive to erosion due to naturally occurring stream channel migration and adjustment; to (3) limit new development within these areas to protect public health, safety welfare, and to minimize property losses and damage and extraordinary public expenditures resulting from fluvial erosion; and to (4) allow rivers and streams to re-establish and maintain their natural equilibrium, and thereby avoid the need for costly and environmentally degrading stream channelization and bank stabilization measures. In addition to the policies of the underlying base district, the following policies also apply to development within the FEHO district:

- Direct future development to areas not exposed to flood-related erosion.
- Prevent river corridor encroachment, which would increase overall fluvial erosion hazards and impede a river's natural tendency to adjust toward a more stable equilibrium condition.
- Consider reserving flood-related erosion-prone areas for open space purposes.
- Maintain native vegetation and appropriate stream setbacks to reduce the potential for any damage to property or road right-of-way caused by the erosion of the bank.

Historic Waitsfield Village Overlay District (HWVO). Waitsfield Village is listed on the National Register of Historic Places as a Historic District. The village exemplifies a classic New England Development pattern characterized by a compact development center, dominant public buildings and contrast between the village and surrounding countryside. This district is superimposed over other land use districts.

The **purpose** of the Historic Waitsfield Village Overlay District is to maintain the historic character and architectural integrity of the Waitsfield Village Historic District listed on the National Register of Historic Places. In addition to the policies of the underlying base district, the following policies also apply to development within the HWVO district:

- All new development and redevelopment shall uphold and respect the character-defining features and historic integrity of structures in this district. *The Secretary of Interior's Standards for Rehabilitation* of historic structures should be used for guidance on the appropriateness of any proposed alterations.
- Responsible historic preservation practices should be promoted. No building that is identified as a contributing structure to the Waitsfield Village Historic District listing on the National Register of Historic Places shall be demolished, in part or in its entirety, without prior approval.

12.D Goals

- 12.D-1 To maintain and enhance our town's historic character, compact settlement pattern, natural resources, aesthetic beauty, open spaces and strong sense of community while providing appropriate locations for residential, commercial and light industrial development.

12.E Policies

- 12.E-1 Maintain the town's historic settlement pattern of compact growth centers surrounded by rural countryside in accordance with the land use plan and associated land use districts described in this chapter and depicted on Map 11 in Appendix B.
- 12.E-2 Administer land use regulations, including zoning and subdivision regulations, in a fair and consistent manner, in accordance with all applicable development and land use policies of this plan.
- 12.E-3 Ensure that development within Waitsfield Village is compatible with the historic scale and pattern of development, and with historic architectural styles, and discourage the demolition or inappropriate alteration of historic structures.
- 12.E-4 Before new development is sited on vacant or undeveloped land, encourage and promote infill opportunities in the village areas.
- 12.E-5 Large buildings (in excess of 4,000 square feet) shall be designed to reduce their apparent mass and bulk, to create visual interest, and to achieve an architectural scale that is pedestrian friendly. This may be accomplished through the use of a combination of the following elements:
- 12.E-5.a Modulation (wall projections, recesses);
 - 12.E-5.b Articulation (varying building facades, footprints);
 - 12.E-5.c Variations in roof line (e.g., dormers, gables, cornices, decorative facings);
 - 12.E-5.d Upper story setbacks;
 - 12.E-5.e Fenestration (spacing of windows, entryways);
 - 12.E-5.f Smaller scale additions; and
 - 12.E-5.g Avoidance of pre-fabricated metal structures.
- 12.E-6 Policies and tasks regarding sidewalk and road improvements, water and wastewater infrastructure, wetlands mitigation, housing, and economic development related to the villages should be pursued in a coordinated manner.

- 12.E-7 Integrate and encourage bicycle and pedestrian traffic within the villages and adjacent districts, and the infrastructure to support it.
- 12.E-8 Through an ongoing planning process, ensure that capital improvement planning is coordinated with land use planning to avoid conflict.
- 12.E-9 Ensure that local regulation does not deny the reasonable use of property and that restrictions imposed on land use are based on clearly defined community objectives.
- 12.E-10 Refer to the goals, objectives and strategies set forth in this Town Plan during all conditional use, PUD, subdivision reviews and all state and federal regulatory reviews.
- 12.E-11 Explore the use of tax abatement as a method of obtaining public use of private lands in order to extend the Mad River Path.
- 12.E-12 Continue to protect existing uses against incompatible development and place the burden of proof on the applicant that such uses will not unduly adversely affect adjoining properties or the character of the area.
- 12.E-13 Conserve, strengthen and support residential neighborhoods and hamlets. Ensure that substantial new residential development incorporates public-gathering places on-site, and physical connections to such places off-site, to help foster a sense of community and neighborliness and unify the area.
- 12.E-14 Promote the preservation of important natural resources, open space, scenic views and agricultural land in Waitsfield, specifically in the Agricultural Residential and Forest Reserve Districts. Prevent the fragmentation of significant open lands and critical resources.

12.F Tasks

- 12.F-1 Inventory development capacity within the Agricultural Residential District to determine appropriate sites or areas able to support rural hamlets (clusters), while simultaneously strengthening resource protection standards elsewhere in the district. Update zoning regulations as needed. [Planning Commission, Conservation Commission]

- 12.F-2 Update the master plan for Irasville, including decentralized wastewater systems, to accommodate higher densities of residential and mixed-use development, that includes housing, in appropriate locations within Irasville.. [Selectboard, Town Administrator, Planning Commission]
- 12.F-3 Revise the Town zoning regulations to establish clear site and building design standards to guide development in Irasville in accordance with the aforementioned master plan, as revised and modified by the Planning Commission. [Planning Commission]
- 12.F-4 Pursue mitigation analysis of wetlands in Irasville in order to accommodate future development needs and reinforce a compact development pattern in Irasville. [Planning Commission, Conservation Commission]
- 12.F-5 Review current administration and enforcement practices related to the zoning and subdivision regulations and ensure that all standards and associated permit conditions are efficiently administered and strictly enforced. [Planning Commission, Administrative Officer]
- 12.F-6 Evaluate historic preservation standards for Waitsfield Village to determine whether they are adequate to maintain the historic character of the Village, and strengthen said standards in the event they are determined to be inadequate. [Planning Commission, Waitsfield Historical Society*]
- 12.F-7 Review and consider combining the Flood Hazard Overlay and Fluvial Erosion Hazard Overlay Districts into one district, like the model regulations developed by Vermont Department of Environmental Conservation Rivers Program for “Areas at Risk of Flood Damage”.
- 12.F-8 Continually research, apply for and utilize grants for planning, infrastructure improvements, historic preservation and other opportunities that help further the goals and policies of this plan. [Planning Commission, Mad River Valley Planning District]
- 12.F-9 Identify specific priority infill development areas and the types of projects envisioned for those areas. [Planning Commission]
- 12.F-10 Review and update zoning standards to ensure value-added agriculture and non-traditional on-farm activities are supported. [Planning Commission]

- 12.F-11 Contemplate expanding commercial uses within the Waitsfield Village Center, as identified in the 2014 Vermont Downtown Action Team Report. [Planning Commission]
- 12.F-12 Create economic development incentives and include flexible land use regulations to support the expansion of food and farm-related businesses. [Selectboard, Town Administrator, Planning Commission]

13. Implementation

In too many communities, town plans are set aside and ignored soon after adoption. This may be due to several factors, including ambiguous plan goals and policies, a lack of local support for long range planning, and/or a lack of resources and money, people, and time to accomplish everything called for in the plan. In Waitsfield, however, the Town Plan has traditionally been viewed as a living document which outlines a path for the community. This chapter summarizes many of the mechanisms that are available to make sure the plan remains current and relevant.

13.A Planning

Plan Adoption. Adoption by the Waitsfield Selectboard is the first step in putting the plan into action. Through adoption, the Selectboard accepts this document as the guide for future physical growth and change in the town.

Regional Approval. Approval by the Central Vermont Regional Planning Commission (CVRPC) allows for greater regional planning and cooperation among towns in addressing mutual problems and challenges, maintains the town's eligibility for municipal planning funds as well as its authority to enact certain programs (e.g., impact fees). Once the plan is approved by the Selectboard, it should be submitted to CVRPC for regional approval.

Ongoing Planning & Plan Amendments. The plan automatically expires eight years from adoption. Before the plan expires, it should be thoroughly reviewed, and information on which the plan is based should be updated.

This plan incorporates the findings and conclusions of a wide range of special studies, public processes and related planning projects that have taken place over the past 20 years. Thus, rather than relying on a planning process that lies dormant for four years only to re-emerge for the purpose of updating the Town Plan, Waitsfield has been actively engaged in an ongoing planning process. Such an ongoing effort, which should involve periodic evaluation of the plan against changing community conditions and needs, is critical for keeping the plan current and relevant.

13.B State Permit Procedures

Presently, any commercial development in Waitsfield involving 10 or more acres of land, and any residential development or subdivision resulting in the creation of 10 or more dwelling units or lots, requires Act 250 approval. One of the Act 250 criteria is that the development be in conformance with the town plan. In the case of Waitsfield, conformance should be determined by whether the proposed development is consistent with specific policies listed at the end of each chapter of this plan. If a project is not consistent with a specific policy, it should be determined to be not in conformance with the plan.

Both the Planning Commission and Selectboard have party status to participate in all Act 250 review processes. Both bodies should monitor project applications and participate in those processes whenever appropriate. Other state and federal regulatory processes, for example Section 248 (related to public energy facilities) and the National Environmental Policy Act (related to federally funded projects) also provide opportunity for local participation and review against the policies set forth in this plan.



13.C Local Regulations

This plan should serve as the blueprint and policy guide for future revisions to local land use regulations. Suggestions for revisions, or for additional study, are described throughout the plan. In addition, certain provisions of the existing regulations require that projects be consistent with the policies of this plan. To ensure that future development is consistent with the plan, the Development Review Board shall refer to it during the review process.

In addition to land use regulations, an Official Map is a regulatory implementation tool that the town may use to lay out future road and infrastructure improvements and provide a legal mechanism for the community to acquire necessary land for those improvements prior to its being lost to development. Waitsfield has or could adopt other ordinances to carry out policies and strategies described in this plan such as a road ordinance, water or wastewater ordinances, or a special events ordinance.

13.D Municipal Policies & Programs

Regulatory measures are not the only means with which Waitsfield can implement various sections of this plan.

Property Tax Policy. Although a municipality's authority to use local property tax dollars to implement a town plan was limited with the passage of the statewide education tax, there are still opportunities to use the property tax to achieve several of the policies included in the preceding chapters.

Waitsfield maintains an agricultural property tax abatement program for eligible farmers, and has worked with local businesses to abate a portion of the property tax on new facilities and to help secure tax incentives available through the Vermont Economic Progress Council. In addition, there are opportunities to pursue special taxing districts, and to establish tax increment finance districts, to help fund local infrastructure improvements.

Public Spending. Waitsfield has a history of making strategic investments in the town's infrastructure, public services, and for special projects. Over the past 20 years, the town has:

- Acquired and developed parkland and assisted with the creation and maintenance of other recreation facilities;
- Supported private non-profits to expand needed facilities (e.g., Mad River Valley Ambulance);
- Acquired the General Wait House and created an information center and public rest rooms;
- Contributed toward the acquisition of development rights on scenic and productive land;
- Funded sidewalk improvements;
- Developed plans for municipal water and wastewater facilities to serve the Irasville and Waitsfield Village growth center;
- Secured funding, obtained permits, and began construction of the municipal water system;
- Secured funding to initiate a decentralized wastewater system pilot project in Irasville;
- Acquired grant funds to develop senior housing and to acquire the Verd-Mont Trailer Park to ensure perpetual afford-ability; and
- Maintained the local road network and public buildings in excellent condition.

Many of these projects were supported by state and federal grants. Consequently, local tax dollars have helped to leverage millions of dollars of supplemental revenue for the town. Through the capital budget and program and continued emphasis on securing state and federal grants, many of the policies of this plan may be directly supported.

Land Conservation. Land conservation is a common mechanism for implementing a variety of local policies related to farmland and forest preservation, natural resource protection, economic development and land use planning. One reason for the growing use of these tools is the availability of statewide funding sources and the presence of active land conservation organizations.

In the Mad River Valley, there is, in addition to statewide resources, a local partnership made up of state and regional organizations dedicated to protecting natural resources and open space within the Mad River Watershed. Coordination with these efforts could help the town achieve many of the policies described in the plan.

13.E Tasks

Table 13-1 that follows identifies the priority tasks that should be undertaken to implement the goals and policies of this plan within an eight-year time frame. The table also identifies the town board or staff with responsibility for carrying out each task and potential partners outside town government.

Table 13-1. Priority Tasks (within 8 years)

Task Reference	Task	Entity Assigned to Task
4.H-1, 5.J-1, 12.F-2	Update the master plan for Irasville, including decentralized wastewater systems, to accommodate higher densities of residential and mixed-use development, that includes housing, in appropriate locations within Irasville.	Selectboard, Town Administrator, Planning Commission
4.H-3	Implement the regulatory recommendations identified in the 2017 Mad River Valley Housing Study, including: <ul style="list-style-type: none">▪ Further reducing zoning density in the Village Residential (VR) and Irasville Village (IV) Districts from 1/2 and 1 acre respectively to 1/4 in both districts.▪ Reducing setbacks in Irasville where increased density and additional housing is desired.▪ Implementing performance standards for minimum lot size based on access to municipal/shared water or wastewater systems.▪ Reviewing the need to accommodate tiny homes into the zoning bylaws.	Planning Commission

Table 13-1. Priority Tasks (within 8 years)

Task Reference	Task	Entity Assigned to Task
4.H-9	Develop a definition of “tiny house” and identify designated areas for higher density tiny house development.	Planning Commission
5.J-5	Review, maintain, update, and implement the Town’s capital improvement program.	Selectboard, Town Administrator, Planning Commission
7.L-5	Explore the adoption of stormwater regulations and other recommendations as a result of Ridges to Rivers study.	Planning Commission
8.G-2	Complete the planned construction of the Route 100 sidewalk.	Planning Commission, MRVPD representatives, Selectboard, Mad River Path Association*
8.G-4	Develop a clear class 4 road policy which identifies under what circumstances such roads may be upgraded, maintained and/or reclassified in accordance with the policies set forth above.	Selectboard, Planning Commission
8.G-9	Prepare and implement an updated traffic calming plan for Waitsfield Village and Irasville that incorporates a complete street approach.	Planning Commission, Selectboard, Tree Board
8.G-13	Conduct a vulnerability assessment for the town that identifies and maps road segments at high, medium, and low risk from climate impacts, and develop and implement operations and maintenance strategies that lessen those impacts, such as more frequent cleaning of storm-drains, debris removal, improved plans for weather emergencies, and performance monitoring.	Road Commissioner, Selectboard
9.J-13	Revise Chapter 9 (Energy) of the Town Plan to comply with the Vermont Comprehensive Energy Plan and the Regional Energy Plan.	Planning Commission, Selectboard

Table 13-1. Priority Tasks (within 8 years)

Task Reference	Task	Entity Assigned to Task
12.F-1	Inventory development capacity within the Agricultural Residential District to determine appropriate sites or areas able to support rural hamlets (clusters), while simultaneously strengthening resource protection standards elsewhere in the district. Update zoning regulations as needed.	Planning Commission, Conservation Commission
12.F-4	Pursue mitigation analysis of wetlands in Irasville in order to accommodate future development needs and reinforce a compact development pattern in Irasville.	Planning Commission, Conservation Commission

Waitsfield Town Plan Appendices

A. References and Resources

1: References	a-1
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B. Maps

1: Base Map	b-1
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12: Irasville Future Land Use	b-12
13: Current Land Use	b-13
14: Residential Development	b-14
15: Preferred Development Locations	b-15



1. References and Resources

1.A History & Historic Resources

- 1882. The History of the Town of Waitsfield. Rev. Perrin B. Fiske.
- 1889. Gazetteer of Washington County, Vermont 1783 - 1889. Hamilton Child.
- 1909. History of the Town of Waitsfield 1782 - 1908. Matt Bushnell Jones.
- 1990. Archaeology in Vermont's Mad River Valley from Paleo-Indian Times to the Present: Warren, Fayston and Waitsfield.
- Waitsfield Village National Register Historic District Map and Inventory.
- Mad River Valley Rural Historic District National Register Map and Inventory.
- 1991. Waitsfield Village Historic District Walking Tour. Waitsfield Historical Society.
- 2004. Waitsfield History. Jan Pogue and Kevin Eurich.

1.B Housing & Economy

- 2002. Integrating Economic and Demographic Projections into Growth Center Planning for Irasville. Economic & Policy Resources, Inc.
- 2006. Mad River Valley Housing Study. Central Vermont Community Land Trust.
- 2009. 2008 - 2009 Annual Data Report for the Mad River Valley. Center for Rural Studies.

1.C Transportation

- 2006. Scenic Roads Enhancement and Protection Plan. Town of Waitsfield.
- 2008. Mad River Byway Extension Corridor Management Plan.

- 2009. Membership, Fundraising, Events and Partnership Opportunities for the Mad River Path Association. Mad River Path Association and the Department of Community Development and Applied Economics at the University of Vermont.

1.D Energy

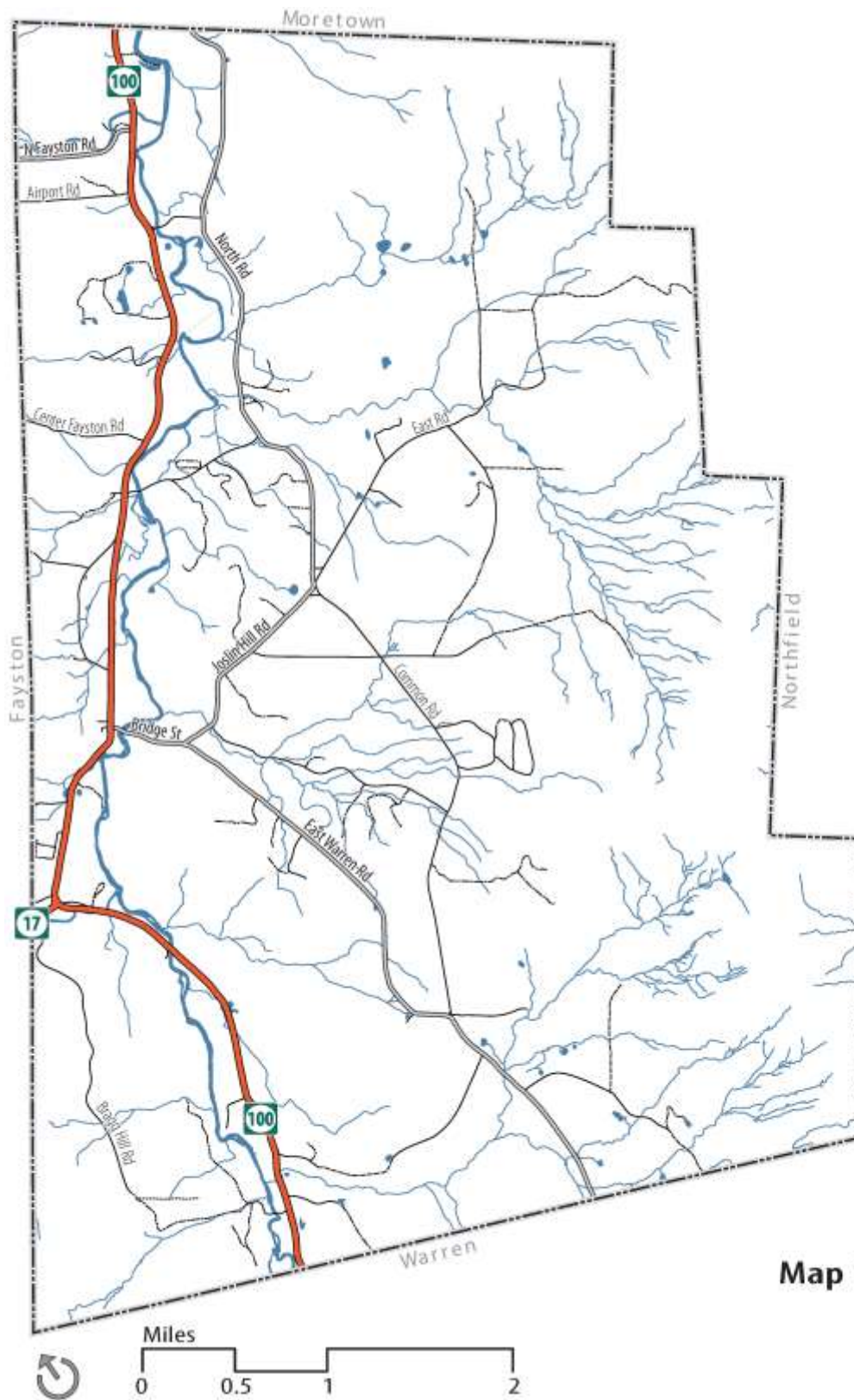
- 2009. Mad River Valley Energy Study. Valley Futures Network Energy Group.
- 2009. Renewable Energy in the Mad River Valley. Department of Community Development and Applied Economics at the University of Vermont.

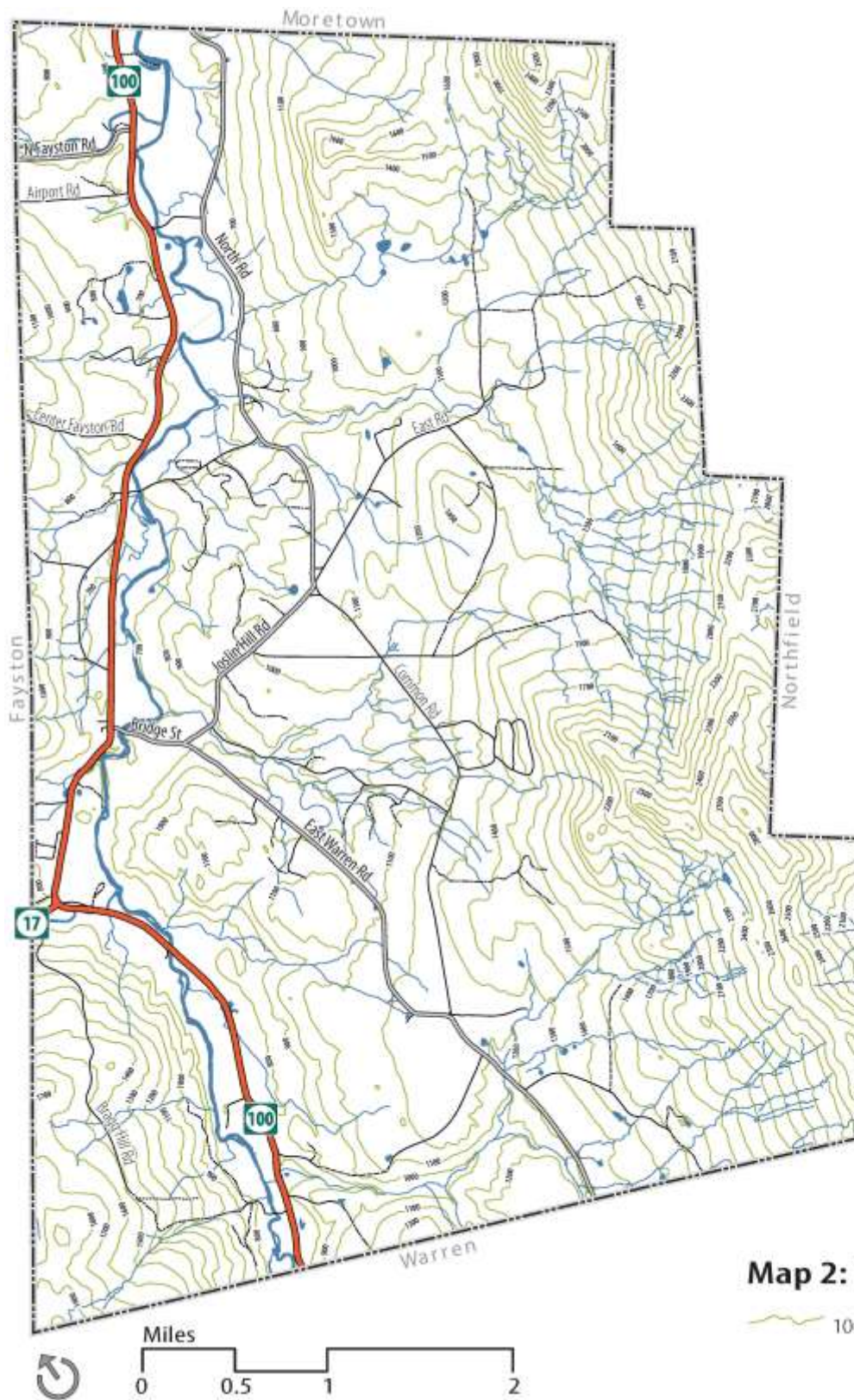
1.E Natural Resources

- 1995. The Best River Ever: A Conservation Plan to Protect and Restore Vermont's Beautiful Mad River Watershed. Friends of the Mad River.
- 2003. Assessment of Fluvial Geomorphology in Relation to Erosion and Landslides in the Mad River Watershed in Central Vermont. Step by Step and Friends of the Mad River.
- 2007. Natural Heritage Element Inventory and Assessment for Waitsfield and Fayston, Vermont. Arrowwood Environmental.
- 2007. Fluvial Geomorphology Assessment of the Mad River Watershed. Field Geology Services and Friends of the Mad River.

1.F Waitsfield Village & Irasville

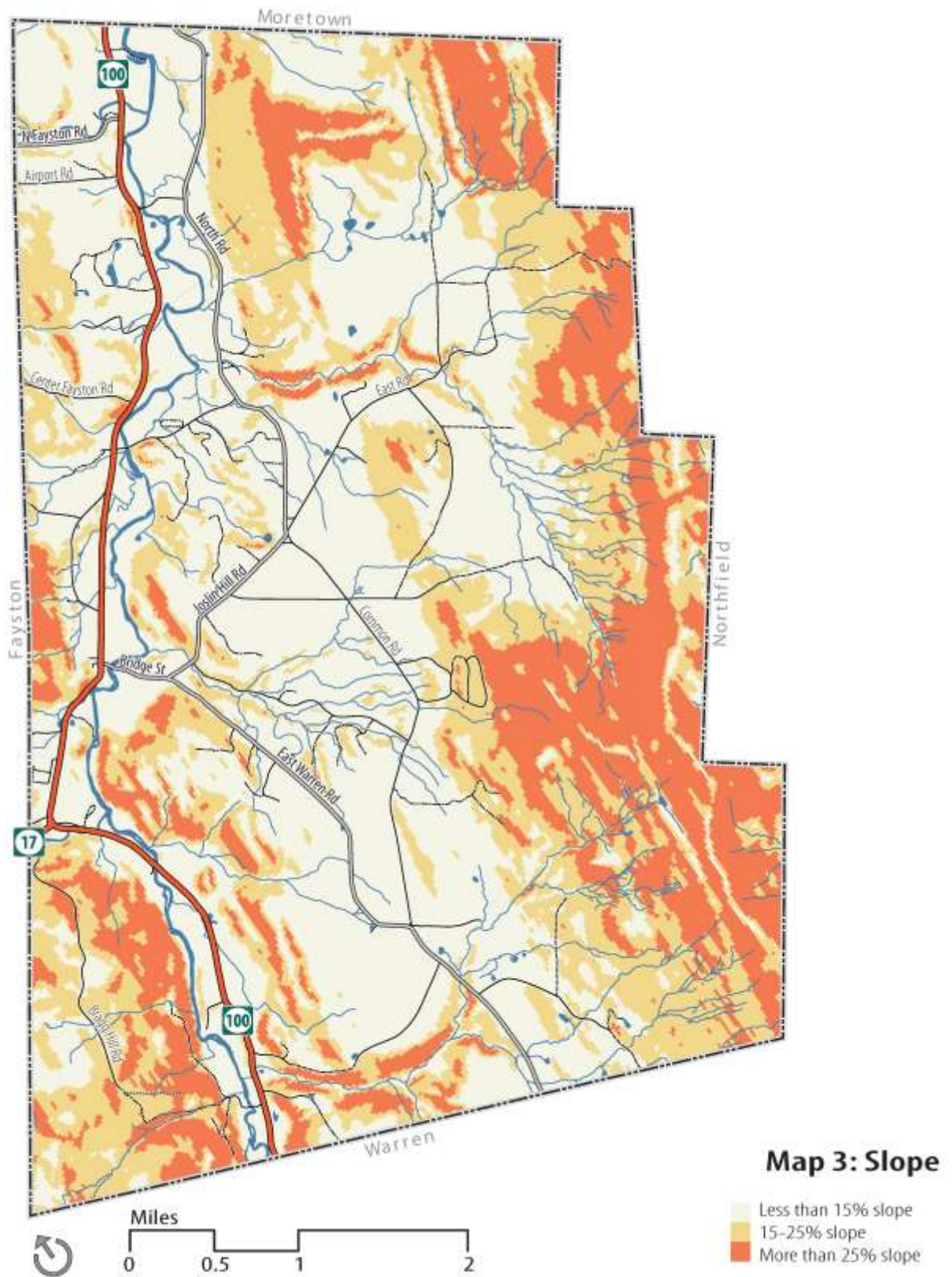
- 2000. Street Tree Master Plan.
- 2002. Master Development Plan for the Irasvilel Growth Center: A Vision for a New Village. Lamourex and Dickinson Consulting Engineers, Inc and the Office of Robert A. White, ASLA.
- 2006. Waitsfield Village Parking and Pedestrian Circulation Study. Resource Systems Group, Inc. and Landworks.
- 2007. Fluvial Geomorphology Assessment of the Mad River Watershed. Field Geology Services and Friends of the Mad River.

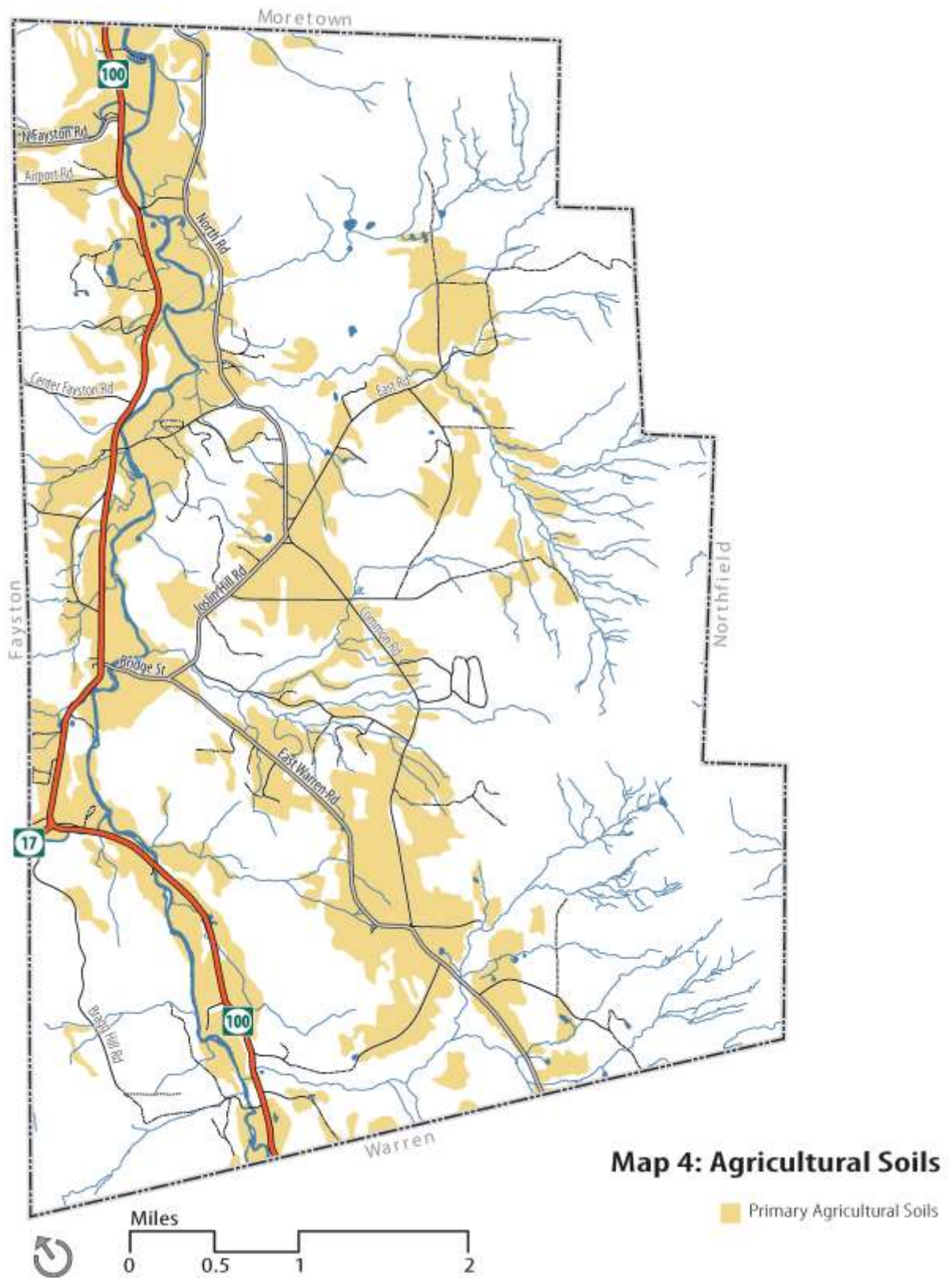


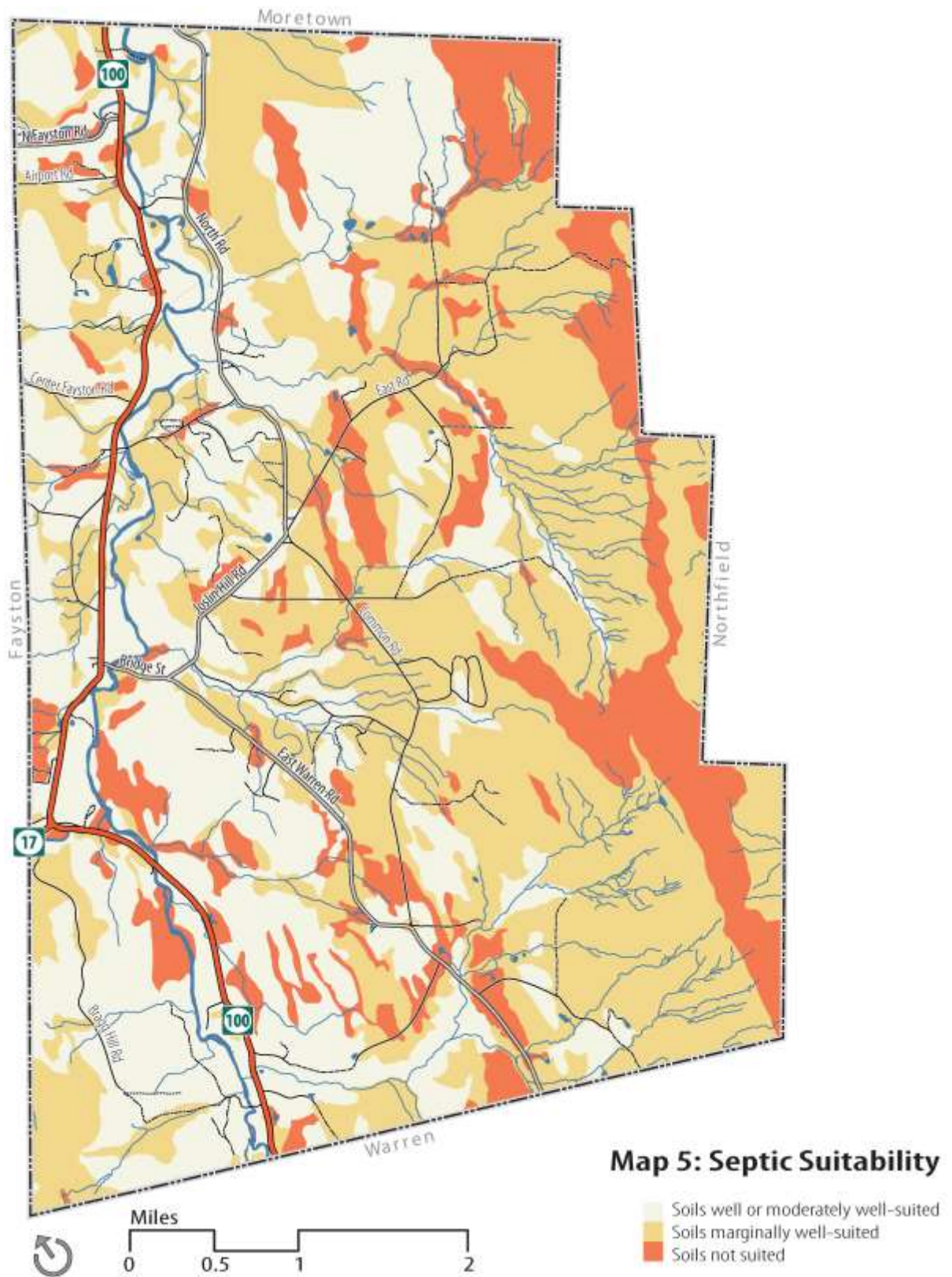


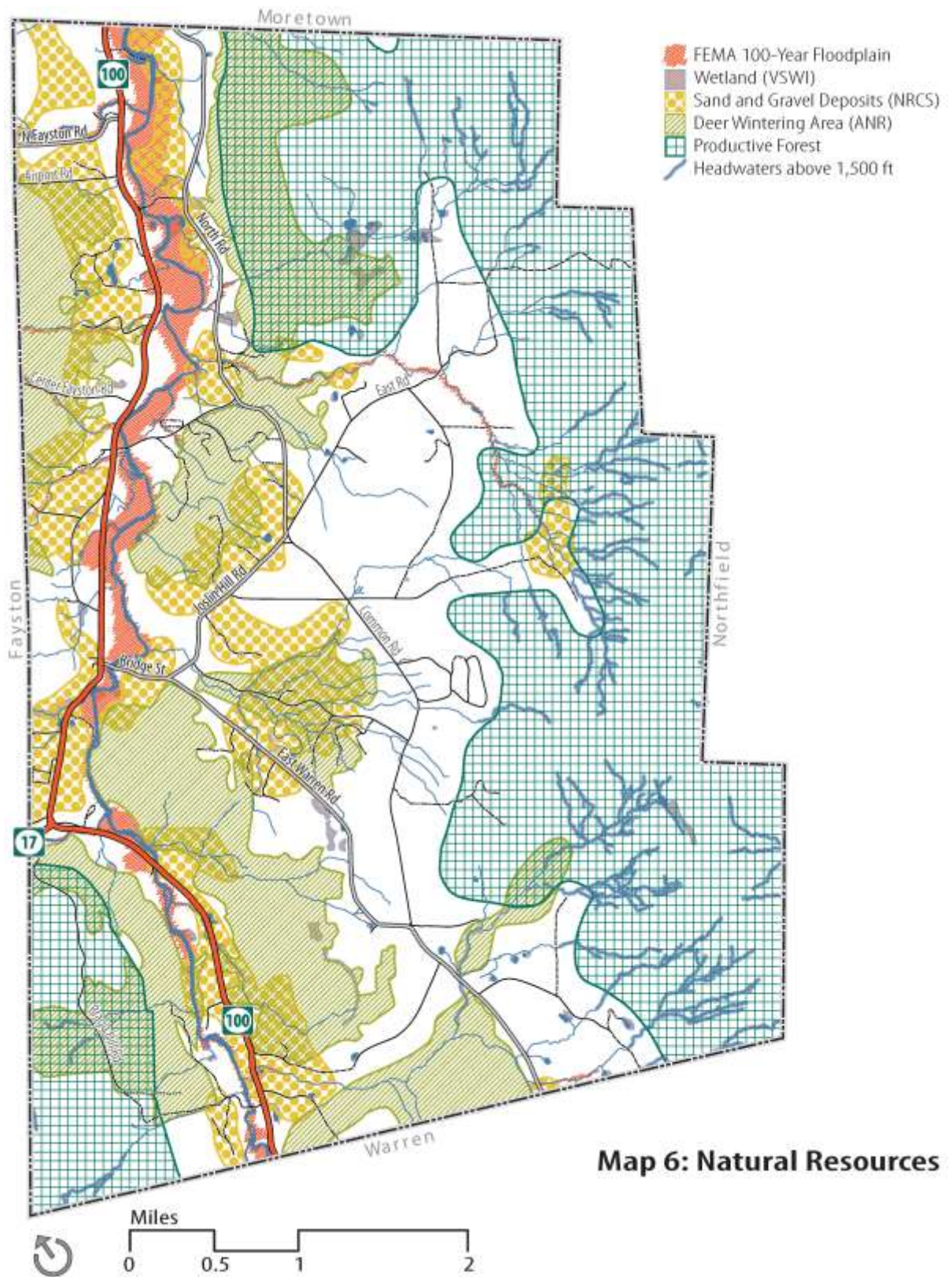
Map 2: Topography

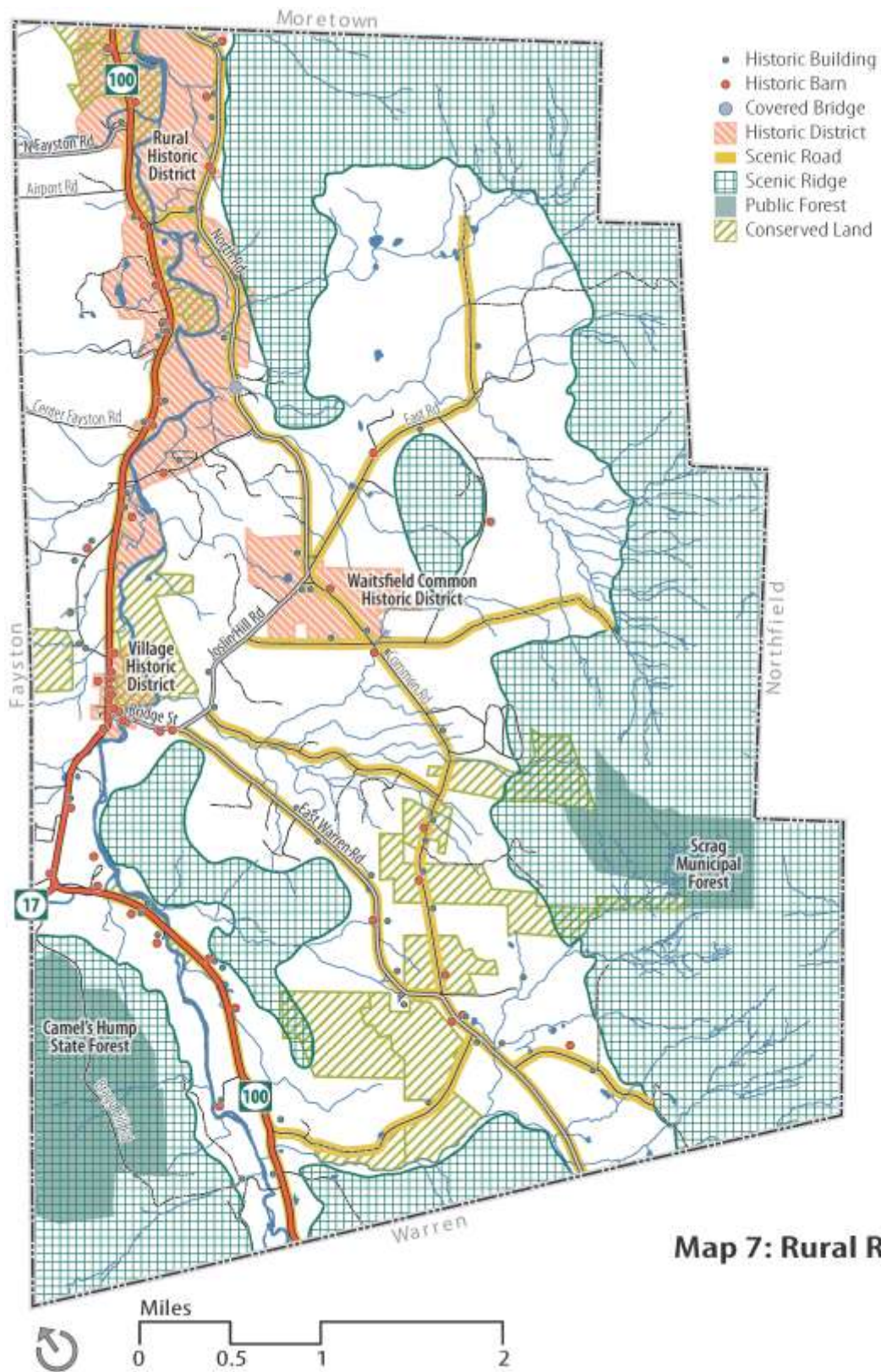
100-foot contours

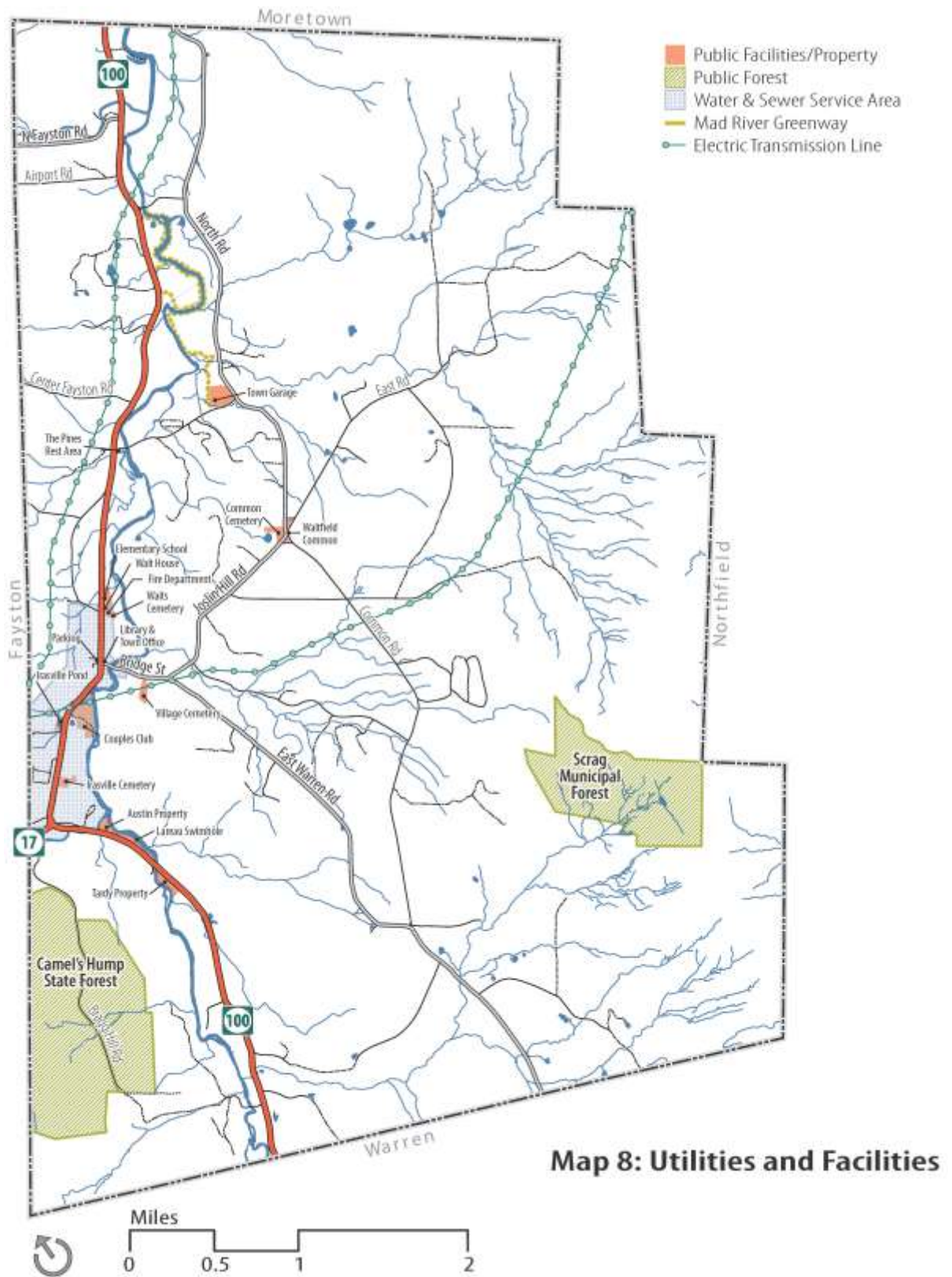


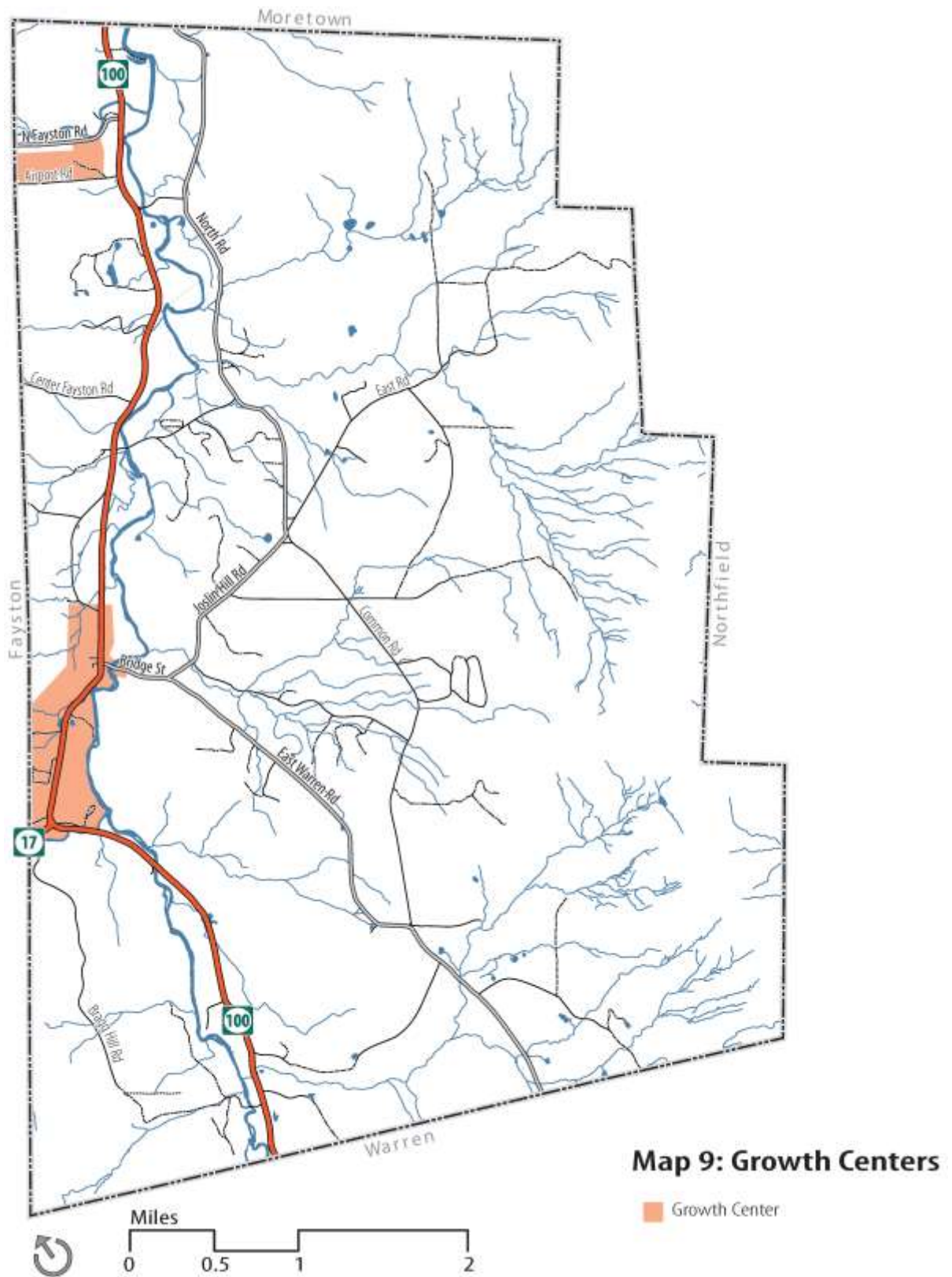


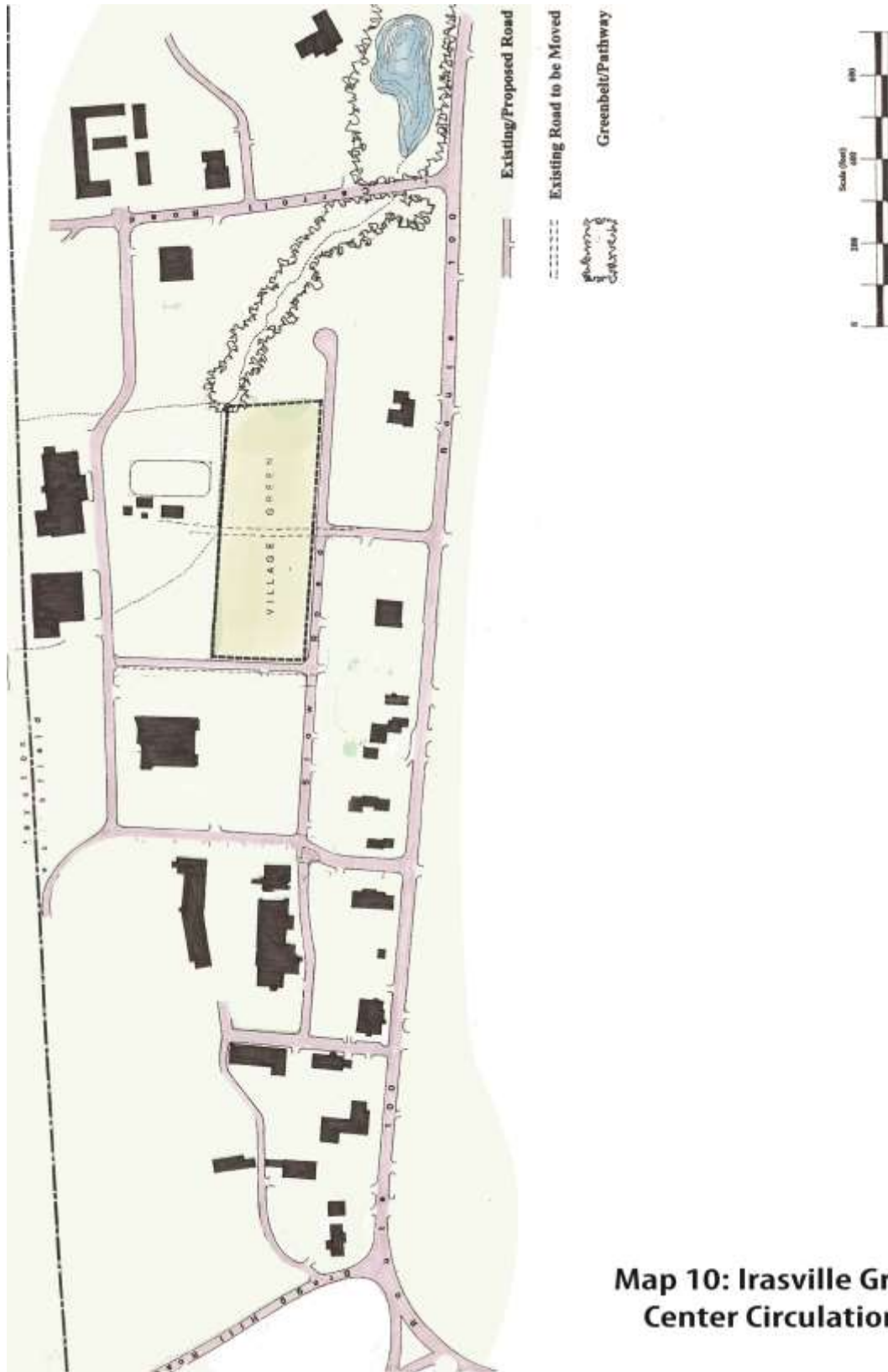


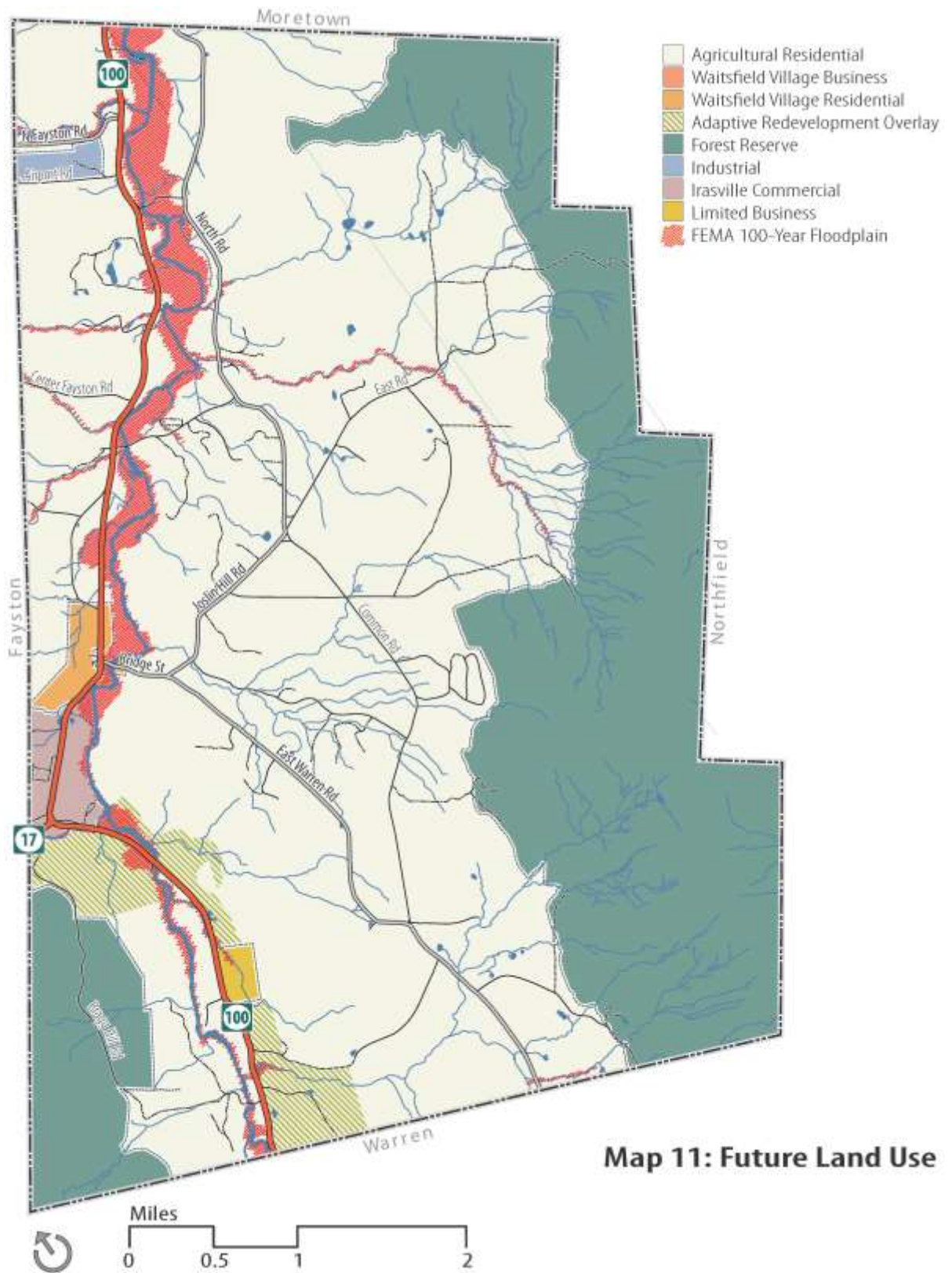


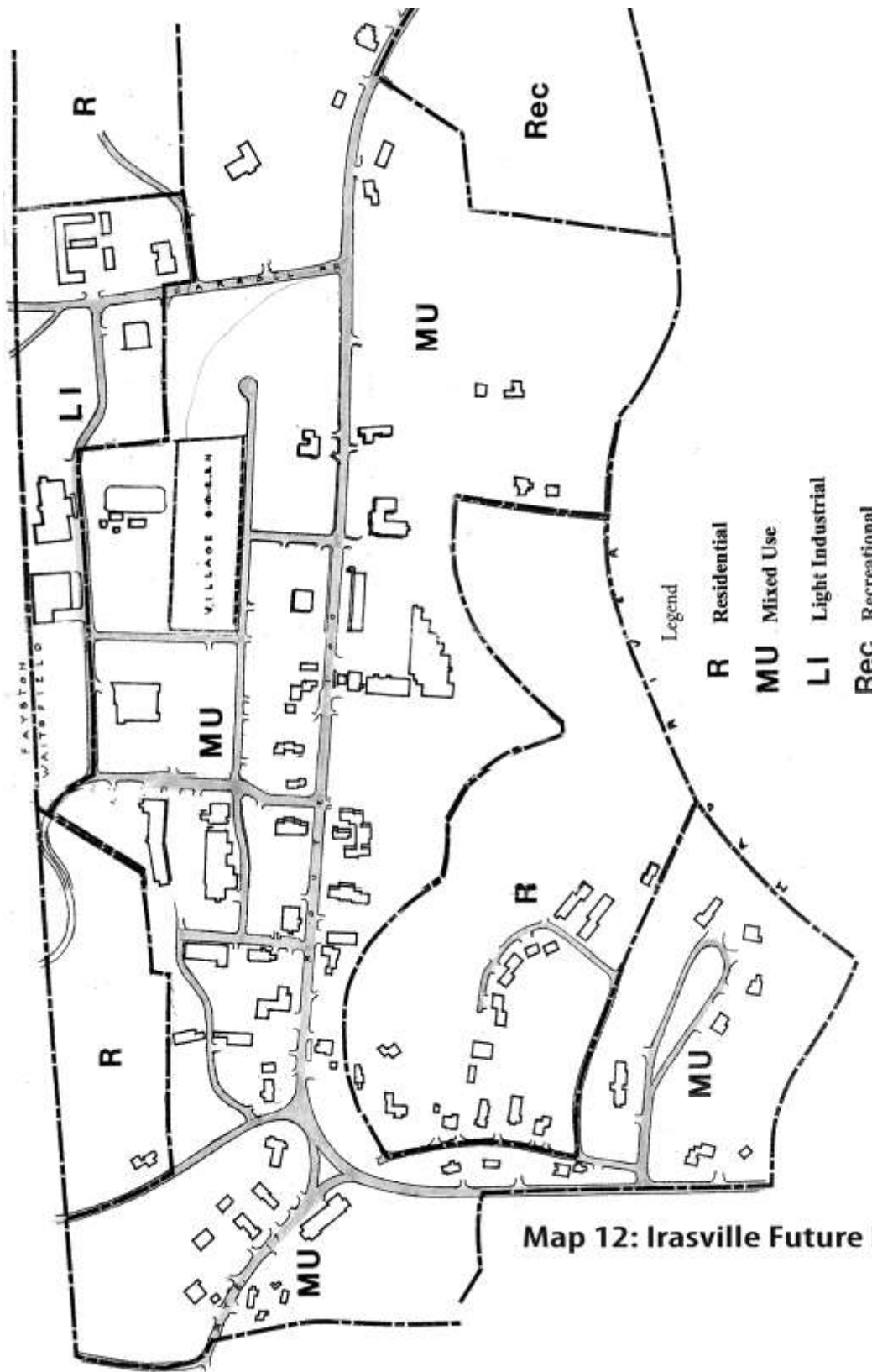




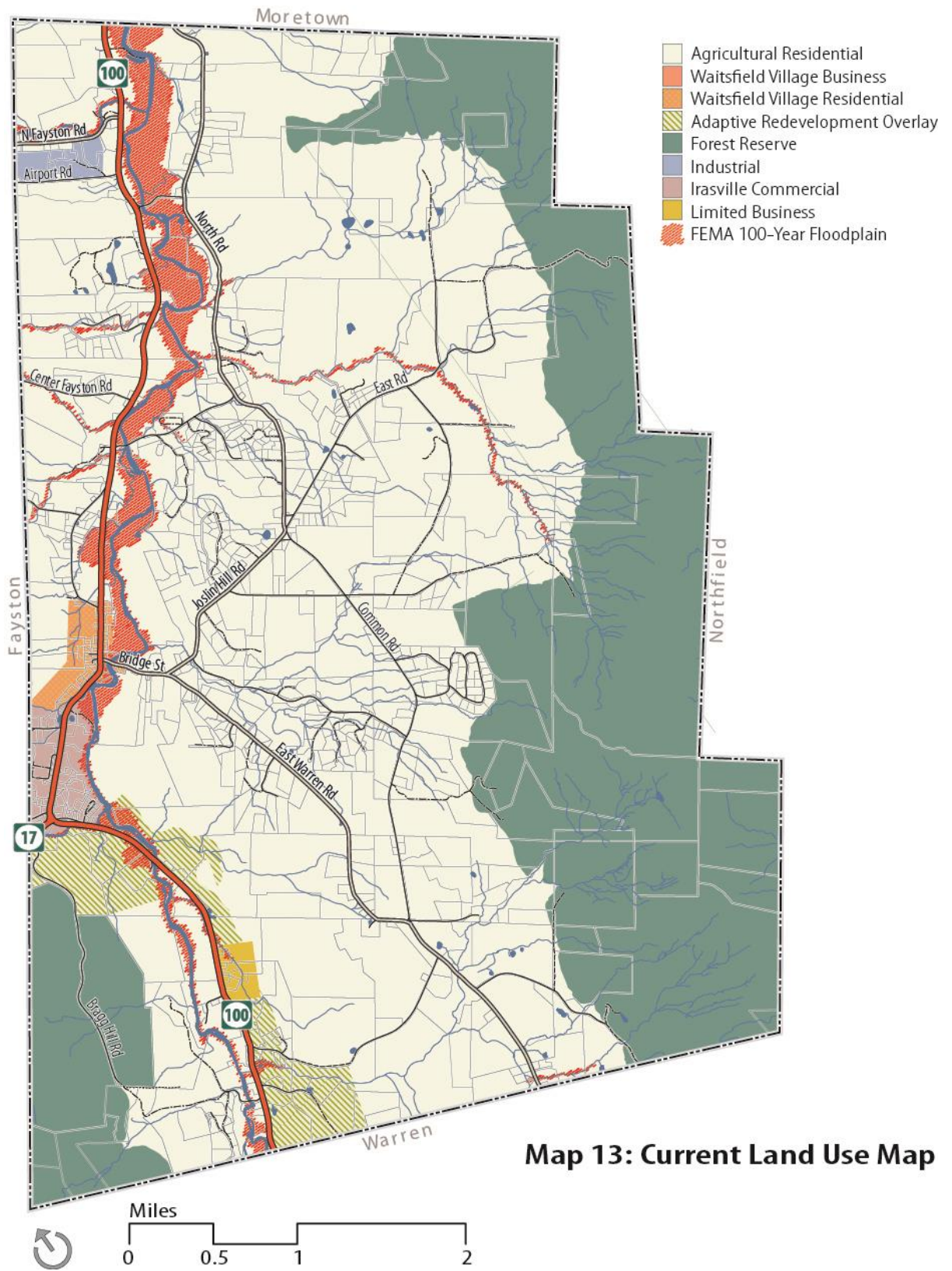


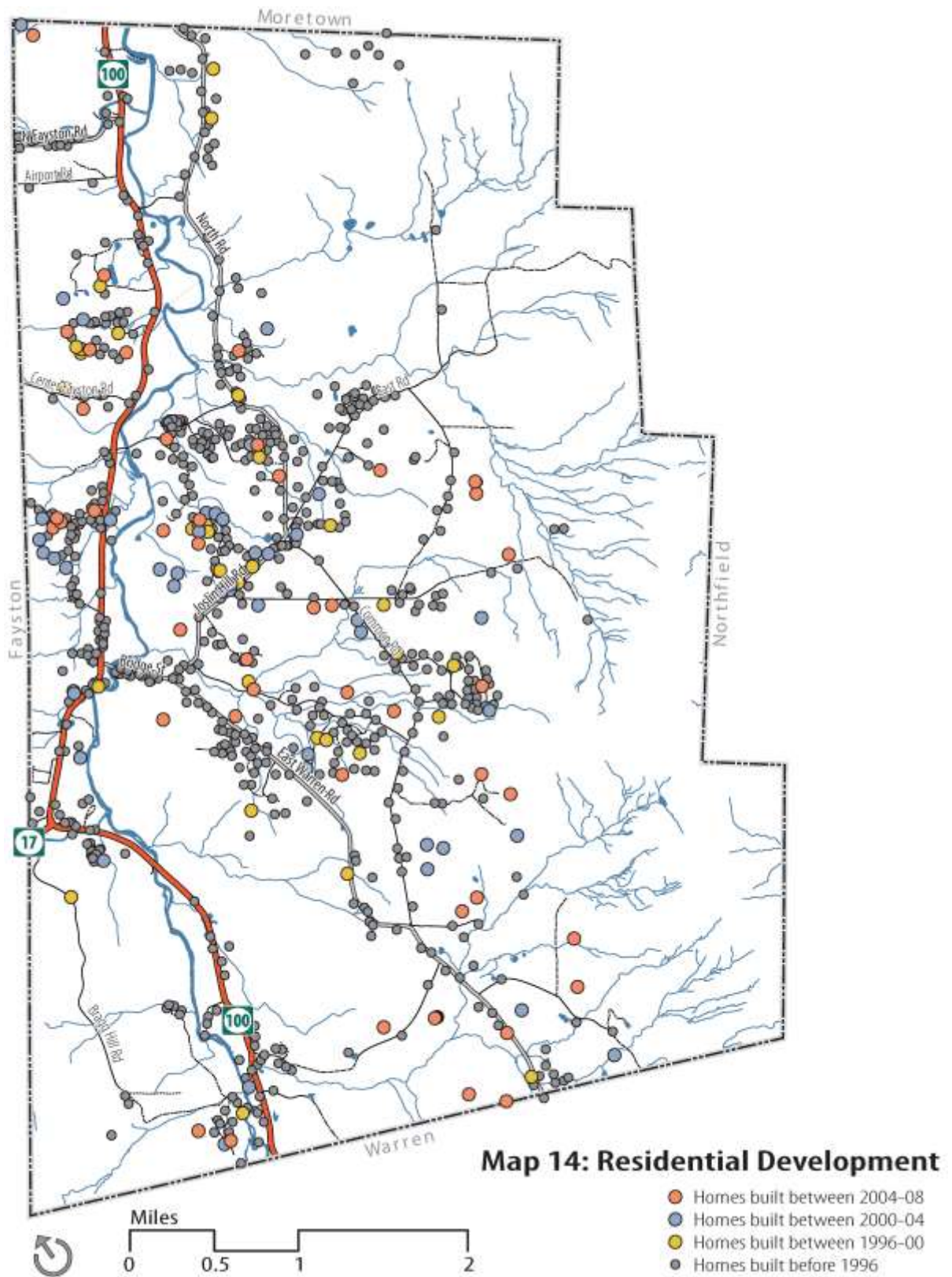


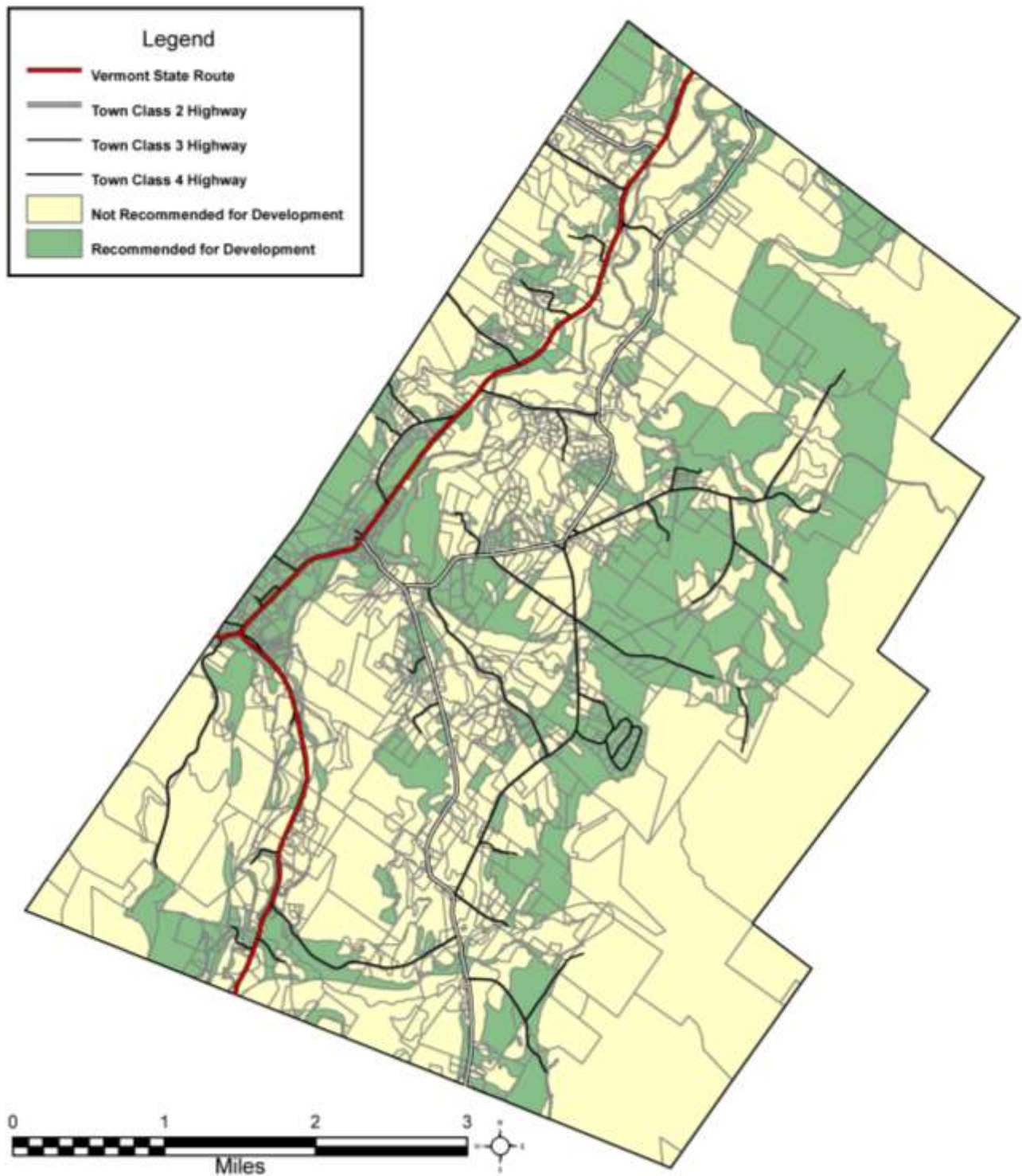




Map 12: Irasville Future Land Use







Map 15: Preferred Development Locations