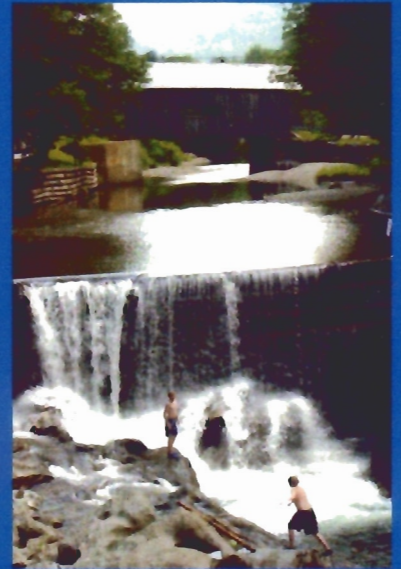
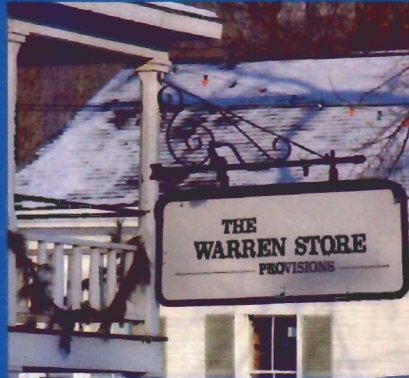


Town Plan

2005

Warren Vermont



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As Amended by the Warren Select Board on October 9, 2007

WARREN TOWN PLAN 2005

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THE PLANNING PROCESS

Chapter 1

Why Plan? Whether preparing for retirement, developing new business strategies, or buying seeds for the summer garden, planning is an essential part of our lives. Though not always a conscious act, the practice of looking ahead, identifying needs, setting goals, budgeting time and resources, and attempting to achieve desired outcomes are key elements of a planning process.

Why should communities plan for their future? Vermont municipalities are not required to plan, although they must have a Town Plan in order to be eligible for grant funds from the state or federal government. Towns have found that, through planning, they can protect community interests, maintain a measure of local control, better manage public

Warren has been planning since the Town's earliest days. The 1789 Town charter subdivided the new community and established land use requirements for the first settlers.

investment and the allocation of scarce tax dollars, protect important natural and cultural resources, promote development in appropriate locations, and nurture the local institutions that define community life. Looking ahead and anticipating change makes sense.

Warren has been planning since the town's earliest days. The 1789 Town charter subdivided the new community and established land use requirements for the first settlers. Modern planning and growth management followed the economic, technological and cultural changes that have occurred since the early 1960's. As



these changes continue at an ever faster rate, planning will be an increasingly important means with which Warren can take full advantage of the future without forfeiting the town's heritage and unique character.

Authority to adopt the Town Plan

Warren's Town Plan was prepared in accordance with Title 24 of the Vermont Statutes Annotated, Chapter 117, The Vermont Municipal and Regional Planning Act. Consistent with §4385 of the Act, this Town Plan was adopted by the Town's Selectboard on May 24, 2005.

In 1988 the Vermont legislature amended the Act with the adoption of Act 200. The purpose of this amendment was to develop a "bottom-up" statewide planning program. The basis of this program was a series of goals contained within Act 200 intended to guide planning activities at all levels of government. In 2003 the state legislature further amended Act 200 to include a thirteenth planning priority relating to daycare facilities. Since 1989, Warren's town plans have been deemed consistent with those goals by the Central Vermont Regional Planning Commission.

Purpose of the Town Plan

The purpose of the Warren Town Plan is to define a long term vision for the Town and a means of achieving that vision. The Plan is designed to serve as the primary reference when making community decisions and provide guidance to local officials when setting public policy. At a minimum, the Plan shall:

- guide the Planning Commission, Development Review Board, other town boards, and landowners during regulatory processes, including conditional use and subdivision review;
- serve as the “blueprint” for anticipated revisions to the town’s development regulations, most importantly zoning and subdivision regulations, by describing the desired location, type and intensity of future development;
- provide the town boards, citizens and landowners with clear guidance during Act 250 proceedings;
- define the existing and desired “levels of service” for public facilities and services and assist with the allocation of resources to maintain those levels of service;
- guide town, state and federal officials in other regulatory, administrative or legislative processes involving state or federal agencies or neighboring towns;
- serve as the foundation for policies, programs and regulations designed to ensure the conservation, preservation and use of natural and cultural resources; and
- inform and educate anyone interested in the Town.



changes facing the Town and the forces behind those changes, these eight chapters serve as the basis upon which goals, objectives and strategies are made. At the end of each chapter, the Goals, Objectives, and Strategies that are relevant to the subject matter of that chapter are listed.

In the Goals and Implementation section of each chapter, the Goals

represent a part of the town’s vision for the future. The Objectives bring the general goals into focus and provide a framework for the Implementation Strategies, which are the specific actions that will be taken to achieve the town’s goals.

Public Participation

The Town of Warren has long benefited from the active involvement of town residents during every step of the planning and decision making process. Spirited debate, and often conflict, is a predictable part of resolving important community issues. This Plan builds upon the history of debate and past planning efforts in an attempt to better focus future discussions concerning major decisions, thereby avoiding unnecessary conflict whenever possible.

The Mad River Valley towns have a history of working together on valley wide planning projects. The three towns of Waitsfield, Fayston and Warren started combining funds toward valley studies back in 1979. In 1983, prompted by the Sugarbush mountain master plan designed to increase the comfortable carrying capacity (CCC) of the mountain from 6,800 skiers/day to over 10,000, the valley towns, Sugarbush, Central Vermont Regional Planning Commission and the State entered into a Memorandum of Understanding (MOU). The Memorandum of Understanding addressed community concern over the potential impact of this expansion on the Valley’s public infrastructure and quality of life. The Memorandum of Understanding was designed to phase expansion of CCC in a manner that does not overburden the Valley’s capacity to accommodate it. Despite changes to the expansion plan in response to changes in ownership, market conditions and ski area technology, the MOU has

Organization & Format

The Warren Planning Commission undertook an extensive revision of the Town Plan in 2003 and 2004. As adopted, the plan contains ten chapters.

The first chapter describes the purpose of the Plan, explains the town’s ongoing planning process and describes the regional context and Warren’s relationship with surrounding towns. The second chapter provides a history of the town.

Chapters 3 through 10 address specific categories of topics and or issues. Included is an overview of the topic, such as transportation or housing; background information relative to recent trends and current conditions; an analysis of those trends or conditions; and, where appropriate, projections of future conditions. By providing greater understanding of the

remained in effect since 1983 (the MOU was updated and reaffirmed by the parties in 1998). In 1985 the Mad River Valley Planning District was formed by the valley towns, Sugarbush Resort and the Central Vermont Regional Planning Commission.

Between the completion of the Valley Growth Study in 1981, Valley Forum Series in early 1990's and the last update of the Town Plan in 1999, Warren residents, together with residents of the neighboring Mad River Valley towns of Fayston and Waitsfield, have supported one of Vermont's most innovative planning programs. These efforts, detailed below, have involved a comprehensive data collection and monitoring program, included a multi-town approach to addressing issues related to growth, landscape preservation and capital facilities improvement, and have provided Valley residents with frequent opportunities to



participate in discussions on a wide range of topics concerning the future of the larger community.

Warren has addressed matters of local concern with the same openness and outreach that Valley-wide issues have

been addressed. Since the 1999 Town Plan update, the town has addressed several issues with long term implications. These include the following:

- installing a community septic system in Warren Village with the capacity to serve most village properties;
- reviewing and permitting a lodge at Lincoln Peak and related wastewater treatment facilities;
- planning for a municipal facilities expansion, sidewalk and traffic calming for Warren Village and a scenic roads inventory;
- passing a bond vote for a stage at the Warren Elementary School;
- establishing a Blueberry Lake Advisory Committee, which in turn wrote a management plan for the lake;
- establishing and adopting a charter for the Warren Conservation Committee;

- conducting a land survey of the municipal complex in the village;
- aiding in the establishment of the “Mad Bus” public transportation system; and,
- updating the Affordable Housing Study from 1991 in 2001.

Most recently, the Mad River Valley Planning District has embarked on a planning fourm called Valley Vision 2020 that encourages community members to take stock of the area's assets, evaluate its needs, and work toward a common vision that will help move the Valley towards a more sustainable future.

In addition to public involvement in making community decisions, the Warren Planning Commission sponsored several public forums to assist with the preparation of this plan. Held between April 2004 and September 2004, these meetings focused on such issues as the town's planning priorities, housing affordability and zoning regulations. The results of the public meetings helped focus the content and goals

Warren has addressed matters of local concern with the same openness and outreach that Valley-wide issues have been addressed.

of the Plan.

During the Town Plan revision process, the Planning Commission also mailed out a survey, the 2004 Questionnaire, to Warren registered voters. The 2004 Questionnaire contained eleven questions on subjects such as housing affordability, traffic in Warren Village, daycare, use and expansion of National Forest land, the conservation reserve fund, conservation priorities, use of Blueberry Lake, municipal facilities and the timber crib dam in Warren Village. The questionnaire and results can be found in Appendix A.

As is often 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 will serve to increase the level of citizen participation in local decision making. Further, the ongoing coordination with local citizen groups, businesses and regional agencies will ensure that Warren's planning program benefits from all of the other opportunities for community involvement that exist in the Town and Valley.

Cooperation with Neighboring Towns

The Town of Warren has been meeting regularly with the neighboring towns of Fayston and Waitsfield to discuss issues of mutual concern for the past twenty-three years. This relationship was formalized by the creation of the Mad River Valley Planning District (MRVPD) in 1985.

This cooperative effort has resulted in a number of studies and programs designed to address the following issues on a multi-town basis:

- affordable housing;
- economic development;
- growth management associated with ski area development;
- highway improvements;
- public transit;
- recreation;
- river conservation;
- rural resource and historic preservation;
- trails and greenways development; and,
- wastewater treatment and disposal.

In addition to the wealth of information available through these studies and programs, this cooperative relationship allows Warren 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 Waitsfield.

While the success of the town's cooperation with adjacent Valley towns is well documented, communication and cooperation with other neighboring towns has been less extensive. This is due largely to the geographic barriers separating Warren from the neighboring towns of Northfield and Roxbury (Northfield Range), Granville (Granville Gulf) and Lincoln (Green Mountain Range). Despite these geographic constraints, Warren recognizes that the operation of a major resort in the Mad River Valley does present the potential for impacting adjacent towns in such areas as housing, transportation and land use.

The policies set forth in this Plan have attempted to ensure compatibility with the plans of

neighboring towns, as required by the Act, by reinforcing the natural barriers with land use and transportation policies that direct growth and traffic away from neighboring towns, and support Route 100 north as the principal arterial highway in the town. These issues are addressed in detail in the various Plan chapters.

Finally, the town continues to play an active role with the Central Vermont Regional

The Town of Warren has been meeting regularly with the neighboring towns of Fayston and Waitsfield to discuss issues of mutual concern for the past twenty three years.

Planning Commission and the Central Vermont Transportation Advisory Committee. Through that involvement, potential conflicts with neighboring town's outside of the Mad River Valley can be addressed. More important, the town has considered the policies of the Central Vermont Regional Plan and the Central Vermont Transportation Plan and drafted a Town Plan that is compatible and consistent with these Regional Plans.

Acknowledgments

The Warren Planning Commission thanks the many people who assisted with the preparation of this Plan. These include Kit Hartshorn for preparing the Town History contained in Chapter 2; Dee Pierce of the Mad River Valley Planning District for her assistance; the staff at Sugarbush Resort, especially Margo Wade and Jason Lisai; the Friends of Mad River for providing many helpful comments; the Central Vermont Regional Planning Commission for assistance with Chapter 7; and the Warren Selectboard, Development Review Board and Conservation Committee for their ongoing interest and support for the town's planning process.



Planning Process Goals

Goal 1.A An active, ongoing local planning process.

Goal 1.B The widespread involvement of all Warren citizens at all levels of the Town's planning and decision-making process.

Goal 1.C Ongoing cooperation and coordination with neighboring towns, the Central Vermont region and the State.

Objective 1.1 To provide opportunities for citizen input during every stage of the planning and decision-making process and to discourage decision making which does not occur in an open, public environment.

Implementation Strategies

- a) Identify potentially affected parties and include them early in the planning and decision-making process.
- b) Recognize statutory hearing requirements as a minimum level of public involvement and exceed that minimum in all instances where public interest is evident.
- c) Continue to require a public hearing and notification of adjacent landowners for all conditional use, subdivision, PRD and PUD applications and make changes to the Land Use and Development Regulations to comply with changes in state law.
- d) Solicit additional public input through the use of surveys and questionnaires.
- e) Inform the public of governmental activities on a regular basis using hearings, forums, direct mailings, the town's web site, the Valley Reporter, and the Vermont Journal.
- f) Encourage balanced representation of the town's diverse population on town boards and committees.

Objective 1.2 To continue fostering cooperative partnerships with other Valley towns in order to better address issues of mutual concern, enhance efficiency through cost

sharing and minimize conflict through ongoing communication.

Implementation Strategies

- a) Continue to actively support and participate in the Mad River Valley Planning District as a means of addressing issues of Valley-wide concern with the neighboring Towns of Waitsfield and Fayston.
- b) Continue the town's participation in such multi-town organizations as the Mad River Valley Planning District, Mad River Valley Recreation District, Central Vermont Regional Planning Commission, Mad River Valley-Waterbury Solid Waste Alliance, Washington West Supervisory Union, and explore other opportunities for forming inter-town entities to provide services in a cost-effective manner.
- c) Provide neighboring towns with an opportunity to comment on local matters of concern through notification of pending decisions which may affect them.
- d) Encourage and support private organizations currently providing public services to area towns.
- e) Support a local planning program through annual budget appropriations for planning services.
- f) Review the Town Plan on a regular basis and make changes as appropriate to address changing circumstances.

Objective 1.3 To ensure that the Warren Town Plan is compatible with state decisions affecting town planning.

Implementation Strategies

- a) Review State decisions, actions and agency plans affecting the town and revise this Town Plan as necessary to be compatible.
- b) Participate in Act 250 decisions and public hearings by other agencies to ensure that the Warren Selectboard and Planning Commission and Development Review Board have substantial input in determining compatibility with this Town Plan.

COMMUNITY HISTORY

Chapter 2

On November 9, 1780, the Honorable John Thorp and 67 associates received a grant for a parcel of land in Vermont. It took nine years to obtain the fee for the charter. When it was issued on October 20, 1789, the 16,660 acres were not enough to make the usual size desirable for a town. Therefore, roughly 6,000 acres, Warren's Gore, were included in the charter. The Gore was located in Essex County far to the north.

A condition of the charter was that each proprietor, his heirs or assigns, plant and cultivate five acres and build a house, or have a family settle on each respective right or share of land in a specified time, or the share would revert to the freemen of the state to be re-granted.

On November 12, 1824, the town was enlarged by four tiers of lots from the Town of Lincoln. Shares were granted for the benefit of a college (Middlebury College), county grammar schools, minister of the gospel, support of the ministry, and an English school. The survey was related to such points as birch, basswood and spruce trees with measurements in links, degrees and chains from the Roxbury and Lincoln Corners. The town was named for Dr. Joseph Warren, president pro temp of the Provincial Congress, Major General of the militia and the first American killed in conflict at Bunker Hill.

Among the early settlers were Samuel Lard, Seth Leavitt and Asahel Young, a famous bear hunter. Young built a log cabin on land owned by Eldridge Hanks and a grist mill near what later became Warren Village. The first child born in town was the daughter of Ruel and Olive Sherman on October 17, 1797, and the



first death recorded was the mother, Olive. The first male child born was Lucius, son of Seth Leavitt on March 5, 1798.

Warren was a wilderness and the people who settled here were pioneer type, resolute people, not afraid of hardships encountered in backwoods life with the strength and courage to endure.

They raised their own food; corn, potatoes and vegetables being the main crops. The only sugar available was maple sugar made in open iron kettles over an outside fire. The buckets were handmade of wood. They made clothes from wool, flax and cloth. They wove their own cloth and knitted their socks, sweaters and

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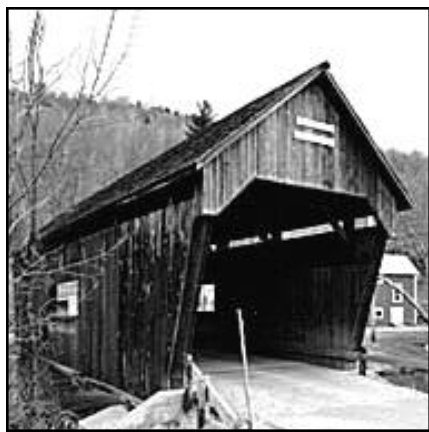
mittens. Baking was done in stone or brick ovens. Candles or pine knots and fireplaces supplied their light. It was not until 1850 that kerosene lamps and lanterns became available. Fishing and hunting were also sources of food, as well as gathering wild berries. The land was cleared, making small farms, crops were planted and homes built. They kept cows, sheep and poultry. Milk was set in small pans to let the cream rise and skim to make butter and cheese.

A small hamlet grew in the eastern part of town away from the river, the likely travel lane of the Indians. There the best farmland lay, and the larger farms developed. At this loca-

tion the business of the town was transacted from 1798 to 1824.

Warren became an agricultural town with grass as king and stock growing a leading branch. Later, this would change to an industrial nature with the addition of mills, tannery, stores, and all the service occupations that become a need in a community. It again changed to a recreational area when Sugarbush Ski Area became the leading factor to dominate the valley with the related businesses of the present day.

On September 20, 1798, the first town meeting was held. Samuel Lard was elected the first town clerk, and the selectmen were Ruel Sherman, Joseph Raymond, and Seth Leavitt,



thus making the necessary machinery that is still in existence for the successful operation of a town. On September 2, 1800, the first Freeman's Meeting was held with twelve men taking the Freeman's Oath. Their meetings were held at the homes of the selectmen until 1812. For the next 18 years they met at the Red School House. The first State Representative was Thomas Jerrold in 1809. During the year 1805, a cemetery was laid out on one and one-half acres of land at a cost of \$30.00.

The first frame house was on Judge Epham's farm at the north end of the Post Road, just south of the Warren/Waitsfield line. In 1812, a two-story house was built on J.W. Eldridge's farm at the south end of the Post Road, near the far corner of Fuller Hill and Plunkton Road. It was used as a tavern and a post office. James Eldridge was the postmaster. It was 22 years after the first settlers came before he got his appointment. Most of the lumber for the early homes was sawed by Henry Mills who lived near what is now Alpine Village. The first settlers made use of the streams, and many mills were in operation over the years.

Religious meetings were held at the homes of Joseph Eldridge or James Richardson until the Methodist Church was built in 1833-1834.

The lumber for the beams was drawn by oxcart from Ripton and the pews from Middlebury. That church remained a place of worship for over 100 years. For 15 years, then, this proud old place of worship in the heart of the early trading center of Warren stood on the Old Stage Coach Road, unused and bowing to time and the elements. The original box pews which had seated fifty persons stood alone in the ruins. The last pastor was Reverend Pearl Daniels, and the last service was held in 1928. The Warren River Meeting House was built in 1838 by the Free Will Baptists, Universalists, Congregationalists, and Methodists. The church later became the United Church of Warren. There were resident pastors who lived in the Parsonage just south of the Town Hall and were real members of the community, visiting homes throughout the area, ministering to their people and providing a social link in the rural areas.

When the resident doctor left the area, Warren shared the services of Dr. Shaw of Waitsfield who covered the entire area. He was the original "Country Doctor," inspiring confidence in his healing and visiting all hours, day and night with his horse and buggy and, in later years, his automobile.

Before 1805 all education was given in the homes, but then it was voted to divide the eastern part of the town into two districts and build a schoolhouse on the southeast section of the Four Corners at Roxbury Mountain Road. There have been three buildings at the South Corner. The last one, built in 1888, now stands as a private home. About two-thirds of the eligible children attended. There were summer and winter terms. By 1822 Warren had eighty-three scholars at the Corner and seventy-six in the South.

The Village School was organized in 1823

The first frame house was on Judge Epham's farm at the north end of the Post Road, just south of the Warren/Waitsfield line.

but not built until 1829 on the south side of the Common. As the population increased, new districts were added until 1845 when there were fourteen districts with three hundred scholars. In 1885 a town school system was adopted, the town paying and hiring the teachers. Parents still furnished books, paper, pencils, pens, and slates until 1895 when the town

began furnishing these supplies.

In 1914 there remained only six districts. People had left the South Hollow, Stetson Hollow, Mill Brook area, Grand Hollow and West Hill sections and, by 1947, the old buildings had been sold or moved away.

The Village School House was remodeled in 1952 by adding a third room, drilling a well, and installing a heating plant. By 1960 it was the only school remaining in operation. All students were bused there. But the growth caused by the recreation industry made it necessary to build a new school on the Brooks Field Recreation Area and send the seventh and eighth grades to Harwood Union High School in Duxbury. (The East Warren School did reopen for a short time because of population increases, but eventually closed to be rented for community services, a store and, recently, the home of Rootswork).

The Village School was turned into offices for public officials and space for the library which had been started in 1900. That year the town had appropriated \$25 for the maintenance of a Free Public Library and elected E.W. Slayton, V.F. Miner, P.B. Daniels, P.C. Lamb, and Plyna Parker as the first library commissioners. By 1901 the library had received 104 books from the State of Vermont. For the first 56 years, the books were kept in private homes for easy access on the ground floor. The first location was at Plyna Parker's, and his wife was the first librarian. The Library stayed in a number of different homes until 1947 when it was moved from the basement of the I.O.O.F. Hall to the small Town Office Building located where the bandstand now stands.

The move to the Municipal Building (formerly the Village School House) took place in 1974. Now known as the Warren Public Library, the facility had 1,000 books which were cataloged according to standard library procedures with the help of volunteers and former librarian, Lois Kaufmann.

In 1977 a group called "Friends of the Warren Library" was formed to broaden its use and activities. A grant from the Vermont Department of Libraries helped establish a record department. There are now over 7500



cataloged volumes and 500 non-book items, and the Library is listed in the tourist guidebook Vermont: An Explorer's Guide, as a place to visit.

The Postal Service was the main link with the outside world through the closest rail connection in Roxbury. From 1828 to 1907, two Warren post offices received mail from carriers on foot, horse-back or team driven. It

came about three times a week until 1880 when it came daily. Gladys Bissell was the last driver to make the route by rail car. After that, mail arrived via Middlesex, then Montpelier, by Star Route Delivery.

The telephone service prior to 1908 came over this route to the office in the home of Wyd McClaffin at the base of the mountain. Later, service came through the Valley over the Waitsfield-Fayston Telephone Company owned by Alton Farr and now run by his daughter and her husband, Eleanor and Dana Haskins. The switchboard was tended by a housewife between her daily chores until it grew large enough to find different quarters with a young lady as "Central." As late as the 1950s, only two lines serviced Warren. It was an important day in 1961 when this company switched to a dial system, but it also meant the end of social life on the telephone when one could listen in or take messages for a neighbor.

Much of Warren's forest land is owned and controlled by the U.S. Forest Service. In November 1934 the U.S.F.S. acquired 243+ acres from L.W. Freeman and 32+ acres from F.N. Cota. In 1935 they acquired 3,832 acres from Middlebury College, 55+ acres from Vaughn K. Brown, 26 acres from Burton S. Ward, and 146 acres from the Addison County Grammar School Corporation. In 1972, 2,103+ acres were added from Laird Properties, N.E. Land Syndicate. In 1979, 218+ acres were added from the Morgans (Rice land), and in 1980, 415+ acres were added from the Carltons (formerly Strachen land), making a total of 7,069+ acres. This also joins a tract on the Lincoln border of 104.6+ acres. About 25% of the land is under lease to Sugarbush Ski Resort.

Today the US National Forest continues their legacy of preserving land in Warren. In

2001 the Forest Service acquired a 368 acre parcel in southeast Warren, including nearly all of the shoreline of Blueberry Lake. In 1998 the US Forest Service acquired the lot known as Warren Falls, formerly Carleton Falls. Various interested parties were contacted by the Forest Service as to the use and preservation of the area, but parking is a dangerous situation on that bend in the road. In 2003 year they acquired a 30 acre parcel on the North side on the Lincoln Gap Road.

Considerations are currently under way for future acquisition of forest land by the US National Forest Service.

In addition to the recent purchases by the US Forest Service, the Vermont Land Trust obtained a perpetual conservation easement of 212 acres of the Eurich Farm land behind the Sugarbush Inn. A portion of the 212 acres is in Waitsfield.

For pastimes and entertainment there were the "raisings." Everyone got together to "raise" a barn or house, get wood for their firewood, logs to saw for lumber, husk corn, tie quilts, etc. These events became social events with local music and food supplied by the neighborhood women.

In the meantime, settlement was growing along the Mad River and on land to the west. Dams were built, mills appeared, and the supply and service establishments required by these people came into the picture. In 1807 the Mad River Turnpike, now Route 100, was surveyed through Granville Woods, and in 1817 William Cardell built a toll road on Lincoln Mountain at a cost of 50 cents/rod.

In the span of twenty years, the Village of Warren was settled. The first house was built by Daniel Ralph and the second by Richard Sterling. In 1826 a Village Common and the cemetery were laid out, and by 1829 the Brick School House was built. It was also at this time that by an act of the Legislature the town was annexed to Washington County. Formerly, it was in the County of Addison. From then until 1840 the Freeman's Meeting was held alternately at the Red School House in East Warren and at the Brick School House in the Village. By 1872, the population had grown so that neither the school nor the larger homes could accommodate the meetings, and it was

voted to build a town hall. The land, just enough for the building, was given by Ed Cardell.

It was completed by December at a cost of \$2,777.50. At the first meeting in the new building, the Freeman's Meetings were dissolved. The Town Hall still remains the location for town meetings, as well as many social events. For years, the small children were "baby-set" at the village school while parents attended Town Meeting. Meals were served at the noon recess by the Church Ladies. People got reacquainted with friends and neighbors. Everyone attended. The Upper Hall became a meeting room for the Odd Fellow Lodge and the Grange. In 1957 it was repaired, a heating plant installed, a dining area added in the basement, new plumbing added, and in 1977 it was insulated because of heat loss and the need for energy conservation.

The brooks and streams, had taken on the names of the early settlers, such as Shepherds Brook, Hanks Brook, Fuller Hill Brook, Mills Brook, Bradley Brook, Stetson Brook, and so on, or their names had been taken from the source, such as Lincoln Brook, or the type of soil, such as Clay Brook. The roads also became named in the same way, a trend that has followed through the years. The



In the meantime, settlement was growing along the Mad River and on land to the west. Dams were built, mills appeared, and the supply and service establishments required by these people came into the picture.

Sugarbush Access Road, replacing the Grand Hollow Road with the advent of the ski industry, was the first big change in the name of a road. This caused a drive in later years to keep old names of the town, with new names appearing on new roads and new areas. The old DeFrest Road and Church Hill Road became known as the Airport Road, a direct access from Route 100 to the Sugarbush Airport.

Everything that came to the Valley had to come by rail to Roxbury and be hauled seven miles over the mountain. By 1889 the number

of mills and businesses had reached its peak. Many carpenters, blacksmiths, boot and shoe dealers, truck dealers, an insurance agent, clergymen, dressmaker, sleigh manufacturer, undertaker and lumber dealers had been added to the types of ventures. A snowroller was purchased in 1890 to maintain the roads, and horse and sleigh were the winter method of travel. Now large trucks and equipment plow and sand to accommodate the traffic that has developed.

During these later 1800s the dairy industry grew. A creamery was started in East Warren. Later the business was transferred to the Village. By the early 1900s many had left the farms for mill work and industry. Young people left to seek life away from the rural areas. The communities of Stetson Hollow, South Hollow, West Hill and Grand Hollow were showing the change from the agricultural pattern, and land was growing back. The cream, separated from the milk on the farm, was sent to the Warren Co-op building in 1910. Soon the Hood Milk Company started buying fluid milk for shipment to Boston. The farmers who had brought cream to the Co-op to be made into butter now started shipping whole milk, and the Co-op closed, to be replaced by steel tank trucks picking up the milk directly at the farm where it was stored in cooled steel bulk tanks until pick-up time. In 1950 only one farm was operating in South Hollow, and that was Frank Hartshorn still shipping milk on a small scale, and by 1965 only six remained in the farming industry. Many farms had been combined to make larger operations. In 1970 only David DeFreest, Rupert Blair and George Elliott were farming and shipping their milk. During the 1980s the Elliott Farm was permanently protected from development through the Vermont Land Trust.

Sugaring became a big operation each spring. The methods have changed through the years to the use of an arch inside a sugarhouse, fed by wood, and huge pans containing the sap boiled to a specified density and graded by color and flavor and packed in metal containers to be sold direct to consumers. This

was a change from the time of packing in huge drums and selling the syrup by the pound to processing companies and also from the time most syrup was made into sugar. All these changes were brought on by new methods in refrigeration, shipping, packing, etc. Most farms had a sugarhouse, and during the middle 1900s Warren was the site of much maple production. Because the farms were abandoned, sugar maples sold for lumber, and the

hard work involved in this production meant the number of operations grew less and less until 1978 when there were only the Hartshorns, D. Ernest Ralph, Albert Neills and small homeowners making syrup. In the 1980s the Hartshorns were hauling their sap to be processed at their farm in Waitsfield.

In 1927 the worst flood ever to hit the Valley washed away the foundation to the covered bridge

which in later years was restored with assistance from a grant established by the Vermont Legislature for the protection of local historic resources. The bridge was closed to all truck traffic to preserve it. Many roads were damaged, along with all four dams in the Village. It took away the J.A.P. Stetson Mill, the Bradley Mill at the south end of the Village, damaged the Grist Mill, and took the old Plyna Parker mill of 1877, then owned by Mary Bradley since 1919. Most every road at some place was impassable with deep gullies made by the heavy rains of that November. No vehicles could get into the area. The Village was cut off at each end with bridges washed away. This flood brought an end to the waterpower era.

Fire, as well as high water, plagued the mill business. Palmer and Wakefield lost a mill by fire. Henry W. Brooks lost his by fire in 1947 and again in 1949. And the Bobbin Mill originally built by Erastus Butterfield in 1878 burned down in the early 1930's when owned by Parker and Ford. They began rebuilding on a shoestring in 1932, but fire struck again before completion. It was finally rebuilt and run as a mill for twenty-five years. Under the ownership of Barry Simpson and David Sellers in 1974, the Bobbin Mill was again damaged by fire. It was rebuilt and



became the birthplace of several manufacturing businesses, including Union Woodworks (now Wall-Goldfinger), Vermont Iron Stove Works, Vermont Castings, North Wind Power Company (now New World Power Company), Controlled Energy Corporation and Dirt Road Company. Currently owned by Barry Simpson, Dirt Road Company produces a variety of wooden furniture, toys, canoe parts, and energy-saving building components.

The H.W. Brooks Mill, which was located below the Village covered bridge, had burned in 1949 but was rebuilt by a co-op in 1951. It eventually fell into disrepair and was razed in 1984 by Macrae Rood, who built a home with a hydroelectric generator on the old mill site. This is the only vestige of the waterpower era that spawned sawmills, cider mills, clapboard mills, gristmills, clothespin and butterpail factories along the Mad River, Lincoln, Stetson, Bradley, Clay, and Freeman brooks. Beginning in 1845 with Carlos Sargent's mill at the south end of the Village, a great surge of mill production had run its course.

In the mid-1970s Francis Kathan began producing log homes at a new mill site in East Warren. This is one of few remaining examples of small factories turning locally felled timber into finished products. The huge piles of logs in the mill yards, the stacks of lumber, and the farmers hauling logs by team and later by



truck are a thing of the past. We are now more likely to see a pile of crooked logs in the backyard of a residence for firewood. The advent of the chainsaw, woodsplitter, and high fuel costs have turned the lower grades of local timber into fuel for wood-burning stoves. Two of the premier examples of these stoves, the "Elm" of Vermont Iron Stove Works and the "Defiant" of Vermont Castings, had their conception in

Warren.

During the Second World War a special effort was made to offset the great pulpwood shortage. In 1943 David McNeill became the first farmer to pledge three extra days to cutting pulpwood. The nation's newspapers were encountering a serious materials shortage. The reduced manpower due to enlistment and the necessity of planting crops left many farmers shorthanded in providing the raw material for paper.

The ski industry has had a profound impact on the character of Warren, despite its meager beginnings. The first ski tow in the Mad River Valley was established by the Warren Outing Club in the late 1930s. It was placed on the Ulie Austin property, now a Town owned source of gravel, by Outing Club organizers Charlie Townsend, David McNeill, Nap Drinkwine and others. The tow rope was provided by Roy Long, with the machinery obtained from the Suicide Six ski area in Woodstock. The project came to a close at the outset of the Second World War, with the departure of many young men to serve in the armed forces.

In 1945-46 Roland Palmedo sought to establish the town's second ski area. After months of negotiation with the Hartshorns and Riches, who were under great pressure from Town residents for a ski lift on the Hanks property, so called because of the area's early settlers. The adjacent Hartshorn land was also desired as part of the project. Unfortunately, the winter in which the development was to start found little snow in the area, and Roland Palmedo went on to establish Mad River Glen ski area in Fayston instead.

Next came the Sugarbush ski area, which was founded by Damon Gadd in 1958. Shares were sold to form the company, with many local people buying shares. The first trails were located in the Asbury-Allen basin, which was accessible only by jeep over logging roads at that time. The ski area operation was a dream of Gadd and General Manager Jack Murphy, who had a vision of a playground for skiers. The season of 1958-59 started with a 3-seat gondola which was manufactured in Italy, at that time the longest lift in the country. There was also a T-Bar for beginners and the Castlerock lift. Tickets were \$4.50 a day. The office was run by Lixi Fortna from a telephone company truck from the second world war days. It was equipped with a crank telephone, a one arm bandit adding machine and a manual typewriter. Peter Estin was the first ski

instructor. The Sugarhouse, now The Warren House, was the area's first restaurant. Other amenities which soon followed were the Valley House and the Gate House. Another lift was added at the Valley House and a ridge was bulldozed for the construction of the Gate House. The Inferno Lodge and Club Ten were built on the Inferno Road which is now a private access to the condominiums adjacent to the ski lifts. These buildings were used as vacation housing by affluent vacationers, earning the nickname of "Mascara Lodge".

For the last forty years Sugarbush has influenced the shape and direction of the Town. New lifts and trails were added, and Sugarbush Village was established as a center of lodging and commercial activity. A building boom unmatched in Warren's history brought confusion about regulation and zoning to control or at least direct this development. Development has continued, and many environmental issues have become important concerns. After the addition of the Glen Ellen ski area in Fayston, Sugarbush had sought to expand the ski area to include more trails, lifts and has permits in place to construct a Lodge at the base of Lincoln Peak.

On July 28, 1983 a Memorandum of



River Valley Planning District was established as the primary forum for communication, impact review, mitigation development, and coordinated action among the parties. The memorandum was updated and re-signed in 1998.

During the 1980s, especially the first half of that decade, Sugarbush Village was heavily developed with accommodations for skiers. The rapid pace of development galvanized the Town to actively plan for its future. As the 1980s wore on, much of the anticipated growth at the mountain failed to materialize as Sugarbush suffered from frequent management changes and a subsequent lack of focus.

The American Skiing Company purchased Sugarbush Resort in 1995, bringing a renewed focus on upgrade and development. The development of the Slide Brook Intertie lift and installation of the snowmaking improvements were soon completed by the new owners.

In 2001 year Sugarbush Resort once again came under new management and is working on a plan to build a Lodge at Lincoln Peak, greatly changing the character of the land in that area.

In 1954 the State made the decision to bypass Warren Village and construct Route 100 to the west of the Mad River. The decision has helped the Town retain its small 19th century mill village to the present with few alterations. More than thirty years after the bypass, Warren Village was nominated to the National Register of Historic Places and in 1992 the Village was added to the National Register. In 1993 the Pitcher Inn, an assimilation of four buildings and the largest commercial building in the Village, burned to the ground. Four and a half years after the fire the new Pitcher Inn opened its doors for business built in the same Greek revival style so evident throughout the Valley and upon the exact footprint of the former Inn.

Alpine Village was initially developed in 1960 for vacation homes and related seasonal-recreation uses. It is approximately 290 acres located in the southeast corner of town and is characterized by 1/10 acre parcels placed in a

On July 28, 1983 a Memorandum of Understanding was signed between the towns of Fayston, Waitsfield, Warren, The Central Vermont Regional Planning Commission, the State of Vermont and Sugarbush Resort.

Understanding was signed between the towns of Fayston, Waitsfield, Warren, The Central Vermont Regional Planning Commission, the State of Vermont and Sugarbush Resort. The purpose of the Memorandum of Understanding is to establish a cooperative working relationship with common aims and defined responsibilities regarding the environmental impact of Sugarbush Report. Subsequent to the signing of the Memorandum of Understanding, the Mad

grid lot and street pattern. It was developed without regard for the capacity of the land. However, Alpine Village has matured over time, lots have been consolidated and it has developed as a clearly defined residential neighborhood.

In 1963 Warren Ketcham built an airport on the East Warren plateau to establish a center for soaring. He picked this elevated area near the Roxbury ridge where thermal and other favorable air currents permit sustained glider soaring flight. Use of this facility has increased for both commuters and sky fans.

On October 23, 1977, an addition to the Fire House was dedicated in honor of John Snow, fire chief for twenty-two years. This volunteer group was organized under the leadership of Clayton Neill, its first fire chief, in 1947. It was first quartered at the north end of the village until the present structure was built into the bank at the entrance of the Common. It remains a volunteer force with members dedicated to their work, and a very efficient crew has developed. Up-to-date equipment has constantly been added.

A municipal wastewater system has been installed to take care of water quality problems in Warren Village. The leach field for the system is located at Brook's Field, the old Dival flat of the early years.

Warren's history continues to be interesting, unique and, at times, tragic. In June 1998, a devastating flood hit the Mad River Valley, inundating parts of Warren Village and destroying homes and property throughout the watershed. The flood occurred after years of focused attention on the Mad River marked by the formation of Friends of the Mad River in 1990, the publication of a River conservation plan in 1995 and, in 1998, the acquisition of Warren Falls by the U.S. Forest Service. Fortunately, no lives were lost in the flood of '98, and the strength and perseverance that has characterized much of the Town's past was very much in evidence.

The covered bridge in Warren Village was extensively damaged during the 1998 flood and was repaired after being closed for a period of time. The old crib dam in Warren Village is once again in a dangerous situation of needing repair after being rebuilt twice since the 1927 flood.

In the mid 1990s a series of events began unfolding around the Town-owned East Warren schoolhouse. In 1996 Dr. Larry and Mrs. Linda Faillace began importing breeding sheep from

Europe to establish their own flock of dairy and meat breeds. They, along with their teenage children, began making specialty cheeses that were acclaimed in numerous national publications.

Unfortunately for the Faillaces, the U.S. beef industry was locked in a decades old trade war with Western Europe which wouldn't admit American beef due to the prevalent use of artificial growth hormones. And the beef and pharmaceutical industries also were involved in thwarting a domestic outbreak of "mad cow disease" which they erroneously thought could be transmitted by sheep imported from a country where the disease had occurred. At the behest of these industries, the U.S. Department of Agriculture began an extended series of testing and legal maneuvering directed toward the apparently unjustified seizure and destruction of the Faillace sheep. Despite a spirited resistance from local supporters, and under the eye of news agencies from around the world, 125 Faillace sheep were loaded and hauled away on March 23, 2001 for slaughter.

The Lincoln Gap Road is getting more use during the Summer and Fall months as there has been a great increase in the hikers using the Long Trail and from commuters from the Champlain Valley area. One mile of the Lincoln Gap Road is still subject to spring mud season.

Business is flourishing in the Valley centers with shops in many of the old homes. Traffic related safety concerns have led to planning for traffic calming measures and possible implementation.

New houses are springing up on the old farms in the outskirts and the meadows are disappearing into lawns in all parts of town.

A photo album of Warren as Katherine Carleton Hartshorn knew it from the 1920's through the 1950's was presented to the Library Commission in 2003. The family preserves a second copy of the album. James Brooks presented pictures and history of his life in Warren from 1927 until he left for high school to the Warren Historical Society.

Prepared by Katherine Carleton Hartshorn, Warren native, Town Historian and long-time former member of the Planning Commission and Zoning Board of Adjustment.

Town History Goal

Goal 2.A Promote a greater understanding and appreciation of Warren's history and cultural heritage.

Objective 2.1 To celebrate and maintain Warren's history and cultural heritage.

Implementation Strategies

- a) Support the efforts of the Warren Historical Society to preserve and promote the Town's history.
- b) Explore the potential to establish a Warren Historic Museum in the existing municipal complex or elsewhere.
- c) Encourage the Mad River Valley Rural Resource Commission (Certified Local Government), Vermont Division for Historic Preservation and Mad River Valley Planning District to continue their efforts related to historic preservation planning and public education regarding Warren's historic resources and cultural heritage.
- d) Encourage property owners to work with the Mad River Valley Rural Resource Commission to seek nomination to and eventual designation on the National Register of Historic Places.

SENSE OF PLACE

Chapter 3

Warren's boundaries encompass the upper watershed of the Mad River. The town's eastern and western borders are defined by the parallel ranges of the Northfield and Green Mountains. The two ranges come together to form Granville Gulf to the south.

Diverging ridges of the Green Mountains create a series of bowls drained by tributaries to the Mad River (Austin, Bradley, Clay, Lincoln and Stetson Brooks) to the west, and a plateau lies roughly between 1,200 and 1,500 feet elevation in East Warren. The Mad River plunges through the center of the town, where it flows north into a widening valley.

Historically, the town's settlement patterns have been influenced by natural land forms and the distribution of natural features. East



of the largest tracts of undeveloped forest and public land in the Mad River Valley.

Warren's natural landscape is enhanced by its built environment. The interplay of natural and cultural features, unique to every community, forms a distinct "sense of place" that is easily recognized and valued by local residents.

This chapter defines

the unique blend of natural and cultural resources which shape Warren's character, identifies threats to those resources, and recommends appropriate strategies for their use and protection.

Rural Character

Despite the diminishing economic viability of farming and forestry, Warren has retained much of its rural character. That character is created by the blending of complementary cultural and natural features, which are discussed in greater detail elsewhere in this and other chapters of the plan. It is useful to consider how these diverse features combine to shape the town's rural character. For the purposes of this plan, rural character is defined by the following elements:

- **A working landscape**, defined by sustainable development and use of land-based resources, especially farming and forestry. Although local residents are increasingly less dependent upon the land for their livelihood, the town's landscape and historic settlement patterns continue to attract new residents and visitors, and thereby continue to support the town's economic base;
- **A healthy natural environment**, including clean air and water, expanses of open land, healthy wildlife populations, and a common

This chapter defines the unique blend of natural and cultural resources which shape Warren's character, identifies threats to those resources, and recommends appropriate strategies for their use and protection.

Warren's broad plateau was among the town's earliest settled areas and continues to be characterized by farming and residential development. Warren Village was located to take advantage of the hydro power of the Mad River and remains the center of the community. The high elevations and steep slopes of the Green Mountains support the town's current primary economic base, alpine skiing and related tourism. Those same mountains contain some

commitment to the protection of those shared resources;

- **Diverse cultural amenities**, including historic buildings and settlement patterns, small-scale local institutions and organizations, and commercial, recreational and social opportunities that exceed those available to residents of many larger communities; and,
- **A rural lifestyle**, marked by relative privacy, peace and solitude; access to the land and nature; a lack of formality; and a strong sense of independence and individualism that is coupled with, though sometimes at odds with, a perception of community spirit and shared responsibility.

The elements which contribute, independently and in combination, to the Town's rural character and sense of place have been well documented. In 1988 the Mad River Valley Planning District (MRVPD) initiated a program to inventory and to protect the identifiable landscape features that combine to create the Valley's rural character. With the assistance of the Vermont Division for Historic Preservation, the MRVPD prepared the *Mad River Valley Rural Resource Protection Plan*.

Since 1988, the MRVPD, with the support of several agencies, municipalities and individuals from within and outside of the Mad River Valley, has actively pursued the goals and recommendations of the Rural Resource Plan. The success of these efforts was documented in the 1998 publication *Kicking Stones Down a Dirt Road: Rural Resource Protection in Vermont's Mad River Valley*.

The Mad River Watershed Conservation Partnership -- a collaboration of the Friends of the Mad River, the MRVPD, and the Vermont Land Trust was formed in 2000 to focus on local land conservation. The Partnership updated the 1988 Rural Resource Protection Plan in 2003/04 by conducting a new inventory of natural and cultural features in the watershed based on input from the Mad River Valley community on conservation priorities. The project used GIS technology (Geographic Information System) to document where these features exist

and where they overlap. The inventory allows the Partnership, town boards, and other organizations to easily consult a compendium of data when evaluating the Mad River watershed's landscape and natural features and thinking strategically about which lands are the most important to conserve.

In addition to the MRVPD's rural resource protection efforts, which continue to receive the financial support of the town, the following discussion provides a framework for specific goals, policies and strategies to guide the use, protection and enhancement of the natural and cultural resources that contribute to Warren's rural character.

Natural Resources

Warren's natural resources are among the town's most valued assets. In response to the 2004 Questionnaire, registered voters overwhelmingly supported the proposal to allocate funds to the Warren Conservation Reserve Fund annually. This money could be used to purchase and protect critical agricultural, forested and open lands in the town. The strength of this support has been expressed in numerous planning processes and public debates over the years and is a defining characteristic of the community.

Warren's natural resources are fragile and especially susceptible to degradation due to land use and development activities. Many serve important ecological functions, such as water filtration, wildlife habitat and stormwater retention. The following discussion describes the natural resources found in Warren and the limitations and opportunities for their use and protection.

Climate

Climate describes weather conditions characteristic of an area over time. Climate is an important planning and design consideration because of its effect on soil erosion, plant growth, air quality, storm water runoff and flooding, groundwater supplies, road maintenance, energy demand for cooling and heating,



Tara Hamilton

access to alternative energy sources, and the viability of weather-dependent industries such as skiing.

In winter months, Vermont's northern climate is dominated by cold, dry Canadian air. The summer months bring warm, moist air from the Gulf of Mexico. Weather patterns vary locally with topography and relief. Warren experiences slightly lower average winter temperatures and greater precipitation than other parts of Vermont because it is located on the eastern side of some of the state's highest mountains.

According to data collected by Sugarbush Resort, average annual rainfall between 1986 and 1996 was 42 inches. Average annual snowfall was approximately 200 inches for the same period. Because of frequent winter thaws, however, natural snowfall does not provide consistent snow cover for skiing without the addition of artificial snow.

Air Quality

Weather patterns, especially wind, affect air quality. As in most of Vermont, Warren's air quality is exceptional. 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. However, a maximum level of pollution, as defined by emissions, cannot be exceeded.

Given the lack of industrial development, local air quality concerns are limited mainly to emissions from traffic, heating systems (woodstoves in particular), diesel engines associated with Sugarbush's snow-making system, which is subject to state air quality permits, and some agricultural practices. While no serious problems have been identified, the cumulative effect of these sources will likely increase with additional growth and may have a greater impact on air quality in the future. Of more immediate concern are impacts on air quality resulting from activities out-of-state, which pose a serious threat to fragile, high elevation ecosystems.

Geology

Geologic events of the distant past have directly affected Warren's topography, soils and drainage patterns, which in turn have influenced local development patterns. The rock underlying Warren, originally sedimentary, was metamorphosed in Cambrian times, overturning, folding, and compressing the original layers to such an extent that their composition has become brittle. Generally, bedrock in Warren consists of highly metamorphosed graywacke, phyllite, gneiss and schist.



The bedrock beneath Warren folded with a general north-south orientation. A gentle dome once crested several miles above the present mountains. The theory of plate tectonics hypothesizes that two plates collided, which caused the pressure that formed the Green Mountains. Since then, the rock has been slowly eroding. Only the eastern part of the dome remains. The Green Mountains and the Northfield Range have eroded steeply on their western slopes and gently to the east. The eastern slopes have eroded with secondary bowls, which were probably caused by glacial activity in much more recent geologic times.

Retreating ice at the end of the most recent period of glaciation, approximately 10,000 years ago, left gravel deposits in a number of places. Gravel can be found along terraces at higher elevations, along the receding glaciers' edges and in river deltas and lake beaches in the valley at about the 900-foot contour. As the glaciers melted, a lake appeared above the present Lake Champlain, reaching up the Winooski and Mad River valleys. At its shoreline, beaches and deltas formed, leaving gravel deposits such as those found near the Bobbin Mill and elementary school.

The most obvious implication of Warren's geologic history is the varied landscape comprised of broad plateaus, steep hillsides, intermittent knolls and defined ridgelines. These features have shaped past settlement patterns and continue to be an important development consideration, especially scenic resources and

SOIL TYPES

The following soil types, identified by the U.S. Natural Resource Conservation Service, are the most common in Warren:

HOGBACK-RAWSONVILLE COMPLEX (17% of town) – tend to have shallow depth to bedrock, marginal suitability for septic, range from 8% to 60 % slope. These occur primarily in higher elevations, with the upper elevations of the Roxbury Mountains being solely this soils type.

TUNBRIDGE-LYMAN COMPLEX (15% of town) – tend to have shallow depth to bedrock, marginal suitability for septic, range from 8% to 35% slope. These soils are most common in the lower elevations of the valley.

BERKSHIRE FINE SANDY LOAM (14% of town) – tend to have greater than 6.0 feet of soil before it hits bedrock, suitable for a conventional septic system, slopes range from 3% to 35%. These soils are dispersed throughout the moderate elevations of Warren.

COLONEL FINE SANDY LOAM (12% of town) - tend to have greater than 6.0 feet of soil before it hits bedrock, suitable for a mound or curtain drain septic system, slopes range from 3% to 35%. These soils are generally found in the moderate elevations throughout Warren.

fragile features.

Soils

Areas that depend on on-site disposal of wastewater, like Warren, must be aware of soil conditions and how they shape the location and intensity of development. Soils found in Warren can generally be divided into gravelly soils deposited on terraces and old lake bottoms and soils that formed in glacial till in the mountains. Terrace and lake deposits are found in the floodplain of the Mad River Valley and in the Clay Brook Bowl near the Sugarbush Inn.

Development Capability

The town's on-site wastewater disposal ordinance was updated in 1999. These regulations require that on-site disposal (septic) systems be designed in accordance with Vermont Department of Environmental Conservation's Small Scale Wastewater Treatment and Disposal Rules (1996). The Vermont Rules were updated in 2002 (Wastewater System and Potable Water Supply Rules - Effective on August 16, 2002) and were to be updated again in 2004. These rules establish design standards dependent, in part, upon site and soil conditions. Warren's regulations will be updated to reference the current state regulations.

To assist in evaluating soils for on-site wastewater disposal, the U.S. Natural Resource

Conservation Service (NRCS) has evaluated the soil types found in Vermont and rated them according to their suitability for on-site disposal. Map #4 shows the distribution of these soil categories throughout the Town. Table 3.1 describes the soil classes found in Warren. The scale of the map and inventory does not allow this information to be used for site-specific analysis. Generally suitable soils can be found along the Valley bottom, especially in and around Warren Village, and throughout the Clay, Bradley, Lincoln and Stetson Brook watersheds. The soils in the Northfield range are generally unsuitable.

Agricultural Lands

The lands that are best suited for farming are classified as prime farmland and farmland of statewide importance. Prime farmland has soils which, due to their chemical and physical properties, possess the highest potential productivity and the fewest limitations for farming. They have high potential for sustained agriculture and little or no limitation for a wide variety of crops adapted to Vermont's climate. Farmland classified as being of statewide importance has good potential for growing crops, but one or more limitations will restrict the choice of crops and require more intensive management than farmland in the prime category. Both categories are a finite resource upon which the future of agriculture depends. Prime farmland and farmland of statewide

Table 3.1

**Warren Septic Suitability
By Soil Classification**

Soil Class	Square Miles in Warren	Description of Suitability
1	2.6	well drained, dry soils suitable for conventional in-ground systems, although some soil replacement may be required to slow the rate of percolation
2	6.4	well suited for conventional in-ground systems
3	0	slow permeability and/or shallow depth to bedrock or seasonal high water table and typically require mound systems
4	9.9	slow permeability and/or shallow depth to bedrock or seasonal high water table and require mound systems and typically require testing, mound systems, and curtain drains
5	11.6	marginally suited for development, except in isolated pockets in which the depth to bedrock is greater than 24 inches and the slope is less than 20%
6	8.2	too rocky, steep, wet or otherwise unsuitable for disposal
7	0.2	not rated

Source: USDA Natural Resource Conservation Service

importance agricultural soils are shown on Maps 2 & 11 they comprise about 17% of the town. The cultural, economic and environmental aspects of agriculture and farmland preservation are discussed in greater detail later in this chapter.

Earth Resources

No commercial mineral deposits have been located in Warren. Sand and gravel have been excavated over the years. Map 2 shows the general location of identified deposits. Extraction poses the risk of adverse social and environmental impacts on the community. Town-owned sources of sand and gravel are running low, and some future extraction of these resources from private land should be anticipated. Impacts include the following:

- reduction in groundwater recharge and filtration, and possible contamination resulting from on-site storage and disposal of materials.;
- alteration of surface drainage patterns resulting in increased runoff, soil erosion and stream sedimentation;
- destruction of natural or cultural resources;
- noise, dust and increased truck traffic;
- diminished scenic quality of the landscape and limitations on the future use of the site; and,

- reduction in neighboring property values.

Many of these impacts can be avoided or mitigated through careful site planning, operation and reclamation. The town’s permitting process requires site reclamation and that adverse impacts to neighbors and the town be minimized.

Fragile Features

Fragile Features are those distinct environmental resources which serve important ecological functions, such as water filtration, wildlife habitat and stormwater retention, and which are especially susceptible to degradation due to land use and development activities. In Warren, these include wetlands, floodplains, steep slopes, Natural Heritage Sites, rivers and streams, groundwater, and wildlife habitat and corridors.

Wetlands

The State of Vermont defines wetlands as the transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must have one or more of the following three attributes:

- 1) at least periodically, the land supports predominantly hydrophytes;

- 2) the substrate is predominantly undrained, hydric soil; and
- 3) the substrate is not soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

All wetlands in Vermont are designated as Class I, Class II, or Class III wetlands through the Vermont Wetland Rules. Class I wetlands are those wetlands that are exceptional or irreplaceable in their contribution to Vermont's natural heritage and are therefore so significant that they merit the highest level of protection. Class II wetlands are those wetlands, other than Class I wetlands, that are so significant, either taken alone or in conjunction with other wetlands, that they merit protection. Class III wetlands are those wetlands that have not been determined by the Water Resources Board to be so significant that they merit protection either because they have not been evaluated or because when last evaluated, they were determined not to be sufficiently significant to merit protection.



Except for the area by Blueberry lake, there are not expansive wetlands in Warren, and no Class I wetlands have been identified. However, many smaller Class II wetland areas have been identified. These provide important wildlife habitat and retain and filter large volumes of runoff. The National Wetlands Inventory (NWI), conducted by the U.S. Fish & Wildlife Service in the 1970's, identified 176 acres of palustrine (upland) wetlands in Warren. This information should be updated since wetland areas experience seasonal fluctuations and are subject to change due to land use activities. Not all significant wetlands in the Town were identified by the NWI. The NWI does, however, give a general indication of the distribution and concentration of wetlands in Warren, depicted on Maps 2 & 9. The Town's major wetland complex occurs on the upper reaches of Mill Brook. Although the creation of Blueberry Lake resulted in the elimination of some wetlands, a large expanse still remains and provides valuable wildlife habitat.

Loss of wetlands (especially palustrine wetlands) is an issue of national, statewide and

local concern. Significant wetlands are protected by the State of Vermont, and town officials are required to report any development proposals within or adjacent to such areas to the Agency of Natural Resources. Another mechanism for identifying and protecting wetlands on the local level is through the town's subdivision review process.

Floodplains

The steep, upland character of the Mad River and its tributaries means that the town has limited floodplain area, which makes all existing floodplains vital to the health of the Mad River and the safety of the community. Floodplains serve as "safety-valves" by temporarily retaining

runoff during periods of heavy rain and spring thaw and reducing the velocity of rivers and streams. Floodplains also improve water quality by allowing contaminants in stormwater to settle out prior to reaching streams and rivers.

The impact of flooding on the community was made clear in June 1998, when an intense localized storm system caused severe flooding in the Mad River Valley. Floodwaters caused severe property damage in Warren Village and elsewhere along the Mad River and several tributary brooks and streams.

Floodplains limit development due to the hazards associated with periodic flooding; the harmful effects on channel capacity and downstream properties resulting from filling; and pollution from improper functioning of sewage disposal systems. Also, because floodplains are generally level with gravelly soils, they are well suited for farming and, consequently, provide important open space, especially along the Route 100 corridor.

The town has created a Flood Hazard Overlay District which conforms to federal requirements for participation in the National Flood Insurance Program (NFIP). The restrictions are intended to protect life and property and to allow property owners to obtain flood insurance and mortgages at affordable rates. These regulations apply to land within the 100 year flood zones depicted on the Federal Flood Hazard Boundary Maps. Within these floodplain areas, building design standards are imposed to minimize property damage during

flood events. Within the designated floodway building and land-filling is prohibited. The 1998 flood heightened local awareness regarding river dynamics and flooding. Not all areas outside of the designated floodplain were safe from flooding. As human activities like bridge construction, filling and the removal of vegetation alter flood prone areas and destabilize streambanks, it becomes increasingly important to identify areas that are outside of the mapped flood plain but are still susceptible to flood damage.

Steep Slopes

Steep slopes pose several land use and development challenges. Steep slopes are especially susceptible to erosion and high rates of runoff, particularly when cleared for construction, agriculture or forestry. State regulations restrict the installation of in-ground septic disposal systems on slopes in excess of 25%. The costs associated with the construction and maintenance of roads, sewer and water systems, or controlling erosion and preventing stream sedimentation, can be prohibitive on slopes of 15% or greater.

Figure 3.1 describes the development limitations the U.S. Natural Resource Conservation Service recommends for land based on slope. Generally, slopes in excess of 25% should not be developed. Clearing for agriculture, forestry and ski area activities should be conducted with careful attention to erosion control and stormwater management measures.

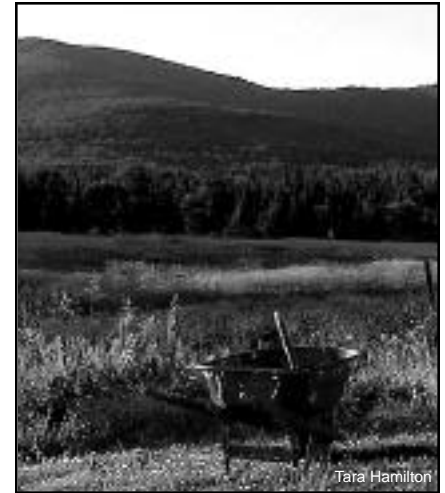
Development on slopes of 15-25% is discouraged by the Warren Land Use and Development Regulations, although limited development may take place providing measures are taken to ensure slope stabilization, erosion control and down-slope protection from stormwater runoff. Resource Map 3 shows

those areas which are characterized by severe (15-25%) and extreme (25%+) slopes.

In addition to physical constraints, development on steep slopes may adversely affect the town's scenic landscape.

Development on steep slopes, especially at higher elevations, tends to stand out from many vantage points in town and diminishes the scenic qualities of the forested hillsides.

Special measures should be considered when reviewing development in such areas, including the careful siting of structures and landscaping and screening to minimize visibility of buildings and lighting.

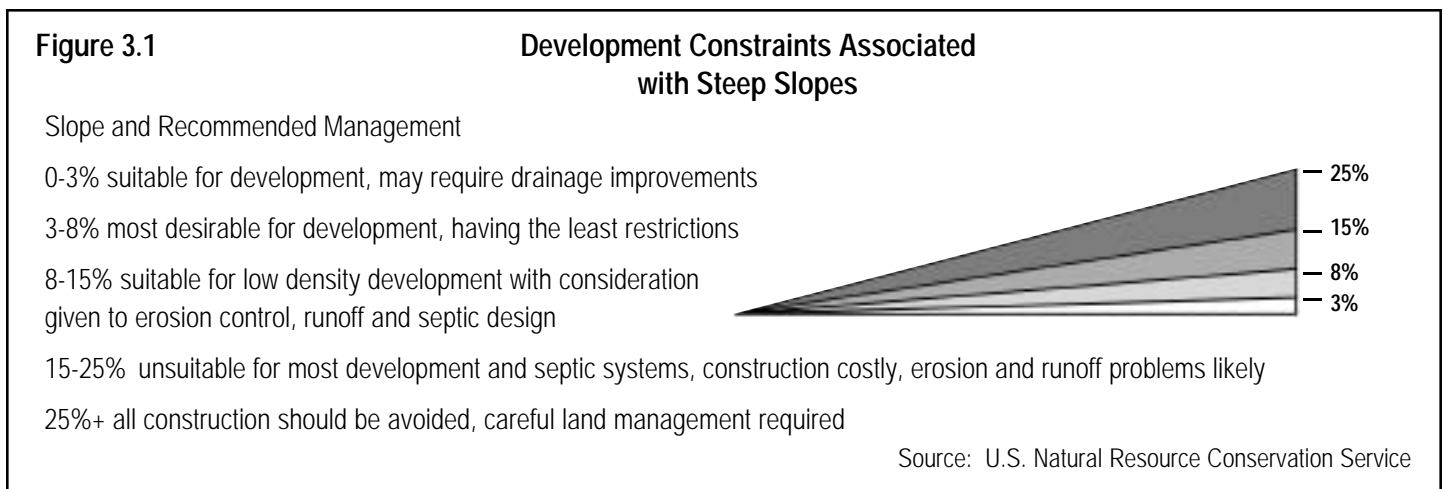


Natural Heritage Sites

The State of Vermont maintains an inventory of rare, endangered and fragile environments. Three Natural Heritage Sites are found in Warren, including the habitat for a rare species of orchid, *listeria auriculata*, in the vicinity of Blueberry Lake, and two rare plant communities in high elevations in the Green Mountain National Forest. These sites should be protected from adverse impacts resulting from potentially damaging land use activities.

Rivers and Streams

According to the results of the 2004 Questionnaire, registered voters in Warren con-



sider water quality of the Mad River and its tributaries to be among the top three conservation priorities. The Mad River provides a central focal point for the town's landscape and, according to an Agency of Natural Resources unpublished *Vermont Swimholes Study*, is a recreational resource of statewide significance. Its tributaries contribute to the unique character of distinct neighborhoods and the outstanding ecological, recreational and scenic resources of the Mad River system.

The Mad River has been the focus of one of the most comprehensive, broad-based, citizen initiated, watershed planning and protection efforts in New England. The Friends of the Mad River (Friends), formed in 1990, have actively promoted a program of river advocacy, education and protection. In 1993, the Friends launched a far-reaching public planning process that resulted in the publication of *The Best River Ever: a conservation plan to protect and restore Vermont's beautiful Mad River Watershed*.



Tara Hamilton

In 2002, the Friends of the Mad River published an educational booklet called *Caring for the River, Caring for the Land: A guide to living in the Mad River Valley* as a compliment to *The Best River Ever*. This handbook contains many suggestions for ways to conserve natural resources in the Mad River Valley and should be used as a resource by Warren residents

The Best River Ever addresses a broad range of issues related to the health and well being of the Mad River. The plan addresses water quality issues related to wastewater disposal and non-point run-off; the maintenance of riparian vegetation; farm and forestry practices and their impact on the River; wildlife; recreation; and the cultural history of the River. Most importantly, the plan includes 112 specific recommendations for improving and protecting the health of the river. While many of these recommendations have already been implemented, an ongoing process is needed to ensure that the goals and recommendations of the plan are achieved.

The recommendations found in *The Best*

River Ever are designed to protect and improve water quality in the Mad River and its tributaries. The following issues are critical to the health of the river and are within the town's ability to influence through existing programs and policies.

1) River health

The Friends of the Mad River currently sponsor the Mad River Watch program, which has monitored water quality in the Mad River and several tributaries every summer since 1986. For these purposes, water quality is measured by the level of E.coli bacteria in the river. E.coli is an indicator of the presence of human and animal waste and generally indicates the extent to which untreated waste is finding its way into the river through inadequate septic or wastewater treatment systems. In recent years, test sites within Warren have frequently exceeded state water quality standards for E.coli. Among the most important means of maintaining water quality standards are the proper siting, installation and maintenance of septic systems and the control of agricultural runoff. In Warren Village, a new community wastewater system should lower the likelihood of this type of contamination.

2) Non-point pollution

Surface run-off from impervious surfaces and erosion threaten water quality and the health of streams. Runoff harms water quality through the addition of petro-chemicals, heavy metals and other toxins from parking areas and other facilities and can cause excessive sedimentation that endangers fish habitat. Proper stormwater management and erosion control, especially in close proximity to streams and for any project involving extensive clearing and on steep slopes, is absolutely critical to the health of the river.

3) Riparian Vegetation

Maintaining a vegetated buffer along all streams is critically important to the overall

health and well being of the river because it provides shade, stabilizes stream banks, and provides habitat for a variety of wildlife.

4) Headwater Streams

The quality and health of headwater streams is threatened by development at high elevations, on steep slopes and in areas with poor soils. Development in these fragile areas poses a direct threat to water quality as does the extension of roads and utilities necessary to service such development.

Groundwater

All Warren residents and businesses obtain potable water from groundwater sources. Generally, with the exception of the Sugarbush Village area served by Mountain Water Company, private drilled wells and springs serve the town. In areas of concentrated development, such as Warren Village and Alpine Village, the dependence on both private water supplies and on-site sewage disposal on small lots poses a potential threat to water supplies. A community wastewater system was installed in Warren Village in 2004. Further opportunities for community water supplies or community wastewater treatment/disposal should be explored. In the vicinity of Sugarbush Village most development is served by both private wastewater collection and community water supplies.

The principal source of water for Sugarbush Village is the Mountain Water Company, which is approved to provide water for up to approximately 310 users. Other community supplies serve individual condominium complexes. Federal clean water standards require a source protection plan for each community system to guard against contamination. These plans should be considered when developing local land use regulations to ensure that water supplies are not imperiled by future development activities within recharge areas.

Wildlife Habitat

Warren's human inhabitants are fortunate to share the Mad River Valley with a variety of

other animal species. However, human activity can have a harmful impact on many species. Through a greater awareness of the local wildlife population and an understanding of potential conflicts with the town's human population, such conflicts may be avoided. In addition to wetlands and riparian areas, which are shared by many species, planning in Warren must also take into account habitat for the whitetail deer, black bear, trout, and other lower profile species.

Whitetail deer

Deer are common in Warren, providing enjoyment to both hunters and passive viewers. While deer easily accommodate human populations, they do have specific habitat needs which enable them to survive severe winter conditions. Deer wintering areas, or deeryards, are generally found on south facing slopes where coniferous forests predominate. Important deeryards that have been identified by the Vermont Department of Fish and



Wildlife, depicted on Map 2 are concentrated along the steep valley wall separating the river valley from East Warren, on West Hill and the surrounding area, and in a narrow band along both sides of Lincoln Brook. It should be noted that deeryard boundaries change over time. Consequently, inventory maps need to be updated on a regular basis, and site analysis is usually required to determine the relative value of existing deeryards.

Black Bear

Large areas of the Green Mountain Range and Northfield Mountain Range serve as prime habitat for black bear (see Map 2). In particular, the area south of Lincoln Gap Road, most of which is included in the Green Mountain National Forest, and the Slide Brook basin located between Lincoln Peak and Mount Ellen in Fayston, provide important bear habitat. The Slide Brook basin has been identified as some of the most productive bear habitat in Vermont due to the extensive beech forest and high seasonal concentration of bears. According to state wildlife biologist Charles Wiley, Slide

Brook has the "largest and most intensively used beech stand in the state, known to date." Much of this area is owned by Sugarbush Resort and is subject to Act 250 permit conditions limiting most development activities. However, these permits are subject to amendment, creating some degree of uncertainty regarding the future use and management of the area. Additional protection measures, such as deeded easement or public ownership, would ensure permanent protection of this critical resource.

Significant bear habitat may also be found in the Northfield Mountain Range. Unlike the Green Mountains, which encompass extensive



public land holdings, greater concentration of development, and some level of habitat protection due to past permit activity, the Northfield Mountains have experienced more substantial land subdivision and residential development. Should these trends continue,

the conflict between human inhabitants and bears can be expected to increase.

Trout

The Mad River system is a popular trout fishery, although this is largely attributable to the Department of Fish and Wildlife's trout stocking program. While brook and rainbow trout are stocked annually, natural regeneration of some brook trout, and to a lesser degree brown and rainbow trout, does occur.

Improving the health and well being of the River, as discussed above, is an important means of protecting fish habitat. Other, more specific, means of enhancing habitat are also addressed in *The Best River Ever*.

Others

Other than three plant species (see *Fragile Features* discussion), no critical habitat for threatened or endangered wildlife populations have been identified in Warren. The Vermont Natural Heritage Program maintains a data-

base of critical habitats which is updated as endangered populations are identified. However, current data is based upon limited field investigation and additional populations may exist in Warren.

Warren is home to several other wildlife species, such as mink, otter, fisher, coyote, turkey and ruffed grouse. Population levels for some species, including moose and bobcat, have risen steadily in recent decades. These reemerging populations share similar habitat needs with black bear. In order to meet seasonal food and habitat needs, many species must range a considerable distance throughout this and neighboring watersheds.

Wildlife Corridors

Linear bands of relatively undeveloped forest serving to connect larger tracts of prime habitat allow for unimpeded travel. Important wildlife corridors have not been identified in Warren, although the Keeping Tracks® program sponsored by the Friends of the Mad River has begun to systematically monitor wildlife populations. The identification and mapping of such corridors could provide the basis for future protection.

Forest Resources

Forest covers approximately 22,000 acres or 85% of the town. The forest consists of low-density residential land use, privately owned undeveloped parcels under forest management, and the Green Mountain National Forest. Because of the large acreage involved, all of the natural resources discussed in this chapter are dependent upon the maintenance of healthy forest cover.

Private Forest Land

Much of the private forest land in Warren is under some form of forest management. Sound forest management provides ecological benefits and recreational opportunities to the public and economic benefits to landowners. To encourage the preservation and sound management of private forest land, the State of Vermont established the Current Use Program to reduce the tax burden on owners of forest parcels larger than 25 acres when the property is managed in accordance with a forest management plan that is approved by the County Forester. While past participation in this program has been limited in Warren, greatly increased tax rates following the enactment of

Act 60 have provided an incentive for increased enrollment.

The location of forest, especially on level terrain in proximity to agricultural land, also provides opportunities to locate development in a manner that is better integrated into the existing landscape. Where one or more Fragile Features exist, most development may not be appropriate. In such areas, acceptable management practices (AMPs) are an important minimum standard to ensure that forest management activities do not result in soil erosion and impacts to surface waters.

Green Mountain National Forest

The Green Mountain National Forest (GMNF) includes approximately 7,180 acres in Warren. Most of these lands are subject to “multiple use” management, which balances environmental protection, recreation and resource extraction.

Besides land currently leased to Sugarbush for the operation of the ski area, GMNF land holdings are concentrated in the south-west section of Town, including substantial holdings in the Lincoln and Stetson Brook watersheds and east of Granville Gulf. There is growing interest in seeing the GMNF acquire additional parcels in Warren. In recent years, 72 acres of property at Warren Falls and 368 acres of land surrounding Blueberry Lake were added to the National Forest.

Map 1 shows the current Proclamation Boundary in the Town. Expansion of that boundary is being considered. The Proclamation Boundary defines the area within which the Forest Service can more easily acquire additional parcels because the approval of the US Congress is pre-determined. Within budget limits, land may be purchased at any time. Outside of the boundary, Congressional approval must be specifically sought and obtained for any land purchases.

Warren residents can influence management

decisions by participating in the Green Mountain National Forest Plan revision process. Also, GMNF officials frequently consult with town officials and residents on issues such as expanding the Proclamation Boundary and designating “wilderness” and “working” areas within the Forest. The 2004 Questionnaire results favored designating more wilderness areas in the GMNF.

Cultural Features

Cultural resources help us understand and celebrate our community heritage. They can be archaeological sites; historic sites, structures or settlement patterns; and larger cultural landscapes that reflect the character of a time, place or economy. Warren’s cultural resources offer a link to the past, help define the town’s present character, and provide a context for future growth and development.

Archaeological Sites

Unlike other areas of Vermont, such as the Champlain Valley, human habitation in Warren is not believed to have been widespread until Europeans settled the area two centuries ago. It is assumed that Native Americans ventured into the Valley as far back as the Paleo-Indian period (10,000 - 7,500 BC), and at least one Paleo-Indian artifact (a fluted projectile point) has been documented in neighboring Waitsfield. According to a study of the Mad River Valley prepared for the Mad River Valley Planning District by Ann Dowd and Beth Trubitt in 1989, the most likely location for finding such prehistoric artifacts is along the higher terraces above the river’s floodplain. This study provides information regarding archaeological sensitivity throughout Warren.

Most archaeological sites date from industrial and agricultural activities occurring after statehood. Mill sites exist in Warren Village and along other tributaries. A particularly well-preserved site occurs along the upper



Courtesy Friends of the Mad River

stretches of Stetson Brook. Cellar holes dot the landscape, calling attention to the town's once dense settlement pattern. The town should use the development review process to require the protection of these remnants of the town's early history.

Historic Sites and Structures

Warren's rural landscape is shaped by the integration of natural land forms, traditional land uses and the historic built environment. More than 100 properties have been listed on the Vermont Historic Sites and Structure Survey, completed by the Division for Historic Preservation in 1983 and updated by the Mad River Valley Rural Resource Commission in 2004. Properties on the state survey are eligible for listing in the National Register of Historic Places.

More than half of the historic structures remaining in town are located in Warren Village, which was placed in the National Register as a Historic District in 1990. This designation provides certain tax benefits to owners of income-producing properties who restore their buildings and offers some protection against federal actions that could harm the documented historic resources. Listing on the National Register imposes no restriction on the use or alteration of historic structures and therefore, provides only limited protection of these resources.

Unlike some historic districts that contain a high concentration of buildings representative of one particular style or era, Warren Village contains examples of the many styles and periods that mark Vermont's history. This diversity allows for the continued evolution of the historic village without the need to impose any one architectural style. However, it is important that future development respect the village's architectural traditions. The replacement of the Pitcher Inn, which was destroyed by fire in 1993, is an example of modern development that is compatible with the town's historic traditions.

Maintaining the historic character of Warren Village was one of the highest priorities expressed by participants at the 1997/1998 Town Plan meetings. Residents raised con-

cerns regarding perceived threats to the residential character of the village, the need to maintain its historic architectural heritage and problems related to traffic, parking and pedestrian circulation.

Many of these issues are addressed in relevant chapters of this plan and the 2004 Warren Village Pedestrian Enhancement Plan.

Regarding the historic character of the village, however, future development and/or infrastructure improvements could be designed to reinforce the character and architectural vernacular of the village. This can be accomplished in a variety of ways, including village design standards in the Town's Land Use and Development Regulations, as well as local incentive programs for the restoration and maintenance of historic structures.

Historic structures are also found outside of Warren Village. Generally, these sites reflect the agricultural history of the community and include farm houses and associated farm

buildings, especially barns. Unfortunately, the high cost of upkeep and maintenance of large barns has resulted in several falling into disrepair after they are no longer used for agriculture. Adaptive re-use provisions have been added to the Land Use Development Regulations to help encourage the restoration and use of barns.

Warren is home to a number of historic bridges. In addition to the Village Covered Bridge, which is listed in the National Register, the Kingsbury Iron Bridge is the sole remaining iron truss bridge in the Valley. These bridges, built throughout the state following the 1927 flood, are a distinctive reminder of a defining moment in Vermont history.

Scenic Landscape

The natural landscape in Warren is dominated by four distinct features: 1) the rugged, steeply sloped ridgelines that enclose the valley to the east (Northfield Range) and west (Green Mountain Range); 2) the north-flowing Mad River and adjacent floodplain which constitute the valley floor; 3) a fertile plateau at mid-slope between the valley floor and the eastern ridge; and, 4) a feature somewhat unique to this particular valley, a series of intermediate



ridges and freestanding knolls creating lesser east-west valleys.

Historically, the human imprint upon Warren has been generally harmonious with the natural landscape. Village centers and smaller hamlets have been positioned in the more level areas, on the floor, and along the upper plateau. These settlements are bounded by cropland pasture, as the terrain permits, and by sloping woodlands created by the intermediate ridges and knolls. This open land typically forms the backdrop or foreground for the built environment.

The road network is perhaps the most significant vantage point from which Warren's visual beauty may be enjoyed. Particularly where major arterials pass through open agricultural areas, the potential for spectacular long and intermediate views can be realized. In 2002 the Planning Commission, along with numerous volunteers, conducted a survey of the scenic qualities along all of the town-maintained roads in Warren using the criteria of the Vermont Scenic Road Program. The field guide inventory sheet identified six categories of positive scenic elements, including vegetation, landscape features, road characteristics, water, buildings, and other man-made structures. The inventory sheet also identified three categories of negative elements, including landscape scars, buildings, and other man-made structures. Twenty-three of the forty-four miles of town roads surveyed received scores high enough to warrant designation as a "Scenic Road" under Vermont's Scenic Road Program. The Selectboard considered this work in early 2004 and decided not to apply the state's scenic road program. Instead, they amended the road ordinance to provide the principal benefit of the state's program (public notification and a hearing process prior to any major changes) to all the roads in the town.

In 1998, the Planning Commission sponsored a Visual Preference Survey. The purpose of such a survey is to enable citizens to evaluate physical images of natural and built environments. The major finding of the survey was



the widespread preference for the traditional settlement pattern, characterized by compact village centers with a formal arrangement of buildings, surrounded by a working landscape of productive farmland and forest.

Another important conclusion of the Visual Preference Survey is that development can serve as a positive visual feature. Instances in which development was viewed favorably were related to the degree to which the built environment blended with the surrounding landscape. Traditional Vermont vernacular architecture, especially buildings in a formal or village setting, received high scores. Modern highway-commercial development patterns and forms received low scores.

Residential development that respects the surrounding landscape also scored well. The placement of structures in open fields was not desired, although the careful siting of structures on field edges rated well.

Based on the many past efforts to define the scenic landscape, including the Visual Preference Survey and 2004 Questionnaire, the town's most important scenic features may be summarized as follows:

important scenic features may be summarized as follows:

- open farmland and meadows, which often serve as the foreground for expansive views;
- Blueberry Lake, the Mad River and tributary streams;
- forested knolls, steep mountain-sides and ridgelines which provide the unbroken background for most distant views;
- scenic roads, especially those of a scale and character that discourages high speed travel while offering a pleasant walking and recreational environment;
- historic settlement patterns, including village centers and small clusters of buildings arranged around a common focal point, such as a road intersection or adjacent meadow; and,
- individual buildings which, because of their scale, character or historic significance, such as a large barn, serve as a visual and cultural focal point in the landscape.

There are a variety of tools available for protecting and enhancing the town's scenic landscape. The Land Use and Development Regulations are used to guide development in a manner that reinforces the historic settlement patterns and avoids the placement of structures that would stand in contrast to the surrounding landscape. Other regulatory provisions such as slope restrictions, resource protection overlay districts and clustering provisions also serve other policies related to natural resource protection and community facilities. Incentive programs, such as tax incentives, could also help landowners maintain the qualities of important properties that contribute to the town's landscape.

Agriculture

Agriculture has played an important role in the development of Warren. Early settlement patterns were influenced by the location of suitable farmland, especially in East Warren. In addition to providing economic and cultural benefits, the contrast between open fields and wooded hillsides continues to define the town's scenic beauty and rural character. Farmland is distributed broadly throughout East Warren, in the valley bottom along Route 100 and, to a lesser extent, on Fuller Hill and in Lincoln Hollow. Parcel sizes range from 15 acres to more than 100 acres. As of 2004, approximately 1,600 acres were in active agricultural use.

The economic viability of agriculture in Warren has steadily declined in the past twenty years, which is consistent with statewide trends. In 1965, eight dairy farms operated in town. The number had been reduced to three in 1976, and today a single dairy remains. This remaining dairy is relatively large by Vermont standards, with a herd of approximately 1,000 head. Operated by a local family, the farm is responsible for maintaining a major portion of the open land in Warren, as well as significant farmland acreage in neighboring Waitsfield and Fayston.

A significant new contributor to agricultural pursuits in Warren is the surge of interest and

investment in horse-based recreational and commercial activity. This has resulted in the reclamation of former pasture land and construction of numerous barns, stables, and indoor riding arenas. There are two large horse breeding and training facilities, several stables with various combinations of boarding, training, lessons and outdoor arena or trail rides, and numerous private owners of one to a dozen or more horses for personal use. Private horse ownership also provides a local market for hay, which further contributes to the maintenance of farmland, especially in East Warren. In addition, numerous small-scale "homestead" farms that keep a few acres in production contribute, on a cumulative basis, to the maintenance of open land. In sum, this is the most important contributor to maintenance of open



space in town since the decline of the dairy industry.

Valley-wide interest in locally grown specialty foods has contributed to the agricultural as well as social life of the community. The town-owned East Warren Schoolhouse, which was renovated and rented by the Rootswork organization, and the surrounding private lands serve as the focus of this movement. Rootswork and related or sublease enterprises have operated the Schoolhouse Market, a nationally acclaimed specialty cheese business, a school for cheese makers, a community garden, Community Sponsored Agriculture vegetable purchasing cooperative, and a flower farm. They have also revived the local Grange as a composting facility and have been granted a local FM radio license. Rootswork has made the second floor of the Schoolhouse available for group meetings and events and is renovating the kitchen for short-term commercial use. Their initiatives and those of others in the fields of hydroponics, beef, pork, lamb, and poultry raising and fruit and vegetable farming have made Warren a real hotbed in the emerging field of alternative agriculture.

While the combination of one large dairy operation and numerous small scale operations has maintained an agrarian landscape in much of Warren, the future of the town's farmland is

far from certain. Development on productive farmland, especially prime and statewide agricultural land, is a threat to the town's rural character. The town has taken the following steps to protect farmland:

1) For almost fifteen years the town has guarded against the conversion of agricultural soils to non-productive uses with the Meadowland Overlay District (see Map 5 & 8). Adopted through the Land Use and Development Regulations, the Meadowland Overlay District encompasses most land actively farmed at the time the 1979 orthophotographs were produced. Encompassing approximately 1,800 acres, most of the town's prime agricultural soils are included within this district. The purpose is to guide land subdivision and other development of productive farmland in a manner that minimizes fragmentation and conversion while accommodating development.

2) The town also supports agriculture by several provisions in the Land Use and Development Regulations. Agriculture (which includes growing of crops, raising of livestock, operations of orchards and the sale of farm produce, etc.), i.e. a working landscape, is a Permitted Use in all Zoning Districts, except the very small Sugarbush Village Commercial District. Agricultural structures are also exempted from building height requirements and several other Performance Standards in the Land Use and Development Regulations.

3) The town maintained a tax stabilization program from 1983 to 1999. The program reduced the local tax burden for landowners whose land remained in agricultural production. When the program was phased out by the town in 1999, the former participants were encouraged to enroll in the State's Agriculture and Managed Forest Land Use Value Program, better known as the Current Use Program. This program was created in the late 1970's as a companion to legislation that required towns to list property at 100 percent of fair market value. Because of escalating land values, it was clear that

property taxes based on fair market value were placing a heavy property tax burden on owners of productive farm and forest lands.

The Current Use Program offers landowners use value property taxation based on the productive value of land rather than based on the traditional "highest and best" use of the land. In 2000, the current use value of the land in the program averaged about 20 percent of the full fair market value (Vermont Department of Taxes, 2001). The Current Use Program includes a Land Use Change Tax as a disincentive to develop land. The tax is 20% of the fair

market value of a property or in the case of the sale of part of a property, a pro rata share of the fair market value of the entire property.

4) The town has acquired conservation easements on approximately 225 acres of farmland in Warren. The Mad River Watershed Conservation Partnership has assisted with putting an additional 350 acres of farmland under easement with the Vermont Land Trust. The Vermont Land Trust holds easements on over 900 acres of land within the Town of Warren. Within the past several years the State of Vermont and various private foundations have allocated considerable sums of money for farmland conservation, creating additional opportunities for future acquisition efforts.

Conservation Strategies

Maintaining Warren's rural character, scenic landscape, productive farm and forest lands, fragile natural areas and historic resources have been objectives of the town since at least the mid-1970's. Many of the tools available for specific resources, such as adaptive reuse for historic structures and designation and appropriate maintenance of scenic roads, were described previously. Strategies for protecting the undeveloped character of many of the resources described in this chapter, such as farmland, forest, and wildlife habitat, may be collectively referred to as "open space protection". Some open space protection tools are regulatory, such as subdivision review standards that require the protection of important



landscape features (e.g., farmland and steep slopes) as a condition of subdivision approval. Many of the regulatory tools, including those mentioned elsewhere in this chapter, are described in greater detail in Chapter 10 and are the subject of various policies set forth at the end of each chapter.

Non-regulatory options include many of the measures discussed elsewhere in this chapter, such as the purchase of development rights, or land acquisition. As noted above, the town has purchased development rights on two parcels totaling 225 acres. The Vermont Land Trust holds conservation easements on over 900 additional acres in Warren and 440 acres have been added to the Green Mountain National Forest in the past 10 years. (see Map 5).

In March, 1999, Warren voters agreed to combine the existing Transfer of Development Rights (TDR) Reserve Fund and the Blueberry Lake Conservation Reserve Fund into a single conservation fund called the Conservation Reserve Fund “for the purpose of acquisition and perpetual protection of critical agricultural, forest and open land in the Town”. The Selectboard subsequently created the Warren Conservation Committee in August of 2002.

The Conservation Committee advises the Selectboard on land conservation projects and any expenditure of funds from the Conservation Reserve Fund. The Conservation Committee and Conservation Reserve Fund charter further states that “the Conservation Reserve Fund shall be used for land conservation only... and that it may be used for repair and restoration of lands conserved, in part or in full, by the Town of Warren...”. The charter provides that “the Selectboard should seek to add to the Conservation Reserve Fund annually through a Town Meeting article”. If used wisely, these funds could be used to leverage additional funds from the Vermont Housing and Conservation Fund and private foundations (such as the Freeman Foundation). This would substantially increase the amount of funding available for land conservation in Warren. The results of the 2004 Questionnaire (Appendix A) indicate strong town-wide support for the town making annual contributions to the Reserve Fund.

To use the reserve fund most wisely, the

town has established open space priorities. Using the results from the 2004 Questionnaire (Appendix A), the Conservation Committee has established the following list of conservation priorities, in the order of importance:

- 1) Land with outdoor recreation resources, including parcels with existing or potential trails, river accesses (especially the Mad River and its tributaries), hunting areas, and potential playing fields and recreation areas;
- 2) Resources that would protect or enhance water quality, such as wetlands, headwater areas, and riparian buffers along the Mad River and its tributaries;
- 3) Land with identified wildlife values, including critical habitat for endangered species, black bear (including the Slide Brook basin), and identified wildlife corridors;
- 4) High elevation forest (ridgelines and prominent knolls) and farmland and meadows visible from well-traveled town roads and Route 100;
- 5) Productive farmland, especially land currently under farm management or with the potential for active farm management;
- 6) Productive forest, especially lands that are contiguous to other undeveloped tracts of forest and conserved parcels;
- 7) Land that contributes to the town’s historic settlement patterns, including upland areas with poor access to town centers; undeveloped parcels that define the contrast between an open countryside and village centers; and, open space that contributes to the character of Warren Village.



Sense of Place Goals

Goal 3.A The maintenance, careful stewardship, preservation and enhancement of Warren's natural resources and environmental quality for the benefit of future generations.

Goal 3.B The preservation of the town's rural character, cultural heritage and historic working landscape.

Objective 3.1. To protect Warren's fragile features, open space and natural resources.

Implementation Strategies

- a) Through the town's Land Use and Development Regulations and Act 250 proceedings continue to:
 - i. Discourage development on slopes of 15% to 25%. Provide for limited development on such slopes, but only in a manner that minimizes site disturbance, runoff and erosion.
 - ii. Prohibit development on slopes with a gradient in excess of 25% (excluding facilities necessary for the operation of an alpine ski area).
 - iii. Prohibit the creation of parcels that would result in development on exposed bedrock and/or poor soils, wetland, upland areas, floodplain or natural heritage sites.
 - iv. Prevent land development and other activities that would result in an undue adverse effect on wetlands.
 - v. Enforce standards to prevent the emission of excessive fumes, dust, odor, smoke, noise and glare from all land uses.
- b) Explore additional options for incorporating specific natural resource protection standards into the Land Use and Development Regulations. Maintain the Meadowland and Flood Hazard Overlay Districts.
- c) Encourage the US Forest Service's acquisition of additional lands to be included in the Green Mountain National Forest.
- d) Support and encourage land conservation organizations (i.e., Vermont Land Trust,

Trust for Public Land, etc.) to work with the town to identify and preserve lands with fragile features and other important natural resources. Coordinate expenditures of the Town of Warren Conservation Reserve Fund. Encourage the activities of the Conservation Committee.

- e) Through the town's capital program, ensure that capital improvements and public facilities are planned in a manner that prevents the development and fragmentation of fragile features and natural resources.

Objective 3.2. To prevent degradation of water resources and improve water quality.

Implementation Strategies

- a) Strictly administer and enforce the town's on-site sewage disposal ordinance and require approval under the ordinance as a prerequisite to other development approvals. Revise the ordinance to comply with changes to state law.
- b) Support the maintenance and upgrade of the existing water classifications of all town surface waters.
- c) Use the Land Use and Development Regulations to require the maintenance of undisturbed, naturally vegetated buffers sufficient to protect water quality along the Mad River, tributary streams and Blueberry Lake. Buffer areas, including the depth and type of buffer, shall be identified for protection through the subdivision and site plan review process.
- d) Ensure that development within wellhead protection areas is carefully designed to prevent adverse impacts to groundwater supplies.
- e) Control runoff and erosion during all stages of development through stormwater and erosion control standards in the town's Land Use and Development Regulations and by enforcing standards and conditions during and after construction.
- f) Limit development in designated floodplains (except that which is related to the maintenance and continued use of existing structures) to recreation and other non-commer-

cial and non-residential uses. Continue to administer the standards in the Flood Hazard Overlay District in the Land Use and Development Regulations. Update as needed to maintain town eligibility in the National Flood Insurance Program and as river conditions change.

- g) Encourage and support the Friends of the Mad River and other entities in their efforts to implement *The Best River Ever: a conservation plan to protect and restore Vermont's beautiful Mad River Watershed* and to ensure that its goals and recommendations are achieved.
- h) Encourage community support of the Mad River Watch program. Use this program to assist in the identification of water quality problems and take appropriate action to correct those problems.
- i) Update the inventory of significant wetlands in the town, including those less than three acres, and consider changes to the building permit process.
- j) Complete the Warren Village community wastewater system.

Objective 3.3. To protect and enhance Warren's wildlife populations.

Implementation Strategies

- a) Identify and, where reasonable, protect deer wintering areas (deeryards) from development and other uses which threaten the ability of the habitat to support deer.
- b) Protect bear habitat from development and other uses which threaten the ability of the habitat to support bear.
- c) Support the identification of critical wildlife travel corridors and ensure that identified corridors are protected from inappropriate development through the Land Use and Development Regulations. Consider data related to wildlife habitat generated by the local Keeping Track wildlife monitoring program and other organizations when updating local planning documents and/or reviewing development proposals.

- d) Support the permanent deeded preservation of identified black bear habitat in the Slide Brook Basin.
- e) Strictly enforce animal control laws (leash law) to eliminate conflict between domestic animals and wildlife.
- f) Join in the development of a program to improve fisheries habitat in the Mad River and its tributaries with other interested parties.

Objective 3.4. To enhance the economic viability of agricultural and forestry activities in Warren.

Implementation Strategies

- a) Encourage the use of Town of Warren Conservation Reserve Fund to help purchase conservation easements on working agricultural land and prime farmland.
- b) Encourage participation in the Vermont Current Use Program to support the viability and maintenance of farm and forest land.
- c) Continue to maintain the Forest Reserve District and the Meadowland Overlay District as defined in Chapter 10 of this Plan.
- d) Use the town's Land Use and Development Regulations and other appropriate mechanisms to encourage the creation of local industries that provide a market for locally produced agricultural and forestry products.
- e) Continue to allow agricultural uses in all districts.

Objective 3.5. To maintain an adequate land base to support present and future forestry and agricultural activities.

Implementation Strategies

- a) Require that development, to the greatest extent possible, not be sited on productive farmland to allow continued and/or potential agricultural use. The Meadowland Overlay District shall be maintained in the Land Use and Development Regulations.

- b) Encourage the permanent protection of farmland and important natural resource areas, through conservation easements or comparable deed restrictions, during the subdivision and/or development review process.
- c) In conjunction with private conservation organizations, explore opportunities for purchasing development rights on farmland and other important natural resource areas, as described in this chapter.
- d) Continue to contribute to the town's Conservation Reserve Fund and consider an annual allocation to the fund at the Town Meeting.
- e) Support the efforts of private conservation organizations to protect farmland, forest land and other open space in Warren through landowner education and voluntary conservation mechanisms.
- f) Consider ways to update the town's transfer of development rights (TDR) program and make the changes needed to improve its use, including possibly designating additional receiving areas, changing allowable densities within existing receiving areas, or identifying non-regulatory incentives to increase the market demand for purchase of development rights within designated receiving areas (See Chapter 10).
- g) Encourage the preservation of forest land through expansion of the Green Mountain National Forest's proclamation boundary to include portions of the Northfield Mountain Range.
- h) Through the development review process and conservation actions, strongly discourage further subdivision and the associated extension of roads and infrastructure in the Forest Reserve District.
- i) Support a viable commercial recreation industry to encourage seasonal diversification and multiple uses of farm and forest land.

Objective 3.6. To provide for the responsible extraction of renewable and finite natural resources for municipal and commercial

purposes.

Implementation Strategies

- a) Use the town's Land Use and Development Regulations or other appropriate mechanisms, to require that all forest management in Warren complies at a minimum with Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont.
- b) Participate in the review and revision of the Green Mountain National Forest Management Plan to ensure that wildlife habitat, recreation opportunities and aesthetic resources are protected and enhanced.
- c) Maintain strict standards to minimize potential conflicts between current land uses and the extraction of renewable and finite resources. These standards should address the operation, maintenance and restoration of extraction sites based on the unique conditions of the area affected.

Objective 3.7. To protect and enhance Warren's scenic landscape and rural character.

Implementation Strategies

- a) Continue to require residential development that is designed in a manner that preserves scenic resources, meadowland, and fragile features and clusters the majority of development activity on the least sensitive portion of the land. (See Chapter 10).
- b) Encourage and support the efforts of the Mad River Valley Conservation Partnership in their efforts to implement their Conservation Opportunities plan.
- c) Maintain a high quality of site design for commercial and multi-family land uses through the enforcement of landscaping and site design standards in the Land Use and Development Regulations. Such standards should encourage the use of native vegetation and minimize the visual impact of parking, service and storage areas. (See Chapter 10)

- d) Rural cultural features, including farm and logging roads, stone walls, tree and fence lines, cellar holes and agricultural buildings, should be preserved by protective measures incorporated into site and subdivision plans, where appropriate. New lot lines should follow existing linear features, such as tree and fence lines to the extent practical. (See Chapter 10)
- e) Carefully review the need for the placement of structures, including solar energy equipment, wind energy equipment and telecommunications towers, on ridgelines or prominent hilltops. Consider revising the Land Use and Development Regulations to stipulate that structures shall not extend above the elevation of the crown line of mature trees on defined ridgelines and knolls. This provision does not apply to wind turbines for the generation of electric power which shall be encouraged.
- f) Extend utility lines and develop associated rights-of-way in a manner which minimizes adverse impacts on the town's scenic landscape. Continue to require undergrounding when utility lines are extended to service new development whenever possible.
- g) Continue protecting those features within the road right-of-way that contribute to the scenic character of individual roads through the town's road ordinance. Coordinate the protection of those features with road maintenance and improvement projects.
- h) Maintain the visual quality of Warren's night sky through standards in the town's Land Use and Development Regulations that ensure that all outdoor lighting is designed and installed in a manner that minimizes glare, skyglow, and the impact on adjacent property owners.
- i) Explore adoption of forest management guidelines to protect the scenic landscape.

Objective 3.8. To maintain and upgrade Warren's historic built environment and promote greater understanding and appreciation of the town's architectural heritage.

Implementation Strategies

- a) Develop Historic District Design Guidelines for Warren Village as a way to encourage the use of harmonious scale, materials, and detailing for renovation of historic structures and new construction.
- b) Continue to allow for the adaptive reuse of historic barns and other historic structures in the Land Use and Development Regulations.
- c) Through the subdivision and conditional use review process ensure that new development is designed to reflect traditional patterns and forms of development, is compatible with its context and setting, and maintains and enhances the town's rural character (see Chapter 10).

Objective 3.9. To promote traditional access to undeveloped lands for public recreation.

Implementation Strategies

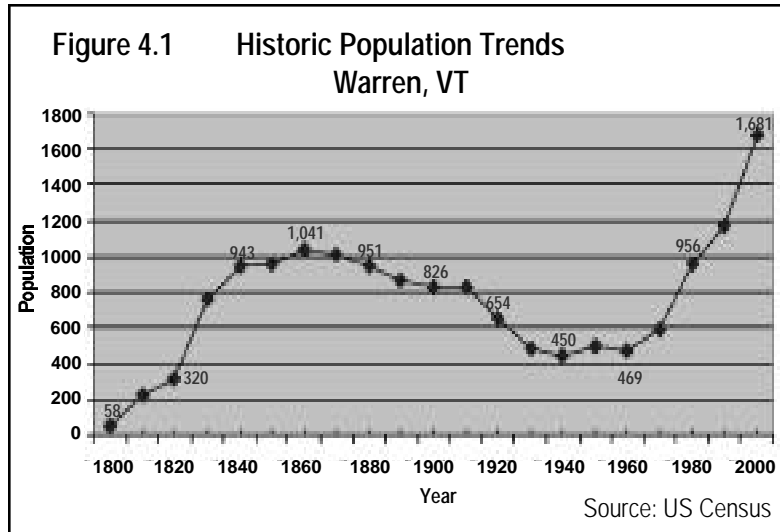
- a) Promote continued access to private lands for hunting, fishing and other forms of outdoor recreation, with due consideration given to landowner concerns such as liability, vandalism, safety and intrusion.
- b) Support the efforts of the Mad River Path Association, Vermont Association of Snow Travelers, Catamount Trail Association, U.S. Forest Service and other parties to create and maintain an integrated trail network throughout town.
- c) Protect identified trail corridors, including the Long Trail and Catamount Trail during the subdivision review process.

COMMUNITY PROFILE

With information about Warren's population, the town can better understand its growth trends; environmental conditions; the need and demand for services and facilities; and its economic parameters. This information affects planning for energy, housing, transportation, emergency services, schools, recreation, utilities and land use. This chapter presents population trends, characteristics of Warren's population and projections to help plan for future land use and public services.

Population Trends

Past population trends have mirrored the significant historical trends in Warren's history. These are described in Chapter 2, town History. As economic activity has expanded or contracted, so has the town's population. Figure 4.1 depicts the Census counts for each decade from 1800 to 2000. In 2000, there were 1,681 residents in Warren.



From 1860 to 1940, Warren's population dropped from a high of 1,041 permanent residents to a low of 450, a 57% decline. Warren's population stabilized between 1940 and 1960 at about 500 people. Since 1960, Warren has experienced tremendous population growth.

Between 1990 and 2000, Warren's population growth rate of 43% surpassed that of the Mad River Valley, Washington County and the State of Vermont. Table 4.1 compares the growth rates of these areas. Only 17% of

This chapter presents population trends, characteristics of Warren's population and projections to help plan for future land use and public services.

the population growth in Warren can be attributed to natural increase (births minus deaths). The remainder is attributed to in-migration.

Table 4.1

**Comparative Population Growth:
Warren, Mad River Valley, Washington County and Vermont 1970-2000**

	Population		% Change	Pop.	% Change	Pop.	% Change
	1970	1980	1970-1980	1990	1980-1990	2000	1990-2000
Warren	588	953	62%	1,172	23%	1,681	43%
Mad River Valley	2,623	4,133	58%	4,855	17%	6,134	26%
Washington Co.	47,659	52,393	10%	54,928	5%	58,039	6%
State of Vermont	444,330	511,456	15%	562,758	10%	608,827	8%

Source: US Census 1970, 1980, 1990, 2000; Vermont Department of Health, 1996

Table 4.2 Warren Area Current and Projected Population Through 2020

	ACTUAL		PROJECTED		% Growth 2000-2020	% Growth 1990-2020
	1990	2000	2010	2020		
Moretown	1,415	1,653	1,750	1,838	11%	30%
Waitsfield	1,422	1,659	1,797	1,911	15%	34%
Warren	1,172	1,681	1,966	2,250	34%	92%
Fayston	846	1,141	1,308	1,461	28%	73%
MRV Total	4,855	6,134	6,821	7,460	22%	54%
Washington County	54,928	58,039	59,931	61,322	6%	12%
Vermont	562,758	608,827	639,241	666,041	9%	18%

Source: VT Department of Aging and Disabilities

Population Projection

Projections for population growth through the year 2020 are depicted in Table 4.2. Warren's population, as with the other Valley towns, is expected to grow more quickly than Washington County. Between 2000 and 2010, Warren's population is projected to increase by 285 people (17%). This is a projected

average annual growth rate of slightly less than 2% per year.

Population Characteristics

The US Census 2000 provides more specific information on community characteristics. Table 4.3 shows a demographic profile of the Town of Warren in

Table 4.3 Warren Community Profile Compared to Washington County and Vermont, 2000

	Warren	Washington County	Vermont
Population	1681	58039	608827
% Male	51.5%	49.0%	49.0%
% Female	48.5%	51.0%	51.0%
% Minority (non-white or multiple race)	3.2%	1.7%	2.1%
% Born in Vermont	30.4%	58.5%	54.3%
% Foreign Born	5.5%	3.6%	3.8%
% Veteran (civilian pop 18 years and older)	12.9%	13.9%	13.6%
% with a Disability (civilian non-institutionalized)	11.2%	17.3%	16.1%
Median Age	37.7	38.5	37.7
% Children (under 18 years)	22.9%	23.5%	24.2%
% Elderly (65 and over)	9.6%	12.9%	12.7%
% High School diploma or higher (25 years and over)	92.2%	88.4%	86.4%
% College Graduate or higher (25 years and over)	44.9%	32.2%	29.4%
Per Capita Income	\$30,405	\$21,113	\$20,625
% Below Poverty Level	8.0%	8.0%	9.4%
% Children Below Poverty Level	8.3%	9.1%	10.7%
% Elderly Below Poverty Level	3.8%	6.8%	8.5%
Families	437	15147	157736
% Families with Children (under 18 years)	28.3%	31.0%	31.8%
Average Family Size	2.89	2.91	2.96
Median Family Income	\$57,206	\$51,075	\$48,625
% Below Poverty Level	5.1%	5.5%	6.3%
% with Children below Poverty Level	8.5%	8.7%	9.7%

Source: US Census 2000

Compared to Washington County and Vermont, Warren's 2000 population was:

- **Similarly lacking in ethnic diversity** – although, with a somewhat higher population of minorities than that of the state and the county,
- **Similar in age or younger** – with the same median age as the state, but lower than that of the county and with a lower percentage of elderly residents,
- **Less “native” to Vermont** – with many more residents having been born out of state or in foreign countries,
- **More formally educated** – with considerably higher percentages of residents having obtained high school and college degrees,
- **Generally wealthier** – with significantly higher median per capita and family incomes, however,
- **Similarly impoverished** – with a similar number of individuals, families, and children living below the poverty level to the county.

These trends are not surprising for a community with a resort amenity. However, unlike many resort towns, Warren maintains an average number of children and median age in an aging country.

the year 2000 compared to Washington County and Vermont.

Income

Table 4.4 compares the per-capita income for Warren, the other Valley towns, the county and the state. The figures in Table 4.4 show that Warren had the highest per capita income among the Valley towns in 1990 and 2000. Warren's per capita income also exceeded the state's per capita income by 47%.

The Census also reported that the median income for male year-round workers was \$6,464 more in 2000 than that for female year-round workers in Warren. The male and female median incomes for 2000 were \$32,054 and \$25,588 respectively.

Warren's median household income was 16% greater than the state average but on par with the Valley towns. In 2000, 5.1% of Warren households lived below the poverty level. The percentage of households living below the poverty level decreased from 7% in 1990 to 5.1% in 2000. Although overall the household poverty level has decreased in Warren, the poverty level for families with female householders and no husband present is 18%.



Education

According to the 2000 Census, more than 92% of Warren residents over 25 years old were high school graduates, and nearly 45% held four-year college degrees. As shown in Table 4.5, Warren's residents are comparatively well-educated, exceeding Washington County and the State of Vermont percentages.

Table 4.4 Income and Poverty Level 2000

	Households	Per Capita	Median House Holds	Median Family	%Families Below Poverty Level
Fayston	484	\$28,196	\$53,472	\$60,938	2.9
Moretown	656	\$20,283	\$47,750	\$52,202	5.4
Waitsfield	746	\$24,209	\$45,577	\$54,868	3.9
Warren	741	30,405	\$47,437	\$57,206	5.1
Washington Co.	23,654	\$21,113	\$40,972	\$51,075	5.5
Vermont	240,744	\$20,625	\$40,856	\$48,625	6.3

Source: US Census 2000

Table 4.5

Mad River Valley, Washington County and Vermont
Education Level Comparison (population +25)

	1990		2000	
	% HS Grad	% 4+ Year College Grad	% HS Grad	% 4+ Year College Grad
Fayston	86.9	35.7	97	59.7
Moretown	79.6	27.4	90.7	43.8
Warren	87.7	41.6	92.3	44.9
Waitsfield	84.8	37.7	93.4	46.2
Washington Co.	81.3	24.4	88.4	32.2
Vermont	80.8	24.3	86.4	29.4

Source: US Census 2000

Fig. 4.2

Warren School Enrolment

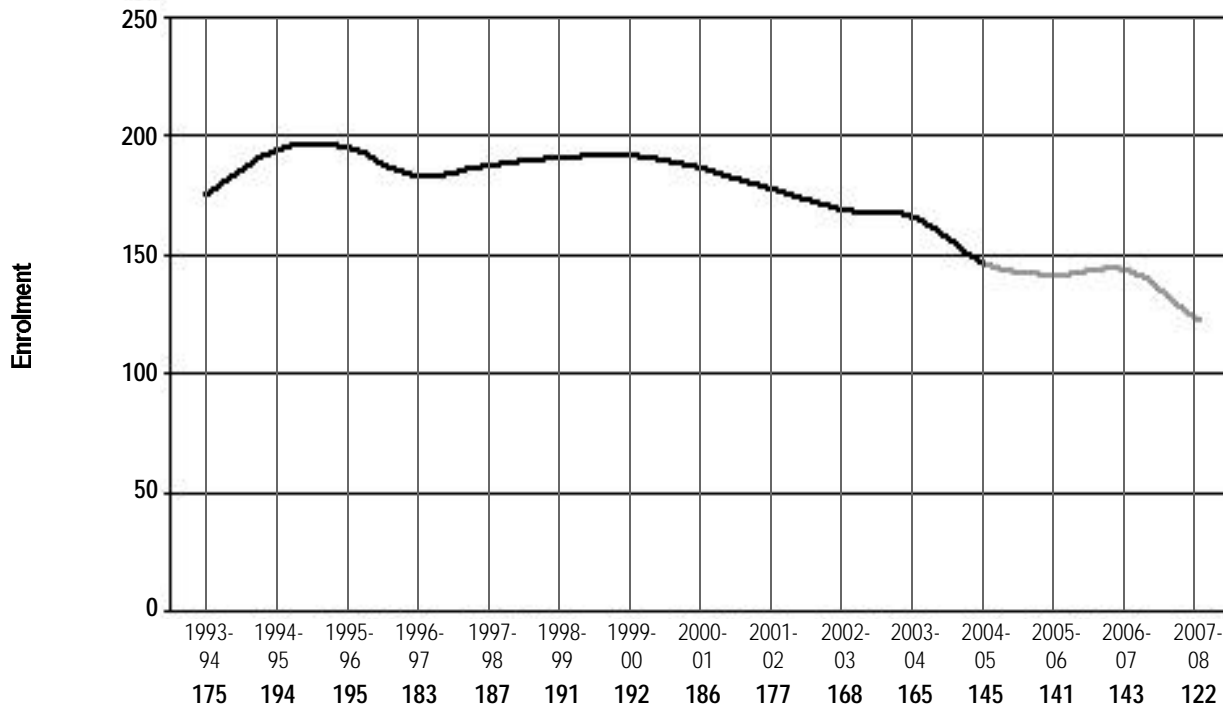


Table 4.6

Comparative Age Distributions, 2000

Town	< 5 years	5-17 years	18-34 years	35-64 years	65+ years
Fayston	6.1%	16.7%	17.4%	50.2%	9.6%
Moretown	6.2%	20.4%	18.6%	45.4%	9.4%
Waitsfield	5.2%	16.1%	19.7%	46.8%	12.2%
Warren	4.2%	18.7%	18.3%	49.2%	9.6%
Washington Co.	5.4%	18.1%	20.8%	42.8%	12.9%

Source: US Census 2000

Age

Understanding the town's age distribution is critical to planning efforts. Warren's population is aging. However, the largest share of the population falls in the 35-64 years age bracket, confirming the perception that baby boomers are retiring to the community. It is likely that Warren, along with other valley towns, will continue to attract aging baby boomers, including a large number of "empty nesters" who are more mobile and are seeking more leisure time activities, an attractive environment, and a high quality of life. If these trends continue, Warren's population will continue to grow due to in-migration.

This suggests an on-going demand for more cultural and recreational facilities and services. While Warren has a relatively low elderly population now, it is reasonable to expect that the number will increase and that an increased demand for the services needed to support an aging and elderly population will follow. Table 4.6 compares the age distributions of Washington County and Mad River Valley communities.

Warren's population of school-age children is decreasing. Figure 4.2 shows Warren Elementary School enrollment for pre-kindergarten through grade 6 for each school year since 1993/94 and enrollment projections



through the 2007/08 school year. Projections are based on the number of children born in town as recorded in the Town Report.

Seasonal Population

Warren has a very large seasonal population. The bulk of the valley's seasonal housing is located in Warren. While this group is not counted as part of the total population discussed in the US Census, the Census does count how many of the total housing units are maintained for seasonal use only. It is critical to understand the magnitude of the seasonal population, because this group places sometimes unanticipated

demands on local facilities and services.

Of Warren's 2,078 housing units, 61.9% were reported to be used for seasonal or recreational use only in the 2000 US Census. Only 742 housing units were reported to be occupied at the time the Census was taken. Table 4.7 shows that Warren has the largest proportion of seasonal units to year-round units in the valley: 69.6% of the seasonal housing in the valley is in Warren.

Household Characteristics

Housing development in the past decade has not kept pace with growth in the town's

Table 4.7 Comparative Year-Round and Seasonal Housing Units, 2000

	Occupied Number	Occupied % of Total	Vacant Number	Vacant % of Total	Seasonal or Recreational Only Number	Seasonal or Recreational Only % of Total	Total Housing Stock
Fayston	484	53.8%	416	46.2%	401	44.5%	900
Waitsfield	734	80.8%	174	19.2%	159	17.5%	908
Warren	742	35.7%	1336	64.3%	1287	61.9%	2078
MRV Total	1960	50.4%	1926	49.6%	1847	47.5%	3886

Source: US Census 2000

Table 4.8

Comparison of Households, 2000

	Warren	Washington County	Vermont
Total Number HH	742	23659	240634
Avg Size of HH	2.27	2.35	2.44
% Family	58.9%	63.6%	65.6%
% Non-Family	41.1%	36.4%	34.4%
% w/ children	29.1%	31.8%	33.6%
% Single Parent	6.2%	8.8%	8.5%
% 65+ alone	5.9%	10.2%	9.5%
Median Household Income	\$47,437	\$40,972	\$40,856

Source: US Census 2000

year-round population. Between 1990 and 2000, Warren's year-round population increased by 43%, while the housing stock grew by only 17%. This may indicate that despite the high proportion of seasonal units in Warren, such units are being converted to year-round use. In 2000, housing in Warren accounted for 53.5% of the valley's total housing stock, but only 38.8% of year-round housing.

The decade between 1980 and 1990 was marked by a large increase in housing units in Warren. The past decade, 1990-2000 resulted in a much more moderate increase, 6.6%, in the overall number of housing units. This was lower than that of both the county and the state. Chapter 6, A Place to Live, describes housing in Warren in more detail.

Table 4.8 describes the demographic make-up of Warren's households. Warren's average household size has continued to decline, much like national and statewide trends. Warren has a relatively low household size for Vermont and Washington County. Warren has an unusually high number of non-family households, which are made up of groups of non-related and non-married individuals living in the same dwelling unit. This may be related to the high cost of housing relative to the average wage paid in

Warren leading to house sharing, or simply the presence of amenities that draw households of unrelated individuals.



Community Profile Goals

Goal 4.A The accommodation of the Town's fair share of the region's population growth to maintain community vitality and diversity.

Objective 4.1 To anticipate and plan for an annual population growth rate of approximately 2.0% for the next 5 to 10 years.

Implementation Strategies

- a) The town shall plan for projected population growth in order to accommodate the accompanying demand for housing, community services and facilities and economic opportunity. Consider phasing or delaying development, if necessary, to avoid adverse impacts of unanticipated growth.
- b) Manage growth to ensure the adequacy of roads, services and facilities as well as to protect the town's significant natural and cultural resources.
- c) Review and update demographic data and population projections on a regular basis. Establish and maintain method of gathering local data on building starts, housing characteristics, and other information regarding local housing stock and population trends.
- d) Growth and development in excess of the projected growth rate shall not over burden town services and facilities, or adversely impact the town's rural character. Prior to approval, it should be demonstrated that the fiscal impact of large scale development projects (major subdivisions or commercial structures greater than 3,500 square feet) shall not result in an undue financial burden on the Town.

POWER FOR THE PEOPLE

Chapter 5

Warren is located in the Green Mountains with long winters, cloudy and snowy weather, and a relatively dispersed population. Sugarbush Resort and associated recreational development make Warren an energy intensive town. Over 60% of Warren's approximately 2000 homes are occupied seasonally. Temperatures routinely drop to 20 and 30 degrees below zero, and winters with more than 8,000 heating degree days are common. A heating degree day is calculated based on the average of the high and low temperatures for each day. Every degree below 65 for the average of the high and low temperatures for the day is counted as a heating degree day.



mills, company stores, and a more vibrant community life. Most resources and all energy still came from the immediate area. For example, in 1910 four dams in Warren generated power for local industries (lumber, creamery, sawmill, and wheelwright).

Until 1950, Vermont as a whole exported electricity to other states, and at that time, Warren had only begun to move away from its independent beginnings. Farming still

played a key role in the Town's economic life. But the larger energy and economic picture had caused mills, stores, and other enterprises to relocate closer to major transportation routes and markets.

Electrical Power Supply

Historical Supply

Warren's energy past has varied. Originally, the town was settled by farmers around a green at the Roxbury Gap Four Corners in East Warren. Subsistence agriculture and logging were the only economic activities. In the mid-1800s, the development of water-powered mills brought settlement to the present village, where power sites were abundant. Although farming was still a mainstay of the Town, the mills used timber resources to manufacture related products, often for export. The quiet green was replaced by the bustle of a town street with

Until 1950, Vermont as a whole exported electricity to other states, and at that time, Warren had only begun to move away from its independent beginnings.

The advent of the ski industry in Warren brought economic vitality to the area along with the related infrastructure of the automobile era. People in Warren and elsewhere in Vermont began to rely heavily on petroleum products to run their cars, heat their homes and manufacture and transport the produce and products necessary for daily life.

The use of electricity increased rapidly as well. Figures from Green Mountain Power

Table 5.1 Total customers served by the Mad Bush and Irasville substations - 2004

Substation	Number of Meters
Mad Bush #38	1382
Irasville #39	2391
Total for area served by these stations	3,773

Source: 2004 Green Mountain Power

reported that no transmission and distribution improvements that would substantially increase the capacity of either the transmission lines feeding the area or the substations, Mad Bush and Irasville, are planned in the area over the next 5 years.

Energy Demand

Residential

As of 2003, household energy use represents approximately 30% of total statewide energy consumption. Almost 80% of domestic demand is for space heating and domestic hot water. The remaining 20% runs miscellaneous appliances, lighting, cooking, drying and air conditioning. Space heating and hot water heating are affected by building design and construction. Other energy uses are affected primarily by personal choices and habits. Table 5.2 provides the 2000 breakdown of heating sources for occupied households in Warren.



The most common sources of heat are bottled/tank LP gas, oil/kerosene or wood. There are a number of cord wood suppliers in the Valley. Two oil and gas suppliers are based in Waitsfield, and additional suppliers in Waterbury and Montpelier serve the Valley. Since the 1990 Census many of the older seasonal properties have converted from wood and electric heat to propane.

Transportation

According to the Vermont Agency of Natural Resources, approximately 43% of the energy used in Vermont is used for transportation. The national average energy consumption for transportation is 27% (US DOE 1990). Almost

Corporation indicate that the Valley's peak electrical demand has risen from 3.4 mega watts (MVA) in 1966 to 23.0 mega watts in 2003 (an average annual increase of 24%). Electrical demands have remained fairly stable over the past decade. The decline and subsequent stabilization in the Valley's peak demand are due to the implementation of the comprehensive electrical load management plan developed by Sugarbush and Green Mountain Power in 1989. The management plan was designed to stabilize energy demand and implement a conservation program at the ski area. It established a schedule for increasing electrical efficiencies through the implementation of an interruptible load agreement with Green Mountain Power.

Historically, there has been a relationship between energy costs, energy sources, location of development, and growth of the Town. For example, agriculture meant settlement dispersed on farms and centralized community facilities to minimize transportation distances and costs. Later, water power concentrated development and growth along the river, and Warren Village started to grow.

Current Supply

Electricity is supplied to the Valley primarily by the Green Mountain Power Corporation. Green Mountain Power's sources of electricity include nuclear (31%), renewables (wood, hydro, wind, 41.2%), gas (2.1%), oil (2.0%), and market purchases (23.9%). Local distribution is provided by a 34.5 kilo volt (kV) transmission line and 12.47 kV distribution systems which comprise a looped line with sources in Montpelier and Middlesex. The capacity of the two substations, Irasville and Mad Bush, serving the Valley was expanded in the late 1980s and has 10 MVA reserved capacity or about 50% of current load. Although adequate electrical capacity currently exists, past growth in Warren resulted in rapid increases in energy consumption. In late 2003, GMP officials

half of the VT transportation energy is consumed by commuters, shoppers, recreationists and others traveling in private automobiles. Public transit represents a very small portion (3%) of the energy used for transportation in Vermont. In Warren, the limited routes of the MadBus account for a very small part of total transportation. Valley trails or bike lanes are also limited and not well integrated with the region. According to 2000 Census data, 85% of Warren residents drove vehicles to work, and only 9% of residents carpooled.

When petroleum prices rise, the cost of maintaining dispersed development will become increasingly difficult for both individuals and the town to support. Costs associated with school buses, road and utility maintenance, and other transportation will increase. Clustering development is an important tool for cutting down on energy usage, as is establishing commercial activities and jobs near residential areas.

Future Energy Potential

Energy Conservation

Energy conservation measures such as increased user control, weather-stripping, insulation, caulking, etc., can reduce heat loss in buildings by 25-50%.

Solar Orientation

The orientation and degree of slope determine the amount of solar radiation hitting a particular site. Southern slopes receive more radiation; northern slopes receive less, especially during the winter when sun angles are low on the horizon. Eastern slopes receive early morning sun; western slopes receive afternoon sun. Orientation affects such factors as ground temperature, shadow length, date of a snow melt, desirability for outdoor activity, and building heat loss. Careful site planning can have a positive impact on the town's total energy requirements.

Solar Energy

The sun can be utilized in three main areas to reduce energy consumption: hot water loads; heating requirements; and food supply. The

Table 5.2 Heating Source by Occupied Households in Warren

Fuel Type	1990		2000	
	Total Units	% of Units	Total Units	% of Units
Wood	180	35%	104	14%
Electricity	118	23%	53	7%
Bottled/Tank or LP Gas	114	22%	392	53%
Oil/Kerosene	96	18%	169	23%
Utility Gas	4	1%	19	3%
Coal or coke	3	1%	3	<1%
Solar	0	0%	0	0
Other	0	0%	2	<1%

Source: 1990 & 2000 US Census

amount of energy savings will depend upon site and economic constraints. New construction can and should utilize such techniques.



Wood Energy

Wood is a plentiful resource and, with wise management, could supply an even more significant share of Warren's energy needs. It is important to note that wood burning may present safety and air quality issues. These issues may be addressed using caution, proper maintenance and the latest in stove technology. Warren may be susceptible to air pollution due to its geographic location surrounded by mountains. However, burning wood instead of gas will reduce greenhouse emissions. Using local renewable energy sources such as wood would save residents money and stimulate the local economy.

Wind Energy

The Lincoln Ridge is among the best wind sites in New England. However, most of this property is national forest. Green Mountain National Forest has a policy against developing wind turbines on National Forest Land. Therefore, it is unlikely a large scale wind farm will be established in Warren. Small scale wind generation in the Valley is possible in certain areas but would have a small impact on overall generation and would require more detailed investigation of specific sites.



Hydroelectric Energy

At present, the Brooks Dam in Warren Village is the only feasible site in Warren for hydro power generation. In the past, it generated electricity which was sold to Green Mountain Power. Discussions are now underway regarding the future of the dam. Its removal would leave no viable location to generate hydroelectric energy.

It should be noted that developing available sources of hydro power is not without costs. The adverse impact of hydro power development can be severe on aquatic life in rivers and streams. Impoundments cause unnatural increases in water temperature, flood upstream shore lands, cause siltation, isolate fish populations, block fish passage and often destroy salmonid spawning areas. Other negative aspects of hydro power development include the aesthetic implications of dams and impoundments as well as the possible impact on popular recreational pursuits, such as canoeing and fishing. However, dams have played a significant role in Warren's history and remains of such dams add to the cultural her-

itage of the community and provide swimming opportunities.

Clustering Development

The density of development can affect energy consumption. As the population is dispersed across the town, more energy is consumed for transportation. There is also a transmission loss over the long power lines required to service dispersed development.

Energy Goals

Goal 5.A Foster quality growth and controlled development in Town.

Goal 5.B Conserve renewable and nonrenewable energy.

Goal 5.C Reduce direct and indirect transportation demands.

Objective 5.1. To direct growth to specified centers served by energy infrastructure. Limit growth in areas of town not served presently.

Implementation Strategies

- a) Continue to limit the types of land use and allowable density in areas outside the designated growth centers and in the least accessible areas of town, including the Forest Reserve (FR) District (see Chapter 10).
- b) Through Land Use and Development Regulations, encourage clustered and multi-family housing in new residential developments (see Chapter 10) and provide opportunities for appropriate home occupations and larger home-based businesses to minimize commuting to work (see Chapter 9).
- c) Amend the Land Use and Development Regulations to encourage innovation in energy conservation and energy efficiency by providing incentives for concentrating development in appropriate locations (e.g., grant density bonuses to developments employing solar design and energy efficiency).
- d) Encourage clustered or concentrated patterns in the Land Use and Development Regulations to minimize land consumption and excessive curb cuts, to enable pedestrian and bicycle travel, and to avoid strip or linear development (see Chapter 10).
- e) Through the Memorandum of Understanding administered by the MRVPD, continue to ensure that expansion and development activities at Sugarbush do not exceed the current or

planned capacity of local electrical supplies.

Objective 5.2. To establish a strong and visible commitment to energy efficiency.

Implementation Strategies

- a) Take corrective measures to reduce energy use in municipal buildings by implementing recommendations from 2003 Energy Audit.
- b) Encourage maximum conservation of electricity and promote its use in applications where it functions most efficiently, such as lighting, motor operation, and certain industrial processes.
- c) Educate citizens about the need for sustainable energy practices. For example, provide technical information to builders and developers, make new public buildings models of energy efficiency, and/or integrate local energy issues into education curricula.
- d) Allow flexible standards in the Land Use and Development Regulations for renewable energy generation and transmission facilities.

Objective 5.3. To conserve forest lands as a renewable resource.

Implementation Strategies

- a) Encourage sustainable forest management to ensure wood supply for the future; implement all relevant forest land conservation policies of this Plan.
- b) Maintain the Forest Reserve (FR) District (see Chapter 10).

Objective 5.4. To create opportunities for walking, cycling and other energy efficient alternatives to the automobile.

Implementation Strategies

- a) Complete a recreation and pedestrian path network plan for Warren. Encourage through regulatory and non-regulatory methods, the donation or provision of path easements from developers to enable creation of paths. Seek similar easements from owners of lands not proposed for

development.

- b) Continue to support state and regional public transportation systems, including the valley transit system. Ensure continued service to Warren Village.
- c) Implement recommendations in the **2004 Warren Village Pedestrian Enhancement Plan** and improve pedestrian access in the Lincoln Peak/Sugarbush Village growth center.
- d) Encourage employers to provide incentives to promote energy efficient commuting (e.g. ride sharing, bicycling, use of Valley transit).

For an individual or family, adequate housing is a basic human need. For a community, a diverse housing stock is necessary to foster a diverse population. Housing that is well designed and of high quality contributes to a town's physical appearance, its ability to attract other desirable forms of growth, and the local tax base. Unplanned and poorly sited housing, however, can overburden public services, suppress property values (and therefore property tax revenue), discourage private investment, harm natural resources and undermine the town's distinct character, quality of life and strong sense of community.

In Warren, issues related to housing are complicated by several factors, including:

- rapid housing development over the past thirty years;
- high housing and land costs typical of resort areas;
- the conversion of seasonal homes to year-round occupancy;
- accommodating new housing while maintaining desired settlement patterns;
- escalating taxes resulting from the passage of Act 60; and
- the large number of high end vacation homes.

The following chapter describes the town's housing stock and addresses the issues cited above.



Alex McClean

Household and Housing Characteristics

The manner in which a town's population is organized into households affects the demand for housing, public services and employment. A detailed analysis of household characteristics is included in Chapter 4, Community Profile.

One way household characteristics influence the availability of housing is household size. Household size has experienced a sharp decline in Warren since the 1970's. Household size in Warren has decreased from 3.23 persons per household (pph) in 1970 to 2.27 pph in 2000 (see Table

Housing that is well designed and of high quality contributes to a town's physical appearance, its ability to attract other desirable forms of growth, and the local tax base.

6.1). Warren's household size is significantly smaller than that of Washington County as a whole, which averages 3.36 pph. Warren's small household size may be related to the age distribution of town's residents. Table 4.6 in Chapter 4, indicates a relatively high number of "middle-aged" adults (i.e. aged 35-64 years) compared to other Valley towns and the county. Warren also has a higher percentage of non-family households made up of unrelated individuals, which tend to be smaller.

Table 6.1 Housing Characteristics Comparison, 2000

	Warren	Washington County	Vermont
Housing Units	2078	27,644	294,382
% Occupied	35.7%	85.6%	81.7%
% Owner	74.3%	68.5%	70.6%
% Renter	25.7%	31.5%	29.4%
% Seasonal	61.9%	11.2%	14.6%
Persons/Unit	2.27	2.36	2.44
Persons/Owned Unit	2.41	2.55	2.58
Persons/Rented Unit	1.85	1.96	2.11

Source: US Census 2000

Housing Stock

Warren’s housing stock has changed dramatically over the past thirty years. The 1970’s and early 1980’s saw an explosion of condominium development in and around Sugarbush Village. Since 1990, the rate of development has slowed.

Table 6.2 summarizes Warren’s housing stock in comparison to Washington County and the state. In 2000, Warren’s housing consisted mainly of multi-family units. Warren is the only community in the valley in which the majority of housing units were not detached

single units. Warren’s housing stock is also quite young compared to other valley towns, the county, and the state with only 8.6% built before 1939. The units are generally smaller, as well, with a median number of rooms of 5.0 compared to the state median of 5.6 rooms. This was skewed by the high number of small, multi-family seasonal dwellings that were built in the 1970s and 1980s, however, it does confirm the perception of Warren as a town made up of non-primary housing units.

In addition to the variety of housing types, the condition of year-round housing in Warren is surprisingly good for a rural town of its size.

Table 6.2 Housing Characteristics Comparison, 2000

	Warren	Washington County	Vermont
% 1-unit detached	43.7%	61.5%	65.6%
% 1-unit attached	8.8%	2.7%	3.4%
% 2-units	2.9%	8.2%	7.2%
% 3-4 units	4.7%	7.9%	6.4%
% 5-9 units	8.3%	6.8%	5.1%
% 10-19 units	8.4%	2.4%	1.5%
% 20+ units	19.9%	4.2%	2.8%
% Mobile Homes	3.0%	6.2%	7.7%
Median # Rooms	5.0	5.6	5.6
% more than 1 person/room	0.5%	1.3%	1.5%
% substandard plumbing	0.7%	0.7%	0.6%
% substandard kitchen	0.4%	0.8%	0.6%
% built 1939 or earlier	8.6%	35.4%	30.0%

Source: US Census 2000

According to the 2000 U.S. Census, few problems associated with sub-standard housing exist in town despite the lack of building codes or housing standards. Energy efficiency is one area in which many local dwellings may be deficient. This is widely the case with many of the condominium developments in Sugarbush Village, most of which are dependent upon electric heating, as well as in many of the older homes throughout town.

Composition of the Housing Stock

The US Census occurs only once every 10 years, and by 2004, the information contained in it may be somewhat outdated. The town keeps a Grand List of properties for taxation purposes. These numbers differ from the Census in the way the information is collected and categorized. For this reason, data from the Census and the Grand List cannot be compared directly. However, both sources can be informative about the composition of housing stock.

In the 2000 US Census, 61.9% of Warren's 2,078 housing units were reported to be used for seasonal or recreational use only. This coincides with the Grand List, in which 63.6% of the housing stock was reported as being reserved for seasonal use (see below). Only 742 housing units were reported to be occupied at

the time the census was taken. Table 4.7 shows that Warren has the largest proportion of seasonal units to year-round units in the valley. Additionally, 69.6% of the all of the seasonal housing in the valley is in Warren.

In the fall of 2004, there were 2,095 dwelling units of all types listed on the Grand List of properties. Fifty-five percent of those units were held as condominiums, 45% were categorized as single-family units (which includes duplexes and multi-family units), and 2% were mobile homes. The Grand List does not count apartments or other multi-family units separately. In the Grand List, 763 units were listed as year-round residences and 1,332, or 63.6%, were listed as vacation properties.

Table 6.4 provides a breakdown of Warren's housing stock, by type, for the year 2004.

Warren's existing Land Use and Development Regulations serves to encourage housing diversity. As required by state statute, the town does not discriminate against manufactured housing (mobile homes). Current density standards allow for one dwelling on one acre and accessory dwellings are permitted as conditional uses throughout much of town. Multi-family housing is also permitted in much of Warren, and higher density zoning districts have been established in the vicinity of Sugarbush Village and the Lincoln Peak area.

Table 6.3 Comparative Year-Round and Seasonal Housing Units, 2000

	Occupied Number	Occupied % of Total	Vacant Number	Vacant % of Total	Seasonal or Recreational Only Number	Seasonal or Recreational Only % of Total	Total Housing Stock
Fayston	484	53.8%	416	46.2%	401	44.5%	900
Waitsfield	734	80.8%	174	19.2%	159	17.5%	908
Warren	742	35.7%	1336	64.3%	1287	61.9%	2078
MRV Total	1960	50.4%	1926	49.6%	1847	47.5%	3886

Source: US Census 2000

Table 6.4 Composition of Housing Stock, 2004

	1998	2004
Single Family Units	854	946
Mobile Homes	42	38
Condominiums	1126	1146
Other Multi-Family	42	n/a

Source: 1998 and 2004 Warren Grand List Abstract

Growth in the Housing Stock

Housing development in the past decade

has not kept pace with growth in the town's year-round population. Between 1990 and 2000, Warren's year-round population increased by 43.4%, while the housing stock grew by only 17%. This may indicate that despite the high proportion of seasonal units in Warren, such units are being converted to year-round

use. In 2000, housing in Warren accounted for 53.5% of the valley's total housing stock, but only 38.8% of year-round housing.

Historically, the majority of Warren's housing development has occurred in the vacation home market. The share of the housing stock comprised of vacation homes grew from 25% of all dwellings in 1970 to a peak of 68.4% in 1990. The number has since dropped to 61.9% in 2000. From 1980 to 1990, the vacation home stock grew by 43.6%. Between 1990 and 2000, the number of units being used as vacation homes actually decreased by 3.5%, while the number of residences being used year-round increased by 20.5%. This, coupled with a 43% population growth rate, indicates that

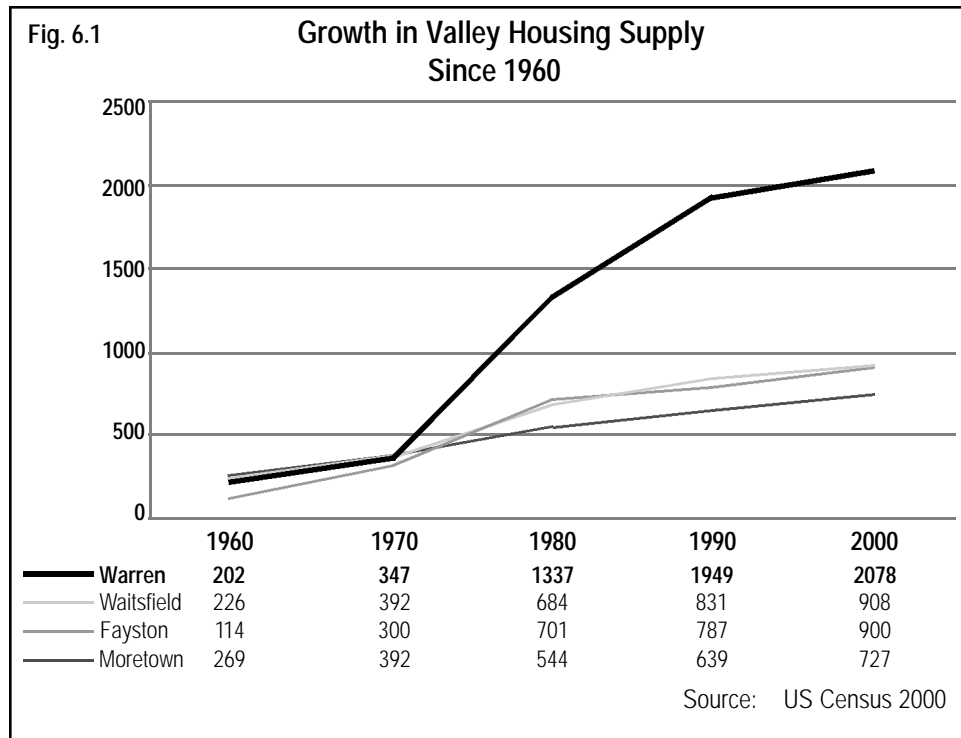
vacation homes are being converted to use as year-round homes at a significant pace.

Figure 6.1 presents the growth in the housing supply in the communities of the Mad River Valley since 1970. Warren's growth trend has

been significantly different from that of the other valley communities.

Table 6.5 describes the change in housing units in Warren, Washington County, and Vermont. Between 1980 and 1990, Warren experienced a 45.8% increase in the number of housing units. In contrast, between 1990 and 2000,

Warren saw a significantly slower rate of building, 6.6%. This was lower than that of both the county and the state.



Distribution of the Housing Stock

The town is characterized by a few areas of dense population surrounded by large areas of low density housing or undeveloped land. This historic settlement pattern reinforces the town's rural character. Two major population centers are located at Warren and Sugarbush villages, and development concentrations occur at the intersection of the Sugarbush Access Road and German Flats Road, the foot of the Sugarbush Access Road, in the vicinity of West

Table 6.5

Housing Unit Change, 1980-2000

	1980	1990	2000	Change #		Change %	
				1980-90	1990-00	1980-90	1990-00
Warren	1,337	1,949	2,078	612	129	45.8%	6.6%
Washington County	22,113	25,328	27,644	3215	2316	14.5%	9.1%
Vermont	223,154	271,216	294,382	48,062	23166	21.5%	8.5%

Source: US Census 2000

Hill and Lincoln Gap Roads, Alpine Village, Prickly Mountain, and other locations in East Warren. In many areas, including the Northfield Mountain Range, along the steep slopes bordering the river valley, and the area south of Warren Village and Lincoln Brook, limited housing development has occurred due to rugged terrain, poor access and public land ownership.

Warren Village has not experienced much housing development in recent years. Sugarbush Village, which was the focal point for much of the rapid development experienced in the 1970's and 1980's, has also not experienced much development activity during the past ten years (this may be partly due to the lack of wastewater treatment capacity serving this area). The transfer of 57 acres from the Green Mountain National Forest to Sugarbush Resort has enabled Sugarbush Resort to plan for development of the base of Lincoln Peak. In 2004 the Warren Development Review Board issued a permit for a 66,600 gallon-per-day ("gpd") wastewater treatment facility and associated wastewater disposal fields. The extra capacity from this system is intended to serve an approximately 153 room lodge in the base area.

Alpine Village is, arguably, the town's third village. This development was subdivided into extremely small lots with little regard to physical features or development capacity in the early 1960's. Over the past two decades, many of the small lots have been merged to form adequate building sites and the area has become a center for moderately priced housing. While this trend has provided greater variety to the town's housing stock, the poor soils and fragmented land ownership characteristic of the area pose a threat to public health and water quality from on-site sewage disposal. Efforts to secure a site for a future community disposal could prevent future problems.

Since the mid-1980's much of the housing development in Warren has been distributed through-out the town's rural areas. Increasingly, houses are being constructed in areas characterized by poor soils, steep slopes



and limited access. The Northfield Range, especially in the vicinity of the Roxbury Mountain Road, is the most obvious example of this trend. Should this pattern continue the town's rural character and scenic landscape could be undermined by a suburban development pattern. Through appropriate house siting, lot configuration and preservation of open space (i.e. undeveloped land), additional resi-

dential development can be accommodated without those adverse impacts. In 2001 and 2002, extensive changes intended to maintain the rural character of Warren were made to the Land Use and Development Regulations.

Seasonal Housing

Recent trends in the town's assessment records indicate a strengthening in the valuation of the stock of vacation homes. The value of a vacation unit is often based in part upon its ability to generate income from rentals. In Warren, the demand for lodging is principally a by-product of the demand for skiing, which highlights the relationship between ski area capacity and the supply of beds. Based on anecdotal information available from local realtors, a growing number of condominium units are being removed from the rental pool to be used strictly as second or seasonal vacation homes by the owners.

All of the issues related to the type of occupancy and property values associated with seasonal homes have been made even less certain by the enactment of a statewide property tax in Vermont. With the passage of Act 60 in 1997, and subsequently Act 68 in 2003, school-related property taxes on vacation homes in Warren and the rest of the state increased dramatically.

Act 68 made some changes in school funding that were designed to improve some of the unpopular provisions of Act 60. The "Sharing Pool" concept was eliminated. Properties on the Town's Grand List were divided into "homestead" and "non-residential." Non-residential properties include commercial and second homes and pay a rate that is unaffected by

local school spending. The homestead rate, which started at a lower rate than non-residential, is adjusted upwards for the amount of local spending above a state block per student rate (\$6,800 in 2004). Both tax rates are adjusted for the “common level of appraisal” which is a process designed to equalize property appraisals across the state. As can be seen from the tax rate history above, Act 68 has done little to slow the escalation of school tax rates.

Housing Affordability

Housing affordability is clearly a problem in Warren. The perception that the demand for vacation housing has acted to price local residents out of the market is widespread, although the extent of this problem is difficult to document. The generally low wages associated with the tourism industry exacerbate the situation (see Chapter 9). It is certainly apparent that the relatively affordable condominium housing stock is slowly being converted to year-round housing.

Responses to the 2004 Questionnaire distributed by the Planning Commission confirm community recognition of the need for affordable housing and indicate support of Town efforts to encourage affordable housing opportunities in Warren. Nearly 77% of respondents believe that “housing affordability is a problem in Warren”. When asked whether the zoning regulations should be amended to

allow an additional density bonus for affordable housing, 73% answered “yes”, and 61% were in support of the Town donating land for affordable housing. However, respondents did not favor the appropriation of Town funds to the creation of affordable housing.

Median Housing Costs

The availability of affordable housing is a problem confronting families from a wide range of social and economic backgrounds. It is generally accepted that housing is affordable when a household is paying no more than 30% of their income to provide it. Housing costs for renters include rent and utilities, while housing costs for homeowners include principle, interest, property taxes and insurance. Warren’s

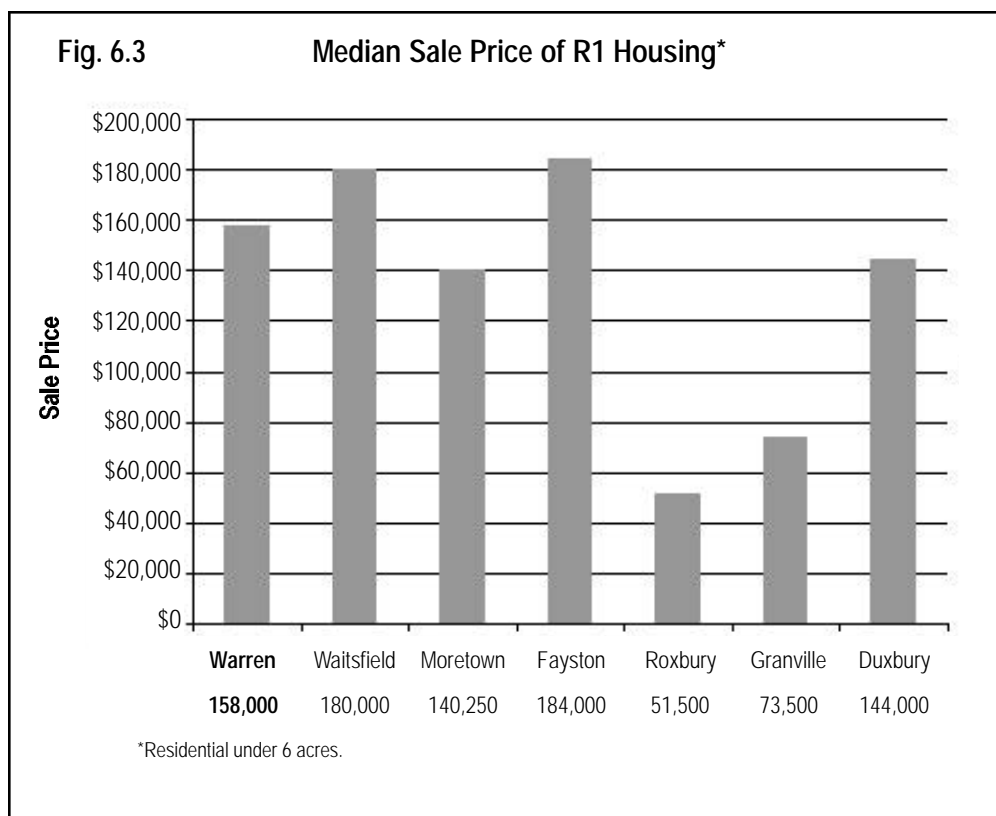
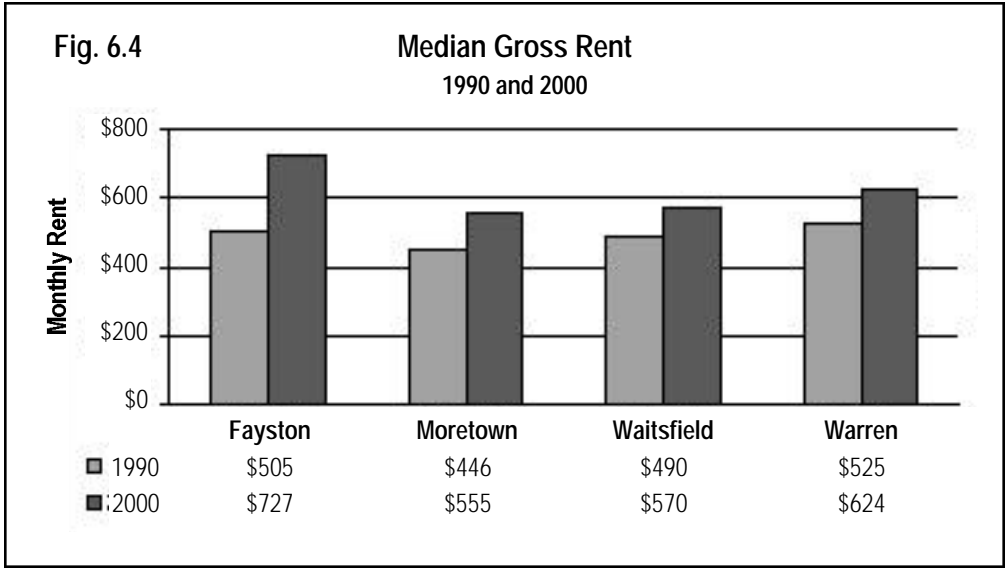


Table 6.6 Warren Tax Rate History

	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	
										Homestead	Non-resident
School	0.65	0.99	0.80	1.10	1.05	1.08	1.54	1.70	1.24*	1.82	1.87
Municipal	0.31	0.43	0.32	0.38	0.33	0.29	0.35	0.33	0.46	0.44	.44
Total	0.96	1.42	1.12	1.48	1.38	1.37	1.89	2.03	1.70	2.26	2.32

*Would have been substantially higher rate but for the contribution to the school budget raised by the Warren Education Fund.

Source: Warren Town Treasurer



not include seasonal units). It should be noted that the median value is not necessarily what the owner paid for the property. However, 66.0% of Warren households moved into their housing unit between 1990 and 2000, indicating that many probably paid close to the current median value.

Table 6.7 also indicates that Warren is becoming less affordable, particularly for renters. Between 1990 and 2000 the proportion of households paying more than 30% of their income on

housing costs are greatly affected by high utility costs due to the climate and a sizable tax burden.

It is clear that housing costs in Warren, on average, are high. Figure 6.3 shows the average fair market value for R-1 housing (owner-occupied houses on less than 6 acres) in Warren and neighboring towns in 2003. Figure 6.4 shows comparative median monthly rents in 2000 for all renter-occupied housing units. The 2000 median household income for Warren was \$47,438. With a down payment of 10%, or \$15,800, on the median house, monthly payments at 6% interest for 30 years would be \$852.56. Property taxes, insurance, and utilities would quickly add up to push the monthly housing obligation above the approximately \$1,200 the a household of median income could be expected to pay. However, in Warren any dependence upon both average income and housing costs provides an inadequate understanding of the present situation, because the actual wages paid in Warren are significantly lower than the median household income. This raises the question of the ability of workers to afford local housing on local wages.

Most of Warren's occupied housing units, 74.3%, were owner-occupied in 2000 (this does

housing grew. In Warren, 36.1% of rental households, and 33.2% of owner-occupied households paid more than 30% of their



income on their housing costs. 30% of income is considered a reasonable amount to pay for housing costs and is used as a standard for housing affordability for most government programs and studies.

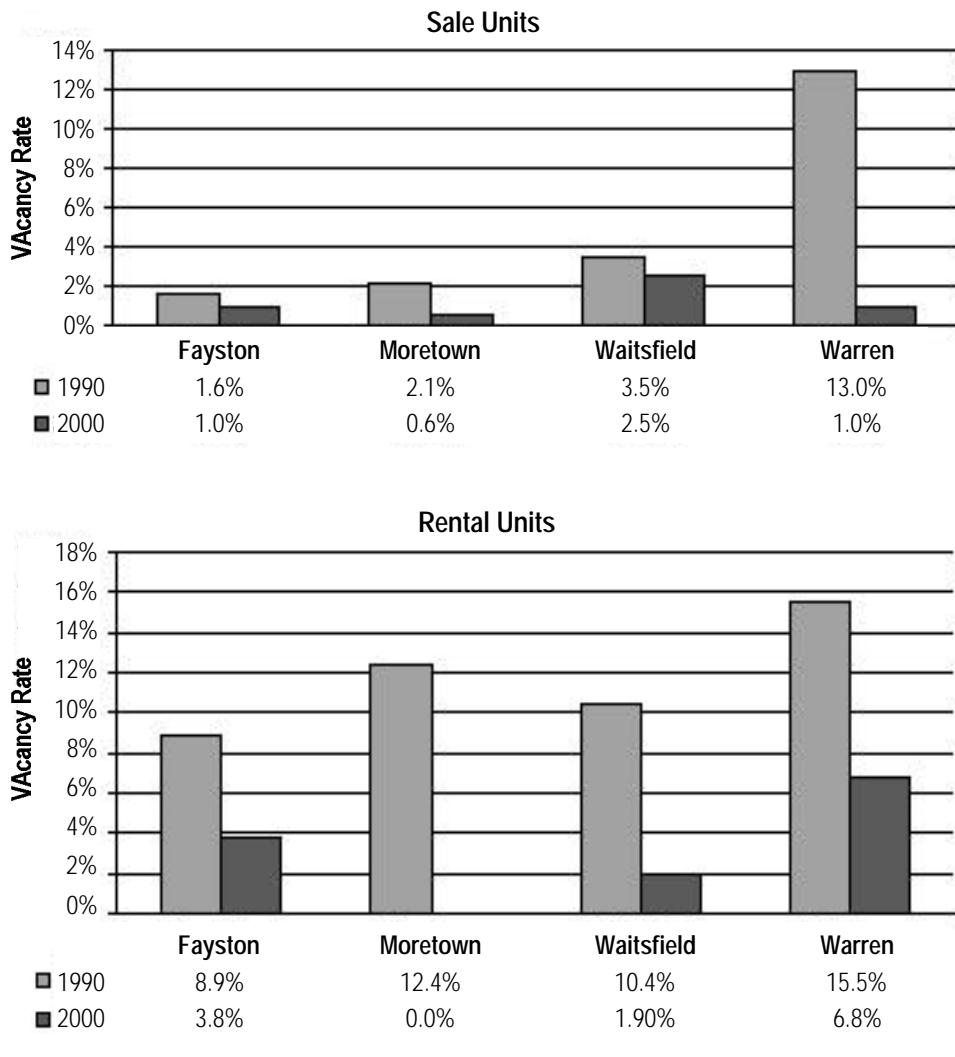
Another key indicator that reveals the extent of Warren's housing problem is the

Table 6.7 **Percentage of Warren Households**
Paying greater than 30% in Housing Costs, 1990 and 2000

	1990	2000
Rented	16.1%	36.1%
Owner-Occupied	21.9%	33.2%

Source: US Census 1990 & 2000

Fig. 6.5 Valley Vacancy Rates, 1990-2000



vacancy rate for both rental and sales units. Figure 6.5 shows that Warren’s vacancy rate for sale units dropped from 13.0% in 1990 to 1.0% in 2000. The rental vacancy rate also plummeted from 15.5% in 1990 to 6.8% in 2000. This data as well as other data supports the perception that there is not enough year-round housing on the local market to meet demand. Respondents to the 2001 University of Vermont Center for Rural Studies survey indicated that rental units are in such demand that they are rarely advertised, but transfer by word of mouth.

Planning for Affordable Housing

In 1990, the valley towns, the Mad River Valley Planning District, Sugarbush Resort and the Mad River Valley Housing Coalition (a non-profit advocacy group) worked together to study area housing needs. The result of these efforts,

A Future for Affordable Housing in the Mad River Valley, covered numerous housing issues including the need for more elderly, affordable, and employee-assisted housing. Since that time, Warren has implemented several of the recommendations in that report.

In 2001, the Warren Planning Commission received a grant to update this housing plan.. Mad River Valley Affordable Housing, Needs and Strategies 2001 Update was prepared by the Center for Rural Studies at the University of Vermont. This report showed that despite all of the efforts of the valley towns, housing became even less affordable over the course of a decade.

The Central Vermont Community Profile 2004 states that “it is estimated that Warren will see 44% increase in population from 2000 to 2020. Combined with the changing household sizes, however, it will take 384 more housing units – a 52% increase – to

allow residents to find reasonably priced housing.” See Chapter 6 for a more extensive discussion of housing affordability.

Ski Area Considerations

The issue of affordable housing, which in part results from the demand for second homes by non-residents, is exacerbated by the annual influx of transient employees necessary for the operation of the ski area. As a housing issue, the needs of these transient or temporary employees at Sugarbush may be separated from the issue of affordable housing to meet the needs of low and moderate income year-round residents, although these two groups frequently are in competition for the limited number of affordable dwellings. As Sugarbush implements its expansion plans, the increase in temporary employment _ as well as additional

permanent employees to staff an increasingly year-round resort can be expected to further stress the lower end of the housing market.

Indications from the most recent employee residency data maintained by Sugarbush and the MRVPD indicate that the ski area's employees, particularly seasonal workers, are living outside of the Town of Warren to a greater extent than in past years. For the winter 2003/2004 season, 31.9 % of Sugarbush's sea-



sonal employees resided in Warren. An additional 13.0% resided in Waitsfield and 17.4 % in Fayston, with 37.7% living in other surrounding towns. This may indicate a greater reliance on year-round Vermont residents for seasonal workers and less dependence of transient "ski bums" for peak season work.

Warren is aware of the impact of seasonal workers who cannot afford valley housing on neighboring towns, which must provide services, most importantly education, without enjoying the tax benefits of the ski area. With the passage of Act 60, however, some of the tax revenue from the resort activities will be redistributed to other communities' schools and costs may be borne by a much greater extent by Warren property owners.

The extent to which housing needs are being met by existing vacation units at Sugarbush Village has not been documented. Seasonal housing units offer the potential for use as year-round housing. Evidence from local realtors indicates that an increasing number of home buyers are considering condominiums in response to their inability to find affordable housing in the valley. However, availability is based on many factors, including the resale or purchase price. While on the one hand this may provide a source of affordable housing units, the practice is not without problems for the occupants. Most vacation housing

consists of high density units in the immediate vicinity of Sugarbush Village, the majority of which are in condominium ownership. These units are subject to high maintenance and association fees, and private water and wastewater disposal costs.

More importantly, most of these units were not designed or built to meet the needs of year-round family occupancy. Not only does such occupancy present potential difficulties for families with children, the transformation of vacation units could have a negative impact on the desirability of adjacent units as vacation units. The rental availability of these properties has diminished as many new owners have elected to establish their investment as a vacation home and thus do not make them available for short-term rental occupancy. Further, the widespread conversion of these units from vacation to year-round occupancy could undermine the goals of Sugarbush being a destination resort dependent, in part, on the availability of a large volume of tourist accommodation.

Housing Goals

Goal 6.A A sustainable rate of housing development to accommodate the town's projected population in a manner that does not overburden public services and is consistent with the town's rural character and natural resources.

Goal 6.B A diversity of housing types and prices in locations convenient to employment, town facilities, services, and commercial centers consistent with traditional settlement patterns.

Goal 6.C Access to safe and affordable housing for all Warren residents.

Goal 6.D Maintenance of existing affordable housing stock.

Objective 6.1. To promote, through the town's development regulations and related policies, the creation of a wide variety of housing types to meet the needs of Warren's residents.

Implementation Strategies

- a) Maintain those provisions of the Land Use and Development Regulations that encourage a diversity of housing types, including the following:
 - i. A minimum lot size of one acre in those areas of town appropriate for moderate density residential development.
 - ii. Provision for multi-family housing in those areas of town with good access to
 - iii. Public services and facilities.
 - iv. Provision for high-density housing, where feasible, in designated growth centers.
 - v. Continue to avoid any distinction between manufactured housing (mobile homes) and other single family homes.
 - vi. Encourage, through planned residential development (PRD) provisions of the Land Use and Development Regulations, creative site design which minimizes

development costs and allows for the creation of a mix of housing while preserving natural resources and open land. Consider allowing more flexibility in design than the current "Crossroad Hamlet" or "Farmstead Cluster" standards for PRDs that would be more suitable for Warren topography.

- b) Review Warren's existing Land Use and Development Regulations and consider making changes that encourage additional diversity of housing types, including the following:
 - i. Allow development in Warren Village in a manner that maintains its historic character. Consider allowing smaller lot sizes in the village to promote clustering, if there is extra septic capacity in the new system.
 - ii. Offer a density bonus for affordable housing through the PRD provision of the Land Use and Development Regulations, as permitted by State statute. Explore ways to yield a higher actual density than is currently permitted, such as density requirements that are not totally unit based. For example, for multi-family units determine density based on the impact of the number of bedrooms per unit, rather than assuming all units have same bedroom capacity, (i.e., a mix of 1, 2 and 3 bedroom units should have less impact than 3 units of 3 bedrooms each). Consider also allowing some areas in the Rural Residential district to be a receiving area for the Transfer of Development Rights (TRDs).
 - iii. Consider adopting an inclusionary zoning or subdivision provision to require that a percentage of the units or lots created as part of large residential projects are made available to people of low or moderate income at affordable prices. As an example, require that a minimum of 10% of the units shall be affordable units (at the same or an alternate site), or the developer shall be required to contribute into an affordable housing fund to be created. For projects of fewer than 10 units, contribution towards creation of a proportional number of affordable

units could be required.

- iv. Amend the Land Use and Development Regulations to make accessory dwellings a permitted use as recently required by state statute enacted in 2004, review the current maximum size limitation for an accessory dwelling to determine if it should be eliminated or changed, and clarify any other related matters. Make all other changes as required by statute.
- v. Adopt mobile home park standards to allow for the development of one or more small, well-designed mobile home parks in town.
- vi. Review zoning district designations and standards in and around Sugarbush Village and the base of Lincoln Peak and explore options for encouraging a mix of housing types, including year-round housing, in appropriate locations.
- vii. Investigate and consider implementing the following and other potential ideas that could foster affordable housing:
 - Automatic reduction or waiver of DRB fees and/or tax incentives for affordable housing.
 - Require upper story residential apartments for mixed use permits in villages and PRD in other districts.
 - For any commercial building or non-affordable residential housing building permit, require a proportional contribution into an affordable housing fund to be created. Create a contribution fee based on land transfer.
 - Establish a minimum density requirement and/or increase permit fees for homes exceeding a certain size.
 - Consider greater density bonuses for affordable housing PRDs or PUDs.
 - Utilize town owned land for affordable housing.
 - Inventory existing stock of affordable housing and implement measures to incent preservation of them.
 - Develop incentives for large landowners to spin off a small suitable tract for affordable housing.

c) Discourage actions by the town and other

entities that would result in the elimination of existing affordable housing stock.

d) Encourage participation in housing rehabilitation programs.

Objective 6.2. To use the town's budgeting and capital improvement program to support the provision of affordable housing for people of low and moderate income.

Implementation Strategies

- a) Pursue "dual goal" conservation projects to create affordable single family house sites in conjunction with the preservation of open space, farm land and natural resources.
- b) Analyze the potential for Alpine Village to be a residential growth center. Consider conducting a feasibility study to explore options for the safe and effective disposal of wastewater.

Objective 6.3. To plan for and promote, in cooperation and coordination with other local, regional and state organizations, programs to assist residents of Warren and the Mad River Valley to obtain affordable housing.

Implementation Strategies

- a) In conjunction with appropriate regional and state agencies and non-profit organizations, encourage the development of subsidized housing, especially senior housing, in and adjacent to Warren Village.
- b) Support the Mad River Valley Housing Coalition, or any other locally based non-profit organization dedicated to the provision of affordable housing, to address housing needs in the Valley.
- c) Through the Memorandum of Understanding between Valley towns, the Mad River Valley Planning District and Sugarbush Resort, ensure that expansion activities at Sugarbush do not adversely affect the cost and availability of housing in Warren and neighboring towns. To this end, continue to monitor the impact of ski area expansion on the Valley's housing market and take action to mitigate adverse impacts as deemed

appropriate.

- d) Support efforts to update the *2001 Mad River Valley Affordable Housing Study* when necessary to better reflect current conditions, needs and potential strategies.
- e) Support state and regional energy efficiency and weatherization programs for dwellings occupied by persons of low or moderate income.
- f) Ensure that housing developed as “affordable housing” includes appropriate legal mechanisms to ensure long-term affordability for citizens of low or moderate income, and that housing developed as “elderly housing” is designed specifically to meet the needs of elderly residents.
- g) Explore means with which to support local economic diversification to improve wages and, thus, the ability of local workers to afford local housing.
- h) Participate in joint, coordinated efforts to monitor and address affordable housing needs within the Mad River Valley (through the MRVPD) and the Central Vermont Region (through the CVRPC). Review regional housing recommendations, including any fair share allocations, included in the regional plan or related housing studies, for consideration in local housing programs and/or regulations as appropriate.

GETTING AROUND

Chapter 7

The principal mode of transportation in Warren is the private automobile. During tourist seasons, buses, vans, and taxi service are available. Bicycling is popular during the warm months. Walking, running and horseback riding occur throughout the year, primarily for recreation: they are limited as a means of transportation by the widely dispersed pattern of development in the rural areas, the great distances between growth centers, and the lack of sidewalks, paths or adequate shoulders along the main roads.

Due to the terrain and roadway capacity,

There are approximately 85 miles of roads in Warren. Currently, Warren owns and maintains approximately 44 miles of those roads.

most of the automobile trips to and from the Valley are made via Route 100 and 100B to Interstate 89, although East Warren residents frequently access I-89 via the Roxbury Mountain Road. The closest rail service is provided by Amtrak in Waterbury and Randolph. Vermont Transit offers bus service in Waterbury to points north and south on I-89.

Green Mountain Transit Agency, which runs the Mad Bus in the Valley, is a Montpelier-based public bus service that provides transportation for commuters, tourists and local residents. Commercial air travel is available at the Burlington International Airport. Small private planes can land year-round at the Barre-



Montpelier Airport in Berlin and during the spring, summer, and fall at Sugarbush Airport in Warren. Charter buses and taxi/shuttle services are offered as well, particularly during tourist periods.

Road Network

There are approximately 85 miles of roads in

Warren. Currently, Warren owns and maintains approximately 44 miles of those roads. They vary from heavily used regional collectors, to lightly used roads serving primarily residents, to roads that no longer serve automobile traffic. Half of the town's roads are paved (22 miles) and the remainder (22 miles) are gravel. The State maintains Route 100 (six miles). The remaining 35 miles of road are privately owned and maintained (see Map #6).

The town maintains an extensive network of collector and local roads, each of which is assigned a town highway number. Table 7.1 describes the town highways by class. These roads are designated as Class 2, 3, 4, or trail. Class 2 and 3 roads are defined for purposes of determining state aid and must be negotiable year-round, under normal conditions, by a standard passenger car. A Class 4 road is generally little traveled and used on a seasonal basis. They are usually the most marginal town highways, frequently narrower and more poorly drained than other highways in town. According to 19 V.S.A. 302, Class 4 roads and trails are defined as all highways not defined as Class 1, Class 2 and Class 3.

The state designates Class 2 roads, which typically provide access to neighboring towns; the Selectboard designates Class 3 and 4

Table 7.1 Warren Road Classifications by Town Highway (TH) Number

Road (s)	Mileage	Class	Function	Aid
Route 100	6	State	Major Arterial	Federal, primary
THs 1, 3, 4, 5 & 6	17	Class 2	Minor Collector	Federal, secondary
THs 7, 10, 18, 24, 29, 31-35, 44, 49 & 50	8	Class 4	Access	None
THs Remaining	28	Class 3	Minor Collector	Local & State

Source: Road Name Map prepared by MicroData, St. Johnsbury, VT 9/1997.

roads. State aid per mile decreases from Class 2 to Class 4; total aid depends on the number of highway miles a town has in each class.

The major traffic network in the Mad River Valley includes Route 100, Route 17, German Flats Road, and the Sugarbush Access Road and is referred to as “the loop”. The growth centers in the valley and in Warren are all served by these minor arterials (Route 100 and 17) and major collectors (German Flats & Access Road). By limiting the location of growth centers to areas served by this network, the town maximizes the use of the existing public investment and avoids the need to duplicate or enlarge upon the loop.

Traffic volumes have been monitored in the Valley by the Vermont Agency of Transportation, since 1975. Data collection has been sporadic, but counts clearly show a steady increase in traffic during the past 28 years. The average daily traffic in 2002 on Route 100 north of Warren Village and south of Irasville is about 4,900 trips per day, a 75% increase since 1977. Route 100 south of Warren Village has seen a 65% increase from 910 trips per day in 1980 to 1,500 in 2002.

Appendix B provides average daily traffic counts at Vermont Agency of Transportation (AOT) counters for the Mad River Valley from 1975 to 2002. As traffic volumes have increased, the ability of the loop to accommodate traffic has been strained. If, in the future, the existing road network is not sufficient to accommodate the traffic in Warren, the following options could be considered:

- road and intersection capacity can be expanded, either by physically enlarging the traveled way, adding turn lanes, or adding traffic controls or lights;
- the growth in traffic volume can be slowed through the introduction of alternative modes and/or restrictions on the use of

motor vehicles;

- the speed of the traffic can be reduced using traffic calming measures; and,
- new roads or intersections can be added.

There are five minor collectors that carry the largest volume of traffic within town and provide links to state roads. These Class 2 roads include Roxbury Mountain/Brook Road, Main Street, part of Lincoln Gap Road, Sugarbush Access Road and German Flats Road. The traffic on the Class 2 roads has remained fairly constant. The only road designated as a major collector in Warren is Route 100.

There are over eight miles of Class 4 roads in Warren. Their current status, function and character are valuable resources to the community. They provide access to scenic views, historic sites and structures, and rivers and streams. They also provide critical trail and access opportunities and are a crucial link in many recreational corridors. Class 4 roads are a finite resource that offers opportunities for biking, running, walking, horseback riding, skiing and snowmobiling. They also have historic significance in that they reflect the Valley’s early settlement and transportation patterns. Reclassification of Class 4 roads would result in increased road maintenance costs. Trails are rights-of-way retained by the town for limited- or non-vehicular use and are not available for upgrading.

Paying for Repairs and Maintenance

The federal and state governments pay for all of the costs of maintaining federal and state highways (Route 100). The town, with some federal and state financial assistance, is responsible for the repair and maintenance of Class 2 and 3 town roads.

According to the 2003 Annual Town Report,

Highway Department expenses were budgeted at \$568,169 or 35% of the Town's general expenses (excluding school budget) in FY 2003. The Highway Department budget does not include \$65,000 allocated for bridges. In 2003, 21% of the Highway Department's cost was covered by state aid for highways. The remaining 79% was raised from local property taxes. Although the Highway Department budget has increased over the past five years, it has remained approximately one third of the Town's General Expenses. This data indicates that the Highway Department budget has increased at approximately the same rate as the rest of the Town's General Expenses. The demand for increased highway capacity resulting from large scale development can have a dramatic impact on the town's budget. Additional challenges arise from the incremental increase in traffic and highway capacity resulting from many small developments over time. By maintaining a capital budget and active transportation planning program, in conjunction with neighboring towns, the town can anticipate highway needs and plan for them in an efficient and cost effective manner.

Bridges

In the past residents have requested that the town and state "celebrate the bridges" and help "make cool bridges" when reconstructing, rehabilitating or building new ones. As the character of Warren is closely tied to its geographic features, residents would like to see the bridges maintained or built to enhance, rather

than detract from, the town's rural integrity.

State-Owned

Table 7.2 lists the bridges in Warren that are owned and maintained by the State of Vermont Agency of Transportation (AOT). The data indicates that two of the five bridges have structural deficiencies.

Bridge # 172 - Route 100/Access Road

Bridge: AOT replaced the curbing, railing and deck of the bridge during the fall and winter of 2004. The bridge marks an important entrance to Warren and the resort area, providing an opportunity to define an attractive look for the Valley's roadway system. As a result of the flood in June 1998, the town bought approximately two acres of floodplain on the southwest corner of the confluence of the Mad River and Clay Brook. This property is adjacent to the bridge and offers an ideal opportunity to create a gateway for public recreation and river access.

Bridge # 173 over Mad River - Kingsbury Iron Bridge

Bridge: According to state officials, the iron bridge crossing the Mad River on Route 100 just south of Mac's convenience store needs to be reconstructed due to safety issues and technical deficiencies. Some maintenance work was completed on the bridge in 2001. AOT is not currently working on this bridge design or replacement and do not plan to through the year 2007.

Bridge # 169 over the Mad River on VT Route 100 just South from the Lincoln Gap

Route & Bridge #	Location	Description	Bridge Type	Deficiency	Status	Historic Registry?
VT 100 (00173)	3.1 MI S JCT VT17	Kingsbury Bridge	Steel Thru Truss	Structural	Under Design Recon	Possibly Eligible
VT100 (00172)	3.5 MI S JCT VT17	Route 100 /Access Road	Steel Beam	Not Deficient	Under Repair	
VT100 (00169)	5.7 MI S JCT VT 17	South of Lincoln Gap Road	3-Span Rolled Beam	Not Deficient	Rehabilitated in 2001	
VT100 (00167)	7.4 MI S JCT VT17	Stetson Brook & Mad River in Granville Gulf	Steel Beam	Not Deficient		
VT100 (00166)	8.3 MI S JCT VT17	Mad River near Granville Line	Steel Beam	Structural	Under Design Recon	None

Source: Central Vermont Regional Transportation Plan, 2003

Road: Bridge rehabilitation was completed during the fall of 2001, which replaced the deteriorated steel and repainted the bridge.

Bridge # 166 over Mad River on VT Route 100 near the Granville town line: The southern most bridge on Route 100 in Warren is considered structurally deficient by state officials. The concrete deck and bridge seat are in poor condition and require extensive rehab or preferably full replacement. The AOT is currently in the very preliminary design phase and does not plan to replace the bridge through the year 2007.

Bridge # 7 over Freeman Brook in Warren Village: The bridge on Brook Road just West of School Street needs to be replaced due to the deteriorated concrete deck and guardrails. Assuming the AOT gets the funding, the AOT will replace the bridge in 2005. Then the majority of the approximately \$ 710,000 project will be funded by AOT, with the town contributing the 20% matching funds.

Bridge # 6 over Mad River in Warren Village - Warren Village Covered Bridge: Some

repairs were completed on the Warren Village Covered Bridge after it was damaged in the 1998 flood. The 2002 Bridge Study indicates additional repairs to the guardrail and replacement of the western abutment are required.

The AOT has also served as project manager for the repairs to the Blueberry Lake Dam which were completed in 2004. The repairs, which began in the Spring of 2004, involved adding a new overflow culvert and 3 emergency spillway culverts. During construction the lake was drained and traffic was rerouted via the old location of Plunkton Road through what was the center of the lake. The project was made feasible with a \$500,000 grant from the Federal Highways grant program. A contractor was hired to design and repair the dam.

Town-Owned

In 2002 the town hired an engineering firm to conduct an inventory of all town-owned and

maintained bridges as well as culverts greater than six feet in diameter. Each bridge or culvert was given a priority number for repair (1 through 4) and an estimate of the cost to repair. The priority number is based on the time frame for repairs or replacement as follows:

Priority Number = Years until recommended replacement

1 = 0 to 1 year

2 = 2 to 5 years

3 = 5 to 10 years

4 = > 10 years

Table 7.3 outlines the results of the bridge and culvert inventory report. The report indicates that ten of the seventeen bridges and culverts inventoried need to be repaired or replaced within the next five years.

Scenic Roads

In 2002, the Warren Planning Commission conducted an inventory of the scenic qualities of all the town highways. The study was prompted by concern from Warren residents about the maintenance of gravel roads. Guided by the Vermont Field Guide titled "Designating Scenic Roads" prepared in 1979 by the Vermont Transportation Board, the Planning Commission determined that 23 roads in Warren were eligible for the scenic designation. The Selectboard held a number of public meetings regarding the maintenance of roads and the Planning Commission's Scenic Road Inventory. At the strong recommendation of the public at the meeting, the Selectboard elected to amend the current road ordinance to include a public notification process when any major change to a Town highway is contemplated.

Road Access Management

The efficiency and safety of all town roads are directly affected by the frequency and location of points of access or curb cuts. The design of curb cuts also is important in terms of drainage and road maintenance. Some access management methods are appropriate to



Table 7.3 Results of the Town Maintained Bridge and Culvert Inventory Conducted in 2002

Bridge # (See map #6)	Description	Problems	Priority Group*	Estimated Repair Costs
B21	Culvert on West Hill Road over Bradly Brook	Need a guardrail, slope stabilization on upstream side, headwalls and a wing walls upstream. Some rust.	1	\$45,000
B29	Culvert on Inferno road over Clay Brook.	Downstream headwall completely undermined by vertical drop.	1	\$13,000
CB6	Bridge on Covered Bridge Road over Mad River.	West abutment needs surface repair. Approach guard rails need replacing.	2	\$20,000
B7	Bridge on Brook Road over Freeman Brook.	Inadequate cable guard on North side and steel beam guard on South side. Beams are rusted with some loss. Scheduled to be replaced.	2	\$710,000
B14	Culvert under Access Road over tributary to Clay Brook.	Crack in pavement from settling, washout at outlet, erosion upstream, drop at outlet, bulge in culvert.	2	\$11,732
B24	Bridge on West Hill Road over Bradley Brook.	Undermining of wingwall. Inadequate size and needs replacing.	2	\$70,000
B26	Culvert on Sugarbush Access Road over tributary to Clay Brook.	Bulge in culvert, mastic coating deteriorated, undermining downstream from drop off.	2	\$11,500
B27	Culvert on Sugarbush Access Road over tributary to Clay Brook.	Bulge in culvert, mastic coating deteriorated, and needs guardrail, some rust.	2	\$11,000
B30	Bridge on Main Street over the Mad River.	Wing wall cracked, deteriorating abutments, and wing-wall footings. Needs replacement in 2 to 5 years.	2	\$50,000 for temp. repair, \$294,300 for replacement
B32	Bridge on Main Street over Freeman Brook.	Deck in poor condition, exposed footings, abutments and wingwall leaning outward.	2	\$203,400
B5	Bridge on Brook Road over Freeman Brook.	Removal of upstream sand bar. Remove and replace bridge rail and approach rail.	3	\$5,500
B11	Culvert on Senor Road over Freeman Brook.	Vegetation and gravel at inlet to culvert blocking flow. Needs a guard rail.	3	\$3,200
B15	Bridge on Plunkton Road over Freeman Brook.	Remove gravel bar upstream. Monitor wingwall and abutments.	3	\$1000
B1	Bridge on East Warren Road over Unnamed tributary to Folsom Brook	Should be monitored. Some undermining of the upstream abutments.	4	0
B3	Culvert on Lincoln Gap Road over Lincoln Brook	Some rust, no work required.	4	0
B4	Culvert on Lincoln Gap Road over Lincoln Brook	Add guard rail. Overall good condition.	4	\$3,000
B18	Culvert on Golf Course Road over Clay Brook.	Some rust.	4	None

*Priority Number = Years until recommended replacement

1 = 0 to 1 year

2 = 2 to 5 years

3 = 5 to 10 years

4 = > 10 years



residential development, some to non-residential development, some equally to both. Some specific standards cited in the 2003 Central Vermont Regional Transportation Plan for improving access management include:

- minimum sight distance at a driveway or street intersection;
- maximum number of driveways per lot;
- minimum distance between driveways and minimum distance between driveways and nearest intersection;
- mandatory access to a minor road, such as frontage/service road or a common internal street
- mandatory location of access on corner lots;
- mandatory shared driveways;
- mandatory connections (immediate or future) to adjacent properties;
- minimum and maximum driveway width;
- minimum driveway (throat) lengths;
- minimum corner turning radius;
- left turn or right turn ingress lane;
- driveway turnaround area (for small existing lots fronting the corridor);
- minimum or maximum on-site parking, shared parking, and parking design;
- minimum area and/or bays for loading and unloading; and,
- landscaping and buffers to visually define and enhance access points.

Many of these requirements have been incorporated into the Land Use and Development Regulations and the standards for curb cut permits. Consistent and comprehensive access management policies are necessary to balance the needs of motorists, pedestrians, bicyclists, and other users of the roadways system to travel in safety and with sufficient mobility.

Traffic Calming

Techniques to better control traffic speeds, enhance pedestrian safety, and improve the overall environment are commonly referred to as traffic calming measures. These measures include narrow vehicle traffic lanes, wider sidewalks, medians, on-street parking, roundabouts, gateways, splitter islands, plantings and street furniture.

Traffic calming in Warren Village has been studied numerous times, most recently in 2001 when the Selectboard requested the Planning Commission study the feasibility of a Sidewalk and Traffic Calming plan in Warren Village. With grant money received from the Department of Housing and Community Development AOT, the Planning Commission hired LandWorks, a landscape architecture firm, to consult on the project. Phase I of the

Traffic calming in Warren Village has been studied numerous times, most recently in 2001 when the Selectboard requested the Planning Commission study the feasibility of a Sidewalk and Traffic Calming plan in Warren Village.

feasibility study determined the location of town owned right-of-ways throughout the village and recommend the best alternative for the location of sidewalks, traffic calming devices, lighting, signage and streetscape. Phase II expanded on Phase I with more specific designs for traffic calming, signage and lighting as well as a report explaining the planning process, feasibility analysis, archaeological study, estimate for construction, and recommendations. The Warren Village Pedestrian Enhancement Plan is the result of Phase II.

Although there has been limited support to implement the entire pedestrian plan, the traffic calming aspect has remained a high priority

by both the Selectboard and village residents. Should the Selectboard decide to implement any part of the plan, the State of Vermont Bicycle and Pedestrian Enhancement Grant Program should be pursued as a funding source.

Traffic speed has also been a concern at the entrance to Sugarbush at Lincoln Peak. As a result the parking lot expansion permitted in 1997, Sugarbush is required to maintain 100 to 150-foot wooded buffers to help maintain the forested gateway to the ski resort, Sugarbush Village and National Forest. Signage and reduced speed limits have also been included in these plans.

Pedestrian and Bicycle Travel

The existing road network, especially VT Route 100, serves as an important bicycle corridor. Cyclists enjoy the Mad River corridor for recreational as well as racing pursuits.

The bicycle lane was created on VT Route 100 between Warren Village and Irasville. This network is intended to serve the travel and



recreational needs of pedestrian, bicycle, and other non-motorized modes of movement.

The path network was most recently extended around the snowmaking pond and to the Riverside Park.

The objectives of the network are:

- to promote health and safety;
- to encourage alternatives to vehicular travel;
- to improve pedestrian and bicyclist safety;
- to afford access to open spaces;
- to enhance recreational amenities; and,
- to link the Valley's growth centers.

Trails linking the Warren elementary school with the Waitsfield and Fayston elementary schools have been investigated by the Mad River Path Association using money granted by the Agency of Transportation, Conservation Fund, Agency of Natural Resources, National Parks Service and the Vermont Youth

Conservation Corp.

Another area of town frequently used by pedestrians and cyclists is the Golf Course, West Hill, Inferno, and Access Road 3 mile loop as well as travel from the Lincoln Peak base area to the Sugarbush Inn and condos. This poses a safety concern since none of these roads have sidewalks or paths and some are narrow and windy. To help alleviate the safety issue, the permit for the Lodge at Lincoln Peak, which is being redesigned, requires Sugarbush Resort to install paths on property owned by the resort linking the base area to the Sugarbush Inn.

Since Sugarbush Resort does not own all of the property between the base area and the Sugarbush Inn there will be gaps in the path. To help remedy this situation, any permit issued at Lincoln Peak will probably require that Sugarbush encourage adjacent property owners to link onto the path at their own expense.

Parking

A lack of parking has been cited as a problem in Warren Village. It is expected that a thorough analysis of parking needs and opportunities in Warren Village will be undertaken by the Planning Commission in the near future.

Residents have also expressed concern about parking at the base of Lincoln Peak. Some of these concerns should be addressed through the Lincoln Peak permitting process as it continues. As a condition of the previously issued permit, Sugarbush is required to increase the number of parking spaces to 1650, which is an increase of 282 spaces.

Travel Demand Management

Traffic congestion is greatest during the peak ski season and several peak holiday events (4th of July, Labor Day and Columbus Day weekend). Not surprisingly there is a direct correlation between the annual number of skier visits and the annual number of vehicular trips. During the peak events it may be appropriate to implement a travel demand management program. A program could include public transit, ride share facilities, flexible-time for employees and skiers (i.e. promote morning skiing with a half day A.M. ticket), pedestrian and bicycle facilities.

Public Transit

Because of the importance of tourism to Warren's economy, public transit designed to alleviate the high volume of tourist- and ski related traffic is important to the Town of Warren. The Mad River Valley Transportation Advisory Committee (TAC), formed under the auspices of the CVRPC, continues to work to bring year round transit services to the Valley, including Warren Village, Sugarbush Resort, Route 100 in Warren, and the Sugarbush Access Road.

Several different entities have served Warren's transit needs since 1999. Wheels Transportation Service provided public transportation services in the Mad River Valley

The "Mad Bus" as the local service is known, operates five routes in the Valley during the winter months serving Sugarbush Ski Resort, Mad River Glen, Warren Village, Waitsfield Village and Irasville.

between 1999 and the summer of 2002. Their successor, Alpha Transit, managed the service for the 2002-2003 season. In the summer of 2003 transportation service in the Valley was absorbed by Chittenden County Transportation Authority. It is now part of the Green Mountain Transit Agency, CCTA's Washington County public transportation provider. GMTA is also operating in Waterbury and Montpelier, which should facilitate adding connections as the service grows.

The "Mad Bus" as the local service is known, operates five routes in the Valley during the winter months serving Sugarbush Ski Resort, Mad River Glen, Warren Village, Waitsfield Village and Irasville. The MadBus stops at regular locations along the routes, and will stop anywhere along the established routes by request. During the ski -season eight buses operate daily beginning as early as 7AM at with service extending to 4:30 PM on most routes. On Saturday nights one bus remains in service until to 2AM for the convenience of locals and tourists who choose to visit the Valley floor for entertainment. The bus operates at reduced hours during the off season. Schedules providing details of all routes are distributed throughout the Valley in November for the winter season and in April for summer service.

The annual operating budget for the Mad

Bus is approximately \$310,000. The State provides 80% of the funding through the AOT. The majority of the required 20% local match comes from Sugarbush and contributions from several other local businesses. In November 2002, the AOT arranged for the acquisition of buses to establish a new transportation service. The cost of purchasing the vehicles was covered 80% by Federal funds, 10% by State funds, and a local match of 10%. The local match was raised by contributions from Sugarbush, each of the three towns and the Mad River Valley Chamber of Commerce business community

The Central Vermont Regional Transportation Plan recommends expanding



the Mad Bus service to Harwood Union Middle and High School, Moretown Village as well as developing a connector shuttle to Montpelier, Waterbury and Burlington.

In 2002, a *Short Range Transit Plan for Mad River Valley* was prepared to determine the feasibility of public transit. The plan includes survey results of residents, visitors and business executives; alternative service concepts; financial and ownership analysis; and recommendations for implementation. Under the proposed transit system set forth in the transit plan, Warren would be served primarily by year round service from Sugarbush Village to Waitsfield Village/Irasville along the Access Road and Route 100.

Linking the Valley's key growth centers is an important component of the transit system, especially with plans for more four-season resort development at Sugarbush. There also would be hourly connections between Sugarbush Village and Warren Village throughout the ski season (November through April). The Warren Village service was included in the Transit Plan in large part because it offers a connection from the Warren School to

Sugarbush Village, Mad River Glen and Waitsfield Village/Irasville.

Air Travel

The Sugarbush Airport in Warren is privately owned by Granite Intersection, Inc. but is open to the public. The facility was built in 1963 by local flying enthusiasts. During the six warm months of the year, it is leased and operated by the Sugarbush Soaring Association, Inc. The Association is a nonprofit corporation that provides glider flight instruction and scenic rides to the public as well as soaring services (tows, rental and flight instruction) to its club members. The airport is leased to Ole's Cross Country ski operation during the winter half of the year.

The airport is located on the East Warren plateau at an elevation of 1470 feet above sea



level. It has a single paved 2700 foot runway with grass areas suitable for landing on either side. Aviation fuel is available for piston aircraft only. No jet fuel is available. A few outside tie downs are available for local and visiting small aircraft. A limited number of privately owned hangars house local aircraft. A larger hangar provides limited storage and occasional maintenance services to other aircraft. This is also the home of an air show business that puts on air shows periodically all over the New

England and New York area. A small, popular restaurant in the airport administration building offers breakfast and lunch on weekends and a limited lunch during the week. The peak use period is from July 4 to September 15. The off-peak period accounts for approximately one-third of the total traffic.

Interstate and international flights are available within an hour of Warren at the Burlington International Airport. Small private planes can also land year-round at the Barre-Montpelier Airport in Berlin and the Burlington International Airport.

Regional Coordination

It is important that local land use and transportation decisions are considered in the context of the regional transportation network that serves Warren. In addition to working with neighboring communities to plan for alternative transportation modes, such as public transit, it is important to consider local highway matters in a regional context.

The town has attempted this through ongoing participation and support for the Mad River Valley Planning District's and Central Vermont Regional Planning Commission's (CVRPC) transportation planning efforts, including consideration of the traffic impacts of ski area development at critical Valley intersections, such as Routes 100 and 17 in Waitsfield. CVRPC also organizes the Transportation Advisory Committee for the region. Other attempts to consider regional impacts of local decisions include warning signs and other means of directing heavy traffic to use paved roads, for example Sugarbush Access Road and Route 100, rather than high maintenance cost gravel roads, Lincoln Gap or Roxbury Gap Roads.

Skier and other tourist traffic visiting Warren may adversely affect residential properties in nearby Moretown, Waitsfield and Middlesex Villages and the Town of Duxbury, and may encourage commercial strip development along Routes 100 and 100B. Supporting the transportation planning efforts of the Central Vermont Regional Planning Commission is an important means of addressing regional concerns.

Transportation Goals

Goal 7.A Maintain and improve a transportation system that is safe and efficient.

Goal 7.B Minimize transportation energy consumption and trips.

Goal 7.C Support regional efforts to provide and maintain systems that meet the needs of all segments of the population.

Objective 7.1. To direct growth to specified centers served by the existing main road network and limit growth in the remainder of town.

Implementation Strategies

- a) Reinforce existing centers at Warren Village and Lincoln Peak/Sugarbush Village.
- b) Continue to promote the principal use of minor arterial highways, specifically Route 100, and major collectors, specifically the Sugarbush Access Road and the German Flats Road, for recreation-related traffic.
- c) Upgrade roads in relation to the desired scale and capacity of growth centers and limit large scale development outside of designated village centers.
- d) Maintain the scale, rural quality, and capacity of secondary roads during improvement and maintenance procedures.
- e) Develop and carry out a program for roadway and intersection improvements, as needed, along the network of major collector roads. Fund necessary improvements in part through developers' contributions in the event that existing capacity is inadequate to accommodate additional development (e.g. level of service 'D' or less).
- f) Evaluate parking needs and opportunities in Warren Village and Sugarbush Village. Require the examination of underground or structured parking as part of any expansion at Lincoln Peak.

Objective 7.2. To manage roads and bridges to meet community-level demand and maintain rural character.

Implementation Strategies

- a) Develop a long-term roadway improvement program that assesses the town's transportation system's current conditions, desired conditions, deferred maintenance needs and levels of routine maintenance needed to sustain desired conditions.
- b) Through the Land Use and Development Regulations restrict curb cuts where alternative access is possible.
- c) Through the Land Use and Development Regulations, ensure that land use activities do not result in an undue adverse impact to traffic safety and the condition of town roads.
- d) Through curb cut permits and the Land Use and Development Regulations require that all new roads and all private road and driveway intersections with town roads meet minimum safety and design standards. Coordinate curb cut permits with Development Review Board decisions and long range planning.
- e) Work with the Vermont Agency of Transportation and legislature to ensure that all road and bridge construction shall balance capacity requirements with scenic impacts to ensure that rural residential roads and bridges are not over-built to urban standards.
- f) Working with VAOT during the rehabilitation of the Route 100 and Access Road bridge, enhance the bridge to create an attractive, safe entrance to Warren and Sugarbush Resort. Ensure adequate and attractive provisions are made for pedestrians and cyclists.
- g) Require the Kingsbury iron bridge be replaced with a bridge with adequate safety provisions for cyclists and pedestrians. Ensure adequate and attractive provisions are made for pedestrians and cyclists possibly including a pathway or pedestrian

crossing underneath the replacement bridge. Investigate the possible re-use of the iron truss.

- h) Ensure that the historic integrity of the Covered Bridge in Warren Village is maintained when it is repaired.
- i) To improve traffic flows during peak ski periods, encourage travel demand management techniques such as but not limited to satellite parking, use of public transit, or other options.
- j) Evaluate proposed bridge improvement projects and develop a purpose and needs statement for each bridge. Submit the town's proposals to Vermont Agency of Transportation and work toward implementation of the Town's desires.
- k) Encourage the use of Route 100 and the Sugrabush Access Road as primary means to access the ski resort at Lincoln Peak, specifically discourage the use of Roxbury Mountain Road, Lincoln Gap Road, West Hill Road and Golf Course Road.
- l) Preserve Class 4 roads for recreational use or downgrade status to that of a trail. Do not relinquish the public's interest in Class 4 roads.
- m) Adopt "Better Back Roads" and the Vermont Agency of Transportation 1996 Design Standards.
- n) Seek innovative funding sources to improve safety, congestion, erosion, and aesthetic problems on state and town highways and bridges (i.e., Public Lands Highways Program Discretionary Grants, Vermont Agency of Transportation Enhancements Program, Lake Champlain Basin Program.)

Objective 7.3. Provide alternatives to the heavy reliance on individual automobiles.

Implementation Strategies

- a) Require provisions for bicycles on any new or improvements to Class 2 or 3 roads and bridges.

- b) Coordinate and develop a path system with sidewalks to insure an integrated pedestrian network.
- c) Develop an aggressive ride sharing program.
- d) Support Vermont Agency of Transportation's striping and signage efforts to establish a dedicated bicycle lane on Route 100.
- e) Encourage the dedication of easements to permanently protect pathways through the subdivision and site plan review process.
- f) Support the continued operation of the Mad Bus or its equivalent and help implement the Short Range Transit Plan for the Mad River Valley (2002).
- g) Maintain the gateway for public recreation and river access at the property adjacent to the Route 100 and Access Road bridge with specific attention to pedestrians and cyclists. (Riverside Park)

Objective 7.4. Coordinate with local, regional and state entities to plan for Warren's transportation needs in a comprehensive manner.

Implementation Strategies

- a) Continue regional transportation planning through the Mad River Valley Planning District, Mad River Valley Transportation Advisory Committee and Central Vermont Regional Planning Commission.
- b) Continue to support the efforts of the Mad River Path Association.
- c) Coordinate with others to facilitate and implement a regional public transportation system.
- d) Explore ways to coordinate transportation planning, road maintenance and improvements with neighboring towns.
- e) Work with neighboring towns to ensure that proposed developments in those towns will not overburden Warren's transportation system.

SERVING THE COMMUNITY

Chapter 8

Community services, facilities and utilities are provided to meet the needs and desires of present and future residents and visitors to Warren. Some of the services and facilities are provided by the Town; others are provided in partnership with regional or state governments, volunteer organizations, and private corporations. They include administration and general services, education, emergency services, health care, senior services, child care, recreation and cultural activities, public lands, wastewater, water supply, solid waste management and communications. Some community services related to the social and cultural aspects of community life also are includ-



This chapter briefly describes Warren's emergency services, community services, public facilities and utilities and their respective capacities. It also describes their costs and some of the factors underlying the Town's ability to pay for them.

ed in this section.

Each facility or service addresses a public need. The level of service is affected by population and economic changes. Depending on the type of facility and its capacity, population changes can result in efficiencies or economies

of scale; deterioration in the level of service; or the need for new, upgraded, and/or expanded facilities.

Growth patterns also affect the provision and cost of community facilities and services. Studies have found that serving scattered development and sprawl is more costly than concentrating growth in villages and neighborhoods (residential clusters). Well-planned and well-designed land use can improve the efficiency of providing

public services and reduce costs.

This chapter briefly describes Warren's emergency services, community services, public facilities and utilities and their respective capacities. It also describes their costs and some of the factors underlying the Town's ability to pay for them. Together they provide a foundation for shaping growth so that desired levels of service are maintained or enhanced without placing an undue financial burden on taxpayers.

Municipal Services

Administration

The Town is the second largest employer in Warren with 12 full-time and 6 part-time employees. The Town Clerk, Lister and Treasurer are full-time, elected positions responsible for managing the office, town records, and accounts. (see table 8.1)

**Table 8.1 Administration Cost Summary
1999-2004**

Year	Cost	Percent Change
2000	\$284,322	7%
2001	\$367,921	29%
2002	\$352,396	-4%
2003	\$371,460	5%
2004 (budgeted)	\$444,218	20%

Source: Warren Town Report 2000-2004,

Warren town government is heavily reliant on citizen volunteers. Warren is governed by a five-member Selectboard that meets on a regular basis. In addition to the elected Selectboard, the Town appoints and maintains a seven-member Planning Commission, a five-member Development Review Board, a five-member Conservation Committee, a Cemetery Commission, a Library Board, a Recreation Commission, and additional groups and committees who spend thousands of hours each year in community service.

Cost of Government

The cost of government has grown as Warren has equipped itself to respond to sophisticated demands and has embarked upon the replacement of its equipment, facilities, and structures. Also fueling the rise in costs has been an upward trend in the cost of education, both at the local level and at the state level as a result of Act 60. As shown in Table 8.2, annual expenditures have increased in recent years.

The Town has initiated a fiscal management process known as Capital Programming, whereby capital expenditures (one-time, non-recurring major costs for equipment, land purchase or construction) are projected over a six-year period. This allows scheduling such expenditures and structuring their financing to avoid a sudden, unanticipated "shock" to the tax rate. Assuming that growth in operating expenditures is spread out, either through timing, financing, or withdrawals from accumulated reserve accounts, the year-to-year fluctuation in expenditures should not be extreme. If, however, expenditure growth should exceed growth in the Grand List and other sources of revenue, the tax rate will rise.

Town Buildings

Warren owns nine public buildings. These are the Warren Fire Station, the Fire Station at Sugarbush, the Town Shed, the Ruby Blair House, the Warren United Church, Town Hall, the Municipal Building, Warren Elementary School and the old East Warren School. The maintenance of these buildings is funded through property taxes, rent and endowments.

The town maintains all of its buildings except the Ruby Blair House, the old East Warren School and the Warren United Church.

Ruby Blair House: The Town purchased the Ruby Blair House in 1997 due to its important location between the Town Hall and Municipal Building. A life lease was retained by Ruby Blair. A number of suggestions have been made as to the future use of the building including a library, a historical museum and/or additional town office space. The Planning Commission has initiated a planning process for the optimal utilization of the properties surrounding the Town Municipal Building.

Town Hall: The Town Hall meeting room, with capacity for 250, is used for voting, plays, meetings, parties and other presentations. In 1997, for the first time in recent history, Town Meeting was held at the elementary school due to the limitation of space and easy access. A number of voters expressed sadness at the change in venue from the historic Town Hall to the school but understood the need and attributed the change to "a sign of the times." The second floor of the Town Hall is rented for dances, aerobics classes, Grange meetings, and other gatherings. The basement dining room

**Table 8.2 General Fund Expense Summary
2000-2004**

Year	Costs	Percent Change
2000	\$1,714,466	+31
2001	\$1,558,829	-9
2002	\$1,506,752	-3
2003	\$1,523,976	+1
2004 (budgeted)	\$1,823,039	+20

Source: Warren Town Report 2000-2004

and kitchen accommodate 150 people. In 2003, the Selectboard began holding meetings in the Town Hall because the meeting room in the Municipal Building was converted to office space.

Municipal Building: The Warren Municipal Building contains the offices of the Town Clerk, Treasurer and Listers, the Selectboard's Administrator, the Planning Assistant, and the library. It also provides a secure vault for town records and other official documents. In 2003, the Planning Commission considered several alternatives for providing relief for what has been determined to be a critical space shortage in the office, vault and library of the Municipal Building, as well as the lack of handicapped accessibility. The option chosen after lengthy review was that of adding a second story over the current library, incorporating an elevator, and reconfiguring the other space to accommodate vault and office requirements. A bond vote on this option was rejected, however, and the town is presently reassessing possible solutions to this dilemma. In the wake of the failed bond vote, the Selectboard did decide to complete some necessary maintenance of the Municipal Building including replacing the failing furnace, removing some of the asbestos in the building and installing a gas fired heater for the second floor offices. The Warren Public Library is also located in the Municipal Building and also suffers from space limitations (Educational Services for more information about the Library).

East Warren School: Located at the Roxbury Mountain Four Corners in East Warren, the former East Warren School is currently being leased and renovated by the local, not-for-profit organization, Rootwork. Rootwork is an educational group dedicated to sustainable agriculture. Rootwork sub-leases the downstairs of the building to the School House Market, a nationally acclaimed specialty cheese business and school and broadcasts local radio station WMRW.



Long Term Plan for Municipal Facilities: The Selectboard requested the Planning Commission to create a master plan for the Warren municipal facilities. The objective was to establish a general plan and direction, i.e. a road map that describes how the municipal facilities should be used, where they should be located and how they can grow.

The Planning Commission presented its recommendations to the Selectboard on June 12, 2007. This recommendation was finalized by the Planning Commission following a November 4, 2006 Planning Charrette that was attended by over 50 interested Warren residents, community leaders, design and planning experts, Town officials and others. The overall vision for a Municipal Complex in the Village includes the major municipal facilities – town offices, Library, Town Hall, possibly a Post Office – all adjacent to and opening onto a Town Green and all adjacent to parking that is located on the east side of the Municipal Complex, away from Main Street. The master plan, which includes both long term and short term elements, was adopted by the Selectboard at that June 12, 2007

meeting. The detailed description of the master plan is contained in Appendix E.

Educational Services

The Town of Warren is part of the Washington West Supervisory Union with the towns of Duxbury, Fayston, Moretown, Waitsfield, and Waterbury. Warren students in pre-K through grade six attend the Warren Elementary School in Warren Village. Those in grades seven through twelve receive their education at Harwood Union High School in Duxbury.

Warren Elementary School

The Warren Elementary School at Brooks Field has a capacity of up to 200 pupils,

depending on age configuration. The school was constructed in 1972 on the open classroom concept. Since then the building has been altered to create separate classrooms and to make the best possible use of available floor space. Funding for an addition was turned down by the voters in 1988. In 1991, the cafeteria was enlarged and space in the basement was renovated to accommodate separate classrooms for preschool and music. In 1992, a dormer was added to existing attic space to create an additional classroom on the second floor. In 1997, a second attic space was enlarged to create small classroom/offices for special education and speech and language instruction. The roof of the school was replaced in 1991.

On Town Meeting Day 2004, the Warren voters approved a \$150,000 bond vote to build a 17' by 32' stage onto the existing gymnasium at the Warren Elementary School. The stage will be used for public meetings, community concerts and theatrical performances, concerts by visiting artists and recreational and learning programs. The total cost of the project is anticipated to be \$175,000. The \$25,000 not covered by the bond will be raised through private donations and fund raising. The \$150,000 bond will add an estimated half a penny to the town tax rate.

School Enrollment

In 1998/99, 174 students were enrolled in kindergarten through grade six (K-6) at the Warren Elementary School. Pre-kindergarten enrollment was 16. For the 2003/04 school year, that number has decreased to 159 students in K-6, with 17 students enrolled in pre-kindergarten. The school has offered a two-day-a-week pre-kindergarten program to all four year olds since 1986, in the belief that "an ounce of prevention is better than a pound of cure." The School Board has felt that the earlier the school starts to help children develop well, the better their chances for success in school. In addition, state law through the Family, Infant and Toddler Project requires the school to identify and provide support for children from birth to three years who show a delay in development.

The school has capacity for enrolling an additional 30 students. The Warren School continues to have the highest enrollment of the

four elementary schools in the Mad River Valley and the highest in the Washington West Supervisory Union after Waterbury.

Based on the current population and Town births since 1998, the Warren School Board forecasts a declining total enrollment through 2008 (Table 8.3). Despite the significant rate of increase during the 1990's, the number of students in grades seven through twelve will even-

Table 8.3 Warren Student Enrollment Projections through 2008

Year	K-6	7-12	K-12
2003-2004*	159	129	288
2004-2005	156	133	289
2005-2006	150	133	283
2006-2007	139	135	274
2007-2008	127	144	271

* Actual Enrollment as of 2003. Figure does not include pre-kindergarten.

Source: Warren School Board & Washington West Supervisory Union

tually level out and decline in the next years. Enrollment in pre-K through sixth grade may drop to 127. Due to the declining enrollment and increasing cost of education, the Mad River Valley Planning District plans to study consolidation of the valley elementary schools.

In the Fall of 2003, Warren sent 129 pupils to Harwood Union High School. Total enrollment at the high school is 857. The core facility of the building (cafeteria, gymnasium, auditorium, etc.) is designed for 1,000 students. Students from Duxbury, Fayston, Moretown, Waitsfield, Waterbury and Warren attended Harwood. Seventh and eighth grade students from Duxbury and Waterbury now attend the Crossett Brook Middle School and as a result there is more space available at Harwood. In 2003/04, Warren students made up 17% of grades seven through twelve in the Washington West district. Table 8.3 shows the projected student enrollment for Warren through 2007/08.

The State of Vermont currently provides vocational education opportunities through a system of sixteen vocational centers serving local high schools around the state. The nearest center to Harwood Union High School is in Barre, and transportation opportunities are available for Harwood students to attend. Harwood does provide some vocational opportunities on site, although these programs are

limited. A local vocational education advisory committee is exploring alternatives for expanding vocational programs at Harwood in areas such as ski area maintenance, wood technology, culinary arts and for maintaining the transportation program to the Barre center.

School Costs

School enrollment is only one factor of many that drive the cost of providing a quality education. In 1999, there were 192 students enrolled at the Warren School; in 2003, there were 159. School funding is based on a per student formula.

Unfortunately, a 17% drop in enrollment does not reduce the need to insure, heat and maintain the building, operate the school buses, and provide administrative support. A drop in enrollment can make cuts in personnel the only viable option for savings. For example, the number of specialist teachers in areas such as art and music was reduced in 2003 by the equivalent of half a position (from 2.9 to 2.4), and the number of K-6 classroom teachers was reduced from 10 to 9.

Operation and maintenance costs for the school have increased steadily from \$104,471 in 1998 to \$119,128 in 2003 (approximately 2.5% annually.) These costs pay for the full-time custodian and a part-time assistant, along with fuels needed to heat and light the building and services needed to maintain it. Other costs, such as health insurance, continue to increase significantly.

Warren Public Library

The Warren Public Library, located in the Municipal Building, contains more than 7,500 cataloged items as well as over 500 non-book items. Currently the collection is at full capacity. Due to severe space limitations, the librarian must discard or give away a book for every book purchased. The library has initiated a

number of programs for town residents, including a story hour for pre-school children, a summer reading hour program for school-age children and occasional lectures and book discussions for adults.

The library interior was renovated in 2000 to facilitate the addition of an online public access computer. In 2002 and 2003, the

library received over \$36,000 in grant funds which were used for interior modifications, hiring a program director, and collection development. In addition to books and periodicals, the library now circulates videos, books on tape and CD's.

The Library is open 30 hours a week and is staffed by one librarian, one children's librarian, two staff members, and eight volunteers. Warren participates in the state

library programs and makes extensive use of the state Inter-Library Loan System, considerably expanding the available collection. In 2002, the library became a member of the Vermont Online Library which provides community residents access to online electronic information databases. Due to space constraints, the popular pre-school story hour was relocated to the Warren Town Hall in 2002.



Table 8.4

Warren Road Department Equipment Inventory 2003

Year	Equipment	Value
2003	Dodge Truck	\$27,000
1992	Mack Truck	\$50,000
1987	Mack Truck	\$50,000
1979	Mack Truck	\$20,000
2000	544E Loader	\$100,000
1994	Backhoe	\$99,000
2003	Grader	Leased
1988	Grader	\$50,000
2001	International	\$89,000
2000	International	\$89,000
	Reed Screen	\$30,000
	Roadside Mower	\$20,000

Source: Road Commissioner, 2003

While the library's circulation is decreasing slightly each year due to the increased use of personal computers, decrease in summer residents and the re-location of the pre-school story hour, the library has seen a rise in the use of the public access computer, audio/video materials, and library space for adult literacy instruction.

In 2003, the library completed its second long range plan. Goals to be addressed during the next five years include keeping the community abreast of new technology, promoting programs for all ages, working to broaden community involvement in the library, as well as continuing the work of the library development committee in its search to expand library space.

Road Maintenance

The Warren Road Department has a regular work force of five people. Part-time help is used as required for winter and flood emergencies. The Road Department and its equipment are housed at the Town Shed, a building of 1,600 square feet located off Brook Road in the Village. Table 8.4 lists the Department's equipment that has an approximate book value of \$20,000 or more.

Warren currently lacks a reliable source of gravel or winter sand to provide for the Town's



future needs. The need for a long-term supply of gravel and sand has a direct bearing on the Town's ability to economically maintain its roads in a manner consistent with the Town's rural character.

Prompted by the Planning Commission's Scenic Road inventory, the Warren Selectboard held a number of public meetings during 2003 regarding the maintenance of roads in Warren. The Selectboard opted to revise the Road Maintenance Ordinance to require public notice and a public review process prior to any significant changes in road maintenance.

Emergency Services

Warren Fire Department

The Warren Volunteer Fire Department has an active membership of 31 persons. Facilities include a four-bay station house and meeting room in Warren Village and a two-bay station house at Sugarbush Village. The Sugarbush Village station is slated for removal. A new three-bay station will be built in a new location by Sugarbush Resort. The new fire station is a condition of Sugarbush Resorts Lodge at Lincoln Peak permit and will be built when development at the Peak goes forward. Table 8.5 describes the emergency equipment housed at each station.

The Department has 3,500 feet of five-inch hose, 1,100 feet of three-inch hose, 1,900 feet of two-and-one-half inch hose, and 3,500 feet of one and one-and-three quarters. With its own equipment, the Department can provide a steady supply of water to a fire

Table 8.5 Warren Village Station Equipment Inventory

Year	Equipment	Replacement Date
1997	E-1 pumper	
1990	E-1 pumper	2010
1986	Chevrolet K30 (750 gpm pumper)	2006
1986	Chevrolet bread style van	
1969	American LaFrance 100' arial	
2001	3,500-gallon tanker	
1948	Ford 500 gallon per minute pumper, retired	
1890	Soda Acid pumper, retired	

Sugarbush Village Station Equipment Inventory

Year	Equipment
1994	E-1 pumper 1977 American LaFrance ladder truck

Source: Warren Fire Chief 2004

2,000 feet by road from a roadside water source, such as a stream or pond. The availability of mutual aid equipment extends this range to about 3,000 feet with pumpers relaying at 1,000 foot intervals. Beyond these distances fires must be fought by the tanker load from the nearest water source. Available ladders and water pressures extend the maximum height at which a fire may be controlled to 50 feet above grade.

Warren participates in a mutual aid program with Waitsfield and Moretown, making the personnel and equipment of these towns available in the event of a shortage. Continued growth in Warren will require additional measures to assure fire protection of any new multi-story construction.

Through the Town's regulatory process, the Fire Department has been able to require new dead-end roads to have a minimum turning radius of thirty feet (minimum for the larger equipment) and to increase the number of fire ponds available in rural areas.

However, because of an increase in the number of single family homes in these areas, the Department has identified a need to establish a hydrant system using larger bodies of water at high elevations.

As a condition of condominium complex development on the corner of the Access Road and the Golf Course Road, the Fire Department required the applicant to extend the existing snow making water line across the Access Road onto the Golf Course Road and install a fire hydrant. Eventually this line will be extended further down the Golf Course Road. The fire department has also required a number of developments in town to install gravity fed hydrants and sprinkler systems from on site ponds.

In March, 2005, the voters approved a \$300,000 bond for the construction of a fire pond at the gravel pit property off Route 100. A hydrant system will be installed from this

Table 8.6
2003 Incidents Requiring
Police Attention

Violent Crime	
Murder/Manslaughter	0
Sexual Assault	2
Robbery	0
Assault	6
Property Crime	
Burglary	26
Larceny/theft	45
Motor Vehicle Theft	5
Other Property Crime	17
Other Crime	
Illegal Drug Incidents	3
Disorderly Sonduct/Other	29
Traffic Incidents	
Fatal Crashes	0
Accident Investigation	13
Motor Vehicle Complaints	18
DUI Incidents	23
Miscellaneous	
Death Investigation	1
Runaway Juvenile	1
Assistance/Service Calls	185

pond to service Warren Village.

In 2004, the Fire Department successfully procured monies from a 2003 FEMA Homeland Security Grant to purchase and install a 40 Kw emergency power generator to provide inline backup electricity to both the Village Fire Station and the Town Municipal Building, with a future option to connect the Blair property and the Town Hall. This generator will provide emergency power for both buildings as needed within 8-10 seconds of a power failure. It will aid in both normal business power failures to maintain town operations, as well as in emergency situations in which radio communication, shelter, heat, hot water, and emergency vehicles and equipment are needed. Both the fire station and municipal building have kitchen and bathroom facilities, as well as ample space for a backup emergency shelter.

It is a goal of the Warren Fire Department to have an emergency plan for every building in town preplanned in a computer database. This

would include information such as nearest available water source, special needs residents, and evacuation plans large structures.

Police Protection

The influx of seasonal residents to the Town has made increased police protection an important issue. During the ski season there are special problems relating to traffic control, while during the off-season unoccupied seasonal dwellings are subject to vandalism and burglary.

The Vermont State Police Department is the primary law enforcement agency in the Town of Warren. Troopers stationed at Middlesex are responsible for the investigation of criminal and motor vehicle related incidents in addition to answering a wide variety of assistance and service related calls. Troopers are also respon-

sible for the reasonable enforcement of motor vehicle laws. Detectives assigned to the Middlesex station are responsible for all major criminal investigations, including arson. Moreover, detectives conduct all death investigations. Middlesex station personnel are dispatched from the Vermont State Police station location at Williston. All emergency 911 calls are taken at that location as well. According to the Vermont Area Crime and Police Service Report for 2003, the Vermont State Police responded to a total of 374 documented incidents on the Town of Warren. Table 8.6 shows the breakdown of the incidents into categories.

In 2004, the Central Vermont State Police Community Advisory Board was formed to work with the personnel of the Middlesex State Police station. A member of the Warren Planning Commission was appointed to be the Warren representative on the board. The primary responsibilities of the advisory board are to:

- 1) provide a voice for concerns related to law enforcement and public safety;
- 2) give recommendations and information on how to best serve the represented towns;
- 3) be a conduit for information exchange between the represented towns and the Middlesex station; and,
- 4) provide community advocacy on behalf of the Vermont State Police.

In addition to the Vermont State Police protection, Warren has contracted with the Washington County Sheriff's Department for traffic enforcement. Sugarbush also has an annual agreement with Washington County Sheriff's Department to assist with traffic control during the ski season and special events. Officers direct traffic at the intersections of Inferno and Sugarbush Access Road, Route 100 and the Access Road, and Routes 100 and 17.

Past studies have indicated that it was premature to create a Warren Police Department and that adequate services can be provided by

the Washington County Sheriff's Department and the State Police.

Mad River Valley Ambulance Service

The Mad River Valley Ambulance Service (MRVAS) is a non-profit corporation that has been providing emergency medical care since 1971. In 2001, MRVAS moved from the Waitsfield Fire Station to their own building on Main Street in Waitsfield. MRVAS provides 24-hour service to residents and visitors of the Mad River Valley, Sugarbush and Mad River Glen ski areas. The Service maintains two fully equipped ambulances, a rescue/extraction vehicle (not used for transport) that carries heavy equipment, a dispatch radio and field

radios, as well as a substantial amount of emergency medical equipment. Over the years, the service has grown considerably to meet the needs of the Mad River Valley community.

Since 1983 the annual number of calls has increased by 84%, from 244 to 448 in 2003. The average number of calls from Warren from 1998-2003 was 136. In 2003, the ambulance service responded to 145 calls

from Warren, which amounted to 31% of the total annual calls for the Valley.

The MRVAS has a highly dedicated volunteer staff of 60 people, many of whom have advanced emergency medical care training. Twenty attendants hold certification to perform advanced life support procedures. Another thirty-four volunteers are EMTs, who have over 100 hours of classroom and in-hospital training. The EMTs operate under a licensed physician based at Central Vermont Hospital in Berlin. All volunteers serve at least five 12-hour duty shifts per month and attend training monthly. In addition to the medical volunteers, a number of Valley residents volunteer their time as dispatchers and drivers.

MRVAS is funded by a combination of subscriptions, donations and fees for service. According to its president, the current levels of funding and facilities are adequate to address the demand for service. The Valley is fortunate to have this excellent volunteer ambulance



service, but it may become over-extended as area growth continues if provisions are not made for its support and/or expansion.

Community Services

Health Care

There are only limited health care facilities in Warren. The First-Aid Station located at the ski area provides treatment during limited hours each day during the active ski season and deals primarily with suspected fractures occurring at Sugarbush Ski Area. It is staffed with a physician who is associated with University Orthopedics of Burlington. Treatment is limited to x-ray diagnosis and the setting of simple fractures and ski-related injuries. At present, the nearest physician's offices are in Waitsfield.

Local Health Services

The Mad River Valley Health Center (MRVHC) in Waitsfield provides primary health care services to the residents and visitors to Fayston, Moretown, Waitsfield and Warren. The MRVHC is non-profit corporation governed by a community Board of Directors composed of individuals representing the towns of Warren, Waitsfield, Fayston, Moretown and Duxbury. MRVHC was incorporated in 1980 when a group of concerned citizens and businesses raised the funds to purchase the health center building and the medical practice from Dr. John Saia to secure accessible, family health care for the Valley towns. In 1986, MRVHC Inc. relinquished administrative responsibility for the existing practice and turned it over to Dr. Francis Cook. MRVHC continues to own the building and leases the space to the current medical practice.

The mission of the MRVHC is to provide a quality facility to insure the availability of local health care to residents of the Mad River Valley, neighboring towns and visitors. Dr. Cook, two nurse practitioners, two registered nurses, and a three person administrative staff, operate a comprehensive family practice that

provides health care to persons of all ages. The staff provides physical and gynecological exams, well child care, immunizations, lab work, diabetes and mental health care as well as timely response to illness, injury and accidents. In 1996, the Health Center received Rural Health Center designation further

enhancing the services available to Medicaid and Medicare patients.

Over its 23 year history, the practice at the MRVHC has served an estimated 70-80% of the population of the Mad River Valley at one time or another. Each month, Dr. Cook's practice sees an average of 600 patients and provides an average of 1050 patient procedures. Because of a 48% increase in the population of the Valley over the last 20 years, the health center building is strained to serve the increased demands. In 2003, the

board began a capital campaign for the purpose of raising money to construct a new and expanded health facility on the existing site. The new building will provide increased medical office space to more efficiently serve the needs of the current medical practice. A second floor will provide additional space for complementary health services, a health information resource library, as well as space to hold health and wellness workshops. The building is designed to fit aesthetically into the streetscape of the historic Waitsfield Village location.

A new health care facility, Mad River Internal Medicine, opened in Waitsfield in 2001. The center is owned and operated by Dr. Karen Endacott, M.D. who has lived in the Valley since 1999. Previous to opening her private practice, she worked in Barre and East Corinth clinics. In addition, Dr. Endacott has worked in medical clinics abroad in Bandipur, Nepal and Arusha, Tanzania. Dr. Endacott has special interest in community and preventative medicine, as well as women's health.

Hospitals

Hospitals serving Warren residents are Central Vermont Medical Center in Berlin, Gifford Memorial in Randolph, the Medical Center Hospital of Vermont in Burlington and



the Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire. Emergency after-hour service is available from a physician on call or at a hospital emergency department.

Additional Health Services

Other public agencies offer specific medical services to Warren residents. Those currently available are as follows:

Visiting Nurse Service: Home health care which includes therapy (physical, speech, occupational) and counseling, consoling the elderly; homemaker service (meals, shopping, house-keeping); 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 programs, day hospital and resident programs.

Senior Services

Mad River Valley Senior Citizens Incorporated (MRVSC) is a non-profit corporation that coordinates and provides services for the older citizens of Fayston, Moretown, Waitsfield and Warren. In December 1998 the Seniors purchased the former Valley Inn and converted the Inn to shared housing and a senior center. The Senior Center, named Evergreen Place, is located in Irasville within walking distance of a number of essential services. Evergreen Place offers 18 residential rooms with private baths, 6 of which are fully accessible, a large common area and a dining room that can seat 60. Evergreen Place is a shared housing facility for mobile senior citizens. In 2004, Evergreen Place began studying the feasibility of expanding and enhancing its facility.

The MRVSC has approximately 50 active members, and the lifetime membership cost is

only \$1. MRVSC provides a number of services including a meals program, a monthly blood pressure clinic, a foot clinic once a week, and Bingo four evenings per month. The meals program offers lunch on Tuesdays and Thursdays at Evergreen Place. In-home meals also are available Monday through Friday upon request. Funding is provided through a combination of local, state and federal grants and donated time and energy of Valley residents.

Child Care

During the 2002/2003 legislative session, the Vermont legislature passed a bill which included a new planning goal for municipalities. In June 2003, Public Act 67 amended Chapter 117 of 24 VSA (Municipal And Regional Planning And Development) to add goal 13, "To ensure the availability of safe and affordable child care and to integrate child care issues into the planning process, including child care financing, infrastructure, business assistance

for child care providers, and child care work force development." Child care in this context encompasses the care of children from birth to age twelve. Most families (especially single parent families) in Warren lead lives that require full- or part-time child care outside of their homes. It has been estimated that child care represents 17% of a basic needs budget for a Vermont family. The

accessibility, affordability and quality of child care also affects parents' ability to enter the workforce, be productive while at work and remain employed. The 2000 US Census reported that in 69.6% of families with children under the age of 6 in Warren both parents were employed. This indicates a potential need for child care services.

The elementary school also offers an after-school program and is used once or twice a week for "play group." Play group is a three-hour block of time when pre-schoolers play with each other under parental supervision. The school collaborates with the Family Center of Washington County to provide service to eligible children.



There are a number of private day care facilities in the Mad River Valley. In 2004, there were six licensed child care facilities in Warren. These six facilities have a total available capacity of 169 children. There may be other child care operations in Warren that are not licensed. The Vermont Department of Social and Rehabilitation Services requires any person who provides care for children from more than two families, other than their own, to be registered or licensed. Family day care home registration is for a care giver seeking to operate out of his/her private home. A care giver wishing to care for children in a building other than his/her home requires a state license. A registered care giver may provide care in his/her home to six children, including up to two children under the age of two at any one time. In addition to the six, he or she may care for up to four school-age children for not more than four hours daily per child. Children who reside in the home are not counted in these limits, unless they are under the age of two.

Sugarbush operates the largest licensed facility in the Valley. A licensed facility is allowed to provide care to a larger number of children and is subject to more stringent regulation and periodic inspection. Sugarbush has the capacity to care for up to 84 children. During 1998/99 non-ski season, the day care had an enrollment of approximately 15 children.

Less than 6% of the respondents to the 2004 Questionnaire indicated that they use child care. Most of these used facilities in Warren. Only 10% of the respondents using child care indicated the service was not affordable or that their needs were not being met (see Appendix A). More formal study into the availability and need for child care is required.

Recreational & Cultural Activities

While the recreation base of Warren rests



upon skiing and ski--related facilities, there have been recent efforts to increase year-round tourism through cultural activities as well as soaring, golfing, tennis, horseback riding, on-and off-road biking, and numerous related indoor and outdoor recreational activities. Fishing, hiking, swimming, canoeing, and cross-country skiing continue to be popular pursuits.

Public Recreation Facilities & Programs

Brooks Recreation Field in Warren Village has been the primary recreation field for the school and public use in Warren since the school was built in 1972. The field is used for baseball and softball diamonds; a field for

soccer, ultimate frisbee and rugby; a cricket pitch; an ice rink for hockey and figure skating; and two tennis courts.

In 2004, the Brooks Recreation Field was not usable due to the construction of the Village Decentralized Wastewater System. The field has been regraded and seeded and is available again for recreational use, although the ball diamond and lights are in need of renovation.

Historically, Brook's Field has been used for the vendors and activities at the Fourth of July Fair. During the construction of the Village Decentralized Wastewater System the vendors were confined to the Village streets and other festivities were limited due to the space constraints.

In 2004, the Warren Selectboard decided to expand Brooks Recreation Field and started the process of having the area logged and stumped. The newly logged area will provide space for the Warren Fourth of July vendors since they cannot park on the older field that now doubles as the village wastewater system leach field.

During the flood in June 1998, three homes located in the floodplain were destroyed. Working through the Federal Emergency Management Agency's Acquisition Program, the Town purchased the damaged properties,

which made it possible for the homeowners to buy new homes out of the floodplain. The Town removed the damaged and at-risk structures from the floodplain and created Riverside Park to provide public access to the Mad River for swimming and boating and to the Mad River Path. A second small piece of property adjacent to the Covered Bridge in the Village was also purchased. In total, nearly 5 acres of river frontage has been added to the Town's inventory through the FEMA program.

Children's swimming programs are sponsored by the Mad River Valley Recreation District, usually at the Bridges or the Sugarbush Health and Racquet Club. The Valley swim team uses facilities at Norwich University in Northfield. The Warren Recreation Commission also sponsors children's programs, including an annual Christmas theater presentation, a summer recreation program and gymnastics classes. The Catamount Trail offers cross-country skiing through the western part of Town. As growth occurs in Warren, it will become increasingly in the Town's interest to expand public recreational facilities and purchase additional land for less formal recreation.

The Mad River Path Association (MRPA), a non-profit organization, works closely with the Town of Warren and local property owners to provide public recreation trails in the town. The Warren Path that heads north from Brooks Field is a wooded trail approximately one mile long. It is the goal of the MRPA to link the towns and villages of the Mad River Valley from Moretown to Warren with the Mad River Greenway Recreation Trail. In 2004, the MRPA officially opened the Kingsbury Bridge Greenway section. Extending from Warren Riverside Park to Butternut Hill Road, this trail traverses along the Sugarbush Pond and links the Towns of Warren and Waitsfield. The MRPA receives funding from the Town of Warren through the Mad River Valley Recreation District. Residents of Warren serve on the MRPA board of directors as well as volunteering for trail work. In September the MRPA hosts the Mad Dash, a popular annual community event that celebrates community, health and fitness.



Private Recreational Facilities

Sugarbush owns and maintains numerous trails, lifts, and indoor and outdoor sports facilities. Two sports facilities are located in close proximity to the ski area and offer swimming, weightlifting, rock climbing and other gym-related activities. There are two cross-country ski touring centers in Warren. One center operates at the Sugarbush Airport in the winter and one operates near Blueberry Lake. Numerous horseback riding centers are located in East Warren. Tennis facilities are located the Sugarbush Health and Racquet Club, and the Bridges. Sugarbush Resort operates an 18-hole championship golf course.

Other Forms of Recreation

Fishing, swimming, canoeing, hiking, biking, and cross-country skiing ("bush-whacking") on both private and public lands is available throughout the Warren. Warren also helps fund the Skatium ice rink in Waitsfield.

Arts and Cultural Activities

In April 1987, the Selectboard established the Warren Arts Committee for the purpose of providing cultural activities for town residents. The mission of the Warren Arts Committee is to provide a variety of affordable musical and cultural events for the residents of Warren. The Arts Committee has sponsored a wide range of artistic programs that appeal to all ages. Using the facilities of the Warren United Church and the Town Hall, the Committee has been able to provide quality performances uncommon for a town the size of Warren. With the addition of the new stage at the Warren Elementary School, the Warren Arts Committee will have another fine venue in which to present music and theatre to the general public as well as programming for school children. Sugarbush has also become active in the promotion of musical events, hosting a number of activities throughout the year.

Public Lands

Town Lands

The 28-acre Brooks Recreation Field and the adjacent 100-acre Eaton Estate parcel are the two largest parcels of land the Town owns. These properties are currently used as an extensive recreational area and also encompass the elementary school, town shed and a wastewater treatment facility. A double tennis court was built in 1985. Other recreation activities that take place during the year include cross-country skiing, running, soccer, cricket, and rugby. The Fourth of July Fair takes place here each year.

Other properties belonging to the Town (see map#6) include the park and bandstand near the concrete bridge in the Village, the cemeteries in Warren Village and East Warren, the site of the old town garage near the concrete bridge at the north end of the Village, the old town dump land, and a small lot directly across from the Town Hall. The Town also owns the former Coates property immediately west of the northerly intersection of Main Street and Route 100 for use as a municipal gravel pit and possible eventual use as recreation fields or a resource area for a municipal water system.

Other Conserved Lands

Warren purchased development rights for a portion of the former George Elliott farm in 1985 located at the East Warren four corners (see Map 5) as well as an addition 147 acres along the west side of East Warren Road. The Town participated in the securing of public access and granting of conservation easements to the Vermont Land Trust (VLT) on portions of the former Eurich Farm as well as Double Top Mountain, both in 1986. In 1994 a conservation easement in East Warren (Fuller Hill) was donated to VLT. Part of the easement provides a public corridor to the National Forest near the Mill Brook. In 2000, the Mad River Watershed Conservation Partnership assisted

with the conservation of 45 acres of open meadow and woodland behind the East Warren Schoolhouse and in 2001 helped to permanently conserve 200 acres off of the Sugarbush Access Road. At the end of 2003, 309 acres of the Blair Farm at the corner of Fuller Hill and Plunkton roads were conserved. Excluding lands on the Green Mountain National Forest, there are nearly 2000 acres of privately owned land under conservation easement in the Town of Warren.

Green Mountain National Forest

The Green Mountain National Forest currently owns approximately 7,200 acres in the Town of Warren. Approximately 18% of these lands, or some 1,260 acres, is under a special use permit to Sugarbush Resort for winter sports resort use. Although hiking, hunting, fishing, and sightseeing are allowed on the permitted lands, the primary use is downhill skiing. The Long Trail, which runs along the peaks of the Lincoln Range, is maintained by the Green Mountain Club. Recently, Sugarbush donated an easement to the Green Mountain Club along the Lincoln Range.

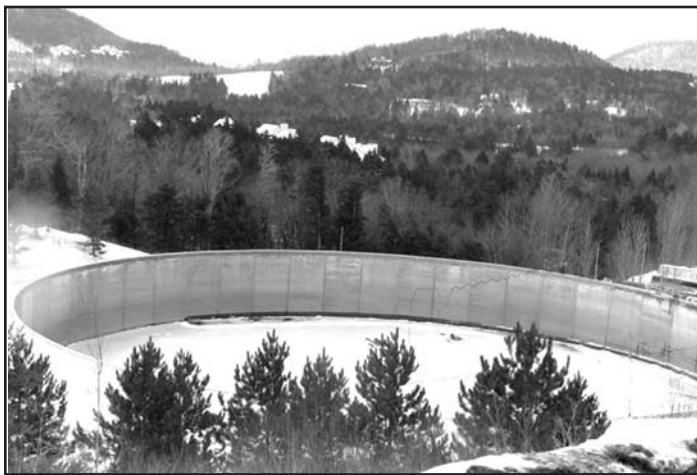
Approximately 650 acres in the southwest corner of the town have been included in the Breadloaf Wilderness, a component of the National Forest Wilderness system. As designated wilderness, such activities as road construction, timber cutting and the operation of motorized vehicles are prohibited. The remaining federal acres are managed under the multiple use concept. At present they are chiefly used for hunting, fishing, hiking, logging, and primitive camping.

With help from the Friends of the Mad River, The Conservation Fund purchased Warren Falls to improve public access to the Mad River and to preserve a stellar swim hole. The USFS then bought the property from The Conservation Fund in 1998. The 368 acre Blueberry Lake parcel that is now owned by the Green Mountain National Forest was transferred through a similar collaboration in 2002.



The Green Mountain National Forest may purchase land within the approximately 12,800 acre National Forest Proclamation Boundary in the Town of Warren without specific Congressional approval. The Warren Planning Commission has recommended extending the Proclamation Boundary to include the entire town so needed land purchases can be made more easily. Management of land purchased in this manner would be under the guidelines of the National Forest Management Act of 1976 and as outlined in the Green Mountain National Forest Management Plan. During 2003 and 2004, the Green Mountain National Forest underwent a lengthy public process of revising the Management Plan. The newly formed Warren Conservation Committee participated in the revision process. In July of 2000, the Forest Service and Sugarbush Resort worked out an exchange of approximately 57 acres (the parking lots and surrounding area) adjacent to Sugarbush Village for other productive forest land and an undisclosed sum of money.

Utilities



Water Supply

Data from the Mad River Valley Growth Study (May 1980) indicate an overall abundance of water within the Mad River Valley. However, individual watersheds within the Valley may experience shortages. Areas that have good potential for recharging aquifers include exposed bedrock, shallow soils to bedrock, and pockets of coarse ground material where water can be impounded. When development is proposed for such areas, particularly those located at higher elevations, it should be carefully considered so potentially negative

impacts may be avoided. Groundwater probability areas with the potential for providing large volumes of water are found in the flood plain of the Mad River and its major tributaries.

The Mad River and all its tributaries are defined by the State as Class B rivers and, as such, are suitable for bathing and recreation, irrigation, and agricultural uses. They provide good habitat for fish and have high aesthetic value. They are acceptable for public water supply with filtration and disinfection. As Class B waters, they are subject to discharge restrictions on levels of dissolved oxygen, color, and turbidity, as defined by state statute. Any direct discharge of sewage effluent or other activity which would result in the degradation of water quality, would precipitate the reclassification of at least a segment of the river or a tributary to a waste management zone. Such a down-grading of the river classification would present the risk of adverse environmental impact to the river, as well the potential for altering development patterns due to the elimination of an important development constraint. If reclassification is ever proposed, a thorough analysis of the long-term environmental, social and economic implications should be conducted before reclassification is considered.

Sugarbush Water Supply

The major public water system in Warren is owned and maintained by a subsidiary of Sugarbush Resort, the Mountain Water Company, and serves the needs of Sugarbush Resort and Sugarbush Village. The Company currently is serving 648 users and has the capacity to serve approximately 715 users. This water system utilizes water from Clay Brook treated in an infiltration gallery by the incorporation of two pressure filters. The rate of withdrawal from Clay Brook is currently limited by state permits to 274,000 gallons per day (gpd). The treatment capacity is 125 gallons per minute for each of two filters (180,000 gpd per filter). After filtration, the water is chlorinated and discharged to a distribution system comprised of four and six-inch pipes and six reservoirs providing 238,000 gallons of storage. The system is supplemented by seven drilled wells with a combined yield of 93,000 gpd. The topography of the area requires that the distribution system be divided into three service zones. In an effort to ensure compatibility between domestic demand and the environmental needs of Clay Brook, an elaborate

monitoring and withdrawal control system has been implemented through the Act 250 process.

Warren Village Water Supply

A number of years ago groundwater contamination in Warren Village prompted the Town to investigate the extent of the problem and options for the future. The study's results indicated that the Village ground water supply is susceptible to contamination from surface influences, including septic systems, road salt and chemical spills. The study further indicat-



ed that a municipal water system to supply the Village area could provide an economical means of eliminating these threats to the water supply. The community wastewater disposal system, which will be completed in 2005, should help alleviate this problem.

Snowmaking

Sugarbush Resort operates a snowmaking system, using water drawn from the Mad River and stored at a 12-acre man-made pond adjacent to Route 100 at the Waitsfield/ Warren border. The system includes pumps, distribution lines, compressors, compressed air lines, and snow guns. Water and air is combined to create a mist that freezes into manmade snow upon exposure to the appropriate air temperature.

Wastewater Disposal

With the exception of the Sugarbush wastewater treatment plant and the Warren Village facility, most wastewater in Warren is handled by individual subsurface disposal systems. Given the predominance of impermeable glacial

tills in Warren, this can pose a potential health hazard. Areas above 1,500 to 1,800 feet are generally shallow to bedrock, with slopes over 15%, and contain the upper reaches of the watershed. As such, they are extremely susceptible to damage from high-density development that could increase surface runoff and potentially pollute groundwater recharge.

Sugarbush Wastewater Disposal

Presently, Mountain Wastewater, Inc., a subsidiary of Sugarbush Resort, owns and maintains the Town's only advanced wastewater treatment facility, although many larger projects do maintain large subsurface septic and leaching systems. The Sugarbush wastewater system, originally constructed in 1969/70, is comprised of more than two miles of eight-inch sewer pipe, nearly 80 manholes, and a treatment facility. The facility utilizes aerated lagoons, chemical addition, filtration, and chlorination to produce an effluent of tertiary treatment quality (BOD and suspended solids are less than 10 parts per million).

The wastewater facility has a treatment capacity of 163,000 gallons per day. The treated effluent is stored in a large holding tank. The effluent is discharged into two leach fields adjacent to Rice Brook where it remains in the leach field for a very brief period of time. Because the flow in Rice Brook is small and varies with the season, the amount of effluent discharged into the leach field is varied to match the flow in the brook. This system is grandfathered under the Indirect Discharge Rules of the Agency of Natural Resources (ANR). From 1988 through 1991, a biological-greenhouse sewage treatment demonstration project was in operation at Sugarbush. Although, the facility clearly demonstrated the viability of biological disposal methods in Vermont, ANR determined that it was not an acceptable means of treating waste on a permanent basis. Recently, ANR has permitted similar projects in other locations.

In addition to the existing treatment facility, a new batch facility has been permitted on the 22-acre site located at the southeast corner of Access and Inferno Roads. As permitted in 2003, the facility will have the capacity to handle the waste from the any development at Lincoln Peak and other proposed on-mountain improvements. If built, the new facility may be maintained and operated by Mountain Wastewater, Inc. or a new subsidiary. It is proposed to treat up to 66,600 gallons of waste-

water per day.

Warren Village Wastewater Disposal

Dealing with wastewater treatment and water pollution in Warren Village has been a major concern of the Selectboard and Mad River Valley Planning District since the mid 1980s. The historic settlement pattern of Warren Village, with houses concentrated at high densities along the Mad River and Freeman Brook, has led to serious problems for continued on-site water and wastewater disposal. Because of small lot sizes and the presence of ledge on many properties, failing on-site septic systems often cannot be rebuilt to current Vermont standards. When on-site systems cannot be replaced, other methods of wastewater treatment, including off-site disposal, have to be available if buildings are to continue to be used. There were concerns that without an alternative to on-site systems, the Village might begin to lose its historic homes and buildings and with them its economic vitality and historic character.

In 1987, the Town sponsored a wastewater disposal alternatives study. The results of this study suggested that on-site disposal may be expected to accommodate future development needs in much of Warren, including the Alpine Village settlement. Regarding Warren Village, the study recommended additional planning efforts to address future wastewater disposal needs. In 1989, the Town, in conjunction with other Valley towns and Sugarbush, sponsored a Valley-wide wastewater alternatives study, the results of which were to demonstrate the feasibility of a system that would potentially link Sugarbush Village, Mount Ellen, and Mad River Glen Ski area, Irasville, Waitsfield Village and Warren Village. While the preliminary cost estimates for such a system were considerable, three potential disposal sites on the floor of the Valley were identified and analyzed. Due to distance, it was recommended that Warren Village pursue an independent wastewater solution.

The 1994 Warren Village Wastewater Disposal Feasibility Study (Wagner, Heindel & Noyes) determined the need for a 30,000 gallon per day (gpd) treatment system and identified Brooks Field at the Warren School as the best disposal site. Preliminary engineering for a community system continued in 1995 and 1996 through a State wastewater planning advance program. However, annual user fees for the system were initially estimated at \$550.

This figure posed serious concerns for Village residents and the project stalled.

In 1997, limitations of the on-site septic system serving the Pitcher Inn led owners to discuss an agreement with the Town to build a forced main and 5,000 gallons per day (gpd) leach field at Brooks Field. In July 1997 the Town granted the agreement, stipulating that the Town would work towards an eventual public takeover of the system. In October 1997 an Act 250 permit for the 5,000 gpd system was granted and it was built.

Over the winter of 1997 the community system engineering plans were re-evaluated. A final Community Wastewater System Engineering Study (Phelps Engineering), published in March 1998, proposed a 30,000 gpd system serving about 60% of Village buildings at an estimated cost of \$2.5 million, and estimated user fees of \$350 to \$400 per year.

Just as the Town started working with State



and Federal agencies to secure public funding for the work, the June 1998 floods damaged or destroyed several on-site systems within the Village. This prompted Vermont's congressional delegation to help secure a \$1.5 million grant through the US Environmental Protection Agency for Warren to explore a combination of approaches to managing wastewater in the Village.

The grant, through EPA's Decentralized Wastewater Planning Program, enabled Warren to evaluate a combination of techniques to manage wastewater in the Village. These include on-going maintenance of on-site systems, building off-site disposal systems like the Brooks Field system, and installing alternative on-site systems serving one or more buildings.

In July 1998, Warren Village residents voted in a straw vote after a public meeting to continue planning and exploration for the Brooks Field system. In October 1998, the Town took over the Pitcher Inn system. In the agreement the Town will repay the costs of the 5,000 gpd system "if, when and as" additional capacity is permitted and built and users are connected, up to a maximum of 30,000 gpd and a maximum cost of \$305,258. A Board of Sewer Commissioners was formed in January 1999 to oversee operation of the system, and a new Health Ordinance was adopted, covering all on-site systems in the Town as well as the 5,000 gpd system.

In 1999, Stone Environmental was retained by the town to conduct a needs assessment which included an evaluation of each wastewater system in the village. After evaluating the current village systems, the consultants recommended a combination of individual on-site systems, both conventional and innovative, along with a range of small to large cluster systems. Between 2000 and 2004, the town worked with Forcier Aldrich and Associates to design the system and to work with the village residents who opted to participate in the project. The Town obtained the necessary local and state permits in 2002 and put Phase 1 of the project out to bid in the spring of 2003. The lowest bidding contractor, NL Chagnon, was hired to complete Phase 1 of the project during the summer of 2003, which entailed expanding the existing disposal system at Brooks Field and connecting the participating properties within the village. Phase 2 of the project, which includes installing the village on-site systems for those properties that will not be connected to the Brooks Field Disposal System, is expected to be completed during 2005.

Once completed, approximately 74 users will be hooked up to the village wastewater system. The operation and maintenance charges have two components, a Base Charge and a Usage Charge. The Base Charge pays 70% of the Annual Budget and is a combined fixed living unit charge of \$200 and a fixed bedroom charge of \$47 per bedroom. The Usage Charge will pay 30% of the Annual Budget based on a water meter reading that will entail a dollar amount per 1,000 gallons of metered water. Operation and Maintenance charges will be billed four times per year.

Aside from existing flows, new flows will not be allowed into the Brooks Field System until

after the Town completes the State required new flow study and after the Indirect Discharge Permit has been amended. The Study is proposed to take place after the system has been in operation for two years. Residents applying for new flows will be required to submit a Sewer Use Application to the Town which will be reviewed by the Selectboard. Applications may be reviewed on a first come, first serve basis. The total remaining uncommitted wastewater reserve capacity shall be allocated by the Board in a manner that is consistent with the Town's allocation priorities. The total uncommitted reserve capacity shall be reviewed by the Board each 6 months and committed reserve capacity shall be regularly recorded and updated for use in allocation decisions. The Town adopted a Sewer Ordinance for the Municipal Wastewater System in 2004.

To assist with the design and installation of the Wastewater Project, the Town received a \$1.5 million U.S. Environmental Protection Agency On-Site Demonstration grant, a \$1.3 million U.S. Environmental Protection Agency State and Tribal Assistance Grant, an \$880,000 Vermont Dry Weather Flow Grant, and a \$3,000 Vermont Administration Grant. The Town voted on Town Meeting Day in March of 2002 to approve a bond in the amount of \$830,000. The Bond Cost Estimate is \$50,756 per year for 20 years allowing for a Town tax increase of \$0.017 cents. The Town also voted funds in the amount of \$125,000 on Town Meeting Day in 1999, 2000 and 2001. The total cost of the project is \$4,654,000.

Solid Waste Management

Warren is a member of the Mad River Valley Solid Waste Alliance. The Alliance is a six-town district that includes Duxbury, Fayston, Moretown, Waitsfield and Waterbury. A representative and alternate from each town serves on the Alliance Board. The Board meets bi-monthly to set policy, determine programs and oversee the District Administrator. Presently, solid waste is trucked by private hauler to Waste Systems International (formerly Palisades) Landfill in Moretown. A regional transfer facility operates on Route 100 in Waitsfield, providing Valley towns with a convenient solid waste disposal site as well as a place to recycle materials. The Alliance holds two household hazardous waste events annually, produces a newsletter twice a year, and hosts an annual composter truckload sale. The

Alliance owns a number of used oil recycling tanks which are being used at the Waitsfield transfer station and the landfill. Also available at the landfill is an oil filter crushing machine.

Communication

Local Phone Service

Warren's local telephone service is provided by Waitsfield and Champlain Valley Telecom, a locally owned, Independent Telephone Company that has been providing telecommunication services to the Mad River Valley since 1904. Long Distance telephone service is available from a variety of national providers as well as locally through Green Mountain Long Distance Service, which is the long distance subsidiary of Waitsfield and Champlain Valley Telecom.

Wireless Service

Wireless telephone services are available in parts of the Mad River Valley. Sprint and Unicel maintain wireless facilities in the Valley. The balance between protecting scenic resources and providing increased wireless service needs to be considered as the demand for wireless service grows. Paging service is available through Contact Communications, Rinkers Communications, and Waitsfield and Champlain Valley Telecom.

Internet Access and Broadband

Dial-up Internet services are available through a variety of local and national providers, including Green Mountain Access (the Internet subsidiary of Waitsfield and Champlain Valley Telecom). Green Mountain Access also offers broadband Internet services via high-speed DSL and T-1 services as well as web hosting.

Cable Television

Cable Television Services are available to residents of the Mad River Valley through Waitsfield Cable. Waitsfield Cable delivers over 150 channels of analog and digital programming including local radio stations and pay-per-view. There are three local origination channels operating in the Mad River Valley, Sugarbush Resort Television (channel 12), Waitsfield Cable (channel 11), and Mad River Valley Television (channel 44), a local public access station which offers local programming, including televised events, public meetings, and other content of interest to Valley residents.

Newspapers

The Mad River Valley is served by two daily Vermont newspapers, the Gannett Corporation-owned Burlington Free Press, which provides very limited coverage of local events, and the Barre-based Barre-Montpelier Times Argus, which provides regional coverage of significant events and issues. The Valley Reporter and the Vermont Journal are weekly newspapers based in Waitsfield that provide coverage of local news and events. As of Spring 2004, the Valley Reporter is designated as the Town's newspaper of record for the publication of official notices and warnings.

Radio Stations

Many radio stations from Burlington and surrounding communities can be picked up in Warren. Rootswork, a local non-profit organization, started broadcasting WMRW FM Radio from an antenna at the East Warren Schoolhouse Market in the Fall of 2004. The station broadcasts at a power under 100 watts and should be able to reach Warren, Waitsfield, and some of Fayston. WMRW will be on the air 12 hours a day, 7 days a week.



Community Services, Facilities and Utilities Goals

Goal 8.A The provision of an environmentally sound and cost efficient system of community services, facilities and utilities to meet present and future demands of Warren citizens and visitors.

Goal 8.B The expansion of community facilities and services in a manner consistent with the goals and policies of this Plan.

Goal 8.C The provision of educational programs and facilities that enable every child to become a competent, caring, productive, responsible individual and citizen.

Goal 8.D The availability of safe and affordable child care services that will enable Warren residents to work out of the home while providing for their children's care.

Objective 8.1. To ensure that adequate facilities and services are in place to accommodate future demands, so that those demands do not create an unreasonable burden on the Town's ability to provide one or more facility or service.

Implementation Strategies

- a) Control the pace and scale of development to insure the adequacy of facilities, services, and roads.
- b) Encourage private facilities and services to relieve burdens on municipal facilities and services. Assurances shall be provided to protect the Town from assuming responsibility for such facilities or services.
- c) Maintain the Capital Budget and Program, forecasting needs for schools, roads, land purchase, police and fire protection, recreation, and general governmental costs.
- d) Establish procedure for evaluating development proposals for demands on municipal facilities and services and the local road network, and for assessing developers to ensure that the public costs associated with new development are funded by

the developer. Consider, as an option the need for development of appropriate impact fees in accordance with 24 V.S.A. Chapter 131 and such other similar mechanisms that may be deemed appropriate.

- e) Require phasing of proposed development when necessary to lessen impact of demand on facilities and services.
- f) Through Land Use and Development Regulations, require new development to accommodate firefighting needs, including such provisions as reservoirs, hydrants, standpipes, fire ponds, and turnarounds with 30' radii.
- g) Investigate future firefighting and police protection needs and alternatives for meeting those needs in conjunction with other Valley towns.
- h) Continue to support the Mad River Valley Ambulance Service.
- i) Encourage developments to contract for private police services when such services are deemed limited.
- j) Locate and acquire a suitable source of gravel to provide for the Town's future gravel needs.
- k) Support the Mad River Valley Health Center's growth plans.
- l) Evaluate the solid waste generation potential of new growth. Seek efficiencies in the handling and disposal of solid waste and continued use of the Valley Transfer Station.
- m) Continue to support the Mad River Valley Solid Waste Alliance.
- n) Continue efforts to expand and enhance the Municipal Building or other alternatives to the Municipal Building.

Objective 8.2. To preserve the small town quality of Warren Village by maintaining and strengthening the Village as the center for town government and services.

Implementation Strategies

- a) Acquire property or purchase options,

where appropriate, to enable necessary growth in town government facilities.

b) Identify and, where possible, provide services and facilities necessary to enable Warren Village to continue to function as the town center, including an expanded post office. Implement the Master Plan for Municipal Facilities in Appendix E and accrue necessary funds to support it. Develop an implementation priority, a phasing plan and a budget to support the plan. Negotiate for rights to key parcels adjacent to the municipal complex.

c) Maintain and support the wastewater system in Warren Village.

d) Maintain and enforce the Town's on-site sewage disposal ordinance and require approval under the ordinance as a prerequisite to other development approval.

e) Provide permanent, accessible public restrooms in Warren Village.

f) Explore possibility of a municipal water system for Warren Village.

g) Explore new or existing space for the Warren Historical Society.

h) Develop a plan for emergency power generation for all town buildings.

i) Adopt the recommendations to correct deficiencies and make improvements at the Town Shed. Decide whether to implement at the current location or create a new facility at the alternate sites that have been identified.

j) Revisit the recommendations for implementing traffic calming measures in the Village.

Objective 8.3. To continue to provide high quality education.

Implementation Strategies

a) Continue to provide sufficient and appropriate space to meet current and projected educational needs.

b) Continue to monitor population and school enrollment trends to address future needs in an efficient manner.

c) Ensure the amount and rate of growth does not exceed the school's ability to provide adequate educational programs and facilities for students and other programs and services to the community.

d) Continue to operate the school and grounds as models for responsible citizenship and environmental stewardship.

Objective 8.4. To determine community needs for child care and help foster the availability of safe and affordable child care.

Implementation Strategies

a) Monitor the adequacy of child care services offered to the community through Town surveys and other means, including a Valley wide public forum or a needs assessment conducted by the regional planning commission.

b) Foster cooperation between the various child care facilities in the Valley to improve service and availability.

c) Consider financial incentives to child care providers, such as property tax abatement for child care providers.

d) Determine if other Town facilities could be used for child care.

e) Address any barriers to increasing child care capacity that may exist in the Land Use and Development Regulations.

Objective 8.5. To maintain the land resource necessary to support recreation and public access to recreation areas.

Implementation Strategies

a) Where appropriate, acquire interest (e.g., conservation easement) in important recreation resource areas. Continue to fund the Town's Conservation Reserve Fund for this purpose.

b) Encourage the U.S. Forest Service's acquisition of additional lands in Town to be included in the Green Mountain National Forest and consider expanding the Proclamation Boundary.

c) Investigate options for the expansion at

Brooks Field.

Objective 8.6. To support private organizations working to meet the many different needs of Warren.

Implementation Strategies

- a) Continue to support the Mad River Valley Seniors and the Evergreen Place Expansion Plan.
- b) Encourage the efforts of Rootswork to restore the East Warren School, provide radio service in the Valley, and promote sustainable agriculture, including its extensive use of nearby and adjacent private property that has been deeded for agricultural use only.
- c) Continue to support the Warren Arts Committee and their efforts to provide cultural activities for town residents and visitors.
- d) Encourage the efforts of the local theater group, the Phantom Theater, and its utilization of the privately owned historic Edgcomb Barn.
- e) Encourage the continuation of the Valley Community Fund and the Valley Food Shelf.
- f) Encourage and support the efforts of the Friends of the Mad River and the Mad Path's efforts to create a continuous bike path.

MAKING ENDS MEET

Chapter 9

Planning for Warren's economic well being will foster an environment in which Town residents have access to meaningful employment at a living wage within the community. Economic vitality also supports many of the recreational, cultural and commercial amenities that have attracted permanent residents to the Mad River Valley.

Warren's economic base is heavily dependent on the tourism industry and, in particular, Sugarbush Resort. There is some diversification of the local economy as residents become less dependent upon any one local employer or industry for their livelihood. This trend is part-

Economic vitality supports many of the recreational, cultural and commercial amenities that have attracted permanent residents to the Mad River Valley.

ly the result of technological improvements in the telecommunications industry and on the high quality of life that makes Warren an attractive place to live.

Information about economic indicators in Warren is limited because of the way data is collected and analyzed on a state and national level. Understanding employment trends in Warren is made difficult by the seasonal nature of many available jobs and the extent to which



standard statistical and state tax data exclude a large percentage of Town residents.

The economic picture can be divided into employment opportunities that are available in Warren and sources from which Warren residents make their living. The following chapter examines the trends and characteristics that make Warren's economy unique.

Employment Opportunities

Warren's employment opportunities are primarily offered by small businesses, self-employment, and commuting to work in other communities. Even the largest employer in the Mad River Valley, Sugarbush Resort, would be considered a small business on the national scale. All other jobs are provided by very small employers. Table 9.1 shows the approximate number of employees for the larger employers in the Mad River Valley as of the end of 2004. The 2000 US Census reported that 75.7% of working Warren residents worked as private wage and salary workers, 10.7% worked for some form of government, and 13.5% were self-employed in an non-incorporated business.

Covered Employment Available in Warren

Covered employment is a phrase that is used to describe wage positions that are covered by unemployment insurance. This is how the Vermont Department of Employment and Training gathers information about jobs and

Table 9.1 Total Number of Employees at the Mad River Valley's Larger Employers*

Sugarbush Resort	50-180 year round, 400-700 temporary
Northern Power	97 full-time, 5 full-time temporary, 5 part-time
Waitsfield Champlain Valley Telecom (Waitsfield Office)	69 full-time, 4 part-time
Controlled Energy Corporation	47 full-time, 1 part-time
Small Dog Electronics	24 full-time, 3 part-time interns
Town of Warren	12 full-time, 6 part-time

* As of the end of 2004

wages. The data in Table 9.2 is reported by employers and includes only positions that are covered by unemployment insurance. It applies to jobs available in Warren, not jobs held by Warren residents, per se. This data also excludes the proprietors of the reporting businesses and the self-employed.

Unfortunately, more detailed town-level data on employment trends is not available at this time.

The data in Table 9.2 shows how employment in Warren has changed over the last ten years. While some diversification has taken place, the trends are generally stable in each employment sector. In 2003, Leisure and Hospitality Services accounted for more than 61.71% of all covered jobs. Employment in the real estate industry appears to have decreased, however, there could be other explanations, such as a shift to self-employment.

Professional and Business services, Educational and Health Services (not including public education), and services such as property maintenance are all growing sectors and do indicate a healthy diversification of employment opportunities.

Self-Employment

The majority of the local labor force is engaged in traditional wage-paying positions which are the mainstay of the local employment base. However, it is generally accepted that Mad River Valley residents are more dependent upon self-employment than residents in other communities. The 2000 U.S. Census includes data on sole proprietors and small businesses. According to those figures, nearly 14% of Warren's labor force was self-

Table 9.2 Employment Covered by Unemployment Insurance by Sector 1994 and 2003

Sector	1994	2003	% of Total 1994	% of Total 2003	% Change
Natural Resources/Mining	n/d *	n/d	n/a	n/a	n/a
Construction	18	25	2.02%	2.19%	39%
Manufacturing	n/d	n/d	n/a	n/a	n/a
Wholesale Trade	n/d	n/d	n/a	n/a	n/a
Retail Trade	47	55	5.96%	5.73%	4%
Utilities	n/d	n/d	n/a	n/a	n/a
Information	n/d	n/d	n/a	n/a	n/a
Real Estate	82	48	9.22%	6.79%	-41%
Professional & Business Services	16	34	1.80%	3.42%	113%
Educational & Health Services	10	22	1.12%	1.81%	120%
Leisure & Hospitality	589	496	66.25%	61.71%	-16%
Other Services (Maintenance, housekeeping, etc)	35	68	3.94%	7.00%	94%
Government	48	69	5.40%	7.10%	44%
Not disclosed			4.24%	4.27%	
Total Employment	889	852	100%	100%	-4%

Source: Vermont Department of Employment and Training

* data for industries with fewer than 3 proprietors responding is not disclosed to preserve the confidentiality of the respondents

Table 9.5**Percentages of Industry of Employment
for Warren Residents 2000**

Agriculture, forestry, fishing and hunting, mining	1.8%
Construction	10.3%
Manufacturing	7.6%
Wholesale Trade	3.7%
Retail Trade	10.5%
Transportation and warehousing and utilities	1.2%
Information	5.3%
Finance, insurance, real estate, and rental and leasing	7.5%
Professional, scientific, management, administrative, and waste management services	10.5%
Educational, health and social services	14.1%
Arts, entertainment, recreation, accommodation and food services	19.5%
Other services (other than public administration)	2.8%
Public Administration	5.1%

Source: US Census 2000

employed. Table 9.3 indicates that a higher percentage of Mad River Valley workers are self-employed than in the county or state.

The high percentage of self-employed residents may contribute to the discrepancy

works at home, compared with neighboring towns and the region.

Source of Resident Income

The 2000 US Census reports the percentage of Warren residents working in each of certain industries. Table 9.5 lists the breakdown of industry of employment for Warren residents over the age of 16 (969 individuals). These numbers include the self-employed and business proprietors. The discrepancy between the industries in which Warren residents report they earn their living and the “covered employment” reported by the Vermont Department of Employment and Training (Table 9.2) may indicate that Warren residents are working outside of Warren or are self-

Table 9.3**Percentage of Labor Force
Self Employed - 2000**

Town	Labor Force	# of Self Employed	% Self Employed
Warren	969	131	13.5%
Waitsfield	982	139	14.2%
Fayston	684	91	13.3%
Moretown	920	106	11.5%
Wash. County	31,276,234	2,960	9.5%
Vermont	317,134	32,546	10.3%

Source: 2000 U.S. Census

between relatively low wage levels paid in Warren reported by the VT Department of Employment and Training for local employees and higher incomes reported in the 2000 Census for Town residents, which is discussed later in this chapter.

Despite the relatively large percentage of Warren’s labor force that is self-employed, the number of local residents who work at home is comparable to the county and state. Table 9.4 shows the percentage of the local labor force that

Table 9.4**Percentage of the Labor Force
Working at Home - 2000**

Town/Region	% of Labor Force Working at Home
Warren	7.0%
Waitsfield	10.2%
Fayston	11.2%
Moretown	9.0%
Washington County	5.9%
Vermont	5.7%

Source: 2000 U.S. Census

employed. This information does not illuminate the proportion of income for Warren residents that comes from non-wage sources such as government transfer payments (i.e., social security, public assistance), dividends, and interest.

Unemployment

Unemployment figures are based on the percentage of the estimated potential working residents in a given town or region. Figure 9.1 shows the percentage of unemployed Warren residents versus the state of Vermont. The data indicates a decline in unemployment between 1993 and 2000 in both Warren and the state. However, since 2000 the unemployment percentage has risen slightly for both Warren and the state. The annual unemployment in Warren tends to be lower than the state. As indicated in Figure 9.2, unemployment of Warren residents spikes during the spring and fall. However what is not shown by this table is that the total number of Warren residents in both winter and summer employment has steadily increased since 2000.

Wages and Income

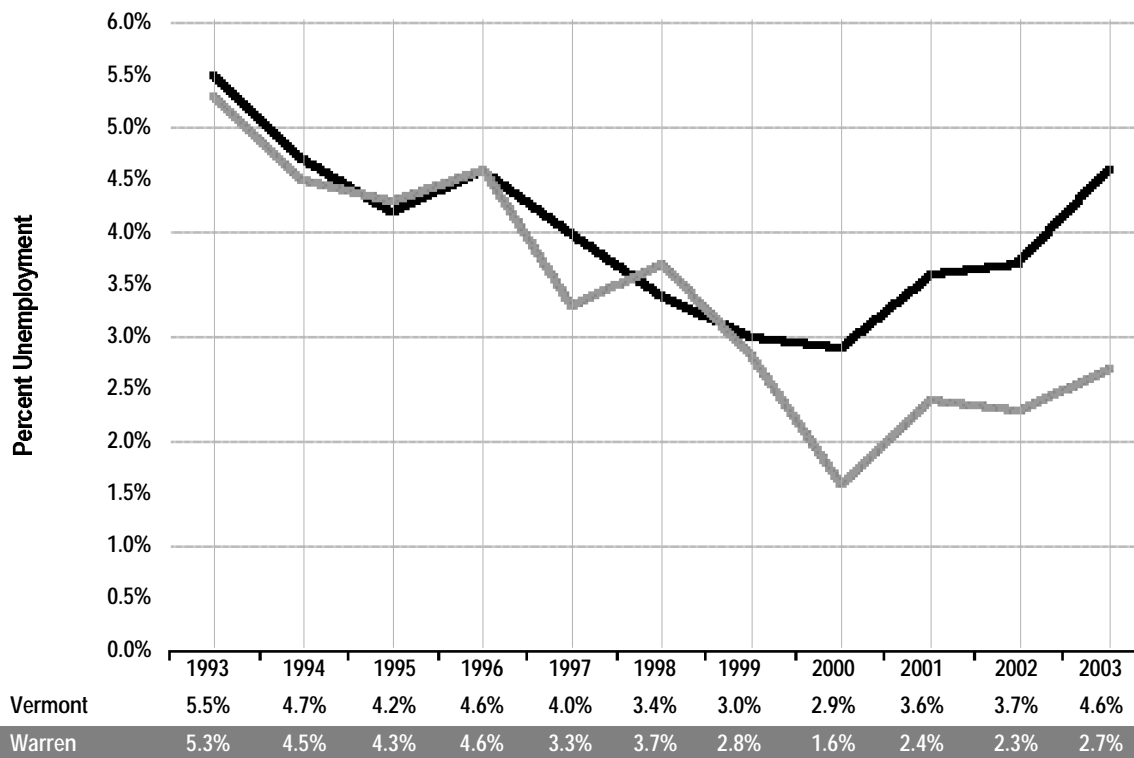
Average wage data refers to the wages paid in a given region or town. Median income data refers to the income received by residents of a given region or town. There are many opportunities for income other than wage income from the “covered employment” described above. These include proprietor income, self-employment, dividends, interest, rent, and government transfer payments (i.e, social security, public assistance).

The seasonal nature of many of the jobs available in the tourism industry, coupled with the low skill level associated with many positions in the hospitality and retail industries that comprise a large segment of the local employment base, results in comparatively low wages paid in the Town of Warren.

According to the Vermont Livable Wage Campaign, a livable wage is defined as “the hourly wage or annual income sufficient to meet a family's basic needs plus all applicable Federal and State taxes. Basic needs include food, housing, child care, transportation, health care, clothing, household and personal expenses, insurance, and 5% savings.” Table

Figure 9.1

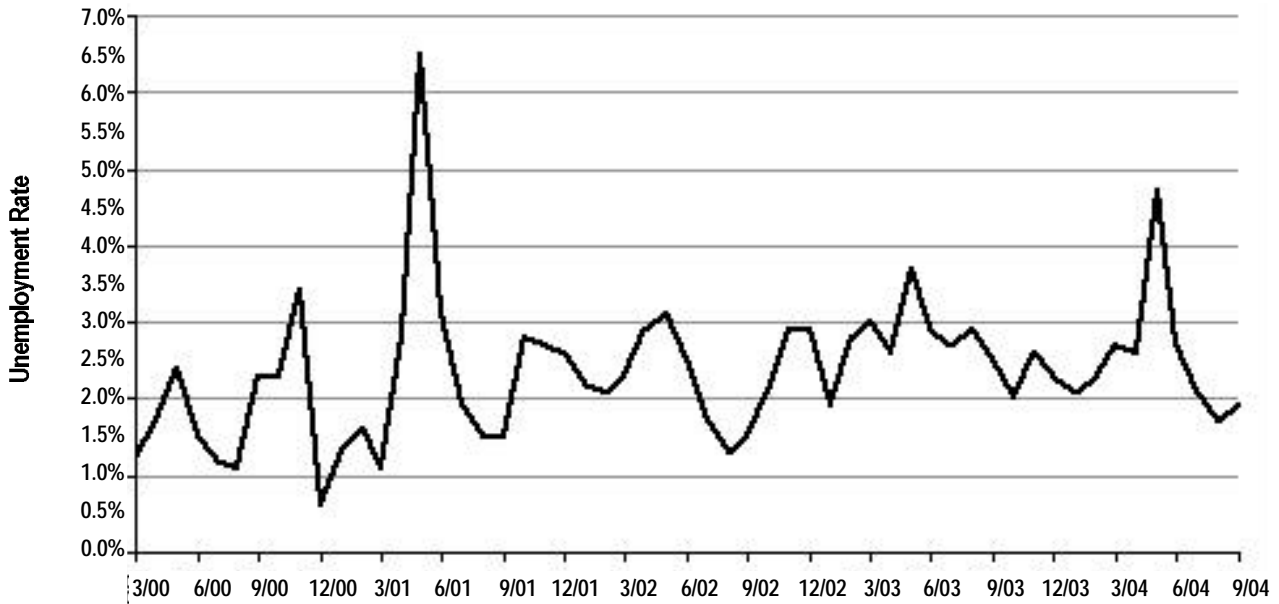
Annual Unemployment rate in Warren and Vermont



Source: Vermont Department of Employment and Training

Figure 9.2

Warren's Monthly Unemployment Rate March 2000 – September 2004



Source: Department of Employment and Training, Labor Market Information

9.6 illustrates the Livable Income for various household configurations in Vermont.

The average annual wage paid in Warren in 2002 was \$17,672. This figure does not distinguish between full- and part-time positions and is based on wages paid in Warren not wages earned by Warren residents, per se. However, it is safe to assume that a number of local jobs are not providing a “living wage” for residents of the community or region. This is likely due to the large percentage of accommodations and food service jobs offered in Warren.

The 2000 US Census reports that the average income of Warren residents was \$30,405, nearly double the average wages paid in Warren. This gap may be due to any combination of a number of factors. Many of the jobs offered in Warren are part-time, and residents combine two or more positions to make a livable income. Many Warren residents commute to other communities where higher wage positions are available. Also, in all communities across the county, non-wage forms of

income account for a large part of a resident’s total income. In addition, the cost of housing in Warren is well above the state-wide average (see Chapter 6), and many people who earn wages in Warren may not be able to afford to live in Warren (eliminating their low income from the income reported for Warren residents).

The 2000 US Census reports that 78% of the working residents in Warren drove to work alone and that the mean travel time to work was 22 minutes. This indicates that the majority of working residents in Warren are driving to work in places outside of Warren.

There is growing concern locally, regionally and nationally regarding the ability of working families to earn an adequate wage to support independent households and families.

Table 9.6

Vermont’s Livable Wage

In 2004 the state of Vermont updated the Legislative Study on Livable Income and calculated the livable wage in Vermont as follows:

- \$23,889/yr. for a single person;
- \$39,163/yr. for a single parent with one child;
- \$47,284/yr. for a single parent with two children;
- \$39,377/yr. total for two adults without children and both adults working for pay;
- \$48,612/yr. for a family with two parents and two children, but only one person working for pay;
- \$61,229/yr. total for a family with two children and both parents working for pay.

Table 9.7 Percent Living Below Poverty Level in 2000

% Families in Poverty	5.1%
With children under 18 years	8.5%
With children under 5 years	10.2%
Female householder no husband present	18.4%
% Individuals	8.0%

Source: US Census 2000

of life. Many of the recreation, commercial, economic and cultural amenities enjoyed by local residents are made possible by the steady influx of visitors to the area and a tax base dominated by second homes.

Historically, the vast majority of visitors to the Valley have been skiers visiting Sugarbush Resort (and, to a lesser extent, Mad River Glen in Fayston). While the ski areas remain the Valley's greatest draw, the tourist

season has expanded to include summer and autumn.

It is widely accepted that summer tourism is dependent upon the area's natural beauty, outdoor recreation and mix of cultural activities to a much greater extent than the winter season. However, Sugarbush is also a driving force behind non-winter tourism as the sponsor of large events. With the anticipated development of the new facilities at Lincoln Peak and other year-round amenities at the Mountain, it is expected that this influence will grow. Thus, it is impossible to address Warren's tourist-based economy without focusing on Sugarbush.

Sugarbush Resort

Although Sugarbush was founded in 1958, the ski area's current character was shaped during the late 1970's and early 1980's when Sugarbush Village and the majority of the Valley's commercial bed base was developed. During this period Sugarbush enjoyed a relatively high percentage of market share within Vermont's ski industry, and the number of annual skier visits exceeded 430,000 in the peak year (1981/82).

In 1983, Sugarbush released a mountain master plan designed to increase the comfortable carrying capacity (CCC) of the mountain from 6,800 skiers/day to over 10,000. In response to community concern over the poten-

Public Assistance

A concern related to low wage jobs is the extent to which society as a whole bears the burden of poverty, often in the form of public assistance. The high percentage of low wage jobs has not resulted in an unusually high dependence on public assistance in Warren. The 2000 US Census reported that 5.1% of all families in Warren were living below the poverty level. 8.5% of families with children under the age of 18 and 10.2% of those with children under the age of 5 years were living below the poverty level (see Table 9.7). Table 9.8 shows the number of local residents receiving Reach Up assistance (formerly Aid to Families with Children) and food stamps in the fall of 2004.

Economy

While it may not be the main way Warren residents earn their living, tourism is Warren's dominant industry. Table 9.1 lists other major employers in the Mad River Valley. Tourism can be seen to dominate through several measurements, including the number of local jobs, the Town's tax base, and the amount and sources of state revenue acquired from the Town. Sugarbush Resort is the town's dominant tourist attraction.

Less easily measured is the contribution of the tourist industry to the Town's high quality

Table 9.8 Public Assistance Recipients – Fall 2004

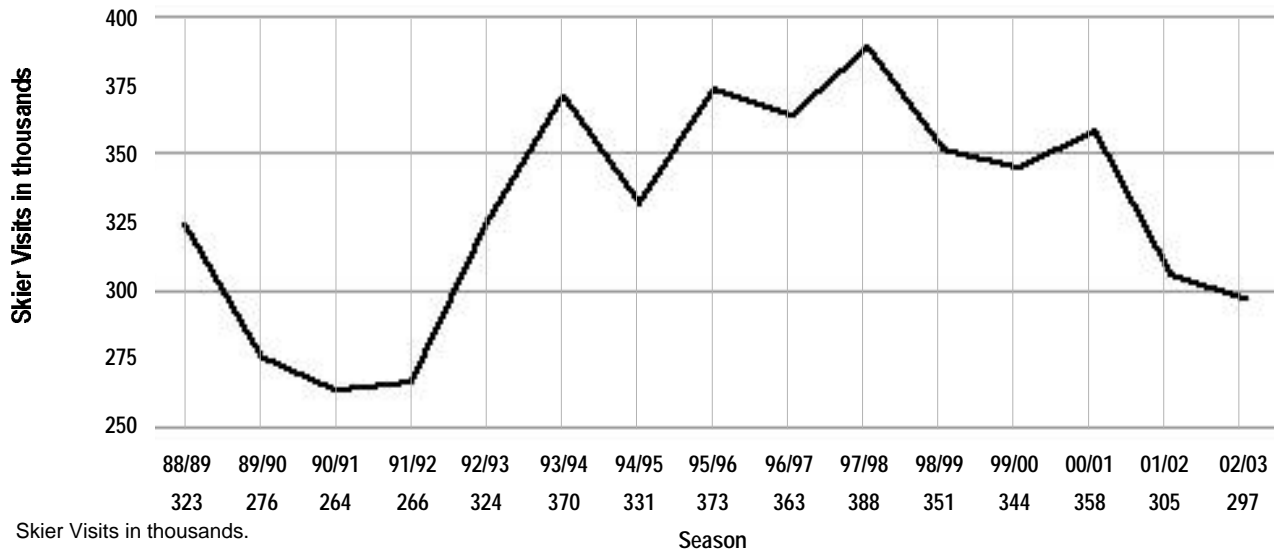
Town	Number of Reach Up (formerly ANFC) Recipients	Number of Foodstamp Recipients
Warren	n/a *	36
Waitsfield	14	50
Moretown	n/a	n/a
Fayston	n/a	20

Source: VT Department of Social Welfare, 1998

* Data for towns with fewer than 10 recipients is not released in order to preserve confidentiality.

Figure 9.3

Sugarbush Resort Annual Skier Visits 1988-2003



tial impact of this expansion on the Valley’s public infrastructure and quality of life, Sugarbush entered into a Memorandum of Understanding (MOU) with Valley towns, the Central Vermont Regional Planning Commission and the State. The MOU was designed to phase expansion of CCC in a manner that does not over-burden the Valley’s capacity to accommodate it. Despite changes to the expansion plan in response to changes in ownership, market conditions and ski area technology, the MOU has remained in effect since 1983 (the MOU was updated and reaffirmed by the parties in 1998).

In subsequent years, the ski area suffered from a decline in skier visits. Consequently, the upgrade or expansion activities called for in the 1983 master plan were limited. The current capacity of Sugarbush is 7,620 skiers per day.

In 1994, American Skiing Company (ASC), acquired the mountain. While ASC owned the resort, several on-mountain improvements, including an expansion of snow-making capacity, the installation of the inter-tie lift connect-

ing Lincoln Peak and Mount Ellen (formerly Sugarbush South and North) have been completed and so has the upgrade of several key lifts.



In September of 2001, Sugarbush Resort was purchased by Summit Ventures NE, LLC, a group of local investors. Since the acquisition, Summit Ventures has made improvements including upgrades to the Sugarbush Inn, replaced a primary lift at Mount Ellen and redesigned the obtained permits for the Lodge at Lincoln Peak.

A result of the increased skier days can be seen in local business activity. Rooms and Meals receipts are an important indication of tourist related business activity in the Mad River Valley. Annual receipts for the Valley since 1990 are shown in Figure 9.4.

Comparing Figure 9.3 with Figure 9.4 reveals the direct correlation between skier visits and rooms and meals receipts in Warren. While this correlation exists in other Valley towns, the figures indicate that commercial activity in Warren is more dependent upon the winter months than neigh-

boring Waitsfield, which experiences more summer activity. This is consistent with the general understanding that summer activity is limited at the mountain and that potential exists for expansion.

In 1996, Sugarbush Resort released an updated Master Development Plan. This plan identified several improvements the Resort feels are necessary to regain its competitive advantage relative to other ski resorts. On-mountain improvements would increase the CCC from 7,620 skiers/day to 10,550. Scheduled over a five year period, improvements were designed to achieve Sugarbush's objective of 600,000 annual skier visits over the coming years.

Future expansion at Sugarbush presents an opportunity to the Town. Ensuring the viability of Sugarbush, upgrading Resort facilities and expanding the use of existing accommodations at and around the base of the ski area has long been a goal of the Town. However, expansion activities which over-burden local infrastructure, undermine established businesses or threaten the Town's character could foster resentment and opposition. The amendments to the Land Use and Development Regulations

in 2001 addressed the need for a growth center at the base of Sugarbush Resort by the creation of the Sugarbush Village Commercial District. The town can further avoid conflicts by:

- continued support for the Memorandum of Understanding to ensure a balance between ski area activity and public facilities;
- coordination between the Town, Sugarbush and local businesses to ensure that the benefits of ski area expansion are shared by the entire community; and,
- an emphasis on developing the types of businesses, facilities and amenities that reflect the Town's character.

Planning Considerations

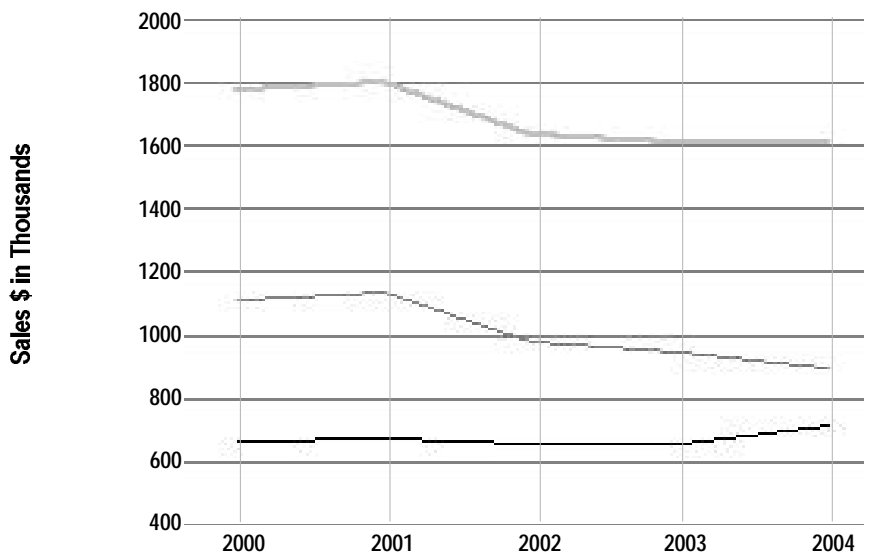
In the past, Warren residents have expressed a need for the Town of Warren to foster a greater diversity of employment opportunities. In Warren, this diversification can take place in the form of a more diverse tourist industry, including an expansion of summer events and activities, and in the form of additional types of businesses less dependent upon the tourist industry.

Summer events, such as the Warren 4th of July celebration and the Festival of the Arts are cultural and social activities enjoyed by local residents while at the same time serving as a draw for visitors. The potential downside of summer events is the risk of building an infrastructure (e.g. commercial beds and amenities) dependent upon ever larger events on every summer weekend, thereby degrading the tranquility of the community. Encouraging the concentration of summer activity in and around Sugarbush Village at a scale and intensity that does not overly burden public facilities or degrade the rural character of the community may avoid the potential pitfalls of summer events.

The number of self employed Town residents

Figure 9.4

Meals and Rooms Taxable Sales for Warren and Waitsfield 2000-2004



	2000	2001	2002	2003	2004
Warren	\$11,141,472	\$11,347,808	\$9,793,610	\$9,501,159	\$8,979,751
Waitsfield	\$6,611,765	\$6,701,212	\$6,552,269	\$6,557,556	\$7,160,727
Waitsfield and Warren	\$17,753,238	\$18,049,021	\$16,345,879	\$16,058,715	\$16,140,478

Adjusted to 2004 dollars using Consumer Price Index

Fayston's receipts are not reported by the VT Dept. of Taxes because there are too few businesses reporting.

Source: VT Department of Taxes

indicates that a certain amount of economic diversification is already occurring. To facilitate this trend, the Town can continue to foster an environment that is conducive to home businesses. While the image of the home-based professional plugged into the information highway is a popular one, it is important to remember that the bulk of Warren's employment opportunities are wage paying jobs in the tourism industry. However, self employment and working from home is equally possible for non-professionals. Warren presently allows for cottage industry to operate in five zoning districts throughout Town.

With a large percentage of local residents finding work in the Valley, coordinating land use, infrastructure and economic objectives with neighboring towns is critical. Working through the Sugarbush Chamber of Commerce and the MRVPD, Warren can help support the establishment of the organizational capacity in the Valley to assist new and existing businesses to grow within the broader community.

Finally, it is important for the Town to be cognizant of its greatest assets; the rural character, healthy environment and high quality of life that can be offered to residents and visitors alike. Development activities and land uses that threaten or degrade these assets could have negative long term economic consequences. To this end, the Town Plan and Land Use and Development Regulations are perhaps the most important tool for designating appropriate locations for various commercial and business activities, and for defining the appropriate scale and intensity of these activities.



Local Economy Goals

Goal 9.A Promotion of a diverse local economy characterized by varied employment and entrepreneurial opportunity.

Goal 9.B Ongoing support of those businesses and industries which contribute to Warren's rural character and high quality of life.

Goal 9.C Ongoing support for the economic viability of Sugarbush Resort and other businesses which contribute to the Valley's attractiveness as a resort destination.

Objective 9.1. To encourage commercial and industrial activities in appropriate locations.

Implementation Strategies

- a) Maintain the following important principals in the Warren Land Use and Development Regulations and consider amendments as necessary to achieve the following:
 - i. Allow for a range of home-based business enterprises throughout Town that are compatible with community's rural character;
 - ii. Allow for a mix of manufacturing/ industrial activities in appropriate areas.
 - iii. Concentrate businesses within the existing Warren Village commercial core, Sugarbush Village, and within a designated growth center at the base of Lincoln Peak.
 - iv. Prohibit commercial development from occurring in a linear pattern along Route 100 and the Sugarbush Access Road.
 - v. Preserve an adequate land base for agriculture and forest management activities.
 - vi. Maintain development standards regulating the scale and intensity of commercial development and land use to avoid conflict with neighboring properties or the Town's rural character.
- b) Explore opportunities for a new or expanded growth center as development

continues to occur.

Objective 9.2. To encourage economic activities that contribute to the preservation of Warren's rural character.

Implementation Strategies

- a) Promote the continued upgrade and expansion of the telecommunications infrastructure in Town to support the ability of local residents to work at home and telecommute to other locations.
- b) Support the development of recreation and cultural facilities which contribute to the Valley's attractiveness as a resort destination. Such encouragement can take the form of:
 - i. Making greater use of the Town Hall for cultural performances and exhibitions. To this end, the Town Hall should be upgraded to ensure full compliance with the Americans with Disabilities Act (ADA) access standards.
 - ii. Supporting the use of the East Warren School for community-oriented activities. To this end, the long-term use and management of the School by the non-profit Rootswork is encouraged.
 - iii. Supporting the establishment of a permanent performing arts facility at the base of Lincoln Peak.
 - iv. Expanding existing walking and bicycling paths and trails and ensuring that future development is designed to accommodate pedestrian connections between properties.
 - v. Continuing to maintain and upgrade the Brooks Recreation Field, and to make that facility available for suitable, special events which serve the local community.
- c) Implement strategies to maintain the economic viability of agriculture and forestry and provide economic incentives, including the State Current Use Program and purchase of development rights and easements, to landowners who keep large tracts of open space undeveloped.
- d) Implement the improvements set forth in the Warren Village Pedestrian Enhancements Plan 2004. Consider other improvements for improving pedestrian circulation, enhancing Village char-

acter and addressing parking and traffic problems.

Objective 9.3. To promote business activity consistent with the area in which it is located.

Implementation Strategies

- a) Continue to support the Central Vermont Economic Development Corporation and encourage that entity to become more responsive to the Town's economic development needs.
- b) Continue to work with the Sugarbush Chamber of Commerce to foster local business recruitment and economic development programs.
- c) Through the Memorandum of Understanding between Valley towns and Sugarbush, support the implementation of the Sugarbush Mountain Master Plan in a manner and schedule consistent with the Town's ability to accommodate additional ski area capacity.
- d) Encourage the creation of jobs that pay a living wage to all employees.
- e) Maintain support of the valley transit service designed to serve local students, workers and employers, and visitors, including stops in Warren Village.

LAND USE

Chapter 10

Land use is among the most important and controversial planning issues faced by local communities. Historically, most decisions regarding land use have been made by individual land owners. Because these decisions affect neighboring properties and property values, the demand for public services and facilities, environmental health, public safety, the availability of finite resources, economic opportunity, and the overall character and quality of life of the community, land use decisions have become a legitimate public concern. Property values also reflect good planning for the community as a whole.



This chapter integrates all of the preceding chapters of the plan. The future land use plan is based on the careful consideration of Warren's traditional settlement patterns and historic resources; its rural character and unique sense of place; the distribution of natural resources and physical features; the location and capacity of public services, facilities and the trans-

portation network; the community's housing and economic needs; and, most importantly, the goals, objectives and strategies related to each of those considerations.

Current Land Use

Current land uses reflect the influences that have shaped Warren's landscape over the past two centuries. While the economic and cultural importance of agriculture and forestry has waned, the Town has retained much of its historic settlement pattern of compact villages surrounded by an open, working landscape. Farming continues to dominate the more accessible countryside, while the less accessible mountains are more heavily forested than in past times. A breakdown of dominant land uses by acreage is provided in Table 10.1 and depicted on Map 7.

Nearly 85% of the Town is forested. Most of the active farmland includes the best agricultural soils on the East Warren plateau, along the Mad River and, to a limited extent, on

A primary purpose of land use planning is to balance the legitimate interests of the community, as expressed through the planning process, with the rights and expectations of individual landowners.

A primary purpose of land use planning is to balance the legitimate interests of the community, as expressed through the planning process, with the rights and expectations of individual landowners. Achieving this balance is a difficult yet necessary function of the Town Plan.

policies may be found in other applicable chapters of this plan.

Land Use Districts

Warren has had zoning since 1972. The most recent version was adopted in 2001 and amended in 2002. The existing Land Use and Development Regulations were designed to implement the most up-to-date land use policies. Map 8 is the Current Land Use Map and shows the boundaries of all of the land use districts. These policies called for maintaining the historic character of Warren Village, concentrating higher development densities and commercial activity in and around Sugarbush Village/Lincoln

Peak base area, allowing additional residential and limited commercial development at lesser densities throughout the most accessible areas of Town, and leaving those areas that are least accessible and most environmentally sensitive undeveloped. To achieve this pattern, the Land Use and Development Regulations establish the following districts:

- Forest Reserve (FR) District
- Rural Residential (RR) District
- Warren Village Historic Residential (WVR) District
- Sugarbush Village Residential (SVR) District
- Alpine Village Residential District (AVR)
- Vacation Residential (VR) District
- Sugarbush Village Commercial (SVC) District
- German Flats Commercial (GFC) District
- Access Road Commercial (ARC) District
- Warren Village Commercial (WVC) District
- Airport Commercial (AC) District
- Bobbin Mill Commercial District (BMC)
- Meadowland Overlay District (MO)
- Flood Hazard Overlay District (FHO)

Another provision in the Land Use and Development Regulations allows for the transfer of development rights (TDRs). TDRs have not been used as widely as hoped. This may be because of the high development densities presently permitted in the designated receiving areas, the limited demand for development in those areas since TDRs were allowed, and the lack of supporting infrastructure necessary to accommodate higher density. Other communities' experiences suggest that for Warren to create the market conditions necessary for an

Table 10.1 Current Land Use

Land Use	Approx. Acreage	% Total
Residential	1,056	4.1%
Commercial	69.1	0.26%
Open/Agriculture/Pasture	1,980	7.6%
Forest	22,001	84.9%
Outdoor Recreation	407	1.6%
Governmental	21.3	0.1%
Airport	71	0.27%
Sand & Gravel Extraction	26	0.1%
Water	124	0.5%
Other	151.7	0.5%
Total	25907.1	100%

Source: Central Vermont Regional Planning Commission, 1998

Fuller Hill and along Lincoln Brook.

Commercial development is concentrated in the vicinity of the base of Lincoln Peak, in Warren Village and around the intersection of Route 100 and the Sugarbush Access Road. In addition to heavy concentrations around Lincoln Peak and in Warren Village, residential development is widely distributed throughout Town, especially along major roads, in Alpine Village and, increasingly, at higher elevations in the Northfield Range.

Land Use and Development Regulations

The Town has administered development regulations for over three decades. In addition to a health ordinance which establishes standards for septic systems, the Town's primary land use regulations are the Warren Land Use and Development Regulations. This regulatory document was established in 2001 and combined the prior zoning bylaw and subdivision regulations into one document. During the zoning revision, site plan review was incorporated into conditional use and subdivision review.

Although many policies and programs related to capital budgeting, economic development, transportation, etc., have a direct bearing on future land use patterns, the primary means with which to affect future land use is through the Land Use and Development Regulations. This chapter therefore focuses on how those regulations can best achieve the goals of the community. Other implementation measures, such as infrastructure needed to support land use objectives, are briefly discussed below. A more detailed description of non-regulatory

effective TDR program, the Town may need to reduce permitted densities within receiving areas, facilitate the development of adequate infrastructure within existing receiving areas and/or designate new receiving areas.

Recent trends, coupled with concerns raised by Town residents, suggest that some changes should be made to the standards, although the guiding land use principles should remain intact. Beginning in 2005, the Land Use and Development Regulations must also undergo a general technical review and update to ensure compliance with statutory changes to State enabling legislation [Vermont Municipal and Regional Planning and Development Act 24 V.S.A., Chapter 117] enacted in recent years. Such issues as mandatory allowance for permitted accessory dwellings, enforcement limitations, recording requirements and site plan standards are contained within the State-level changes. Needed technical amendments have also been identified through the process of applying the regulations and writing this plan.

Subdivision Regulations

Warren voters adopted the current subdivision regulations in as part of the Land Use and Development Regulations in 2001. These were amended in 2002. These authorize the Development Review Board to review and make decisions about proposals to subdivide land within the Town. As such, they provide public oversight regarding the pattern and location of development, the provision of public and private infrastructure, and the protection of natural resources and scenic features. In many respects, subdivision regulations are the most important tool for ensuring that new residential development occurs in a manner that is consistent with the Town's traditional landscape and rural character.

Increasingly, residential subdivisions in the Forest Reserve and Rural Residential District (where the bulk of land subdivision has occurred recent years) have been of a suburban character and pattern that is inconsistent with

Warren's historic landscape. As subdivisions have encroached into areas characterized by steep slopes and poor soil conditions, such as the Northfield Range, concern has grown regarding the environmental and visual impacts of land clearing, road and driveway construction, and the siting of houses and septic systems on hillsides.



Subdivision Design

To accommodate residential subdivisions in a manner that protects natural resources and the Town's rural character, the Land Use and Development Regulations require careful site analysis and design. Rural communities facing development pressures similar to Warren have become more aggressive in

requiring that environmental and landscape protection are the primary design criteria for new subdivisions.

Figures 10.1 through 10.3 illustrate the preliminary steps in designing what is often called an "open space" subdivision. Figure 10.1 depicts the first step in the subdivision design process the preparation of an accurate site plan and resource inventory of the parcel. In this example, the boundaries of fragile natural features, including flood hazard areas, wetlands, water bodies and excessively steep slopes with gradients of 25% or greater, are carefully delineated.

Next, other important community resources are identified and mapped. In Warren, these could include wetlands, meadowland, severe slopes with a gradient between 15% and 25%, wildlife habitat, scenic knolls and ridgelines. It is also important to identify other prominent features, such as historic sites, fence lines and walls, and forest type; and to conduct a thorough assessment of the site's development capacity. Figure 10.2 shows how these features could be depicted on a preliminary plan.

With the careful delineation of fragile features and community resources, as well as other prominent features, subdividers may identify suitable development sites. Such sites would then be carefully located to avoid any adverse impact to identified natural resources, and to result in the minimum impact feasible to such community resources as farmland or

scenic areas.

Based on the potential development areas, illustrated in Figure 10.3, a preliminary subdivision plan may be developed. Only at this time, after the important resources have been

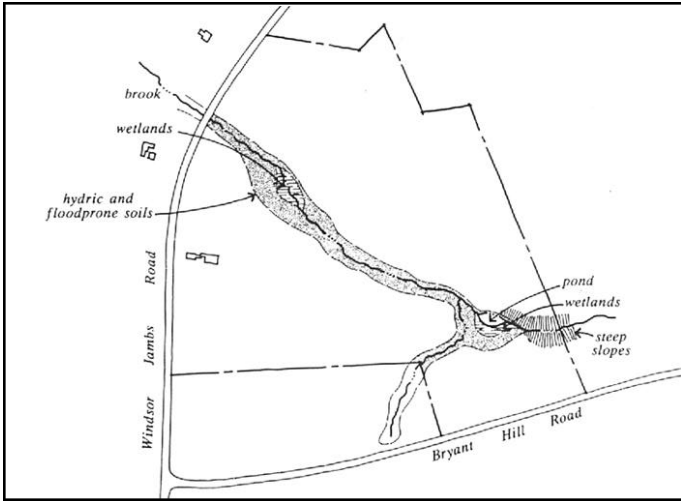


Figure 10.1

designated as open space, would house sites be identified, infrastructure be laid out and lot lines configured.

This approach differs from designing the subdivision around the most marketable house site. Development must be designed in a manner that has the least impact on the landscape.

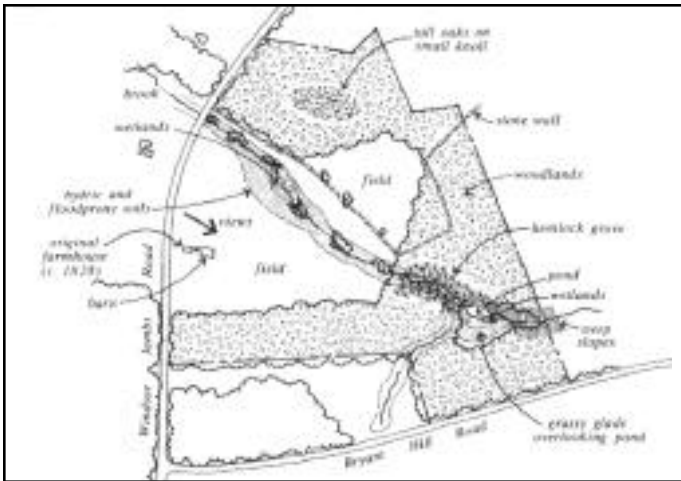


Figure 10.2

Standards have been included in the subdivision regulation that require: (1) documentation that the considerations described in Figures 10.1 through 10.3 were addressed; (2) the designation of open space in accordance with clear standards for all subdivisions involving a minimal number of acres, and; (3) the establish-

ment of designated building envelopes within which development may occur.

It should be noted that this design process may not be necessary for all subdivisions, especially those involving the creation of only one or two new lots and where significant fragile features are not present. In such cases, the subdivision regulations can include a streamlined review process for minor, as opposed to major, subdivisions. The scale of what constitutes a major subdivision is defined by the regulations.

Other revisions to the subdivision standards in Warren's Land Use and Development Regulations which might be considered include better definition of development on primary conservation areas (specifically steep slopes and "scenic" roads) and landscaping and tree cutting standards to address the scenic

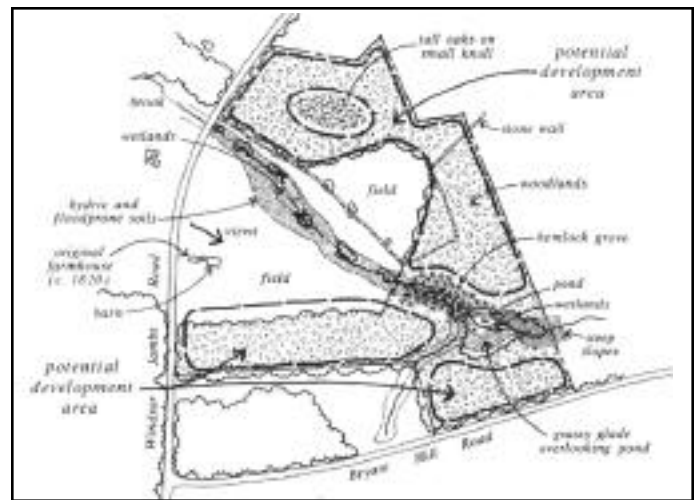


Figure 10.3

impacts of development on forested hillsides and meadowlands, and measures to encourage and facilitate affordable housing. Some thought should also be given to procedures for amending final plats.

Settlement Patterns

The Town Plan and Land Use Regulations build upon past planning efforts. They are based on current planning principles that take into account how the Town has grown: commercial and high density residential development concentrated in village centers, accessible to major transportation routes; surrounding countryside characterized by low density residential development and a working landscape of farms and forest; and the least accessible and most fragile areas undeveloped.

To maintain this desired settlement pattern, while ensuring that the economic and housing

needs of local residents are addressed, the Land Use and Development Regulations continue to focus on three categories of land use districts. These are Village Centers, including Warren Village, Alpine Village and Sugarbush Village/Lincoln Peak; Rural Countryside & Meadowlands); and, Commercial Nodes. These three categories are discussed in detail below.

Village Centers

Warren contains three areas characterized by higher densities and a more compact settlement pattern than surrounding areas. Despite these similarities, the three areas of Warren Village, Alpine Village, and Sugarbush Village (including the surrounding base area of Lincoln Peak) are quite different in character, function, and capacity to accommodate additional growth. Warren Village continues to serve as the town's historic center, even though the potential for locating additional development in the Village is limited. Sugarbush Village and the base of Lincoln Peak have served as the Town's principal modern growth center. The Alpine Village area was subdivided for high density development, but environmental constraints will limit future development.

Before addressing Warren's village centers, it is important to address the Town's relationship with the neighboring Town of Waitsfield and the extent to which Warren residents depend on that town's commercial and employment center, Irasville. Supporting the economic vitality of Waitsfield and Irasville is consistent with continued support for Warren Village and Sugarbush Village/Lincoln Peak as Warren's town centers, providing the scale of development (in the case of Warren Village) and character and type of commercial activities (in both cases) does not duplicate Irasville's commercial role in the Valley.

Warren Village

Warren Village has served as the center of government and commerce for over 100 years. While the potential for additional growth is limited by both physical constraints and the desire of many residents to maintain the Village's quiet residential character, existing densities coupled with the Village's function as the center for governmental, social and cultural activities, require careful consideration of the Village's historic role in the community.

The Village features a mix of residential,

commercial and institutional land uses at relatively high densities along the road network. The settlement pattern and architecture are typical of 19th century Vermont, as indicated by the Village's inclusion in the National Register of Historic Places. Residential uses are dispersed throughout the Village, including single family structures, duplexes, and multi-family structures.

Commercial activity is concentrated at the 'triangle' formed by Main Street, Brook Road and Flat Iron Road, although a few commercial uses are found outside of this core area. Activities include a general store, an inn, sever-



al business and professional offices, and a few antique and specialty shops. During periods of high use, this core area can experience parking shortages and traffic congestion.

Governmental and institutional uses are clustered off of Main Street, just south of the 'triangle'. These include the Town Clerk's Office and Municipal Building, the Library, Town Hall, the Fire Station, a town cemetery, the Post Office and the Church. Finally, a newer center of town activity has evolved in the northeast corner of the Village, off of Brook Road. This is the location for the Town shed, the Warren Elementary School and the Brooks Recreation Field.

Water and wastewater facilities were historically provided on-site for most Village buildings. To address the potential for ground and surface water contamination related to the high concentration of septic systems, and the desire to maintain the economic viability of the Village's commercial core, the Town has installed a municipal wastewater system. This facility is addressed in greater detail in Chapter 8. In addition, transportation needs related to the Village are described in Chapter 7.

The Village's character and special charm result from a combination of features and ele-

ments, including:

- the dominance of residential land uses;
- a diversity of architecture reflecting the changing styles that have contributed to Vermont's architectural heritage;
- pedestrian access and circulation;
- a traditional village settlement pattern, comprised of buildings set close to and fronting upon roads;
- generally small lot development in the Village core with larger lots and more open land a short distance from that core;
- a complimentary mix of building scale and mass;
- several prominent buildings serving as civic and cultural focal points; and,
- a clear contrast between the Village and the surrounding countryside defined, in large part, by sparsely developed forested hillsides.



Warren Village is presently split into two distinct zoning districts. The Warren Village Commercial District and the Warren Village Historic Residential District, surrounds the Village. Several properties in the two Warren Village districts lie in the Flood Hazard Overlay District.

Warren Village Commercial (WVC) District:

The WVC District comprises the Village core and includes most of the commercial buildings within the Village. A full range of mixed residential and commercial uses are conditional uses. The WVC is surrounded by the Warren Village Historic Residential District.

Planning Considerations:

Standards to regulate the scale and site design of new development could be included with future zoning amendments to address concerns raised over the increasing intensity of commercial activities within this district. Since 1998 the U.S. Postal Service has indicated a desire to either expand its present leased facility on Main Street or to relocate outside of the Village. Public sentiment supports efforts to ensure the post office remains in the Village.

To accommodate an expanded facility on its present site, the 2001 changes to the Land Use and Development Regulations expanded the Village Commercial District south on Main Street to include the post office property. If this district is expanded further, however, the Village could experience a wider conversion of residential buildings to commercial uses.

Warren Village Historic Residential (WVR) District:

The WVR District, which surrounds the Warren Village Commercial District, encompasses most of the Village. Partly due to the Route 100 bypass in 1954, Main Street has not experienced the widespread commercialization typical of other

historic villages located along busy highway corridors. While several home-based businesses exist in this district, the area is predominately residential in character. Village residents have expressed concerns regarding perceived threats to the quiet, residential character of the Village. These include the potential for additional commercial activity (which is presently allowed in the district), and the potential for higher densities resulting in the loss of the Village's remaining open space. Although higher densities may be possible with the expansion of the municipal wastewater collection system, under present state rules, expansion may not occur for two years and possibly not at all. Presently, most properties do not comply with current dimensional and density standards. Some residents have indicated that additional residential development could occur in a manner, scale and pattern that better reflects the traditional character of the Village than the large lot development now required.

Planning Considerations:

It is clear from public concern that no increase in development density should occur unless the implications of such changes on Village character and the quality of life enjoyed by Village residents are clearly understood.

Most existing commercial enterprises in the Historic Village Residential District are associated with residential uses, which help to maintain residential character. Home-based businesses should continue as permitted uses. At

the same time, standards for site design and building scale could be considered concurrently with a review of existing land uses, parcel sizes, physical features and development densities in the district. With proper design standards, the Commission may find the means for allowing limited development while strengthening the standards needed to maintain Village character.

Alpine Village

Encompassing approximately 290 acres in the south-eastern corner of Town, Alpine Village was initially developed in the early 1960s for vacation homes, camps and related seasonal-recreation uses. The development pre-dates most state and local regulatory processes. Characterized by 1/10 acre parcels placed in a grid-lot and street pattern with little regard to land forms or development capacity, Alpine Village has developed as a clearly defined residential neighborhood.

Several landowners have consolidated pre-existing, non-conforming lots into larger parcels for residential purposes. In many instances, seasonal camps have been upgraded for year-round use. Due to the conversion of camps, as well as the availability of affordable land, Alpine Village has benefited from the investment and 'sweat equity' of home-owners over the years. However, the area is still plagued by problems stemming from the inception of the development.

For example, the road network is privately owned and in poor condition. Poor soils and small lot sizes may pose a number of public health risks associated with on-site septic systems and private wells. The conflict between year-round residents and landowners using the area for seasonal camping remains an issue. The most critical of these issues is sewage disposal. To date, no feasibility study has been performed to determine whether a community disposal system is practical. However, such a study will likely become more critical as year-round occupancy in the Village increases.

Planning Considerations:

To recognize the distinctive settlement pattern and potential for the area to continue serving as a source of affordable owner-occupied housing in Town, an Alpine Village Residential District (AVR) was included the Land Use and Development Regulations. The district is limited to residential uses and associated home-based businesses, although some limited community activities are appropriate in designated areas. The minimum lot size is one acre. Regardless of lot size, requirements that pre-

existing small lots be merged could be reviewed to determine whether those standards reflect current state statute, and an aggressive system for monitoring the transfer of small lots developed to support the continued consolidation of parcels. Finally, some standards for the use of recreational vehicles could also be included to ensure that sewage is disposed of in a safe manner.

Sugarbush Village/Lincoln Peak Base Area

The high elevation bowl formed at the convergence of Clay and Rice Brooks is the setting of Warren's largest growth center. Containing the bulk of the Town's recent commercial and residential development, the Sugarbush Village and Lincoln Peak area will likely continue to serve as the focus of economic activity and development for the foreseeable future.

Since the advent of alpine skiing on Lincoln Peak in 1958, Sugarbush Resort has been the economic engine that has supported the development of a dispersed mix of lodging, seasonal residential and commercial (especially restaurant and recreation) developments in and around the Clay Brook bowl.

Due to the lack of a guiding land use plan for this area, past development was largely uncoordinated and unorganized. Despite this, ownership patterns and 1970s zoning resulted in a high concentration of residential and commercial uses in Sugarbush Village, adjacent to the base of Lincoln Peak. Although Sugarbush Village provided direct access to ski trails, the large parking area formerly owned by the U.S. Forest Service prevented the development of base area facilities that could serve as an extension of the Village and more fully integrate the Village with ski area operations. In 2000 Sugarbush acquired the parking area and surrounding land (known as the '57 acre site') from the Forest Service. The acquisition will allow for a consolidation and rearrangement of base facilities and associated resort-oriented in-fill development which could strengthen the relationship between the Village and ski area.

Beyond the loosely defined boundaries of Sugarbush Village are a number of lodging and residential enclaves that have developed at a range of densities. These projects were primarily developed with direct access to the Sugarbush Access, German Flats and Inferno Roads.

To the south of the Access Road, and east of the Inferno Road, is a lower density residential area surrounding the Sugarbush Golf Course, which is one of the Resort's most important

summer recreation amenities. The Sugarbush Village/Lincoln Peak Growth Center encompasses the Sugarbush Commercial District and a portion of the Sugarbush Village Residential District. This area represents a significant portion of value found in the Town's grand list and is the focal point for the Valley's tourist industry.

In addition to the designated growth center, the zoning map (Map 8) designates the boundaries of a larger growth center study area. This area encompasses not only Sugarbush Village and the base of Lincoln Peak, but the majority of the commercial and condominium development in the vicinity, as well as approximately 300 acres of land presently zoned Rural Residential in the vicinity of the Sugarbush Golf Course. The study area boundary reflects past development patterns; and identified infrastructure and service area needs. The Sugarbush Village Commercial District, Sugarbush Village Residential District, and Vacation Residential District zoning designations are represented within the growth center and the surrounding study area.

Sugarbush Village Commercial (SVC) District

The SVC District encompasses the core of Sugarbush Village, including the commercial enterprises adjacent to the covered pedestrian bridge, the Lincoln Peak base facilities and a portion of the 57-acre site. As noted previously, this SVC District is considered the Town's principal growth center and as such would facilitate a compact, urban core at the base of Lincoln Peak.

To this end, the SVC District has been designated a receiving area for development rights. For each acre of meadowland in the RR District for which development rights have been acquired, one additional unit or two additional hotel bedrooms may be permitted. The density within the District may be increased by up to 50% using the TDR program.

In the past, concerns have existed regarding the desire of Sugarbush management to develop self contained commercial amenities at the base of the mountain, and Sugarbush Village property owners' desires to maintain the economic viability of the Village through greater integration with, and access to, ski area operations. Recently, Sugarbush has demonstrated a willingness to support Village viability through property leasing and business development. In addition, after an extensive design and regulatory process, a hotel was approved

in a configuration that will improve the physical linkages between the Village and base area. Planning for this development continues.

Planning Considerations:

The development of the remainder of the 57-acre site (and associated ski-facility improvements) presents an opportunity to the community. As the ski area expands, the base area could be developed in a manner that reflects the ski village scale and density. Such considerations as an integrated street network, the development of parking structures to eliminate expansive surface parking lots, a pedestrian orientation of development and transit service could enhance the hotel as a prominent focal point in a traditional small-urban setting.

However, large scale development, use of



developable land for parking, and poor site design could undermine the opportunity that currently exists. To avoid this, Town and Sugarbush officials should continue to work together to ensure that future development occurs in a manner that takes full advantage of the potential to create a pattern and scale of development that balances the Town's planning goals with Sugarbush's economic goals.

Potential environmental threats associated with large scale development at high elevations should continue to be monitored. Wastewater treatment, stormwater management, and encroachment into remote areas, are all important considerations relative to future development. The ecological sensitivity of the area demands the highest level of environmental protection, especially during construction. In addition, the Town has concerns regarding large scale and intense future development of

the base area due to:

- greater recreational use of sensitive upland areas;
- increased development pressure outside of the growth center boundaries;
- the potential that existing business enterprises and other commercial centers may be undermined;
- traffic impacts on the regional road network; and,
- increased demand for public services and facilities.

These concerns should continue to be addressed whenever the current Land Use and Development Regulations are revised to ensure that they are addressed during future regulatory review of development proposals in this area.

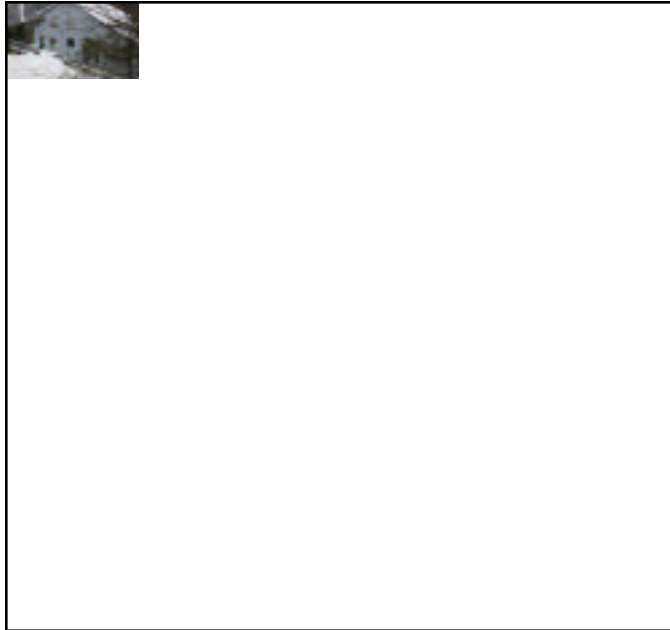
Sugarbush Village Residential (SVR) District.

The SVR District encompasses most of Sugarbush Village uphill from the base area, as well as some of the surrounding land. Within this 135+/- acre district are the Sugarbush Health & Racquet Club and wastewater treatment plant and a small portion of the 57-acre site just south of Rice Brook. This District also has been designated as a receiving area for development rights. For each acre of meadowland in the RR District for which development rights have been acquired, one additional unit or two additional hotel bedrooms may be permitted. The overall density within the District may be increased by up to 33% using the TDR program.

Planning Considerations:

Many of the issues associated with the SVC District also apply to this district. In many respects, the development potential of this area is not as great as the SVC portion of the 57 acre site in fact, development in the SVC district could be designed to strengthen and enhance the existing patterns found in the SVR zone. Additionally, there is some potential to allow for an overall density of the southeasterly triangle of SVR (see Map 8) comparable to the SVC District using the TDR program. Prior to such an expansion of the District and modifica-

tion of density, it will be important to fully understand how this land use change would affect the function of the SVC District as the Town's principal growth center



Vacation Residential (VR) District

The VR District currently encompasses over 470 acres of land surrounding the Lincoln Peak base area and Sugarbush Village. Much of the condominium development of the late 1970s and early 1980s occurred in this district.

Past development has included a range of styles and levels of construction quality.

Individual projects were generally isolated and lack road or pathway connections to one another or an integration of dedicated open space. In addition, the siting and landscaping of some projects resulted in unattractive developments. Finally, the extensive road frontage on major Town roads poses a risk of commercial strip development.

Like SVC and SVR Districts, this District has been designated a receiving area for development rights. However, the additional density may only be allowed in Planned Unit Developments.

Planning Considerations:

Because of the concentration of ownership of undeveloped land at the base of Lincoln Peak, the VR District provides business opportunities to a variety of landowners. Further, with good site design principles and clear open space protection and landscaping requirements, the VR District can serve as a low-impact, moderate density contrast to the high density core in and around Sugarbush Village.

German Flats Commercial (GFC) District.

The GFC District is intended to provide the parcel occupied by the Sugarbush Inn with higher densities and greater flexibility of uses than are allowed in the surrounding VR district. This District also has been designated a receiving area for development rights.

Planning Considerations:

While the elimination of this district could

be considered, the potential for Sugarbush to link the Inn with the ski area with lift facilities has been discussed for several years. Should such a lift extension occur likely terminating at the maintenance building near Village Woods the area could serve as a small crossroads commercial center. Should such a lift extension appear feasible, the Town could consider expanding this district to include the lift terminus and surrounding lands, and identifying appropriate uses, densities and development standards at that time.

Rural Countryside

The bulk of the Town, over 90%, is designated as either the Forest Reserve (FR) District or the Rural Residential (RR) District. Within the RR District, approximately 1,800 acres have been included in the Meadowland Overlay (MO) District. Together, the RR and FR Districts comprise the bulk of the Town's productive forest and farm land and define its historic working landscape. At the same time, these parts of Town have been the focus of significant residential development pressure over the past fifteen years. Guiding future development in these districts will be of particular importance to efforts to preserve Warren's sense of place and rural character.



Forest Reserve (FR) District

Defining characteristics of this district are steep slopes, a preponderance of soils with extremely poor septic suitability, highly visible hillsides and ridgelines that form the background view for many of the Town's scenic viewsheds, large tracts of productive forest land, fragile headwater areas, and extensive wildlife habitat which includes some of the most productive black bear habitat in the State. While portions of the district were once used for agriculture, as evidenced by stone walls and patchwork forest patterns, it is almost entirely wooded today. The FR District presently permits few land uses other than forest management and single family homes on a lot with a minimum of 25 acres. Much of the property within the district is subject to ongoing forest management, and large tracts are

held by the Green Mountain National Forest (GMNF). As was stated elsewhere in this plan, good forest management may ensure a sustainable income from timber harvesting while accommodating stable wildlife populations, protecting sensitive headwater streams and providing a wide range of low intensity recreation opportunities.

A number of programs are available to foster sound forest management and provide financial incentives to landowners in return for multiple use management of their property. The State Current Use program provides tax relief for landowners in return for responsible forest management. The Green Mountain Forest may be interested in expanding its land holdings, and the Vermont Housing and Conservation Fund is a possible source of funds

for the acquisition of development rights. During the last revision to the Land Use and Development Regulations in 2002, the boundary for the Forest Reserve District was modified in the following manner:

- The FR District east of Route 100, comprising the upper elevations of the Northfield Mountain Range, is defined by the 1,850' msl (mean sea level) contour elevation;
- The area west of Route 100 and south of Lincoln Brook was included within the FR District;
- The FR boundary in the Lincoln Brook watershed was lowered from 1,950' to 1,700' msl;
- Land currently under GMNF ownership is included in the boundaries;
- In the Bradley Brook watershed, the boundary was lowered from 2,500' msl to 2,000' msl; and,
- In the vicinity of Sugarbush Village and in the Slide Brook watershed, the boundary was drawn to include land adjacent to the Sugarbush Village/Lincoln Peak base area and all of Sugarbush Resort's land holdings in Slide Brook.

Planning Considerations:

Because of the geographic conditions throughout this district, road improvements are expensive and difficult to maintain. This is

exacerbated by the distance from other Town roads and services. Further, emergency vehicle access is difficult on steep, narrow roads, and the potential exists for conflict between automobile traffic, logging operations and outdoor recreation in these areas.

Other important land use considerations in the FR District include the protection of wildlife habitat, especially black bear; the visual impacts associated with lot clearing and the placement of structures on prominent sites and steep hillsides; and erosion and stormwater runoff resulting from clearing and development on steep slopes, especially in headwater areas.

Rural Residential (RR) District

The RR District comprises the bulk of the Town outside of the Forest Reserve District. The district is intended to protect environmental resources while permitting low density development. In addition to single-family homes permitted on one acre parcels, a number of other land uses, including light, medium and heavy industry, are presently allowed within this district.

Planning Considerations:

The general pattern of development in the RR District should remain largely rural. The historic pattern of farmyard clusters surrounded by open fields could be recreated through the application of Planned Residential Development (PRD) standards included in the Town's Land Use and Development Regulations. Such standards could allow landowners to cluster development in this historic pattern, which might not otherwise be permitted under conventional zoning.

The extent to which Warren residents are involved in home-based businesses is discussed in detail in Chapter 9 and is accommodated in this district. Finally, incentives to maintain historic barns should be continued, including allowing such structures to be used for uses not otherwise permitted in the Rural Residential District.

Meadowland Overlay (MO) District

The RR District currently contains special standards for development proposed within delineated "Meadowlands". In the Meadowland Overlay District allowable land uses, density and lot size, and dimensional requirements are dictated by the underlying RR District. Development rights of meadowland also may be acquired and transferred to a number of other districts where high density development is

encouraged. Where meadowland has been identified and mapped, however, additional performance standards apply.

The MO District was designated to encompass all land that was in agricultural production in the late 1970's, as delineated on the 1979 ortho-photographic aerial photographs. The purpose of the district is to maintain viable farmland for agricultural uses and to locate development in a manner that, to the extent feasible, preserves the open fields and meadows that contribute to the Town's scenic landscape.

The Meadowland standards have been among the Town's most important and successful regulatory tools for protecting the working landscape. As residential development pressure continues to increase, the importance of this provision will increase as well.

Planning Considerations:

The MO District boundaries have not been reconsidered as the landscape has changed. Some consideration could be given to clarifying the boundaries and providing maintenance standards.

Commercial Nodes

In addition to the Town's Village Centers, three small commercial districts are contained within the Land Use and Development Regulations.

German Flats Commercial (GFC) District:

This district is considered in the context of the Sugarbush Village/Lincoln Peak base area.

Access Road Commercial (ARC) District:

This district encompasses several commercial properties clustered around the intersection of the Sugarbush Access Road and Route 100. Several of the parcels within the district have been developed for commercial uses. This area serves as the gateway to Sugarbush Resort. Efforts to strengthen the area through improved landscaping and site design would contribute to property values as well as the scenic values of the Route 100 corridor.

Airport Commercial (AC) District:

The Airport Commercial District encompasses the Sugarbush Airport and is designed to promote the continued viability of that facility and encourage compatible land uses while protecting neighboring residential properties from adverse impacts of such development. Nevertheless land users adjacent to this district should be cognizant of the inherent needs and

characteristics of airport operations.

Bobbin Mill Commercial (BMC) District:

The Bobbin Mill property, located just south of Warren Village west of Route 100, has been the site of industrial activity in the Town of Warren for over 100 years. The adjacent sand, gravel and stone quarry, with its secondary access off the Lincoln Gap Road, has been operated for over 50 years. The primary access for both industrial and extraction activity is via a dead-end Town Road from Route 100 that is not shared by other properties.

Due to its historic use, existing character, proximity to Route 100 and the Village, and relative isolation from surrounding properties, the area is a suitable location for continued industrial and associated commercial uses. Such a designation can be designed to encourage industry and resource extraction while avoiding conflicts with commercial and recreational uses requiring higher traffic volumes and public access.

Planning Considerations:

A review of the land uses allowed in the AC district would be useful to determine whether some of the commercial uses should be limited to accessory to the airport or other outdoor recreation enterprise, and whether other light industrial uses might be encouraged.

The upper portion of the BMC has good access, soils and southern exposure and is suitable for moderate density residential uses once the current sand extraction is completed. Other considerations include the need to protect water quality and recreational access in Lincoln Brook and ensure that standards are developed to protect neighboring properties.

Other Provisions

Flood Hazard Overlay (FHO) District: The Flood Hazard Overlay District was created to prevent or minimize hazards to life or property due to flooding. It also was designed to assist the Town in regulating development within identified flood hazard areas in accordance with state and federal law in order to ensure that property owners are eligible for flood insurance. During the preliminary phase of writing the Warren Disaster Preparedness Plan in 2004, flood was identified as the most likely and most potentially damaging of disasters threatening Warren. With the exception of agriculture, forestry, and outdoor recreation uses, all uses, permitted or conditional, in the underlying dis-

trict are conditional uses.

Planning Considerations:

Other safety considerations could be included in the Flood Hazard Overlay District standards, such as anchoring propane tanks.

Future Considerations

Again, to accomplish the proposed land use plan while achieving many of the goals set forth in other chapters of this Plan, additional development standards related to environmental protection, traffic management, commercial strip development, open space preservation and coordination of land use and capital facilities planning, will be required. A full range of regulatory and non-regulatory strategies are available to the Town. By focusing on the regulatory alternatives, it is hoped that this Plan will serve as a blue print for future zoning changes.



Land Use Goals

Goal 10.A The preservation of the Town's historic settlement pattern, defined by compact villages surrounded by rural countryside.

Goal 10.B The regulation of land development in a manner which protects important natural and community resources including farm land, forest resources, important wildlife habitat and water quality while allowing for diverse land uses in appropriate locations.

Goal 10.C The development of a compact village core at the immediate base of Lincoln Peak and Sugarbush Village to serve as the Town's primary growth center.

Objective 10.1. To administer the Town's development regulations in a fair and consistent manner.

Implementation Strategies

- a) Review the Land Use and Development Regulations to identify and correct technical deficiencies, ensure compatibility with the Town Plan and make substantive revisions identified elsewhere in this Plan.
- b) Review current administration and enforcement practices related to the Land Use and Development Regulations and ensure that all standards and associated permit conditions are efficiently administered and strictly enforced.
- c) Refer to the goals, objectives and strategies set forth in this Town Plan during all site plan, conditional use, Planned Unit Development, Planned Residential Development, and subdivision reviews and all state and federal regulatory reviews.
- d) Upgrade and maintain comprehensive permit tracking and record keeping system.
- e) On a regular basis, compare the Town's Land Use and Development Regulations to current Town policies and state statutes and make revisions to ensure

consistency as appropriate.

- f) Consider options for allowing minor amendments to the final plats for subdivisions and Planned Residential and Planned Unit Development through an administrative process.
- g) Consider adopting new requirements in the Land Use and Development Regulations covering building safety issues, such as requiring smoke detectors and/or sprinklers for fire protection in new home construction.
- h) Consider the use of assessing impact fees to pay for needed capital improvements (such as schools, roads, or other) which are a direct consequence of any new development.

Objective 10.2. Maintain an overall high quality of site design and environmental protection throughout Town.

Implementation Strategies

- a) Review and revise, as necessary, conditional use standards to address the impact of various land uses on adjacent properties, the neighborhood or district in which a project is located, and the community at large. Standards and conditions should emphasize those adverse off-site impacts of a proposed project that can be identified, avoided and/or mitigated.
- b) Review and revise, as necessary, site plan review standards to ensure that overall building and site design is consistent with the purpose and character of the district within which a development is located. Standards and conditions should emphasize those considerations related to the internal layout of the site, the physical design, and the functional integration of the site with surrounding properties and uses.
- c) In revising the land uses permitted in each zoning district, identify those land uses which, because of such special considerations as scale, intensity or potential to impact neighboring properties or fragile features (e.g. gravel extraction, gasoline stations), require specific performance

standards related to site design and operations.

- d) Maintain existing sign standards. At a minimum, maintain the existing maximum sign sizes set forth in the Land Use and Development Regulations.
- e) Review and revise, as necessary, general performance standards to ensure that new and existing land uses do not exceed specific standards for noise, odor, water quality, lighting and related environmental and public health considerations. (See Chapter 3)
- f) Maintain standards to protect natural resources and fragile features, including wetlands, headwater streams, steep slopes, view sheds and wildlife habitat (See Chapter 3). Develop clearer standards regarding development on steep slopes.
- g) Prevent strip development (commercial development occurring in a linear pattern along major road corridors) along Route 100, the Sugarbush Access Road and German Flats Road.
- h) Maintain the Flood Hazard Overlay District provisions and update as needed to maintain the Town's eligibility for the National Flood Insurance Program and to support the Town's disaster preparedness efforts. Consider updating the Land Use and Development Regulations to reflect the need to protect high risk areas that are not in designated floodplains.
- i) Maintain standards for the protection and enhancement of surface and ground water quality throughout Town, including but not limited to maintaining setbacks from streams and a 50' minimum undisturbed setback along all streams (see Chapter 3).

Objective 10.3. To preserve the character, scenic landscape and environmental well being of Warren's rural countryside through the designation of distinct zoning districts, and to regulate land use activities to ensure compatibility with the purposes of those respective districts.

Implementation Strategies

- a) Maintain the Forest Reserve (FR) District for the purpose of protecting significant forest resources and headwater streams and limiting development in areas with steep slopes, shallow soils, wildlife habitat, fragile features, scenic resources, and limited access to Town roads, facilities and services. To this end,
 - i. Consider whether future changes to Forest Reserve boundary are required.
 - ii. Maintain the Forest Reserve District standards to require that all development, other than agriculture and forestry, be subject to conditional use review. In addition, conditional use standards specific to this district should be maintained to prevent erosion and sedimentation associated with stormwater runoff; to ensure that new development is sited and landscaped in manner which limits the visual impact of hillside development; and which avoids adverse impacts to water quality and headwater streams. (see Chapter 3)
 - iii. Maintain an overall density of one dwelling per 25 acres in the FR District.
 - iv. No development shall be permitted within that portion of the Forest Reserve District contained within the watershed of Slide Brook, with the exception of routine maintenance necessary to allow the continued operation of the Inter-tie Lift connecting Lincoln Peak and Mount Ellen. Forest management shall be limited within this area to those activities designed to preserve and enhance bear habitat.
- b) Maintain the Rural Residential (RR) District for the purposes of encouraging low density residential development; allowing moderate or high density residential development in appropriate locations; encouraging continued agricultural and forest management; and for the preservation of rural resources and natural features. To this end:
 - i. Consider whether future changes to the Rural Residential boundaries are required.
 - ii. Continue to prohibit those commercial uses that are found to be inconsistent with the RR District's residential and

- rural character (e.g. retail businesses, restaurants, heavy industry) while ensuring that home-based offices, child care facilities, and cottage industries are permitted and encouraged.
 - iii. Maintain a maximum density of one dwelling per acre. Consider lowering density as appropriate.
 - iv. Revise the Land Use and Development so that density calculations exclude fragile areas (slopes in excess of 25%, delineated wetlands, floodplain) from the total area used to calculate required lot size.
 - v. Concurrent with the review of uses described above, consider alternatives for supporting Rootswork and similar efforts by allowing educational and commercial activities associated with agricultural operations.
 - vi. Consider allowing the RR district to act as a receiving area for transfer of development rights (TDR).
- c) Maintain the Meadowland Overlay District (MO) to preserve an adequate land base for agriculture, prevent the conversion of farm land to other uses, and preserve the scenic qualities of the landscape. Consider updating boundaries to correct errors. Clarify development, clearing and maintenance requirements.
- d) Implement all strategies set forth in this Plan regarding the preservation of the Town's rural resources and natural features, and the continued viability of farming and forestry. (See Chapter 3).

Objective 10.4. To reinforce existing villages and designated growth centers as the focus of cultural, economic and residential activities in the Town, in a manner that respects the unique character of those areas.

Implementation Strategies

- a) Strengthen Warren Village's status as a Town center in order to promote its social, governmental, commercial and residential function in the community, while taking special care to protect the residential character and the quality of life enjoyed by Village residents. Also maintain a viable site in the Village for a Post Office. To this end:

- i. Maintain the Warren Village Historic Residential (WVR) District and Warren Village Commercial (WVC).
 - ii. Review the list of permitted and conditional land use allowed in the WVR District, and eliminate those that could undermine the residential character of the Village, while promoting the establishment of home-based businesses.
 - iii. Review site design, parking, lighting, setbacks and related standards for development within both the WVR and WVC Districts and create standards that will protect and enhance the scale, pattern and character of development that defines the Village. (See Chapter 3).
 - iv. In conjunction with (iii), above, review WVR density standards for residential uses and determine whether appropriate locations exist to accommodate higher densities and/or smaller lot sizes in a manner that maintains and enhances existing scale, patterns and character of development.
- b) Implement the objectives and strategies related to pedestrian enhancement, traffic management and parking improvements (see Chapter 7) and Community Facilities and Services (see Chapter 8).
- c) Maintain the Sugarbush Village/Lincoln Peak Growth Center as the Town's principal growth center to concentrate commercial, recreation and residential land uses associated with the operation and expansion of Sugarbush Resort as a four-season resort. Within the growth center, the following zoning designations should be maintained to concentrate mixed-use development at the base of Lincoln Peak and Sugarbush Village, while allowing a mix of lower density land uses in the surrounding area:
- i. Maintain the Sugarbush Commercial (SVC) District to promote a high density, mixed-use urban core in Sugarbush Village and at the base of Lincoln Peak (as depicted on Map 8). The SVC District should allow for a mix of commercial and residential uses at high densities, and should include specific development standards requiring:

- _ the development of an integrated network of streets;
 - _ buildings to be oriented toward and front upon streets (as opposed to large parking areas);
 - _ a reasonable mix of building scale and consistent use of styles and materials;
 - _ pedestrian orientation, characterized by an extensive network of sidewalks and walking paths, a pedestrian scale and orientation of buildings, lighting and public spaces, and the placement of street furniture;
 - _ the efficient use of land, including provisions for the development of parking structures and use of public transit; and,
 - _ the design of a prominent gateway(s) and substantial undeveloped buffers to provide a sharp contrast between the village center and the lower density surrounding areas.
- ii. Maintain the Sugarbush Village Residential (SVR) District to support high-density residential dwellings and commercial lodging in and around Sugarbush Village. In addition to residential and lodging uses, other commercial activities (e.g. restaurant, recreation) should be permitted in the SVR District. To promote an urban scale and character of development, district standards should be comparable to those described for the SVC District, above.
- iii. Maintain the Vacation Residential (VR) District to encourage the development of seasonal dwellings at moderate density in the vicinity of the ski resort. The existing VR standards should:
- _ discourage those land uses (e.g., retail, fast food restaurant) which would conflict with residential uses and could contribute to roadside clutter and strip development;
 - _ require appropriate landscaping and lighting standards to minimize the visibility of large development from off-site;
 - _ establish access management provisions to limit curb-cuts and maximize highway safety; and,
 - _ require the establishment of an

inter-connected network of walking paths, recreational trails and open space.

- iv. Maintain the German Flats Commercial (GFC) District to encourage the continued viability of the Sugarbush Inn, and consider expanding that district concurrent with the development of ski lift facilities extending to the northwest corner of the German Flats/Access Road intersection (see Map 8). Such a designation should include standards to strengthen the intersection as a compact commercial node, with a building pattern and orientation similar to that of the Sugarbush Inn.
- v. Maintain the Alpine Village Residential (AVR) District to recognize the distinct settlement pattern of this area and address associated concerns.

Objective 10.5. To support the ongoing viability of commercial enterprises in those areas designated as commercial nodes, while limiting the encroachment of those districts along roads or into residential areas.

Implementation Strategies

- a) Maintain the Airport Commercial (AC) District to permit airport related growth and development associated with the Sugarbush Airport. To this end, uses in the district should be reviewed to allow those uses open to the public (retail, restaurant) to continue only as accessory uses to the operation of the airport and outdoor recreation.
- b) Maintain the Access Road Commercial (ARC) District to allow a range of commercial uses in the vicinity of the Route 100/Access Road intersection. The district should not be extended, although a range of commercial uses should be permitted. Site standards should be developed to require appropriate landscaping, traffic calming and an arrangement of buildings in a manner that reflects a traditional Vermont crossroads settlement.
- c) Maintain the Bobbin Mill Commercial Park (BMC) District to allow for the continued operation and expansion of industrial and associated commercial uses.

Maintain standards to ensure that commercial traffic access is limited to Route 100, and that substantial buffer areas are established from Lincoln Gap Road within which only residential uses are permitted.

Objective 10.6. To reinforce historic settlement patterns, protect environmental and scenic resources, and facilitate the logical extension of services and facilities through the careful regulation of land subdivision.

Implementation Strategies

- a) Regulate land subdivision in a manner that ensures the pattern of future development does not adversely affect the Town's natural features, rural resources and scenic character. To this end maintain and strengthen the subdivision regulations as necessary to:
 - i. strengthen standards, as necessary, related to erosion control and stormwater management;
 - ii. require the delineation of a building envelope for each newly created lot to prevent adverse impacts to natural resources and fragile features;
 - iii. address the distinct characteristics of different zoning districts with specific standards designed for each district;
 - iv. include standards for the designation of open space for major subdivisions, including documentation that the subdivider considered all available options for preserving natural and community resources;
 - v. require the designation of public access to support the creation of a Town-wide trail network and the protection of important existing trails;
 - vi. coordinate traffic safety and access management objectives and implementation strategies of this plan with subdivision standards, and ensure that new development does not result in adverse impacts on traffic safety and efficiency;
 - vii. coordinate natural resource protection standards with the current and revised zoning standards, and prevent the creation of any lot which would result in significant adverse impacts on any fragile feature identified in this Plan, including wetlands, floodplain, steep

slopes (> 25%) and riparian areas;
viii. include a provision in the permit fee schedule stipulating that the cost of special studies necessitated by an application (e.g. traffic studies, fiscal impact studies, landscaping evaluation, etc.) will be borne by the applicant unless otherwise determined by the Town.

ix. consider allowing additional districts to be used as transfer of development rights (TDR) receiving areas.

b) Through subdivision regulations and/or planned residential development standards for large subdivisions, require the clustering and siting of new development as necessary to protect identified natural resources, fragile features and cultural resources.

c) Consider the development and adoption of an Official Map (§4422) to identify future road and trail improvements and important open space.

Objective 10.7. To balance infrastructure and transportation improvements with land use policies; and to ensure that growth and development occurs at a rate and scale that do not overburden community facilities or services, or undermine the community's rural character and quality of life.

Implementation Strategies

- a) Through an ongoing planning process, ensure that capital improvements are coordinated with land use policies to avoid conflict in rural areas of Town (see Chapter 8).
- b) Continue to prepare and adopt an annual capital improvements program to identify capital needs and schedule improvements in a coordinated manner (see Chapter 8).
- c) Do not extend sewage service beyond the Sugarbush Village/Lincoln Peak growth center boundaries and/or the Village Commercial and Historic Residential District boundaries in Warren Village, as delineated on the current zoning map (except as needed to address clear threats to public health and safety).
- d) Encourage all governmental facilities

requiring frequent and regular public access, such as the municipal offices, Town Hall, library and post office, to remain in Warren Village. (see Chapter 8)

- e) Require a phasing plan for large developments and major subdivisions when necessary to ensure that the rate of development does not overburden town services and facilities.
- f) Support the Memorandum of Understanding between Valley towns and Sugarbush Resort to maintain a balance between ski area expansion and the Valley's capacity to accommodate additional resort-related growth and activity.
- g) A balance between the number of commercial accommodations (beds) and on-mountain ski area capacity shall be maintained.
- h) Through the Land Use and Development Regulations ensure that large scale developments and major subdivisions shall not result in a significant diminishment of highway safety or existing levels of service. Ensure that the cost of transportation improvements and related mitigation necessary to accommodate development projects are borne by the developer.

Appendix - A

Town of Warren 2004 Questionnaire Results

Question 1

Housing affordability a problem?	Yes		No		Total
	135	76.70%	41	23.30%	176
What should the town do?	Yes		No		Total
Amend Zoning	97	73.48%	35	26.52%	132
Donate Land	74	60.66%	48	39.34%	122
Appropriate Money	30	25.21%	89	74.79%	119

Question 2

Traffic Problem in the village?	Yes		No		Total
	53	30.29%	122	69.71%	175

Question 3

Do you use daycare?	Yes		No		Total
	11	5.76%	180	94.24%	191
Daycare Affordable?	10	90.91%	1	9.09%	11
Daycare needs being met?	10	90.91%	1	9.09%	11
Daycare located?	Warren	Mad River	Other		Total
	6	4	1		11
	54.55%	36.36%	9.09%		

Question 4

Expand the GMNF?	Yes		No		Total
	119	71.26%	48	28.74%	167

Question 5

Money to Conservation fund?	Yes		No		Total	
	140	77.78%	40	22.22%	180	
Amount?	5-10K	10-15K	15-20K	20-25K	Other	Total
# of responses	28	16	14	36	16	110
	25.45%	14.55%	12.73%	32.73%	14.55%	

Question 6

Conservation values	Checked (191 responses)	
Land with trails or other recreation opportunities	120	63%
Water quality of the Mad River, it's tribs	119	62%
Wildlife habitat and travel corridors	86	45%
High elevation ridge lines and knolls	71	37%
Agricultural lands and other open meadows	68	36%
Public access to the mad river	49	26%
Wetlands	36	19%
Large tracts of forestlands	28	15%
Connectivity of conserved lands	20	10%
Scenic Road Corridors	15	8%

Question 7

Use of National Forest?	More		Less		Total
Wilderness	146	92.99%	11	7.01%	157
Non-motorized Trails	152	92.68%	12	7.32%	164
Remote Backcountry	139	92.05%	12	7.95%	151
Management for wildlife	146	91.25%	14	8.75%	160
Mountain Bike Trails	101	64.33%	56	35.67%	157
Logging	60	35.50%	109	64.50%	169
Snowmobile Trails	30	17.86%	138	82.14%	168
ATV Trails	17	10.49%	145	89.51%	162
Roads	15	9.80%	138	90.20%	153

Question 8

Facilities at Blueberry Lake?	Checked (191 responses)	
picnic area	114	59.69%
sandy beach	109	57.07%
boat ramp	37	19.37%
boat house	13	6.81%
none of the above	61	31.94%

Question 9

Municipal Space Needs?	Yes		No		Total
Renovate and Expand the Existing Building	80	62.50%	48	37.50%	128
Build a new Building	22	20.00%	88	80.00%	110
Wait for adjoining property	105	75.54%	34	24.46%	139

Question 10

Remove the Dam?	Yes		No		Total
	76	49.03%	79	50.97%	155

If "NO" should the town assume ownership, liability and maintenance responsibilities for the dam to prevent it from being removed?

Yes	No		Total	
42	59.15%	29	40.85%	71

Town of Warren Questionnaire Comments

1) Do you think that housing affordability is a problem in Warren?

- Affordable housing should be near where the jobs for them are
- Availability
- Give everyone a chance to get a piece of the pie
- Ask for state assistance, we must maintain a level of forest – limit development in certain areas
- Amend zoning for rental units
- Allocate areas for high density, low income housing
- Yes, but only in the village
- With stipulation for property care and maintenance
- I'd like to hear what the unemployment rate is in Warren compared to housing
- Look at property value realistically
- Work with Habitat and other organizations, i.e. shared appreciation
- Use property by the school
- Tax break for housing development
- Make it easier for homeowners to develop auxiliary apartments in their home
- Encourage multi family
- Get cemetery access
- Yes, we need to help keep this a mixed community – not just retirees! Kids, family, etc all kinds of people. Keep the community strong.
- Create tax incentives without compromising the

environment

- In addition to an affordable housing development project we should look for houses, apartment buildings to buy and turn into affordable housing. This is what they are doing in Newport, RI.
- Less second homes, more full time locals
- Taxes are the problem and low wages for persons working in the service industry
- But never lower construction and design standards
- Ease zoning requirements for multi-family development
- Business development projects should include employee housing
- Keep taxes down so people can afford to live build and keep it!
- Ease permitting process!
- There is affordable housing it just takes intelligence to find it

2) Is there a traffic problem in Warren Village?

- Temporary speed bumps (plowing) and speed limit reminders
- Speed bumps (3)
- Not yet
- Minimize parking at Warren Store, emphasize parking at Town Hall lot, only parallel parking on street
- 10 minute parking – Warren Store and Pitcher Inn parking tickets
- street light, bridge lights

- Stop signs at Brook Road intersection w/Main Street
- We need sidewalks
- Narrow roads, No cars on Main St between the Brook Road and Flat Iron Road.
- Fix the road before there is any more money spent on traffic studies or any other study
- Stop signs at ALL intersections
- No more SUV's
- Traffic calming, police picking up those who do not stop at stop signs
- Stop developing
- Parking is a problem, not good to back out in Warren store
- No parking in front of the pitcher inn
- Look at long range parking issues
- We need to create a unified Main Street area
- Speeding through the village center
- Need more parking for warren store
- Get people to slow down
- People drive to fast!
- Speed indicating display on brook Road.
- Sidewalk needed on Brook Road
- Widen roads, no street parking
- There's a parking problem, but not a traffic problem.
- No sidewalks please, don't suburbanize downtown Warren
- Need to create additional parking somewhere.
- Move the municipal building out of the village and only approve new buildings if they can provide their own parking.
- Try to slow down drivers at the south end of town
- Eliminate on street parking – especially at the Pitcher Inn
- Not increase business (new)
- I see speed a factor – but we've tried many things
- More a parking problem, need parking lots for individual businesses
- The Warren Store and Pitcher Inn are using the road for parking – they should develop their own.

3) Do you use daycare for your children?

- The town could help support WASP and KPAS, Both non-profit at Warren Elementary School
- Vacations and shut down day care would be great
- Will need daycare next year – having difficulty finding a good affordable option

4) Should the United States Forest Service expand the Green Mountain National Forest in the town of Warren?

- Depends what is lost or gained
- They have plenty
- Yes, but not wilderness!

- Buy right of way for future roads and future settlements such as E Warren village
- Need more information

5) Should the town annually allocate funds to the Warren Conservation Fund? The purpose of the conservation fund is to purchase and protect critical agricultural, forested and open lands in the town.

- \$1,000
- \$50,000
- pay as you buy
- as much as we can afford!
- conditional yes, as long as we don't go overboard with the allocation
- has to be looked at part of the entire budget
- depends on the health of town resources, set a number at \$25,000 but could be varied from year to year
- you are going to have to support the conservation fund financially; you can't buy anything for \$25,000
- 5-10% of the school budget, we can't do too much!
- Not used later for affordable housing
- Whatever the town can reasonably afford
- The fund should ask for money on a case by case basis
- Meadowland zoning works

6) What should be the town's highest conservation priorities? Please rank the following options from 1-10 in the order of preference:

- the roads
- clean the river out so the fish can live
- no scenic road corridors
- right of way for future roads such as the Warren Village By-pass
- population growth – what a concept!!!

7) There are 7,200 acres of National Forest in Warren. The Forest Service is currently revising its management plan for the Green Mountain National Forest and is seeking public input on how various areas of the Forest should be managed.

- Horse riding trails

8) What facilities would you like to see at Blueberry Lake?

- Goose, waterfowl control. Waterfowl and swimmers don't mix; swimmers ITCH!
- Toilets
- Boat house with a fire place
- Landscape the island, camp areas across the lake, swimming raft

- Until we see what we need as we use it – it is beautiful now and that should be compromised as little as possible
- Also some ordinance on dogs running at large. People bring them and turn them loose.
- I like it “as is” but a little improvement would not be bad
- Boat house paid for with users fees
- Clean up from water fowl
- Stock lake w/Bass to help keep the lake clean
- Simple and rustic
- Overnight tent camping
- Drain it and leave alone
- Mountain bike trails across Plunkton

9) How should the town meet the expanding space needs of the town municipal building?

- Use the warren school building and merge warren and Waitsfield schools
- Use a mobile unit until then
- Use the town hall as offices
- Least costly option
- Combine the Waitsfield and Warren elementary schools; make retired school building municipal space
- Build a main library up at the school and get the children off Brook Road walking, this would give room at the municipal building
- Use downstairs of town hall
- Buy the land near the Sugarbush Access Road and build a new building.

10) Should the town support the removal of the timber crib dam in Warren Village?

- Town should remove dam and use gravel as payment for their costs
- Make the dam a historic site
- Remove the current dam, clean up the gravel and then build a new town owned dam
- It is the owner’s responsibility
- Take sand out and fix dam
- Let the river flow
- Perhaps it could be a dam rising like the old barn and house rising
- Having the historic preservation help preserve the dam
- Removing the dam will affect the river bed for hundreds of yards and change the dynamics of the river – build a new dam or several short spill ways
- Tough call, but it would be a scenic and historic loss
- Village Center – should not become a “resort”
- If it is really a historic structure than it should be preserved, but not to the point of risking the town

- Keep it that and the covered bridge it is historical also fire protection
- let nature take its course
- let it go, I guess, but get the gravel first
- town should not spend any financial resources on private property

11) What are the most important issues or problems that the Town should be planning to address (long range or short term)?

- Taxes (25)
- Affordable Housing (30)
- Expansion of the municipal building (5)
- Control expenses
- Keep dam for history – should be saved
- Economic diversification
- Affordable child care
- Keep Warren, VT from being Boston or New York
- Road conditions
- Enforcement of already existing zoning regulations
- Speed limit reduction on all roads, not just Warren Village.
- repair to bridges
- village compact housing
- housing for people who work at Sugarbush – as part of this community
- Young people need a break with affordable homes, permitting takes too long and taxes are too high!
- Housing opportunities to ensure continues economic diversity
- Avoiding over-development
- Fix the town roads
- Bicycle trails
- Get rid of eyesore buildings (debris, falling buildings)
- By-pass route from Airport Road to Route 100
- East Warren settlement (develop village center)
- Maintain rural character
- Find a way to reconcile all of this and you get the Nobel Prize for planning.
- Quality of accommodations for tourists and visitors including rest rooms, more information kiosks, and possible small unmanned visitor center.
- Look for new leadership on top.
- Preserve Route 100 scenic corridor by purchasing development rights
- Increase density within the village
- Increase capacity of village sewer system to handle more density
- Prohibit low income housing as isolated developments
- Stone walk finished along Freeman Brook and Flat Iron

- road for pedestrians
- Lights on Village Bridges
- More parking for the village
- Better quality education at Harwood
- Less bureaucracy
- Creating a new commercial district
- Bike path instead of sharing the main road
- Remove Act 60 from state law
- Preserve integrity of Vermont quality, support medium income/working families/nor second out of state land owners.
- River and recreational access
- Where will labor and service industry people live?
- Protect the wilderness
- Avoid sprawl
- Focus development in specific areas so as to preserve open spaces and consistent patterns of community life
- Tourists, scenic roads
- Keep an eye on land use/traffic in light of Sugarbush expansion – we don't want to be Stowe
- Attracting and keeping year round stable, good jobs for residents
- Getting/keeping young people involved in town issues and government
- Refurbish the village
- Making Warren good for all – families and older people.
- Growth in general
- Affordability for locals for goods, services, taxes, housing
- Small businesses expansions/new small businesses
- Community events and community areas
- Roads need repair
- Town garage needs to be bigger
- Ridgeline development
- Fighting act 60
- Expanding population and speeding development
- Second home growing pains
- Allow development as per town plan
- Support industry in town to keep jobs for working class
- Don't allow increased access to valley over Roxbury Mountain Road, don't pave!
- Proper fire department purchase to fit needs and then some
- Preserve open lands and high ridges
- The humongous Sugarbush plans
- Removing the dam in Warren
- Preserving the village
- Traffic calming
- Conservation of prime ag land
- The establishment of wildlife corridors
- Protecting the ridgeline
- I'd like the Planning Commission to look into purchasing the Orton Foundation town planner showing the visual changes
- You have all those people and most of them have at least one automobile, therefore they will need something to drive on. The need is more good gravel and crushed rock – better road system!
- Expand post office
- Sustainability of outstanding elementary school
- Maintain open space and agricultural lands
- Viability of Warren Village
- Control/restriction of ski resort related facilities
- Consolidation of overlapping non-profit ventures
- Work on the traffic problem created by the Pitcher Inn
- Enforcement of building regulations particularly visible and meadow and agricultural land conservation and use.
- More outside, recreational facilities (trails, rec areas, bike paths, etc)
- Town roads maintained – they do a great job and need to continue
- Keep children and skateboards off Brook Rd and Main St
- Flight of young families
- Profiteering by developers with little or no regard for wildlife, typical local density consider a “flip tax”
- The impact of more and more people moving to Warren, I'd like to see more wilderness, less people, less development It's why we moved here to be rural mountains twenty years ago
- Recreational opportunities for members
- Pave Airport Road and Plunkton Road
- Allow local businesses to flourish w/proper permitting process
- Ever increasing town expenses; i.e. sewer system that benefits a few, expensive elementary school
- Keep outside activities OUT of rural residential areas – not so many variances, why have zoning?
- Population growth
- Town road and maintenance
- Under use of town facilities i.e. town hall for school plays
- Lack of true interest in tourist trade
- Development of open land – control development
- Expansion of ridge development
- Possible increase in traffic
- How to keep the middle class workers from moving out of town!!
- Decisions being made by the minority instead of the majority.
- Parking on street in village

- Better police coverage
- Population impact on land and water and wildlife
- Saving the dam
- Stopping the current gentrification project in Warren Village
- School costs – study consolidation of valley elementary schools
- Lack of cohesive plan to support the ski area
- Reacting to short term problems w/long term solutions
- Less vacation homes
- If we move the Municipal Building up to the land near the school then the PO can have our town building to enlarge their needs
- Pave roads – I know my neighbors will hate me, but pave Prickley it's sinking
- More downtown/Village businesses, videos, affordable lunches and dinners, bakers.
- Support the resort; it's embarrassing to drive up there.
- Thank you town leaders for all you do!
- More residential properties
- More black top roads
- More shops and businesses into Town of Warren
- Conservation and preservation of rural/historic character
- Water quality
- How to help Sugarbush be a contributing member of the valley
- More paved roads – tired of mud season and muddy roads; it takes a toll on your cars and trucks
- Lack of livable wage jobs
- Zoning
- Building lots must become available, so where do they do the least harm?
- I don't have children here, but the needs of the kids at the school and after school require constant vigilance
- Roxbury Mountain Road, where is the pavement?
- Where are the jobs in this town for the working people?
- When will the rest of the people get there septic and water. The day is here!
- Water quality for residents outside of the village
- Creating a more cohesive town center
- Sewer system, water system
- Shrinking tax base/rising tax rate
- The trophyhomization of Warren
- Pave many of the town's worst roads
- Remove many unnecessary restrictions on building
- Enforce rules that make sense
- Mad river path from Warren to Waitsfield
- Over development
- It should begin to black top one mile of road every year to get people out of the mud.
- Parking in Warren village
- Increasing population w changing demographics
- Ban this sodium vapor lamps at private homes that are like a beacon
- Keep the village area alive
- Keeping village vibrant and safe
- Providing recreational facilities for community
- Municipal center – relocate near school
- Hiring practices
- Spending – It is out of control – this is not a city – Please don't make it one. If this town does not offer what you want – go back home to where you came from.
- Decrease ridgeline development/impact
- Do not pave Roxbury Gap Road such that it becomes a major corridor into the valley
- Conserve as much land as possible especially for the wildlife and secondarily for recreation
- Maintain rural characteristics of Warren
- recreation
- Something for our youth – teenagers especially during the summer time so they aren't just hanging in the village
- Protect natural beauty
- The people who live and work in Warren are finding it harder to stay here because of the increase in property value and taxes. This issue must be addressed.
- Lighting and noise pollution conditions
- Pedestrian and cycling right of ways on roadsides
- Pothole pollution
- Maintain quality education at Warren's school
- Keep business and noise disturbing other adjoining rural residential areas out of rural residential areas
- Incentives to keep open land open and scenic
- Keep diversity economically
- Equal opportunity for building permits
- Pave all roads that have a major mud season problem
- Sidewalks
- Activities (affordable) for all teens
- Meadow and forest land conservation and agriculture
- Maintain gravel roads
- Permanently conserved prime agricultural land
- Mandate all new power lines under ground
- Re-locate all existing power lines underground
- Designate and maintain scenic roads
- Pick up dog poop law/ordinance
- Clean up own yard/ can't start personal trash dump ordinance
- Restricting growth and especially restricting commercial

space

- Protection of wildlife corridors
- Mad river and water protection
- Loss of identity from run-away development
- Loss of open lands
- The town blew it by not approving some kind of sidewalk plan. Mostly from the village up Brook Road to the school.
- Population growth and stress on infrastructure
- Water quality
- wastewater treatment outside the village (relates to population growth)
- Conservation of working farms
- Stricter enforcement of zoning restrictions and permits
- Conservative growth/school operation issue
- Returning river to a more natural condition; remove dam
- Teen socials.....at town hall? Schedule regularly
- Tax incentives so people will want to clean-up and improve their property/house
- Enforcement of zoning!!!
- Cross valley traffic coming from Roxbury Gap thru the Warren Village
- Long term vision with Sugarbush
- More building permits
- More subdivisions
- Less social factions
- Respect the right of property owners
- Provide access to public land
- Letting people do what they want with their private property – find something else to do
- Clean water
- Public access to forest areas and water
- Protection of property rights – less zoning
- Recreational opportunities for all segments of the population
- Management of blueberry lake area as a town asset
- ATV's in public areas
- Constant maintenance of dirt roads in mud season
- Maintaining quality education at warren school and high school
- Protect out forests, fields, wetlands and waterways
- Preserve rural quality, feel and outlook
- Examine EACH item in the town budget to determine whether requests are justified
- Preserve the scenic and rural aspect of the area
- Combine the town library with the school library – expand the school library and make it big and for everyone
- Parking in the village

Appendix - B

Historical Traffic Counts in the Mad River Valley - Average Daily Traffic Counts

Station	Town	Route	LOCATION	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
W364	Duxbury	VT 100	N of VT 100B	3,900		3,600										
W023	Fayston	German Flats	N of SBN				2,300			3,300	1,500	3,400		3,400	960	2,900
W055	Fayston	VT 17	W of Ger Flts	1,300	1,200	1,000			1,000			970		3,900		
W131	Fayston	VT 17	W of Hasville	3,400								2,700				
W354	Fayston	German Flats	S of SBN									1,000		860		
W133	Granville	VT 100	N of Village	1,300		1,500		970		900		880		2,800		
W138	Moretown	VT 100B	N of VT 100	3,200				3,100		2,900		3,400				
W136	Moretown	VT 100B	S of US 2	2,900				2,800		2,500		2,500	2,500			4,900
W410	Moretown	VT 100B	N of Mtn Road	2,500				2,400		2,400		2,300	2,500	2,200		
W003	Waitsfield	VT 100	S of Hasville	4,900		4,700		4,900		4,400		4,200		4,100		4,000
W139	Waitsfield	VT 100	N of Village	6,400				6,900		5,200		5,900				
W140	Waitsfield	VT 100	N of Slow Rd	8,400				8,400				7,800				
W358	Warren	Roxbury Mtn	W of Roxbury TL				570				620			430		
W062	Warren	Access Rd	W of Golf Cor Rd	2,700		2,500			3,000			3,000		2,600		
W363	Warren	Main St	N of Brook Rd				380				280			250		
W269	Warren	Lincoln Gap	E of Lincoln								220			200		1,100
W008	Warren	VT 100	S of Village	1,500				1,100		1,100		990		1,400		
W439	Warren	Access Rd	W of VT 100							2,111	2,106	2,150		1,400	2,080	
W141	Warren	VT 100	N of Lunch Gap Rd	1,600				1,200				1,400		1,500		
W359	Warren	Brook Rd	E of Village				1,100				1,000					
W270	Warren	Lincoln Gap	W of VT 100				420				320					
W360	Warren	Main St	S of Flat Iron Rd				780				850			800		

Station	Town	Route	LOCATION	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977
W364	Duxbury	VT 100	N of VT 100B		3,200		3,000		2,600	880	2,100			1,900		1,500
W023	Fayston	German Flats	N of SBN			970										680
W055	Fayston	VT 17	W of Ger Flts		890											2,200
W131	Fayston	VT 17	W of Hasville		2,400		2,900		2,500		2,000		2,200	2,100		
W354	Fayston	German Flats	S of SBN													
W133	Granville	VT 100	N of Village		740		910		940				510	1,500	2,100	
W138	Moretown	VT 100B	N of VT 100											1,500	2,100	
W136	Moretown	VT 100B	S of US 2					2,000					1,500	1,500	1,500	
W410	Moretown	VT 100B	N of Mtn Road						1,800			1,700	1,600			1,500
W003	Waitsfield	VT 100	S of Hasville		4,300		4,400		4,000		3,100		3,600	2,500		2,800
W139	Waitsfield	VT 100	N of Village		5,300		5,400		4,800				3,800	4,800	4,100	4,100
W140	Waitsfield	VT 100	N of Slow Rd								6,000		5,500	5,200	6,200	
W358	Warren	Roxbury Mtn	W of Roxbury TL													
W062	Warren	Access Rd	W of Golf Cor Rd	2,500			2,400				2,500					
W363	Warren	Main St	N of Brook Rd													
W269	Warren	Lincoln Gap	E of Lincoln													
W008	Warren	VT 100	S of Village		880											
W439	Warren	Access Rd	W of VT 100			1,460										
W141	Warren	VT 100	N of Lunch Gap Rd										920			920
W359	Warren	Brook Rd	E of Village			920										
W270	Warren	Lincoln Gap	W of VT 100			470										
W360	Warren	Main St	S of Flat Iron Rd													

Appendix C - Glossary

Accepted Management Practices (AMPs): Accepted practices for forestry, agriculture or other areas as defined by the appropriate state agency or department.

Accessory Dwelling: A secondary dwelling unit established in conjunction with and clearly subordinate to a primary single family dwelling unit which is retained in common ownership, is located within, attached to or on the same lot as the primary dwelling unit.

Act 60: The popular name of State of Vermont tax legislation that was enacted in 1997 to revise the funding of schools through local school taxes, which resulted in dramatically higher property taxes.

Act 68: The popular name of State of Vermont tax legislation that was enacted in 2003 to improve some of the more unpopular provisions of Act 68.

Act 250: The popular name of State of Vermont legislation that regulates land use and related environmental matters for some of the land development in Vermont

Adaptive Reuse: The rehabilitation or renovation of an existing historic building for another use.

Affordable Housing: Housing that is either (1) owned by its inhabitants, whose gross annual household income does not exceed 80 percent of the county median income, and the total annual cost of the housing, including principal, interest, taxes and insurance, is not more than 30 percent of the household's net annual income; or (2) rented by its inhabitants whose gross annual household income does not exceed 80 percent of the county median income, and the total annual cost of the housing, including rent, utilities, and condominium association fees, is not more than 30 percent of the household's net annual income.

Central Vermont Regional Planning Commission (CVRPC): Formed in 1967, the CVRPC is one of 11 regional planning organizations in Vermont working with and for twenty-three municipalities in Central Vermont, including all the towns in Washington County and three towns in Orange County; Orange, Washington, and Williamstown. Its mission is to assist member municipalities in providing effective local government and to work cooperatively with them to address regional issues.

Current Use Program: A State of Vermont program that reduces the local property tax burden for landowners whose land remains in productive agricultural or forestry use.

Conditional Use: A land use allowed in a specific zoning district, as defined in the Land Use and Development Regulations, subject to the review and approval by the Development Review Board.

Density: The number of dwelling units, principal uses or structures permitted within a defined area.

Flood Hazard Area: Those lands subject to flooding from the 100-year flood, as defined by the Flood Insurance Administration.

Livable Wage: The hourly wage or annual income sufficient to meet a family's basic needs plus all applicable Federal and State taxes. Basic needs include food, housing, child care, transportation, health care, clothing, household and personal expenses, insurance, and 5% savings.

Land Use and Development Regulations: Warren's land use regulations that include provisions for such matters as land development, subdivisions, conditional use review, and related zoning regulations.

Mad River Valley Planning District (MRVPD): An organization formed jointly by Fayston, Waitsfield, Warren, Sugarbush Resort and the Central Vermont Regional Planning Commission to plan for issues affecting the Valley.

Meadowland: Land, including pasture land, hayland, and cropland.

Memorandum of Understanding: A joint agreement entered into 1983 between the Valley towns, Sugarbush, Central Vermont Regional Planning Commission and the State that was designed to maintain a balance between ski area expansion and the Valley's capacity to accommodate growth.

Multi-Family Dwelling: A building containing two or more dwelling units.

Natural Heritage Site: Rare, endangered and/or fragile environments which are inventoried by the State of Vermont.

Permitted Use: A land use allowed in a specific zoning district, as defined in the Land Use and Development Regulations, subject only to obtaining a permit.

Planned Residential Development (PRD): An area of land to be subdivided or developed as a single entity for a number of dwelling units. The plan for a PRD typically has characteristics in lot size, type of dwelling, commercial or industrial use, density, lot coverage, and other areas such that it can only be developed under the Land Use and Development Regulations as a planned residential development.

Planned Unit Development (PUD): An area of land to be subdivided or developed as a single entity for a number of dwelling units and commercial and industrial uses, if any. The plan for a PUD typically has characteristics in lot size, type of dwelling, commercial or industrial use, density, lot coverage, and other areas such that it can only be developed under the Land Use and Development Regulations as a planned unit development.

Proclamation Boundary: The land area in which the U.S. Forest Service can more easily purchase additional parcels because some of the administrative issues have been pre-determined. For all lands within the Proclamation Boundary, Congressional approval does not need to be specifically obtained for any individual land purchase, subject always to budget limits.

Single Family Dwelling: A building or structure containing one dwelling unit.

Subdivision: The division of any parcel of land into two or more parcels for the purposes of sale, conveyance, lease, or development. The term "subdivision" includes resubdivision involving the adjustment of boundaries between two or more existing parcels.

Transfer of Development Rights (TDR): A mechanism that enables the transfer of development density or other quantifiable development right from one parcel to another non-contiguous parcel, normally in another zoning district.

Warren Conservation Reserve Fund: Town funds that can be used for the purpose of acquisition and protection of critical agricultural, forest and open land in Warren.

2004 Questionnaire: A survey that was mailed to all residents by the Planning Commission in 2004 in order to obtain feedback on subjects that were relevant to the Town Plan revision process. The results are contained in Appendix 1.

Appendix D - Photography

Page	Photo subject	Photographer
Cover	Historic Warren Village	Archive
Cover	Warren Dam and Covered Bridge	Courtesy Burlington Free Press
Cover	Sugarbush	Kevin Russell
Cover	Warren Parade	John Donaldson
1-1	Warren Municipal Building	Stock
1-2	Meeting in Warren Town Hall	Stock
1-3	Valley Vision 2020	Francis Moran
1-4	Cemetery	Stock
2-1	Natural Bridge	Archive
2-2	Covered Bridge	Archive
2-3	Mill Building	Archive
2-4	Village Bridge and Dam	Archive
2-5	Kingsbury Iron Bridge, Route 100	Kevin Russell
2-6	Main Street, Warren Village	Archive
2-7	Sugarbush Gondola Car	Courtesy of Sugarbush Resort
3-1	Farm hands	Archive
3-2	Canoeists on Blueberry Lake	Tara Hamilton
3-3	Cows	Tara Hamilton
3-6	Wetlands Arial	Alex McClean
3-7	Wheelbarrow Landscape	Tara Hamilton
3-8	Boy at Mad River	Tara Hamilton
3-9	White-tailed Deer	Stock
3-10	Black Bear	Stock
3-11	Kids at Warren Falls	Courtesy of Friends of the Mad River
3-12	Warren Town Hall	Stock
3-13	Landscape Conserved Land	Tara Hamilton
3-14	A Thriving Warren Dairy Farm	Tara Hamilton
3-15	Blueberry Lake	Tara Hamilton
3-16	Whitworth Barn	Tara Hamilton
4-3	Warren School	Kevin Russell
4-5	Kids Fun Run	Courtesy Mad River Path Association
4-6	Warren Volunteer Firefighters & FDNY	Courtesy Warren Vol. Fire Company
5-1	Warren Dam and Covered Bridge	Courtesy Burlington Free Press
5-2	Macs	Kevin Russell
5-3	Woodpile	Stock
5-4	Power Station	Stock
6-1	Warren Village Arial	Alex McClean
6-5	New Construction	Kevin Russell
6-7	Habitat for Humanity Home	Susan Lee
6-9	South Village, Sugarbush	Kevin Russell
7-1	Access Road Arial	Alex McClean
7-4	Covered Bridge	Don LaHaye
7-6	Sugarbush Village Road	Kevin Russell
7-7	Bicyclists	Stock
7-8	The Mad Bus	Kevin Russell
7-9	Glider	Courtesy Sugarbush Soaring Club
8-1	Warren Firefighters in Action	Courtesy Warren Vol. Fire Company

8-3	Warren School	Kevin Russell
8-5	Kids Brook	Kevin Russell
8-6	Warren Fire Engine	Stock
8-8	MRVAS in Action	Courtesy Mad River Valley Ambulance Svc.
8-9	Health Center Renderings	Courtesy Mad River Valley Health Center
8-10	Sugarbush Day School	Kevin Russell
8-11	Mad River Path, Sugarbush Pond	Kevin Russell
8-12	Mad Dash	Kitty Werner
8-13	National Forest Aerial	Alex McClean
8-14	Mountain Waterworks	Kevin Russell
8-15	Sugarbush Aerial	Alex McClean
8-16	Warren Wastewater Project	Kevin Russell
8-18	East Warren Store	Kevin Russell
9-1	Friendly Clerk and Sugarbush Inn	Kevin Russell
9-7	Sugarbush Resort	Kevin Russell
10-1	West Hill Road Sugarhouse	Kevin Russell
10-3	East Warren Aerial	Alex McClean
10-5	Warren Village Aerial	Alex McClean
10-6	Pitcher Inn	Courtesy of the Pitcher Inn
10-8	Sugarbush Village	Kevin Russell
10-9	Ski Chalet	Kevin Russell
10-10	Horse Farms Aerial	Alex McClean
10-12	Spine of the Green Mountains	Kevin Russell

The three illustrations on page 10-4 are reprinted with permission from the book entitled *Designing Open Space Subdivisions; A Practical Step by Step Approach*, by Randall Arendt, published by the Natural Lands Trust.

Page layout and graphic design was done by Kevin Russell, Stark Mountain Productions, P.O. Box 797, Waitsfield, VT 05673.

The following describes the master plan for the Warren Municipal facilities, as adopted by the Warren Selectboard on June 12, 2007. It is not a detailed plan, with building specifications, schedules, cost estimates, etc. Rather it is a general plan and direction that provides solutions for how to best use town properties for planned future requirements for the municipal offices, the Library, the Town Hall, possibly a Post Office, expanded and accessible parking facilities, and a desired Town Green. A drawing of the long term vision is included at the end.

A. Long Term Plan

1) Town Green and parking: The best solution for long term parking requirements is to create a lot to the east of the Library on portion of what is currently private property, parcel # 004-002-900. There is a very large area, approximately 145 feet by 225 feet by 95 feet by 270 feet (approximately 1/2¹/₂ acre), that is very level and lies below the bluff on which the house is located. This land extends back in a southerly direction behind the Library, the Blair property and parcel # 004-003-500 and could accommodate approximately 75 automobiles. (To put this in perspective, the current municipal lot is approximately 160 feet by 85 feet and can accommodate about 39 vehicles.) Given the topography, a parking lot here should be a minimal intrusion on the adjacent property owners' privacy. Also, it would be the best place for parking to access the various municipal facilities, it would be adjacent to a new Town Green (see below) and it is away from Main Street and fairly well hidden. Care should be taken to provide screening, shrubbery, etc. to provide as much privacy as possible to adjoining land owners. The town could create parking here in a phased approach, extending it further back in two or three stages depending how much parking is needed at the time and cost considerations. It is recognized that it may be necessary to make some minor modifications to the corner of the current Library to facilitate

vehicular traffic up Cemetery Road into the new parking area.

Warren needs a Town Green for the community to enjoy that is logically and physically connected to as many of the municipal facilities as possible, including parking. A Town Green could be used for picnics, meetings, art shows, farmers' markets, social gatherings, and many other uses. The best place for the Town Green is the Blair property. This way there will be connected green space from Main Street up and into the area between the major municipal facilities. These facilities would be adjacent to and connected to the Town Green. In addition, it would be adjacent to future parking to be created on the 004-002-900 parcel. Once the Town Green is created, the gazebo, currently on Main Street, could be relocated there.

The current municipal parking lot was created on land that had been a Town Green. At some point, once there is enough additional parking on the 004-002-900 parcel and elsewhere, some of the current municipal lot can be reclaimed for use as an additional part of and extension to the Town Green. This additional green space would flow from Main Street up and into the cemetery green space and over to the other Town Green. Vehicle access to the Church and Fire Station and handicap parking and perhaps some other parking would need to be retained, but part of the lot could become green space. The precise configuration of the right amount of parking and access will be determined in the future.

2) Town Hall: Town Hall needs some improvements and maintenance, especially handicap accessibility. These improvements should be made, but the Town Hall should remain largely as it is today, with the same configuration and facilities so it can be used and enjoyed by the most people.

3) Library: Once the Blair property is available, this will provide more than adequate

space for a new Library facility to be built. The Library could either be an addition to the west or to the south of the Municipal Building, or in a new stand alone structure built between the Municipal Building and the Town Hall. Building new space will facilitate a Library that can be designed in an optimum way for efficient operation, rather than retrofitting it into an existing building. The location shown on Master Plan Drawing is not necessarily the final or optimal place but one of several alternatives. Specific decisions about size, building configurations, etc. will be made in the future.

The Blair property will provide more than adequate space for future expansion for a new Library and even a new Post Office, if required, as stand alone structures or as additions to the existing Municipal Building. The new Library should be built in an architectural style that is in keeping with the Municipal Building and the Town Hall. The future Library design should also allocate some space for a Historical Museum. It is not clear now how much space might be desirable for a Historical Museum, but such a facility would be a valuable addition to the Town.

4) Municipal Building: The best solution to provide for future needs in the town municipal offices is to keep those facilities in the Municipal Building and expand them into the current Library space. This should easily provide enough space for the foreseeable future. However, before any expansion can occur, the Library needs to either move to temporary facilities, or a new Library must be built.

5) Blair Property: Once the Blair property is available to the Town that the building should be removed from that site. This will facilitate using the property for a Town Green and provide space for building expansion for a new Library and a new Post Office, if required.

While the building is very old, it does not appear to be architecturally significant and probably needs significant repairs. Once it is possible to evaluate the building, it may turn out that some or all of the structure could be moved and reused – either for affordable hous-

ing or possibly as a structure to house a new Library or Post Office. But in either event the building would need to be moved from its current location in order to optimize the use of the Blair property for a Town Green and future building expansion. Before the Blair building is removed, it is important that the Town facilitate the replacement of the affordable housing units that are currently in that building.

6) Fire Station: The best solution is to keep the Village Fire Station in its present location. If and when more “people” space is needed, additional space can be added to the current second story to the north fairly easily since the first floor and foundation is already there. While no one has currently defined such a need, at some point in the future, the Fire Department may need to acquire equipment that is taller and/or longer than the present equipment. It is most likely in that case that the best place to keep that equipment would be up at the Sugarbush Fire Station, which would then have to be expanded or replaced. Such equipment would more likely be needed up at Sugarbush Village given the height and density of the buildings. However, if such larger equipment were needed in the Warren Village Fire Station, the least cost alternative would be to lower the level of the equipment bays to accommodate larger equipment in the existing building, rather than abandoning the Warren Village Fire Station for a new facility.

While it is perhaps not as important to be in the center of the Village as some other Municipal facilities, the Fire Station has become an integral and vital part of the fabric of the Village and would be missed by many if it were no longer there. It appears the Fire Department also favors keeping it in the Village. It is certainly the least costly alternative to keep the Fire Station where it is.

7) Post Office – The Post Office has recently added a trailer to provide extra office space. This may satisfy their needs for some time, but will do nothing to fix the parking problems. It is vital to keep the Post Office in the Village. In the long term, if the present loca-

tion is deemed inadequate and no other space can be found in the Village, there will be adequate room on the Blair property for a new Post Office – either as a stand alone building or as an addition to the Municipal Building or the new Library.

8) Other parking alternatives - There are possibilities for modest incremental parking locations. They can be implemented when needed and built for very low cost. The more of these alternative spaces that are created the easier it will be to reclaim the current municipal lot for additional Town Green space. The small .3 acre lot across from Town Hall has approximately 50 feet of frontage on Main St. This could accommodate 6 or 8 off street parking spaces at street level. The remainder of this lot should be cleared for green space and access to the river.

While the Millstone lot is currently available for parking, it is greatly under utilized. A grant has been received by the Town that will be used to provide appropriate signage, paving and defined parking areas. This should increase utilization. Having lighting and a sidewalk from the Millstone lot into the center of the Village would also greatly increase the utilization of this lot.

It would be possible to allow parallel parking on one side of Flat Iron Road. There is enough room to accommodate up to 15 cars. To make this workable Flat Iron Road would have to be made a one way street, going from Main Street to Brook Road. There is also room to accommodate parking for 3 or 4 cars on the edge of the .25 acre Town owned parcel # 003-000-300 adjacent to the covered bridge.

If the Post Office is ultimately relocated, that property could be acquired and used for parking (or housing).

9) Town Garage: Planning for necessary improvements and enhancements to the Town Garage has been on-going. An architectural firm was hired, using grant funds, to assist the Planning Commission in considering various options and doing life cycle cost analysis to help determine the best alternative. The

Town Garage is not part of the integrated Municipal Complex and an independent decision can be made whether to improve it on its current site or build a new garage somewhere else. Addition study is required by the Selectboard before a final decision can be made.

Two good alternate locations have been identified - part of the Bobbin Mill property, or some of the Summit Ventures (i.e. Sugarbush) property adjacent to the town owned Aldeborgh / Roe parcel by the Kingsbury Bridge. If the Town Garage is relocated the property could be used to accommodate affordable housing – as an extension of the Luce Pierce Road neighborhood. It may also be possible to put some limited housing across School Road from the Town Garage site. Sales of the house sites could help offset the cost of relocating the Town Garage.

B. Short term plan -

Before the Blair property is available, many actions can still move forward in the short term. Most importantly, the Town should move ahead to secure rights to a portion of the 004-002-900 parcel. Necessary improvements are being planned for the Town Hall and the Library has been approved to move into the Town Hall temporarily. Then the Municipal Building can begin to expand into that vacated Library space. Additional parking can also be expanded when needed, independent of the Long Term plan for the Municipal Complex. The lot across from Town Hall could be enhanced for parking and green space as described above. Other incremental parking solutions outlined above could be implemented. A decision can be made and implemented for the Town Garage – either improving it in place or moving it to the preferred locations recommended above. Whenever the Fire Station needs more space, addition second story space can be built to the north over the existing first floor. Finally, the Town should plan for the best way to replace the affordable housing that could be lost when the Blair house is removed.

Appendix E-1, Master Plan for Municipal Services

