

ENERGY

Importance of Energy Planning

Energy is an important factor in the economic, environmental, and social well-being of Dummerston. The cost of energy in Dummerston, including residential, commercial and governmental use (heating, electricity, transportation, etc.) is estimated to be more than \$1 million per year. Because a large majority of this energy is imported from outside of the town and Windham Region, most of the money spent on energy does not directly benefit the local economy. Efforts to reduce use of energy sources from outside the Town or shift reliance to locally produced energy can strengthen the local economy.

From an environmental standpoint, energy is the root cause of many of our most significant problems, both short and long-term. Any efforts to reduce the use of energy and shift to environmentally benign energy sources will benefit the town's environment.

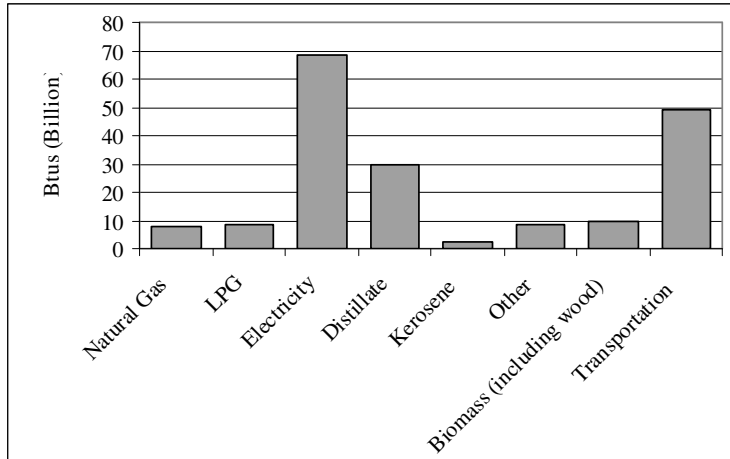
Energy policies have traditionally been the responsibility of state, federal and international bodies, with relatively little role for local governments. While Dummerston can do little to shift these broader policies, we can influence energy use and production on a local level. We hope here to address actions for reducing energy use that can be taken on a local level.

The vulnerability of Vermont homeowners has been illustrated over and over when ice storms, flooding, and other problems have resulted in extended power outages. When power is lost, not only are residents left without lighting, appliances and electric heat, but most fossil fuel heating equipment and even pellet stoves cannot function without AC electricity. In the future, this vulnerability may not be limited to power outages. Some experts predict that in the not too distant future, there may be shortages in heating oil, or rising oil prices may cause effective shortages for low-income residents. For these reasons, houses should be built or remodeled to provide "passive survivability," that is, the ability to maintain livable conditions in the event of an extended power outage or loss of heating fuel. Such houses will never become so cold that they will put their occupants at risk or allow pipes to freeze. Achieving passive survivability requires highly energy-efficient construction, with insulation levels far above average and top-performance windows.

Energy Use

Dummerston's energy use patterns closely match those of Vermont, which are shown in Figure 5. In Dummerston, natural gas is not available, so the proportion of oil, propane and electricity might be slightly higher than that shown for the entire state. According to the *Vermont Draft Energy Plan (2008)* the per capita demand for energy in Vermont has shown steady growth. Between 1990 and 2004, per capita energy demand rose roughly 30%.

Figure 5: Vermont Energy Consumption by Selected Categories, 2006



Source: Energy Information Administration

Home heating and automobiles account for the greatest energy use. Dummerston property owners use a variety of energy sources for home heating. According to the 2000 Census, the majority of housing units use fuel oil (64.8%) as the primary heating fuel. The remaining heat fuel sources include wood (21%), propane (10.9%), electricity (1.9%), coal or coke (0.6%), solar energy (0.4%), and other fuel (0.4%). These figures only represent the primary heating source and do not illustrate whether or not there are multiple fuel sources being used.

In 2000, there were 893 occupied housing units in Dummerston, and average energy use per home in Vermont was \$861. Since that time, fuel prices have shown a steady increase giving way to record growth in prices beginning in late 2007 continuing into 2008, when gasoline reached its highest national average retail price.¹

As a rural state, Vermont continues to show a reliance on petroleum based fuels with a high number of vehicle miles traveled. The U.S. Department of Transportation estimated the per capita vehicle miles traveled in Vermont was 12,379 in 2005. Because there are very few industries or businesses in Dummerston, nearly all workers who live in the Town commute to work. Most commute a minimum of six miles each way (to Brattleboro); some travel much further (to Keene, Greenfield, etc.) According to the U.S. Bureau of the Census (2000), 885 people commute to work alone and 119 carpool, for a total of 1,004 commuting vehicles.

Energy use for the Town government is much easier to quantify, since the Town budget includes energy line items. Energy line items for selected recent years are shown in Table 4. Increase in the price of heating and transportation fuels has accounted for a close to doubling of energy costs in five years.

¹ *Utility Facts 2008*, Vermont Department of Public Service

Table 4: Annual Energy Costs for Town Facilities and Services

Energy Line Item	FY98	FY03	FY08
Elec – Municipal Bldg.	\$1,413	\$1,887	1,407
Oil – Town Garage	664	529	1,500
Elec – Town Garage	1,044	1,179	2,098
Equipment – gasoline	1,931	0	63
Equipment – diesel	9,779	16,069	44,557
Subtotal	\$14,831	\$19,664	\$49,625
Dummerston School			
Electricity	\$10,854	\$25,308	\$29,100
Fuel Oil	13,504	15,236	38,500
Subtotal²	\$24,358	\$40,544	\$67,600
TOTAL	\$39,189	\$60,208	\$117,225

Source: Town Reports

Electricity

Nearly 40 percent of the energy consumed in Vermont comes from electricity. Both Green Mountain Power Corporation and Central Vermont Public Service Corporation provide electricity to Dummerston. Power is brought into Dummerston via three electric transmission lines. A 69 kv National Grid Transmission line runs in the vicinity of Route 5 from Bellows Falls to the Vernon Dam. Central Vermont Public Service (CVPS) maintains the “Southern Loop,” a 46kv transmission line which runs from Brattleboro to Bennington up the West River Valley. A 345 kv Vermont Electric Power Company (VELCO) transmission line runs through the western part of Town from Vermont Yankee to Cavendish, Vermont.

Recently, there have been proposals to improve the reliability of all three transmission lines. Of major concern to residents is land clearing within the easements of these lines. Any new clearings, regardless of whether or not they fall within the easement area can result in significant environmental and aesthetic impacts. These transmission corridors run through important habitat blocks which are vulnerable to forest fragmentation and the introduction of invasive plant and animal species. In addition, new clearings may impact the water quality in wetlands and water. It is imperative that the Public Service Board consider and address these issues when reviewing new or improved energy generation, transmission and distribution projects.

Conservation and Energy Efficiency

² This subtotal does not account for school transportation costs as it is contracted out and fuel costs are a part of the overall fee.

With total energy expenditures in the Town in excess of \$1 million, there is considerable opportunity for savings from various energy conservation and improved efficiency measures. Because most of the energy use in Dummerston is for private uses (home heating, commuting, etc), savings would accrue primarily to residents and Town policies to bring about those savings would be difficult to implement. Public education is one of the most effective strategies to bring about savings through energy conservation and improved efficiency, though there are some specific policies that can also help.

Most new construction in Dummerston is required to meet or exceed the Vermont Residential Energy Standards through the use of insulation, heating systems, and weatherproof windows and doors. Current building codes provide basic energy efficiency requirements for buildings; however, technology advancements have generated higher standards such as zero energy construction standards in which buildings generate as much energy as they consume. Green construction and LEED Construction (Leadership in Energy and Environmental Design) standards promote the use of natural, recycled and durable building materials, as well as energy efficiency. These efficiency standards are also applied to landscaping, advocating for native plantings that are low maintenance.

Energy savings can be realized by retrofitting existing buildings with insulation, installing high-performance windows and doors to reduce heat loss, weather-stripping, replacing incandescent lights with fluorescent, and using energy efficient appliances. The following programs are available to residents of Dummerston:

- Southeastern Vermont Community Action (SEVCA). SEVCA is the service provider in Windham County that runs the Weatherization Assistance Program. Weatherization services, which include an energy audit, diagnostic tests, analysis and installation measures, are available at no cost to income-eligible homeowners and renters. SEVCA is also available to help in the event of a heating emergency. They can help purchase oil, kerosene, propane or wood. In addition, they also work with electric companies in order to prevent disconnection and help negotiate payment plans.
- Efficiency Vermont. Efficiency Vermont is the State's provider of energy efficiency services. They provide technical and financial assistance to electrical consumers for the purpose of improving the efficiency of existing and new facilities.
- ENERGY STAR Home Rebates. Energy Star Homes meet strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and U.S. Department of Energy. Efficiency Vermont provides free financial, design, and technical to help build an ENERGY STAR qualified home. Benefits of being an ENERGY STAR home include financial incentives such as product rebates; utility savings; higher resale value; increased comfort and air quality; and other environmental benefits.
- Vermont Housing Finance Authority's Energy Saver Loan Program. Administered by Windham Housing Trust, this program offers low interest loan funding for homeowners for an energy audit and improvements specified in the audit.

Initiatives to reduce transportation costs are also viewed as energy conservation measures, especially within a state where the transportation sector is the major consumer of energy. Changes, such as ride-sharing, combining trips and using alternative transportation, will conserve fuel and reduce wear and tear and maintenance costs on individual vehicles. Fuel efficient cars will use less gasoline and emit less pollution.

Effective land use planning can promote energy conservation. Targeting new development toward areas located close to the community's major roads and existing settlements, as detailed in the Land Use Chapter of this Plan, will minimize the energy consumed by residents commuting and will reduce the energy required to deliver essential services to residents and businesses.

The siting, design, and construction of buildings strongly influences the amount of energy needed for heating as well as the amount of electricity needed for lighting. Proper subdivision design, building orientation, construction and landscaping provide opportunities for energy conservation such as less vehicular travel, and by designs incorporating passive solar space and domestic hot water heating, natural lighting and photovoltaic electricity production.

Potential for Local Energy Production

Energy resources within Dummerston are all renewable resources: wood, solar, hydro, and wind. In order to reduce dependence on conventional energy sources, of which the costs and availability are outside residents' control, the use of alternative energy sources is encouraged. Net metering is one way for a customer to realize savings from his/her individual energy production. Under net metering, the customer is permitted to connect suitable generating equipment to the public power grid. During periods when more energy is generated than the property is using, the metered amount of electrical energy provided to the grid reduces electric bills. In order to net meter, the customer must receive a Certificate of Public Good from the Public Service Board. Dummerston supports net metering, and does not view it as a commercial use.

1. Wood

Currently, only wood is used on a relatively wide scale; the US Census Bureau estimated that 167 housing units used wood as the primary heating source in 2000, down from 231 housing units in 1990. While burning wood does create air pollution, wood-burning technology has improved and emission requirements have been implemented. If all residents using wood heat were to switch to state-of-the-art wood stoves that meet U.S. Environmental Protection Agency emission limits or to pellet stoves (most pellet stoves operate with emissions lower than even the best wood stoves), wood heating could increase with no increase in pollution.

2. Solar

Of the energy sources available in Dummerston, solar energy offers the greatest untapped, long-term energy potential. Solar energy can be used in a number of different ways, but the most likely for widespread use are passive solar heating, natural

daylighting, and solar electric generation (photovoltaics). In new home design, passive solar can decrease heating requirements by more than 50 percent. There are several homes in Dummerston that are not connected to the utility grid and rely solely on photovoltaics for electricity.

3. Hydropower

Early Dummerston settlers relied on hydropower to operate grist and lumber mills. Dummerston also had a hydroelectric facility on the West River that operated from 1903 to 1968. During the last ten years of operation, the facility generated approximately 1.5 million kWh per year.

Given the past use of our rivers and streams, the possibility of developing hydroelectric in Dummerston is real. Micro-hydro systems, generating between 5 and 100 kWh, do not dam rivers or streams and therefore are more preferable. The utility of a micro-hydro system depends on the dynamic head, amount of water flow, and the efficiency of the turbine.

4. Wind

There are a few wind energy systems known to be installed in Dummerston, and these are small wind-energy systems owned by residents. In general, high costs have limited the popularity of small, individual wind-energy systems. The most cost-effective wind-electric systems are so-called “wind farms”—groups of many windmills installed in one location. Generally, there are several factors that contribute to the siting of large scale wind-farm: elevations greater than 2,000 feet, proximity to electric transmission lines, ridgeline locations, and wind speed. At this time, it is not believed that wind speeds are favorable for Dummerston to host a wind farm. A sizeable wind farm is located in Searsburg and operated by Green Mountain Power.

Energy Vision

Long-term projections of energy production and use foresee dramatic changes in the way we use energy. Petroleum production in the United States peaked around 1970, and world petroleum production will peak by the mid-21st century. As supplies dwindle, costs will almost certainly continue to rise. Perhaps more significantly, there is a trend toward factoring the “societal costs” into the price of energy. Society pays for health costs associated with pollution, environmental clean-up, military protection of petroleum sources, and disposal of radioactive wastes.

These pressures may significantly increase the cost of conventional energy sources within the next ten to twenty years. As a result, Dummerston will seek to establish reliable energy resources for townspeople and municipal operations, to hedge against the increasing volatility of petroleum prices and to reduce the environmental impact of our energy use. The role of clean, alternative energy sources will be expanded.

Energy Goals, Policies, and Action Steps

Goal 1: Dummerston will reduce total per-capita non-renewable energy consumption 40% by 2030 from a 2009 baseline.

Policy 1.1 Commit to energy conservation in all Town properties, facilities and vehicles.

Policy 1.2: Provide current and prospective homeowners with information and incentives to focus on energy-saving opportunities for existing homes.

Deleted: Recognizing that there is relatively little new construction in Dummerston,

Action Steps

- a. Identify incentives to encourage the construction of highly energy-efficient homes --for example, through sliding-scale building permit fees in which fees are lower for more energy-efficient houses. (Energy Committee)
- b. Develop financial incentives, revolving loan funds, and other measures to facilitate energy conservation retrofits. (Energy Committee)
- c. Examine strategies to encourage the reporting of energy consumption, or energy performance ratings, by buildings whenever they are sold. (Energy Committee)
- d. Increase public awareness of weatherization programs. (Energy Committee)
- e. Promote the sale of compact fluorescent light bulbs. (Energy Committee)

Policy 1.3: Enforce compliance with the Vermont Residential Building Energy Standards by ensuring that certificates are filed upon completion of construction.

Policy 1.4: Support renewable energy technologies for heating and cooling purposes.

Action Steps

- a. Promote high levels of energy conservation and solar design features in new construction projects that come under review. (Development Review Board)
- b. Explore incentives to encourage the use of facilities that employ renewable energy sources, such as solar water heaters (as defined in 32 VSA §3845 (Selectboard)

Deleted:), by exempting such facilities from real and personal property tax.

Policy 1.5: Use site planning, landscaping, and structure design to maximize the potential for energy conservation by reducing the demand for artificial heating, cooling, ventilation, and lighting, and facilitating the use of solar and other energy resources

Policy 1.6: Encourage the use of forest resources for heating and energy generation in a manner that sustains the resource base, maintains proper safety standards, and has minimum impact on the environment.

Policy 1.7: Reduce outdoor lighting and require energy efficient lighting and fixtures and the use of timing devices during Site Plan Review.

Policy 1.8: Reduce transportation energy use.

Action Steps

- a. Identify and implement strategies for reducing commuting energy use--through such measures as additional park-and-ride facilities, ridesharing programs, and bicycle lanes and pathways. (Planning Commission, Energy Committee)

Deleted: a. . Develop an anti-idling ordinance. (Energy Committee)
b

Policy 1.9: Participate in regional energy planning issues and activities.

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TRANSPORTATION

Existing Transportation Network

1. Classification of Roads

Dummerston's network of roads consists of town roads and state and federal highways (see the *Transportation and Community Facilities* map). State Routes 5 and 30 serve as Dummerston's main arteries for both daily commuting and through-traffic. Both routes run generally in a north-south direction. Some residents in the southwestern corner of Dummerston use Route 9 to gain easier access to Brattleboro.

Town roads are classified as either Class 1, 2, 3, or 4. This information is represented on maps that are updated annually based on information supplied by towns on an annual Mileage Certificate. The chief purpose of these maps is to document classification and mileage of town roads for calculating payment to towns of state aid for highway maintenance. The Vermont Agency of Transportation (VTrans) Highway Map classifies Dummerston's public roads as shown in Table 5.

Interstate 91 passes through Dummerston following the Connecticut River Valley, providing direct access to the town's road network near the Putney town line at the Exit 4 interchange. Other interchanges are located south in Brattleboro. Routes 5 and 30 are State Highways. In accordance with state law they are exclusively maintained by VTrans. Class 2 roads are the responsibility of the town. There are several Class 2 roads including East-West Road, Middle Road, School House Road, and Upper Dummerston Road. [Most](#) Class 3 roads are comprised of secondary town roads that are passable year round by standard vehicles. These roads are the town's responsibility.

Table 5: Mileage Summary of Town Highway/Roadway

Class	1	2	3	Interstate	Non-Interstate	Total Mileage
Town Roadways	0	12.37	49.07			61.44
State Highways				5.931	10.384	16.315
Total						77.755

Source: VT Agency of Transportation Highway Map, 2003

All other town roads are Class 4. Typically these dirt roads are seasonally functional for normal vehicular traffic.

In response to Act 178 which requires municipalities to identify "ancient roads"³ and formally map them if the town wishes to retain them, Dummerston assembled a group of residents to research whether there were any ancient roads in Dummerston. As of the writing of this Plan, this work is still ongoing.

Deleted: Like many Vermont communities, Dummerston has many Class 4 roads and legal trails that are not mapped on the VTrans Highway Maps. ¶

³ An ancient road is a right-of-way not otherwise clearly observable by physical evidence of their use as a highway or trail.

Funding for the maintenance and infrastructure improvements comes from federal, state and local sources. Transportation needs exceed and will continue to exceed available funds for the foreseeable future. Dummerston is fortunate to have a local source of sand and gravel. It is estimated to provide six years worth of gravel and twenty to twenty-five years worth of sand. The Town is looking to secure long-term local supplies and is investigating other potential sites based on expected areas of gravel deposits. Finding a sustainable source of gravel is imperative to controlling road maintenance costs.

2. Traffic and Circulation Concerns

Travel speed through Dummerston is an ongoing concern and problem. Recent traffic counts taken on East-West Road, Middle Road, and School House Road confirm this issue. East-West Road was recently categorized as a High Risk Rural Road. The road is frequently used as a cut through for traffic traveling from Route 5 to Route 30 or vice versa. The High Risk Rural Roads program allocates federal funds to mitigate safety issues on rural roads that have a history of crashes distributed throughout the traveled corridor. In 2009, new signs will be installed to improve safety along East-West Road from the covered bridge to Dummerston Center and from the Center to the intersection of School House Road.

An [ad hoc](#) citizen Traffic Committee has also identified West Dummerston Village as a place where speeding is a concern. The density of development and lack of sidewalks make this a high priority area. The Town will continue to work with the Windham Regional Commission to obtain reliable traffic counting information and evaluate the need for traffic calming.

There are several areas where existing conditions present traffic safety concerns. Based on the popularity of a local swimming hole, the area south of the intersection of Route 30 and Depot Road (Newfane) continues to be a place with high seasonal pedestrian movement. The vehicles are parking along the shoulder of the southbound lane and in an informal parking area on the northbound side. The Town supports controlling the access for the informal parking area and banning parking for 200' feet south on the southbound lane as a means of improving the safety of this area. [Excessive traffic speed on Route 5 combined with the numerous entry and egress points afforded by Schoolhouse Rd., East-West Rd. and the businesses along Rte. 5 in this area warrant a study of traffic control alternatives.](#)

Deleted: Another safety concern is at the Walker Farm on Route 5 where cars back out of parking spaces directly onto Route 5. During projected busy periods, Walker Farm has arranged for traffic control but an analysis of other access management options would be warranted.

3. Bridges

Dummerston has a total of 44 bridges, of which 12 are maintained by the state and the remaining 32 are owned and maintained by the Town. Many of these bridges are structurally deficient and in need of repair. Two of Dummerston's significant historic bridges, both listed on the National Register of Historic Place, are slated for repairs in the coming years.

The Dummerston Covered Bridge is the [longest covered wooden bridge located wholly within Vermont](#). The last major restoration was during 1997 and 1998. The bridge is in

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need of regular maintenance and repairs. The Town will continue to seek state and federal funds to assist in these efforts.

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Deleted: In order to be listed on Vermont's Statewide Transportation Improvement Program (STIP), the Town will need to undertake some preliminary engineering to evaluate the options available for repair.

The Green Iron Bridge, spanning the West River, is a rare intact quadruple intersection Warren truss bridge. The bridge is currently closed and is slated for repairs that will make it capable of handling a load of 12,000 pounds. It is critical that repairs to this bridge be completed because traffic will likely need to be rerouted to this bridge if the covered bridge is closed for repairs.

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4. Park and Ride Facilities

The Town operates and maintains the park and ride lot at the Covered Bridge on Route 30. The State owns several parking sites in Town that are principally used for recreational access to the Connecticut and West Rivers. There is a plan to build a Park and Ride facility at the Putney Fire Department property which is located on the town line.

5. Bicycle and Pedestrian Facilities

There are no sidewalks in Dummerston. Most of the rural roads, both paved and unpaved, have little or no shoulder. Nonetheless, these roads are popular routes for recreational users such as walkers, hikers, mountain bikers, horseback riders and cross-country skiers. Bicycle traffic is particularly heavy along Route 30 and Route 5, especially during the spring and summer months.

There is a significant amount of pedestrian movement across Route 30 on the town border with Newfane. People park on Route 30 and cross the heavily traveled road to access a trail leading to the Rock River and popular swimming holes.

Deleted: Efforts to obtain funding for a feasibility study to determine whether or not a pedestrian walkway under Route 30 is realistic are ongoing. ¶

6. Bus and Rail Service

Connecticut River Transit (CRT) operates daily bus service that can link Dummerston to various parts of the region. A commuter bus runs from Bellows Falls to Brattleboro along Route 5. It operates in each direction, twice in the morning and twice in the afternoon. There are no dedicated stops in Dummerston. Stops at Putney Meadows and Old Ferry Road/C&S are the closest. Current options are to either wave down the bus or to call CRT and to request a scheduled stop. Dial-A-Ride bus service is available for destinations along Route 30 from Brattleboro to Jamaica. Dial-A-Ride medical appointment service is also for riders who have Medicaid, are over 60, or have an ADA-defined disability.

The New England Central Railroad Company operates an active rail line that runs along the western shore of the Connecticut River. The rail bed is used to move freight. Amtrak also uses the rail for passenger service. There is daily northbound and southbound passenger rail service available from rail stations located in Bellows Falls and Brattleboro.

7. Scenic Roads

Routes 5, 30, and Interstate 91 constitute Dummerston's main travel corridors. Located along the roadsides of these travel corridors are certain amenities such as the Connecticut and West Rivers, active farmland, and forested slopes and ridge tops. Residents and

visitors derive enjoyment from these natural and pastoral landscapes. The scenic beauty of rural Dummerston is vital to tourism and the recreation industry. These industries play an increasingly large and important role in the economic base of this region. Route 5 is part of the Connecticut River Byway which was designated a National Scenic Byway in 2005 by the US Department of Transportation, Federal Highway Administration. This designation recognizes roads for their archaeological, cultural, historic, natural, recreational and scenic qualities.

Transportation Vision

It is the intention of Dummerston to have a transportation system that encourages the safe and convenient movement of people and goods by both motor vehicle as well as by bike and by foot.

The transportation system should continue to be a multimodal one that provides different types of transportation options. A dedicated stop along the CRT bus route from Brattleboro to Bellows Falls is desired. Having a predictable pick-up and drop-off location may enhance the service for Dummerston residents. A desirable location would be in the vicinity of [the Housing Foundation Inc.'s \(formerly Charette's\) Mobile Home Park](#).

Transportation is the single largest use of energy in Vermont, and almost all of that is highway transportation. As a rural town, Dummerston will strive to increase energy efficiency. Implementing zoning districts that discourage dispersed settlement patterns will help to reduce expansions of the transportation system and help contain maintenance costs to existing bridges and roads. At an individual level, choosing fuel efficient vehicles and reducing vehicle miles traveled by ridesharing or taking advantage of alternate modes of transportation will help reduce energy consumption.

There are over 52 miles of dirt roads in Dummerston, crisscrossing diverse geological, ecological, and aesthetically appealing landscapes. It is imperative to preserve these roads along with the historic structures that remain alongside them. Retaining the existing features of these roads, which include narrow traffic lanes and curves, can help decrease speed and preserve Dummerston's rural character.

The Covered Bridge is one of Dummerston's most visible landmarks. Maintaining it as a one lane covered bridge is important to preserving our rural character and controlling traffic on the East-West Road. The inconvenience of having to wait for cars from the opposite direction to pass over the bridge is minor compared to the benefits of keeping truck traffic off East-West Road.

Transportation Goals, Policies, and Action Steps

Goal 1: To provide for safe, economical, and energy-efficient transportation systems that respect the integrity of the natural and social environment.

Policy 1.1: Maintain a safe and functional public road system.

Action Steps:

- a. Continue to grade and seed all road cuts and embankments to minimize erosion and to maintain their rural character. (Highway Department, Selectboard)
- b. Review and update road and bridge condition status annually to reflect the priority of needed improvements. Make recommendations for short and long-term improvements. (Highway Department, Selectboard)

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Policy 1.2 Coordinate with local, regional and state entities to plan for Dummerston's transportation needs in a comprehensive manner.

Action Steps:

- a. Support the efforts of Connecticut River Transit. (Selectboard)
- b. Continue to work on regional transportation planning with the Windham Regional Commission. (Windham Regional Commission Representatives)
- c. Continue to procure culverts, fuel and other transportation materials and equipment at the best price and quality possible. (Highway Department, Selectboard)
- d. Coordinate with the Agency of Transportation and neighboring towns in planning for road and bridge improvements along routes 30 and 5, the interstate, and all bridges, to ensure adequate road and bridge capacities without damage to the rural character and environment of Dummerston. (Highway Department, Selectboard)

Policy 1.3: Make more efficient use of existing road capacity without significantly expanding roads or highways.

Action Steps:

- a. Provide traffic calming where warranted for enhancing or restoring livability of neighborhoods through reduction of cut-through traffic and excessive speed. Traffic calming should be provided for safety of all street users including pedestrians, children, bicyclists, and those who wish to congregate along the street. (Selectboard, Highway Department)
- b. Avoid, if possible, the widening of existing town highways and the construction of new roads. (Highway Department, Selectboard)
- c. Where it helps retain and enhance character, adopt a policy such that unpaved roads remain unpaved. (Selectboard)
- d. Classify Dummerston's local roads by function (collector, minor arterial, rural local road, etc.) and create context-sensitive roadway design standards to maintain or restore their character. (Planning Commission, Selectboard, Highway Department)
- e. Promote the development of pedestrian and bicycle paths as alternative and safe modes of travel. (Planning Commission)
- f. Find a long-term source of gravel and develop a long-term gravel plan. (Highway Department, Selectboard)

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Policy 1.4 Preserve the character of Town roads.

Action Steps:

- a. Conduct an inventory of scenic roads in Dummerston and establish management guidelines to protect the distinctive features located in the right-of-way, such as road surface and width, canopy trees, and stone walls. (Planning Commission)
- b. Determine whether Dummerston should designate scenic roads (either local or state) under the Scenic Highway Law (19 VSA §1019) or VT Scenic Byway Program, to ensure that future road maintenance and construction activities are carried out in a manner that is consistent with the scenic quality of the area. (Planning Commission, Traffic Committee)

Policy 1.5 Retain Class 4 roads and legal trails for recreational use.

| Policy 1.6 Maintain the Covered Bridge as a working bridge to preserve its historic character and structural integrity.

Policy 1.7: With any road improvements along Route 5 and 30, make provisions for cyclists and pedestrians.

HOUSING

Existing Conditions

The Community Profile chapter of this Town Plan provides background data on Dummerston housing statistics, including housing growth and change in housing stock. The *Dummerston Housing Needs Assessment*, prepared by John Ryan of Development Cycles dated February 2008, analyzed Dummerston's demographic, economic and housing conditions in great detail, as well as focused on affordability issues. That document provides the basis for this chapter. The following data from the report details the housing conditions in Dummerston.

- **Rental Housing:** Nearly 60 percent of Dummerston's existing rentals are single-family homes. As a result, rentals are more likely to have three or more bedrooms. Despite the larger size of rentals, one or two persons occupy 74 percent of all rental units.

In terms of cost, median market rents in Dummerston are about \$50 per month higher than in Windham County. There are seldom more than a few rentals available on the market at any given time. There is a wide variety of working people who cannot afford to rent a one-bedroom unit in Dummerston based on a single person's earnings. In Dummerston and in Vermont, rents have increased much faster than wages. Since 2000, the average wage for local jobs in Dummerston increased by 22 percent but median rents has increased by 44 percent. There are no subsidized housing rental units in town despite the fact that as many as 60 current renter households would qualify for subsidized housing if it were available. [There are subsidized facilities available at the Housing Foundation, Inc.'s mobile home park.](#)

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- **Affordability:** Home ownership in Dummerston is expensive, but not significantly more so than it is in neighboring communities or in Vermont generally. The median priced home is beyond the reach of at least 80 percent of the town's first time buyers, but a quarter of the homes do continue to be at prices affordable to households earning under \$50,000. The effective buying power of first time buyers has declined sharply over the past several years as wages failed to keep pace with home prices. The result leaves Dummerston's potential first-time buyers with a limited range of smaller, older or less well-maintained properties.
- **Senior Housing:** Dummerston is home to roughly 275 persons aged 65 and over living in 180 households. Ninety percent of these seniors own their home. There are no subsidized independent rental housing for seniors, no assisted living or residential care facilities, and no age-appropriate ownership housing for seniors in Dummerston. There are six senior housing developments with a total of 294 units located within 12 miles of Dummerston Center. All of these projects are at or near full occupancy.

In 2000, the median household income for residents 65 and over was 20 percent higher than for seniors in the rest of Windham County. An estimated 60 senior households could be eligible for housing aimed at low and moderate-income residents.

- **Special Needs Housing:** Dummerston has a population with a range of disabilities according to the 2000 US Census data. In 2000, 125 residents identified themselves as having a physical disability, half of whom were seniors. A total of 35 residents reported having a self-care disability. There are no special needs or supportive housing in Dummerston. There is an assisted living facility in Townshend.

Affordable housing is primarily addressed by area non-profit agencies. The following programs/organizations are currently available to Dummerston households:

- The **Southeastern Vermont Housing Rehabilitation Loan Fund** provides low interest-loans to income eligible homeowners to address health and safety issues, repair or replace septic and wells, correct code violations, and/or to provide access modification for elderly or disabled homeowners. The fund also has special monies available for energy related capital improvements for all income levels.
- **Windham Housing Trust (WHT)** provides education, counseling, and access to affordable mortgage products that assist first-time home-buyers buy a home. They also provide counseling on foreclosure prevention. WHT is a partner in the Southeastern Vermont Housing Rehabilitation Loan Fund.
- **Southeastern Vermont Community Action Agency (SEVCA)** provides referrals to area shelters, landlord lists, and assists in completing applications for affordable housing possibilities. SEVCA also operates weatherization and fuel assistance programs for income-eligible homeowners and renters.

Housing Needs

Dummerston is a uniform community in terms of its housing – it is characterized by single-family homes with primarily ownership options only. Life transitions (aging, retirement, divorces, entering the work force, etc.) require a housing change, and Dummerston currently lacks choices. The *Housing Needs Assessment* indicates that Dummerston would benefit from creating flexibility and diversity in the housing stock by adding the following:

- Rental housing for households with a gross household income that does not exceed 50 percent of Windham County's median gross household income for households of the same size (6-8 units) and seniors (3-4 units);
- Smaller-sized, market rate rental units (6-8 units) to meet the needs of newly forming households, low wage local workers, households in transition, and seniors no longer able to maintain their owned homes;
- Young family homeownership opportunities for less than \$150,000 (3-4 units per year);
- Housing that meets accessibility, maintenance and social needs of independent senior households (3-4 units);

- Support to make existing homes handicap accessible (6-8 units).

In total, these 27-36 units would significantly ease the burden of aging seniors, newly forming households, local workers, households headed by young adults, households dealing with divorce and separation, single parents, and those with disabilities. These units would represent 3-4 percent of the town’s housing stock.

Creating strong neighborhoods is an important component to meeting Dummerston’s housing needs. The following are important design and location criteria that must be respected while trying to increase the diversity of housing in Dummerston.

- **Smart locations.** Locating affordable housing close to bus service can actually be more affordable for lower income homeowners and renters. Transportation costs consume a large portion of household budgets and with volatile gasoline prices, homeowners and renters can save on transportation and monthly expenses if their housing is located where they can take advantage of alternative transportation, such as Connecticut River Transit. It will be important to work with housing advocates, property owners, service providers and adjacent towns to study the advisability, design, infrastructure, density and service possibilities for housing along Route 5 near the Putney or Brattleboro town lines.

Deleted:

- **Energy Efficient Design.** Housing must not only be affordable to live in, but to operate as well. Constructing or remodeling existing housing with energy efficiency in mind is an important component in keeping housing affordable over time. Important considerations for any project must include: designing to an appropriate scale, utilizing appropriate insulation, energy efficient lighting and appliances, taking advantage of direct sun for daylighting and heating, utilizing solar hot water and photovoltaics, and exploring the potential for the use of wind power.

Deleted: Additional savings come from developing in areas that already have infrastructure and services. Taking advantage of public water and sewer infrastructure can help increase density in turn helping make a project more cost effective for a developer with the savings hopefully passed on to the homeowner or renter. ¶
¶ For these reasons, a priority location to locate housing is along route 5 near the Putney or the Brattleboro town lines where public transit exists, and at least near Putney there are goods and services in walking distance.¶

- **Universal Design.**⁴ The intent of universal design is to simplify life for everyone by making the built environment more usable by as many people as possible, especially those with special needs. Universal design features can easily be incorporated into new homes and some can readily be retrofitted to existing homes.

Deleted: at little or no extra cost

Housing Vision

We would like to be a community where people who grew up in Dummerston can live and where people who choose to live in Dummerston can remain as they age. In order to

⁴ Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. A universal design feature is one that can be used by everyone regardless of their ability or disability (e.g. electrical receptacles placed higher than usual above the floor, standard but wider doors, and elimination of steps at the entrance).

accomplish this, we will encourage a variety of housing types to meet the lifestyle, demographic and economic needs and social needs. We are committed to preserving our established existing settlements and neighborhoods through housing rehabilitation and the infill development of small-lot single family homes and small-scale (2-3 units) multifamily residential units. New housing developments will make creative and efficient use of vacant land to help maximize sustainability and maintain our natural environment.

Housing Goals, Policies, and Action Steps

Goal 1: To create flexibility and diversity in Dummerston's housing stock.

Policy 2.1 Promote the creation and preservation of housing that is and will continue to be affordable.

Action Steps:

- a. Investigate sites for a small affordable housing project (2-3 duplexes, 6-8 units). (Housing Advisory Commission)
- b. Publicize the Southeast Vermont Housing Rehabilitation Loan Fund to expand housing rehabilitation in Dummerston. (Housing Advisory Commission)

Policy 2.2 Provide Dummerston residents with information about housing needs, issues, and choices.

Action Steps:

- a. Study the trend of second homeownership in Dummerston. (Housing Advisory Commission)

Policy 2.3 Promote accessory dwelling units as a way to increase the rental supply of housing.

Action Steps:

- a. Amend the Zoning Bylaw to permit the creation of an accessory dwelling within an accessory building on a single-family lot. (Planning Commission)
- b. Provide outreach and technical support to residents interested in creating an accessory dwelling unit. (Housing Advisory Commission)

Policy 2.4 Form public and private partnerships to help identify potential sites for new affordable housing development and to provide grant and funding support.

Policy 2.5 Promote sustainable living through high quality design, energy efficient construction, and proximity to existing transportation corridors.

Policy 2.6 Encourage the use of “Universal Design” in new or rehabilitated housing units in Dummerston to enable households or individuals to age in place.

Policy 2.7 Encourage the use of innovative housing formats such as intergenerational housing and youth lots.

EDUCATION

Public Education

1. Facilities

The Dummerston School provides public education for grades K-8. The school is located on School House Road off Route 5 (see the *Transportation and Community Facilities* map). It was originally built in 1951 as a three-room building. The most recent addition to the building occurred in 1994. The building has been well maintained and is in excellent condition.

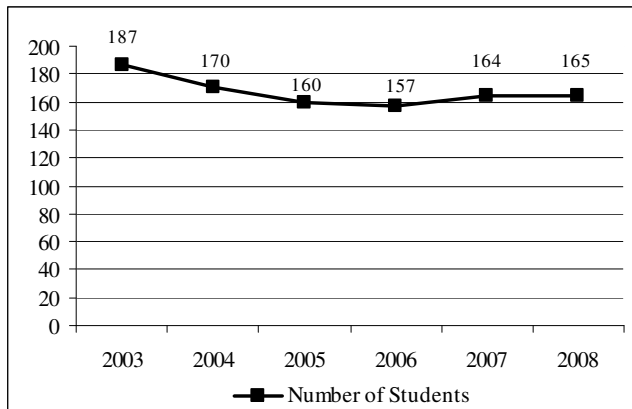
Dummerston School has excellent playing fields that are used by the school and the greater community for a variety of sporting activities. The playground was recently upgraded to include new play equipment and a concession stand. A gymnasium would be an asset to the school and the greater community. The current gym is a multipurpose space for lunch, gym and large group events.

Students in grades 9-12 are served at Brattleboro Union High School and the Windham Regional Career Center located at a common site on Fairground Road in Brattleboro.

2. Enrollment History

The school enrollment and attendance rate for the period 2003-2008 is shown in Figure 6.

Figure 6: Dummerston School Enrollment



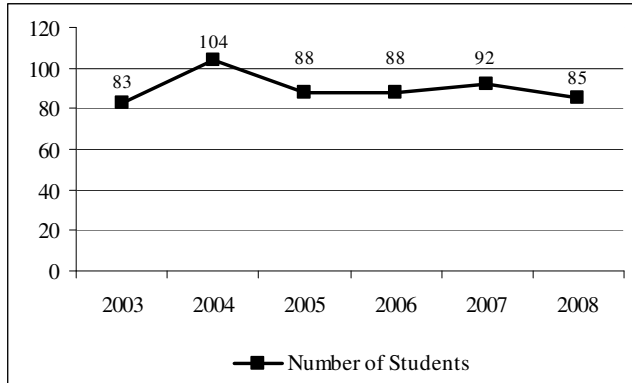
Source: Dummerston Town Report, 2008

Projections for the short term indicate that enrollment will be 158 in 2009 and 167 in 2010.

Brattleboro Union High School provides public education to students from Dummerston, Brattleboro, Putney, Vernon, and Guilford and accepts tuition students from other towns. For the 2007-2008 school year, there were approximately 1,010 students. BUHS recently

completed a construction and renovation project to help address space needs for both students and programs. Dummerston's enrollment at BUHS is shown in Figure 7. Projections indicate that enrollment should stay roughly the same in the immediate future with an increase as class sizes in the longer term.

Figure 7: Fall Enrollment of BUHS Students from Dummerston, 2003-2008



Source: Windham Southeast Supervisory Union

3. Current Educational Services

Dummerston teachers provide a scholastically challenging and educationally enriched environment based on the collaboration of faculty, staff, School Board Directors, parents and community volunteers. The core curriculum is coordinated through the Windham Southeast Supervisory Union and is aligned with Vermont State Standards. There is a focus on traditional literacy (reading, writing and comprehension), mathematics, science and technological literacy. Dummerston School also has a strong arts and music program and offers a variety of sports and extracurricular activities. Some of the popular programs offered at the school include:

- The **Winter Activities program** has been a long standing tradition at Dummerston School that teaches life long, healthful skills to students for 6 afternoons in January and February. Past and present activities include skiing, snowboarding, snowshoeing, skating, bowling, jump and climb (gymnastics, trampoline work and rock wall climbing), yoga, theatre and pottery.
- The Dummerston School Friends of the Library offers a weekly **preschool story hour** to welcome and introduce young children and their families to the Dummerston School.
- **Girls on the Run** is a program for girls in grade three through five that trains girls to participate in a 3.1 mile run/walk event while emphasizing health, exercise and self-image awareness.
- Students in kindergarten through grade 4 participate in **Environmental Learning for the Future (ELF) Program** by volunteers trained by the Vermont Institute for Natural Science.

Windham Southeast Supervisory Union's Intensive District Program is located at the Dummerston School. This program assists elementary aged students (grade k-6) with

multiple handicaps or disabilities in increasing functional life skills. This is the only site for this program in the Supervisory Union.

Home schooling has been an option used by some families in recent years. The exact number of students being home schooled is not known so it is difficult to track changes. Parents interested in home schooling their children must have a plan approved by the state. Although the town school district does not receive funding to help educate home-schooled students, Dummerston School works to assist their efforts through access to services and resources such as music, the library, and extracurricular activities.

4. School Governance

The Dummerston School Board is responsible for developing the budget and overseeing the administration of Dummerston School. The School Board is comprised of five board members who are elected at Town Meeting. All members of the School Board sit on the Windham Southeast Supervisory Union Board but only three are voting members.

Similarly, the Brattleboro Union High School District #6⁵ School Directors are responsible for overseeing the budgets and administration of the Brattleboro Union School District #6. There are 9 seats on the board, of which Dummerston has one seat. This seat is filled by election at Town Meeting for a three-year terms.

5. Education Costs

Education funding is distributed on a per-pupil basis from Vermont's education fund. Money for the fund comes principally from a state-share education property tax that is assessed on both residential and non-residential properties. The residential property tax rate varies depending on per-pupil spending approved by residents. The non-residential rate is a uniform rate. Excess revenues collected on local tax rates are redistributed throughout communities through the state education fund.

According to the Vermont Department of Education *FY2008 Per Pupil Spending by School Type* report, Dummerston ranked highest in the state ranking of education spending per equalized pupil (\$14,113.81) and has done so since 2006.⁶ Like many towns across the state, Dummerston had to increase local taxes in order to cover the difference between operational costs and the amount of funding received from the state education fund in order to maintain educational services. The teaching staff at Dummerston School is highly qualified with the least experienced teacher having over 10 years experience at the School. In addition, as the education tax is a state tax every property in the state needs to be valued correctly so that property owners are taxed fairly. Therefore, the state sets a Common Level of Appraisal (CLA)⁷ for each town. This rate is set outside of the school budget process but can have a significant impact on the education tax. As a community,

⁵ This school district includes Brattleboro Area Middle School, BUHS, and the Windham Regional Career Center.

⁶ Education spending is the part of the expenditure budget without a specific funding source. It includes the portion of special education costs not covered by federal aid and the state categorical grant, transportation costs not covered by the state categorical aid, as well as any tuition owed by the district, general payroll and operation costs that do not have specific funding sources.

⁷ The CLA is an adjustment the listed value of properties to reflect fair market value as nearly as possible.

Dummerston residents value and support the education of its students in a rural, smaller school setting despite external pressures from legislation and realize that the arbitrary number used by the state does not reflect the true cost of educating our children.

Under the funding changes enacted via Act 130 all support for the Brattleboro Union High School is raised via direct taxation to residents of the five member towns. The district's education tax rate is split; with a portion allocated to the Dummerston School (pre-K through grade 8) and a portion allocated to the Brattleboro Union High School. Despite Dummerston enrollment figures hovering around 90 students over the last couple of years, the assessment has generally increased since 2003.

Bus service is provided for students in Dummerston attending Dummerston School. This service is provided by a private contractor. The School Board recently implemented a transportation plan with centralized, group stops (similar to the high school) with significant cost savings to the taxpayer. Bussing for high school students is provided through the Brattleboro Union School District #6. Transportation is provided to and from central locations in Dummerston.

Dummerston School Endowment, Inc., a non-profit corporation, was recently set up to enrich the education opportunities of students attending Dummerston School. Its purpose is to supplement academic programming at the Dummerston School in areas such as foreign language and technology instruction.

Other Educational Services

1. Childcare

Safe and affordable child care is important to local residents. Dummerston's Zoning Bylaw provides for both family child care homes and child care facilities. There are a variety of state-regulated child care facilities, both family-and center-based located in Dummerston and in nearby towns. A Business Directory of the Town compiled in the summer of 2007 listed 5 child care providers in Dummerston.

One of the most significant contributions to local childcare came as a result of the Dummerston Y2C event. Starting in the Fall 2008, the School Board opened up Dummerston School to host the YMCA ASPIRE program which offers affordable after school child care up until 6:00 pm. There are over 16 students registered in the program.

The local demand for childcare services is difficult to measure. In 2002, the Windham Regional Commission conducted a county-wide needs assessment. Among the findings are the following:

- Even though there has been a decrease in the number of children under the age of 5 between 1990 and 2000, state and national trends suggest that there may have been an increase in the number of working parents resulting in an increased need for child care.
- There is a particular need to increase the availability of high-quality child care for infants and toddlers (ages birth to 2 year olds).

2. Early Education

Dummerston School District participates in Vermont's Public Preschool Partnerships Program and collaborates with six qualified preschool programs in the area. The programs that the School District has contracted with to date are: Brattleboro Nursery School, Neighborhood Schoolhouse, West Bee Nursery School, Winston-Prouty Center, Hilltop Montessori and Timson Hill. Under this program, children participating in one of the qualified preschool programs are counted towards the resident student count (average daily membership) under the school financing formula. Seventy percent of the funds received are passed on to the preschools while the remaining funds are retained by the school district. Per the contract, the funds that are passed on must be used in three ways: tuition reduction, program development, and/or staff development. The School Board did look into starting a preschool program at the Dummerston School but concluded that it would be too expensive to the taxpayers.

Early Education Services in Brattleboro operates an Early Head Start program. Head Start is a national program that promotes school readiness by enhancing the social and cognitive development of children through the provision of educational, health, nutritional, social and other services to enrolled children and families. The income eligibility of families is 130 percent of the federal poverty level.

3. Colleges and Adult Education

The Community College of Vermont (CCV) has a campus in Brattleboro which offers Associate degree programs and workshop. Several private and public colleges and universities are located within commuting distance of Dummerston.

Opportunities for adult education include:

- various programs offered through community libraries and individual groups;
- career-related certificate programs and non-credit programs offered through CCV;
- work readiness and literacy programs available through Adult Learning in Brattleboro; and
- learning opportunities for people 50 and older at the Osher Lifelong Learning Institute which is located in the Southeast Vermont Learning Collaborative on Route 5 (formerly the Southeast Regional Library).

Education Vision

The educational programs and facilities in Dummerston are important components of Dummerston's social and economic well being. Dummerston will continue to provide a solid educational foundation for its students to ensure educational and personal success. All young children in Dummerston will have access to affordable, quality child care and educational experiences.

Education Goals, Policies, and Action Steps

Goal 1: Provide quality education for all people in Dummerston.
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Policy 1.1: Maintain or enhance the level of excellence in our schools.

Policy 1.2 Seek creative methods to improve public education without increasing expenditures.

Action Steps:

- a. Evaluate on an ongoing basis the transportation policy for Dummerston students. (School Board)
- b. Encourage community involvement and seek funding sources for the newly created Dummerston School Endowment, Inc. (School Board)

c. Develop a policy for long term energy management at Dummerston School. (School Board and Dummerston Energy Committee,

d. Evaluate desirability of shared programs with neighboring schools.

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Policy 1.3: Continue to make school facilities available to community groups for evening or weekend programs, for recreational programs, and for adult educational programs throughout the year.

Action Steps

a. Maintain effective communication between School Board and Selectboard.

Policy 1.4: Promote lifelong learning.

Action Steps

a. Support long-term viability of Southeastern VT Learning Collaborative.

Policy 1.5: Continue administration of Miller Fund for needy children of Dummerston.

Goal 2: Ensure that high quality, affordable child care is accessible to all children.

Policy 2.1 Support the provision of safe and affordable child care.

Action Steps:

- a. Maintain an inventory of all child care programs in the town and their capacity.
(Emergency Management Director)

Deleted: (Selectboard)

Policy 2.2: Ensure that land use regulations do not place unreasonable limitations on child care homes and facilities.

Action Steps:

- a. Consider permitting child care facilities as an accessory use for education institutions, churches, and places of employment. (Planning Commission)

