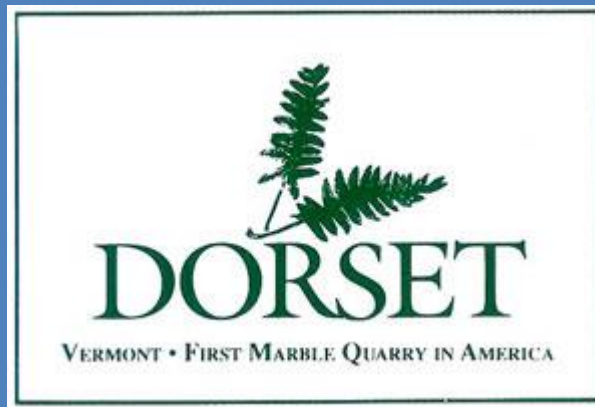


DORSET TOWN PLAN

Adopted by the Dorset
Selectboard:

January 21, 2020



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SECTION 1 INTRODUCTION

1.1 What is the Dorset Town Plan?

The Dorset Town Plan is a comprehensive long-range plan for the Town of Dorset. It states goals, objectives, and policies to guide the growth and development of the town. It is intended as a framework upon which to base specific future actions, regulations and bylaws.

The Dorset Town Plan has been prepared by the Town of Dorset Planning Commission, under the authority of 24 VSA, Chapter 117, The Vermont Municipal and Regional Planning and Development Act. In particular, it addresses Subsection 4382 of that Act which lists the elements to be included in a municipal plan. It also addresses the intent and purposes of the State legislature to ensure that the fourteen general State planning goals are met. These general planning goals are to be followed by municipalities, the Regional Planning Commissions, and State agencies so that all may plan in coordination with the other. An index relating the Dorset Town Plan to these general planning goals is included as Appendix A to this Plan.



***Dorset Union Store
(Peltier's) opened in
1816***

1.2 The Municipal Plan Process in Dorset

The Town of Dorset has had a municipal plan since 1970 which has been periodically updated. This new plan updates and supersedes the 2014 Dorset Town Plan. Updates are required at least once every eight years in order to revise bylaws. Updates are desirable to enable the Town to direct growth based on current data, research, and citizen input.

The Planning Commission has reviewed the factual bases for planning in Dorset. Many of the planning factors are discussed in this Plan, either in Section 2, General Planning Background, or in the later Sections dealing with specific issues.

In order to involve the public in the planning process for Dorset, the Planning Commission conducted a survey and a number of meetings in 2013 to elicit input about the future of the town. In 2018, the Energy Committee adapted the 2013 Town Energy Assessment as an Act 174-compliant energy chapter with support of the Bennington County Regional Commission. The Planning Commission also solicited direct input from Town boards and commissions, and municipal employees. Public and private town and region wide interest groups were invited to provide information and address drafts of the Plan. Information was also derived from public meeting minutes, and meetings held for special purposes.

Dorset is in Bennington County, and is a part of the planning area of the Bennington County Regional Commission (BCRC). The BCRC has had a Regional Plan since 1970, which was last updated in 2015. The Town has reviewed the data presented in the Regional Plan, and has

worked with the Regional Commission to develop a Plan which is compatible.

This Dorset Town Plan leads the town in a direction which builds upon factual bases, takes into consideration the expressed opinions of the local citizens, is compatible with the Regional Plan, and addresses the State legislative general planning goals.

In 2013, the Planning Commission was aided in its update of the Dorset Town Plan by a resident Build – Out Survey made available by a grant through the Department of Housing and Community Affairs. The results are included as Appendix C and gave a baseline picture of residents’ land use-goals and needs and how they envision their town.

1.3 How This Plan is Used

Framework

This Plan provides a Statement of Objectives (Section 3) and the Town’s policies for growth and development by land use designation (Section 4). Specific topics and areas of special concern are addressed in subsequent sections. For example, natural resources are discussed in Section 5, housing in Section 6, and so forth. Also contained in this Plan are Maps; other maps and studies are included in this Plan by reference.

In preparing or reviewing development plans, reference shall be made to all sections of the Plan having a bearing on the proposal.

Use by the Planning Commission

This Plan and these policies will be used by the Town of Dorset Planning Commission in many ways, including:

- preparing bylaws and regulations;
- responding to proposals of the Region and various State agencies; and
- reviewing development applications in the town, in particular when such applications are involved in review proceedings under Act 250.

Use by Other Town, Regional, and State Boards and Commissions

This Plan may be used by the Town Selectboard in determining their priorities for capital improvements. The Plan will be used by the State Environmental Board and the District 8 Environmental Commission in making decisions on Act 250 applications. The Public Utility Commission shall consult the enhanced energy policies in this Plan when reviewing electricity generation development proposals through the Section 248 process.

Use by Residents, Businesses and Others Interested in Dorset

The Plan and policies should be of interest to all residents of Dorset who have an interest in its future.

1.4 Interpretation of this Plan

This Plan serves as a statement of intent and policy. At the local level, the Planning

Commission has the task of interpreting the policies of this Plan. At the State level, the Environmental Board, its District Commission, and the Public Utility Commission must decide whether development proposals conform with this Plan. Judgments are to be made while considering and weighing all of the planning policies which have a bearing on any particular proposal.

The boundaries between the land use designations shown on Map 1 are intended to be general, except where they coincide with defined physical features such as roadways or watercourses. The Zoning Bylaw may zone lands more precisely, and with slight alterations from these boundaries, as long as the intent of this Plan is respected. Natural Resources, Water Resources and Community Facilities locations as shown on Maps 2, 3 and 5 are also recognized as general, and subject to amendment based on more detailed site-specific data. It is intended that all Town Plan figures and quantities shall also be considered as approximate only, and not absolute.

SECTION 2 GENERAL PLANNING BACKGROUND

2.1 Physiography

The Town of Dorset has an area of 30,656 acres or 46.04 square miles, made up of many types of land and waterways: flat valley land, wetlands, rolling hills, steep mountains, streams and rivers. 14,228 acres contain slopes in excess of 20%, and 2,880 acres have elevations above 2500 feet.¹

The physiography of the town may be described as two roughly north-south valleys, which contain most of Dorset's development, together with parts of three north-south mountainous areas, which define the valleys.

The eastern edge of the town runs along the western slope of the Green Mountains. The southwestern corner of the town occupies the northeastern slope of Mother Myrick Mountain, in the Taconic Mountain Range. Thrusting into Dorset from the north is a mountainous area, also part of the Taconic Range, extending south from Dorset Mountain, whose summit, close to the northern town line, is over 3800 feet above sea level. A spine, between 2000' and 2500' high lies between Dorset Mountain and Mount Aeolus (also called Green Peak) about five miles to the south. Land falls southerly from Mount Aeolus to become rolling land extending south to the town line.

Between the Green Mountains and the Taconics lies the well defined and rather narrow Vermont Valley, which is Dorset's eastern valley, and is known in transportation terms as the "Route 7 corridor." The southern portion of this valley is drained by the BattenKill, which flows mostly west to the Hudson River. The northern portion of the valley is drained by the Otter Creek, which flows northerly to Lake Champlain. The divide between the two

¹ US Census Bureau 2010 & Bennington County Regional Plan 2002

watersheds lies a short distance north of the village of East Dorset. The easterly valley contains the villages of East Dorset, South Village of East Dorset, and the cluster of houses known as North Dorset.

The westerly valley extends diagonally from approximately the midpoint of the southern town line to the midpoint of the western town line. This is the “Route 30 corridor.” This valley also drains in two directions, with the watershed divide constituting a Class I wetland, known as the Dorset Marsh, southwest of Dorset Village. Towards the southeast, this drains into a branch of the BattenKill; towards the northwest the flow is into the Mettawee River, which, like the Otter, flows into Lake Champlain. This westerly valley contains the villages of Dorset and South Dorset.

A subordinate valley, known as Dorset Hollow, is located east of Dorset Village. This valley contains considerable acreage of rolling land, and also the headwaters of the Mettawee River.

The geography of the town divides it roughly into two development axes, both of which radiate out from the larger urban center of Manchester to the south. Only one public road within the town links the two valleys – Morse Hill Road – which climbs over the lower southern side of Mount Aeolus.

2.2 Population

According to the 2010 U.S. Census, the population of Dorset is 2,031 persons. These are mostly year-round residents, but the figures do include some seasonal residents who maintain residency here even though they are not year-round residents.

The population of Dorset remained almost constant from 1930 to 1960. According to the 1930 U.S. Census there were 1,120 residents in the town, while in 1960 there were 1,150 residents, an increase of only 30 persons in thirty years.

From 1970 to 2000, the town experienced more substantial growth. The following table presents the Dorset population figures since 1970, in comparison with those of its immediate neighbors in Bennington County, the Bennington Region², Bennington County, and with the State.

TABLE 1
Population, Dorset and Neighbors, Region, County, State 1970 – 2010

<u>Town</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>1970-1980</u> <u>% Change</u>	<u>1980-1990</u> <u>% Change</u>	<u>1990-2000</u> <u>% Change</u>	<u>2000-2010</u> <u>% Change</u>
Dorset	1,293	1,648	1,918	2,036	2,031	27.5	16.4	6.1	-0.3
Manchester	2,919	3,261	3,622	4,180	4,391	11.7	11.1	15.4	5.0

² The Bennington Region includes all municipalities in Bennington County except Readsboro, Searsburg, and Winhall. These towns are part of the Windham Region.

Peru	243	312	324	416	375	28.4	3.8	28.4	-10.0
Rupert	582	605	654	704	714	4.0	8.1	7.6	1.0
Sandgate	127	234	278	353	405	84.3	18.8	27.0	13.9
Bennington									
County	29,282	33,345	35,845	36,994	37,125	13.9	7.5	3.2	1.4
Bennington Reg.	28,279	32,308	34,516	35,387	34,951	14.3	6.8	2.5	-1.3
State of Vermont	444,330	511,456	562,758	608,827	625,731	15.1	10.0	8.2	2.8

*Sources: 1980, 1990, 2000, and 2010 U.S. Census

These figures show that the decade of the 1970's had the highest rate of growth in Dorset in recent history. During the 1980's, the rate of growth in Dorset exceeded that of its larger neighbor Manchester to the south, as well as the Region, County and State. However, in the 1990's, Dorset had the lowest growth rate of any of its neighbors, as well as the State, but had a slightly higher growth rate than the Region and County. In the 2000's Dorset again had the lowest growth rate of any of its neighbors, the growth rate was also lower than the County and State growth rates as well.

Using a straight-line projection method based on current population trends, it is possible to forecast a population range for Dorset in the year 2020. The straight-line projection method yields a population of 2,026 for the year 2020, at a projected growth rate of -.0245% per decade (similar to 2000-2010 growth patterns) and 2,154 at a projected growth rate of 6.1% per decade (similar to 1990-2000 growth patterns).

The Town should continue to keep an eye on population growth, and research how possible demographic changes could affect planning and services in Dorset. For instance, the most recent census information shows that 63% of homeowners are 55 years of age or older, and nearly one in five of these older homeowners are 75 years of age or older. Yet, some public commentary has suggested that the region's population may increase in coming decades as a result of climate change. Impacts of climate change are projected to be less severe in places like Vermont, making it appealing to new residents evading the natural hazard events already occurring around the country. Ongoing municipal and energy planning should consider the town's ability to absorb some population growth in the future.

2.3 Housing

Housing in Dorset is primarily owner-occupied single family units, although there are short-term and long-term rental units and two family dwelling units. Seasonal residences comprise a significant proportion of Dorset's housing (see Table 2). Therefore, the number of housing units is larger than one would expect for a town with a resident population of 2,031 persons.

According to the 2010 U.S. Census, there are 1,450 housing units in Dorset, of which 468 are vacation/seasonal units. This refers to units, not properties, and includes, for example, units

which comprise a part of a structure. The following Table presents housing data from the 2010 U.S. Census for Dorset, its immediate neighbors, the Region, Bennington County, and the State.

TABLE 2
Seasonal/Vacation and Year-Round Housing Units (Source: 2010 US Census)

<u>Town</u>	<u>Total Housing</u> <u>Units</u>	<u>Seasonal/Vacatio</u> <u>n Units</u>	<u>Yr-Round</u> <u>Units</u>	<u>% Seasonal</u> <u>Units</u>
Dorset	1,450	468	982	32.3
Manchester	2,864	615	2,249	21.5
Peru	697	508	189	72.9
Rupert	482	151	331	31.3
Sandgate	287	105	182	36.6
Bennington County	20,922	4,294	15,730	20.5
State of Vermont	294,382	50,198	256,442	15.6

Using the 2010 population figure of 2,031 and the 2010 figure for number of year-round units of 982, there is an average number of persons per unit in Dorset of 2.07 (reasonable when compared with the Bennington County figure of 2.23 persons per unit). 2010 Census housing units in Dorset total 1,450 units. At 2.07 persons per unit, the housing units could, if they were all year-round units, accommodate 3,233 persons.

The prices and affordability of housing in Dorset are discussed in Section 6 of this Plan, together with policies to address affordability and growth management. A great way to improve housing quality and affordability is through comprehensive weatherization and efficiency upgrades. Strategies for improving energy efficiency of homes are discussed in Section 9: Energy.



H. N. Williams Store in the mid 1800's

2.4 Economic Development

Though Dorset is largely a residential community, serving both year-round and seasonal residents, over 100 commercial businesses are located in the town and contribute to the community's vitality. Most business activities are in service provision, with 46 establishments providing professional and business services, leisure and hospitality, and financial activities. Goods production makes up a third of private businesses, with 32 establishments in the construction, manufacturing, and natural resources sectors.

In 2017, the village centers of Dorset and East Dorset were designated by the VT Agency of Commerce and Community Development as hubs for future economic development in the town. As part of this program, tax incentives, priority status for grant applications, and other benefits are available to encourage private and public investments in these areas.

Infill development that concentrates businesses and public amenities in these compact, walkable villages can help retain existing businesses and attract new ones.

Dorset residents envision their town as a peaceful, but far from boring, place to live, work, and play. Residents appreciate the village scale of the town's commercial development, its rural character, natural beauty, historic buildings, excellent school, efficient government, arts community, superb hospitality offerings, and friendly people. Dorset aims to maintain its existing agricultural and forestry businesses as thriving enterprises, to encourage clean industries, and to promote service businesses compatible with the town's rural environs. Within easy reach, more extensive employment, shopping, and hospitality services are available in the Town of Manchester. Dorset seeks to:

- Enhance the existing villages as places of economic and community activity compatible with the residential uses that comprise the majority of land use in the villages;
- In particular, enhance Dorset and East Dorset village centers as community hubs by improving business and housing infill development opportunities, pedestrian and bicycle safety, and civic uses and public amenities;
- Encourage appropriate new commercial and industrial activity in clustered areas of the town.
- Prohibit strip development along transportation corridors, instead concentrating development in dedicated clusters of economic and residential activity.

2.5 Dorset's Relationship with the Region and with Adjacent Municipalities

Dorset recognizes that the adjacent Town of Manchester provides and will continue to provide jobs and certain educational, recreational, and cultural facilities to residents of Dorset and the region. The Town will continue to cooperate with the Town of Manchester where Manchester's services are appropriately provided to the people of Dorset. In addition, the Town will work to maintain and enhance the level of service of community facilities appropriate to the town level – elementary education, library services, fire fighting, and so forth.

In addition to the Town of Manchester, the Town also shares boundaries with the Towns of Peru, Rupert, and Winhall in Bennington County, and with the Towns of Danby and Mt. Tabor in Rutland County. Dorset will continue to cooperate with these municipalities with respect to issues of mutual interest.

The Town also recognizes roles of the various regional organizations and State agencies in providing regional level facilities and services. The Town will cooperate with the appropriate regional and State agencies to further its objectives in areas such as waste management, housing, conservation, pollution control, energy planning, economic development, transportation planning, and coordination of land use planning.

SECTION 3 STATEMENT OF OBJECTIVES

The Plan of the Town is designed to guide development towards the achievement of certain objectives in the community. These are the Town's general objectives. They are listed in the same order as the State's general planning goals (24 VSA #4302) in order to facilitate comparison. For each sub-heading of objectives, references are provided to both the State's goals, and to the Section(s) of this Plan where more detailed policies to achieve these objectives are to be found.

3.1 Land Use and Economy (State Goals 1 & 2; Sec. 4 of this Plan)

1. Provide for a variety of land uses that take advantage of the rural, residential, scenic, agricultural and forested character of the town.
2. Encourage a pattern of development that can be served efficiently and economically by existing and planned public facilities and services. Direct development to historic village centers where a range of uses may be accommodated efficiently in walkable, mixed use, and attractive village centers.
3. Recognize the importance of the existing village centers as traditional foci for residential development and community activity, and village-scale mixed use and commercial development. Strengthen the importance of the villages by encouraging growth within the village areas and by expanding their boundaries where appropriate.
4. Provide appropriate locations and sufficient acreage for the expansion of commercial and industrial activities. Provide controls on uses and site design within the areas designated for commercial and industrial uses.
5. Avoiding sprawl by directing development to clustered areas along or near existing public roads, thus avoiding unnecessary new road mileage and costly servicing. This applies equally to second homes which may, in the future, be occupied by year-round residents. Access roads will remain private with recorded maintenance agreements.
6. Support the development of home businesses and the telecommunications infrastructure that allows such enterprises and work-from-home arrangements to succeed.
7. Provide for review of subdivisions of land to ensure proper design of roads, proper site development, and protection of agricultural and forestry lands, natural resource and natural hazard areas, and water resources.
8. Accommodate the changing needs of the town through a continuous and comprehensive planning program.
9. Encourage agricultural and forest uses of the land, including on-farm businesses and

rural enterprises, that contribute to a stable local economy, balanced land use, and public benefit.

3.2 Education (State Goal 3, Sec. 8 of this Plan)

1. Develop long range plans for education, in cooperation with other towns and the region. Acquire land in anticipation of future needs for schools and related facilities at the earliest possible time.
2. Ensure that the rate of new residential development is in keeping with the ability of the school system to serve the increased number of students.
3. Support the Taconic and Green Regional School District in its effort to ensure all of its students have every reasonable opportunity to become healthy, self-directed, self-fulfilled individuals and active, civic-minded citizens.

3.3 Transportation (State Goal 4; Sec. 7 of this Plan)

1. Provide for safe, convenient, economic, and energy efficient transportation systems within the town.
2. Encourage the State in its various transportation planning studies to carry out all highway improvements and reconstructions in the town in a safe manner, and with sufficient width to provide for bicycle use.
3. Encourage State and federal implementation of traffic calming measures along major corridors through the village areas in addition to law enforcement.
4. Pursue opportunities to lower energy use in the transportation sector by supporting the use of electric-powered vehicles in town and by expanding access to public transit, ridesharing, and bike and pedestrian pathways.

3.4 Natural, Scenic, Historic Resources (State Goals 5 & 6, Sec. 5 of this Plan)

1. Achieve the best possible quality of environment for the town's residents.
2. Protect aquifers and recharge areas, groundwater and our Class A and B streams, so that the town may have a continuing supply of pure water for domestic (which includes drinking water) and recreational use. Update mapping of source protection areas.
3. Protect habitat forest blocks and wildlife corridors and crossings and incorporate The Nature Conservancy's *resilient landscapes* into resource mapping and land use analyses.
4. Keep the rugged and poorly accessible mountain and forest areas free from development, reserved for forestry and other uses appropriate to their character.

5. Maintain profiles and ridge lines of mountains and hills in their natural state to preserve their scenic beauty.
6. Promote the continued use of high value agricultural and forestry lands, both as part of the economic base of the town, and to preserve the scenic and environmental quality of the town.
7. Retain as much permanent open space as possible through infill and mixed use development in the village centers, preservation of natural resource lands and natural hazard areas, and encouragement of agricultural and forest practices.
8. Protect, in a manner consistent with the Statewide Historic Preservation Plan, areas of special educational and scientific value and conserve sites, structures, and neighborhoods of historic and architectural significance for their beneficial impact on the economic, cultural, and environmental life of the town.
9. Common land in a subdivision shall remain as permanent open space.
10. Consider land or easement acquisition in some cases and work with other organizations such as land trusts to acquire an interest in lands important to the implementation of this section. Consider creation of a land acquisition fund.

3.5 Energy Conservation (State Goal 7, Sec. 9 of this Plan)

1. Enhance energy conservation and efficiency, reduce total energy consumption in businesses and homes, and increase reliance on aesthetically-sited renewable and alternative energy sources.
2. Support projects to achieve the State's energy goals as outlined in the Vermont Comprehensive Energy Plan (CEP), in particular the goal to meet 90% of total energy needs with renewable energy sources by the year 2050.

3.6 Recreation (State Goal 8, Sec. 8 of this Plan)

1. Continue to develop and expand recreation networks, including the development of trail systems, in cooperation with other towns and the region. Acquire land, sites and easements for these at the earliest possible time.
2. Protect and expand access to the town's recreational assets and amenities, including the Dorset Marsh, which make the town an attractive place for outdoor recreational pursuits for local residents and visitors alike.

3.7 Agriculture and Forestry (State Goal 9, Sec. 5 of this Plan)

1. Encourage the preservation of high quality agricultural lands for agricultural uses.
2. Encourage the maintenance and strengthening of the forest industry and related secondary industries within the town.
3. Provide for the evaluation of suitability of lands for development in the Town's development review processes.
4. In reviewing development proposals, discourage the creation of land use conflicts with existing agricultural or forest industries.
5. Encourage sound agricultural and forestry practices within the town.
6. Seek and support changes in property value taxation which would favor the continuation of agricultural and forestry uses.

3.8 Natural Resources and Extractive Resources (State Goal 10, Sec. 5 of this Plan)

1. Allow reasonable and responsible use of the town's underground extractive resources, in a manner which minimizes negative impacts on the surrounding area.
2. Require rehabilitation and redevelopment of extractive sites as they are completed.
3. Protect natural resources including agricultural and forest lands, wetlands, water resources, wildlife habitats, fragile areas, and rare plant habitats.

3.9 Housing (State Goal 11, Sec. 6 of this Plan)

1. Encourage a diverse and affordable range of housing options needed to house the projected population of the town.
2. Encourage the development of housing that will be safe, sanitary, and conveniently located, and will not impact negatively on neighboring development in terms of health and safety.
3. Seek practical solutions to the gap between house prices and housing affordability.
4. Encourage housing density to reduce energy use for transportation and to preserve open land.
5. Encourage efficiency and conservation of energy in housing new and old.

3.10 Public Facilities and Services (State Goal 12, Sec. 8 of this Plan)

1. Provide for public facilities and services needed to serve the town.

2. Allow for the expansion of public and/or private community water supply where practical, and protect current and future water supply sources to meet future needs.
3. Evaluate options to develop a municipal or community wastewater treatment system to serve the Dorset Village center.
4. Encourage the highest level of personal health for everyone in our community through investments and programs that encourage healthy lifestyles, reduce risks, and create access to quality healthcare regardless of age, income, or ability.

3.11 Child Care Services (State Goal 13, Section 8 of this Plan)

1. Support the availability of safe and affordable child care for residents of the town.

3.12 Flood Resilience (State Goal 14, Section 5 of this Plan)

1. Restrict development in areas that are prone to flooding and flood erosion hazards.
2. Maintain local planning documents and policies that allow Dorset residents to access federal flood insurance and FEMA recovery funding in the case of a natural disaster.

SECTION 4 LAND USE PLAN

Dorset is predominantly a rural town. The Vermont Municipal and Regional Planning and Development Act, which establishes the basis for local land use planning, defines a rural community as a municipality consisting of 2,500 or fewer persons as evidenced by the most recent U.S. Census. In addition to its definition by population numbers, Dorset is primarily rural due to its topographical characteristics and development suitabilities.

4.1 Existing Land Use Patterns

4.1.1 Mountainous Areas

The mountainous areas are typified by forests, forestry uses, absence of improved roads, and very low density residential development. These areas are consistent with the lands known as Upland Forests in the Regional Plan. More than 80 percent of the land area of Dorset is in forest. Some of this forested area is also included in the rural areas described below.

4.1.2 Valley Lands and Rural Areas

The valley lands, outside of the villages, contain a variety of low density uses – predominantly agricultural and related uses and rural housing. Valley lands include the

lands known as rural areas in the Bennington Regional Plan. Rural areas are characterized by slopes and suitable soils that allow carefully planned development that considers ridge line protection, open space, agricultural, and forestry values.

4.1.3 Villages

Within the valleys are built-up areas with concentrations of development in small villages; Dorset Village and East Dorset are the largest of these villages. Each contains a collection of residential uses together with non-residential uses such as village scale commercial uses, churches, post offices, and similar uses. Settlements at South Dorset and South Village also represent significant residential groupings, with some non-residential uses in South Dorset.

New England villages represent historic settlement areas, which in Dorset typically consist of one and two-story detached buildings with surrounding mountains that form a scenic backdrop. Villages are the commercial and cultural hubs of a rural community, where residents come together to socialize, to execute public and private business, and to procure basic goods and services. In Dorset, there is an acknowledged village scale that defines the character of the town. Villages should be built at a pedestrian scale (as opposed to an automotive drive-by scale) and as such should be safe and navigable on foot and by bike, for young children and elderly residents alike. As part of their historic tradition, streets are just wide enough to accommodate no more than two lanes of traffic, a scale that should be maintained. Sidewalks, where appropriate, encourage pedestrian activity and help define the village.

Villages concentrate business and employment opportunities, public services, residential units, cultural activities, and community needs so that public service provision is economical and energy efficient. Because it is desirable to maintain clearly defined edges at limits of village areas, new development should take advantage of infill opportunities and mixed use design rather than expand beyond village boundaries. In fact, mixed use and infill development in village centers helps keep these historic areas vibrant and economically viable. Compact design encourages residents and visitors to forego use of fossil fuel powered vehicles in favor of walking and biking. This is consistent with Dorset's commitment to conserve energy and promote the health of its residents. For details of ongoing projects to pursue these community goals, see Sections 7 (transportation) and 9 (energy).

Dorset and East Dorset Villages

Dorset and East Dorset represent the two core commercial and cultural centers in the Town of Dorset. Dorset Village includes The Dorset Post Office, The Dorset Historical Society, The United Church of Dorset & East Rupert, The Dorset Playhouse, The Dorset Public Library, The Union Store, and several inns and restaurants. East Dorset includes the East Dorset Post Office, The Dorset Town Office, The East Dorset Fire Department, The Bill Wilson House and Library, the East Dorset Congregational Church and some existing stores.

Dorset and East Dorset are within walking distance of numerous residences and there is an effort to increase shopping, dining and entertainment opportunities in these village centers consistent with the residential character of the area. Through the Vermont ACCD Village Designation Program, both Dorset and East Dorset were granted village center designations in September 2017. This program promotes private and public investment in village centers through tax credits and other incentives that can spur redevelopment. Designated villages and town centers are also prioritized for state funding opportunities.

Designation of these two centers supports the economic development goals of this plan by encouraging commercial development that would provide goods, services and employment opportunities in appropriate areas and by reinforcing historical development patterns. Designation also supports land use goals by helping maintain the rural character of the town. Designation helps improve the ability of these historic villages to attract residents and businesses, enhance their livability and unique sense of place and expand access to employment, housing, and public services. These designated village centers promote healthy, safe and walkable centers for people of all ages and incomes and reduce the combined costs of housing and transportation.

An overview of the approximate land cover character of the town is provided in the following table, based on national land cover analysis. In 2008 there was 7,128 acres in the VT Current Use Program and ten years later in 2018 the total acreage is 8,177.

TABLE 3

<u>Land Cover</u>	Dorset Land Cover in Acres and Percents	
	<u>Acres</u>	<u>Percent</u>
Woodland	21,782	71.1
Pasture	2,274	7.4
Wetland	1,936	6.3
Water	1,250	4.1
Cropland	1,100	3.6
Open Land	1,009	3.3
Developed	679	2.2
Herbaceous/Scrub	626	2.0
Totals	<u>30,656</u>	<u>100.0</u>

Source: VT National Land Cover Dataset, 2001

4.1.4 Development Along Transportation Corridors

Apart from the villages, the major transportation corridors serve as the other focus for development. The Route 30 corridor accommodates a variety of small scale commercial uses, plus some commercial-industrial uses related to the town’s rural and tourism economies. For example, there are two wood products industries, a nursery, a farm products outlet, a campground, and various antique and craft businesses. The Route 7/7A corridor has attracted a variety of uses serving residents and tourists, including restaurants, tourist accommodation facilities, and campgrounds, and commercial/industrial operations. A

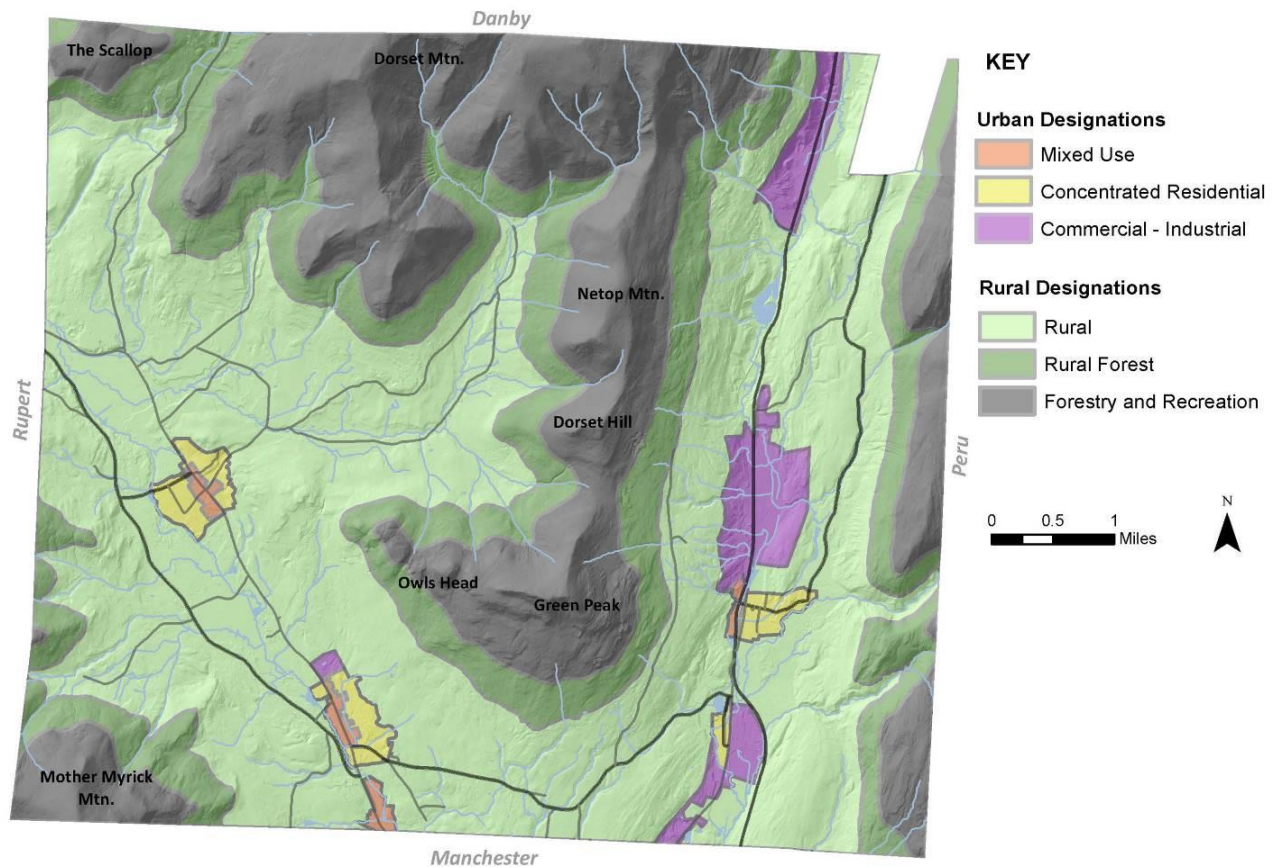
purpose of this Plan is to allow clustered development along these transportation corridors so that strip-type development is prohibited. Morse Hill Road, which links villages in the two valleys, has attracted mostly residential development. Its western flank contains a major community facility, the Dorset Elementary School, which is a K-8 school within the Taconic and Green Regional School District that serves school children throughout Dorset.

Additional residential development is found primarily along the town’s public road network. Dorset Hollow is one such concentration of rural residential development, and roads such as West Road, Mad Tom Road, and Kirby Hollow Road also accommodate significant numbers of housing units.

4.2 Future Land Use Plan and Policies

The Future Land Use Plan reflects and builds upon the pattern of existing development as well as desired future development patterns in the town. The Future Land Use Plan requires that all development plans consider the development goals of the community together with natural resource opportunities and constraints, and then design appropriate plans with these needs in mind. Six general planning areas are shown on the Future Land Use Map and described below. These areas should not be interpreted as zoning districts, but rather as planning areas that provide a general vision for desired future development.

MAP 1: Future Land Use Plan



In addition to the following planning areas, which roughly correspond to specific zoning districts, there are in Dorset a number of “overlay” policies, such as Ridgeline and Mountainside Conservation, floodplain protection, and the Design Review Area in the Historic District, related to specific issues or land types which are described elsewhere in this Plan. Therefore, in reading this Plan for any specific location, general land use policies will be found in this Section, but reference must be made to other sections of the Plan to determine additional relevant policies of the Town.

4.2.1 Urban Designations

“Urban” is a relative term, and in Dorset the urban areas would be considered rural in many other localities. In Dorset, the “urban” areas are defined as the Mixed Use, Concentrated Residential, and the Commercial-Industrial areas.

The lands designated in these categories are intended to accommodate a large proportion of Dorset’s commercial and residential growth. The concentration of development in these areas is an efficient use of public investment in infrastructure and of maintenance services. In addition, it helps to relieve growth pressure in the outlying areas. In these areas of urban designation, appropriate natural resource and natural hazard policies will apply, and as densely-settled, mixed use zones, these areas should be safe and accommodating for both pedestrian and bicycle traffic.

4.2.1.1 Mixed Use

a) Location:

Mixed Use areas are designated within the settlement areas of Dorset Village, East Dorset, and South Dorset. The indicated areas approximately represent existing concentrations of village-scale commercial and residential uses, but with room for infilling.

b) Purpose:

Mixed Use areas provide space for housing and suitable business and service establishments to provide employment opportunities and commercial and service facilities for local residents and visitors. Maintaining commercial and residential activities in these areas should be consistent with the historic character of the compact, walkable, and mixed use settlement pattern.

c) Uses:

Commercial uses in the Mixed Use areas shall be small scale retail and service commercial uses compatible with the village surroundings – that is, the historic settlement pattern and village scale. In addition, residential uses, small scale offices, tourist accommodation facilities, restaurants, and home occupations shall be encouraged. Housing options should

be diverse and affordable and, when appropriate, mixed with commercial uses.

d) Policies:

1. Support uses, building types and styles, and scale of development compatible with village scale.
2. Revise allowable densities, setbacks, minimum lot sizes, in the Mixed Use areas to create more opportunity for infill development, affordable housing and community development.
3. Commercial uses in the village shall adhere to detailed performance standards regarding development effects such as traffic flow, lighting, noise levels, and more.
4. Encourage the combination of commercial and residential uses in the Village Commercial areas through mixed use development. Permit commercial business and professional uses of a service nature compatible with residential use.
5. Encourage conservation of open land between Mixed Use designations to prevent strip development.
6. Town residents recognize distinctions among the four Mixed Use areas in Dorset. The Town should consider pursuing a Town Master Plan focusing on commercial areas to assess how each of these unique areas may reach its potential.

4.2.1.2 Concentrated Residential

a) Location:

Concentrated Residential areas are designated in the settlement areas of Dorset Village, East Dorset, South Dorset, and South Village of East Dorset. The designated areas approximately represent existing and future infill development area for concentrated village residential development.

b) Purpose:

The Concentrated Residential areas are designated to recognize concentrations of existing development, provide for maintenance of the village communities as desirable places to live, and also to encourage new, infill residential development and some compatible commercial development of a scale and type appropriate to the village environment.

c) Uses:

Uses in the Concentrated Residential areas shall be housing with additional uses compatible

with residential uses, including, when appropriate, mixed uses.

d) Policies:

1. Enhance the attractive residential environment of the village areas by further developing the villages as charming and desirable places to live. In the Design Overlay District, hold existing and new development to standards that sustain its historic character.
2. Recognize the existing villages as the original form of “cluster development” in which houses are “clustered” together to share community facilities in an economically and energy efficient manner, and also thereby to avoid development in important natural resource areas.
3. Encourage the efficient use of infrastructure facilities in the villages, including village roads, existing water systems, and public facilities such as the post offices, library, emergency services, and so forth.
5. Encourage a mix of housing types and affordability levels within the Concentrated Residential areas capable of housing current town residents who wish to downsize and age in place as well as new residents of the town. To be compatible with existing development, residential types will include single family, two family, and multi-family houses, and homes may include an apartment within the primary structure, or within an accessory building.
6. Ensure safe and adequate water supply and sewage disposal systems for both existing and new housing in the villages. Evaluate options to develop a municipal or community wastewater treatment system to allow for infill residential development in Dorset Village.
6. Encourage the expansion of the Dorset Village water supply.
7. Recognize that the potential future water supply area of the East Dorset water supply system exceeds the area of the existing water service area. Undertake a future study to determine whether (and how) the boundaries of the designated Concentrated Residential area could be expanded.
8. Encourage pedestrian and bicycle access, safety, and wayfinding.

4.2.1.3 Commercial-Industrial

a) Location:

Four Commercial-Industrial areas are designated in the Town Plan. Three of the Commercial-Industrial areas are located along the Route 7/7A corridor. One of the

Commercial-Industrial areas is located along the Route 30 corridor. The Town intends to revise these districts to eliminate areas where site conditions, such as wetlands and conservation easements, preclude commercial and industrial development.

b) Purpose:

The Commercial-Industrial areas are designated to recognize existing commercial-industrial uses and to provide for suitable locations of adequate size to attract new light commercial-industrial development in the town, additional businesses and services needed in the community, and new employment and housing opportunities for local residents.

c) Uses:

Commercial uses in the Commercial-Industrial areas shall be light manufacturing or assembly of goods, offices, distribution centers, and similar light industries, subject to strict performance standards, as well as agriculture, forestry, and other rural uses. Additional uses, including public spaces, recreational uses, home occupations, and residential uses, may be permitted.

d) Policies:

1. Control the number and design of commercial-industrial access points to Route 7/7A to maintain the roadway in good condition over time and reduce need for costly upkeep.
2. Encourage new light commercial-industrial uses within these areas, and in accordance with high standards of performance and site design.
3. Permit a mixture of uses within these areas, designed in a way to minimize land use conflicts.
4. Uses to be particularly encouraged are those that provide employment opportunities for the local residents, such as clean, light industry.
5. As the East Dorset industrial park located at Tennis Way/ Hills Court reaches capacity the Town should research siting of future similar commercial establishments.

4.2.2 Rural Designations

“Rural” designations refer to the Rural, Rural Forest, and Forestry and Recreation areas. These areas cover most of the town.

4.2.2.1 Rural

a) Location:

Rural areas are designated in the town's valleys, in areas below elevation 1600 feet, and outside of the areas designated for Mixed Use, Concentrated Residential, or Commercial-Industrial.

b) Purpose:

The Rural areas are designated to recognize and permit a range of rural and residential uses, while protecting resources of open space, views, agricultural and forest lands, natural areas, and wildlife habitats. These areas are the parts of town that have recently experienced the most development pressure, and which also contain many areas deserving special consideration for resource protection. The policies for this planning category are intended to permit reasonable types and quantities of rural development, while giving full consideration for all of the resource policies of this Plan.

c) Uses:

Uses in the Rural areas shall be agriculture, forestry and related uses, low density residential uses, and other rural or open space uses. Additional compatible uses such as recreational uses, "bed and breakfasts," and home occupations may be permitted.

d) Policies:

1. Allow a limited amount of rural residential development in a fashion that will protect the town's natural and scenic resources.
2. Encourage conservation of important agricultural soils for current and future use and existing agricultural uses. (Refer to Sec. 5.1 of this Plan.)
3. Encourage conservation of the town's forestry resources. (Refer to Sec. 5.2 of this Plan.)
4. Encourage development of appropriately sized and screened renewable energy facilities, which improves the town's energy resilience and can enhance the financial viability of keeping agricultural and forested lands in production or conservation.
5. Where warranted, require new residential subdivisions to be of a cluster form, designed to preserve open space, natural resources, and natural hazard lands.
6. Ensure that new residential development can be provided with safe and adequate water supply and sewage disposal facilities.
7. Ensure that new residential development will not adversely impact existing residential development with respect to the provision of a safe and adequate water supply. This will be accomplished through following regulatory means provided by the State.

8. Require that new development be served either by existing public or private roads, or by new private roads. Require that all new roads be constructed to proper standards to allow easy access by emergency and other service vehicles.
9. Require that access roads will remain private, with recorded maintenance agreements. Encourage development of recorded road maintenance agreements when new development is proposed along existing access roads.
10. Avoid creation of land-locked parcels.
11. Minimize driveways or roads crossing steep slopes.
12. When new development is proposed on existing substandard private roads, require, where possible, upgrading of such existing substandard roads.
13. Require that new development provide water to fight fires as per specifications provided by the fire districts.
14. Encourage a mix of housing types and affordability in the rural housing supply.
15. Favor compact forms of development, using short lengths of roadway, over more extensive development scattered along long distances of roadway. Encourage infill development in existing development clusters along existing roadways.

4.2.2.2 Rural Forest

a) Location:

All lands in the town above 1600 feet elevation and below 2000 feet elevation are designated Rural Forest areas. Most of these lands are not suitable for normal development due to limitations related to topography, soil conditions, high elevation, and inaccessibility.

b) Purpose:

Rural Forest lands are designated to recognize the importance of the town's forest resources and forest industry, and to preserve rugged forest areas and high mountain lands for continued forestry uses and open spaces and associated public benefits.

c) Uses:

Uses in the Rural Forest areas shall be forestry and related uses and public recreational uses. In addition, some very low density residential development, or low density cluster subdivision, may be permitted subject to detailed regulations. Customary home occupations, certain wood processing operations such as logging and firewood and similar

uses may be permitted.

d) Policies:

1. The town's Rural Forest areas are considered a valuable resource to the town. Reference must be made to policies specific to the forest resources (Section 5.2) and to the other natural resource policies (Section 5) affecting these lands.
2. Permitted residential development in these areas will be strictly reviewed and controlled with respect to water and sanitary sewage disposal systems, erosion concerns, avoidance of steep slopes, protection of natural drainageways, maintenance of forest resources, and screening from the town's roadways and settlement areas.
3. Permitted residential development shall be designed to minimize conflict with the functioning of forestry operations.
4. Permitted residential development shall either be of a very low density (minimum lot size of 10 acres) or shall be clustered with a density not to exceed 1 unit per 10 acres of net developable land.
5. The Planning Commission may require that subdivisions in Rural Forest areas be in a cluster form.

4.2.2.3 Forestry and Recreation

a) Location:

All lands in the town above 2000 feet elevation are designated Forestry and Recreation areas. Most of these lands are not suitable for normal development due to limitations related to topography, soil conditions, high elevation, and inaccessibility.

b) Purpose:

Forestry and Recreation areas are designated solely to recognize the importance of the town's forest resources and forest industry, and to preserve rugged forest areas and high mountainous lands for continued forestry uses and open spaces and associated public benefits.

c) Uses:

Uses in the Forestry and Recreation areas shall be forestry and related uses and public recreational uses. Other uses that may be permitted include temporary hunting or fishing camps, public uses, and extractive industries.

d) Policies:

1. The town's Forestry and Recreation lands are considered a valuable natural resource to the town. Policies specific to forest resource lands, both within and outside of this planning area, are discussed in Section 5 of this Plan.



Aerial view of Owls Head & Green Peak, part of the Taconic Mountain range running through the center of town from the north.

SECTION 5 NATURAL, SCENIC, AND HISTORIC RESOURCES

The Town of Dorset is fortunate to have extensive natural, scenic and historic resources that combine to make Dorset such an attractive place to live. From the breathtaking views at Gilbert Lookout in Owls Head Town Forest to the tranquility of the Dorset Marsh, the Town of Dorset offers residents and visitors unparalleled access to stunning vistas and rich history. Town residents have always treasured the community's natural endowment and sought to preserve it, such as when Dorset petitioned and gained recognition of the Dorset Marsh as the first Class I wetland in Vermont in 1992.

In recent years, the Town has taken further steps to steward its natural and historic resources. For example, in 2016 the Town partnered with the Vermont Youth Conservation Corps, the Vermont Land Trust, and the Dorset Historical Society to expand the Town Forest and develop a trail network that highlights the historic Gettysburg Quarry and connects with existing public preserved lands. Such efforts highlight the interconnected legacies of Dorset history with the natural environment, and the opportunities that exist today to celebrate these resources by preserving them and making them more accessible to town residents.



Art's Bench, Owls Head Town Forest

All of these resources require special care and consideration so that they continue to be recognized and available to future generations of Dorset residents and visitors. The resource policies contained in this section must be read in conjunction with the town's land use policies. The objective of these policies is to consider natural, scenic, and historic resource opportunities when designing new development. Appropriate development will recognize the value of these resources and adapt to site conditions to preserve them.

This chapter provides an overview of the town's (1) Natural resource areas, (2) Scenic resources, and (3) Historic assets. (4) Natural hazard areas, which include locations prone to flooding and fluvial erosion, are reviewed at the end of the chapter.

5.1 Natural Resource Areas and Policies

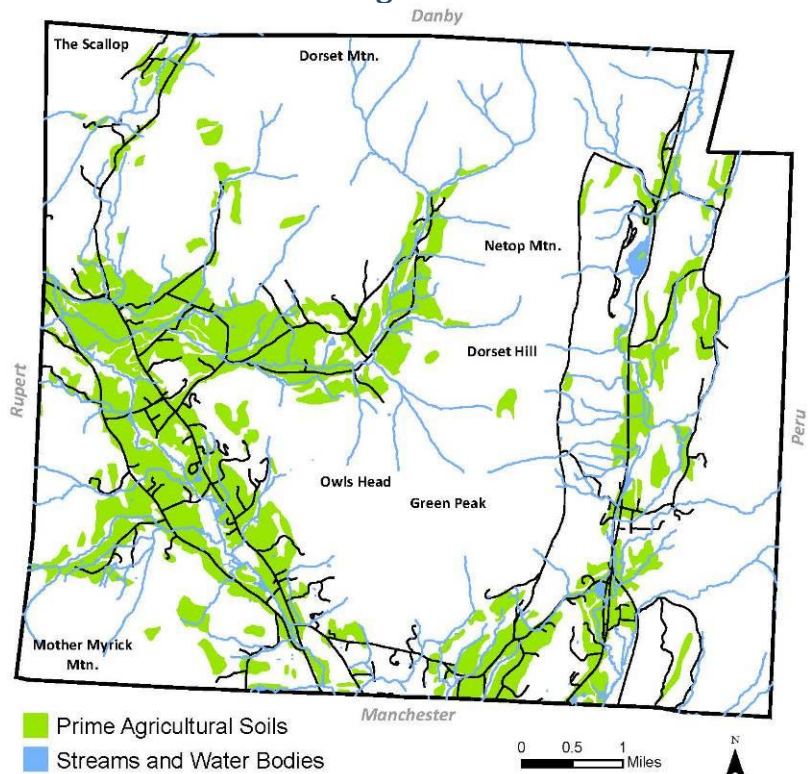
Natural resource areas in Dorset include:

- agricultural soils
- forested lands
- streams, lakes, ponds, and wetlands
- wildlife habitat areas
- springs and public water sources
- extractive resources

5.1.1 Agricultural Soils

Dorset contains a considerable amount of farmland, some of which is actively farmed, and some of which has historically been farmed but is now inactive. Since the conservation of open space is a major objective of the Plan, as well as the maintenance of the agricultural sector of the economy, the Town should encourage the continuation of farming where it is most suitable and preserve agricultural soils for future use when possible. Placing an explicit economic value on agricultural soils is a highly effective, non-regulatory approach to preservation of agricultural land. Methods include community-supported agriculture (CSA) programs, investment in conservation easements, and participation in state tax abatement programs.

MAP 2: Prime Agricultural Soils



5.1.2 Forest Lands

More than 70 percent of the land area of Dorset is in steep and rugged forest and mountain land, generally located away from existing roads and development. Most of this land is not suitable for development. Demand for land for building development will not be large enough in the foreseeable future to use any substantial portion of the nearly 21,000 acres of forest and mountain land in Dorset. The bulk of this land should remain as timberland. Therefore, encouragement of good forest management, through land use taxation and other means, becomes essential.

In addition to providing forest products, wildlife habitat area, and recreational opportunities, forest lands serve as vast carbon sinks that help to offset greenhouse gas emissions. The various ecosystem services that forests provide, such as the capturing and filtering of rainwater to reduce stormwater runoff and flood hazards, will be vital in the future as high volume precipitation events occur with greater frequency. For these reasons, the conservation of wooded areas in Dorset is an important climate change mitigation strategy.

The Town has designated lands above 2000 feet elevation for forest use since 1972. In 1984, it was determined that lands of elevations between 1600 and 2000 feet also had severe

limitations to development. The Town recognizes the natural value of these areas through Rural Forest and Forestry and Recreation future planning designations.

The Town recognizes that important forest resources exist outside the areas designated as Rural Forest and Forest and Recreation areas, and the conservation of their forest resources is also important to ensure forest habitat connectivity. The best way to preserve low-lying, high-value forested lands is through non-regulatory measures such as supporting forestry-based businesses, encouraging participation in state tax abatement programs, and conserving forested areas through easements.

5.1.3 Water Resources

Dorset's lakes, ponds, and streams are important natural resources for wildlife habitat, sources of water for domestic and recreational use, and for agricultural operations. The town contains headwaters of three important watersheds – those of the BattenKill, the Otter Creek, and the Mettawee River. Emerald Lake (28 acres), Prentiss Pond (5 acres), and South Village Pond (5 acres) are the major bodies of open water in the town. In addition, there are smaller water bodies and many streams that are important.

Both Dorset Village and East Dorset have public water supply systems. Each is operated by a separate Prudential Committee and are part of the fire districts. Existing public water sources are mapped and the ground water source protection areas are shown in Map 3: Water Resources. The Town is exploring opportunities for new water sources to be brought online, including a potential well site in Dorset Village. Water resources and associated resource protection areas merit further study and mapping to protect resource areas from pollution and degradation.

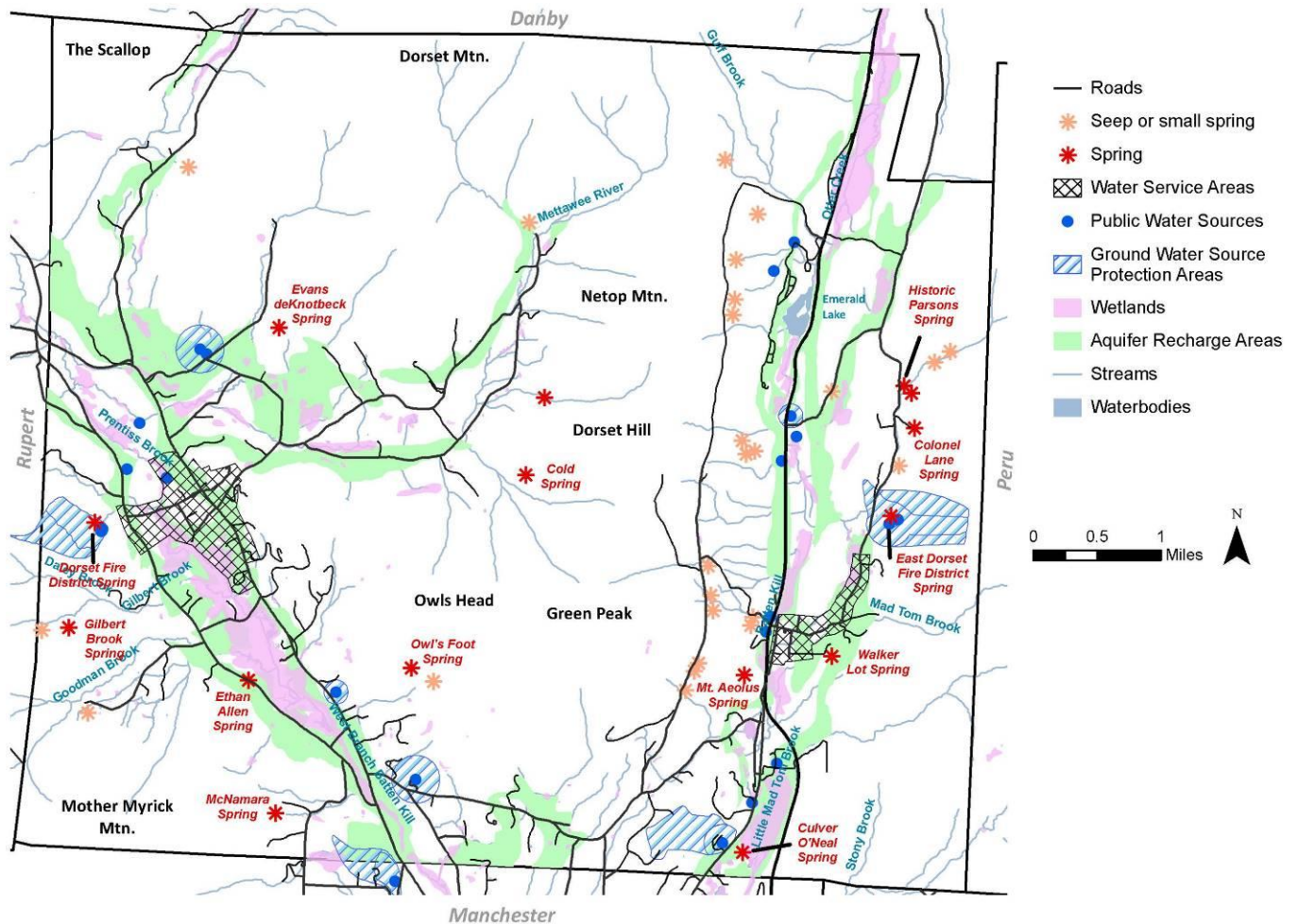
Wetlands are another important natural resource. Wetlands in the Dorset area provide considerable benefits. Vermont Wetland Rules identify ten functions of wetlands and buffer zones which further define their significance. These are:

- water storage for flood water and storm runoff;
- surface and groundwater protection;
- fisheries habitat;
- wildlife and migratory bird habitat;
- hydrophytic vegetation habitat;
- threatened and endangered species habitat;
- education and research in natural sciences;
- recreational value and economic benefits;
- open space and aesthetics; and
- erosion control through binding and stabilizing the soil.

The Dorset Marsh is a wetland of statewide significance and is classified as a Class 1 Wetland. There are also important wetlands at the base of the Green Mountains in East Dorset, along courses of the Otter Creek and the BattenKill, and elsewhere. Wetlands in

Dorset are shown on Map 3, Water Resources, and are shown on the National Wetlands Inventory maps, which are included by reference as part of this Plan. During review of development applications, the Town may require more detailed mapping of wetlands as well as an explanation of their significance on a particular site being considered for development.

MAP 3: Water Resources



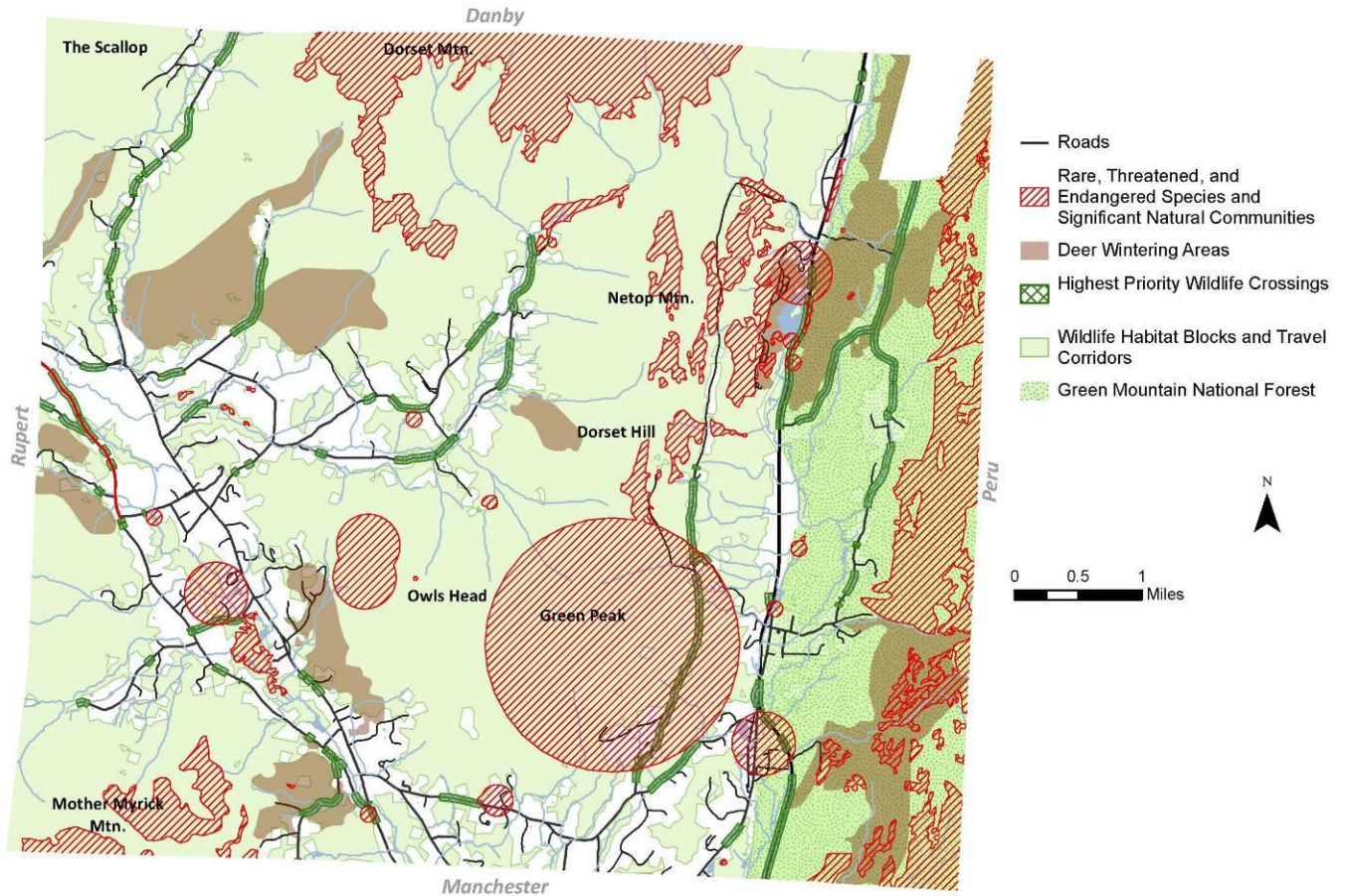
5.1.4 Wildlife Habitat Areas

Wildlife habitat areas such as contiguous tracts of forested land and the Dorset Marsh are also important to Dorset. The State recently completed a project to assess and map forested areas across the state for their value as habitat areas and connectivity corridors for wildlife. By focusing on continuous forest cover rather than specific species habitats, this approach highlights the shared environments of many plants and animal species that require significant territorial ranges for their populations to thrive.

Map 4: Natural Resources shows the locations of rare, threatened and endangered species, deer wintering areas, high priority forest habitat blocks, wildlife road crossing areas, and

the boundary of the Green Mountain National Forest on the east side of town. In areas where there is concern for natural and wildlife resources, the Planning Commission may require an applicant for development to prepare and have approved a wildlife management plan.

MAP 4: Natural Resources



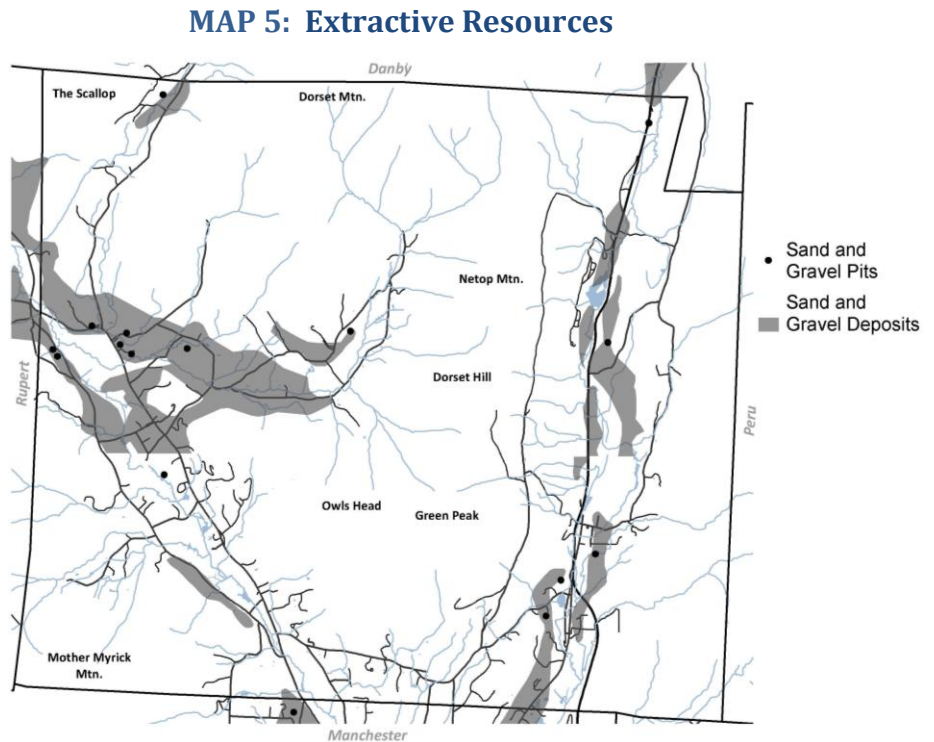
Analysis by The Nature Conservancy, an international non-profit organization dedicated to environmental conservation, highlights Dorset as an area with a high level of climate change ‘resilience’ due to its natural features. Dorset has geophysical characteristics such as complex topography, connected natural cover, and high quality biodiversity features that provide ecological strongholds where the effects of climate change will be buffered by natural properties of the land. In other words, plant and animal species can find areas of suitable conditions to thrive in close proximity to where they currently reside, and as a result ecosystem changes associated with climate change will be more gradual than in other locations. This unique combination of natural qualities provides both natural beauty and resilience to the Dorset area.

5.1.5 Extractive Resources

Historically, Dorset was notable as a major source of marble, as evidenced by the important historic marble quarries included in the list of historic sites below. However, marble is no

longer quarried in Dorset, although it is in Danby to the north.

Extraction of natural resources is permitted with conditions in the rural and forest land use districts, and also permitted in the commercial-industrial land use districts. Special standards for proposed new or enlarged extractive sites are to be applied. Mineral, gas and oil extraction uses in the commercial-industrial areas are subject to detailed review and performance standards. Retired extraction areas are well suited for solar and other renewable energy facility siting. A map of historic marble quarries is available from the Dorset Historic Society.



5.1.6 Policies for Natural Resource Areas

The following policies apply to all development in the town, in relation to potential impact on groundwater source protection areas, wetlands, water resources, wildlife habitat areas, forest blocks and wildlife travel corridors, natural/fragile areas, and rare plant/animal communities as discussed in this section:

1. Natural resource areas have been mapped for this plan based upon the best available information, but new or more detailed information about the location of natural resource areas will be used in reviewing development applications when available.
2. Development proposals shall take measures to preserve valued natural resources and the Town may impose conditions to require cluster development or similar site plan adjustments to this end.
3. Educate and encourage landowners to take advantage of the State Use Value Appraisal tax program, also known as the Current Use Program.
4. The Town will, when possible, work with private conservation organizations such as Vermont Land Trust and the New England Forestry Foundation to protect identified resources through donation, easements, acquisitions, or other methods.

5. Support agricultural businesses and operations as a valued way to lower food and energy costs, retain diverse jobs in the community, and preserve Vermont's working landscape.
6. Where new development is proposed adjacent to existing agricultural operations, the Town shall, when possible, seek to avoid conflicts between the proposed development and the agricultural operation.
7. The Town of Dorset supports forestry-based businesses and operations as a valued way to preserve productive woodlands, sustainably manage forest ecosystems, and retain local jobs in the natural resource sector.
8. Protect quality of streams, springs, and groundwater that serve as domestic water supply (which includes drinking water) or flow into aquifers that have potential for future water supply.
9. The Town will work with the State, when possible, to update studies or perform new studies critical to protecting the public water supplies in the town.
10. Require erosion control and stormwater management measures in any new development that has the potential to impact valued natural resources.
11. When the opportunity arises, upgrade the classification of streams and wetlands.
12. Require a minimum buffer area adjacent to wetlands, streams, and water resources, which may be greater than that required by state or federal regulations, to provide cover for wildlife, maintain ambient temperatures for fish, and protect water quality.
13. Permit the extraction of mineral resources in suitable areas, subject to rigorous review and performance standards. In the review of proposals for resource extractive uses, require suitable plans for drainage, protection of natural resources, protection of nearby water supplies, and site rehabilitation. Consider the aesthetic impact of any such proposals, and require screening to minimize negative aesthetic impacts.
14. In accordance with Act 174 enhanced energy planning, the Town supports redevelopment where appropriate of resource extractive sites for alternate uses such as renewable energy generation, when resource extraction is completed.
15. Require site restoration at resource extractive sites upon completion of appropriate phases of operation.

5.2 Scenic Resources

The Town of Dorset is very scenic, and the residents of the town would like to maintain its scenic quality. It is recognized that the scenic character of the town is an important economic factor in that the scenic resources enhance property values and the attractiveness of the area as a residential environment and tourist destination.

Important components of this scenic quality include large tracts of open lands, interesting topography, a mix of open agricultural lands and forests, broad vistas of valley lands, and undeveloped, forested mountains areas. The small scale of Dorset's commercial and industrial uses and the historic and traditional nature of the town's villages add to the area's scenic quality and combine to form some particularly scenic driving and walking routes.

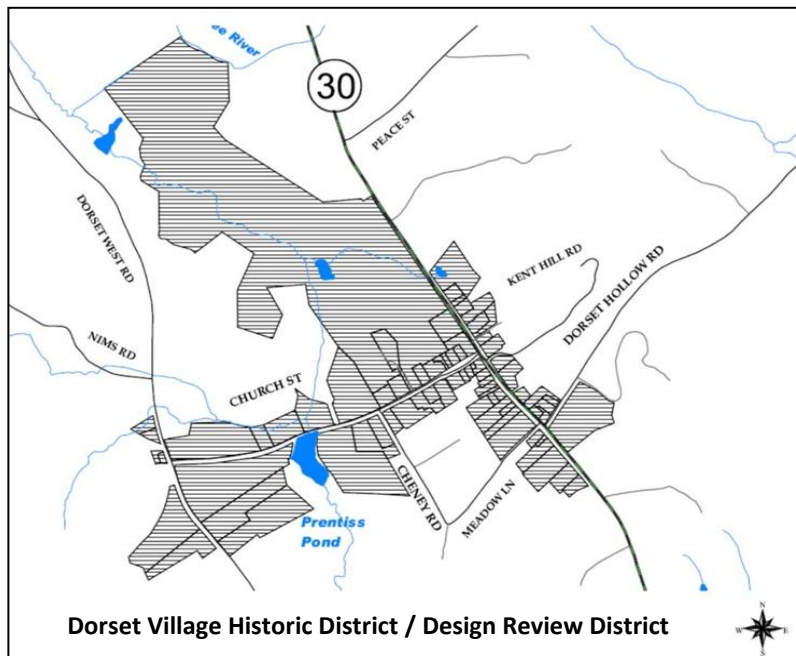
5.2.1 Policies for Scenic Resources

1. Protect views of the town's ridge lines and hilltops from the public roads and major settlement areas by a) imposing conditions on development to prevent degradation of those views, and by b) guiding the siting of structures and the location of tree clearing in new development so that aesthetic impacts will be minimized.
2. Perform a study to better define the town's most important scenic resources, and to identify additional measures to protect them.
3. Require high performance standards with respect to site design, landscaping, and operations for new commercial and industrial development.
4. Review new development with outdoor lighting and limit such lighting to that which is necessary for safety and convenience. Prevent excessive lighting of the night sky.
5. Study the impact of the designation of Mad Tom Road, Dorset West Road, Dorset Hollow Road, Morse Hill Road, and possibly others, as Scenic Roads under the State's Scenic Highway Law. Certain stretches of road, such as those addressed in the Bennington County Regional Plan, may also be considered (e.g. part of Route 7A).

5.3 Historic Resources

The Town of Dorset is rich in historic resources. These include important old marble quarries on both the east and west sides of town, the Dorset Village Historic District, the Dorset Village Historic District ~ West, the Kent Neighborhood Historic District, cemeteries, and many individual structures that are of historic importance. Table 4 provides a partial list of historic sites in the town.

The National Register of Historic Places has identified two historic districts in Dorset – Dorset Village and the Kent Neighborhood District (West Road/Nichols Hill Road/Lane Road area). The Dorset Village Historic District has been adopted as a Design Review District, in which development proposals are reviewed by the Design Review Board. There is no design regulation in the Kent Neighborhood Historic District.



An objective of this Plan is to preserve sites and neighborhoods of historic value. At present there are no protective regulations other than in the Dorset Village Historic Districts, but there are opportunities to further historic preservation through both regulatory and non-regulatory approaches.

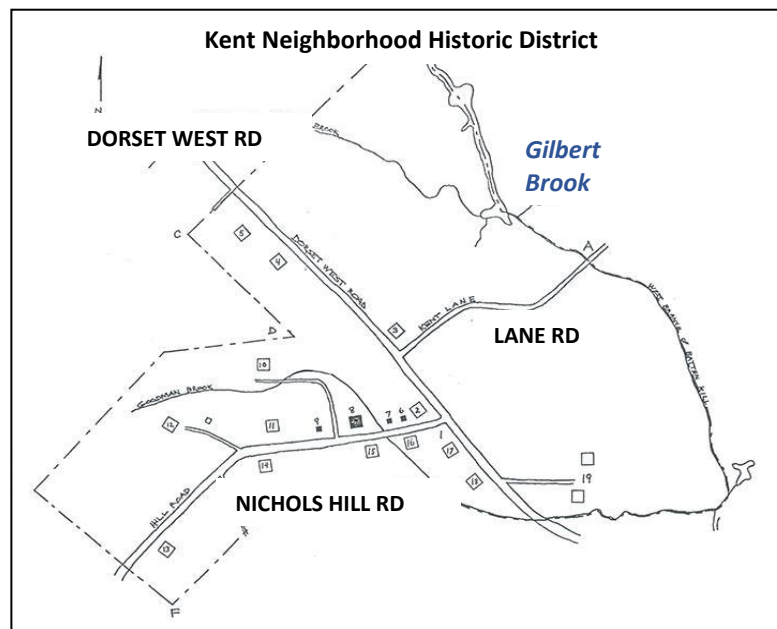
Additional information about Dorset history has been gathered by the Dorset Historical Society and can be viewed at their museum in Dorset Village or online at dorsetvthistory.org.

5.3.1 Policies for Historic Preservation

1. Continue to support ongoing efforts of the Dorset Historical Society and the State to correctly map historic and pre-historic resources. Such map, when completed, will be included in the Town Plan by reference.

2. Continue to support the Design Review Board in its mission to preserve the historic structures and land use pattern of the Historic Districts.

3. Work with the residents and the Dorset Historical Society and other groups to establish additional historic districts if



warranted.

4. Consider use of cluster design development as a means of preserving historic resources not in historic districts.
5. Work with the Historical Society and private conservation organizations to acquire rights, easements and/or ownership of historic resources as appropriate. In particular, consider the incorporation of abandoned quarries and other outdoor historic resources as potential components in a future open space network or in recreation plans.
6. Encourage developers to incorporate historic structures into their project planning. Private property owners should take advantage of tax incentives and grant opportunities for improving historic properties located in the Dorset and East Dorset designated village centers.

TABLE 4

List of Important Historic Sites in Dorset

Included in the National Register of Historic Places:

Dorset Village Historic District, the district itself, and including over 76 individual historic buildings/properties.

Kent Neighborhood Historic District, the district itself, and including 19 individual historic buildings/properties.

Listed in the State Register of Historic Sites:

Warren Homestead	Coach Road Marker
Lincoln-Isham House	Cephas Kent Tavern Historic District
Ethan Allen Spring	Lefevre House
Norcross-West Quarry	H.N. Williams Store
Dorset Public Library	Prentiss Residence
Dorset Village Green Historic District	Dorset Inn
August Residence	North District Schoolhouse
Iron Foundry	St. James Church
Freedley Quarry	Freedleyville Marble Mill
Connor's Filling Station	Wilson House

Listed on Dorset Bicentennial Map (and not listed above):

Buildings

John Farwell House (1769)	Viall House
Ichabod Dimmock House (1780)	Toll Road Gate House
Harvey Holley House (ca. 1790)	Williams' Store (1820)
Geo. Manley House (1802)	Underhill House (ca. 1773)
John Kent House (1773)	Edgerton Saw Mill
Amos Field House (1776)	Hodge House (1791)

Titus Sykes House (1790's)
Asa Baldwin House (ca. 1774)

John Manley House (1773)
E. Baldwin House (ca. 1780)

Cemeteries (there are a total 14 cemeteries in town, mapped at dorsetvthistory.org)

Armstrong Family
Hazelton Family
East Dorset (Catholic)

Maple Hill
Green Peak
East Dorset (Community)

Sites

Farwell Tavern

Cephas Kent Inn (1773)

Quarries

Norcross-West (1785-1913)
Freedleyville (1808-ca. 1900)
Cave (1812-1820)

Gettysburg (ca. 1800-1897)
Fulsom (1854-1885)

(Left) Upper Prince or Gettysburg Quarry located in Dorset is a fine example of a quarry that shows how historic quarrying techniques were enhanced by steam power.

(Right) Freedleyville Quarry in East Dorset, is another example of in-ground mining techniques used in the late 1800's to early 1900's



5.4 Natural Hazard Areas and Hazard Area Policies

Natural Hazard Areas are those areas which, if developed, would be hazardous to the development, such as landslide areas, or those areas which, if developed, would cause negative impacts on the site or adjacent sites, such as erosion on steep slopes and other similar conditions. This Plan provides policies for two types of natural hazard areas –Steeply Sloped Lands and Flood and Fluvial Erosion Hazard Areas.

5.4.1 Steeply Sloped Lands

In the Town of Dorset, the overall mountainous terrain creates both valleys and steeply sloped areas that lead up into wooded, undeveloped highlands. Some transitional lands between valleys and high-elevation zones have high grades that, if developed, would be vulnerable to hazardous conditions such as erosion and high levels of stormwater runoff. Building technologies and stormwater management techniques have advanced significantly to control for these conditions, but areas with steep slopes over a significant portion of land shall not be developed. Restrictions are placed on this type of development in order to

protect public safety and the integrity of the natural environment.

5.4.2 Flood and Fluvial Erosion Hazard Areas

With expected changing climate conditions bringing more extreme weather events to the region, flooding is likely to occur with greater frequency and force. It is important that Dorset properly prepare to minimize future flood damage and to develop the capacity for post-flood resilience. Effective flood resilience requires several steps, including: assessing hazards, reducing risks, preparing for an emergency, and insuring residual risk.

Dorset has identified local flood hazard areas by mapping both federally-designated Special Flood Hazard Areas and local Fluvial Erosion Hazard Areas throughout the community (see Map 6 Flood Hazards). Special Flood Hazard Areas include areas that have been determined to have a one percent or greater chance of inundation from flooding in any given year, and Fluvial Erosion Hazard Areas are areas where vertical and horizontal adjustments of rivers and streams occur as they meander to disperse energy and sediment to maintain stable slope and dimensions over time. The Dorset Hazard Mitigation Plan (2015) provides detailed descriptions of flood hazard areas, the history of flood events and their impacts, and vulnerable road, bridge, culvert, and retaining wall infrastructure in the town.

The Federal Emergency Management Agency (FEMA) developed the first flood hazard map for Dorset in 1974. These maps identify properties that could be threatened by flooding. The National Flood Insurance Program, which Dorset joined in 1975, provides insurance to those property owners within flood hazard zones to protect owners from financial loss since private insurers will not provide such coverage. As of 2015, there were 28 structures located within the Special Flood Hazard Area. Only 32% of those properties were insured, indicating that there are properties that are vulnerable to flooding or to erosion that are not currently protected through the National Flood Insurance Program.

TABLE 5

Structures in the Special Flood Hazard Area (SFHA) and/or Fluvial Erosion Hazard Zone (FEH) in Dorset. Source: BCRC GIS analysis		
Type	SFHA	FEH
Single family	17	8
Mobile home	1	1
Other Residential	4	9
Commercial	4	1
Lodging	1	
Government	1	
Total	28	19

The table above shows the number of structures by type from E911 data that are in the Special Flood Hazard Areas or within a Fluvial Erosion Hazard Zone. These numbers are estimates since the E911 points are not always located exactly where structures are.

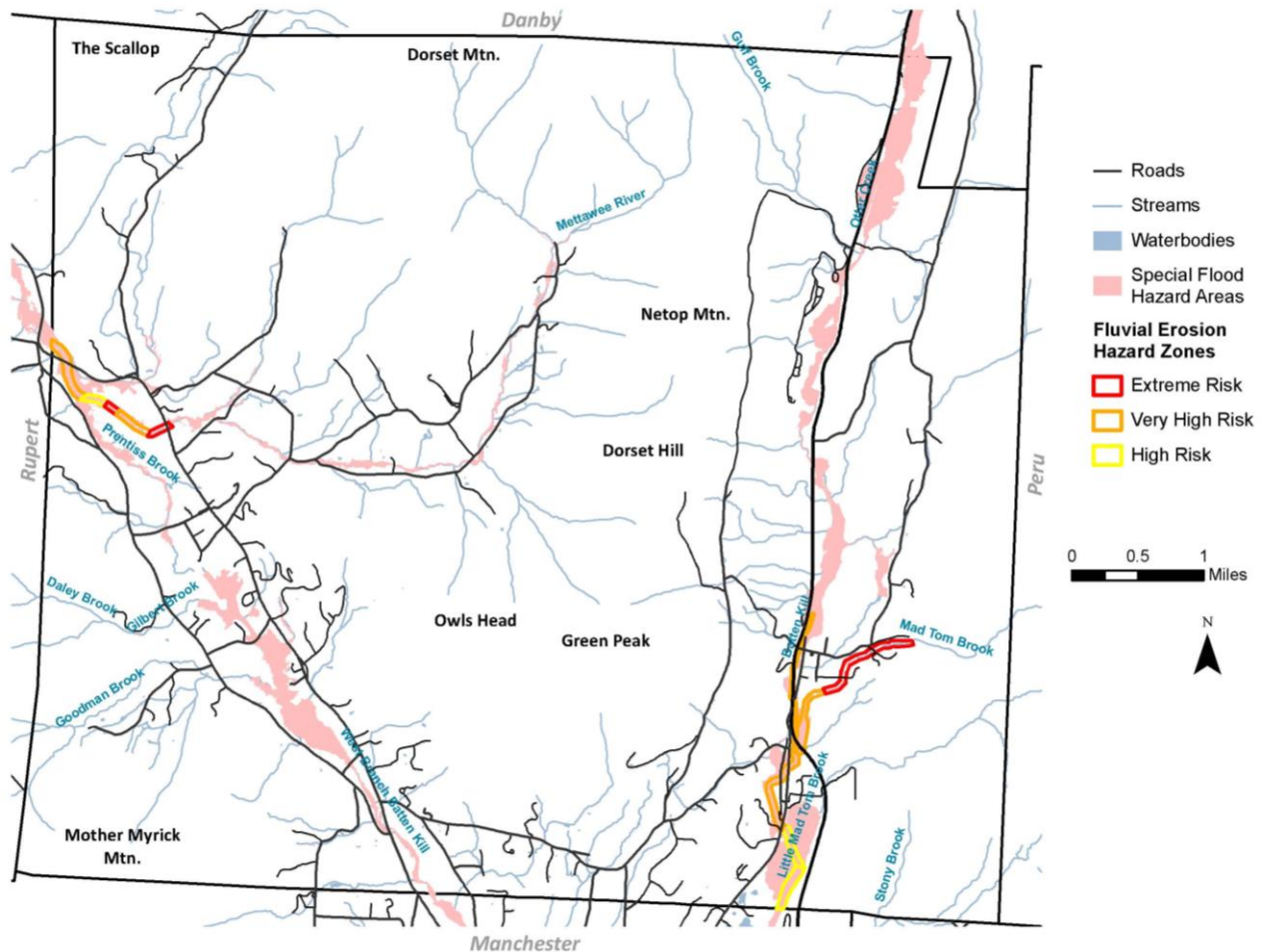
Fluvial Erosion Hazards can be of greater concern to Vermont communities than inundation since most flood damage in Vermont streams is the result of erosion. There are 19

structures in Fluvial Erosion Hazard zones in Dorset. These areas are subject to hazards ranging from gradual stream bank erosion to catastrophic channel enlargement, bank failure, and change in course, due to naturally occurring stream channel adjustments.

The Town's Zoning Bylaw includes flood regulations for Special Flood Hazard Areas and Fluvial Erosion Hazard Areas. Vermont Department of Environmental Conservation now recommends that towns regulate development in state-designated River Corridors, which cover larger areas than Fluvial Erosion Hazard zones, but have the same intention of limiting development within the meandering pathway of rivers and streams. Dorset will consider the pros and cons of River Corridor regulation and will assess whether to adopt them during the next update of their land use bylaw. For now, the Town recommends that property owners consider flood erosion risk when planning new development.

The Dorset Hazard Mitigation Plan contributes to lower flood risk by prioritizing specific mitigation actions for the town and by expanding access to FEMA risk mitigation funds. The Town maintains a Local Emergency Operations Plan (LEOP) to coordinate local response and facilitate contact with other towns and agencies before an emergency occurs. Through participation in the National Flood Insurance Program (NFIP), the Town makes federal flood insurance available to all residents.

MAP 6: Flood Hazards



Following a major flood event, a municipality can face the need for significant repairs to vital infrastructure. In federally-declared disasters, qualified losses may be reimbursed through the federal public assistance program and the Vermont Emergency Relief and Assistance Fund (ERAF), whose funding depends on local compliance with a set of requirements. The Town of Dorset is currently eligible for the largest amount of state (ERAF) funding because it is a member of the NFIP, has adopted the Town Road and Bridge Standards, maintains a current LEOP, has an up-to-date Hazard Mitigation Plan, and has interim river corridor protection. In the future, though, Dorset's interim River Corridor coverage may expire, resulting in a decrease in the State's portion of reimbursement to repair publicly-owned infrastructure unless the Town regulates development in designated River Corridors.

5.4.3 Policies for Natural Hazard Areas

1. Where development is permitted, the Planning Commission may require the use of a cluster form of development for lands containing or affecting Natural Hazard Areas.
2. The Town should maintain current flood hazard regulations to control and limit development in flood hazard areas. New development in Special Flood Hazard Areas and the Fluvial Erosion Hazard Zones shall be avoided where possible. Any new development that does occur shall be designed and sited so as to avoid any increase in flooding or erosion.
3. Support acquisition by public entities or conservation organizations of buffers and Fluvial Erosion Hazard Zones, especially those identified in hazard mitigation plans.
4. Dorset should adopt the most recent Town Road and Bridge Standards from the current 2014-2016 VTrans Orange Book and updates as they are developed. Bridge and culvert repairs and replacements should be designed following hydraulic studies to avoid constrictions that would accelerate flow and to allow for passage by aquatic organisms.
5. The Town should provide outreach to property owners within the flood zones to support flood proofing or buy-outs of structures subject to repeated flooding and eligible for funding under the FEMA Hazard Mitigation Grant Program.
6. The Town should encourage owners in flood hazard zones to secure propane tanks, fire wood, boats and other items that could float away in a flood, thereby creating hazards for those downstream.
7. The Town should participate in the FEMA Community Rating System program by implementing projects that would ultimately lead to rate reductions in flood insurance premiums for residents and businesses.

8. The Town should continue to fulfill ERAF requirements including maintain a Hazard Mitigation Plan, a Local Emergency Operations Plan, participation in the NFIP, and compliance with Town Road and Bridge Standards, and consider adoption of River Corridor protections.



Images of flooding and fluvial erosion damage from Tropical Storm Irene in 2011.

SECTION 6 HOUSING SUPPLY, HOUSING AFFORDABILITY, AND GROWTH MANAGEMENT

6.1 Housing Supply

The most recent 2010 U.S. Census reports on the supply of housing units in Dorset and is presented in Table 2, in SECTION 2 of this Plan. There are about 1,450 housing units in the town, of which 468 are seasonal units.

A review of the recent Grand Lists for Dorset provides a further and quite detailed look at housing properties in Dorset. (The overall number of housing properties is lower than the number of units, as in some cases a housing property contains more than one unit. Also, the Grand List data below does not reflect short-term rental units in commercial establishments, for example in inns.)

Grand List data shown in Table 6 and referred to in the text below are as of April 1 of the year referenced. For example, the 2018 Grand List shows that there was a total of 1,471 housing properties in 2018.

According to Census data, the population of Dorset decreased 0.245% from 2000 to 2010. Census data showed an increase in total housing units of 16.4% between 2000 and 2010. Dorset Grand List data showed an increase of 5.5% in housing properties between 2000 and 2010. Grand List data indicate an average annual increase in housing properties of 1.56% for the ten year period from 2010 to 2020. This trend suggests that housing units are increasing at a greater rate than the population, however much new housing construction in recent years has been for vacation/seasonal residences and for homes that house less people per household than in previous generations.

The rate of growth in housing properties has not been even. Based on the Grand Lists, the rate of growth since 1990 in housing properties has ranged from a low of -1.4% (1997-98), to a high of 11.7% (1989-90). As indicated by averaging the percent change data in Table 6, the average annual growth rate for the years from 1990 to 2000 has been .5%. From 2000 to 2009 units increased by 94 (8.48%) for an annual average growth rate slightly less than 1% at .94%. More recent numbers suggest that new home development has relatively leveled off.

The Grand List classifies housing properties as permanent if they are the primary residence of the owners. The 2010 U.S. Census indicates that 32.3% of Dorset housing units were for seasonal use. The trend towards greater numbers of seasonal units has been steadily climbing upward for more than ten years. The Grand List shows a significant drop in vacation units between 2003 and 2004 because of a change in definition as noted for Table 6. The change reflects more the condition of the housing units vs. nature of occupancy. The term “vacation” in the Grant List changed to “seasonal” under the state classification but will still be counted under the “Permanent” residential category. For this reason, the former permanent vs. vacation units cannot be broken out until the next Census or an estimate is provided by the Town Listers.

TABLE 6
Housing Properties in Dorset by Category – 1990 to 2018

Category	1990	2000	2008	2010	2012	2014	2016	2018
Permanent Residential								
Res. <6 Acres	526	504	808	817	847	820	824	828
Res. >6 Acres	185	189	333	348	347	351	353	353
Subtotal Res.	711	693	1141	1165	1172	1171	1177	1181
% of Total	67.7	62.5	96.6	96.6	96.7	97.0	97.2	97.2
Manufact. Homes								
MH no Land	27	16	11	11	10	8	7	6
MH with Land	13	12	11	11	11	10	9	10
Subtotal MH	40	28	22	22	21	18	16	16
% of Total	3.8	2.5	1.8	1.8	1.7	1.4	1.3	1.3
Vacation Residential								
Vac. <6 Acres	207	266	10	12	11	11	10	10
Vac. >6 Acres	92	121	7	6	7	7	8	8
Subtotal Vac.	299	387	17	18	18	18	18	18
% of Total	28.5	34.9	1.4	1.4	1.4	1.4	1.5	1.5
Totals	1050	1108	1180	1205	1211	1207	1211	1215

* State Definition of Vacation/Permanent Residential Changed
 Source: Dorset Grand Lists, 1990 – 2009 (Note: 2007 data not available)

In 2018, 828 (70.1%) permanent residential properties are under 6 acres in size. Similarly, most (55.6%) vacation/seasonal properties are also under 6 acres.

There were 16 mobile homes in 2018, or 1.3% of the housing properties. In 1993, there were 34 mobile homes, or 3.1% of the housing properties. Although mobile homes have not been a significant portion of Dorset’s housing stock, their numbers continue to decrease as a percentage of total housing.³

6.2 Housing & Affordability Policies

The 2010 U.S. Census provides some data on housing values and gross rents in Dorset:

TABLE 7
 Dorset Housing Unit Values and Gross Rents

<u>Housing Unit Value</u>	<u>Percent of Total Units</u>
Less than \$50,000	14.29%
\$50,000 to \$149,999	0.0%
\$150,000 to \$199,999	13.39%
\$200,000 to \$299,999	23.21%
\$300,000 to \$499,999	10.71%
\$500,000 to \$1,000,000	38.39%
\$1,000,000 or more	0.1%
Median (dollars)	\$291,700
<u>Gross Rent</u>	<u>Percent</u>
Less than \$200	N/A
\$200 to \$299	4.9%
\$300 to \$499	20.73%
\$500 to \$699	14.63%
\$700 to \$999	24.39%
\$1,000 to \$1,499	17.07%
\$1,500 to \$1,999	23.17%
\$2,000 or more	N/A
Median (dollars)	\$820

Source: 2010 Census, www.usa.com/dorset-vt-housing

³ The Dorset Grand List refers to mobile homes. [The Dorset Zoning Bylaw defines and refers to Mobile Home as Mobile Home/Manufact. Home. Consult the Dorset ZBL for the exact definition.]

TABLE 8⁴
Dorset Average Assessed Values

Category	# in 2008	Average Assessed Value	# in 2010	Average Assessed Value	# in 2012	Average Assessed Value	# in 2014	Average Assessed Value	# in 2016	Average Assessed Value	# in 2018	Average Assessed Value
Permanent Residential												
Res <6 Acres	808	\$426,869	817	\$430,730	825	\$428,169	820	\$424,633	824	\$415,828	828	\$409,251
Res >6 Acres	333	\$887,298	348	\$918,494	347	\$916,653	351	\$900,576	353	\$873,486	353	\$850,545
Subtotal	1141		1165		1172		1171		1177		1181	
Mobile Homes												
MH no Land	11	\$15,272	11	\$15,436	10	\$16,360	8	\$17,575	7	\$19,014	6	\$20,233
MH w/ Land	11	\$153,581	11	\$140,881	11	\$140,881	10	\$132,900	9	\$126,867	10	\$122,120
Subtotal	25		22		21		18		17		16	
Vacation Residential												
Vac <6 Acres	10	\$119,360	12	\$177,291	11	\$133,963	11	\$133,963	10	\$119,480	10	\$119,480
Vac >6 Acres	7	\$149,180	6	\$118,754	7	\$263,900	7	\$263,900	8	\$243,900	8	\$243,900
Subtotal	17		18		18		18		18		18	

⁴ * State Definition of Vacation/Permanent Residential Changed
Source: Grand List

Additional housing property value data can be gleaned from the Grand Lists which provide assessed values by category, which are averaged in the above Table.

It is generally accepted that housing can be considered “affordable” when a family pays no more than 30% of their gross income on housing costs. Based on 2017 ACS Estimates, the median household income in Bennington County is \$52,251. Such a family could afford to purchase a house selling for roughly \$130,627 or 2.5 times their annual income.⁵ This figure is well below the value of a median priced home in Dorset. A family would need a household income of nearly \$102,270 per year to be able to afford the median ~~average~~ value residence in Dorset, \$340,900. The median household income in Dorset is \$73,021 as per 2017 ACS Estimates, whereas statewide median income is \$57,808.

Clearly it is difficult for persons of moderate means to find affordable housing in Dorset. Owner-occupied housing is not affordable for many. Rentals are an option, but they are limited in number, and may be limited in size. Some are single-family houses; others are apartments within houses or accessory buildings. Seasonal residents, who can often afford to pay more for housing, are often in direct competition for available units.

An effort should be made to promote home weatherization to make maintaining a home more affordable. It would be useful to introduce the concept of “cost of ownership” – not just purchase price – to note how energy efficiency can make a home more affordable. More detailed analysis of residential heating costs by type of home and resources for assessing residential thermal efficiency is found in Section 9.

The following broad housing policies can help to relieve the discrepancy between income and housing and land costs: (1) diverse home options, including mobile homes, are permitted in all districts; (2) small building lots and high residential densities are permitted in the villages, where new development should be concentrated; and (3) two-family and multi-family housing developments are permitted in the villages and in some more rural areas, subject to wastewater and other environmental limitations; (4) mixed use development, which combines commercial and residential units in a single building, is permitted in the villages and surrounding areas as an effective means to create more affordable housing units.

Dorset values its families and children that keep our schools and community institutions alive and vibrant. In order to make living in Dorset more accessible to new residents, the Town supports the development of workforce housing to provide homes to families, teachers, public servants, and fire fighters that the community needs to thrive. Additional affordable housing in the village centers will also provide options for elderly Dorset residents to age in place rather than move away when they are ready to downsize their homes and lifestyles.

⁵Annual gross median household income per month multiplied by 30% then by 100.

6.2.1 Policies Regarding Housing Affordability:

1. Find and utilize available funding sources to encourage rehabilitation of older houses through the resources of State agencies and the Regional Affordable Housing Corporation and other non-profit housing organizations and land trusts.
2. Investigate allowing a density bonus, where such bonus will be used to provide a cost break, thus allowing moderate cost lots and housing.
3. Encourage the provision of additional rental housing by permitting, where appropriate, new dwelling units within existing homes or accessory buildings. Provision for such units must be subject to requirements for proper sewage disposal and adequate water supply.
4. Permit and encourage “infill” housing in village areas, where Town water services are, or can be made available. Infill housing needs to be compatible with existing development, and may take the form of new mixed-use development, and homes may include an apartment within the primary structure or within an accessory building.
5. Work with local, regional, and state organizations to implement affordable housing solutions.
6. Ensure that all construction, new & renovation, complies with the Vermont Residential Building Energy Standards (VTRBES) & Commercial Building Energy Standards (VTCBES).

6.3 Growth Management and Policies

Until 1990, population growth in Dorset was higher than that of the Region, County, and State as shown in Section 2 and in Table 1 of this Plan, but population growth has slowed since. Yet, the Town has concern for the rate of future growth and its possible impact on the rural character of the town, and also on the Town’s ability to provide needed services.

6.3.1 Growth Management Policies:

1. The rate of growth shall be consistent with the Town’s ability to provide services.
2. Monitor growth rates of both population and housing to determine the effectiveness of the growth allocation regulations, and make amendments to these regulations if necessary.
3. Lower barriers to development in “urban” designations in this Plan, thus alleviating pressure on the rural areas and facilitating the provision of Town services.
4. Assess limits to growth in the Villages. Explore the potential for water and sewage

treatment in the villages. A Committee could be established to study water and possible sewer needs in Villages for residential and commercial areas.

6.3.2 Growth & Energy

Most buildings currently in Dorset, and most that are likely to be built in the future, are private residential structures. Consequently, strategies that lead to greater energy conservation and effective utilization of renewable energy systems in new homes will have a substantial impact on total energy usage in the community. Those strategies should include reducing total energy expended for space heating, water heating, lighting/electric, and the expansion of electric and shared transportation opportunities throughout the town. More strategies are outlined in Section 9.

Dorset's plan for future development allows and encourages higher densities of development in village centers and along existing highways adjacent to those areas. Such development supports energy conservation objectives by limiting sprawl and thus reducing energy used for transportation and energy required for the delivery of essential services to residents. The most effective strategies for siting new residential development in Dorset, therefore, focus on infill and incentivized development in the villages, adherence to energy efficient building standards, and on the location and solar orientation of new developments and buildings.



The East Dorset Congregational Church in late winter of 2011. The Church is a focal point for East Dorset Village, which is largely a residential village.

SECTION 7 TRANSPORTATION

Safe, convenient, energy efficient and economical transportation is essential to the residents of Dorset. The transportation system is made up of a variety of components, roads being chief among them, but also the railroad serving freight but not passengers, the bus system, and facilities for bicycle and pedestrian transportation. However, bicycle and pedestrian facilities are minimal and require revitalization and expansion. In addition, a direct bus or van shuttle service between Dorset villages and Manchester would greatly benefit town residents.

7.1 Roads

The existing road system is shown on Map 7, Transportation Map. According to the State Agency of Transportation, Dorset has the following mileages of public roads *as of 2/10/14*.

	<u>Miles</u>
Town Class 1	0
Town Class 2	13.85
Town Class 3	24.57
State Highway	<u>13.671</u>
Total	52.091

Descriptions of town highway designations:

Class 1 - State-designated town highways that serve as extensions of state highway routes and carry a state highway number.

Class 2 - Locally-designated town highways that carry more than normal amounts of traffic and connect neighboring towns.

Class 3 - Other town highways that are maintained for year-round use by pleasure cars.

In addition, there are several miles (8.07) of Class 4 Town "Highways" and/or Legal Trails, which are owned but not maintained by the Town, and substantial mileage of private roads (18 miles & 70 roads) and right-of-ways serving mostly residential development.

7.1.1 State Highways

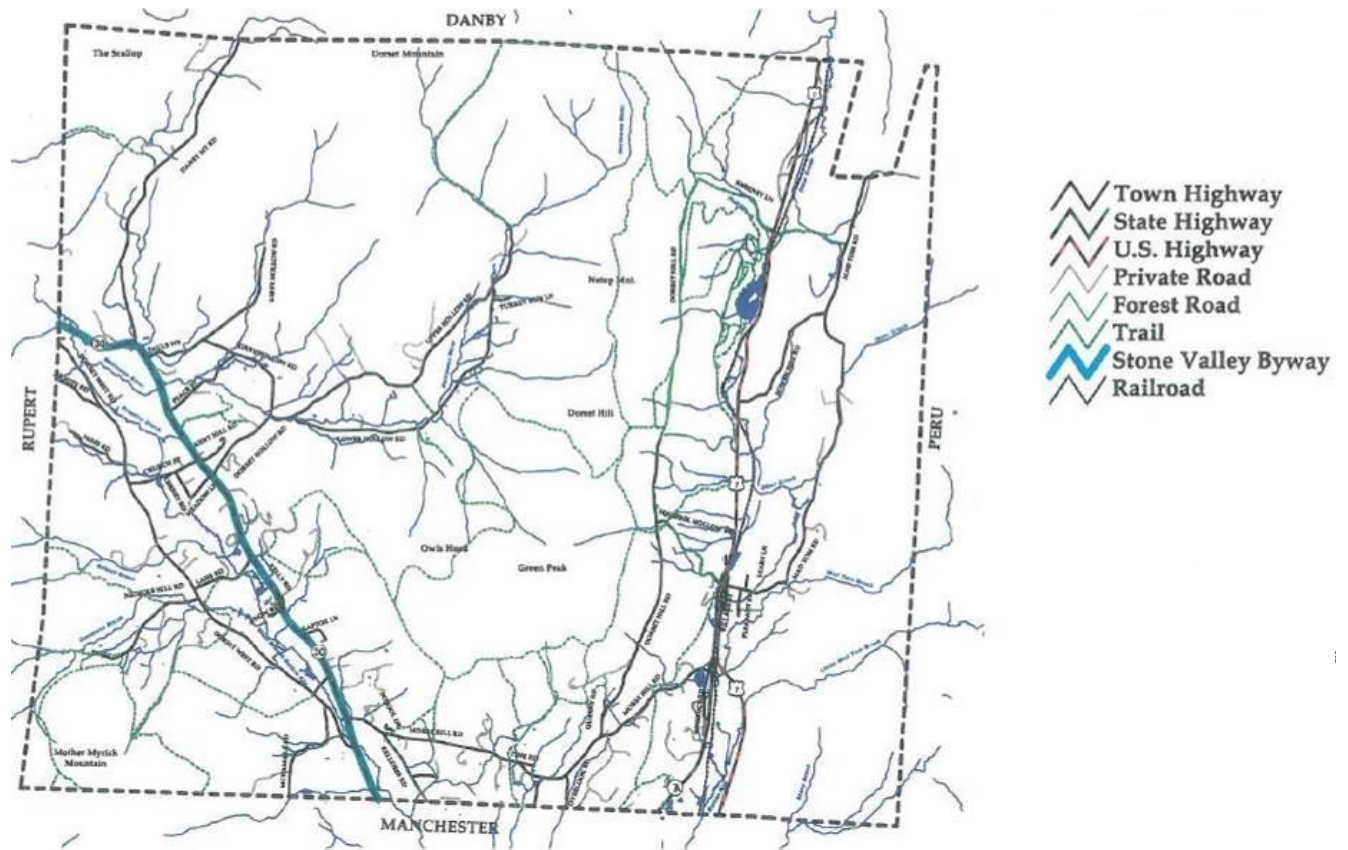
The Route 7 Limited Access Highway is located near the base of the Green Mountain front in the southeastern part of Dorset. It serves as a direct travel route from Bennington to its end in East Dorset. It is important to the town that an extension of the Limited Access Highway not be built beyond its current terminus in East Dorset. An extension would result in disruption of residential neighborhoods and wetland areas.

Route 7/7A is the main transportation artery through Dorset's easterly valley. It connects the settlement areas of South Village, East Dorset, and North Dorset, with Manchester and other destinations to the south, and with Rutland and other localities to the north. It also provides direct access to some properties along its route. Route 7A becomes Route 7 where

the Route 7 Limited Access Highway interchange ends, just south of the East Dorset General Store. Route 7 through Dorset has a fair highway sufficiency rating. Sufficiency ratings consider the type of road, its functional classification⁶, and traffic volume. The Vermont Agency of Transportation (AOT) gives points based on structural condition (50), safety (25) and movement efficiency (25). A good rating is 80 -100, a fair rating is 60-80, a poor rating is 40-60, and a bad rating is 0-40 points. The Route 7 sufficiency rating for Dorset has increased since 1987 due primarily to the opening of the Route 7 Limited Access Highway.

Route 30 is a State Highway, and is the connecting link between Manchester, Dorset, Rupert, and other towns further north. It also provides direct access to properties along its route. Increased traffic can be expected with population growth in Dorset or in areas to the north. It is also a well-traveled tourist route for drivers and bicyclists alike. Soft and narrow shoulders on this road make bicycling and walking difficult and unsafe.

MAP 7: Transportation



⁶ Functional classification of roads is based on movement (mobility) or access. Through movement requires roads with high capacity, allowing a greater number of vehicles moving at a higher speed as there are fewer conflicts (e.g. curb cuts). Access roads allow ingress and egress to properties adjacent to the road, resulting in slower speeds.

Route 30 and Route 7 have traffic conflicts due to access cuts for commercial development. Route 30 also has many residential curb cuts. Strip development must be avoided, and the number of access roads and curb cuts should be carefully controlled. Strip development is characterized by multiple curbcuts, non-pedestrian access, and a predominance of parking lots, inadequate landscaping, and inconsistently sited, single-use, single story buildings that define the landscape. The State AOT Route 7 Transportation Management Plan recommends safety and operational improvements, and access control and right-of-way acquisition to protect the existing Route 7 corridor in East Dorset since it is part of the economic link between Bennington and Rutland. In 2018, the Town, with help from BCRC and a Municipal Planning Grant, completed a scoping study to examine pedestrian and bicycle safety on Route 30 in and around the Town Green. Findings note that there are currently no pedestrian crosswalks anywhere in Dorset Village, and the study suggests improving safety by reducing the width of road intersections and introducing marked crosswalks and bicycle lanes.

TABLE 9

Dorset Road Ratings – VTrans Pavement Condition Map, 2018

Route	Range
Route 30	Very Poor to Poor
Route 7	Fair to Good
Route 7A	Fair to Good

7.1.2 Local Arterials

Local arterials are the more heavily traveled routes between Village centers. Morse Hill Road, from South Village to Route 30 in South Dorset, is an important local arterial, providing access to Routes 7 and 7A, and linking the easterly and westerly areas of the town. This is also the route traveled by school busses from both sides of town to reach the elementary school.

The existing local arterials have several dangerous intersections. The most critical are:

- the intersection of Church Street and Route 30;
- the intersection of Morse Hill Road and Route 30;
- the intersection of Peace Street and Route 30; and
- the intersection of Mad Tom Road and Route 7;
- the intersection of Danby Mountain Rd and Route 30;
- the intersection of Hollow Rd and Route 30.

As traffic increases in the area, hazardous situations at these intersections will also increase, and improvements will be required. Improvements may include the addition of crosswalks, radar speed limit signs, left turn lanes, the installation of traffic signals, regrading for better visibility, or other measures designed to reduce the hazard. The Town and the State should, when possible, jointly study the situations and determine if, when, and what corrective

measures are necessary. The Town is working with the Agency of Transportation to implement the traffic calming plan, designed with the use of a municipal planning grant for the intersection of Mad Tom Road and Route 7. The Town is currently working to improve pedestrian and bicycle safety on the Route 30 side of town. Future grants will address similar issues in E. Dorset.

7.1.3 Local Collector and Access Roads

Collectors are secondary roads which provide access between arterials and local roads. These minor thoroughfares should be gradually improved to handle the added traffic of the future.

Local roads are low speed, access roads providing direct access to property. The majority of curb cuts for a community should be along these roads. This is a basic transportation planning principle. However, most of the local roads are rural in nature, and are unsuitable for large increases in traffic loads. Concentrating development in village centers can help reduce traffic in less dense areas of town.

7.2 Parking

Inadequate parking for the library, churches, stores, inns, etc., particularly in Dorset Village around the Village Green and on Route 30, remains a problem. The Dorset Green was reconstructed in 2015 to alleviate some of the parking problems. The addition of parking spaces on Route 30 would also help. The town will work with VT AOT to examine what options are possible. Route 30 is a State maintained road and therefore under AOT's control.

In addition, current parking lot standards should be revised so that these lots are properly laid out to maximize available parking spaces and provide for safe and efficient flow of traffic. The required number of parking spaces for various uses should be reviewed and revised as necessary to meet parking needs for all uses. Shared parking among adjacent village destinations should be implemented where possible.

7.3 Bicycle and Pedestrian Transportation

7.3.1 Bicycle Travel on the Town's Roadways

Many of the town's roads and State Highways are well traveled routes for bicyclists, both local residents and tourists. Many of the local roads can accommodate bicyclists without tremendous danger, but conflict increases on the larger traffic arteries, in particular the State and federal highways.

The State's ongoing program of road repaving and reconstruction should accommodate the

safe use of the State Highways by bicyclists and pedestrians, especially in the town's two villages.

7.3.2 Bicycle and Pedestrian Transportation, Off Roadways

There is an increasing interest in walking, running, and bicycling, both as a means of getting to local destinations, and as a form of fitness and recreation. As well, there is substantial local interest in maintenance and use of trails for snowshoe, cross-country skiing, snowmobile use, and mountain biking.

The Town may have an opportunity to develop off-road routes to accommodate pedestrian and bicycle travel. There are already many local trails in Dorset which the public use for recreational purposes. The Town owns lengths of Class 4 Trails, some of which may have potential for development of a trails system. The Town of Manchester has taken some initiative to explore the development of a recreational path linking Manchester and Dorset along the old route of the Manchester-Dorset-Granville Railway. As Manchester's path plans have progressed, Dorset has begun to explore the possibility of linking it to Dorset Village. A proposed Dorset bike trail would connect Dorset Village to downtown Manchester via a new 3.8-mile side path along VT Route 30. The first step to developing this trail is to produce a scoping study to evaluate alternative alignments and to assess the project's feasibility. Discussions are currently in progress with the Planning Commission.

In 2013, the United States Forest Service completed the Dorset – Peru Integrated Resource Project, a management plan for federal land owned in the Towns of Dorset and Peru. Under future efforts the Forest Service will establish additional recreational venues located on and around Dorset Peak. The diverse uses encouraged will include mountain biking, and there is great potential for partnered efforts between the federal, state, and local entities to enhance the mountain biking experience in Dorset.⁷

7.4 Railways

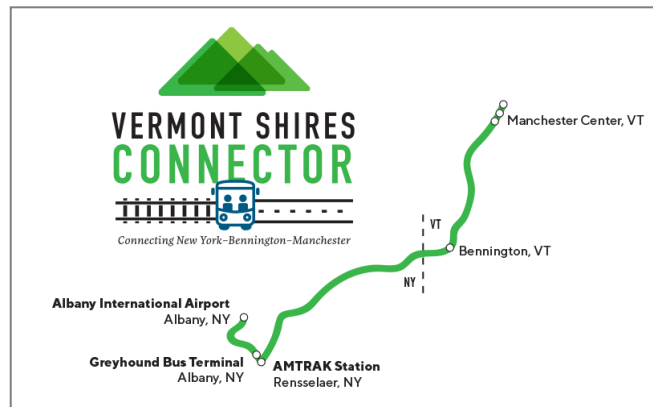
About 6.25 miles of railroad track runs through the Town of Dorset. This is a portion of the main line between Burlington and North Bennington. Track mileage is owned by the State of Vermont, and is operated by Vermont Railways, Inc. Although some area businesses do ship and receive freight by rail, the railways are not currently used as a major means of transport in the area. Changed circumstances in the future could alter this, and bring an increased interest in use of rail transportation.

This Plan designates three Commercial-Industrial areas in the Route 7/7A corridor which are alongside and encompass portions of the railway in Dorset. The Town should seek to keep the rail option open in Dorset, and should encourage commercial-industrial developers to make use of rail service when feasible. A Vermont company called AllEarth Rail has proposed a trial passenger rail route from Saint Albans to Essex that would use self-

⁷ "Dorset – Peru Assessment" by USDA – United States Forest Service 2013

propelled passenger rail cars. The Town should engage with this group to investigate whether a route from Rutland through Dorset and Manchester to the Amtrak station in Rensselaer, NY is feasible.

The Vermont Shires Connector, a thruway bus service between the Albany/Rensselaer Amtrak Station, Albany Airport, and Manchester and Bennington, has been in operation since the fall of 2017. Two or more round trip shuttles are made daily, making timed connections with Amtrak train service to Penn Station in New York City. The service has greatly expanded access to the Southwestern Vermont area for both vacationers and residents who live in Vermont while maintaining a business connection to nearby metro areas. Vermont residents also benefit from the improved access to passenger rail service and a shuttle service to the airport.



7.5 Transportation Policies:

1. Work to improve the “sufficiency rating” of Routes 7/7A and Route 30 through Dorset by controlling access points and avoiding strip development.
2. Commercial and industrial developments should provide adequate parking, and include provisions for safe and efficient vehicular ingress and egress. To the extent possible, adjacent commercial or industrial uses shall make use of common parking and access drives.
3. Work with the State to find and provide solutions to problems related to dangerous intersections, in particular those noted above (and shown on the Transportation Plan Map).
4. Favor compact forms of development which do not require long lengths of roadway. Require that new development roadways be private, and that maintenance agreements be provided to ensure that new private roadways are adequately maintained without burden to the Town.
5. Require that all new lots be provided with adequate access by public or private rights-of-way to the public road system.
6. Require that new public or private roads be carefully located with respect to topography, reasonable grades, and safe intersections, be designed to Town

standards, and be accessible to emergency vehicles in all weather.

7. Seek, in cooperation with the businesses and residents of Dorset Village, a solution to problems of inadequate parking in the Village area. Encourage carpooling whenever possible, as well as safe walking and biking opportunities from designated parking areas to destinations throughout the village centers.
8. Encourage the development and maintenance of safe pedestrian routes within villages and other areas of concentrated residential development. Traffic calming measures – in addition to law enforcement – along major corridors through the village areas need to be planned and implemented to ensure village character.
9. Work with the State to provide adequate width and design standards for the safe transportation of bicyclists and pedestrians along State Highways. Whenever feasible, bicycle lanes should be provided in the State’s repaving and reconstruction plans.
10. Undertake a future study regarding a comprehensive trails system, to be marked and open to the public, for recreational use, and possibly linking the western and eastern valleys of the town.
11. Work with the Town of Manchester, other towns, and other organizations involved in the development of multi-purpose recreation paths, such as that being considered between Manchester and Dorset on an old rail-bed.
12. Keep Class 4 Town Highways and Town Trails in public ownership, so that they might be available in the future for part of the transportation system, either for vehicles or for pedestrians/bicycles. Prospective land purchasers should be made aware that existing Town Trails will remain in public ownership.
13. Continue to maintain a working town transportation plan map listing known traffic volumes by road, and add traffic volumes as they become evident through public studies and accepted private studies as per development review testimony.
14. Support the use of bicycles in the downtowns by encouraging the installation of bicycle racks outside commercial and public establishments.
15. Encourage and support installation of plug-in stations for electric vehicles at commercial and public establishments and consider incorporating requirements for electric vehicle charging stations into the zoning bylaws.
16. Encourage carpooling by establishing Park & Ride locations through the VTrans Local Transportation Facilities program.



Road Work on Upper Hollow Rd

SECTION 8 EDUCATION & COMMUNITY FACILITIES

The Town of Dorset offers educational facilities, public services, and community facilities. This Section of the Plan provides information on the existing facilities and services and policies for the future.

8.1 Educational Facilities and Services

The Dorset School serves children from Kindergarten through Grade 8. It is administered by the Bennington-Rutland Supervisory Union (BRSU). It is located near the western end of Morse Hill Road, and is well located for convenience in bus transportation between the east and west sides of town. The school was built in 1960 and was expanded in 1988. Enrollment as of May 2018 was 150 students.

In 2018 Dorset voters approved becoming part of the Taconic & Green Regional School District. This includes the towns of: Danby, Dorset, Landgrove, Londonderry, Manchester, Mt. Tabor, Peru, Sunderland, and Weston. The new school district is governed by a 13-person board made up of members from each community. In 2019 there were two board members from Dorset. The larger District operates 5 elementary and middle schools, and students in grades 9-12 are tuitioned to area public and private high schools that include Burr & Burton Academy and Long Trail among others. In the early years after the merger the District is reviewing student equity across all schools and programs. In 2019 the discussion is just beginning about conducting a study to review opportunities for a regional

middle school. The School District continues to be administered by the Bennington Rutland Supervisory Union with offices in Sunderland.

Secondary school students in Dorset have historically been educated at Burr and Burton Academy in Manchester, or other public or private secondary schools, on a tuition basis paid by the Town.

On Kirby Hollow Road is the Long Trail School, a private secondary school serving grades 7 through 12. Its 2018 enrollment is 195 students.

8.1.1 Educational Facility Policies

1. Work with the School Board and the BRSU to provide information that allows the school to better project enrollments and associated capital improvements.
2. Consider various options for school expansion or consolidation including the option of cooperating with nearby towns to provide for anticipated future needs.
3. If additional lands are required at the existing elementary school site, or if a new school site is required, encourage the School Board to acquire such lands as soon as possible, and to assist them in so doing if possible.
4. Require that any new or expanded school site be safely and conveniently accessed by the population it serves.
5. Conserve energy at school buildings through use of efficient lighting fixtures and appliances. Encourage students to ride the bus or walk and bike to school on bike- and pedestrian friendly roads and multi-use pathways. Schools should pursue other conservation measures such as reuse and recycling and composting.

8.2 Water Supply Service

Two areas of the town are served with public water supply systems: Dorset Village and East Dorset, in each case under the jurisdiction of a fire district governed by a Prudential Committee. The dispersed nature of development elsewhere in the town generally makes it uneconomical to install a public water supply system. In areas outside of the public water service areas, private supplies from wells or springs are the main source of water.

The Dorset Village water system is managed by the Dorset Fire District No. 1 and the reservoir building underwent renovations in 2011. The system obtains its water from the "Kellogg Springs," west of the Village. In 2015 the water system operating permit was conditioned to require the Fire District to procure and connect a supplemental water source to augment the Kellogg Springs. The Fire District currently plans to bring a new well online by the winter of 2019-2020. The Fire District has also worked with engineers to outline a list of possible distribution system improvements moving forward. Options include: system

wide service line replacement with the addition of meters, main line upgrades, and a possible second reservoir to assist with fire protection. The Fire District will look to bring new customers online where feasible to achieve better economies of scale for system operations. There are 178 connections to this system.

The East Dorset Village Water System is managed by the East Dorset Prudential Committee and the East Dorset Fire District #1 Fire Department. Several upgrades to the Water System were undertaken during 2008 and 2009. Although four springs continue to supply the system, a well was drilled and provides backup water supply. A chemical feed and control building was constructed on the water storage site. It contains new chlorinating equipment that also automatically diverts water when it is not needed and does so prior to chlorination. Corrosion control treatment has begun. A new system monitoring and alarm control system was implemented and uses multi-media paging controlled by an online system. At the time the entire water main on Pleasant Street Extension was replaced. The water main on South Village Street was extended from the Fire Station to the south end of the road, providing two new fire hydrants and future water service connections for current non-users. The water system currently serves 85 properties.

Both of these systems rely on springs for supply. The Town has identified the aquifers (recharge areas) for those springs, and has placed a protective Natural Resource Area overlay over those aquifers. These are the Public Water (Aquifer) Protection Areas. Due to the extreme importance of these water supplies to the Town of Dorset, applicants for proposed development within the vicinity of the aquifer protection areas, especially up gradient, will be required to demonstrate through expert testimony that proposed development will not pollute the water supplies.

The community needs more affordable housing for low- to moderate-income households, and one way to cut housing costs is to allow for dense dwellings to connect to the public water system and thereby leave more lot space for on-site septic and sewage disposal systems. Consideration should be given to expanding the public water supply, particularly in Dorset Village, and to better utilizing existing capacity in the East Dorset area, including extensions to serve the entire village area.

Quality of Dorset's public water is excellent and it is critical that it be maintained. Public water supplies are tested for bacteria only. However, Dorset needs to be concerned about pollution related to additional contaminants such as seepage from underground tanks, old disposal sites, pesticides, and other potential pollutants. Potential water sources must be protected when surrounding land is developed to ensure future water supplies for the town and its residents.

A Town study has identified the springs and recharge areas for ten springs in the town which should be protected for possible future water supply use. These are identified on Map 3 as Aquifer Recharge Areas and springs, and are discussed in Section 5 of this Plan. In addition, measures must be taken to protect and grow the availability of these potential water supplies.

8.2.1 Water Supply Policies

1. Protect Public Water Supply Aquifers and Spring Recharge Areas as identified on the Water Resources Map from pollution.
2. Secure access to and availability of important water sources for future water supply use.
3. Explore ways to improve the water supply system in Dorset Village, both to ensure a long-term, reliable source of water supply, and to allow new infill housing within the Village.
4. Work with both Prudential Committees and the State to encourage testing of water supplies for nitrates, chemicals and other pollutants, in addition to bacteria.
5. Continue to refine aquifer protection areas and their mapping.

8.3 Sanitary Sewage Disposal

As mentioned previously, Dorset lies at the headwaters of the Mettawee River, the BattenKill, and the Otter Creek. None of these rivers contains sufficient flow within town boundaries to allow it to receive effluent from a public sewer system which provides the usual levels of treatment. Any public sewer system in Dorset would, therefore, require a high level of treatment of the waste in order for the effluent to be suitable for discharge, and would involve the associated high costs to achieve that level of discharge. While the potential for a community-scale wastewater system may be explored for the dense village centers, most of Dorset residents will continue to rely on individual sewage disposal systems. Adequate control is to be provided over these systems to prevent contamination of groundwater and existing wells.

8.3.1 Sanitary Sewage Disposal Policies

1. Assess and encourage the potential for community-scale wastewater treatment in Dorset Village.
2. Continue to rely for the foreseeable future on private systems in rural areas for the disposal of sanitary wastes and will work to ensure that individual sewage disposal systems are properly sited and installed and maintained to prevent contamination of wells and groundwater.

8.4 Solid Waste Disposal

The Dorset Select Board has adopted the Regional Solid Waste Implementation Plan as prepared by the Bennington County Solid Waste Alliance (BCSWA) on behalf of its thirteen member municipalities in the region. This plan was approved by the Vermont Agency of

Natural Resources in December 2015. The Alliance provides outreach and technical assistance to member towns, businesses, schools and institutions to reduce the amount of material sent to landfills and incinerators and to increase the amount of material recycled. Dorset is part of the Integrated Solid Waste Applications Program (ISWAP) along with Arlington, Manchester, Sandgate and Sunderland. Town residents have access to the Northshire Transfer Station in East Dorset and the Sunderland Transfer Station in Sunderland.

8.4.1 Solid Waste Disposal Policies

1. Cooperate, when possible, with the Region and with its neighbors in seeking a rational system for regional waste management.
2. Support recycling and composting programs as a method to reduce the quantities of solid waste.

8.5 Emergency Services

Fire protection is provided by the Dorset Fire District #1 (for the west side of town), and the East Dorset District #1 (for the east side of town), with reciprocal back-up agreements with surrounding towns. These agencies are staffed by volunteers. Medical emergency service is provided by the Northshire Rescue Squad. The Northshire Rescue Squad began as a volunteer service but shifted to a primarily paid, professional staff over several years in the late 1990s and early 2000s. The change to a paid staff was due largely to increasing demand and difficulty finding enough volunteers. Even with the shift to paid personnel, the Rescue Squad still has difficulty finding adequate qualified staff in the region. The Fire Districts have also regularly found it difficult to find enough volunteers, and volunteers are largely from outside the community. Generally, service use has increased at a faster rate than service provider capacity. A second factor in providing these emergency services is physical access to the properties to be served. This is particularly important on private roads which may not be as well maintained as Town roads, especially in winter. A third factor is availability of adequate water to fight fires, either on site or in close proximity.

Police protection is presently provided by a Bennington County Sheriff whose primary patrol area is the Town of Dorset, with back-up provided by the Bennington County Sheriffs and the Vermont State Police. In keeping with prior studies on how to best provide law enforcement services in the town, Dorset will continue to seek to collaborate with neighboring towns on provision of these services into the future. As the town grows, particularly with the development of expensive properties, there may be a demand for increased police protection. The Town will continue to evaluate the best method for providing the best possible police protection for the least possible cost. It will work with the Bennington County Regional Commission and the Local Emergency Planning Committee to maintain a high level of disaster/response preparedness.

8.5.1 Policies Related to Emergency Services

1. Work with the Northshire Rescue Squad to explore limitations and methods for cooperation so the town can continue to rely on this non-profit emergency service.
2. Ensure that new developments are designed to facilitate emergency access, and adequate water supplies for firefighting.

8.6 Local Government

As the town grows, needs may arise in the areas of management, administration, planning, engineering, law enforcement, parcel data management and other mapping, and technological advances to make administration more efficient. The Town should plan for budget fluctuations to try to keep taxes at reasonable levels. Also, application fees should be in an amount commensurate with the cost of reviewing the applications, including warning costs and costs of outside consultants.

8.6.1 Policies Related to Local Government

1. Budget planning should reflect a reasonable estimate of projected needs for providing local government services.
2. Ensure that fees for filing of land development applications be in proportion to the costs of processing time and professional services required to provide proper review of these applications.

8.7 Public Buildings

The Town of Dorset has a number of public or quasi-public buildings that play an important role in the community life of its residents. Most of these, but not all, are located in the town's village areas. Included are:

In East Dorset Village:

- East Dorset Post Office
- Town Hall
- East Dorset Congregational Church
- East Dorset Fire Hall
- The Wilson House

In Dorset Village and surrounds:

- Dorset Post Office
- Dorset Historical Society Museum
- Dorset Village Library
- The United Church of Dorset and East Rupert
- Dorset Fire Hall
- The Dorset School

The Long Trail School
The Dorset Playhouse

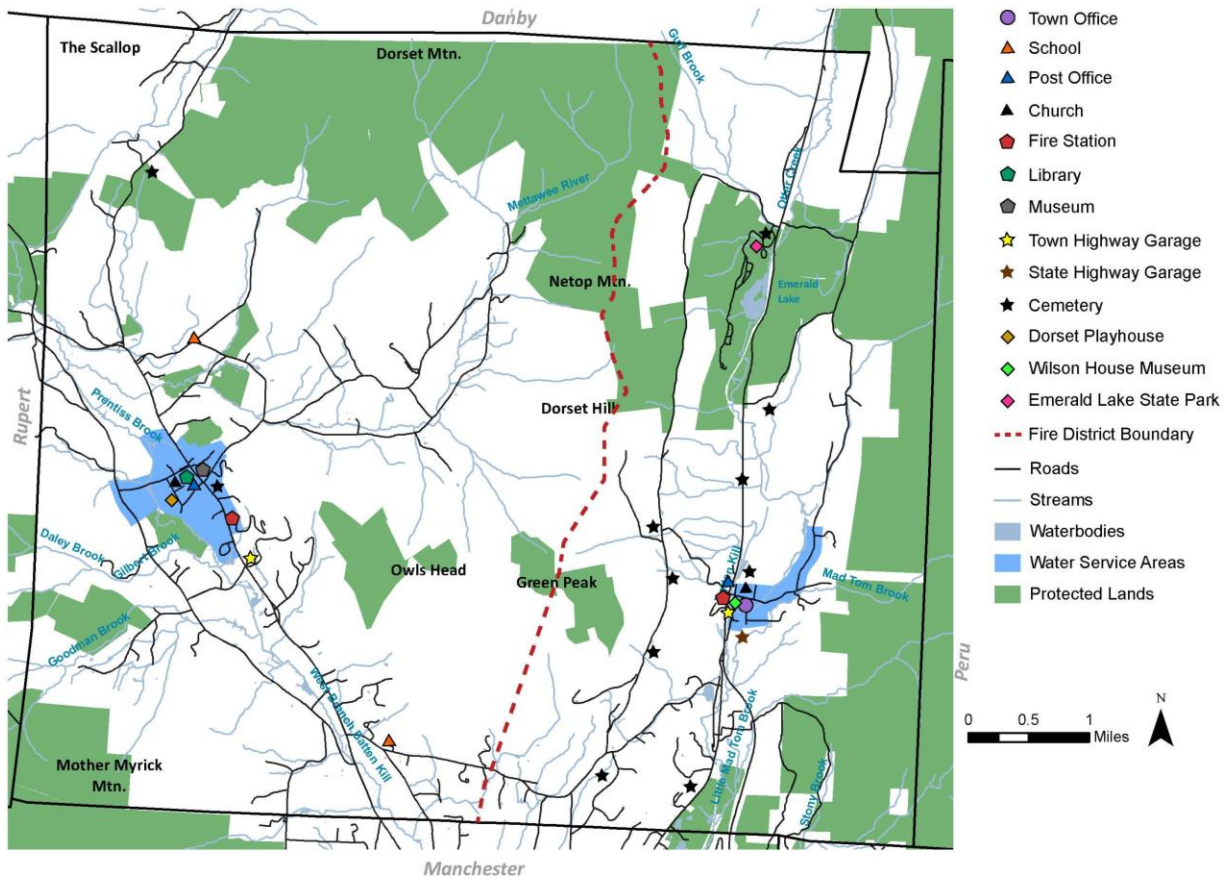
These uses represent an important ingredient for maintaining and strengthening the social fabric of the villages, and their locations in the village areas is appropriate.

The Town of Dorset maintains two Town sheds used primarily for road maintenance, one along Route 30 at the south end of Dorset Village that was rebuilt in 2018, and one along Village Street in the southern portion of East Dorset. The State of Vermont maintains a State Highway maintenance shed, also accessible off Village Street at the south end of East Dorset.

8.7.1 Policies Related to Public Buildings and Lands

The public and quasi-public buildings serve community functions and are recognized as important to the town. Generally, uses such as churches, town offices, libraries, and post offices should be located within the villages. Uses such as fire halls, works yards and schools need to be located for ease and safety of access and convenience of the resident population. Public lands acquired by the Town should be assessed to increase opportunities for ecotourism.

MAP 8: Community Facilities



8.8 Recreation

In recent years Dorset has worked to improve recreational opportunities for residents and visitors. The Town is committed to making outdoor recreation an important part of our local and regional economy. Dorset is fortunate to have both mountain highlands and river lowlands that offer a wealth of outdoor activities. The mountain and valley landscape is uniquely picturesque here.

Recreational facilities are also a necessary part of the social and cultural environment of the town, and provide for the physical well being of residents. Existing recreational resources are listed on Table 10, and include both public and private resources.

There are nearly 9,000 acres of public, and private conserved lands accessible to the public in Dorset. In recent years the US Forest Service Dorset-Peru Integrated Resource project outlined options for the use and management of the Webster-Mellville lands, which include much of Dorset Mountain and Netop Mountain. A few improvements that were outlined and constructed were the Mad Tom Notch hiking trail in East Dorset, and the Grouse Lane mountain bike trail. The Town will continue to partner with the US Forest Service to improve public lands for recreational use by residents and visitors. Future efforts will include: finishing the Dorset Peak trail access with view clearing improvements, possible construction of a cabin on the South Peak of Dorset for public use, and linking the Dorset Peak lands to Emerald Lake State Park, and Owls Head Town Forest.

In 2016 the Town of Dorset acquired the Gettysburg Quarry property, expanding what is now called Owls Head Town Forest. The property is around 300 acres and offers hiking trails and old woods roads/paths for recreational use. In future years the Town will seek expanded opportunities for mountain biking and a multi-use path that is suitable to a wide range of visitors from young to old. The Town will also look to further establish the Town Forest as an educational asset for our local schools, and historic and cultural asset to other community groups.

The Town will also look to support private and non-profit groups in their efforts to offer trail access and trail improvements to the public. The Church Street – Humphrey’s mountain bike trail is one such example, the Northshire Area Trail Systems group have worked with landowners to construct 5 miles of singletrack bike trail off Church Street/Dorset West Road. Parking is located at the Dorset Green.

There are many old trails and unused roads that could be incorporated into a trail system, both for hiking and cross-country skiing. For example, a good connection between the trail that runs across a shoulder of Green Peak and a trail from Dorset Hollow to the old quarry above East Dorset would link Green Peak with the Dorset Mountain Trail and, through East Dorset, to the Mad Tom Notch trail and the Long Trail. There may have been such a link in the past years, but it is not now marked or used.

Maps of the entire trail system, for hiking, riding, ski touring, and snowmobiling, should be

locally available for residents and for visitors. Maps and descriptions of some hiking trails are available at the Dorset Historical Society Museum and on the town website.

In most cases, old trails lie on private land. Legal easements to these trails should be secured wherever possible, since active land development could make them inaccessible. The Town or a local or regional conservation or trails association could hold title to such easements.

The Town owns 34 acres of land along the Mettawee River north of Peace Street. This land was a gift to the Town from Mrs. Gerald Cutler in 1976. Dorset Fire District No. 1 owns 10.4 acres of land which includes Prentiss Pond. This land was a gift of Mrs. Robert Beyers to the Nature Conservancy, who transferred title to the Sportsmen's Club, which in turn transferred title to the Fire District. In addition, the Town owns a 35 acre forested parcel and an adjacent 7 acres situated on a small hill (named The Pinnacle) east of Route 30, north of Dorset Hollow Road and south of Peace Street. Dorset acquired the property in 2005 through the generosity of the late Robert & Margaret Keeler. The Town should work with landowners and private conservation organizations to see if other recreational and open space lands of importance to the Town could be transferred to public or quasi-public ownership as gifts.

The Nature Conservancy owns the site of the Mt. Aeolus Bat Cave. The Conservancy hosts field trips on an occasional basis. The Nature Conservancy, in partnership with the Vermont Land Trust, obtained 686 acres on the summit and northeast slopes of Mother Myrick Mountain from Betteridge Jewelers, Inc. A right-of-way access to the parcel was also negotiated. This is the first transaction in what is hoped to be a long term plan for protection of the Taconic crestal trail from Equinox Mountain to the Merck Forest area in Rupert.

In addition, the State owns land at Emerald Lake State Forest, and at Emerald Lake State Park.

8.8.1 Recreation Policies

1. Map the existing trail system. Work with landowners and private groups to plan and provide an improved trail system utilizing existing trails and roads, and such connections as may be necessary. Amend trail maps as trails are added to the system.
2. Work with landowners to protect deeryards and other wildlife habitat areas to provide recreation for sportsmen.
3. Work with V.A.S.T. (Vermont Association of Snowmobile Travelers) and affected landowners to maintain access to trails for snowmobiling.
4. Work with Trout Unlimited, the BattenKill Conservancy, and other conservation groups and affected landowners to protect fishing access and water quality along the

BattenKill, the Mettawee River, and Otter Creek-

5. Work with the State and affected landowners to acquire additional land west of Emerald Lake as part of the trail system, and to provide protection for the slopes above the lake.
6. Continue partnerships with nearby towns to allow joint use of recreational facilities and recreational programming for residents of Dorset. Coordinate work on new and existing trails with adjacent municipalities to create connections and continuity between trails.
7. Maintain public access to the recreational resources of the town wherever possible. Provision for public access may be required for projects involving significant natural areas, paths, trails, or hunting grounds commonly used by area residents.
8. Pursue the creation of public access and walking paths through the Dorset Marsh as proposed by the Planning Commission in 2018.
9. Maintain ownership of Town Trails for possible future use either as part of the transportation system or as part of a recreational trail system.
10. Incorporate the town's historic resources into the open space planning of the town.
11. Consider use of municipal ordinances and development regulations to limit the number of alcohol, tobacco, and other recreational substance retailers permitted in a given area and to locate them away from recreation sites, schools, daycares, and other concentrations of youth.

Aerial view of Mt. Aeolus from the northwest. The area in the foreground is Dorset Hollow.

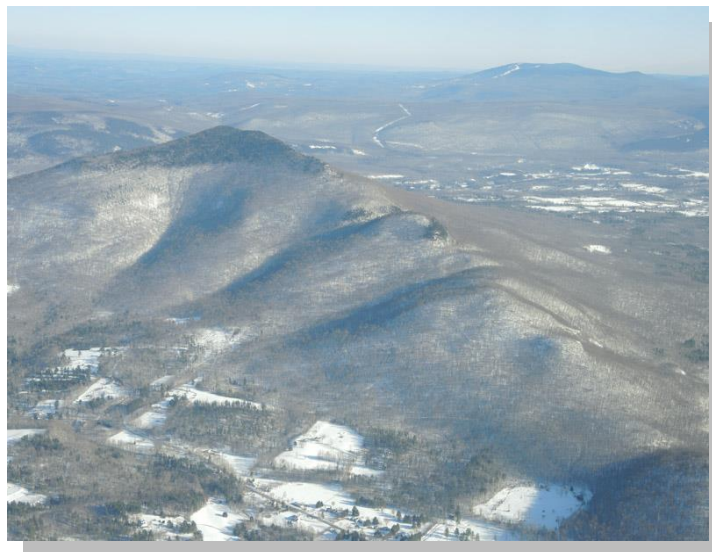


TABLE 10
LIST OF RECREATIONAL FEATURES AND PROJECTS

Public:

Owls Head Town Forest - Gettysburg Quarry & Owls Head/Gilbert Lookout
Cutler Memorial Forest - Peace Street
The Pinnacle - Pinnacle Lane
Prentiss Pond - Church Street
Freedley Quarry - East Dorset
Emerald Lake State Park (beach, picnic area, campground)
Emerald Lake State Forest
Shaw Pond - Wildlife Management Area (East Dorset)
Bullhead Pond - Wildlife Management Area (East Dorset)
Rupert State Forest - off Nichols Hill Road
Otter Creek Wildlife Management Area (Mount Tabor)
US Forest Service Dorset Peaks - Dorset Hollow
US Forest Service Grouse Lane Bike Trails - Dorset Hollow
US Forest Service Green Mountain National Forest - East Dorset - Mount Tabor
White Rocks National Recreational Area - Mount Tabor - Wallingford
Black Rock Preserve - Nature Conservancy
Aeolus Bat Caves - Aeolus Peak - Nature Conservancy
Mother Myrick - Nature Conservancy
Haystack Mountain - Nature Conservancy
Pew Forest - Equinox Highlands - Nature Conservancy
Merck Forest & Farmland Center - Rupert
Smokey House Center - Danby

Private:

Nichols Memorial Forest - East Dorset/ Mount Tabor
Dorset Quarry - Norcross West Quarry on Route 30
Saddleback Farm - Kirby Hollow
Netop Farm - Dorset Hollow
Humphrey's Bike Trail - Church Street/ Dorset West
Natural Bridge - East Dorset
Dorset Field Club - 18 hole golf course, tennis/ paddle
Dorset R.V. Campground, private commercial campground
Maryville Campground, private commercial campground
The Dorset Marsh
Folsom Quarry - East Dorset
Old Iron Kiln - East Dorset
Fenton Pottery site - Dorset Hollow

Trails:

Dorset Peak
Gettysburg Quarry - Owls Head - Gilbert Lookout
Mother Myrick

Mad Tom Notch
Netop Mountain to Freedley Quarry
Folsom Quarry - Aeolus Bat Cave - Aeolus Peak
The Pinnacle
Cutler Forest
Humphrey's bike trails
Grouse Lane bike trails
Baker Peak - Griffith Lake
Equinox Mountain

8.9 Child Care

The availability of safe and affordable child care services is important both to local residents and to the region's economy. The Town shall encourage safe and affordable childcare services given the town's population and number of families requiring such services. There are additional child care facilities available in Manchester, the major employment center for northern Bennington County. It may be more convenient for some residents of Dorset who commute to work in Manchester – or some other town – to find suitable child care services in those towns.

Existing registered facilities in Dorset include:

- Lawrence School for Young Children
 - Center Capacity = 26 Ages: 6 Weeks - 12 Yrs
- The Dorset School After School Program

Additional information on child care facilities in the area, and services for families, providers, employers, and people interested in opening a new facility can be found through the Child Development Division of the Vermont Department for Children and Families (Agency of Human Services) and the Bennington County Child Care Association (located in Bennington).

8.9.1 Child Care Policy

1. Support the development of a variety of quality child care services, in Dorset and nearby communities, that meet the needs of residents and employers and which are compatible with the residential and commercial neighborhoods in which they are located.
2. Support the expansion of Early Education being provided by The Dorset School, consistent with State directed expansion of Early Education programs.

SECTION 9: ENERGY AND UTILITY PLANS

9.1 INTRODUCTION

The town of Dorset recognizes it is necessary to work toward a sustainable energy future in a manner that minimizes environmental impacts and supports the local economy. The purpose of this energy chapter is to further those goals and recommend actions by increasing public awareness of energy issues, assessing local energy use and conservation opportunities, and evaluating the potential for utilization of various renewable energy resources to meet the town's energy goals. Given new opportunities presented through Act 174, the town has determined that developing an enhanced energy element represents a sound step in advancing these policies.

Dorset Energy Goals and Policies:

- Reduce dependence on non-renewable and imported energy sources;
- Promote energy conservation and efficiency in residential, commercial, and industrial structures and operations;
- Reduce energy consumption in all taxpayer funded buildings and operations; and
- Develop sustainable, local renewable energy resources.

Act 174 and Enhanced Energy Planning

In 2016, the Vermont legislature approved Act 174 to enhance regional- and town-level energy planning and to establish a way for municipalities to have more input on the siting of electric generation facilities through local land use planning. The Act established standards that –if met by a regional or municipal plan—give their contents ‘substantial deference’ in Section 248 proceedings of the Public Utility Commission regarding the siting of electric generation facilities. The standards require that plans address specific requirements organized into three broad categories:

1. Analysis and Targets: assessment of current energy use and targets for future consumption;
2. Pathways: identification of implementation actions and strategies to achieve future targets;
3. Mapping: renewable energy resource maps and siting guidelines for renewable electric generation facilities.

VT Energy Goals and Policies (VT CEP 2016):

- Obtain 90% of energy for all uses from renewable sources by 2050;
- Reduce statewide energy consumption by 30% by 2050;
- Reduce greenhouse gas emissions to 50% below 1990 levels by 2028 and 75% by 2050;
- Rely on in-state renewable energy sources to supply 25% of energy use by 2025;
- Improve the energy efficiency of 25% of homes by 2025;
- Meet the Vermont Renewable Energy Standard through renewable generation and energy transformation.

This energy chapter is outlined in accordance with the Act 174 standards. Requirements for regional and local plans are based on statewide policies and goals outlined in the Vermont Comprehensive Energy Plan (CEP), updated in 2016. Central goals of the CEP are summarized to the right. A Regional Energy Plan was adopted in 2017 by the Bennington County Regional Commission (BCRC). The Dorset enhanced energy plan element has been developed with support from the BCRC.

Energy Use in Vermont and the Bennington Region

The State of Vermont established markers through the CEP to help guide communities to such a sustainable future. A central goal of the plan is to attain **90% Renewable Energy by 2050**. To achieve this goal, however, development of new renewable energy sources is insufficient on its own. Since renewable sources yield less energy per unit than their fossil fuel-based counterparts, a drastic reduction in overall energy consumption is critical to meeting this target.

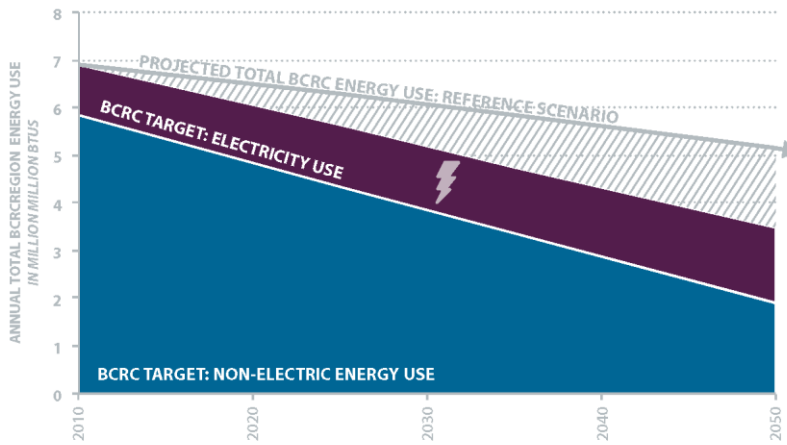


Figure 9.1: BCRC Region Energy Cost Estimates, 2014

According to LEAP estimates (see below for more details), to achieve the 90X50 energy goal, the BCRC region will need to dramatically reduce energy use by increasing efficiency and relying on electricity for many more purposes. The 'Reference Scenario' above represents a business-as-usual scenario.

In the Bennington region, **Total Energy Consumption will be Cut by More than Half of 2010 levels by 2050**. Energy conservation efforts combined with improved energy efficiency through technology upgrades and building weatherization will enable Vermont towns to reduce energy consumption to sustainable levels into the future.

A key aspect of improved efficiency will be a greater reliance on electricity to power everyday needs. Since

electricity can be generated from renewable resources, and electric-powered technologies such as heat pumps and electric vehicles are highly efficient, switching to electricity will help lower overall energy consumption even as lifestyles remain much the same as today. **By 2050, nearly Half of All Energy will be supplied through Electricity** (CEP projections).

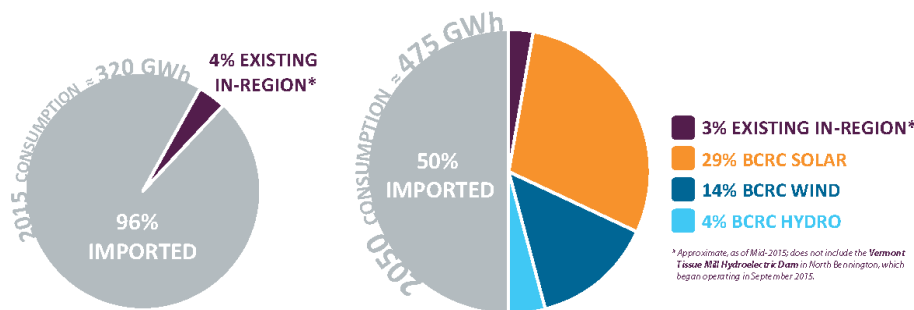


Figure 9.2: Sources of Bennington Region Electricity, 2015 v. 2050

Electricity use will increase significantly by 2050, with in-region renewable generation equivalent to about half the expanded 2050 electricity supply.

* Approximate, as of Mid-2015; does not include the Vermont Tissue Mill Hydroelectric Dam in North Bennington, which began operating in September 2015.

Though this major shift in energy use is considerable, there are opportunities to lower costs and bolster the local economy through a **Transformation of the Energy Sector**, which costs the Bennington Region over **\$150 Million a Year** (2014 estimates). Nearly all this money currently flows out the region and the state through the purchase of foreign fuels and distribution services, so redirection of these funds to local energy businesses and jobs will better retain wealth in local communities.

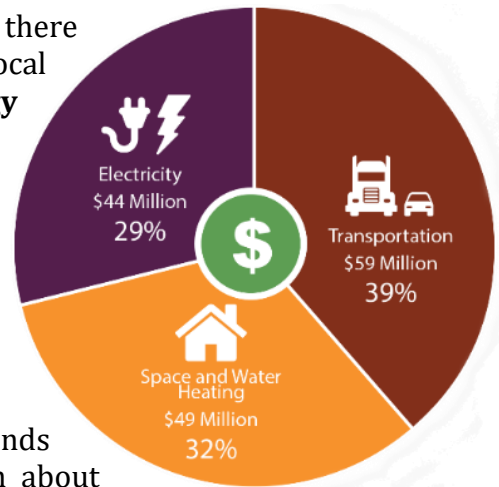


Figure 9.3: BCRC Region Energy Cost Estimates, 2014
 Generated by BCRC staff based on data from Census Bureau, VT Dept. of Motor Vehicles, and US Energy Information Administration.

Dorset’s future energy use will reflect the regional trends shown here in brief. For more in-depth information about regional energy planning, see the Bennington County Regional Energy Plan (adopted March 2017). The remainder of this energy chapter will focus on energy use and policies in the Town of Dorset.

9.2 ANALYSIS AND TARGETS

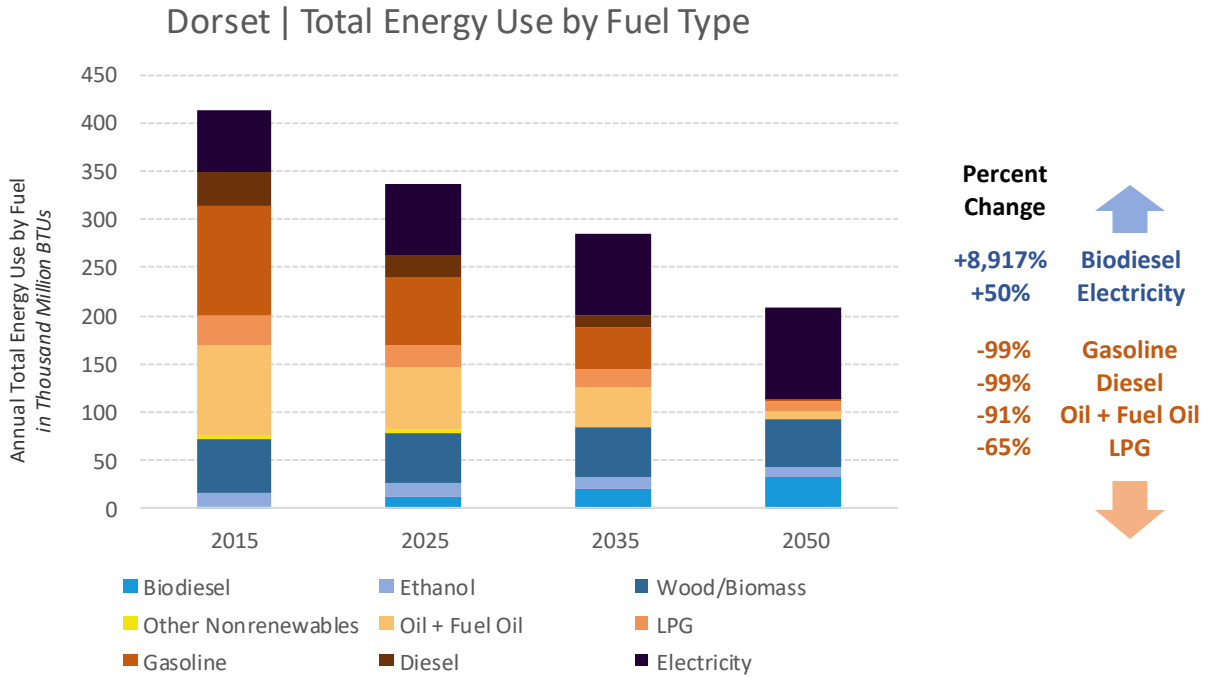
This section of the Act 174 standards calls for analysis of energy resources, needs, scarcities, costs, and problems within the municipality across the three energy sectors: electric, thermal, and transportation. Overall current energy use in Dorset is broken down by fuel source below, and future targets for reduced energy consumption are illustrated across transportation, residential heating, industrial uses, and commercial uses. Specific targets for efficiency and conservation improvements are identified for electric vehicles (EVs), cold climate heat pumps, and full residential weatherization projects.

Current and Future Energy Use

Dorset consists of two dense village centers surrounded by extensive rural settlement and open space. The town’s 2,031 residents live mostly in detached, single family homes (more than 9 in every 10 homes according to the 2010 Census). This type of development pattern is linked with considerable energy use to meet transportation, space heating, and daily electricity needs. According to LEAP model projections (see BCRC Regional Energy Plan 2017, page 39, for more details), Dorset uses over **400 thousand million BTUs** (British Thermal Units) per year in total energy. **Dorset will Need to Reduce Energy Consumption by Half to about 200 thousand million BTUs by 2050** to achieve 90% renewable energy by that target year.

The chart below illustrates one path the town may pursue to achieve this goal through **Gradual Adaptation and Fuel Switching** over the next several decades. With the year 2015 as a baseline, Dorset has identified energy use targets by fuel/energy carrier for years 2025, 2035, and 2050:

Figure 9.4: Dorset Total Energy Use by Fuel Type, 2015—2050. Based on LEAP projections.



According to LEAP projections, Dorset will phase out fossil fuels through electrification of the transportation and heating sectors, with biodiesel replacing some conventional diesel and oil fuels, and with widespread use of woody biomass for space heating. Over time, **Electricity** will go from meeting **Just 15% of Total Energy Needs in 2015 to 46% of Energy Needs in 2050**. More details on how specific technologies and strategies can achieve this energy reduction and fuel conversion are broken down by energy sector below.

Residential Energy Use

Energy use can be grouped into 3 major sectors: transportation, thermal (heating and cooling), and electricity. Dorset’s more than 2,000 residents living in about 1,005 households consume large amounts of energy for transportation, to heat space and water, and to power lights and appliances with electricity. See Table 9.1 for an estimate on how much Dorset households spend on energy by sector each year. By identifying technologies and practices capable of catalyzing the transformation of each energy sector, Dorset aims to provide its residents the tools necessary to lower their energy use and costs and to realize state energy goals.

Table 11: Dorset Residential Heating and Electric Use and Costs. ACS 2015 Estimates, Efficiency Vermont data. The vast majority of Dorset’s 1,005 occupied housing units are single family homes, which together consume close to \$4 million a year in heat and electric energy use. As shown below, dense, multi-unit dwellings are more efficient than single family homes due to lower average square footage and efficiencies arising from passively shared heat. Residents spend the most money on heating oil and non-heat electricity.

	Occupied Residential Units	Total Oil Use (gallons)	Total LP Gas Use (gallons)	Total Wood Use (pellet bags)	Electric Use for Heat (kWh)	Non-heat Electric (kWh)	Total Cost by HH Type	Cost /Unit
Single Family	935	516,742	174,210	63,795	490,518	9,350,000	\$3,788,580	\$4,052
Two-Family	26	10,777	3,633	1,330	10,230	234,000	\$84,747	\$3,259
Multi-Family	24	6,632	2,236	819	6,295	192,000	\$59,216	\$2,467
Mobile Homes	20	8,290	2,795	1,023	7,869	160,000	\$62,249	\$3,112
Cost Factor		\$2.75/gal	\$3.45/gal	\$5.00/bag	\$0.15/kWH	\$0.15/kWH		
Total Cost		\$1.49 mill	\$630,915	\$334,840	\$75,744	\$1.46 mill		

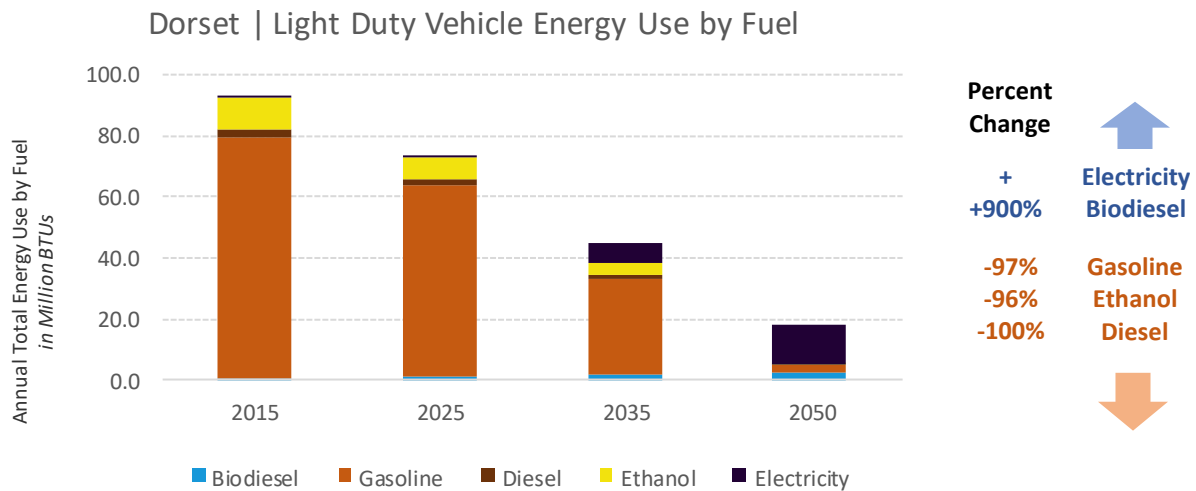
Methodology: Assumed heating efficiency of 60,000 BTU/sq.ft. and the following square footage assumptions: 2,000 sf; 1,500 tf; 1,000 mf; and 1,500 mobile homes (higher sq.ft. due to generally lower efficiency). Units in housing structure and heating source shares from Census.

Transportation

In Dorset, and across all Vermont, **Transportation Consumes the Most Energy of Any One Sector.** Due to Dorset’s expansive settlement pattern along the main transportation corridors of Routes 30 and 7, people and goods often travel considerable distances to reach places in and around the community. The light duty vehicle has made this independent mobility and the convenience that comes with it possible, yet most vehicles rely on vast amounts of non-renewable fuel inputs to function. Given the dependence most households have developed on fossil fuel vehicles to move among sprawling destinations, transportation represents one of the greatest challenges to reducing overall energy use. Fortunately, electric vehicle (EV) technologies have advanced significantly in recent years and these systems are projected to dominate the car industry in coming decades. By electrifying the light duty vehicle fleet, Dorset residents have the opportunity to improve transportation efficiency and divert money currently spent on fossil fuels to support local electricity production. Targets for gradually reducing energy consumption and converting to EV technologies are shown in the following chart:

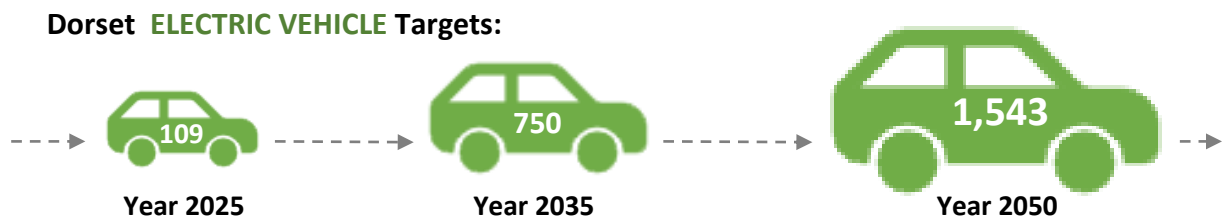
According to LEAP scenarios, Dorset’s total energy for transportation will fall gradually to **Just 20%, or One Fifth, of Current Levels by 2050.** Electrification of the light duty vehicle fleet will account for much of this reduction in energy use through improved efficiency. **In 2050, Electric Vehicles Will Comprise More than 70% of Light Duty Vehicles** in the town. A combination of biodiesel and gasoline fuels will power the remaining portion of light duty vehicles.

Figure 9.5: Dorset Light Duty Vehicle Energy Use by Fuel, 2015—2050. Based on LEAP projections.



There are three main kinds of EVs: all-electric vehicles, plug-in hybrid electric vehicles, and hybrid electric vehicles (in the latter the battery recharges from the combustion motor and from braking so there is no plug-in component). Today’s EVs have a fuel efficiency many times greater than that of combustion engine vehicles (about 100 mpge [mile per gallon equivalent] compared to about 30 mpg), and the range and efficiency of EVs are projected to improve further (U.S. Dept. of Energy). Several Dorset residents already own EVs, but use will have to increase steadily to be on track to meet the 90X50 energy goal. The following targets are intended to guide adoption rates over time:

Figure 9.6: Dorset Electric Vehicle Count Targets, 2025, 2035, 2050. Based on LEAP projections and ACS estimates.

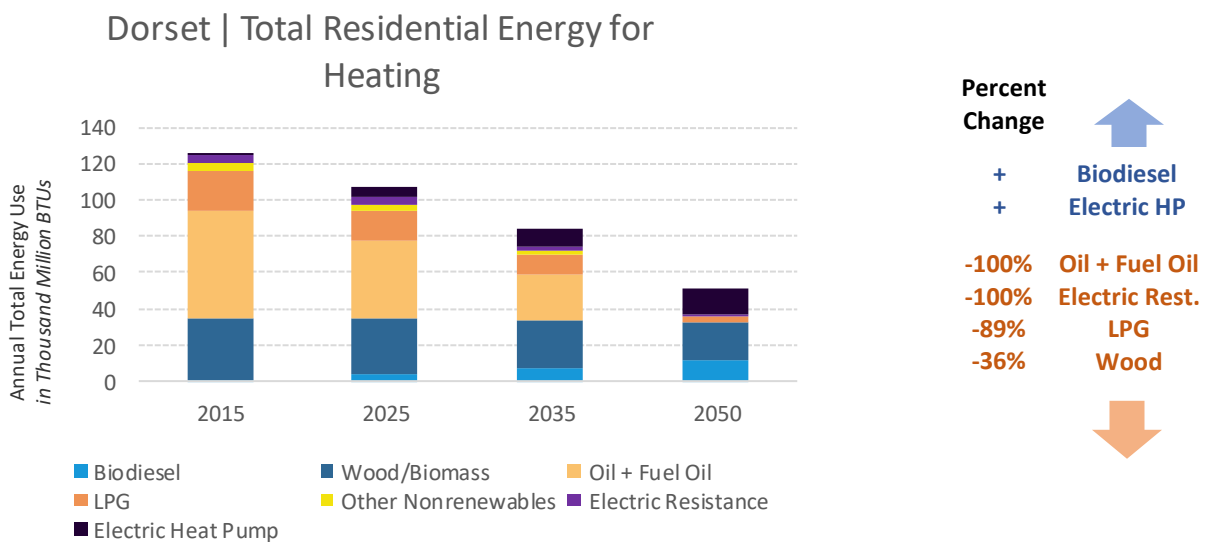


While EVs will play a major role in reducing energy use while allowing Dorset residents to continue to rely on some personal vehicle travel, efficiency gains from EVs alone will not account for all the energy reduction needed to meet future transportation energy targets. **Conservation through Behavior Changes such as Carpooling, Transit Use, and Increased Reliance on Walking and Biking will be Critical** to reaching 2050 energy targets. Policies that encourage denser land use development and implementation of Complete Streets road design are necessary to shift the predominant transportation model from being vehicle-centric to multimodal and efficient-by-design.

Thermal

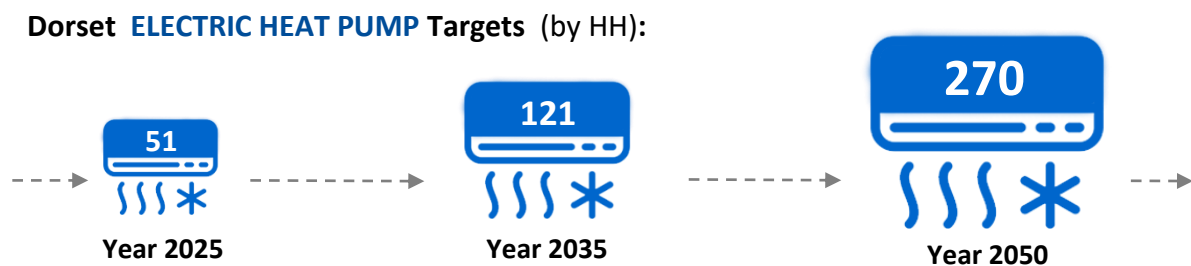
Close to half of Dorset homes are heated throughout the 7-month heating season by oil. Though this fuel source has been inexpensive and widely accessible in the past, projected future shortages of fossil fuels suggest that the town should mitigate reliance on this fuel source by switching to more efficient systems that can be powered by local resources. Woody biomass is one abundant local resource already use for space heating. Wood and pellet stoves currently heat 27% of Dorset residences, and this proportion is projected to increase to about 40% of Dorset homes by 2050. Though the number of homes heated by woody biomass will increase, the total energy consumed by these systems will lower from about 14 thousand million BTUs to 9 thousand million BTUs as aging stoves are replaced by newer, more efficient ones.

Figure 9.7: Dorset Total Residential Energy Use for Heating, 2015—2050. Based on LEAP projections.



In total, **Dorset’s Energy Use for Residential Heating will Decline to Just 40% of Current Use, or 21 thousand million BTUs, by 2050.** Cold-climate electric heat pumps are another highly efficient technology that will play a major role in lowering overall energy consumption through electrification. **By 2050, 1 in 4 Homes will Use an Electric Heat Pump as its Primary Heating Source.**

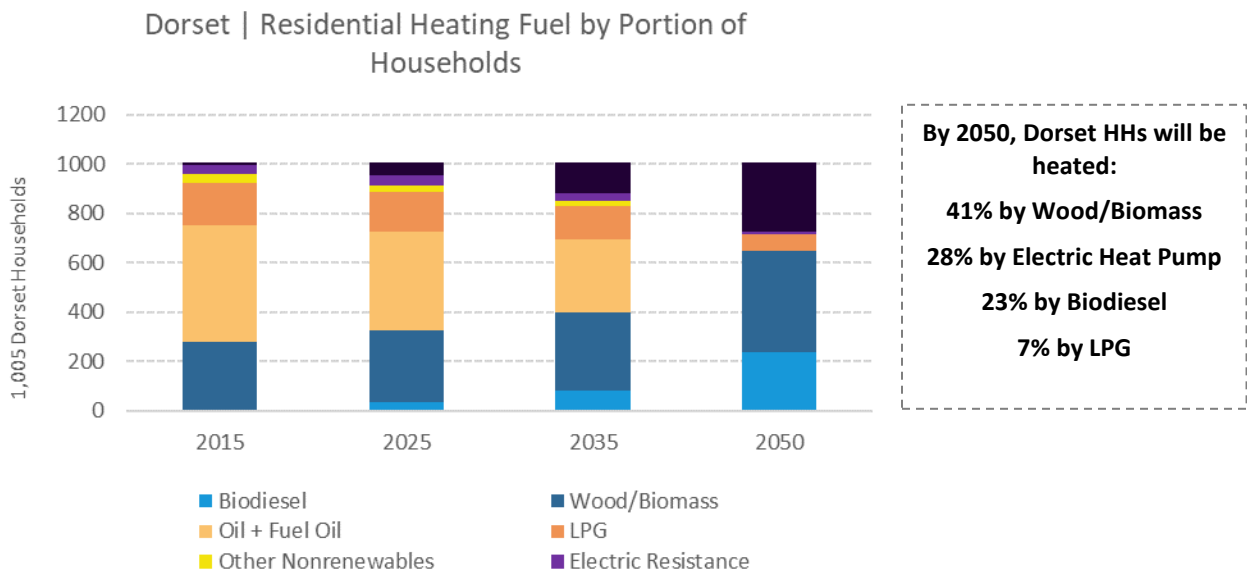
Figure 9.8: Dorset Electric Heat Pump Count Targets, 2025, 2035, 2050. Based on LEAP projections.



Cold-climate heat pump technology, based on the mechanism that cools refrigerators by extracting cold air from ambient space, has improved greatly in recent years. In addition to being more energy efficient than other technologies for heating, **Heat Pumps Also Cool Homes during the Warmer Months.**

The overall shift in residential thermal energy use can also be shown by portion of households:

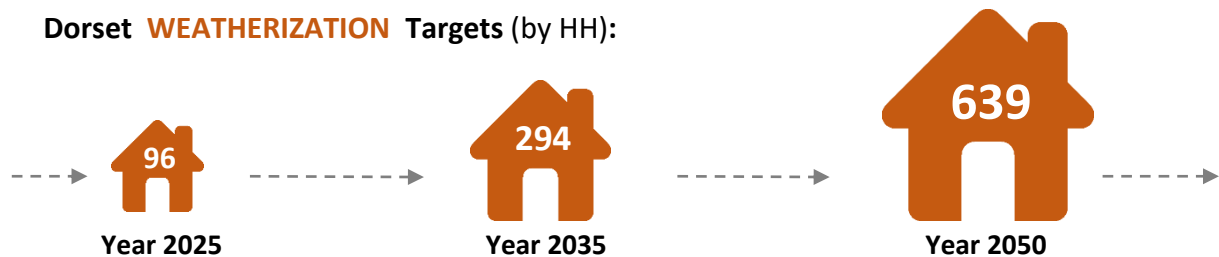
Figure 9.9: Dorset Total Residential Energy Use for Heating by HH, 2015—2050. Based on LEAP projections.



According to LEAP estimates, of Dorset’s about 1,005 households, roughly 411 homes will rely for heating on woody biomass through high efficiency pellet and wood stoves, about 278 homes will use electric heat pumps, and almost 236 homes will use biodiesel-based systems. Some homes will continue to use liquid propane gas (LPG), but at a fraction of today’s usage (about 67 homes in 2050).

Gradually switching thermal systems to more efficient electric options will do much to improve energy efficiency, but thermal conservation gains will rely on extensive weatherization of existing homes and **Local Enforcement of Building Codes for New Construction and Renovations.** See targets for weatherizing existing homes:

Figure 9.10: Residential Weatherization Count Targets, 2025, 2035, 2050. Based on LEAP and ACS estimates.



By better sealing and insulating homes, total energy use will decrease drastically since it requires less energy to heat and cool a weatherized home. **NeighborWorks of Western Vermont** is a regional organization that offers technical assistance and financing options to make weatherization programs accessible. Efficiency Vermont data shows that at least **106 Thermal Shell Improvement Projects have been Undertaken by Dorset Residents since 2014**, indicating that residents already value this approach to efficiency. Given that individual shell improvement projects—such as air sealing and insulation—are not typically comprehensive weatherization projects, these numbers do not likely represent the full weatherization of homes prescribed in the targets on the previous page. They do represent important progress, however, and place Dorset well on its way to fully weatherizing 96 homes by year 2025.

Electricity

As mentioned previously, electricity use will expand greatly in the future since it is a reliable way to make local renewable energy sources available for use. Electricity is a conductor of energy, not a source, but electricity is often mentioned as if it were an energy source since widespread adoption of appliances, vehicles, and thermal technologies powered by electricity are critical to achieving Vermont’s energy goals through efficiency improvements. Current trends show that overall electricity use in Dorset is declining slowly despite rising use in commercial and industrial establishments:

Table 12: Dorset Electricity Usage by Year and Sector (in kWh). Source: Efficiency Vermont.

Sector	2014	2015	2016
Residential	13,301,482	12,940,386	12,564,616
Commercial & Industrial	4,009,442	4,091,125	4,270,428
Total	17,310,924	17,031,511	16,835,045
Count of Residential Premises	1,401	1,397	1,395
Average Residential Usage	9,494	9,263	9,007

Note on Residential Premises versus Household Counts: The Residential Premises count shown above (1,395) represents all residential units currently connected to electric utility services. The estimated residential household count (1,005: sourced from the US Census Bureau’s American Community Survey 2011-2015 Estimates) shown elsewhere in this chapter represents estimated year-round residences, which is smaller than total residential premises count due to high incidence of seasonal homes in the town.

Efficiency Vermont reports that electricity use has declined in residences in part due to efficiency enhancement programs and initiatives. For example, Efficiency Vermont estimates that **Dorset Homes have Saved at least \$111,868 since 2014** by switching to high efficiency appliances and weatherizing their homes. While these trends show electricity consumption on the decline, total electricity use will eventually begin to increase as Dorset residents switch to electric transportation and thermal systems. As part of this process, total **Electricity use is Expected to Increase to 94.9 thousand million BTUs by 2050**. This increase may seem contrary to energy use reduction goals, but since electricity is much more efficient than the fuels it will replace, total energy consumption will decline even as electricity use rises. More is said about local generation of electricity in the section: *Local Renewable Energy Potential*.

Commercial and Industrial Energy Use

Home to about 78 commercial establishments, Dorset consumes almost 50 thousand million BTUs of energy per year for commercial services. Energy reduction in this sector is not projected to be as drastic as in the residential heating or transportation sectors. The vitality that these businesses contribute to local communities is substantial, and so state energy policies have placed a lighter energy reduction burden on these sectors relative to the residential sector. See charts on the following page.

Figure 9.11: Dorset Total Commercial Energy Use by Fuel, 2015—2050. Based on LEAP projections.

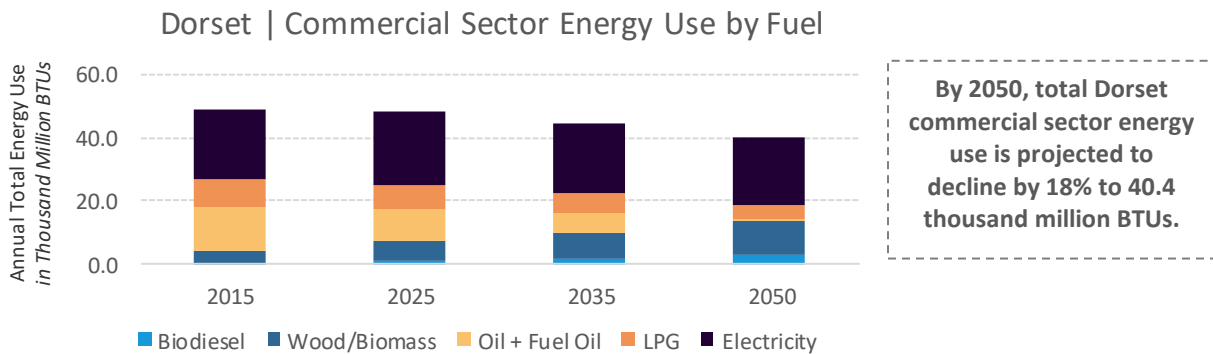
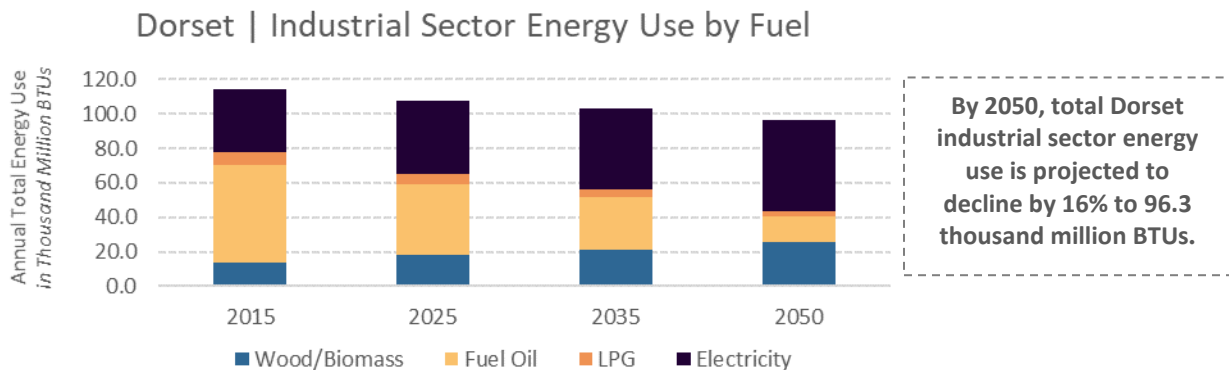


Figure 9.12: Dorset Total Industrial Energy Use by Fuel, 2015—2050. Based on LEAP projections.



Fuel oil use is projected to decrease to minimal levels in the commercial sector and 74% in the industrial sector by 2050. Businesses will need to plan for electrification, woody biomass combustion systems, and biodiesel use to replace this fuel over this time period. Most businesses can reduce energy consumption through straightforward conservation practices such as upgrading lightbulbs and appliances, powering down appliances and machinery when not in use (such as by using programmable timers), and adjusting thermal settings. Comprehensive energy audits are an excellent first step to identifying strategies that make the greatest impact on energy reduction and cost savings. Additionally, since many commercial and industrial operations involve sizeable building footprints, some sites may be well suited to accommodate rooftop solar arrays.

Municipal Energy Use

Local government and schools are significant consumers of energy, and the costs associated with energy use by those entities have a direct bearing on taxes. Energy conservation and use of alternative energy systems in this sector have the potential to produce significant savings for the community and to set a visible example of responsible energy use. Over the past decade, **Dorset Has Become a Leader** among Vermont’s municipalities for the town’s proactive approach to reducing energy use through efficiency and conservation strategies.

For example, the Town has taken major strides to reduce energy consumption at the town office building by pursuing recommendations from a 2007 energy audit (see list of improvements to the right). The Town also worked with the electric utility company to replace all streetlights in the town with highly efficient LED fixtures. The new LED units consume significantly less electricity and have reduced the town’s annual expenditure in this area (previously \$12,000) by about one-third. The light from the LED units also is much more natural and is distributed evenly, with little wasted light or areas of overlapping illumination between adjacent lights. Estimates of current energy use by town government are below:

Municipal Energy Improvements:

2007 Town Office Energy Audit:

- Serviced the boiler
- Improved ventilation
- Installed programmable thermostats
- Upgraded to efficient lighting and office equipment
- Air-sealed the building
- Installed cellulose insulation in the knee wall and attic
- Improved the water heater
- Sprayed foam insulation in the basement and box sills

Other Initiatives:

- Replaced all streetlights with efficient LED fixtures
- Purchased 2 bike racks and encouraging businesses to do the same
- Restoring marble sidewalks throughout town to encourage walking

Historical Society:

- Interior lighting upgraded to LED and timed light controls
- 2006 Building Renovations: double-pane window installation and rigid foam, fiberglass and blown-in cellulose insulation in walls, attic, and cellar

Dorset Library:

- Energy audit completed, heat pumps & new windows

Dorset and East Dorset Fire Houses:

- Energy audits completed, grant-funded weatherization work at both sites and a new boiler at East Dorset Fire House

Table 13: Estimated Annual Fuel Consumption and Cost for Town Government: Dorset, VT.

Estimates from Town, 2017.

Energy Source	Quantity Used	Cost Factor	Total Cost
Heating Fuel	2,000 gallons	\$2.75/gallon	\$5,500
Diesel Fuel	12,000 gallons	\$2.75/gallon	\$33,000
Gasoline	1,800 gallons	\$2.50/gallon	\$4,500
Electricity	12,000 kWh	\$0.15/kWh	\$1,765
Total Cost			\$44,765

Another round of efficiency and conservation improvements to the town offices should take place. The Town is currently considering a renovation of the building that would

incorporate an open floor plan and greater reliance on electric heat pumps for year-round climate control.

As demonstrated in the table above, the town's highway department, with its trucks and heavy equipment relying on great amounts of diesel fuel, is the largest expenditure for energy in local government. Maintenance of the town's highway infrastructure is a critical public service; as petroleum prices will increase and with experts predicting fuel supply disruptions within the next 20 years, we must explore alternative fuel technologies. Several cities and towns have used biodiesel blends for trucks and equipment. Biodiesel use is difficult at present because of high cost and limited supply, although there is one small producer in Bennington County.

Churches are significant energy users in the community. The United Church of Dorset and East Rupert (the Dorset Church), located next to the Dorset Green, has undergone a number of efficiency and conservation improvements such as modern insulation and weather sealing and upgrading to T-8 fluorescent fixtures and LED lighting indoors and out. The church plans to replace current oil heaters to a hot water heat pump and 3 cold climate heat pumps. The East Dorset Congregational Church, located adjacent to the East Dorset Green, has upgraded its chapel building with T-8 fluorescent lighting fixtures and replaced older windows with double pane windows. The church currently adjusts building use seasonally due to the high cost of oil heating in the winter. Insulating and weatherizing the church and chapel buildings would yield major energy savings for the congregation.

The Dorset School is overseen by the local school district, which has focused considerable effort on energy improvements in recent years. An energy assessment of the building was completed in 2009 and most of the recommended actions implemented (see right). Since that time additional major steps have been taken. This included a total rework of lighting throughout the school under the ReLight program – which again significantly reduced electricity usage, while providing what lighting experts consider to be better lighting for our students and teachers. The school roof work continued, with almost the entire roof having been replaced and upgraded. The school also shifted to producing electricity to meet almost of its needs through the installation of solar panels on the roof in 2014.

Dorset School Energy Improvements:

- Buses: added timers to block heaters, maintain tire pressure, reduced idling;
- Computers: replaced CRTs with LCD monitors, use of power management systems;
- Gym: weatherstripped doors, installed programmable thermostats and automatic exhaust fans;
- Kitchen: repaired vent, replaced refrigerators and freezer with Energy Star-rated units, replaced vending machine;
- Boiler Room: replaced one boiler with highly efficient unit that handles most of school's heating needs;
- Lighting: Replaced all interior and exterior lights with T-8 fluorescent and LED fixtures;
- Roof: replaced several sections and added proper insulation
- Solar Panels: installed non-net-metered panels that provide electricity to utility and a discounted rate to the school for their electricity consumption.
- Wind Power: the school assessed their land for future wind generation capacity

The school has seen considerable savings in both electricity and fuel oil use since implementing these improvements – in fact, it is estimated that **The School’s Total Energy Use was Reduced by 35%**. An active “Farm to School” program also has been established at the Dorset School (www.dorsetfarmtoschool.org). Students learn about farming and healthy food while maintaining a garden and helping to implement a composting program. The school works with local farmers to integrate agriculture into educational programs while using locally sourced food whenever possible.

The Long Trail School is a private secondary school occupying a large building off Kirby Hollow Road. The school has replaced some lighting with efficient LED fixtures and has contacted Efficiency Vermont about possible future weatherization improvements. The Dorset Energy Committee will reach out to the school to offer assistance in identifying and implementing improvement projects.

9.3 PATHWAYS

This section of the Act 174 standards involves the identification of implementation actions and concrete recommendations that demonstrate a commitment to achieving the future energy targets outlined in the previous section. Though several means for reaching 90X50 have been discussed already, this section calls out specific strategies for quick reference and prioritization. Identified pathways are categorized under the standards into conservation and efficiency actions, land use planning strategies, and renewable energy resource development.

Conservation and Efficiency Actions

According to a survey administered at Dorset’s 2017 Town Meeting, the most common conservation and efficiency strategies used by town residents are

- (1) turning lights off when not in use,
- (2) turning down the thermostat in winter,
- (3) making sure to close and secure windows,
- (4) reducing car use by combining errands,
- (5) weatherstripping doors and windows,
- (6) eliminating unnecessary lights, and
- (7) changing interior lights to LEDs.

These behaviors certainly contribute to lowering overall energy use, and Dorset residents should continue to promote these easy, inexpensive strategies. However, to realize the energy targets set forth in the previous section, town residents must couple these actions with considerable investments in



NeighborWorks of Western Vermont (NWWVT), through its HEAT Squad program, provides low-cost (\$150) comprehensive residential energy audits, low- and zero-interest energy loans, and access to \$2,500 in financial incentives available from Efficiency Vermont. The energy audits identify the most impactful efficiency improvements that can be made to a home, and representatives connect clients with certified contractors and financing options to pursue the projects they are interested in. On average, clients save 32% on annual heating costs after improvements.

high-efficiency electric technologies and community-wide initiatives capable of transforming Dorset's energy sector.

Listed in Table 9.4 are the top three strategies Dorset should pursue across the thermal, transportation, and electricity sectors to catalyze a major reduction in local energy consumption.

To disseminate information about needed behavior changes and technology upgrades, the Town must leverage two key distribution points: the town offices and local schools. The Town should display its comprehensive energy audit, data on the street light initiative, and information about rebates and improvements pursued in a prominent place at the town offices and on the town website to inspire residents to pursue their own audits. The offices may also host workshops about available incentives and financing for improvements. Workshops and information packets shared with school children may also be an effective way to encourage families to improve their energy practices.

Given that financial constraints are often a limiting factor restricting low-income home owners, renters, and others from pursuing weatherization or technology upgrades, considerable attention should be paid to expanding access to weatherization and financing programs available through NWWVT, BROCC, and the Vermont State Employees Credit Union (VSECU).

Other conservation concerns important to Dorset residents include reducing waste through recycling/composting and obtaining more food from local and sustainable sources. Targeting local institutions such as schools and businesses with technical assistance to integrate robust recycling/composting programs and to source local food products will be a reliable strategy for change.

Sharing success stories as projects are implemented can also create positive social momentum around energy improvements. One platform for sharing stories and creating local campaigns is the [Vermont Community Energy Dashboard](#). In addition to providing access to renewable resource mapping tools and data showing how Dorset is on track to meet its 2050 targets, the Dashboard provides [Actions Checklists](#) for [businesses](#), [farms](#), [institutions](#), [municipalities](#), and [homes](#) to reduce their energy use.



Vermont Community Energy Dashboard provides information on current energy use by town, future energy targets consistent with Act 174, and steps communities, businesses, and homeowners can take to lower their energy use and/or invest in renewable energy.

Table 14: Town of Dorset: Top 3 Conservation and Efficiency Strategies by Energy Sector.

	What	How	Goal
Thermal			
1.	Comprehensive energy audits for all homes and businesses	<ul style="list-style-type: none"> ▪ Promote the NWWVT <i>HEAT Squad</i>'s low-cost energy audits for homes and businesses ▪ Promote BROC's <i>SAVES</i> energy audit service ▪ Encourage all fuel dealers to sell efficiency services such as audits, weatherization services, etc. ▪ Encourage all businesses and industries to consult with Efficiency Vermont to identify energy-saving improvements to their operations 	All local institutions complete energy audits and pursue basic efficiency upgrades
2.	Weatherization of homes and businesses	<ul style="list-style-type: none"> ▪ Increase awareness of rebates and incentive programs available from Efficiency Vermont; of NWWVT <i>HEAT Squad</i>'s low-interest energy loans for homes and businesses; and BROC's weatherization assistance program ▪ Small businesses may be eligible for <i>Building Performance</i> rebates from Efficiency Vermont ▪ Enforce state-mandated Residential and Commercial Building Energy Standards 	96 homes by 2025
3.	Adoption of electric heat pumps	<ul style="list-style-type: none"> ▪ Help coordinate installations by certified contractors eligible for Efficiency Vermont rebates ▪ Share information on becoming certified installer with all local fuel dealers 	51 heat pumps by 2025
Transportation			
1.	Switch to EVs (electric vehicles) and improve efficiency of existing vehicles	<ul style="list-style-type: none"> ▪ Encourage upgrading personal vehicles, public transit, and town and school vehicles to EVs ▪ Host electric car show and install charging stations; ▪ Trial biodiesel use in town vehicles 	109 EVs by 2025
2.	Enhance multi-modal and public transportation	<ul style="list-style-type: none"> ▪ Work with Marble Valley Regional Transit ("The Bus") and Green Mountain Community Network to identify opportunities for service improvement or expansion ▪ Promote 'Vermont Shires Connector' bus service to Albany airport and the train station to NYC ▪ Administer resident transportation survey (ex: Weybridge survey) ▪ Promote bike and E-bike use 	
3.	Carpool and Ride Share	<ul style="list-style-type: none"> ▪ Promote use of school buses, work place carpooling, Manchester Park & Ride lot, and recognize businesses that allow ride-share parking (ex: E. Dorset store) 	
Electric			
1.	Upgrade lighting fixtures	<ul style="list-style-type: none"> ▪ Replace interior and exterior light bulbs to CFLs and LEDs at homes, businesses and industries, streets and parking lots, and farm operations ▪ Install occupancy sensors with timers ▪ Share information on Efficiency Vermont rebates 	
2.	Upgrade to ENERGY STAR appliances	<ul style="list-style-type: none"> ▪ Share information on rebate programs and savings ▪ Eliminate unnecessary or underutilized appliances 	
3.	Localize electricity sources (since long-distance transmission is inefficient)	<ul style="list-style-type: none"> ▪ Provide information to home and business owners about installing renewables systems, and with all residents about participating in community solar 	

Land Use Planning Strategies

The organization of towns into hubs of activity interconnected by transportation routes shapes how we use energy in our daily lives to move, produce, and consume. Dorset's existing land use regulations generally encourage dense development along established transportation corridors and historic centers and discourage it outside of these areas, but improvements to the town plan and bylaws will allow for more mixed use and infill development in and around the town's villages. Such improvements will advance the ability of residents to live closer to where they shop, gather and work, thereby reducing transportation costs, increasing the efficiency of densely-built, multi-unit buildings, and enhancing the vitality of Dorset's village centers.

Areas for Land Use Regulation Improvement:

- Building Size and Density Limits: increasing allowed building size and densities could make future proposals more viable;
- Reduction of Lot Sizes: lowering required lot sizes would make lots more affordable and encourage multi-story development;
- Mixed-Use: regulations should be reviewed to make sure they encourage mixed-use development;
- Home Business Regulations: regulations should be reviewed to make sure they reasonably accommodate home-based businesses;
- Slopes Restrictions: existing slope restrictions prohibit development where it may otherwise be advantageous;
- Form-Based Code: FBC may encourage diverse development in appropriate areas while assuring a high aesthetic standard is maintained in the town.

The Town needs to revise its land use bylaws to address several factors currently limiting infill development (see left). There is a desire on the part of many residents to allow for more mixed-use, walkable development in and around Dorset and East Dorset Villages, though there has been resistance to this land use strategy in favor of preserving development patterns featuring large lots with single family homes and considerable setbacks. Demonstrating ways in which a high-density strategy would better allow for current residents to 'age-in-place' and for residents to afford housing in town could make this pathway more appealing.

Of course, there must be adequate infrastructure to support denser development in the town, such as enhanced wastewater treatment facilities and varied transportation options in and around village centers. This infrastructure is currently lacking, exacerbating the challenge of attracting denser downtown development to the villages. While a conventional sewage treatment system may prove impractical for Dorset due to limited space for facility construction and discharge areas, smaller-scale alternative or innovative systems may be feasible. For example, the Town of Arlington successfully expanded their school facilities recently by installing a packaged wastewater treatment plant with the ability to process sufficient volumes of wastewater with minimal impact to surrounding areas.

Improved land use regulations and wastewater infrastructure will establish a supportive environment for infill development in Dorset and East Dorset villages, but in order for diverse uses to be viable in these areas, residents should have regular, preferably pedestrian access to them. Increasing the number of affordable, walkable residential units in the immediate vicinity of the villages would create demand for services, produce employment opportunities, and introduce vitality to village sidewalks, stores, and parks. Improvements to street design and landscaping that incorporate pedestrian-friendly features such as trees, human-scale lighting, and benches and bike racks also promote this activity. Provision of adequate telecommunications services throughout the town facilitates working-from-home and telecommuting, thereby reducing travel costs and retaining economic activity in the village centers.

What is Mixed-Use Development?



Mixed-use development is a type of development that encourages economic and pedestrian activity by grouping residential, commercial, institutional, or cultural uses densely in an area. Multi-story buildings with residential units above commercial spaces are a common element of mixed-use and historic development patterns. Examples above are from downtown Dorset and Manchester.

Many residents have expressed interest in purchasing more of their food locally to reduce trips to grocery stores in neighboring Manchester and to support local businesses. The weekly Dorset Farmers Market is a year-round hub where local producers sell their products direct to consumers. Beyond this successful market, though, expanding the grocery staples and carry-away offerings at existing general stores in Dorset and East Dorset villages may be another way to achieve this goal. Of course, attracting a food market or new restaurants to the villages could be a popular development, but in order for this to occur Dorset’s land use regulations should be amended to allow for more infill and mixed development.

Table 15: Town of Dorset: Top 3 Land Use Strategies.

	Land Use Strategy	Goal
1.	Explore possibilities for serving the village centers with innovative wastewater treatment facilities (see example of Arlington school’s packaged wastewater treatment plant)	Enhance wastewater management to support denser development while protecting the environment
2.	Review and revise bylaws to better encourage denser infill development in and around the village centers	Increase number of affordable, walkable housing and commercial units in villages
3.	Pursue transportation improvements indicated by a resident transportation survey, such as the strategic placement of park and ride sites; Use the Site Plan and Subdivision Review processes to make sure that new construction accommodates multiple transportation modes; All road improvement projects must incorporate Complete Streets design principles	Increase public transit use, ride-sharing, and biking and walking in the town; Enhance the safety of biking and walking; Increase total ridership on school buses

In the fall of 2017, the State recognized Dorset and East Dorset villages as designated village centers through the Agency of Commerce and Community Development’s designation program. This program grants access to tax incentives and preferred status for funding opportunities that encourage historic building improvements and dense, mixed-use investments in these areas. The benefits of this program can be leveraged to pursue land use goals that will reduce energy consumption.

Renewable Resource Development

Immense financial and energy savings are realized when fuels and electricity are generated close to their points of use. Since renewable energy sources yield less energy per unit than their fossil-fuel and nuclear-based counterparts, energy efficiency must be improved in acquisition, processing, and transport stages. Available resources that can provide for some of the area’s energy needs include: biomass (wood and field crops), water (hydroelectric), wind, and direct solar radiation. In addition to supporting local businesses and keeping energy dollars circulating in the local economy, utilization of these renewable resources would provide significant environmental benefits by reducing the amount of pollutants emitted by fossil fuel combustion and supporting good management of natural resources. Developing those resources now also will help provide energy security for the community, assuring availability of the energy needed to sustain economic prosperity well into the future.



Vermont Renewable Fuels is a renewable fuels dealer specializing in wood pellet sales and biomass boilers and stoves based in Dorset.

Energy from renewable sources has many applications. It can help address space and water heating needs, provide fuel for transportation, and generate electricity (that can, in turn, be used for heating, transportation, and many other functions). Space and water heating can be accomplished using solar energy, wood (cordwood, pellets, or chips), biodiesel, and geothermal sources. Certain biofuels, especially ethanol, methanol, and biodiesel, can be used to provide energy for various types of vehicles. Electricity will become increasingly important as a way to deliver energy for a wide range of uses, and can be produced from renewable sources including biomass, wind, solar, and water.

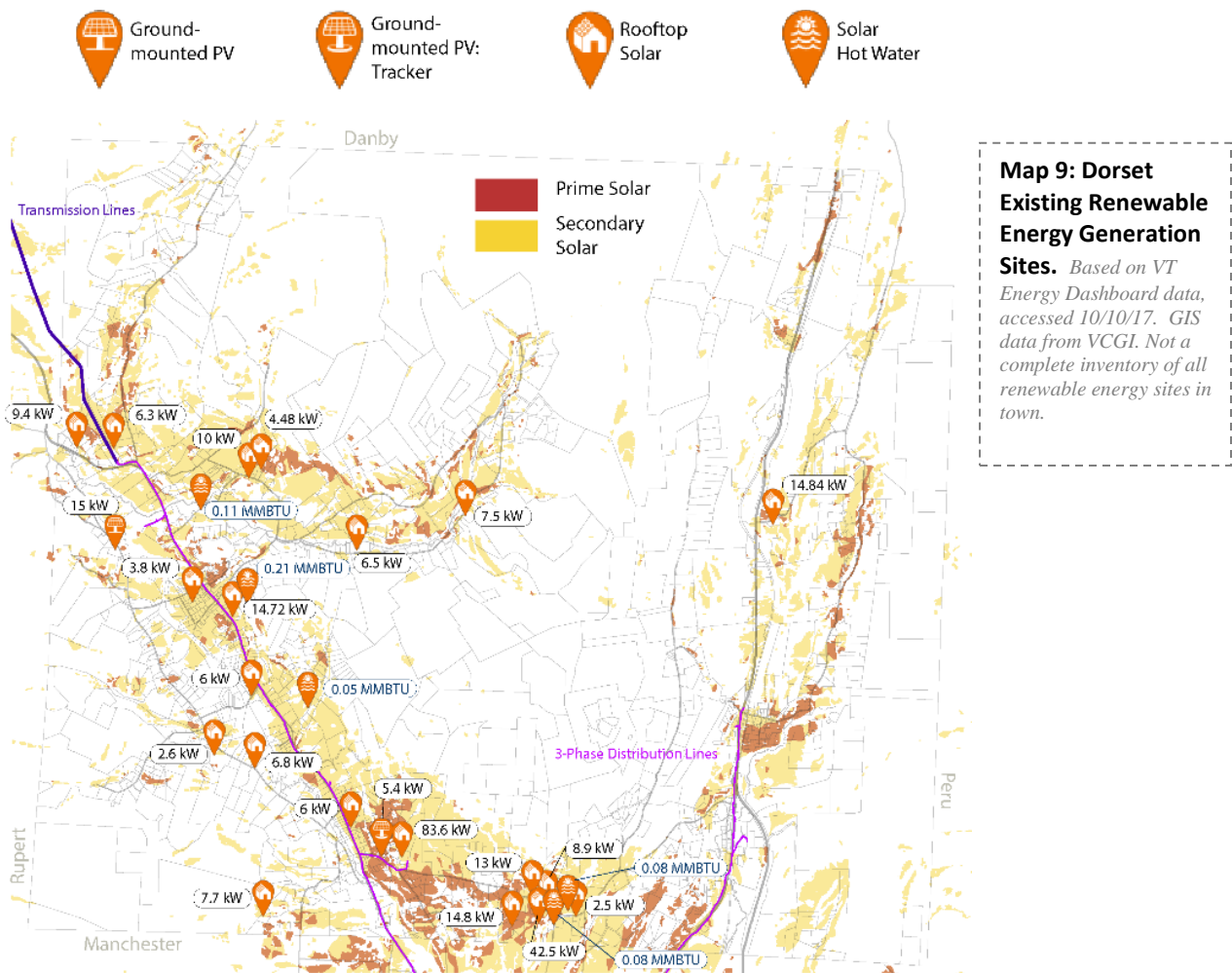
Table 16: Town of Dorset: Top 3 Renewable Resource Strategies.

	Renewable Resource Strategy	How	Goal
1.	Develop appropriate scales of solar and wind facilities	Prioritize municipally- and state-owned areas for solar renewable development; Identify preferred sites to incentivize commercial solar in suitable locations; Support community solar projects to expand access to renewable energy generation	5.2 MW of new solar capacity by 2050
2.	Expand use of biomass for heating and liquid biofuels	Support cost-effective development of biomass energy resources, and promote the use of combined heat and power biomass projects in town and	Reduce carbon pollution

		biomass heating in residences; Trial biodiesel in town vehicles (example: Manchester pilot program); Support production and use of liquid biofuels at farms	emissions
3.	Promote potential renewable energy generation during the approval process for new construction and property improvement applications	Use the Site Plan and Subdivision Review processes to promote use of solar energy or other renewables use in new construction; Provide resources on solar, wind, biomass, and geothermal systems to developers and home owners as applicable to work being pursued on their properties	Increase local renewable generation

9.4 RESOURCE MAPPING

This section of the Act 174 standards requires the identification (through map analysis) of potential areas for the development and siting of renewable energy resources as well as any areas that are unsuitable for siting those resources. This section contains maps of existing renewables generation, future wind generation potential, and future solar generation potential with preferred sites for development, and statements of policy regarding the siting of renewable energy facilities.



Local Renewable Energy Generation and Potential

Nearly all energy consumed in Dorset is imported in the form of gasoline, oil, propane, and electricity. Some imported electricity is powered from renewable sources, primarily the electricity purchased from hydroelectric generating facilities in Quebec and Labrador, Canada. Today some energy production occurs in Dorset in the form of at least twenty rooftop solar arrays (installed capacity of over 271.9 kW generating 285,863 kWhs annually), at least two ground-mounted panels (total installed capacity of 20.4 kW generating 16,422 kWhs annually), and five residential solar hot water heaters. Two businesses and a local institution have sizeable rooftop solar arrays: the Aerie Motel (14.84 kW), GSK Climate Control (42.5 kW), and the Dorset Elementary School (83.6 kW). See Map 9 above.

Act 174 - Environmental Constraints

Known Constraints:

Vernal pools
River corridors
Floodways
State significant natural communities
Rare, threatened, and endangered species
Natural wilderness areas
Class 1 and 2 wetlands

Possible Environmental Constraints:

VT agriculturally important soils
Special flood hazard areas
Protected and conserved lands
Deer wintering areas
Conservation design highest priority forest blocks
Hydric soils

There are many more areas in the municipality where specific scales of solar and non-utility wind development are appropriate. The following map analyses, which comply with **Act 174** standards for renewable resource mapping (for more details, see Bennington County Regional Energy Plan, pages 80-83), provide information about renewable resource availability in the town. Maps were generated using GIS (geographic information systems) data layers developed by VCGI (the VT Center for Geographic Information). Renewable resource layers were mapped, and **'Known Constraints'** were removed entirely from available resource areas. **'Possible Constraints'** were overlapped with renewable resources to highlight where there are potential complications for developing generation facilities. Remaining resource areas that do not overlap with any environmental constraints are considered **'Prime'** resource areas, and resource areas that overlap with Possible Constraints are called **'Secondary'** resource areas.

Locally-Identified Constraints

Act 174 authorizes municipalities to identify local resource areas where renewable energy development is inappropriate and/or development is already restricted. In accordance with this guidance, Dorset has identified several local

Dorset Local Constraints:

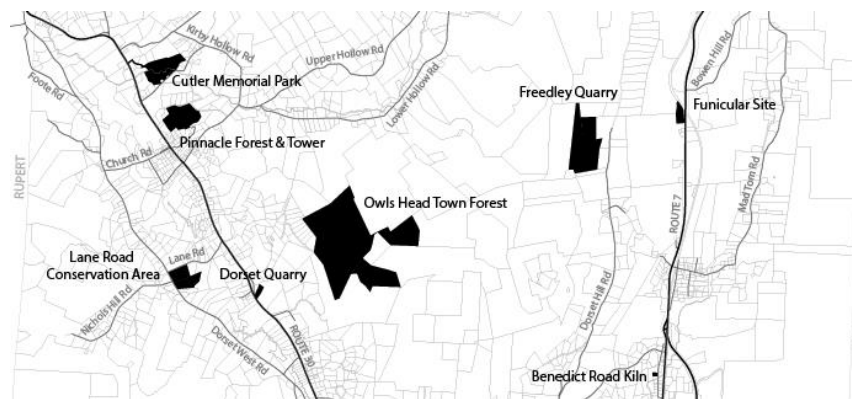
- Historic Landmarks
 - Dorset Quarry
 - Freedley Quarry
 - Funicular Sites
 - Benedict Road Kiln
- Public Parks / Recreation Areas
 - Cutler Memorial Park
 - Pinnacle Forest
 - Owls Head Town Forest
 - Lane Road Fields
- Design Control Area
 - Design District
- Protected Natural Areas
 - Forest I Land Use District
 - Groundwater Source Protection Areas (SPAs)
- Species Habitat Protection
 - Aeolus Hibernaculum (unmapped – entire municipality)

Local constraints are applied differently by type and scale of renewable energy facility. Policies on how local constraints are applied are outlined below in Figures 4.4, 4.5, 4.6, and 4.7.

constraints with the goals of preserving treasured historic landmarks, respecting public recreation sites, and protecting environmentally sensitive areas.

Identified historic landmarks and public recreation sites to be excluded from most renewable energy development are listed above and mapped in Map 10 below. Also excluded is the Forest I land use District, where permanent development is prohibited to protect high-altitude, high-slope natural areas. An unmapped but critical local resource to be considered in reviewing future development proposals is the **Aeolus Hibernaculum** located in the highlands of Dorset. The caves provide hibernation habitat to bat species including the Indiana Bat, which is considered an endangered species with its populations depleted by white nose syndrome and habitat loss. The VT Agency of Natural Resources (ANR) considers the entire town of Dorset to be a sensitive area for the bats, and for this and other reasons large-scale (utility) wind development is not permitted in the town. Potential impacts to the hibernaculum must be considered when reviewing renewable development proposals. Projects that would degrade the hibernaculum or impair the bats' access to it are not permitted in the town.

Map 10: Dorset Historic Landmarks and Public Parks – Local Constraints. Data from Town.



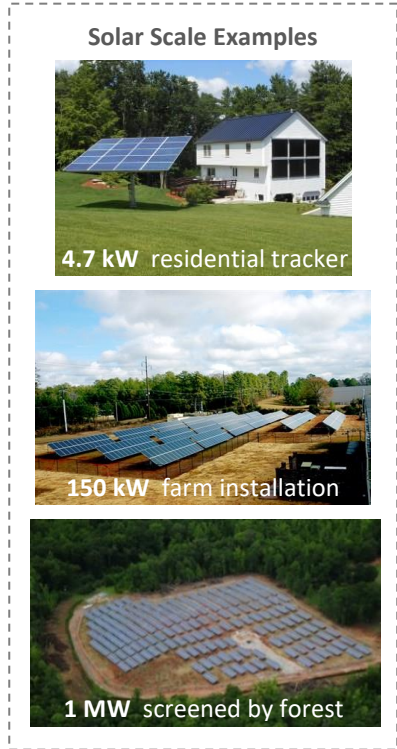
** Historic funicular infrastructure extends west from the mapped Funicular Site to the Freedley Quarry. Areas where funicular infrastructure exists are considered historic landmarks and shall not be developed.*

Solar

There is abundant solar resource throughout low-lying areas of the town, and much of this resource is unrestricted by state-identified environmental constraints. The Town of Dorset establishes the following policies to guide solar energy development in the town. For policy purposes of this plan, solar energy facilities are grouped into three categories: **Small-Scale Solar**, here defined as solar electricity and transmission facilities up to and including 15 kW (AC) capacity; **Mid-Scale Solar**, here defined as solar electricity generation and transmission facilities greater than 15 kW (AC) capacity and less than or equal to 150 kW (AC) capacity or up to two acres of developed area including fencing, whichever is greater; and **Large-Scale Solar** (also known as 'utility-scale'), here defined as a solar electricity generation and transmission facility 150 kW (AC) or greater in capacity or more than 2 acres of developed site area, whichever is greater.

The town strongly supports the development of small- and mid-scale solar facilities where sufficient solar resource is present and environmental and local constraints permit (see Map 12, solar energy resource potential map, for possible locations). Homes, businesses, schools, and other institutions are encouraged to develop onsite solar facilities. **Community Solar Projects** (see next page) are a great way to expand access to renewable energy. Roof-mounted small-scale solar installations, as preferred areas under the state’s Standard Offer and net-metering programs, shall not be restricted anywhere in the town.

The town supports large-scale solar facilities on identified preferred sites as defined in state statute and as displayed in Map 13, Dorset preferred solar sites map. Large-scale projects are also suitable in **Preferred Areas**, which are listed below and shall be considered eligible for preferred status benefits under PUC net-metering rules. Large-scale solar developments shall be sited in areas with good solar radiation and where minimal or no known environmental constraints exist. All projects greater than 150 kW in capacity must comply with Dorset’s solar screening ordinance (to be developed in 2020-2021) and the following **Siting Criteria**, which reflect the town’s goal to preserve scenic, environmental, and historic resources of Dorset:



- New solar facilities shall be restricted to areas that do not adversely impact the community's existing and planned patterns of growth of compact downtowns and village centers surrounded by a rural countryside, working farms, and/or forest land.
- Solar facilities shall only be sited in locations where screening will suffice to mitigate the visual impact of the facility on the following scenic attributes: views wherein fields form an important foreground; prominent ridgelines or hillsides that can be seen from many public vantage points and thus form a natural backdrop for many landscapes; historic buildings and gateways to village areas; and scenes that include important contrasting elements such as water.
- The impact on prime and statewide agricultural soils, particularly those currently in production, shall be minimized during the project design process.

Preferred Areas for Solar Development

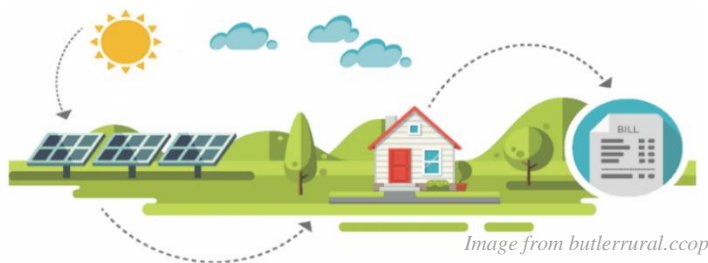
- Roof-mounted systems;
- Parking lot canopies;
- Systems located adjacent to existing large-scale commercial or industrial buildings;
- Tracts of impervious surface not originally developed for energy purposes and lawfully in existence prior to July 1st of the year preceding the year a CPG is filed;
- Reuse of former brownfields;
- Disturbed areas such as gravel pits and closed landfills;
- Community solar projects;
- Preferred sites identified in Figure 4.5

Unsuitable (prohibited) areas for solar development include the following locations:

- Act 174 Known Environmental Constraints (see list on page 88)
- A location that would significantly diminish the economic viability or potential economic viability of the town's working landscape, including productive forest land and primary agricultural soils (as defined in Act 250 and as mapped by the U.S. Natural Resource Conservation Service);
- A location that would fragment or significantly compromise the ecological functions of highest priority forest blocks and habitat corridors as mapped by VT ANR and resilient landscapes as mapped by The Nature Conservancy;
- Steep slopes (>25%);
- Surface waters and riparian buffer areas (except for stream crossings);
- Ridgelines or other landscape features where the facility would be prominently visible against the skyline from public vantage points such as roads;
- A site that causes adverse impacts to historical or cultural resources.

Solar Generation Target: The Town of Dorset aims to develop an **Additional 5.2 MW of Solar Capacity by 2050** to help meet regional and state renewable energy targets. Solar resource areas identified as preferred solar sites in Map 13 total roughly 410 acres and are more than sufficient to meet this target. Solar energy policies should consider the evolving nature of energy technologies. As capacity and diversity of solar energy systems increase over time, policies shall be reviewed to reflect relevant updates in the technology.

Community Solar Projects are of particular interest to the town since they offer an opportunity to people who otherwise lack access to the benefits of solar energy production, such as renters or homeowners with financial or logistical barriers to installing a privately-owned system, to participate in a clean energy project. Dorset here defines community solar projects as group net-metered solar energy installations ranging in size from 15 kW to 150 kW of capacity. Net-metering is a system in which a renewable energy generator is connected to a public-utility power grid and surplus power is supplied to the grid, allowing customers to offset the cost of power drawn from the utility. In a community solar project, shares in a facility are sold to the property owner, neighbors, community members, and local organizations in proportion to their annual energy usage. The utility splits output from the solar farm among the members according to their share size, crediting their utility accounts.



How Community Solar Works

- Step 1* – Solar installation generates energy and feeds it into the utility grid.
- Step 2* – Members purchase shares in the installation as a way to add solar power to their energy mix.
- Step 3* – Each member's bill will receive a credit based on the amount of energy produced by the solar panels.

Wind

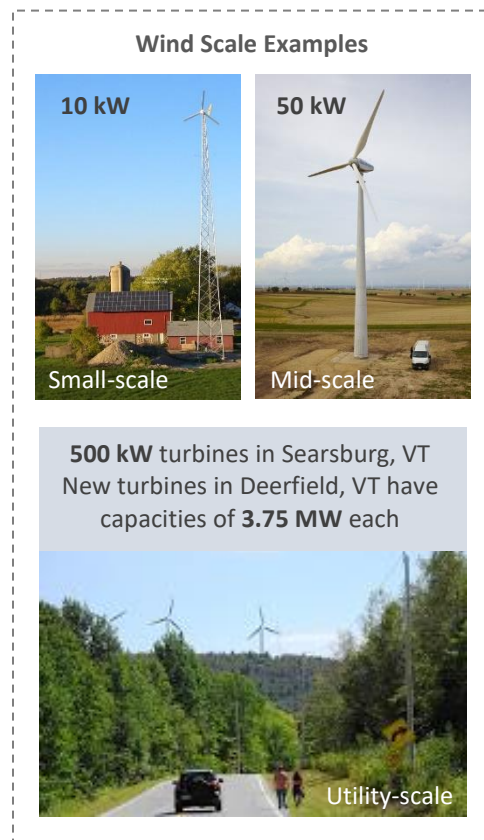
The Town of Dorset has no wind generation facilities currently connected to the utility grid, but is home to **Star Wind Turbines, LLC**, an innovative manufacturer of small- and mid-scale wind turbines. The company designs ultra-low noise, automated hydraulic lifting, low-wind-speed turbines (5 kW – 45 kW capacity) that minimize visual and physical impacts to the environment. Star Wind was recently awarded funding by the Department of Energy to test its turbines against national performance and safety standards. Dorset is proud to be home to this growing business and unique source for locally-produced wind power.



The Town of Dorset establishes the following policies to guide wind energy development in the town. For policy purposes of this plan, wind energy facilities are grouped into three categories: **Small-Scale Wind**, here defined as systems with generating capacities up to and including 10kW (AC); **Mid-Scale Wind**, here defined as systems with generating capacities greater than 10kW (AC) and less than 1MW (AC); and **Utility-Scale Wind**, here defined as systems with a generating capacity per turbine of 1 MW or greater.

The Town of Dorset has determined that large, **‘Utility-scale’ Wind Generation Facilities are Not Currently Feasible Anywhere in the Town of Dorset**. Nearly all high wind resource areas are concentrated in Dorset’s Forest I District, where the Dorset Town Plan prohibits permanent development and access to 3-phase power connection is currently limited. Additionally, the presence of the Indiana Bat Hibernaculum raises concerns about the impact of utility-scale wind infrastructure to that species’ free movement in the area. Furthermore, the Bennington County Regional Energy Plan establishes a regional constraint of 1KM residential buffer for utility-scale wind development. These constraints, along with protected groundwater source protection sites, envelop the town so extensively that the entire municipality is excluded from consideration for utility-scale wind projects (see Map 14 below). At the next revision of this plan, the Town of Dorset shall review this policy to see if future improvements in wind power technologies better mitigate impacts to the environment.

Dorset has determined that **Only Small-Scale and Mid-Scale Wind Power Generation is Appropriate in the Town**. In contrast to utility-scale turbines that produce electricity primarily for sale to the electric grid, lower-capacity turbines primarily support on-site electricity use, though they may provide surplus



energy to the electric grid through net-metering. Small-scale systems are appropriate at homes, businesses, schools, and other institutions. Mid-scale wind turbines are only appropriate for placement at institutions such as schools and businesses for the purpose of supplementing onsite energy consumption.

This policy shall not preclude development of small- or mid-scale wind projects that serve and are supported by the local community. For example, **Community-Serving Wind Development** that offsets the electrical demand for businesses, offices, or a neighborhood may be appropriate. All wind development must comply with the State's noise and environmental standards. See Map 15 below to view areas where small- and mid-scale wind facilities will be most effective.

Biomass

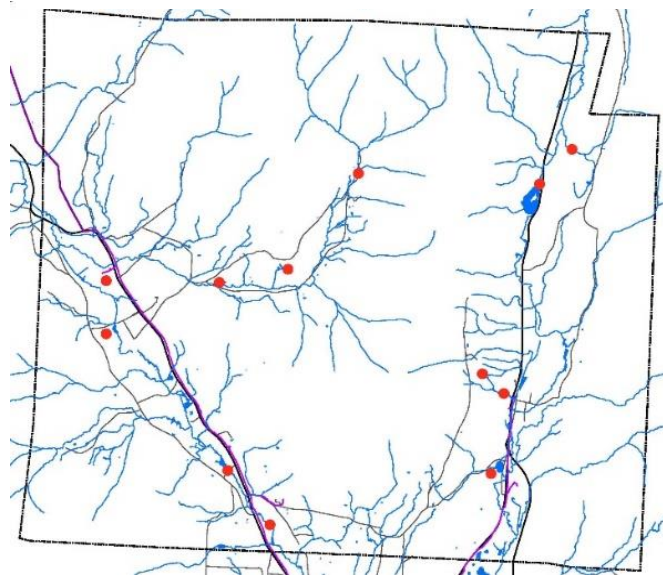
The town supports efforts to develop appropriate, cost-effective biomass energy resources. With 14,000 acres of forest, Dorset has abundant woody biomass resource to be used for local heat generation – the most efficient use of biomass for energy. High-efficiency cord wood and pellet stove heating systems are suitable for residential and commercial buildings. Large-scale wood pellet and chip heating systems are a good choice for buildings such as apartments, schools, and other institutions. For example, Flood Brook Elementary School in Londonderry is preparing to install a 500,000 BTU /hour pellet boiler system to replace its existing oil boiler heat system. There is a pellet production facility not far from Dorset (Vermont Wood Pellet Co) and one business in Dorset that distributes pellets and sells pellet furnaces and oil-to-pellet conversion systems (Vermont Renewable Fuels).

When it comes to using biomass for electricity generation, the town sees combined heat and power biomass projects as preferable to enterprises dedicated solely to electricity generation. Biomass electricity facilities may be appropriate in Dorset, though only projects operating at a capacity of 5 MW or less shall be permitted in the town. Other plant-derived renewable fuels such as biodiesel can be produced from oil seed crops to support farm operations and to supply businesses in the area. The town should consider trialing use of blended biofuel in diesel-powered municipal trucks and equipment. The town should support farmers or other businesses that propose cost-effective methane production systems, though possibilities are limited by a lack of local feedstock source for methane production.

Hydro

There are no active hydroelectric sites in the Town of Dorset, but historically hydropower did exist at various locations. The Historical Society has

Map 11: Historic Hydro Sites. Data from Town.



identified 12 previous hydro sites in Dorset dating back to the 19th century (mapped in Map 11). It is not likely that new dams or hydro sites will be permitted in the town due to high standards of environmental regulation at this time, but in some cases existing dams can be restored to produce power. For example, ‘micro-hydro’ generators may be possible at numerous locations in Dorset. The town supports efforts to develop environmentally responsible and economically viable hydro facilities, particularly at existing dams such as one located just off Route 30 near the border with Manchester.

Geothermal

The soils in low-lying, developed areas of Dorset have high resource potential for geothermal well heating systems. This technology is encouraged in new residential and commercial construction.

Local Food Production

An often-overlooked renewable energy source that can be supported and developed locally is food. The town commits to participating in efforts to develop a more robust local food and agricultural system, including supporting the siting and operations of composting programs in the town. Municipal boards and committees should support agricultural operations in the town and help facilitate dialogue between local/regional food producers and local/regional institutions such as schools, hospitals, and meal delivery or provision programs.

Recent hydroelectric development in Bennington County has included the rehabilitation of two facilities at existing dams – one on the Walloomsac River in Bennington and one on the Hoosic River in Pownal. These restoration projects are complex due to the need for environmental assessments and remediation of sediments behind dams, and environmental regulations intended to protect downstream aquatic ecosystems. Once completed, however, the facilities have added about **1MW** of reliable renewable energy to the region’s energy portfolio.

Several smaller existing dams have potential for redevelopment, all at capacities of less than 100 kW each. Dorset has a few such dams. The Town could sponsor an environmental and hydro potential study to assess the costs and benefits of pursuing development of small generating facilities at these sites.

Renewable Energy Terms Glossary

Act 174 – 2016 Vermont legislation establishing energy planning standards that grant participating regions and municipalities ‘substantial deference’ in Section 248 proceedings of the Public Utility Commission.

Community-Serving Wind Development – development of small- or mid-scale wind projects that serve and are supported by the local community and that offset electrical demand for businesses, offices, or a neighborhood.

Community Solar Projects – group solar energy installations ranging in size from 15 kW to 150 kW capacity that are net-metered so that energy sold to the electric grid is discounted on project members’ electric bills.

Known Constraints – Act 174-identified environmental constraints that are likely to preclude renewable energy development. Listed on page 82.

Possible Constraints – Act 174-identified environmental constraints that may preclude or impact the development of renewable energy facilities, but do not necessarily prevent development. Listed on page 82.

Preferred Sites / Areas – Act 174 term for locations or types of locations that are advantageous for renewable resource development. Areas identified as ‘preferred’ receive financial incentives when developed for renewable energy production.

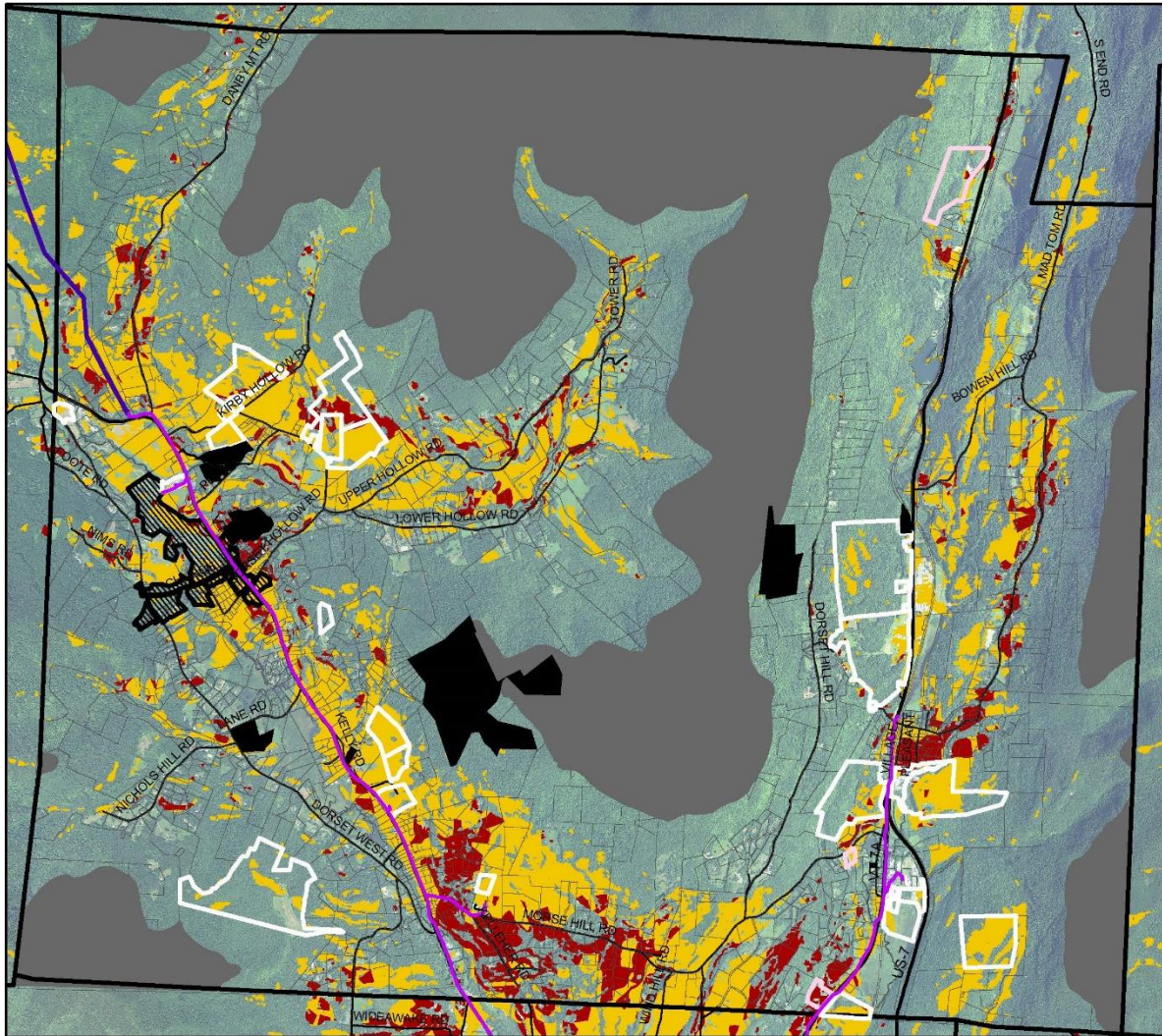
Prime Resource Areas – Act 174 term for areas with high levels of renewable resource and where no Known or Possible Constraints are present.

Secondary Resource Areas – Act 174 term for areas with high levels of renewable resource and where no Known Constraints exist, but at least one Possible Constraint is present.

Solar Facility Scales – Dorset has policies for three scales of solar development. See page 84 for details.

Wind Facility Scales – Dorset has policies for three scales of wind development. See page 86 for details.

Map 12: Dorset Solar Energy Resource Potential Map. Large-scale solar energy facilities (greater than 150 kW capacity or 2 acres, whichever is greater) shall be restricted to building rooftops, preferred sites, and other locations specifically identified in this chapter as preferred areas for solar energy development; other sites are considered unsuitable for large-scale solar facilities. Siting of large-scale solar facilities is subject to the Siting Criteria set forth in this section of the plan. *GIS Data from VCGI and preferred sites from Town.*



Preferred Sites

- Preferred Sites
- Preferred - Gravel Pit

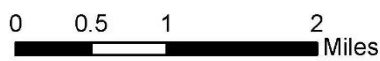
- 3-Phase Distribution Lines
- Transmission Lines
- Parcels

Prime Solar Resource - No Identified Environmental Constraints

Secondary Solar Resource - No Known Constraints, but at least one Possible Constraint

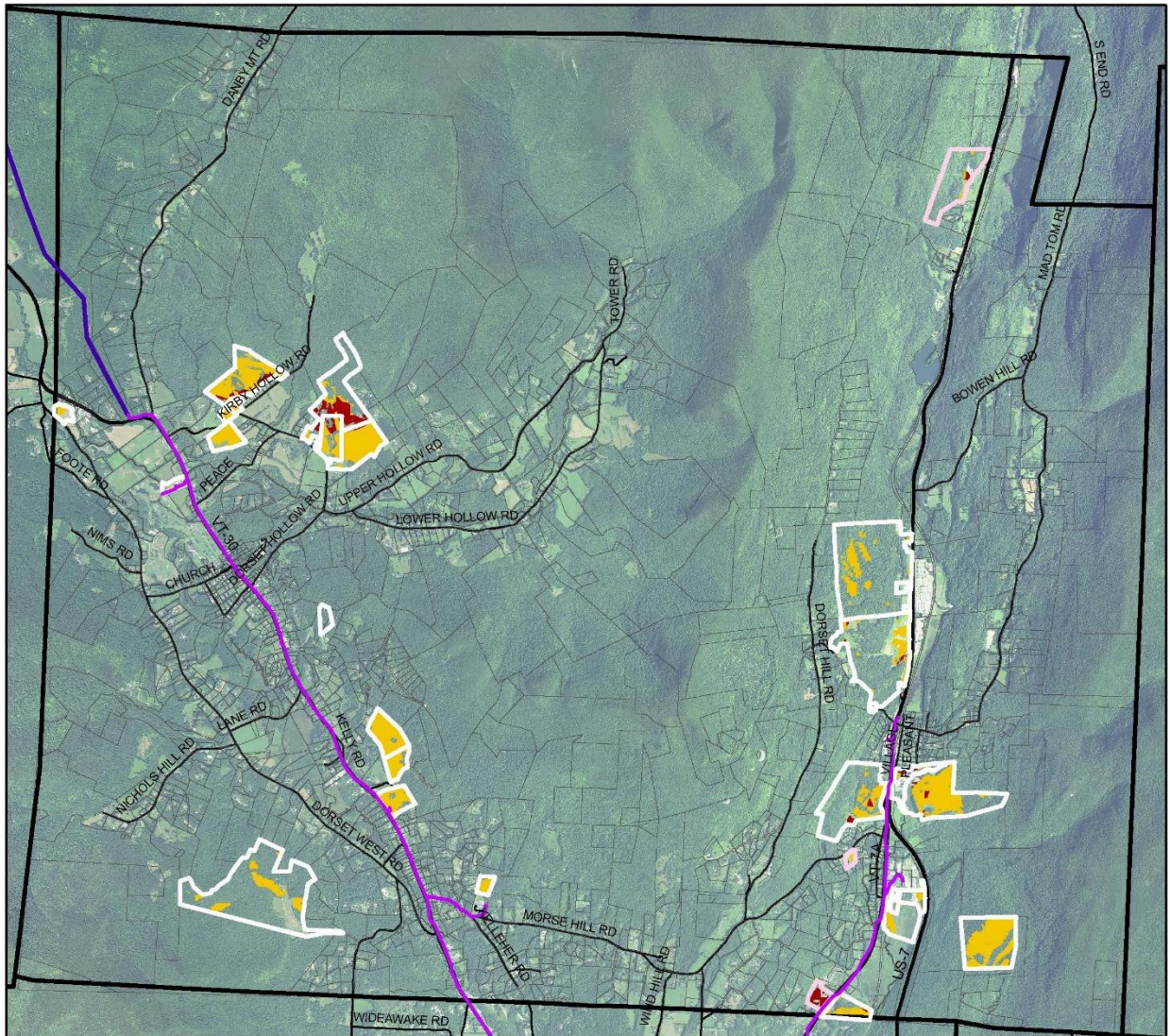
Local Constraints

 Design District	ground-mounted solar arrays are not permitted
 Historic Landmarks and Public Parks	solar energy facilities are not permitted, excepting installations of small-scale solar that further the recreational purposes of these areas.
 Forest I District	



Map intended for planning purposes only

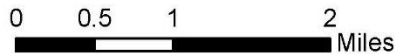
Map 13: Preferred Sites - Dorset Solar Energy Resource Potential Map. Preferred sites are suitable for development of all scales of solar energy development, including facilities greater than 150 kW capacity. GIS Data from VCGI and preferred sites from Town.



Preferred Sites

- Preferred Sites
- Preferred - Gravel Pit
- 3-Phase Distribution Lines
- Transmission Lines
- Parcels

- Prime Solar Resource - No Identified Environmental Constraints
- Secondary Solar Resource - No Known Constraints, but at least one Possible Constraint



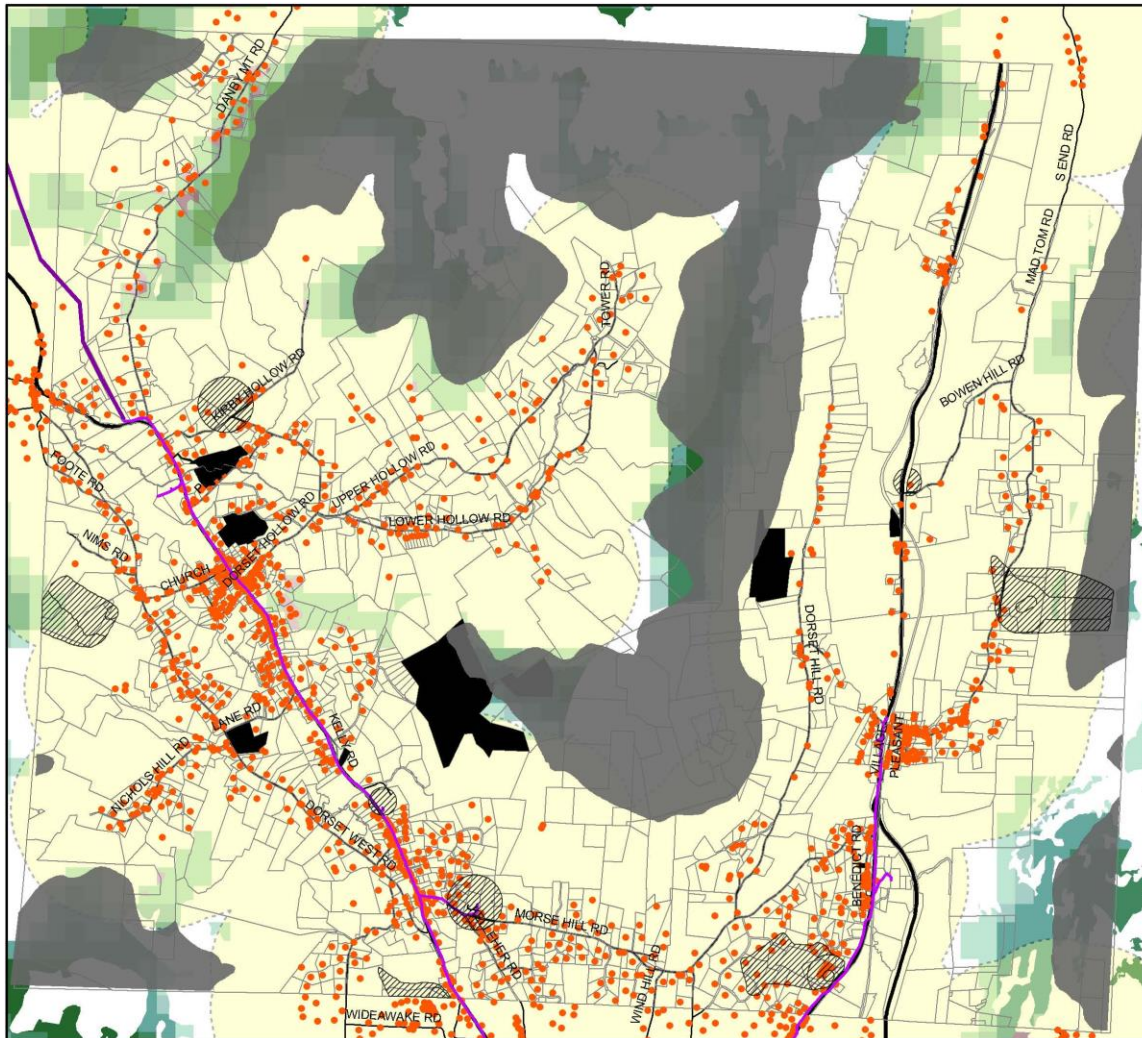
Preferred sites contain about 410 total acres of prime and secondary solar resource

Preferred Sites Methodology




To identify preferred sites for solar development, the Town used a solar resource mapping analysis. The town contacted owners of potential properties by letter requesting those uninterested in being assigned preferred status make their wishes known to the Town in a timely manner. The preferred sites shown above passed through this vetting process.

Map intended for planning purposes only



Map 14: Dorset Wind Resource Map Showing No Availability for Utility-Scale Wind. Historic landmarks, public parks, and the Forest I land use district are applied as known local constraints prohibiting development of utility-scale wind facilities in those areas. Groundwater source protection areas, Indiana Bat hibernaculum, and 1KM buffer are applied as possible constraints that currently place prohibitive limitations on large-scale wind development in the town. *GIS Data from VCGI.*



Local Constraints

-  Groundwater Source Protection Areas
-  Forest I District
-  Historic Landmarks and Public Parks
- Entire Municipality: Indiana Bat Hibernaculum Area

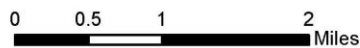
Regional Constraint

-  1KM Residential Buffer
-  Residential Structures

1 PRIME WIND
 Areas with high wind potential and no identified Constraints (Known or Possible).
 Darker areas have higher wind speeds.

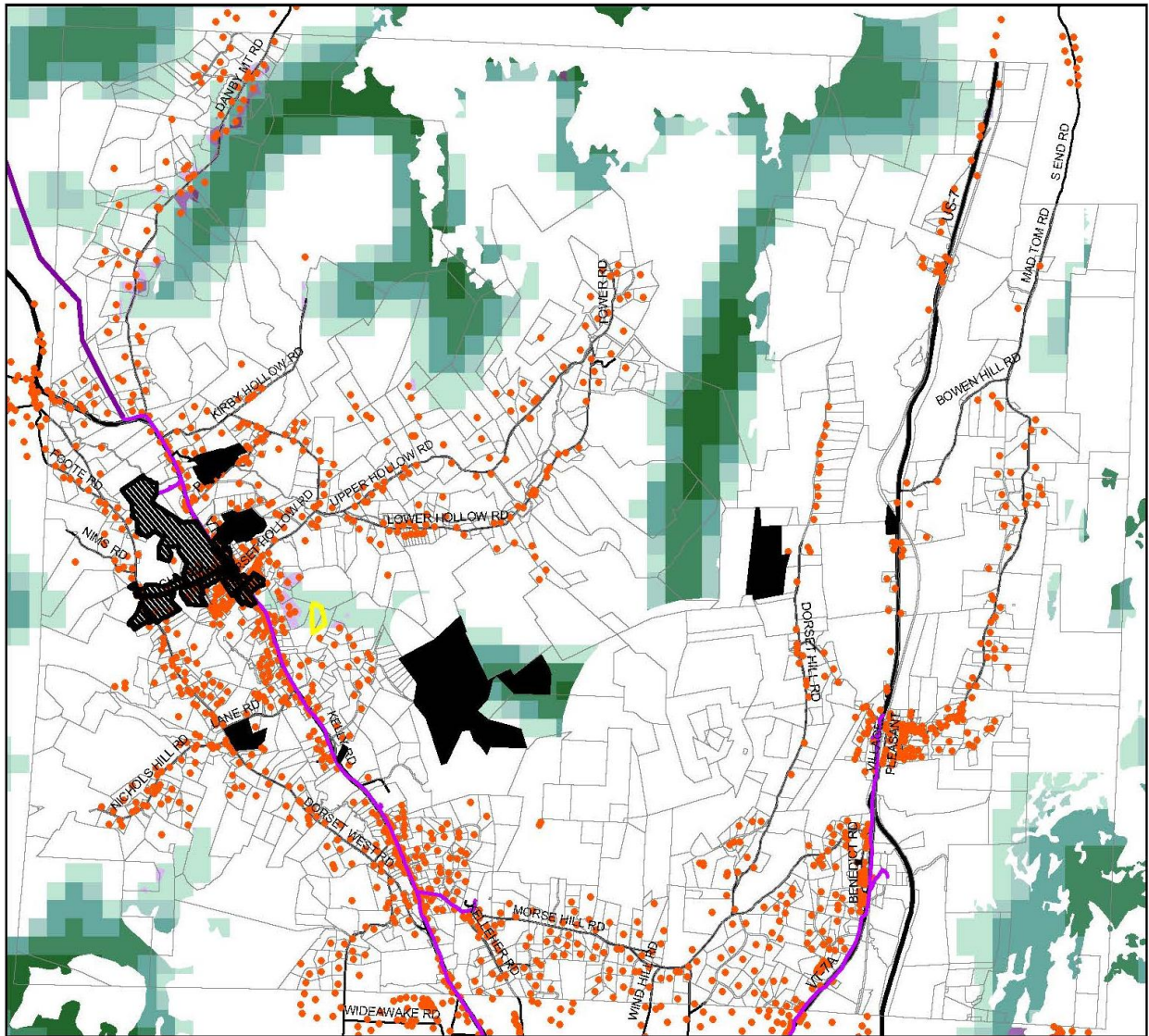
2 SECONDARY WIND
 Areas with high wind potential and no Known Constraints, but where at least one Possible Constraint exists.
 Darker areas have higher wind speeds.

-  Transmission Lines
-  3-Phase Distribution Lines
-  Parcel Lines



Map intended for planning purposes only

Map 15: Dorset Wind Resource Map for Small- and Mid-Scale Turbines. Historic landmarks and public parks are applied as known local constraints prohibiting development of any wind facilities in those areas, consistent with existing town policies. *GIS Data from VCGI.*



Preferred Site

Cell Tower Parcel

Local Constraints

Design District
 Historic Landmarks and Public Parks

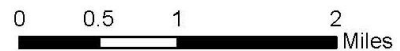
Transmission Lines
 3-Phase Distribution Lines
 Residential Structures
 Parcel Lines

wind energy facilities are not permitted



1 PRIME WIND
 Areas with high wind potential and no identified Constraints (Known or Possible). Darker areas have higher wind speeds.

2 SECONDARY WIND
 Areas with high wind potential and no Known Constraints, but where at least one Possible Constraint exists. Darker areas have higher wind speeds.



Map intended for planning purposes only

Section 10: ECONOMIC DEVELOPMENT

Dorset is a sought-after residential community, serving both year-round and seasonal residents, that offers cultural, civic, and commercial activities to residents and visitors. Over 100 commercial businesses are located in Dorset and contribute to the community's vitality. Most business activities are in service provision, with 46 establishments providing professional and business services, leisure and hospitality, and financial activities. Goods production makes up a third of private businesses, with 32 establishments in the construction, manufacturing, and natural resources sectors. Economic activity increasingly involves home occupations. Dorset recognizes its connection to its geographic setting and realizes that its adjacency to the Town of Manchester means that some employment and certain educational, recreational and cultural opportunities for Dorset residents will be accessible in Manchester. The Town will continue to cooperate with the Town of Manchester and continue to evaluate avenues to enhance cooperation and the sharing of services, facilities and opportunities of mutual benefit, including those related to economic development.

10.1 Employment by Occupation and Industry

Employment in Dorset reflects the diversity of the local economy. This is not unexpected as the community is home to few large employers. The greatest percentage of residents is employed in occupations related to management, business, science and the arts. Employment by industry sector shows a very even distribution across six of the eleven sector categories (see table 11).

TABLE 17

Total number of Dorset residents employed (over the age of 16): 1,111

Employment % by Occupation

Management, business, science and arts	48.4%
Service occupations	10.8%
Sales and office occupations	25.8%
Natural resources, construction and maintenance	9.4%
Production, transportation and materials moving	5.6%

Employment % by Industry

Agriculture, forestry, fisheries, hunting, mining	3.9%
Construction	8.3%
Manufacturing	11.4%
Wholesale trade	4.3%
Retail trade	14.1%
Transportation, warehousing, utilities	2.1%
Information	1.6%
Finance, insurance and real estate	4.9%

Professional, scientific, management, administration	11.6%
Education, health and social services	21.2%
Arts, entertainment, recreation, accommodations, food	13.4%
Other services (except public administration)	1.0%
Public administration	2.2%

Source: American Community Survey 5-Year Estimates (2017)

10.2 Wages and Household Income

TABLE 18
Per Capita Income

	2010	2017	% Change since 2010
Dorset	\$40,523	\$37,602	-7.2%
Bennington Co.	\$27,962	\$31,313	+12.0%
Vermont	\$27,478	\$31,917	+16.2%

Source: American Community Survey 5 Year Estimates (2017)

Median Household Income

	2010	2017	% Change since 2010
Dorset	\$66,367	\$73,021	+10.0%
Bennington Co.	\$47,396	\$52,251	+10.2%
Vermont	\$51,841	\$57,808	+11.5%

Source: American Community Survey 5 Year Estimates (2017)

Travel Time to Work

In Dorset 74% of the workforce spends less than 30 minutes traveling to work. This means that the majority of the population works close to or in the town of residence. Just 4.0% spend 60 minutes or more traveling to their place of employment.

TABLE 19

< 10 Minutes	24.8%
10-14 Minutes	18.8%
15-19 Minutes	20.5%
20-24 Minutes	8.1%
25-29 Minutes	1.4%
30-34 Minutes	9.6%
35-44 Minutes	8.5%
45-59 Minutes	4.3%
> 60 Minutes	4.0%

Mean Travel Time To Work: 21.1 Minutes

Source: American Community Survey 5 Year Estimates (2017)

10.3 Economic Development Goals & Policies:

Dorset aims to grow its existing agricultural and forestry businesses as thriving enterprises, to encourage clean industries, and to promote service businesses compatible with the town's rural environs. As such, the Town has identified the following goals, policies and actions.

10.3.1 Economic Development Goals

1. Dorset will have a diverse and resilient economy based on agriculture, natural resources, small businesses, recreation, tourism and light, clean industry and that is compatible with the town's natural environment.
2. Dorset will enhance its existing villages as places of economic and community activity by improving business and housing infill development opportunities, pedestrian and bicycle safety, and civic uses and public amenities.

10.3.2 Economic Development Policies

1. Dorset will make improvements for infrastructure, including broadband, vital to economic growth.
2. Dorset will pursue opportunities for job creation at wage levels which allow people to live and work in town.
3. Dorset will support industries that utilize local resources to produce value added products.
4. Dorset will seek to build partnerships with public and private stakeholder groups to capitalize on development opportunities.
5. Dorset will seek development opportunities that utilize the skills of the local labor force.

10.3.3 Economic Development Actions

1. Dorset should maintain Village Center Designations through the Vermont Downtown Program for both Dorset and East Dorset Villages and work with property owners to take advantage of associated incentives.
2. The Town should establish regular communication with representatives from the Public Service Department and key service providers to stay abreast of possible broadband or cellular communication project plans and rollouts in order to ensure input can be provided as to how such projects might best serve Dorset.

3. Dorset should undertake a Town Master Plan focusing on commercial areas to help identify appropriate business expansion and addition opportunities, as well as avenues to increase the success of existing and new local businesses. This study should build off of the findings of the Northshire Economic Development Study to assess the potential for ecotourism and outdoor recreation and the Town's needs for affordable housing and maintenance of a vibrant school system.
4. As the East Dorset Industrial Park nears capacity, the Town should continue to investigate future opportunities for siting appropriate commercial and industrial facilities.
5. Dorset should support regional economic development planning, marketing and workforce education activities through partnerships with groups including but not limited to the Bennington Industrial Corporation and their Workforce and Education Committee, the Regional Economic Development (RED) Group, and The Shires Regional Area Chamber of Commerce.

SECTION 11 IMPLEMENTATION

The Town has available to it a number of tools with which to implement the policies of this Plan.

11.1 The Town Plan

Dorset has had a Town Plan since 1970, and should keep its plan both up-to-date and in effect. It is intended that this Plan be reviewed and adopted as a guide to growth and development within the town, that it be amended from time to time as warranted by changing circumstances, and that it be reviewed at least every eight years as required by Vermont law.

11.2 The Zoning Bylaw

A zoning bylaw is the most commonly used bylaw for guiding development at the local level. Dorset has had a zoning bylaw in place since 1973. The Zoning Bylaw has been amended from time to time to bring it up to date. Once this updated Town Plan has been adopted, the Zoning Bylaw should be thoroughly reviewed in the context of this Plan.

11.3 Subdivision Development Regulations

The Town's Subdivision Development Regulations govern the procedure for, and review guidelines for, subdivision proposals within the town. Dorset has had Subdivision Development Regulations since 1987.

11.4 Additional Regulations

- a) Signs: The Town presently has a sign ordinance which was passed many years ago. The current sign ordinance is being updated, reviewed and will be adopted soon.

11.5 Mapping Program

The Town can facilitate its future planning activities by improving its map resources, in particular by pursuing a program to have both physical data and parcel data mapped in a Geographic Information System (G.I.S.). It is recommended that the Town work with the BCRC and appropriate State agencies.

11.6 Coordination with Local Boards, Commissions, Committees

Conservation issues are important to the Town of Dorset, and the Dorset Conservation Commission is an appropriate body to share the load of the Planning Commission in its pursuit of good land and water conservation practices. The Conservation Commission is charged with working with the Planning Commission to identify procedures to encourage open land preservation. The Conservation Commission could also work with the Planning Commission to pursue certain policies of this Plan such as the planning and establishment of a public system of trails and open spaces within the town. The Energy Committee is charged with carrying out the energy policies of the Town Plan to reduce overall energy use and realize cost savings for the Town and its residents. The Committee has been recognized statewide for its exemplary work, and it was successful in bringing the Vermont Climate Communities Program of the Vermont Council on Rural Development to Dorset in the summer of 2019.

There are many organizations working with the Select Board, Planning Commission, Design Review Board, Zoning Board of Adjustment and Conservation Commission. Their aim is to keep Dorset a desirable place to live, and to provide the services desired by the town's residents. These include the Prudential Committees, the Fire Districts, the Historical Society, the Chamber of Commerce and numerous church and other community groups. This Plan is intended to facilitate planning and cooperation among these groups. Further planning initiatives and discussions should involve these groups as appropriate on individual issues. It will take the efforts of many to accomplish the goals of this Plan.

11.7 New Citizen Boards, Commissions, and Committees

There is presently a Design Review Board which reviews the design aspects of development proposals within the Dorset Design Overlay Districts. The Kent Neighborhood Historical District and any new historic districts approved in the future should be brought under design review.

The Town may wish to consider additional organizations, to deal with special issues within

the town. For example, a Housing Advisory Committee could be established to assist the Planning Commission and the Town to pursue the Town's Housing Objectives.

11.8 Coordination with Regional and State Authorities

The Town is in Bennington County, and therefore within the planning area of the Bennington County Regional Commission (BCRC). The Town should work with the BCRC, when possible, to develop plans and programs which are mutually supportive.

The Town is profoundly affected by State initiatives dealing with State Highways, and with other State programs including land use regulation, land taxation, State owned lands, etc. The Town will work, when possible, with the relevant State agencies to pursue the planning policies identified in this Plan.

The State's Environmental Board, and District Commissions, review certain development proposals under Act 250. Developments required to obtain a permit under Act 250 must conform to the policies of the Town's adopted Plan. The Town will review Act 250 development proposals in the context of this Plan, and will participate in Act 250 hearings when necessary to pursue Plan policies. This plan and its energy element have been drafted to comply with Act 174 energy planning standards. Accordingly, the Public Utility Commission shall reference policies herein when making determinations regarding new electric facilities in the area.

11.9 Fiscal Management

A Capital Improvement Program is an important tool for town planning. The Town has adopted a Capital Improvement Plan for roadways and general infrastructure, public buildings, and highway equipment to help maintain the level of the property tax, to avoid peaks and valleys in spending, to contribute toward an orderly program of land acquisition, road maintenance, and other Town services, and to enable the collection of impact fees for new development.

Use Value Appraisal: The State presently has a Use Value Appraisal program which subsidizes a portion of the property taxes for actively used agricultural land, agricultural land owned by a farmer, and managed forest lands. This does not, however, give any tax relief to owners of open land whose lands may be affected by factors such as important recharge areas, deeryard, and the like. As the preservation of large amounts of open space is a key ingredient of the Town's planning policy, every effort should be made to pursue land taxation formulas which do not penalize the owners of open land.

New revenue sources: Certain Plan policies would be greatly facilitated by new revenue sources. For example, levies or "impact fees" on new developments could contribute to the costs of expanding the Town's infrastructure. A special park levy on new development could be used to buy public parkland. These options and others need to be researched and considered by the Town.

11.10 Land Acquisition

Sometimes, land acquisition is needed to implement policies of a town plan. Land may be acquired by fee simple acquisitions by a government authority or by private individuals. Increasingly, however, the acquisition of easements is becoming a common means to acquire an interest in land, either for conservation or for other purposes. The Town of Dorset may wish to consider land or easement acquisition in some cases, or may wish to work with other organizations such as the Vermont Land Trust and any other land trusts, to acquire an interest in lands important to the implementation of this plan.



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IDENTIFIED BY THE STATE OF VERMONT

INTRODUCTION:

The Vermont Municipal and Regional Planning Development Act (24 VSA Chapter 117) requires that municipalities that choose to plan must have plans that meet the specific planning goals identified in subsection 4302. The purpose of this appendix is to indicate generally how the Dorset Town Plan meets these goals, and to provide references to the areas within the Plan where one can find more specific information on how the goals are addressed in Dorset.

The format of this appendix is to quote each of the State's goals, and to provide in point form a listing of the key elements in Dorset's Plan which support that goal, along with the Section or Subsection in the Dorset Plan where additional information and/ or policies are included.

State of Vermont Goal 1:

(1) To plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside.

(A) Intensive residential development should be encouraged primarily in areas related to community centers, and strip development along highways should be discouraged.

(B) Economic growth should be encouraged in locally designated growth areas, employed to revitalize existing village and urban centers, or both, and should be encouraged in growth centers designated under chapter 76A of this title.

(C) Public investments, including the construction or expansion of infrastructure, should reinforce the general character and planned growth patterns of the area.

(D) Development should be undertaken in accordance with smart growth principles as defined in subdivision 2791(13) of this title.

Dorset Town Plan Key Elements Supporting Goal 1:

- Plan identifies a land use pattern which builds on the historic settlement pattern of development, under Section 4: Land Use Plan and Land Use Policies.
- Discourages strip development, under subsection 2.4 & 4.1.4
- The most intensive residential and mixed use development is encouraged primarily in the villages, subsection 4.2.1 & 4.2.1.1
- Small, village scale commercial development and dense residential development is encouraged in the villages. Village scale is described, subsections 4.2.1.2 & 4.1.3
- New commercial-industrial development is encouraged in designated commercial – industrial growth areas, subsection 4.2.1.3

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- Public services and facilities are encouraged to support the land use plan, for example, with encouragement for improvements to the village water systems, Section 8, subsection 8.2
- Policies to discourage new public investment in roads in the rural areas, subsection 7.5 & 4.2.2.1

State of Vermont Goal 2

(2) To provide a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards, and to expand economic opportunities in areas with high unemployment or low per capita incomes.

Dorset Town Plan Key Elements Supporting Goal 2:

- The Plan seeks to maintain agriculture and forestry as viable activities, subsections 2.4, 4.2.2.1, 5.1, 4.2.2.2, & 4.2.2.3
- High environmental standards are a key objective of the Plan, Section 5 (Resources)
- The Plan seeks to attract and encourage clean, light industry in its designated commercial industrial areas, subsections 10.3 & 4.2.1.3
- Economic development data, goals, and policies have been identified and the need for an economic development study has been noted, Section 10

State of Vermont Goal 3:

(3) To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.

Dorset Town Plan Key Elements Supporting Goal 3:

- Educational facilities planning recognizes need for additional educational facilities, possibly in cooperation with adjacent municipalities, subsection 8.1
- Private facilities recognized as an option, subsection 8.1
- Location of new commercial-industrial uses may lead to additional training opportunities within the Town, subsection 4.2.1.3

State of Vermont Goal 4:

(4) To provide for safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.

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(A) Highways, air, rail, and other means of transportation should be mutually supportive, balanced, and integrated.

Dorset Town Plan Key Elements Supporting Goal 4:

- Plan addresses various forms of transportation available in the Town, including vehicular, bicycle, pedestrian, and railway, Section 7
- Plan encourages maintenance and improvement of existing road system, subsections 7.1 & 7.5
- Better provision for bike and pedestrian transportation, subsection 7.3 & 7.5
- Encouragement of use of rail, subsection 7.4
- Energy policies are included and are in part related to transportation, Section 9 & in 7.5

State of Vermont Goal 5:

(5) To identify, protect, and preserve important natural and historic features of the Vermont landscape, including:

(A) significant natural and fragile areas;

(B) outstanding water resources, including lakes, rivers, aquifers, shorelands and wetlands;

(C) significant scenic roads, waterways, and views;

(D) important historic structures, sites, or districts, archaeological sites, and archaeologically sensitive areas.

Dorset Town Plan Key Elements Supporting Goal 5:

- Plan deals extensively with natural, scenic, and historic resources, Section 5
- Natural/fragile areas are identified on Map 3 and Map 4 and addressed in policies, subsection 5.1.6
- Water resources are identified on Map 3, and addressed in policies, Map 3, subsection 5.1.6
- Scenic resources are addressed; policies are included, and potential scenic routes are suggested, subsection 5.2
- Important historic sites are listed, and policies are provided, Table 4, subsection 5.3
- Cluster forms of development may be required to preserve important natural resources, subsection 5.1.6

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State of Vermont Goal 6:

(6) To maintain and improve the quality of air, water, wildlife, and land resources.

(A) Vermont's air, water, wildlife, mineral and land resources should be planned for use and development according to the principles set forth in 10 V.S.A. § 6086(a).

(B) Vermont's water quality should be maintained and improved according to the policies and actions developed in the basin plans established by the Secretary of Natural Resources under 10 V.S.A. § 1253.

(C) Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.

Dorset Town Plan Key Elements Supporting Goal 6:

- The Plan identifies and describes the Town's natural resources, and includes policies for resource use and protection, Section 5
- Detailed policies are included for protection of underground water supplies, subsections 5.1.3 & 5.1.6
- Wetlands are discussed and policies included, subsection 5.1.3 & 5.1.6
- Wildlife habitat lands are discussed and policies included. Wildlife habitat blocks, travel corridors, and road crossings are mapped, Map 4, subsections 5.1.2, 5.1.4 & 5.1.6
- Extractive resources are discussed and policies included, subsection 5.1.5 & 5.1.6

State of Vermont Goal 7:

(7) To encourage the efficient use of energy and the development of renewable energy resources.

(A) General strategies for achieving these goals include increasing the energy efficiency of new and existing buildings; identifying areas suitable for renewable energy generation; encouraging the use and development of renewable or lower emission energy sources for electricity, heat, and transportation; and reducing transportation energy demand and single occupancy vehicle use.

(B) Specific strategies and recommendations for achieving these goals are identified in the State energy plans prepared under 30 V.S.A. §§ 202 and 202b.

Dorset Town Plan Key Elements Supporting Goal 7:

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- Plan includes a discussion of the Town’s energy resources, and includes policies which seek to conserve energy, and which recognize the importance of renewable energy resources within the Town, Section 9. This chapter meets the requirements of Act 174.

State of Vermont Goal 8:

(8) To maintain and enhance recreational opportunities for Vermont residents and visitors.

(A) Growth should not significantly diminish the value and availability of outdoor recreational activities.

(B) Public access to noncommercial outdoor recreational opportunities, such as lakes and hiking trails, should be identified, provided, and protected wherever appropriate.

Dorset Town Plan Key Elements Supporting Goal 8:

- The Plan recognizes the importance of recreation and seeks to provide for a variety of recreation opportunities, subsection 8.8
- The Plan seeks to preserve existing recreation opportunities, subsection 8.8.1
- Develop a trails system, subsection 8.8.1
- Seek new funding sources for recreation land/facilities, subsection 8.8.1
- Maintain public access to recreation resources, subsection 8.8.1
- The Plan suggests a future recreation and open space study, subsection 8.8.1

State of Vermont Goal 9:

(9) To encourage and strengthen agricultural and forest industries.

(A) Strategies to protect long-term viability of agricultural and forest lands should be encouraged and should include maintaining low overall density.

(B) The manufacture and marketing of value-added agricultural and forest products should be encouraged.

(C) The use of locally-grown food products should be encouraged.

(D) Sound forest and agricultural management practices should be encouraged.

(E) Public investment should be planned so as to minimize development pressure on agricultural and forest land.

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Dorset Town Plan Key Elements Supporting Goal 9:

- The Plan includes policies in the Land Use Section, to protect agricultural and forestry resources in the Town’s rural areas, subsection 4.2.2
- The high forested lands of the Town are designated for forest uses, as a land use designation, subsection 4.2.2.2 & 4.2.2.3
- Cluster forms of development may be required where necessary to preserve agricultural or forestry resources, subsection 5.1.6
- The facilities and services policies support the land use plan, which encourages development in designated “growth centers,” rather than in the rural areas, Section 8

State of Vermont Goal 10:

(10) To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.

Dorset Town Plan Key Elements Supporting Goal 10

- A wide range of natural resources is addressed, including agricultural lands, forest lands, water resources, wildlife etc., Section 5
- Flood prone lands and steeply sloped lands are identified as Natural Hazard Lands, and policies are included to maintain these areas, subsection 5.4
- Extractive resources are recognized, and policies are included for their use, and for site restoration, subsections 5.1.5 and 5.1.6

State of Vermont Goal 11:

(11) To ensure the availability of safe and affordable housing for all Vermonters.

(A) Housing should be encouraged to meet the needs of a diversity of social and income groups in each Vermont community, particularly for those citizens of low and moderate income.

(B) New and rehabilitated housing should be safe, sanitary, located conveniently to employment and commercial centers, and coordinated with the provision of necessary public facilities and utilities.

(C) Sites for multi-family and manufactured housing should be readily available in locations similar to those generally used for single-family conventional dwellings.

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(D) Accessory apartments within or attached to single-family residences which provide affordable housing in close proximity to cost-effective care and supervision for relatives, elders, or persons who have a disability should be allowed.

Dorset Town Plan Key Elements Supporting Goal 11:

- The Plan reports in some detail on housing supply and affordability characteristics, subsections 6.1 & 6.2
- Policies are included to facilitate the provision of affordable housing, subsection 6.2.1
- Infill housing within the villages is encouraged, subsection 6.2.1

State of Vermont Goal 12:

(12) To plan for, finance and provide an efficient system of public facilities and services to meet future needs.

(A) Public facilities and services should include fire and police protection, emergency medical services, schools, water supply, and sewage and solid waste disposal.

(B) The rate of growth should not exceed the ability of the community and the area to provide facilities and services.

Dorset Town Plan Key Elements Supporting Goal 12:

- The Plan identifies important community facilities and services, Map 8, Section 8
- Policies are included for educational facilities, water supply, sanitary sewage disposal, solid waste disposal, emergency services, local government, public buildings, and recreation, Section 8
- Growth management policies are included with the intent that growth does not outstrip the demand for facilities and services, subsection 6.3

State of Vermont Goal 13:

(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.

Dorset Town Plan Key Elements Supporting Goal 13:

- The Plan identifies current child care provider and outlines a child care policy,

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subsection 8.9

State of Vermont Goal 14:

(14) To encourage flood resilient communities.

(A) New development in identified flood hazard, fluvial erosion, and river corridor protection areas should be avoided. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.

(B) The protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion should be encouraged.

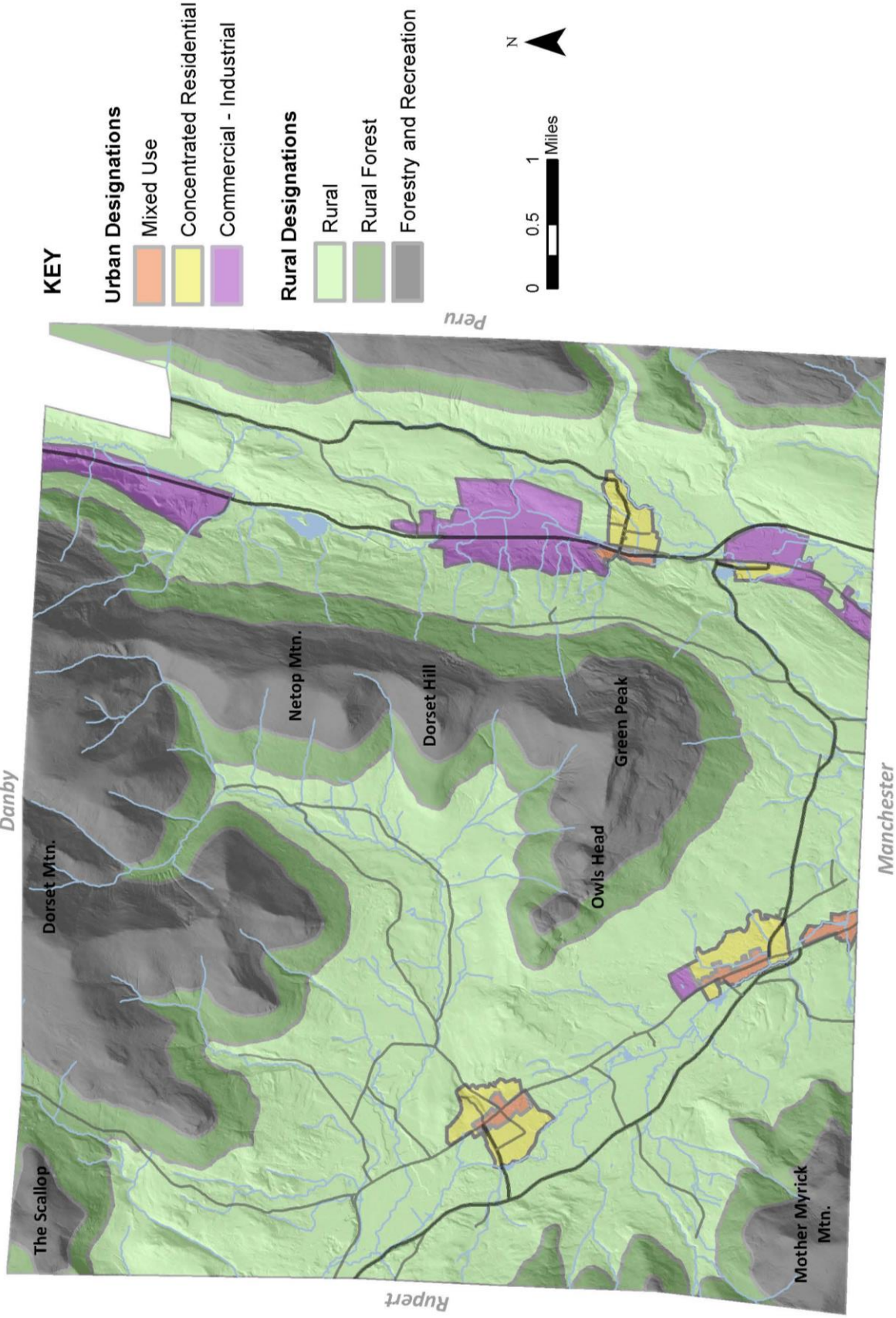
(C) Flood emergency preparedness and response planning should be encouraged.

Dorset Town Plan Key Elements Supporting Goal 14:

- Flood hazard areas section of the Town Plan identifies the need for the Town to regulate new development in flood hazard, fluvial erosion and river corridors to prevent future loss of property, Map 6, Section 5.4.2
- The Plan identifies structures in both the flood hazard area as defined by FEMA and in the fluvial erosion hazard zones, Table 5
- Surface water flood resiliency and fluvial erosion policies and actions identify issues and outline action items to address future flood loss mitigation measures, subsection 5.4.2 & 5.4.3

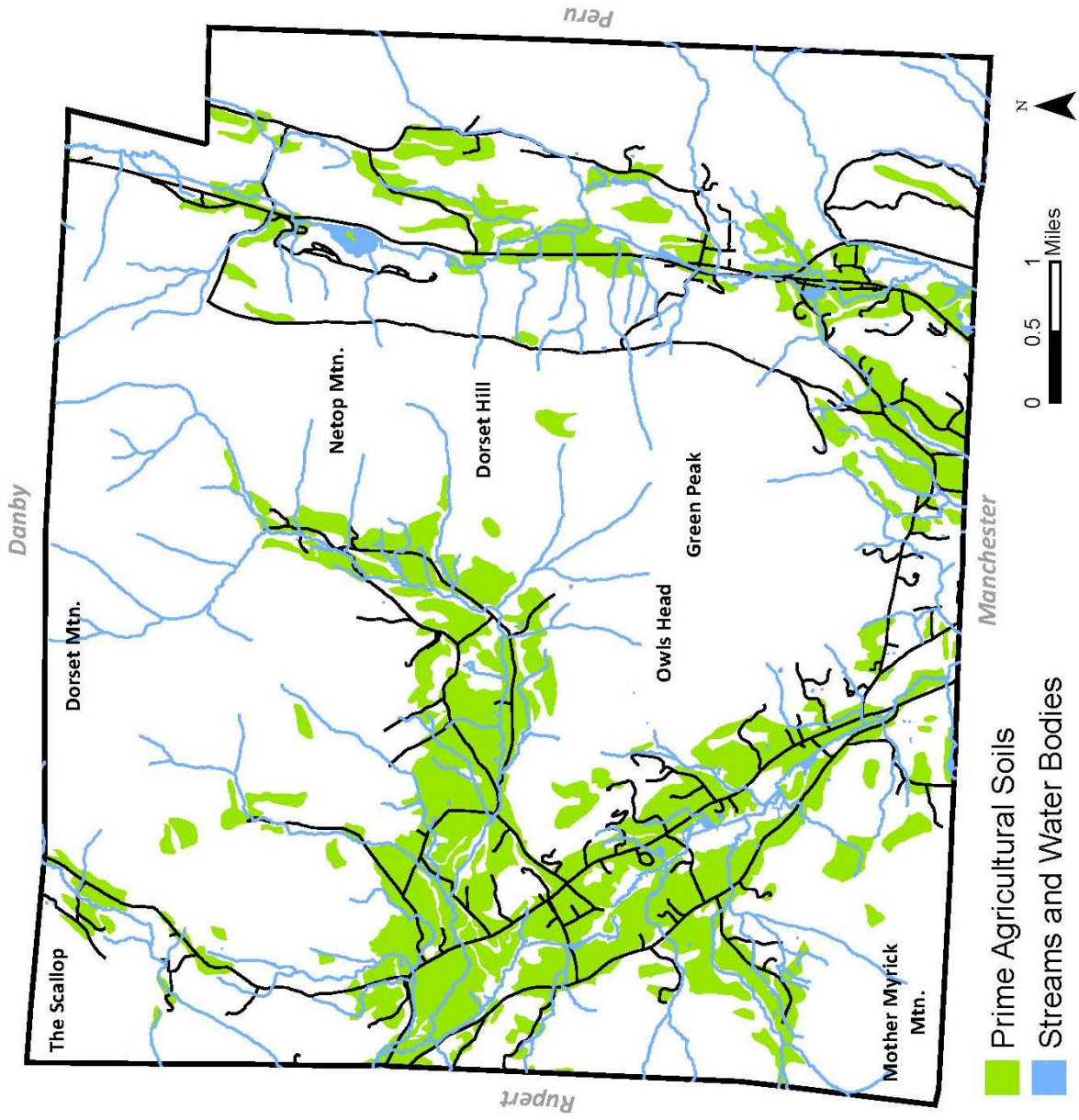
Appendix B: Dorset Town Plan Maps – Full Size

MAP 1: Future Land Use Plan



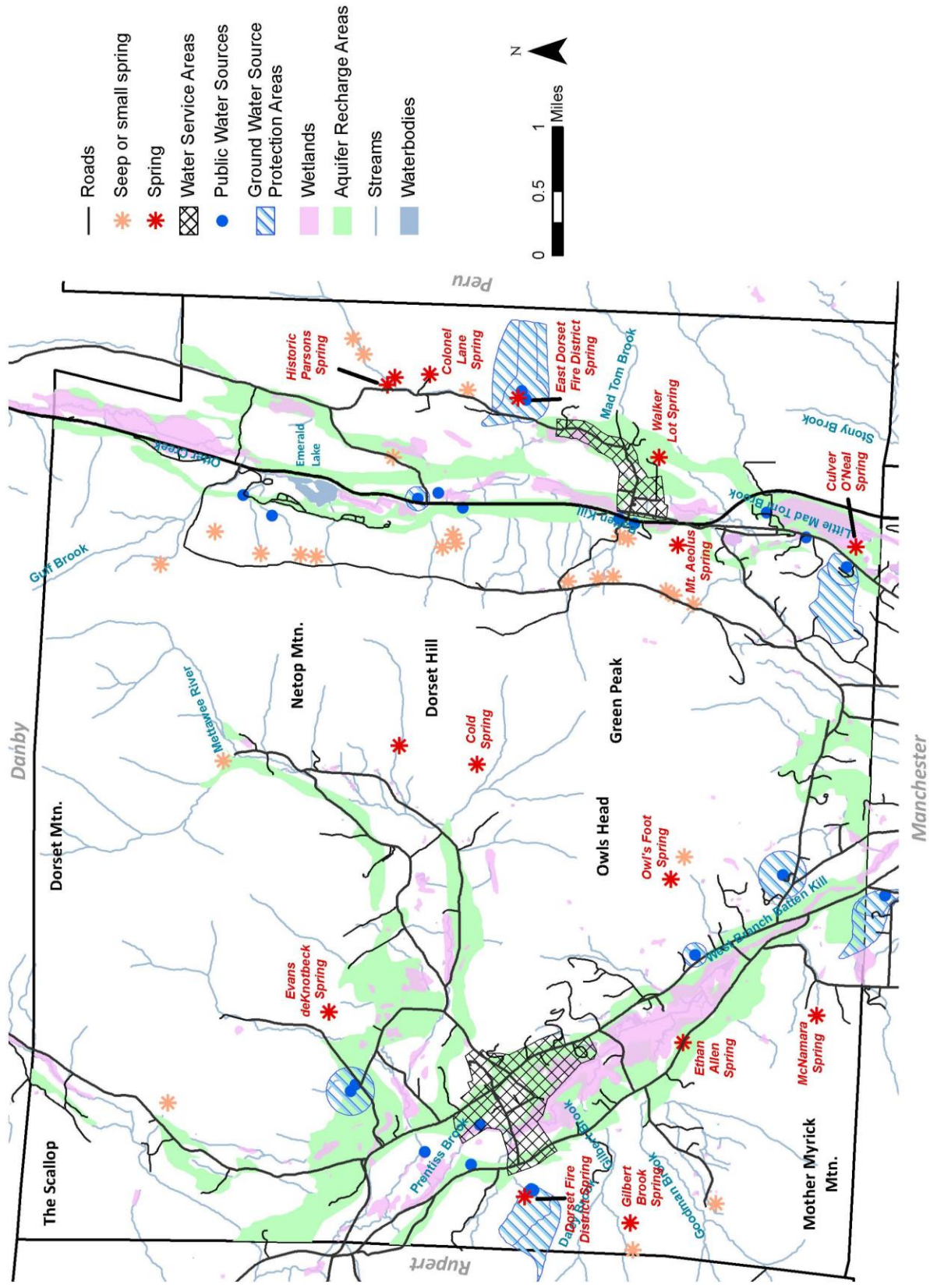
Appendix B: Dorset Town Plan Maps – Full Size

Map 2: Prime Agricultural Soils Map



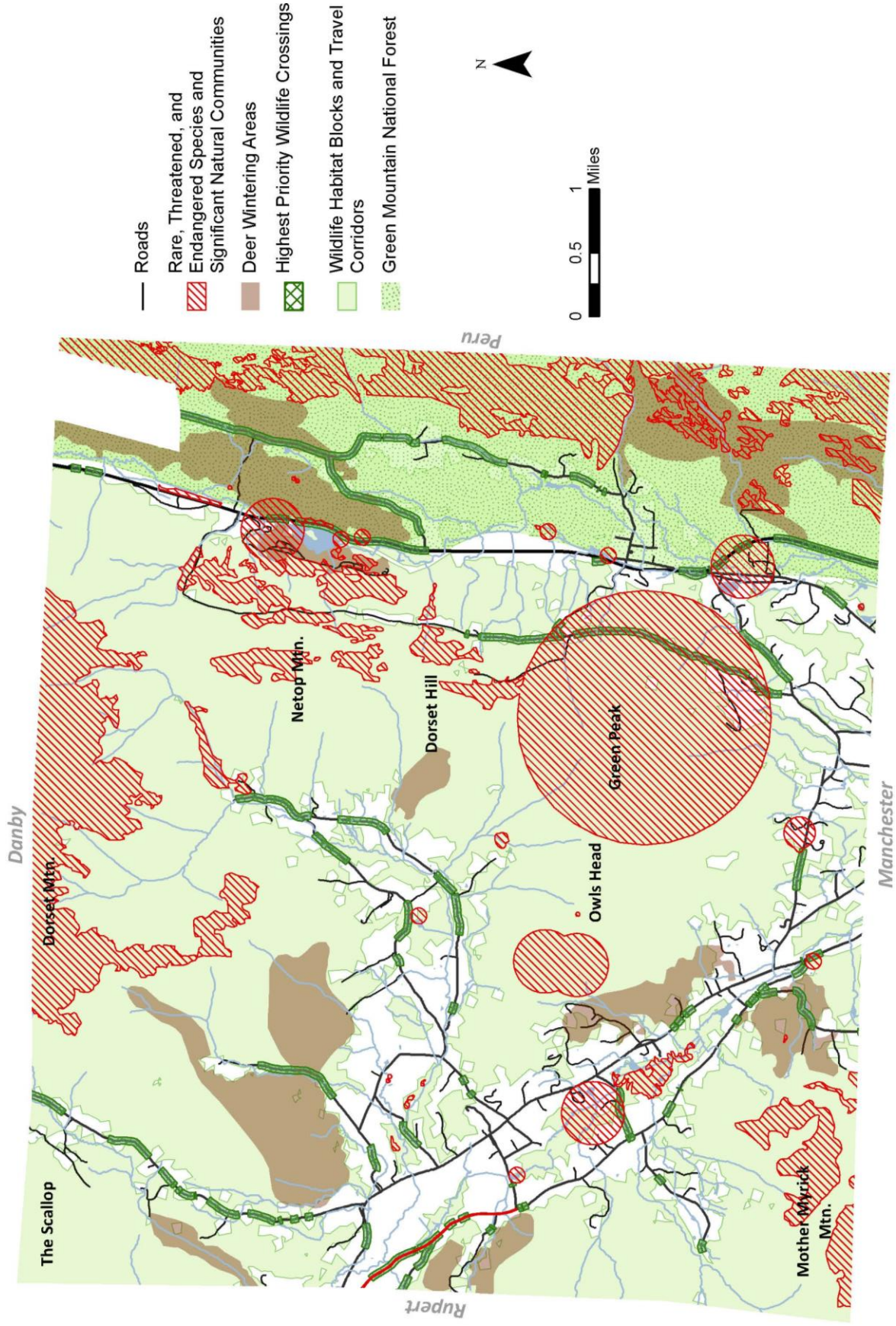
Appendix B: Dorset Town Plan Maps – Full Size

Map 3: Water Resources Map



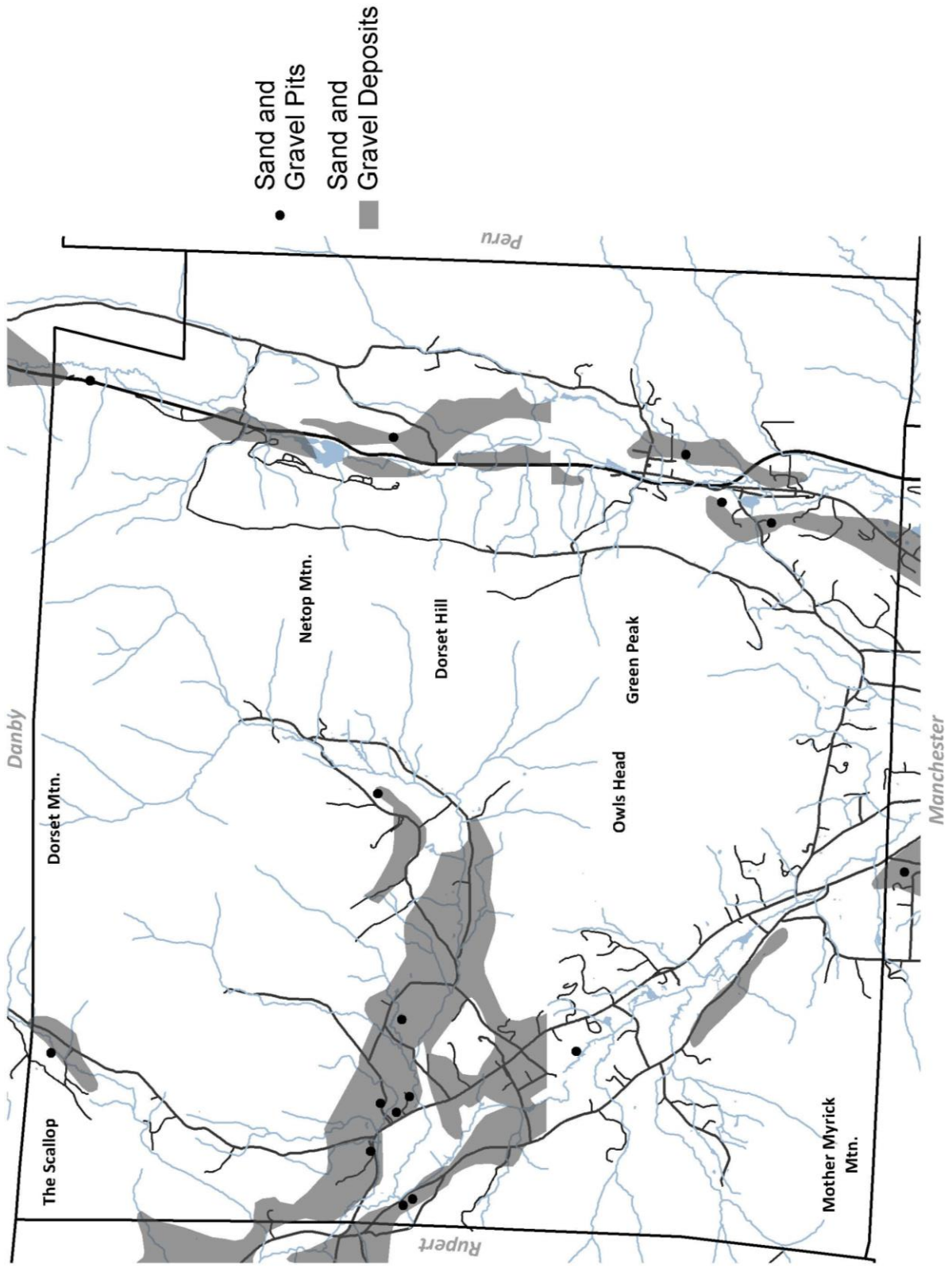
Appendix B: Dorset Town Plan Maps – Full Size

Map 4: Natural Resources Map



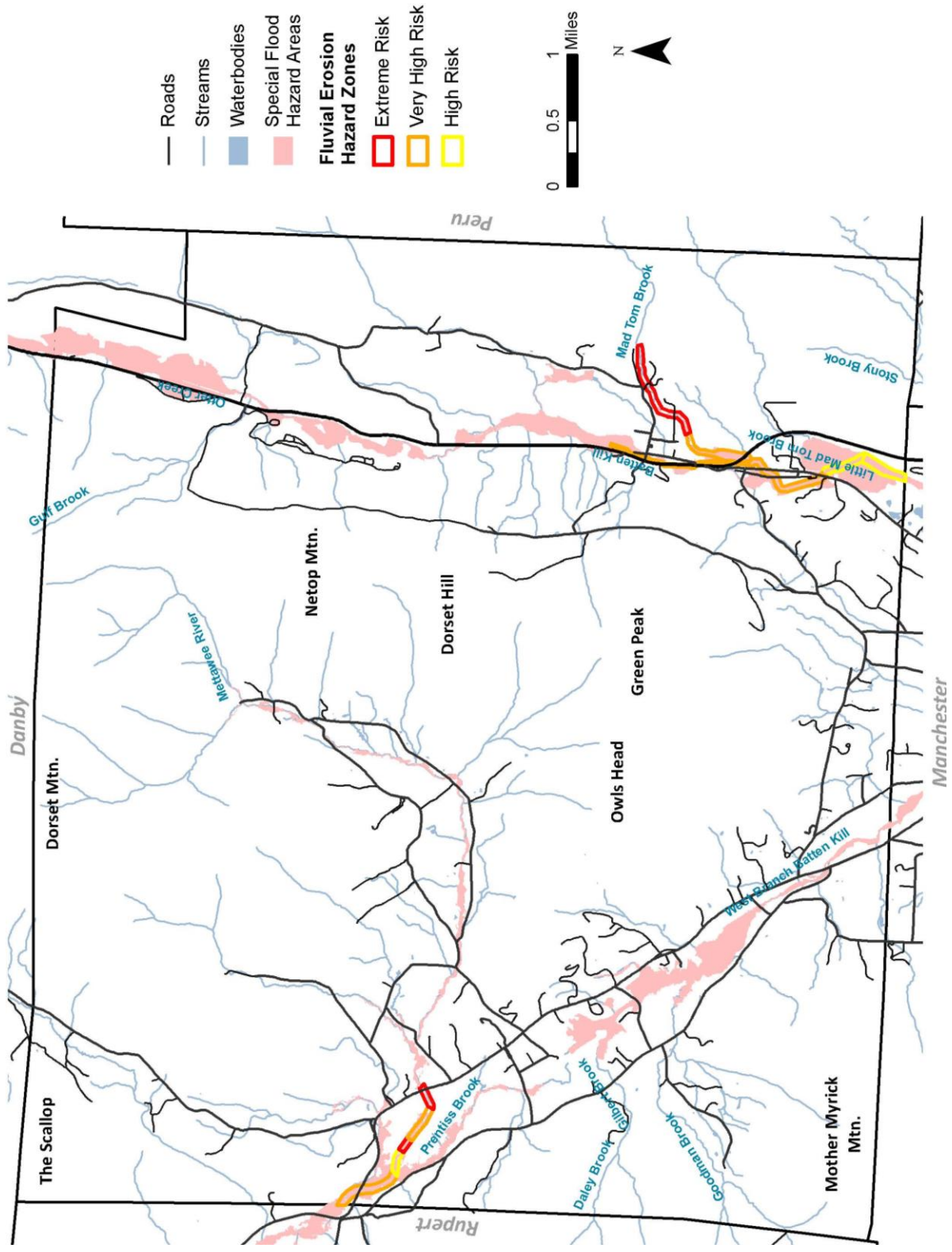
Appendix B: Dorset Town Plan Maps – Full Size

Map 5: Extractive Resources Map



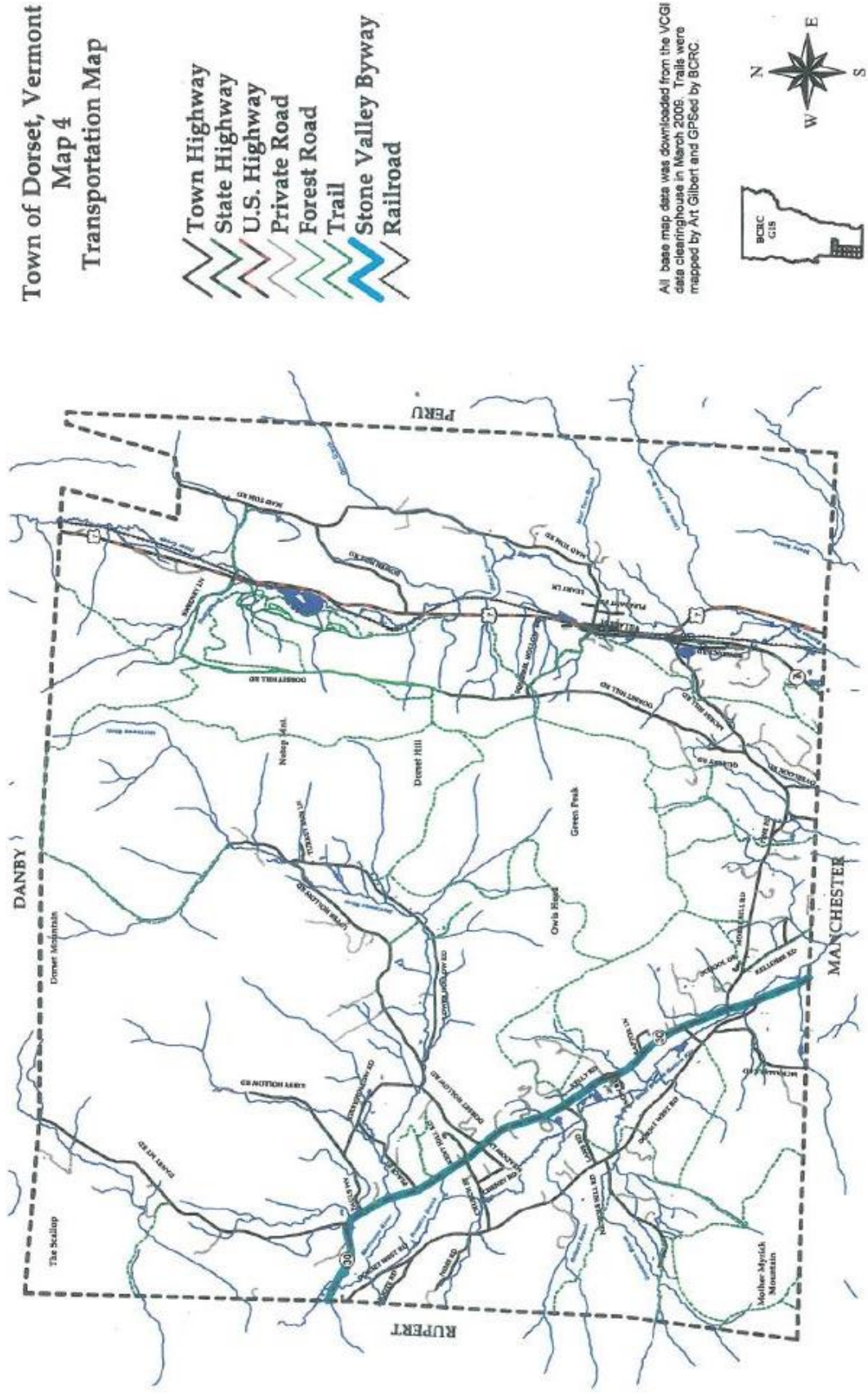
Appendix B: Dorset Town Plan Maps – Full Size

Map 6: Flood Hazards Map



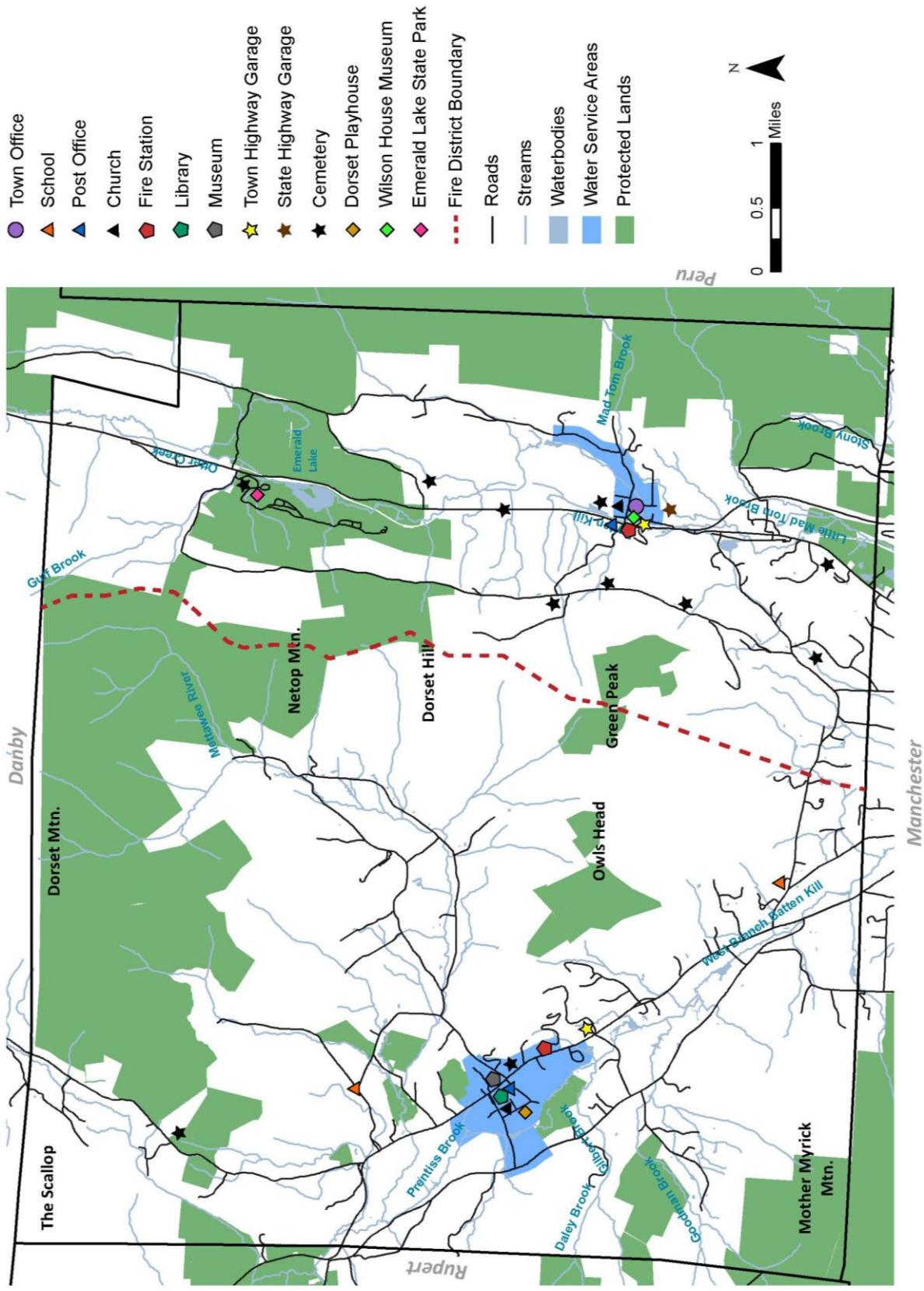
Appendix B: Dorset Town Plan Maps – Full Size

Map 7: Transportation Map



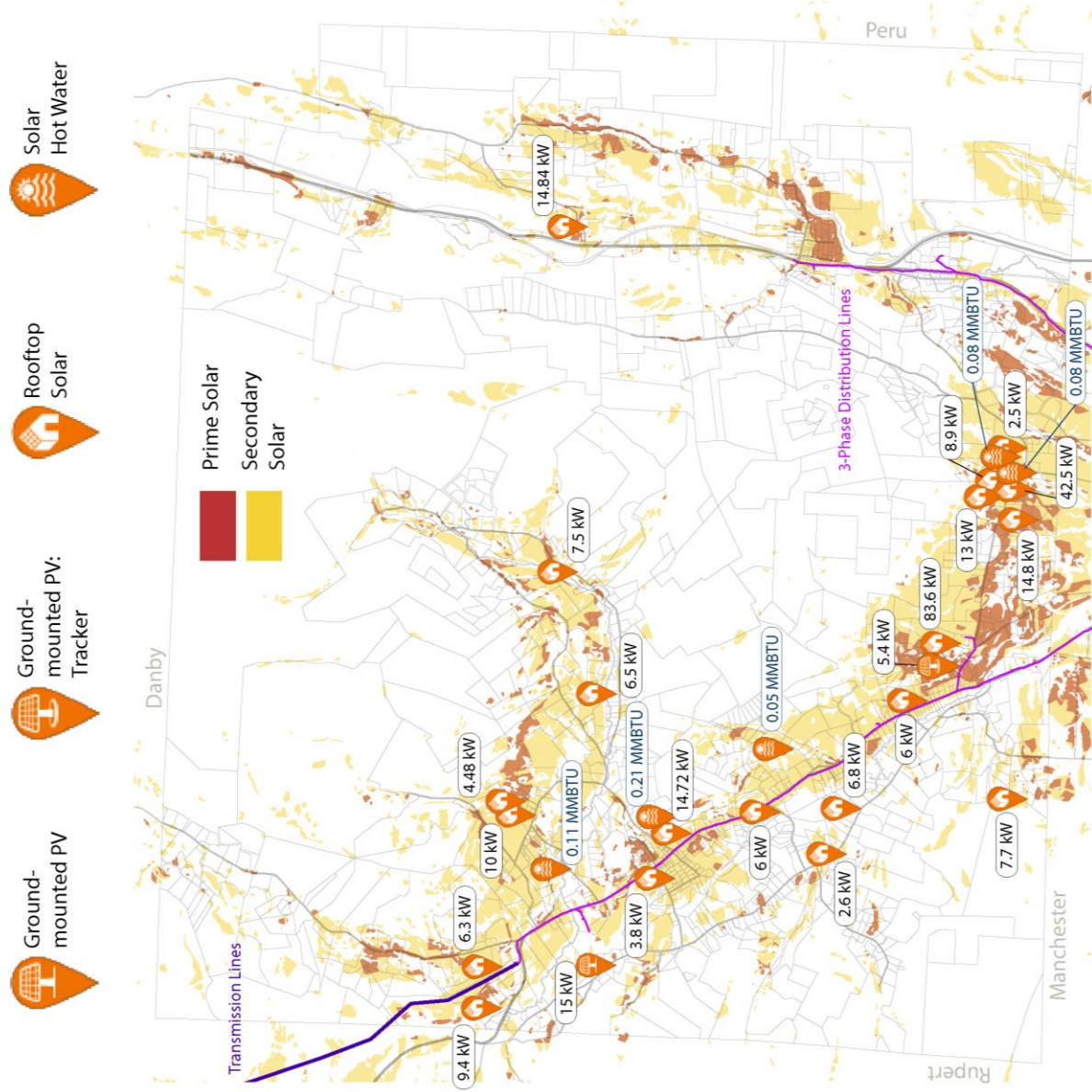
Appendix B: Dorset Town Plan Maps – Full Size

Map 8: Community Facilities Map



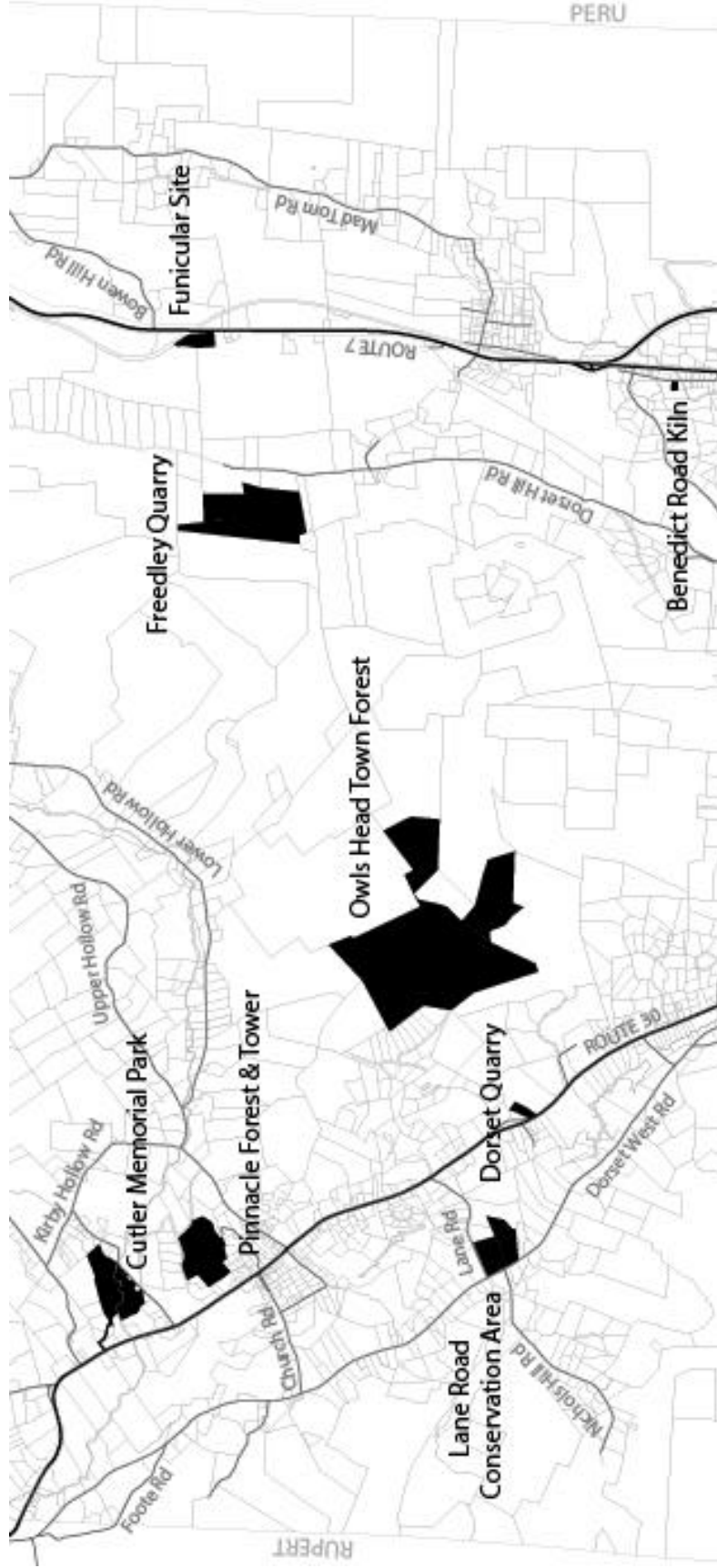
Appendix B: Dorset Town Plan Maps – Full Size

Map 9: Existing Renewable Energy Generation Sites

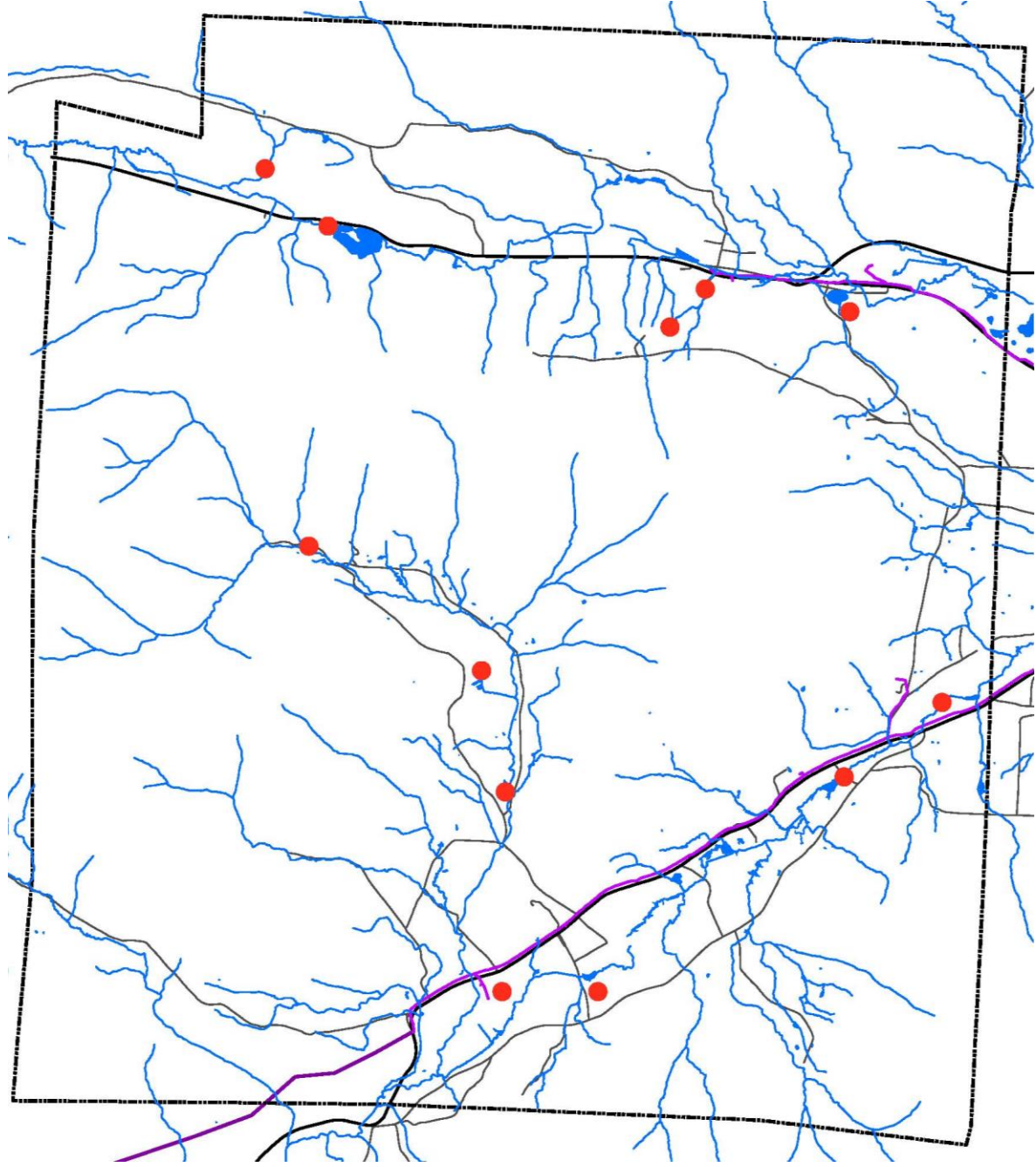


Appendix B: Dorset Town Plan Maps – Full Size

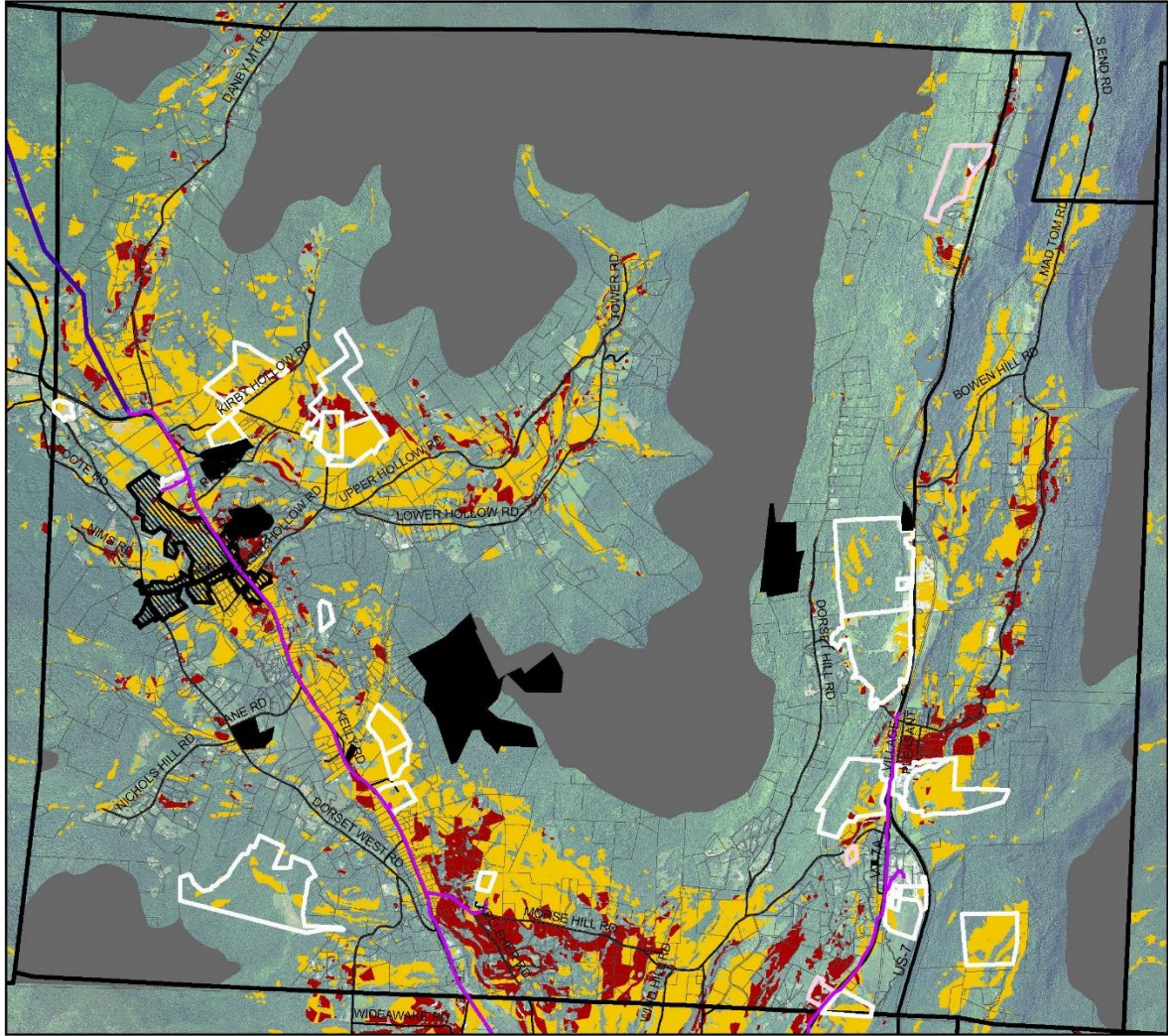
Map 10: Dorset Local Constraints



Map 11: Historic Hydro Sites








Map 12: Solar Energy Resource Potential Map




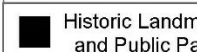

Preferred Sites

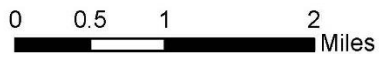
-  Preferred Sites
-  Preferred - Gravel Pit

-  3-Phase Distribution Lines
-  Transmission Lines
-  Parcels

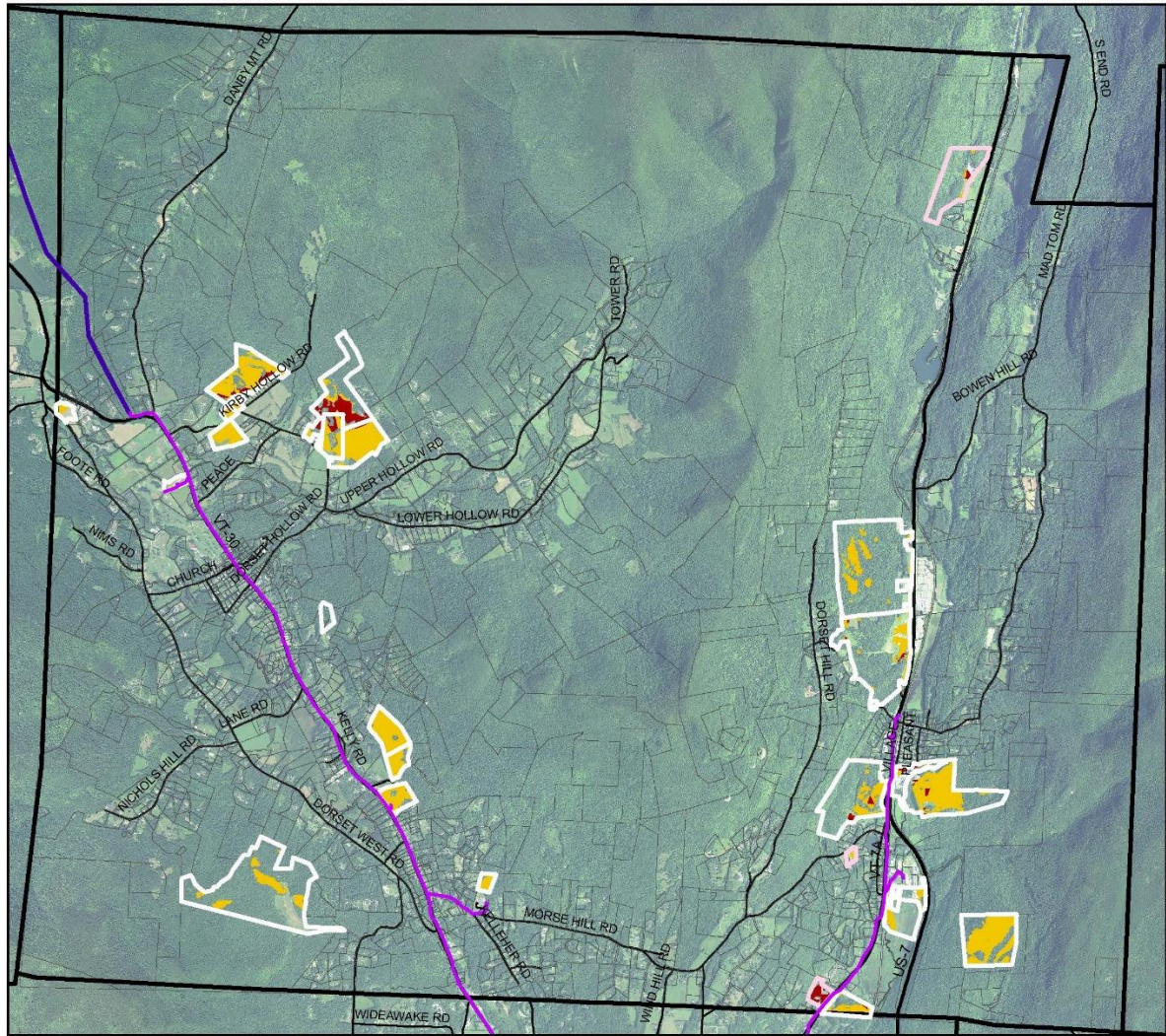
-  Prime Solar Resource - No Identified Environmental Constraints
-  Secondary Solar Resource - No Known Constraints, but at least one Possible Constraint

Local Constraints

 Design District	ground-mounted solar arrays are not permitted
 Historic Landmarks and Public Parks	solar energy facilities are not permitted, excepting installations of small-scale solar that further the recreational purposes of these areas.
 Forest I District	





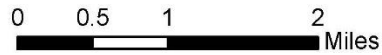
Map 13: Preferred Sites – Solar Energy Resources Map



Preferred Sites

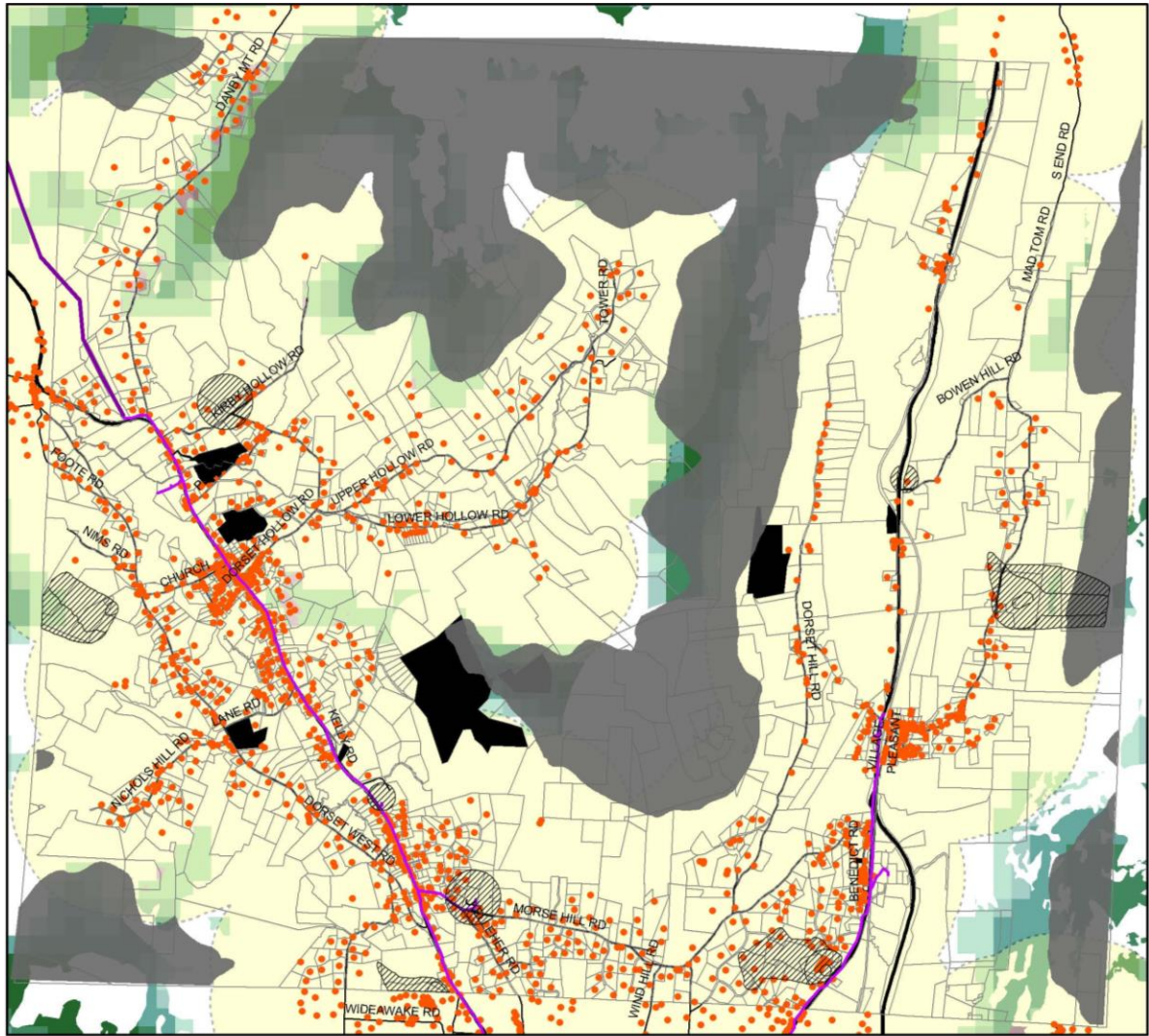
-  Preferred Sites
-  Preferred - Gravel Pit
-  3-Phase Distribution Lines
-  Transmission Lines
-  Parcels

-  Prime Solar Resource - No Identified Environmental Constraints
-  Secondary Solar Resource - No Known Constraints, but at least one Possible Constraint






Preferred sites contain about 410 total acres of prime and secondary solar resource

Map 14: Wind Resource Map – Utility-Scale





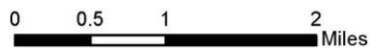
Local Constraints

-  Groundwater Source Protection Areas
-  Forest I District
-  Historic Landmarks and Public Parks

Entire Municipality: Indiana Bat Hibernaculum Area

Regional Constraint

-  1KM Residential Buffer
-  Residential Structures



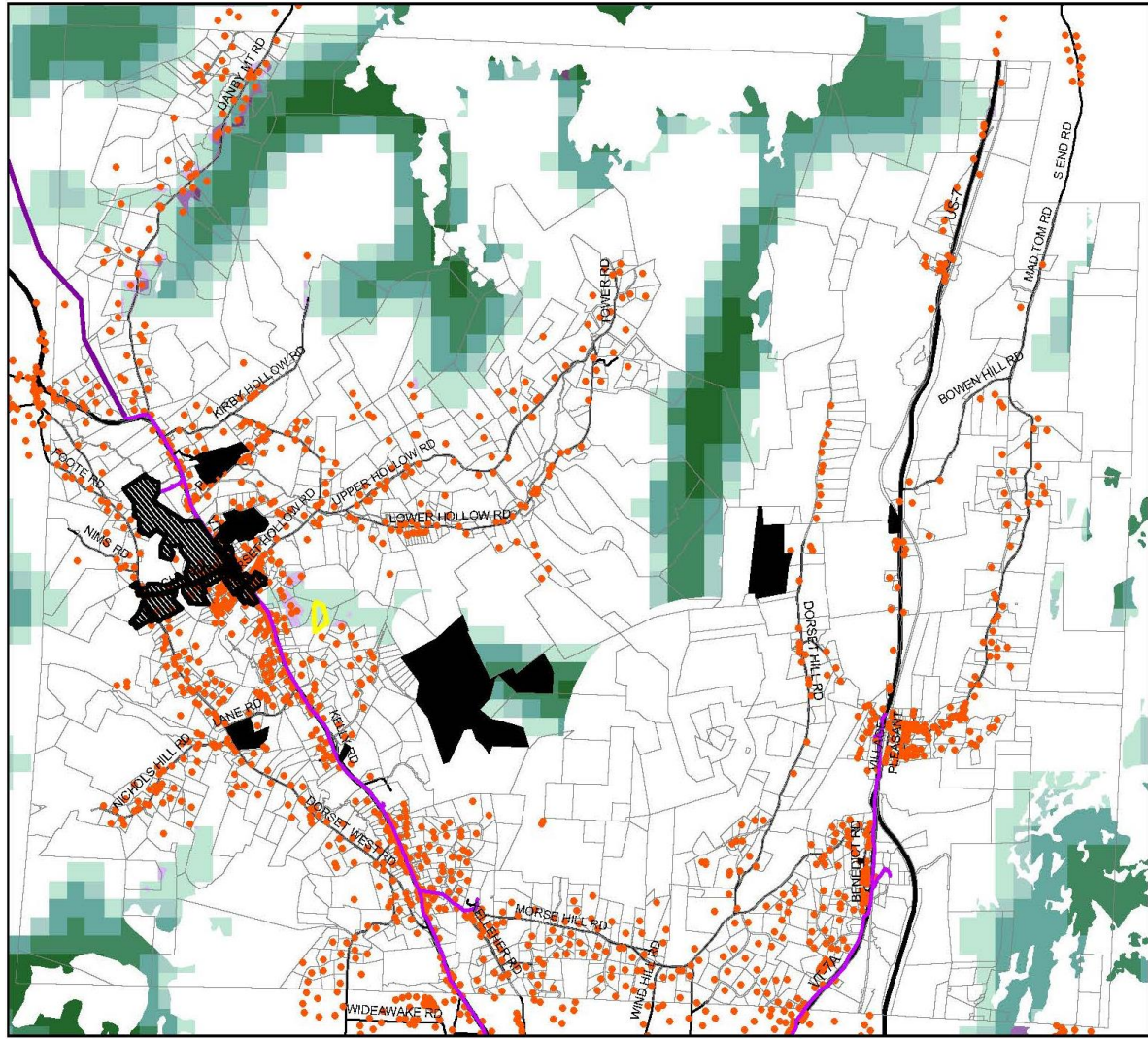
1 PRIME WIND
 Areas with high wind potential and no identified Constraints (Known or Possible).
 Darker areas have higher wind speeds.










2 SECONDARY WIND
 Areas with high wind potential and no Known Constraints, but where at least one Possible Constraint exists.
 Darker areas have higher wind speeds.

-  Transmission Lines
-  3-Phase Distribution Lines
-  Parcel Lines



Map 15: Wind Resource Map – Small- and Mid-Scale



<p>Preferred Site</p> <p> Cell Tower Parcel</p>	<p> Transmission Lines</p> <p> 3-Phase Distribution Lines</p> <p> Residential Structures</p> <p> Parcel Lines</p>	<p>Local Constraints</p> <p> Design District</p> <p> Historic Landmarks and Public Parks</p>	<p>wind energy facilities are not permitted</p>	<p>N</p> 	<p>1 PRIME WIND Areas with high wind potential and no identified Constraints (Known or Possible). Darker areas have higher wind speeds.</p> <p>2 SECONDARY WIND Areas with high wind potential and no Known Constraints, but where at least one Possible Constraint exists. Darker areas have higher wind speeds.</p>	<p>0 0.5 1 2 Miles</p> 
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