

Putney Village District Inventory

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Putney Village District Inventory

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EXECUTIVE SUMMARY

The Putney Village District Inventory was initiated because of a Town Plan action step that directed the town to “evaluate the current Village District Zoning requirements to ensure that they permit future commercial and residential growth while maintaining a healthy and vital traditional village center.”

This study first created a GIS-based inventory of buildings, parcels, infrastructure, and physical constraints. The results of this inventory are presented in this report as facts and figures on buildings, parcel land use, infrastructure, and physical constraints. This gives a detailed picture of the existing conditions in the village.

Much of the data collected are displayed on a large-scale map of the village (not included in this report) and these data were used as a base for nearly all of the maps in this report. The inventory found 196 primary structures in the village. Each building’s “footprint,” or shape, has been mapped, and a database containing the building’s name, use, parcel number, address, business name, number of living units, date of construction, number of stories, general description, and general comments has been developed.

Data on parcels in the Village (248) were developed, as were data on the location of street edges, sidewalks, and driveways. The approximate location of existing sewer lines and proposed water lines were mapped, and data on parcels served by sewer and by the proposed water system were created.

Inventory data were used as an input to a buildout analysis. The buildout analysis can help to determine the potential for growth in the Village and the effects zoning, infrastructure, and physical constraints have on growth. Findings showed that current zoning regulations allow for a great deal of growth in the village; the number of buildings just in the “core” of the Village could more than double (there are 126 existing structures, and the potential for 311 more). The likelihood of this additional development taking place, however, is hampered by current parcel, building, and road configurations, and by physical constraints.

The buildout was run again considering constraints, and this showed a considerable reduction in the number of potential new buildings. As such, potentially developable land in the village core is somewhat scarce. The Town should consider applying for a Community Development Block Grant (CDBG) to develop an overall master plan for several sites in the village with the highest development potential.

Pedestrian issues in the Village are discussed. Main Street in Putney has the highest traffic flow on any non-interstate highway in the Windham Region outside of Brattleboro. Suggestions are provided for further examination of traffic and pedestrian issues.

Putney’s Wastewater Treatment Facility serves much of the village core area. There is sufficient hydraulic capacity to accommodate additional growth in the village (the

equivalent of over one hundred new homes or of retail development accommodating thousands of employees). The present organic loading capacity (or Biochemical Oxygen Demand) would allow for a good deal of residential growth in the village, but additional food related business may stress the organic capacity of the facility. New rules for on-site septic systems may change the development potential of parcels outside the sewer service area, and these changes should be investigated.

There is no municipally-owned public community water supply system in the Town of Putney. All water is supplied by individual wells. There are significant problems with both water quality and water quantity in the village, and the Town is planning for construction in the fall of 2004 of a municipal public water supply system. The feasibility study for this system documents the water issues in the village, and indicates that future development in the village would be seriously constrained should the village continue to rely on individual water supply wells.

Designating the village as a growth center would allow the town to seek funding from the Vermont Agency of Natural Resources for wastewater treatment facilities. Such designation can be done as an amendment to the Town Plan, or during the next revision of the Plan. Growth center designation and construction of a municipal water system will both help to maintain a viable village center in Putney.

A discussion of the Village Zoning District boundary is included. Some possible changes to the boundary are suggested, but any changes would depend on the Town's desire for more or less growth these areas.

Putney's Zoning Regulations were reviewed as they pertain to the Village Zoning District. A number of recommendations were made that would improve and strengthen the zoning regulations. These recommendations include parking, setbacks, density bonuses, and the addition of detailed performance standards.

BACKGROUND AND PROJECT GOALS

The 2000 Putney Town Plan includes as one of its Land Use actions the task to: “evaluate the current Village District Zoning requirements to ensure that they permit future commercial and residential growth while maintaining a healthy and vital traditional village center.” Town Plan policies indicate a desire for most of Putney’s commercial and civic activities to be located in the Village. Residential uses are also recognized as a vital part of the Village.

To accomplish the task of evaluating the Village Zoning District, the Town of Putney Planning Commission applied for and received a Municipal Planning Grant from the State of Vermont to conduct a detailed inventory and assessment of the Village. The Windham Regional Commission (WRC) is acting as project consultant to the Town to evaluate the Village Zoning District.

The goals of this project are to:

- 1) examine the existing conditions in the Village, including structures, parcels, physical constraints, and infrastructure;
- 2) determine what kind of growth can take place in the Village given these existing conditions and the Town’s zoning regulations; and
- 3) review the zoning regulations to determine if they inhibit or permit the maintenance and enhancement of the Village as the major economic and social center of the Town, and provide recommendations for changes or further investigation.

The project examines existing conditions through an inventory of the Village. Structures, parcels, physical constraints, and infrastructure were inventoried and are stored in a Geographic Information System (GIS) file format. In addition to this, a more qualitative inventory was done by conducting an extended walking tour through the Village to develop a written analysis of the general character.

The project explores the growth potential in the Village by performing a buildout analysis. The analysis first determines the maximum number of potential new structures based upon current structures, parcel configurations, and zoning. Next, in a more qualitative, subjective manner, physical constraints and the relative likelihood of any one parcel being developed are factored in to provide a more realistic potential for growth based on existing conditions.

Finally, by looking at the results of the buildout, we are able to speculate with confidence regarding the effect zoning, physical characteristics, and other factors might have in maintaining and growing the village as the economic and social center of town.

The final products of this project are:

- 1) a GIS-based inventory of buildings, parcels, infrastructure, and physical constraints;
- 2) a buildout analysis stating the potential for growth in the Village and the effects zoning, infrastructure, and physical constraints have on growth;
and
- 3) a review the zoning regulations and recommendations for action to help the town meet its goals for the Village.

PUTNEY'S PLANNING GOALS

The Town Plan, adopted October 10, 2000, expresses the need to “maintain the Village as the major economic and social center of Putney¹.” It also states that the Rural Residential District “contains lands which are already committed to rural development or which appear capable of accommodating a significant proportion of the expected growth of Putney²,” and “that commercial development be restricted to the present commercial districts in the Village and existing areas of commercial development along Route 5 and River Road³.” Putney’s Zoning Districts are shown on [Map 1](#).

Persons who responded to the Community Survey of 2000 expressed support for these actions. They emphasized a desire for higher-density housing near the Village center and strong support for limiting commercial growth to the Village.

There are presently two commercial zoning districts along Route 5 outside the Village, each of which previously contained several commercial businesses. There has been discussion about eliminating these two districts because they were originally created to accommodate the existing businesses. Most of these businesses have closed, resulting in very little commercial activity in these areas.

In summary, the Village will be asked to accommodate most, if not nearly all future commercial uses in the town. In addition, most civic and social uses (e.g. municipal, religious) should be located in the Village. Finally, while the Rural Residential District has been established to accommodate the majority of residential growth, maintaining the Village’s existing residential uses and encouraging residential growth is important to maintaining a healthy and vital traditional village center.

This study examines the Village Zoning District with these goals in mind.

¹ Putney Town Plan, Page 18, General Policies #1

² Putney Town Plan, Page 25 [Rural Residential Districts](#)

³ Putney Town Plan, Page 18, General Policies #4

INTRODUCTION

DEFINITION OF THE WORD “VILLAGE”

The word “village” is used throughout this report. It has a number of different meanings, both officially in Vermont planning parlance, and generally in common usage. Below is a listing of some of terms that incorporate the word “village.” Capital letters are used for terms that are of, or relate to, official or legal standing.

the village – a generic term to describe those areas of compact development that include residential, commercial, industrial, and/or public/municipal structures. It may also include those areas of less compact development adjacent to these more compact areas. It has no official definition, designation, or boundaries, and each person may have a different opinion as to where the village boundary is, but in general it is what most people associate with the word “village.” The terms “traditional village,” “village center,” or “center of town” may also be used.

Village Zoning District or Village District – that portion of the Town of Putney designated as “Village” in the zoning bylaw. The District has specific, officially defined boundaries such as the town line, Sacketts Brook, roads, or setbacks from roads. In Putney, it includes the “village,” as defined above, along with both developed and undeveloped lands adjacent to this village.

the village core – a term used in this report to refer that portion of the Village Zoning District that includes and is adjacent to the traditional “village.” It is the Village Zoning District exclusive of the area along Westminster Road north of the top of Kimball Hill.

Designated Village Center – a term used in this report to refer to a “village center designation,” an official designation provided for in Vermont Statutes and administered by the Vermont Downtown Program, Department of Housing and Community Affairs. Village center designation comes about through an application process, and the village center itself is officially defined with specific boundaries. Putney has village center designation.

HISTORY

“In 1790 there was no real Village center. Settlers built on the lots that were scattered throughout the Town. There were 12 school districts, each with its own school; conveniently located taverns; several stores; and several churches. As the population slowly shrunk, the homes on the highest elevations were left vacant....The successful mills were not in the hills, but on the lower falls of Sacketts Brook and on East Putney Brook...The first paper mill, in its current location, dates from before 1820...By 1840 there were two recognizable centers, the "Village" and East Putney....Most of the old houses and buildings in the Village survived and it was recognized as a Historic District

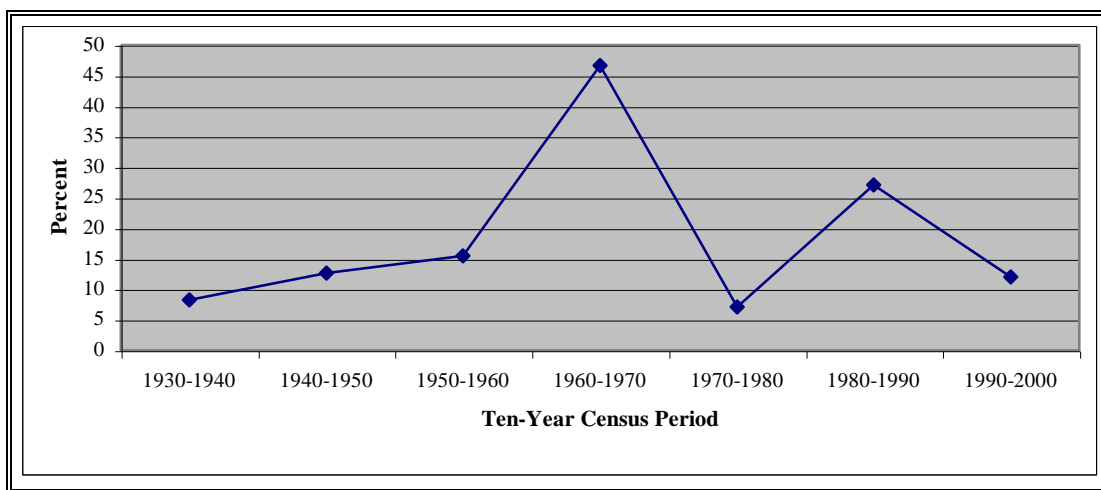
in 1985....Today there is a distinct Village center, and only one public school instead of twelve⁴.”

Table One - Population

	1940	1950	1960	1970	1980	1990	2000
Putney	904	1,019	1,177	1,727	1,850	2,352	2,634
Windham Region	29,501	30,469	31,319	34,986	38,597	43,405	46,453
Vermont	359,231	377,747	389,881	444,732	511,456	562,758	608,827

Sources: U.S. Census, 1940 – 2000

Figure One - Percent Population Growth Over Each Census Period



Population in Putney has grown every decade during the past sixty (60) years. The largest percent growth was seen in the 1970 Census when the growth was 46.7 percent during the previous ten years. Putney’s population grew by 12 percent from 1990 to 2000. No projections based on current census data are available, but past predictions indicate a similar growth rate during the next decade. Based on current information, the majority of this growth is expected to occur outside the village core.

VILLAGE GROWTH

Organic Growth

The Village of Putney is a mixed-use community that exhibits many of the characteristics of organic growth. Organic growth is natural and comes about over time with few limitations on the proximity of uses. It is based on economic structure: market; handicrafts; trade; social structure (craftspeople, merchants, clergy); physical structure (plan, public buildings, fortification); legal foundation (constitution); and situation (land, waterways, bridges, and political vitality). Most communities grew this way during the

⁴ Putney Town Plan, pages 9 and 10.

eighteenth and nineteenth centuries. A typical example is the paper mill surrounded by other commercial uses and residential uses across the street. For villages to remain viable, village zoning districts should continue to encourage the mixed-uses that are representative of organic growth, but they should discourage uses that have a negative effect on the health, safety, and welfare of the village residents.

Mixed-Use Village

Because of organic growth, villages tend to develop as fairly dense and diverse mixed-use communities with commercial and industrial areas surrounded by residences. Putney, Bellows Falls, and Brattleboro are good examples of villages that have grown to different scales with these kinds of mixed-uses. As villages grow, more residences are built with easy access to the commercial and industrial areas. In Putney, housing now makes up the majority of the buildings. Types of housing range from the traditional single-family to multi-family type structures and commercial buildings have become the second most common building type in the Village.

PUTNEY VILLAGE INVENTORY

DESCRIPTION

The study examines the Village Zoning District of the Town of Putney (see [Map 1](#), Zoning Districts, and [Map 2](#), Existing Conditions). The District includes the traditional village of Putney, lands adjacent to the village, and the more densely developed areas along Westminster Road.

The Village Zoning District is 515 acres⁵ in size. It encompasses the traditional village center, which is that area along Route 5 from the Town of Dummerston line north to River Road, the side streets off Route 5 (Old Depot Road, Old Route 5, Christian Square, West Street, etc.), Kimball Hill, and Westminster Road north to slightly beyond West Hill Road. The village also includes land on the east side of Putney Landing Road down to the Connecticut River.

The Village District, as mentioned, includes the traditional village center, which contains a mixture of residential, commercial, and civic buildings. The area along Route 5 south of Westminster Road is relatively flat. To the east of Route 5 and Old Depot Road the land drops off steeply into a ravine formed by Sacketts Brook. To the west of Route 5 and Old Route 5 the land rises moderately and steeply to the west. North of Westminster Road, land to the east of Route 5 is steeply sloping, and to the west is moderately sloping and contains wetlands. Development is moderate to dense along the roads in this area of the village, with the exception of the southern portion, where development is light to moderate. Steep slopes farther back from existing roads limit development in these areas.

Lands along the Kimball Hill-Westminster Road corridor are gently to moderately sloping. Wetlands of Sacketts Brook border the corridor to the east. Development in this corridor is dense along Kimball Hill, then becomes light to moderate along Westminster Road, where open land is found.

The boundaries of the Village District on the south are the Dummerston town line and the Connecticut River. Continuing north, the boundary is 750 feet west of Old Route 5 on the west, and coincides with Sacketts Brook on the east. North of the point where Old Route 5 and Route 5 intersect, the boundary is a 750-foot setback from Route 5 to the east. To the west, the boundary is a 750-foot setback from Route 5, and from Kimball Hill and Westminster Road.

A quarter century ago, zoning and land use district boundaries were routinely established by using specified distances back from roads. Putney's zoning district boundaries are no exception. The underlying principal was to allow development to be concentrated along roads for ease of access and proximity to services and out of the less accessible interior undeveloped areas. In some instances, no consideration was given to environmental,

⁵ Per Geographic Information System (GIS) data.

infrastructure, and other land use factors; this oversight is somewhat understandable as detailed data on such factors were not readily available. Today, however, data on parcel lines, buildings, wetlands, soils, and the like are all available, and these data allow planners to make better land use decisions. As a result, a discussion of the effectiveness of the Village District boundary is found later in this report.

VILLAGE INVENTORY COMPONENTS

A great deal of data were developed on the existing features in the village during 2002, including structures, parcels, infrastructure, and physical constraints.

Structures

A total of 274 structures in the Village were inventoried. Of these, 196 are considered primary structures. That is, they are occupied to some extent, and are residential, commercial, industrial, or public/civic buildings. Garages, sheds, outbuildings, and the like generally are not considered “primary” buildings. In most cases, these primary structures are those that have an address and are represented in Vermont Enhanced 911 data.

Locational information for all structures is stored in a Geographic Information System (GIS) data file called FT_PRINT. Each structure’s building footprint, or building shape, is stored as a polygon and each building footprint contains a unique identification number and an address.

Descriptive, or attribute, information for all structures is stored in a Microsoft Access database file called INVENTORY.MDB. Every structure in the village has a record in the database. Information for each building includes a unique identification number, name, use, parcel number, address, business name, number of living units, date of construction, number of stories, general description, and general comments. This database file can be linked to the building footprint information using GIS software.

Detailed information on how the building footprint information was developed can be found in the GIS documentation file for FT_PRINT in the appendix. A detailed description of the content and structure of the inventory database can also be found in the appendix.

Parcels

Information on parcels in the Village was initially assembled using existing data sources from the Town of Putney, supplemented with information developed by Windham Regional Commission (WRC). A total of 248 parcels are located partially or wholly within the Village District. The primary source for parcel information was the Town’s digital tax map data. These data were obtained from Cartographic Technologies, Inc. (CTI), of Brattleboro, VT.

Locational information for all parcels is stored in a GIS file (PARCEL.SHP) as polygons. Parcel boundaries were edited where necessary by WRC to conform more closely to the structures data and digital orthophotographs. The parcel data are current to 2002. These data are used for tax purposes and general parcel reference only, and are not of survey quality.

Attribute information for each parcel is stored in several different files. A copy of the grand list that links to the GIS parcel data was obtained from CTI, and this file (GL_2002.DBF) contains information on parcel owner and acreage.

A file named PARCVILL.DBF was created by WRC and contains additional parcel information pertinent to this study. Much of this information, however, was only collected for the 176 parcels located in that portion of the Village District that can be thought of as the village core. This “core” area is the Village District exclusive of the area north of the top of the hill on Westminster Road.

The PARCVILL file also links to the GIS parcel data and contains information on use, square footage, sewer status, development restrictions, and in a few cases a general description. The file also contains information pertaining to the buildout analysis, addressed later in this report. A detailed description of the content and structure of this database can be found in the appendix.

Infrastructure

Information on roads, sidewalks, water, and sewer were collected in a variety of formats.

Data on road edges, sidewalks, and driveways were developed by WRC and are stored in GIS data files. These data were developed primarily for reference purposes on maps using a GPS receiver and digital orthophotographs. Detailed information on these files, STR_EDGE, SIDEWALK, SDWKEDGE, and DRIVES, can be found in their corresponding GIS documentation files in the appendix.

The Town’s Wastewater Treatment Facility serves a portion of the Village. The file SEWERPAR.DBF lists parcels that contain buildings connected to the sewer system. There are 109 parcels that meet this criteria. The GIS file SEWERDST contains the extent of the sewer service area, which is the area of the Village in which a connection to the sewer system would be possible, though a connection may or may not be likely. The GIS file SEWERLIN contains the approximate location of sewer lines in the village.

Currently there is no municipally owned public community water supply system in the Town of Putney. All water is supplied by individual wells; however there are some individually owned public community and public non-community water systems in the Village. These systems serve either residents of the facility or patrons or users of the establishment. The residents of Putney have voted for and approved the construction of a municipal water supply system to be built in the fall of 2004, due to concerns about the quantity and quality of water available to village residents and businesses.

The file WATERPAR.DBF lists parcels that would potentially be served by the proposed municipal water system. The GIS file WATERLIN contains the approximate location of the proposed water lines in the village.

Physical Constraints

Data on wetlands and steep slopes were used as part of this study. Wetlands information was taken directly from Vermont Geographic Information System data on Vermont’s Significant Wetlands Inventory. These data were developed at a fairly small scale relative to this analysis (i.e. the data are not highly precise compared to the other data in the Inventory), but are adequate for general planning purposes.

Steep slopes were located using a number of data sources. Data from the Windham County Soil Survey, U.S. Geological Survey Topographic Maps, Vermont orthophotos, stereo aerial photographs, and other data sources were all used to create a composite data layer of steep slopes. In general, areas with a slope of 25 percent or greater were classified as steep. In many places, particularly along the sides of the ravine formed by Sacketts Brook, these areas contain slopes much steeper than 25 percent.

VILLAGE INVENTORY RESULTS

The results of the village inventory are displayed in map form on [Maps 2, 3, 4, 5, and 6](#). The inventory shows 274 buildings in the Village district. In the village core, there are 196 buildings. Of these, 148 are “primary” buildings (i.e. not accessory structures like barns and garages). Sixty-five percent of these buildings are residential, while 24 percent are commercial. [Maps 2](#) and [3](#) show the existing structures in the Village.

Table Two - Building Use

	Primary					Secondary	Total
	Residential	Commercial	Industrial	Municipal	Total Primary	Accessory	
Village core	96	36	3	13	148	50	198
Outside core	42	5	-	1	48	28	76
Total	138	41	3	14	196	78	274

The Village District contains 247 living units. Nearly half (121) of these living units are located in multiple unit buildings, all but one of which are in the village core. Twenty buildings that are primarily of commercial use supply 37 living units.

Table Three - Buildings with Living Units

	Buildings with a Single Unit	Buildings with Multiple Units (# units)	Total Buildings
Village core	85	31 (119)	116 (204)
Outside core	41	1 (2)	42 (43)
Total	126	32 (121)	158 (247)

Table Four - Building Use and Living Units

	Residential Buildings with a Single Unit	Residential Buildings with Multiple Units (# units)	Commercial Buildings (# units)	Total Buildings
Village core	75	21 (92)	20 (37)	116 (204)
Outside core	41	1 (2)	-	42 (43)
Total	116	22 (94)	20 (37)	158 (247)

There are 248 parcels wholly or partially in the Village District. The village core contains 176 parcels. Use of each parcel was determined by the use of the primary building on that parcel. One hundred twenty-nine parcels are considered developed, while 47 are considered vacant or containing only accessory structures. [Map 4](#) shows parcels by use.

One hundred and nine developed parcels are currently served by sewer ([See Map 5](#)). Another 16 undeveloped parcels would likely be served by sewer if developed. Ninety-three developed parcels in the village core would likely be served by the municipal water system if and when it is constructed ([See Map 6](#)). Another 23 undeveloped parcels, if developed, would likely be served by the municipal water system.

PUTNEY VILLAGE BUILDOUT

INTRODUCTION

In order to help determine the potential for growth in the village core and what effect Putney's current zoning regulations would have on growth, a buildout analysis was conducted. A parcel-based buildout estimates the theoretical number of units that can be placed on a parcel by determining the maximum number of lots into which any parcel could be subdivided. This determination is done by taking into account only the minimum lot size as dictated by zoning. Once the theoretical maximum number of lots is determined, currently developed parcels are subtracted from this number. The result is the potential number of *new* lots that could be created, thereby giving an indication of growth potential.

It should be emphasized that a buildout is not a prediction of the development that will take place, but is instead a tool to determine what growth is possible based upon current zoning. As such, the buildout is simply a tool that provides some insight as to growth potential.

The buildout analysis was performed on the 176 parcels in the core of the Village District (i.e. that area south of the top of the hill on Westminster Road). Basically, a parcel's acreage is used to determine the total potential lots into which a parcel could be subdivided based upon the lot size minimum in the zoning regulations. The lot size minimum differs for sewered and non-sewered parcels. The potential number of lots is reduced by one if the parcel is currently developed.

INPUTS TO THE BUILDOUT

Putney Zoning Regulations require a lot area minimum of 15,000 square feet for sewered parcels, and 40,000 square feet for non-sewered parcels. Information was obtained from the Town on currently sewered parcels, and data were created on undeveloped parcels with a high likelihood of being served by sewer should they be developed. This information was placed on a map and reviewed and corrected by the Town Manager.

Information on parcel size came from two sources. If the parcel in question is the only parcel in town owned by its landowner, then the grand list acreage value was used for the parcel acreage. If the parcel in question is one of several parcels owned by its landowner, then the grand list acreage value cannot be used (the grand list value is the landowner's total acreage, not the parcel acreage). The area figures inherent in the GIS parcel data were used. These GIS acreages are not the official parcel acreage, but merely an estimate from the tax maps.

Information on the development status of each parcel was determined by using data in the Putney Village Inventory. Each parcel was coded as to its use based using building footprint data and building use data. Parcels with no buildings were coded as vacant and

therefore undeveloped. Parcels without a primary structure (i.e. parcels with a building coded as “accessory”), for the purposes of the buildout, were coded as undeveloped, as the purpose of the buildout was to determine the number of additional residential, commercial, industrial, or public/civic buildings that could be constructed. Certain parcels, due to their ownership, use, or easement restriction, cannot be developed (e.g. cemeteries) and were not analyzed.

Procedure

Using the above inputs, the buildout analysis was performed using ArcView GIS software. For sewerred parcels, whose lot size minimum is 15,000 square feet, the square footage of each parcel is divided by 15,000. For non-sewerred parcels, whose lot size minimum is 40,000 square feet, the square footage of each parcel is divided by 40,000.

The resulting quotients are truncated (reduced to an integer without rounding), with this result giving the theoretical maximum number of potential lots that could be created from each parcel. This maximum potential lot figure provides a theoretical estimate of the number of primary structures that could be placed on that parcel. Summing the results for each parcel provides the number of lots at “buildout,” that theoretical condition when the entire village core is developed to its maximum potential given the current parcel configuration. If a parcel is currently developed, the theoretical maximum number of potential lots is reduced by one. The result is the maximum number of *new* potential lots.

Results

The buildout results help to show overall potential growth trends for the village area, and should not be looked at on a parcel-by-parcel basis. A number of factors are ignored in the analysis, including not considering land that would have to be allocated to access road rights-of-way, setback requirements, parcels less than the lot size minimum that are grandfathered, inaccurate parcel acreage figures, and so on. Overall, the impact of these assumptions is minimized when the results are viewed in a village-wide sense.

The buildout analysis was run on 176 parcels in the village core. Of these parcels, 125 are considered “sewerred,” that is they are either developed and presently sewerred, or are undeveloped and would be sewerred if they were developed.

Development already exists on 129 of the 176 parcels. One of these developed parcels has a conservation easement placed on it, prohibiting future development.

No development currently exists on 47 of the 176 parcels. Of these 47 parcels, ownership, use, or easement restrictions prevent six of them from being developed in the future. Therefore, 41 of the 176 parcels in the village core are vacant and potentially developable.

The buildout analysis showed that of the 176 parcels analyzed, 93 parcels allow for no future development (these will be referred to as “built out” parcels) and 83 parcels have

the potential for development and/or further subdivision (these will be referred to as “growth” parcels). These results are displayed graphically on [Map 7](#).

Table Five - Potential New Lots With No Constraints

93 Existing Parcels Allow For No New Development
31 Existing Parcels Allow For 1 New Lot/Building
18 Existing Parcels Allow For 2 New Lot/Buildings
9 Existing Parcels Allow For 3 New Lot/Buildings
6 Existing Parcels Allow For 4 New Lot/Buildings
3 Existing Parcels Allow For 5 New Lot/Buildings
1 Existing Parcels Allow For 6 New Lot/Buildings
15 Existing Parcels Allow For 7 Or More New Lot/Buildings
Total Potential New Lots = 311

Of the 93 “built out” parcels: 72 parcels are developed to their maximum potential, that is due to zoning regulations they cannot be further subdivided; one parcel is developed but is restricted from further development by a conservation easement; six parcels are vacant but cannot be developed due to ownership, use, or easement restrictions; and 14 parcels are vacant but for this analysis were assumed to be undevelopable because they are less than the lot size minimum.

Of the 83 “growth” parcels: 56 parcels are developed and theoretically could be subdivided to create 217 new vacant lots; 27 parcels are undeveloped and theoretically could be subdivided to create a total of 94 vacant lots. Thus if all the growth parcels were subdivided to their theoretical maximum, 311 new vacant lots would exist along with the 56 existing developed parcels.

In summary, if maximum subdivision were to take place today in the village core, there could be a total of 460 lots in the village. Of these 460 lots: 129 (72 + 1 + 56) would be developed; 20 (6 + 14) would be vacant and not available for development; and 311 (217 + 94) would be vacant and potentially developable.

CONCLUSIONS

It must be stressed that the buildout analysis only considers two items when determining the theoretical maximum number of potential lots: 1) the acreage of each parcel; and 2) the lot size minimum for each parcel as dictated by zoning. There are a number of zoning-based restrictions not considered in the buildout, such as frontage, width, and setback requirements, parking requirements, and additional square footage required above the lot size minimum for parcels with more than three dwelling units. The buildout therefore addresses the effect of a zoning regulation’s lot size minimum on growth potential.

It is possible to speculate that the lot size minimum in the Town of Putney Zoning Regulations is not a strong deterrent to future growth in the village. The lot size minimum restrictions allow for 311 potentially developable parcels in the village core. This figure is more than two times the present number of developed parcels in the village core (129). Ultimately, 440 developed lots could exist in the village core if it were fully “built out.”

In summary:

- Lot size minimums for the Village district, as dictated by the Town’s zoning regulations, permit 311 new lots in the village core
- Considering only the lot size minimum requirements, the village core is approximately 29 percent built out; zoning regulations permit development in the village to grow by two and one-half times
- The Village District Zoning lot size minimum requirements do indeed permit future commercial and residential growth

ISSUES/OPPORTUNITIES/PROBLEMS

ENTRANCES TO VILLAGE

Entrances to the Village of Putney are from the south and north along Route 5, which is Main Street to the south and Bellows Falls Road to the north. A secondary entrance to the Village is from the northwest along Westminster Road, which becomes Kimball Hill in the village center. All of these entrances are heavily traveled.

Interstate 91 provides access to the village at Exit 4. The northbound exit ramp terminates on Putney Landing Road opposite the entrance to the Putney Inn and adjacent to commercial properties located in the Town of Dummerston (Green Mountain Spinnery, West Hill Bike Shop and Kings Boatworks). Putney Landing Road crosses Interstate 91 just east of the ramp. This area includes a seasonal food establishment, a gas station, vacant commercial lots, and the Putney Consumer’s Co-Op. The southbound exit ramp of Exit 4 terminates in the Town of Dummerston at Route 5. This area is marked by a gas station to the south (situated in the Town of Dummerston) and the wooded edge of an inactive orchard. Heading north into the Village, one passes Putney Meadows apartments and the Putney Consumer’s Co-Op to the west beyond a cleared vacant lot, and a wooded lot on the east.

CHARACTERISTICS OF VILLAGE ENTRANCES

Cemeteries are found at the village entrances along Bellows Falls Road (Mount Pleasant Cemetery) and Westminster Road. Another cemetery is along Old Route 5 near its intersection with Main Street. Historically, Old Route 5 would have been a major entrance to the village and cemeteries would have marked all of the entrances to village.

Village cemeteries usually would have been located away from the village center to accommodate necessary expansion of the cemetery as communities grow. This may not

be the case with church cemeteries or with family plots. The new section of Route 5 does not have any cemeteries along it in the southern section of the Town.

Putney Village is marked by the intersection of Sand Hill Road and River Road to the north, the Putney Consumer's Co-Op to the south and is defined by the density of houses along Westminster Road to the northwest. Coming down the hill from the Mount Pleasant Cemetery, a pronounced change of density can be seen with Basketville and other commercial buildings in the Village. The entrance from Westminster Road is most pronounced with the change in density of the homes where it intersects with Sand Hill Road.

One characteristic of villages is their development at major intersections of transportation routes. The intersection of Route 5 and Westminster Road is the major intersection in the Village. Historically, this intersection provided access to towns and villages to the north of Putney and access to the Connecticut River to the east. It remains the most important intersection in the Village, but Interstate 91 has diminished its importance to regional travel.

Recommendations

- Investigate ways to create special, distinctive entrances at the major entry points of the Village by using:
 - Signs that welcome visitors to Putney.
 - Landscaping along vegetative sidewalk strips.
 - Architectural elements such as artwork from local artists or stonewalls.
- Along the entrances to the Village and where possible, maintain open spaces to help define the Village boundary.

PEDESTRIAN CONDITIONS IN THE VILLAGE

Putney is a fairly compact village with a “Y” roadway pattern and centrally located village services (stores, town offices, library, restaurants, etc.). A pedestrian can generally walk from the center of the Village to its limits (as described in ‘Entrances to the Village’) in approximately ten to fifteen minutes. The “Y” Roadway pattern and compact nature of village and services make it easy to serve the Village via a sidewalk system.⁶ Presently, however, a complete sidewalk system does not serve the entire Village.

Sidewalks are currently found along Main Street (U.S. 5), Kimball Hill and Westminster Road. North from Putney General Store to Landmark College along Bellows Falls Road (U.S. 5), only a small segment of sidewalk exists. This segment is found from the General Store to Mountain Paul's and is need of repair. The recently constructed sidewalk from the Town Office to the School along Westminster Road is in excellent condition, but the sidewalk along Main Street from the Town Office south toward the Co-Op is in need of repair.

⁶ Windham Region Bike/Pedestrian Plan, WRC, July 21, 2000 pg. 6.

On Main Street the Average Annual Daily Traffic (AADT) is 10,200 vehicles⁷. This relatively high volume of traffic for a village center could result in pedestrians feeling uncomfortable walking around or crossing U.S. 5. Crosswalks are currently found at the intersection of Kimball Hill and Main Street (crossing both streets), and on Westminster Road just south of Putney Central School. In the Windham Region, traffic volumes greater than 4,500 are considered strong criteria for sidewalks or sidewalk improvements.⁸

Currently, a bus from Brattleboro to Bellows Falls, with stops in Putney, provides intercity bus service for the Village. Linking the entire village to this bus would allow a pedestrian to be able to travel greater distances without a car.

In summary:

- The “Y” Roadway pattern and compact nature of the Village and services makes it easy to serve the Village via a sidewalk system. Presently, however, a complete sidewalk system does not serve the entire Village, and where sidewalks do exist, their conditions vary.
- The AADT on Main Street may result in functional conflicts between pedestrians and vehicular traffic.
- Crosswalks may not be found in locations that pedestrians may be crossing.
- Intercity bus transportation is available in Putney.

Recommendations:

- Improve pedestrian circulation in the Village by:
 - Rehabilitating the following sidewalks along U.S. 5:
 - General Store to Mountain Paul’s
 - Town Offices south toward the Co-op
 - Building a new sidewalk from Village to Landmark College by applying for planning, design, and construction funds from:
 - Vermont Agency of Transportation Enhancement Program
 - Vermont Agency of Transportation Bike/Pedestrian Program
- Improve pedestrian safety by:
 - Evaluating the need for additional crosswalks in the Village utilizing Vermont Agency of Transportation’s *"Guideline for the Installation of Crosswalk Markings and Pedestrian Signs at Marked and Unmarked Crossing."* Technical assistance for the evaluation may be available through Windham Regional Commission and Vermont Agency of

⁷ 2000 (Route Log) AADTs State Highways, Vermont Agency of Transportation, January 2002.

⁸ Windham Region Bike/Pedestrian Plan, WRC, July 21, 2000 pg. 7.

Transportation (VTrans.) Once need is established, VTrans will install crosswalk(s) when road is resurfaced or repainted.

- Utilizing *VTrans Traffic Calming Standard Drawings and VTrans Traffic Calming and Approval Process for State Highways*, consider installing appropriate traffic calming techniques for a major collector road in a Village (U.S. 5). Funds may be available for planning, design, and construction from:
 - Vermont Agency of Transportation Enhancement Program
 - Vermont Agency of Transportation Bike/Pedestrian Program
 - Federal Highway Scenic Byway Program
- Improve intermodal connections in the Village by:
 - Working with transit providers to ensure that a scheduled bus stop serves the Village at appropriate times.
 - Reviewing locations of bus stops to make sure that the stops are in appropriate locations to serve the Village.
 - Locating bike racks in appropriate locations in the Village.
 - Ensuring that there is enough parking so that drivers can park their cars and walk around the Village.

INFILL IN THE VILLAGE

Infill is the development or redevelopment of land that has been bypassed, remained vacant, and/or is underused as a result of the continuing outward development process. Sites may or may not be of a prime quality. However they are usually served by or are readily accessible to services and facilities provided by the local community. Use of such lands for more housing and other development is considered desirable because it can provide a better alternative to the sprawling development patterns seen in many communities. The use of infill development promotes the best use of community resources and also will tend to have a positive impact upon taxes and other fiscal policies.⁹

Successful infill development can offer rewards for communities:

- provide housing (both affordable and market rate) near jobs and transit;
- increase the property-tax base;
- preserve open space at the edge of centers;
- provide new residents to support shopping and services;
- capitalize on community assets such as parks, infrastructure, and transit; and
- create new community assets such as child-care centers, arts districts, and shopping areas¹⁰.

⁹ American Planning Association. Planning Advisory Service, Report Number 491/492. *A Glossary of Zoning Development and Planning Terms*

¹⁰ Northeast-Midwest Institute Congress for the New Urbanism. *Strategies for Successful Infill Development, 2001.*

SEWAGE DISPOSAL

As noted in the Putney Town Plan, “much of the village area is served by the Town's Wastewater Treatment Facility (WTF). The Sewer Service Area, shown on [Map 5](#), includes lands on either side of U.S. Route 5 from the Dummerston boundary to River Road, and along River Road to the Mailrite plant. Service extends up Kimball Hill to just past and including part of Fred Houghton Road, and also extends down Depot Road over Interstate 91 to service the Putney Inn and several businesses located in the Town of Dummerston. Putney Central School connected to the Town Sewer in 1994 through construction of a pumping station and a half-mile-long pressure line¹¹.” Table six illustrates that of the 107 sewerred parcels in the village, 62 percent of these parcels are residential.

Table Six – Sewered Parcels by Type of Use In the Village

Parcel Use	Sewered Parcels
Accessory	1
Commercial	26
Industrial	2
Municipal	12
Residential	66
Total	107

“The WTF has a design capacity of 80,000 gallons per day (GPD) of hydraulic flow, and 136 pounds per day of biochemical oxygen demand (BOD), or organic loading. Presently the WTF is treating approximately 42,000 gallons of wastewater per day, which represents about 53 percent of capacity. However, the BOD averages about 90 pounds per day, or about 66 percent of loading capacity.” This is indicative of the large number of food related businesses in the village¹². The processing of food and the grinding of food scraps contributes significantly to elevated BOD levels.

An engineering study of the WTF was completed in January 1999 and proposed a phased plan to upgrade the facility to a 100,000-gallon per day design flow capacity. A renovation and construction bond has been passed and the WTF will be upgraded in 2003.

Currently, the excess hydraulic capacity of 38,000 GPD could allow for the development of every parcel in the village that has proximity to the sewer lines. The following table (6) shows that the current excess capacity would allow for 105 additional residences or allow for additional retail development employing 4,750 people. Obviously with additional new development there would be a mix between additional residential and

¹¹ Putney Town Plan, pages 37 and 38.

¹² Putney Town Plan, pages 37 and 38.

commercial development, but the point is that there is still enough excess GPD to allow for significant additional development in the Village.

Table Seven – Sewer Capacity-Potential Additional Village Development

Parcel Use	Hydraulic input (gallons per day)	Potential New Units
Residential	360 GPD per 3 bedroom home ¹³	105 new homes
Retail	8 GPD per employee ¹⁴	retail employing 4,750 people

Analyzing BOD capacity to determine allowable potential development is more difficult. There appears to be enough BOD capacity to allow for dozens of single-family homes. However, BOD capacity could be a limiting factor on commercial development.

The area outside the Sewer Service Area is served by individually owned and maintained on-site septic systems. The State has recently adopted new rules for on-site septic systems. These new rules allow for innovative on-site septic systems, which could reduce the minimum area required for these systems.

One significant change will allow disposal systems on lots created prior to June 14, 2002 with up to 30 percent slope in the leachfield area. The maximum allowable slope of 20 percent will still apply to all lots created after June 13, 2002. Also, the new rules closed the 10-acre lot exemption on November 1, 2002; all new or repaired onsite wastewater systems will require a permit. It allows for municipal delegation of the permit program, so a landowner would obtain a permit from either the State or the town, but not from both. It connects less restrictive site requirements for systems to new planning requirements for municipalities for 5 years. On July 1, 2007, the new siting standards will be applied statewide. All of these changes could potentially allow development on land that was formerly unavailable for development in the Village.

In Summary:

- Much of the village area is served by the Town's Wastewater Treatment Facility.
- The Town is planning to implement a phased plan to upgrade the facility to a 100,000-gallon per day design flow capacity in the near future.
- Currently there is enough excess hydraulic capacity (38,000 GPD) to allow for significant additional potential development in the Village. There appears to be enough BOD capacity to allow for dozens of single-family homes. However, BOD capacity could be a limiting factor on commercial development.
- The area of the village outside the Sewer Service Area is served by individually owned and maintained on-site septic systems. The recently adopted new rules for on-site septic systems may potentially allow development on land that was formerly unavailable for development in the Village.

¹³ Vermont Agency of Natural Resources, *Small Scale Wastewater Treatment and Disposal Rules*. August 8, 1996. Pages 72 and 73.

¹⁴ Ibid.

Recommendations:

- Analyze village parcels to determine which parcels have improved development potential due to proposed septic rule changes.

MUNICIPAL WATER SYSTEM

In response to continuing concerns about both the quality and the quantity of water supplies in the Village area, a feasibility study for a municipal water system was completed in March 2000 by the Wright Engineering Company. It stated “of significant interest is the Town’s September, 2000 Water Needs Assessment Survey, which received 106 responses with the following results:

- 18 percent of wells run low in dry weather with another 16 percent classified as usually having enough water;
- 51 percent have problems due to hard water;
- 16 percent have odor problems;
- 24 percent have taste problems;
- 32 percent have staining problems;
- 4 percent have water that causes sickness;
- 27 percent do not drink the tap water¹⁵.”

Water quality and quantity are serious problems in the Village. Occupants of housing and offices in the Christian Square area are using bottle water because of contamination from leaking petroleum storage tanks. Wells in the Village are being progressively drilled deeper with some wells now exceeding 350 feet in depth. Because of the shortage of water, some family residences may be converted into commercial uses. In general, commercial uses will reduce the overall requirements for water. One property owner has had to remove washing machines from local rental property. Because of insufficient water, the local laundromat has been closed.

The feasibility study noted that many properties within the proposed service area will not be able to grow or expand while utilizing their existing water supply systems. As noted in the study the following are current examples of this problem:

- “Putney Gateway Property - Located on the south end of the village, this 10-lot commercial subdivision was approved by the Town. Due to lack of sufficient on-site water and fire protection, only two lots have been utilized to date.
- Mailrite, Inc. - Located in the former Quaker Oats building on River Road, this commercial building cannot be fully utilized without additional adequate water supply and fire protection. Full development of property adjacent to this facility (a multi-use zone) is unlikely without municipal water service.
- Recollections and Dosolutions Buildings - These Main Street retail and residential buildings have had to install storage and treatment to maintain their water supply. The

¹⁵ Wright Engineering Study, March 2000.

well serving both buildings has a varying static level, affected by hydrofracturing of neighboring wells. Genesis Church - Well has fuel contamination¹⁶.”

On Election Day 2002, the voters of Putney authorized the Town to bond up to 1.5 million dollars of a 2.5 million dollar project to construct a municipal water supply system for the Village. The project is currently in final design and will be constructed in 2004. [Map 7](#) shows the proposed service area and proposed water lines.

In Summary:

- Quality and quantity of water in the Village continues to be a problem.
- Many properties within the proposed service area will not be able to grow or expand while utilizing their existing water supply systems

Recommendations:

- To maintain a viable village center and permit growth in the village, the Town should continue to support the development of a municipal water system.
- Encourage development in the Village Zoning District by limiting access to municipal water outside of this District.

DESIGNATED GROWTH CENTER

If the Town seeks funding from the Agency of Natural Resources for wastewater treatment facilities, the project must serve a designated growth center. The most recent update of the Town Plan did not include a reference to a Designated Growth Center. If Putney wants to apply for funding under this program, it is necessary to amend the Town Plan to establish the boundary of the Designated Growth Center.

Under the Environmental Protection Rules for Municipal Pollution Control Priority System¹⁷, a “designated growth center shall mean a traditional town or village center. A designated growth center must be included in a duly adopted and approved municipal plan and anticipated growth within the municipality should be directed there. Traditional town center growth centers are similar to downtowns but occur at a smaller scale that reflects the economy and population of the town or region that is served. They are communities; historic centers and are a cohesive core where housing, shopping, and jobs are located within close proximity, allowing residents to live near where they work.

“The pattern of development in these centers is often multi-story, mixed use, and compact. The mix of uses that defines this type of growth center is identified as a wide variety of uses including residential, commercial, business, civic and if appropriate, industrial uses in a compact and mixed, rather than separated fashion, with the growth center. Industrial uses may also be with traditional town center growth centers. Wastewater collection and treatment facilities serve as an inducement to development.

¹⁶ Wright Engineering Study, March 2000.

¹⁷ Agency of Natural Resources Department of Environmental Conservation

Consequently, the location of sewer lines is a critical factor in shaping development patterns. Because centralized sewage treatment eliminates a primary development constraint the capacity of land to dispose of sewer on site the sewer service area can effectively reinforce Vermont's traditional development pattern by accommodating compact, higher density development in a village center^{18.}"

Recommendations:

- Consider growth center designation through either an amendment to the Town Plan or in the next revision to the Town Plan. Delineation of the growth center boundary will require some investigation; the growth center boundary may or may not correspond with the Village boundary.
- Apply for State and Federal funding that will help finance the expansion of sewer facilities in the designated growth center.
- Use the designated growth center as a way to encourage development in the village core. This can be done by encouraging connections in the village core before expanding connections to areas outside the village core.

DESIGNATED VILLAGE CENTER

In early 2003, the Town of Putney applied to the Vermont Downtown Board for Village Center Designation. The Downtown Board reviewed the application and voted to approve the village center designation. The designated village center is shown on [Map 9](#).

A village center should not be confused with a growth center. The purpose of village center designation is to support revitalization of what exists, not to support areas where new growth would be targeted. Prior to 2002, the State had passed legislation that provided tax incentives and other financial benefits to designated downtowns. Brattleboro and Bellows Falls are designated downtowns and both communities have succeeded in acquiring a substantial amount of funding from this program. Legislation was passed in 2002 to create the designated village center.

Benefits available within a designated Village Center are to:

- Create a 5 percent income tax credit, to be added to an existing 20 percent federal tax credit for the substantial rehabilitation of qualified historic buildings;
- Create a 50 percent income tax credit for code improvements made to commercial buildings (maximum credit of \$5,000 per building);
- Create a priority for village centers within the Municipal Planning Grant program and the State's Consolidated Plan for HUD funding (including the Community Development Block Grant (CDBG) program);

¹⁸ Ibid.

- Allow special assessment taxes to be used for operating funds, as well as capital projects; and
- Create a priority for State Buildings to locate facilities in Village Centers.

Recommendations:

- The Town should work to fully utilize all benefits that are available for designated Village Centers.

BROWNFIELDS ASSESSMENT

One of the legacies of southern Vermont's economic cycles over the years has been the challenge of reusing abandoned sites and idled or under-used industrial and commercial facilities. Developers find it easier to build on open pastures or green fields instead of purchasing an existing "brownfield" site in a town or village. Brownfields are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. Potential buyers of buildings in downtown or village centers have turned away in part due to the real or perceived presence of hazardous materials. This pattern of development slowly fragments a community's landscape and places higher demands on the tax base as services become decentralized. Reuse of these sites will aid and stimulate economic activity in these traditional commercial centers, also helping to prevent rural sprawl.

One resource available to the Town of Putney for potential brownfield properties is the Windham Region Brownfields Reuse Initiative (WRBRI). The WRBRI has been established to help communities confront these land use challenges. The EPA funded program grants funds to conduct site assessments and related activities at brownfield sites to determine whether a site is, in fact, contaminated. The overall goal of the WRBRI is to return sites with real or perceived contamination to commercial or industrial use or to reuse them for the public good such as parkland or green space.

ANALYSIS OF DEVELOPMENT POTENTIAL

INTRODUCTION

At first blush, it may appear that the village core has much land for potential growth. The buildout analysis indicates the village core to be at only 29 percent of its development capacity, based on zoning lot size requirements. This figure can be misleading, however. Ignoring past and current development trends and market forces (which do not show high development pressure in the village), the *likelihood* of much of this potential development actually taking place is low.

PHYSICAL AND OTHER REGULATORY CONSTRAINTS

Further investigation into the development potential of parcels in the Village is needed, and the results of the buildout analysis can be used as one input for this investigation. The investigation would be a qualitative assessment using the buildout results, the GIS data from the Putney Village Inventory—namely parcel boundary configuration and building location—and additional GIS data on physical constraints—principally slopes and wetlands.

Under current zoning, eighty-three parcels could be subdivided and further developed. Thirty-nine of these parcels are already developed and could be subdivided into only one or two additional lots. (Development of these lots might be termed “infill,” the filling in vacant or underutilized land in currently developed areas with additional development.) The small size and configuration of these parcels and the location of their existing dwellings would make subdivision and new construction difficult or unlikely in many cases.

Nearly half (40) of the 83 potentially subdividable parcels are residential, and one quarter of these residential parcels are less than one acre in size. It is unlikely that many homeowners would pursue constructing additional dwelling units on their property, especially if their parcels are small and new construction would be located close to the existing dwelling.

Nearly half (150, or 48 percent) of the 311 *potential* vacant lots in the Village result from the subdivision of just 15 parcels; these parcels are all 5 acres in size or greater. Many of these parcels, however, are severely constrained by steep slopes or wetlands, making development difficult or impossible.

Steep slopes and wetlands have a great impact on development potential. This is shown by [Map 8](#), where the buildout analysis results are overlaid with wetlands and steep slopes. To gain a better understanding of these impacts, the buildout analysis was run a second time excluding constrained lands, defined as wetlands or steep slopes. The original buildout showed a potential for 311 new or existing vacant lots in the village core.

Excluding steeply sloping areas and wetlands, the buildout considering constraints showed a theoretical maximum number of potential new or vacant lots of just 169.

Table Eight - Potential New Lots for Development, Considering Constraints

106 Parcels Allow for No New Development
35 Parcels Allow for 1 New Lot/Building
17 Parcels Allow for 2 New Lot/Buildings
5 Parcels Allow for 3 New Lot/Buildings
3 Parcels Allow for 4 New Lot/Buildings
3 Parcels Allow for 5 New Lot/Buildings
2 Parcels Allow for 6 New Lot/Buildings
5 Parcels Allow for 7 or More New Lot/Buildings
Total Potential New Lots = 163

Putney Zoning Regulations require a lot width minimum of 80 feet. While the width minimum is met by many of the existing parcels in the village core, subdivision of these existing parcels into new parcels may be hindered in a few cases by this requirement.

For parcels that are small and already have some form of development, new development may have to take place in their rear portion, behind existing structures. If a new parcel is created to accommodate the new development, and the new parcel does not have frontage on a public road, a right-of-way of at least 50 feet is required, though the Planning Commission may approve a right-of-way as narrow as 20 feet provided certain conditions are met. The 50-foot right-of-way requirement may be difficult to meet in a number of situations, but the ability of the Planning Commission to reduce this requirement to 20 feet is an important factor for allowing infill.

Frontage and right-of-way requirements are not the only hindrance to maximizing the development potential of parcels. For larger parcels with limited road frontage, construction of extensive access roads to facilitate development may be necessary, and their cost could be prohibitive. Even on smaller parcels, construction of numerous individual access roads could hinder development. In some situations, for example the area west of West Street and south of Kimball Hill, joint construction of access roads that would serve more than one existing parcel may make subdivision and development a more viable option.

CONCLUSION

Land that is most easily developed tends to be flat, open, vacant parcels with adequate frontage and access to infrastructure. Parcels with some non-residential development and some vacant land, or parcels with underutilized structures, would also be attractive for future development. In looking at the results of the buildout analysis, especially in map form, few parcels in the village core meet these characteristics. In short, land with a high development potential in the village core is a scarce resource.

The town's planning goals state that most of the commercial development should be restricted to the village. Additionally, those activities which "maintain the Village as economic and social center of Putney," e.g. stores, restaurants, public and civic institutions, and housing, need to be accommodated in the Village, and not outside of it. It is therefore important to treat any land in the village with a high development potential as a scarce and valuable resource. Should Putney experience growth in the future, these lands will be needed for commercial, civic, and to a lesser extent residential uses. These lands should be developed in such a way as to not limit additional future development.

The Putney Gateway area, those parcels on Carol Brown Way and Alice Holway Drive (in the vicinity of the Putney Coop and Putney Meadows), is one area that stands out as highly desirable for development. Another area is the former Basketville factory, a large parcel with vacant industrial buildings. Both of these areas offer exciting potential for development due to their large size, proximity to the Interstate in the former case, and proximity to the center of the village.

In summary:

- Infill development (additional compact development on presently-developed parcels) has the potential to accommodate additional development in the village, but the likelihood of this occurring appears low at the present time.
- Many large parcels that could potentially allow for development are severely constrained by wetlands or steep slopes.
- Some parcels could benefit from the collaborative construction of access roads.
- Developable land is scarce in the village core.
- Developable land should be treated as a scarce resource and, if developed, should be done in such a manner as to maximize any future development potential.

Recommendations:

- Working with owners of some of the key parcels in town, investigate applying for a Community Development Block Grant (CDBG) to develop an overall master plan for each site. The master plan would allow for the Town to work with the owners to develop an overall vision for the sites that would both benefit the Village and the owners of the site. Once completed the master plan can be utilized to recruit developers that are sympathetic to the desires of the Town and Village.

RECOMMENDATIONS FOR NEW VILLAGE DISTRICT POLICIES

ANALYSIS OF THE VILLAGE ZONING DISTRICT BOUNDARY

Introduction

As previously stated, the boundary of the Village District is defined in most places by using a specified distance back from roads. Often such boundary delineations do not take into account physical features, infrastructure, or site-specific design considerations.

The current Village District boundary was evaluated to see if boundary modifications would be merited. This evaluation is supported by one of the town plan action steps, which states “evaluate the current method of defining Zoning districts based on fixed dimensions from Town roads. Explore options for more site specific district boundaries, perhaps incorporating geographic features, existing uses, parcel boundaries and density requirements.”

Making changes to zoning district boundaries only should be proposed when significant benefits will result. The process can involve a good deal of work, and when new boundaries are proposed, they must be clearly defined by obvious features or specific dimensions.

Analysis of Village Core Area

The boundary of the Village Zoning District on the east is either Sacketts Brook or a line 750 feet from Route 5. Land adjacent to Route 5 and Old Depot Road is relatively flat, has access to sewer, and has at least fair development potential. East of these lands, however, the ground drops off extremely steeply into a ravine formed by Sacketts Brook.

The land in the ravine is nearly undevelopable. Currently, the only development includes several houses along Mill Street and some settling ponds along Sacketts Brook. Since this area could never be developed at densities approaching that of a village, one might consider moving the district boundary up to the top of the ravine. However, due to lack of development pressure and the effort involved in defining a revised boundary, there is probably no great benefit from changing the boundary in this area.

The boundary of the Village Zoning district on the west is a line 750 feet from Route 5 (Main Street and Bellows Falls Road), Old Route 5, Kimball Hill, and Westminster Road. Between Bellows Falls Road and Westminster Road, the boundary encroaches on the wetlands of Sacketts Brook. These wetland areas are essentially undevelopable. Moving the boundary closer to Westminster Road may be an option, but again the benefits would be minimal.

West of Old Route 5 and Main Street, southwest of Kimball Hill, and in the vicinity of Signal Pine and Fred Houghton Road, the land both in the Village Zoning District and adjacent to it is rolling to moderately sloping. There are several parcels with a sizable amount of undeveloped land. Most of the soil is “moderately suited” for on-site septic systems, according to the Natural Resources Conservation Service. Access to sewer is possible in a number of places.

This area is near the center of the village, and though there are access issues, development potential is favorable. Village-type development could probably be supported. Expansion of the Village Zoning District in this area could be considered.

In summary:

- Due to physical constraints, high density development in portions of the Village Core near Sacketts Brook and Old Route 5 is unlikely.
- Revising the Village boundary in these areas is a low priority due to lack of development pressure and lack of benefits from such a revision.
- The area around Fred Houghton and Signal Pine Roads contains land with fairly limited development constraints.

Recommendations:

- Should the town wish to encourage development near the village center in areas with relatively few constraints, the town should investigate expanding the village boundary near Fred Houghton and Signal Pine Roads.

Analysis of Area North of the Village Core

The northern portion of the Village (that area along Westminster Road north of Kimball Hill and Signal Pine Road) is distinctly different from the village core. Building density is lower and is centered along the road. There is much more open land, both in fields and wetlands. The area’s character is more “rural residential” than “village.”

In this area, one parcel is enrolled in the Use Value Appraisal Program, and another parcel is both enrolled in this program and under a Vermont Land Trust conservation easement. Two other parcels are part of the Putney Central School campus, which provides access to the School Forest and trail system. The area is gently rolling, and, except for the wetlands near Sacketts Brook, contains few physical development constraints. Most of the land is “well suited” for on-site septic systems, according to the Natural Resources Conservation Service.

The area contains about 40 structures. A rough buildout was performed, excluding from development the School campus and the parcel under conservation easement. Current zoning (lot size minimum of 40,000 square feet, or approximately 0.9 acres) allows for about 95 new structures.

The town may wish to try and retain the existing character of the area. To do this, one option might be to change the zoning designation to rural residential (lot size minimum of 2 acres). Such a change could allow for about 35 new structures, as opposed to 95.

Certainly, changing the zoning to rural residential would provide for less additional growth, though at full build out under rural residential the existing density still would nearly double. A number of existing lots would be non-conforming.

Several parcels of open land contribute to the area's more rural character. They include the parcel east of Westminster Road and south of Sand Hill Road which is under a Vermont Land Trust easement, the parcel west of Westminster Road at Spring Hill Road, and the parcel on the southwest corner of West Hill Road.

Development of these open parcels probably would alter the character of the area more so than development on other parcels. Limiting development on these parcels, whether at Village or Rural Residential densities, might do more to retain the rural character than changing the zoning density of the entire area from Village to Rural Residential. Development could be limited through use of a conservation easement.

A small but dense area of houses at the intersection of Westminster Road and Sand Hill Road almost resembles a small village or hamlet. Additional subdivision and compact development on several parcels in this area might not be a drastic change from the current land use pattern.

There are a number of reasons to keep this area in the Village District. The area represents one of the few places in or near the village that has few development restrictions and soils that are "well suited" to on-site septic systems. Development at village densities, coupled with preservation of those key open parcels through, say, acquisition of conservation easements, would provide for additional housing units near the village and retention of some rural character.

Even higher development density (lot size minimum of 15,000 square feet) could be possible with the construction of a sewer line that would flow to the school, where currently an oversized pumping station pumps the school's septage to the top of Kimball Hill and into a sewer main. Development at such densities would significantly change the character of the area, but may be warranted if residents feel that this portion of the town should be allocated to accommodate future growth.

In summary:

- The area along Westminster Road north of Signal Pine Road has a distinctly different, more rural character, than the village core area.
- Several open, undeveloped parcels significantly contribute to the area's more rural character, and preservation of these key parcels, more than a change to a zoning district that requires larger minimum lot sizes, would help to preserve this rural character.

- The area possesses relatively few development constraints and could potentially be served by the Putney Central School sewer line.
- A small area of fairly dense development currently exists at the intersection of Westminster and Sand Hill Roads.

Recommendations:

- Should the town wish to retain some of the existing rural character of the area, the town should investigate ways to limit development on several key parcels.
- Due to the relative lack of development constraints, the town may wish to encourage development in this area by allowing connections to the sewer line that serves Putney Central School.

ZONING IN THE VILLAGE DISTRICT

From the Putney Zoning Regulations, the Village District “is established to preserve the existing character of the high density, mixed use area and to encourage a prosperous and attractive town center for shopping, employment, and community activities. The Village District is defined as the existing village and includes additional lands, which appear suitable for future village growth and which may be eventually served by the municipal sewage disposal system. These lands are convenient to the existing village, will offer few or slight limitations for development, and can be further developed for village uses without causing undue damage to resource values.” [Table Ten](#) lists the uses that are either permitted or conditionally allowed.

The Village Zoning District uses the most traditional form of zoning - Euclidean¹⁹ zoning. This traditional zoning deals only with the specific use of a parcel of land. In the Putney Zoning Regulations, a use can be permitted, conditionally permitted, not listed²⁰ or not permitted. For instance, if an applicant wants to build a single-family dwelling, this is permitted in the Village District. The only land use requirements that the applicant must meet are dimensional requirements such as meeting minimum setbacks (15 feet) and minimum lot size (two acres). This form of zoning does not deal with the effect of the use on the surrounding parcels of land. Traditional zoning also tends to limit the development potential of lots within a zoning district because it restricts the mixing of uses on a single parcel regardless of size.

Mixed Uses

In the Putney Zoning Regulations there are two features that will allow for a mixture of uses, Planned Unit Development, which relies on performance standards, and Secondary Use, which is a variation to the standard zoning in the Regulations. There are, however,

¹⁹ Euclidean Zoning – A convenient nickname for traditional as-of-right or self-executing zoning in which district regulations are explicit; residential, commercial, and industrial uses are segregated; districts are cumulative; and bulk and height controls are imposed. (Planning Advisory Service Report No 322, *The Language of Zoning*; American Planning Association).

²⁰ See Putney Zoning Regulations, Article III: Zoning Districts.

limitations that can restrict this mix of uses. The access to municipal sewer and municipal water limits the potential for mixed development on lots in the Village Zoning District. Where a parcel has only enough septic capacity or well water to service the existing use, it will not be possible to expand uses on that parcel. If there is not enough available on-site parking, it will not be possible to add mixed uses to a parcel.

Planned Unit Development

Title 24 V. S. A. Chapter 117 states that “any local zoning regulations containing provisions for planned unit development shall describe the standards and conditions by which a proposed planned unit development shall be evaluated²¹.” This is a performance-based standard and gives any town an opportunity to specifically state standards that a developer will have to meet. The Putney Zoning Regulations conditionally permit Planned Unit Development (PUD). This can be applied to any district in Putney and land uses in a PUD are limited to those in the underlying district²².

The Putney Zoning Regulations state that, “all zoning requirements of the district shall be met except for the following, which may be modified or waived: lot area, lot width/depth minimum and setback.” These appear to be the only variables allowed for a PUD. However, any benefit gained from the modification or waiving of these requirements may be negated because “the overall density of the project shall not exceed the number of residential and non-residential structures, which could be constructed if the land were subdivided into lots in accordance with district lot area requirements.” This could potentially eliminate a PUD on parcels that might not meet the necessary lot area requirements. Greater density is not permitted in a PUD.

Planned Unit Development standards should outline specific performance-based zoning that will allow for unforeseen uses and can be applied to the Village District. Currently, the Putney Zoning Regulations lack these standards. Performance zoning standards can help regulate how any use will affect neighboring properties and the community. Standards should consider impacts such as noise, air pollution, dust, stormwater, access and other impacts. These should be listed either in the section under Planned Unit Development²³ or should be listed in General Standards²⁴.

It should be noted that Planned *Residential* Development does encourage a mixture of housing types and does allow for an increase in density. But permitted uses in Planned Residential Development will not allow for a mixture of housing and commercial uses, which might be the intent of this form of conditional development.

²¹ Title 24 V. S. A. Chapter 117, Section 4407 (12), page 69.

²² See Section 400, Town of Putney Zoning Regulations.

²³ See Section 400, Town of Putney Zoning Regulations.

²⁴ See Section 220.1 Town of Putney Zoning Regulations.

Secondary Uses

From the Putney Zoning Regulations, “a secondary use is allowed in the district that is conducted on the same lot as a primary use, and which meets the requirements established in Section 310.4 of these Regulations. These uses are not customarily incidental or subordinate to the primary use, as are Accessory Uses or structures. An example of a secondary use is the renting of the third floor of a primarily retail-use building for dwelling purposes.

“Secondary Uses are permitted as Conditional Uses in all districts in order to provide for a limited, sensible, mixed use of properties. Conditional Use Approval and a Zoning Permit are always required. The Secondary Use shall meet all the requirements for it as specified in the district (e.g., setbacks, parking, landscaping, etc.). However, no additional lot area is required for a Secondary Use²⁵.” Any number of secondary uses may be allowed in the Village District.

Allowing secondary uses through the conditional use process has the potential to allow a mixing of uses on a single parcel. For instance, it might be possible to have a single-family residence and a nursery on the same parcel. Zoning requirements, small lot size, lot configuration, and lot access restrict putting an additional building to house a secondary use on many of the parcels in the center of the Village. An available parcel that would allow only one use under normal circumstances may not be able to be expanded because of restrictions on parking. The secondary use feature of the Putney Zoning Regulations fits well with areas outside the core of the Village, but may cause other concerns in the rural fringes of the Village such as unwanted sprawl. It could also result in applications for uses that might be deemed incompatible with the more rural fringes of the Village.

Other Comments on Village Zoning District

Performance standards are permitted in Title 24 V. S. A. Chapter 117²⁶, but most towns choose not to be specific with performance standards. “Such regulations shall specifically describe the levels of operation which are acceptable and not likely to affect adversely the use of the surrounding area by the emission of such dangerous or objectionable elements as noise, vibration, smoke, dust, odor, or other form of air pollution, heat, cold, dampness, electromagnetic or other disturbance, glare, liquid or solid refuse or wastes; or create any dangerous, injurious, noxious, fire, explosive, or other hazard²⁷.” Setting specific performance standards helps eliminate any guesswork on the part of the Planning Commission or the applicant.

²⁵ See Section 310.4 of the Putney Zoning Regulations.

²⁶ 24 V.S.A. Chapter 117, Section 4407 (7).

²⁷ 24 V.S.A. Chapter 117, Section 4407 (7).

The following are some examples of specific performance standards that might be used in the Putney Zoning Regulations and could be used to relate to future development in the Village Zoning District:

Lighting

From the Putney Zoning Regulations “site lighting should be kept to the minimum necessary for safety. All lighting should be shielded to minimize light flowing onto adjoining properties and roadways and to minimize skyglow. Except for that lighting necessary for safety, lights should be extinguished after the close of business hours. Lighting of high intensity and flood lighting are discouraged.²⁸” This sets no standards and can be interpreted in a number of ways.

A more specific example of a lighting standard could be: “Lighting may be used to serve security, safety and operational needs, provided that it neither adversely affects abutting properties, nor impairs the vision of motorists on adjacent roadways. Lighting fixtures shall be shielded or hooded so that the lighting elements are not exposed to normal view by motorists, pedestrians, or from adjacent dwellings. Direct or indirect illumination shall not exceed 0.5 foot-candles upon abutting residential properties²⁹.” For reference, it only requires 0.1 foot-candles to read the serial number on a dollar bill³⁰.

Noise

From the Putney Zoning Regulations: “Persistent, repetitive, or reoccurring noise, which represents a significant increase in noise levels in the vicinity of the use so as to be incompatible with the reasonable use of the surrounding lots³¹.”

An example of a noise standard that is more specific could be: “The maximum permissible sound pressure level of any continuous, regular or frequent source of sound produced by any activity shall be limited by the time period and land use district listed below. Sound levels shall be measured at least 4 feet above ground at the property boundary.” Normal conversation is at 60 dB and exposure to noise in excess of 85 dB over time will cause permanent hearing loss³².

Table Nine - Sound Pressure Level Limits (Measured in dB (a) scale)

	7 A.M. - 10 P.M.	10 P.M. - 7 A.M.
Residential Districts	70	45
Commercial Districts	70	50

²⁸ See Section 509 H of the Putney Zoning Regulations.

²⁹ Article VII - Performance Standards -- General Requirements, Limington, ME.

³⁰ Burlington Design Review Guideline – Outdoor Lighting.

³¹ See Section 508 of the Putney Zoning Regulations.

³² League For The Hard Of Hearing.

“The levels specified may be exceeded by 10 dBA for a single 15-minute period per day. Noise shall be measured by a meter set on the A-weighted response scale, slow response. The meter shall meet the American National Standards Institute (ANSI S1. 4-1961) "American Standard Specification for General Purpose Sound Level Meters.”

- A. “No person shall engage in construction activities, on a site abutting any residential use between the hours of 10 p.m. and 7 a.m., which exceed those limits established for residential districts. Otherwise the following activities shall be exempt from these regulations:
1. Sounds emanating from construction and maintenance activities conducted between 7 a.m. - 10 p.m.
 2. Sounds emanating from safety signals, warning devices, emergency pressure relief valves, other emergency activities or other State or Federally required devices.
 3. Sounds emanating from traffic on public transportation facilities.”

Table Ten – Examples of Sound from Typical Devices³³

Device	dBA
Quiet Room	28-33
Computer	37-45
Refrigerator	40-43
Normal Conversation	55-65
Clothes Dryer	56-58
Hairdryer	80-95
Vacuum Cleaner	84-89
Lawn Mower	88-94
Leaf Blower	95-105
Circular Saw	100-104
Maximum Output of Stereo	100-110

Parking

The Shared Parking section of the Putney Zoning Regulations helps eliminate some of the potential parking problems in the Village. “In the case of a parking lot which will be used for non-residential or mixed residential-commercial or other use, the Planning Commission may reduce the parking requirement of a project undergoing Site Plan Review by up to 80 percent for such uses that it determines will be generating a demand

³³ League for the Hard of Hearing.

for parking during periods when other uses are not in operation, or which will share parking demand with other uses located on the same or nearby lots.”

Under the broad cover of a Planned Unit Development, parking requirements could be set by the Planning Commission during the site plan review process and could be approved as part of a conditional use permit. This could include accounting for some of the parking requirements through Shared Parking, but the Putney Zoning Regulations do not allow for the waiving of parking requirements.

With Secondary Uses, parking requirements cannot be waived and must meet the requirements for the combined uses. Parking has to account for the Primary Use plus the addition of parking for the Secondary Use.

Setbacks

Setbacks can be waived as part of a Planned Unit Development. A deviation in setbacks is not allowed when the Planning Commission considers a Secondary Use. In the village core, not being able to adjust the setbacks effectively eliminates Secondary Uses because of access or the smaller parcel sizes. This is less of a problem outside the village core where there is more space and larger parcels available.

The Town might consider establishing maximum structural setbacks. This discourages the buildings being set far back from the road and helps create uniformity in placement. In the Village, no building should be allowed to be set back more than a distance that reflects the surrounding setbacks. What the Village might consider is a grassy separation strip between the right-of-way and sidewalk and then the structure that is then set back to reflect the surrounding structures. This maintains the look and feel of the Village and prevents large parking lots in front of buildings.

Zero lot line might be something to consider as a conditional use. Zero lot line setback would allow a structure up to a side property line. If roof eaves overhang by two feet, a structure would have to be at least two feet from a property line; however, a building without a sill could be built right up to the property line. This could give the developer or landowner the maximum use of a parcel. Footings would not be allowed to extend into the neighboring parcel.

Comparison of Zoning at Dummerston Town Line

The Town of Dummerston abuts the Town of Putney at the southern entrance to the Village District. At this point, the Dummerston Zoning District at that boundary is Rural Commercial³⁴ and is shown on the Dummerston Official Zoning Map³⁵. From the Dummerston Bylaw, “these lands are of sufficiently varied topography and soil type to fit the criteria for both rural residential and commercial/light industrial uses. They appear generally suitable for well-planned and coordinated development of commercial/light

³⁴ Dummerston Zoning Bylaw; Page 7.

³⁵ Dummerston Official Zoning Map; Page 13.

industrial facilities that will benefit from close proximity to the Town’s two major highways and.....except along the east side of Route 5, a property in the Rural Commercial District must abut the highway (Route 5 or Route 30) if it is to be commercially developed. Corner lots abutting on Route 5 or Route 30 and a side road entering one of these highways, may be developed commercially.”

In contrast to the Putney Village District, the Town of Dummerston is more restrictive in the uses allowed or conditionally permitted. Regardless of the smaller number of uses allowed in the Town of Dummerston, both the Town of Dummerston and the Village of Putney are linked because of the Route 5 and Interstate 91 Exit 4. A mixed range of uses could be developed at this intersection in both communities. However, the Village of Putney may have an advantage for development over the Town of Dummerston because of the proximity to municipal sewer and the potential for municipal water. [Table Ten](#) is the comparison of permitted and conditional uses in Putney and Dummerston. All uses shown on this table could be contiguous.

Table Eleven – Comparison of Permitted and Conditional Uses, Putney and Dummerston (continues on next page)

Putney Permitted Uses	Dummerston Permitted Use	Putney Conditional Uses	Dummerston Conditional Uses
Accessory Use to a Permitted Use	Accessory Use	Accessory Use to a Conditional Use	
Agriculture	Agriculture	Bar, Tavern	Animal Hospital
Church	Community Center	Bed & Breakfast	Building trade / Repair shop
Child Care Facility	Conservation	Boarding, Rooming House or Inn	Campground
Conservation	Dwelling Single – or Two-Family	Cemetery	Dwelling, Multi Family
Dwelling, Single- or Two-Family	Forestry	Community Facility	Earth and Mineral Extraction
Dwelling; Three-Family	Home Industry	Conference Center	Greenhouse/Nursery/Farm Stand
Dwelling, Four-Family	Professional residence-office	Contractor's Yard	Junkyard
Forestry	Tourist home/boarding house	Dwelling, Multi-family	Motel/Hotel
Garden/Farm Supply or Nursery		Educational Institution	Personal Service
Home Occupation		Extraction of Earth Resources/Quarrying	Planned Unit Development
Office		Home Industry	Professional office building
Recreation, Indoor		Hotel, Motel	Manufacturing, Packaging or Processing
Recreation, Outdoor		Kenel	Mobile Home Park
Retail Business or Service <2,500 sq. ft		Manufacturing, Packaging or Processing	Restaurant
Residential Care/Group Home		Mobile Home Park	Recreation

Putney Permitted Uses	Dummerston Permitted Use	Putney Conditional Uses	Dummerston Conditional Uses
Restaurant		Motor Vehicle Service Station	Retail Store
Theater/Cultural Center		Motor Vehicle Fuel Station	Stable
Wholesale Business <2,000 sq. ft.		Motor Vehicle Sales;	Warehouse
		Municipal Utility or Safety Related Facility	
		Museum	
		Nursing Home	
		Resource Industry	
		Retail Business or Service 2,500 - 30,000 sq. ft.	
		Secondary Use	
		Warehouse/Storage to 30,000 sq. ft.;	
		Wholesale Business 2,000 to 30,000 sq. ft.	
		Wireless Telecommunications Facility	

Recommendations:

- Conduct a joint Route 5/Interstate 91 corridor study. This could show both communities what might be expected from development at this exit of Interstate 91.
- Consider developing coordination between Putney and Dummerston Planning Commission on development that occurs in the contiguous zoning districts along Route 5. This might help prevent incompatible development from occurring.
- Consider allowing for density bonuses for Planned Unit Development. This is one of the primary tools that could help encourage developers to use the Planned Unit Development option.
- Consider maximum setbacks in the Village District to create a uniform feel and appearance to the Village as development occurs over time.
- Consider developing specific performance standards such as those shown in the section on Planned Unit Development. This will help the Putney Zoning Regulation to more fully comply with Title 24 V. S. A. Chapter 117 and will allow the Planning Commission to give developers standards prior to applying for a Conditional Use Permit or Planned Unit Development.
- Consider altering the cumulative parking requirements for Secondary Uses. Limit the number of required parking spaces to the use which would require the greatest number of spaces. Do not require parking spaces for the Secondary Use. This might encourage more Secondary Uses in the Village core

APPENDIX

Putney Village Inventory Database Structure

GIS Data Documentation Sheets

Putney Village Inventory – Database Structure

Building Footprint GIS data (FT_PRINT)			
field name	type	width	description
ADDRESS	N	11	address number
NEWSTR	C	30	full address (number and street), E911 format
BLDGID	C	16	WRC unique building id
RDNAME_CHA	C	30	road name
Building Inventory Access file (INVENTORY.MDB)			
field name	type	width	description
ID	N	20	system id number
USE	C	2	use of building (one letter code)
NAME	C	50	name of building/business
BLDGID	C	16	WRC building id
PARCELNUM	C	15	parcel number (links to grand list, GIS data)
ADDRESS	C	30	911 address (number and street), E911 format
BUSINESS	C	100	business names
USECODE	N	4	VGIS land use code
USE_CHAR	C	50	VGIS land use description
LIVUNITS	N	3	number of living units
DATE	C	8	date of construction, when available
NUMSTORY	N	2	number of stories
DESCRIPT	C	100	description of building
COMMENTS	C	200	comments on building
STATUS	C	100	WRC comments on status of data
MODDATE	D		date record was modified/updated
Parcel status DBF file (PARCVILL.DBF)			
field name	type	width	description
PARCELNUM	C	15	parcel number (links to grand list, GIS data)
INVILLAGE	C	1	Y = parcel is in village zoning district
PRCLUSE	C	2	use of parcel (one letter code)
PARCUSECODE	N	4	use of parcel (VGIS land use code)
NO_DEV	C	5	Y = no development allowed (e.g VLT easement, cemetery...)
DESCRIPT	C	50	brief description, for selected parcels
PARCELACRE	N	9	acreage of parcel
SQFOOTAGE	N	8	square footage of parcel
ANALYZE	C	1	Y = parcel analyzed in build-out (i.e. in village core)
SOURCEACRE	C	5	source of acreage figure (either grand list or GIS data)
DEVELOPED	C	1	Y = parcel has a structure on it
POTNEWLOTS	N	2	potential new lots, from buildout
SEWERED	C	1	Y = parcel is/will be connected to sewer
PER_CONST	N	5	percent of parcel constrained (slope or wetland)
SEWERDST	C	1	Y = parcel in sewer district (may not be sewerred!)
NEW_CONST	N	2	potential new lots, excluding constrained areas

=====

COMPREHENSIVE COVERAGE DESCRIPTION

DATA LAYER SUMMARY

Date of Entry: 12/30/02
Coverage Name: FT_PRINT
Path:
Description: Building footprints, village of Putney, Vt.
Feature: POLY
Status: 6
Available: 02/03/03

DATA MANAGER

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DATA AUTOMATION

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GEOGRAPHIC AREA and TILE STRUCTURE

Tile Structure: NONE (Avg.size: 0kB)
Area: village of Putney, Vermont

DATA SOURCE & FORMAT

Source Map: 1:5000 orthophotos and other supplemental data
Source Date: 2002 Data Format: pcArc/Info
Source Scale: 1:5000 Projection : State Plane meters
Source Media: digital Datum: NAD 1983

SOURCE DESCRIPTION

The main data source used was 2002 1:5000 digital Vermont orthophotos. They are based on aerial photography taken in spring 2000.

Several other data sources were used to help identify the location and general shape of the buildings. These include historic district maps, Mabel Gray Walkway maps, and E911 ESITE data. Field visits were also made in 2002 to map and photograph building location and shape.

ACCURACY & TOLERANCES

Resolution:
Fuzzy: 0.000 Dangle: 0.000
FEATURE ACCURACY (in meters)

The accuracy of this coverage is quite variable. Where the building edges were obvious on the orthophoto, the error is probably no more than 1 to 3 meters.

In most cases, even with a clear view of a structure, all the angles and corners were not captured. If the structure was not able to be clearly identified on the orthophoto, it may be located within 5 meters of its true location, but with very little detail on its shape and orientation. In

FEATURE ACCURACY (in meters), continued ...

several instances, no building could be identified on the orthophoto and thus the error would be much greater.

DATA AUTOMATION

Dates: May to December 2002 Software: pcArc/Info 3.5.2; ArcView 3.2
Device: n/a (Resolution: 0.000)
Maximum RMS: n/a
Update Schedule: ongoing
Last Update: 12/30/02

QUALITY CONTROL

Data have not yet been reviewed.

DESCRIPTION, FEATURE DEFINITION, METHODOLOGY, etc.

This coverage contains rough building footprints for major buildings in the village of Putney, Vermont. The coverage was created to give a general impression of the location, size, shape, and orientation of structures in the village and not to map in detail the structures themselves. Buildings are coded with their use, a general description, and a 911 locatable address.

A combination of data sources was used to identify, locate, and determine the general shape of all the major buildings in the village. The rough outline of the building (i.e. the building footprint) was delineated in ArcView using 1:5000 Vermont digital orthophotos. Field visits and ground photographs were then used to do final verification and fine tuning of the buildings.

LIMITS ON DATA USE & INTERPRETATION

This coverage was created to give a general feel for the overall location, size, shape, and orientation of buildings in the village of Putney. Its primary purpose is cartographic; that is, to serve as a base map reference coverage for mapping in the village.

POLYGON ATTRIBUTE DESCRIPTIONS: NONE.

ARC ATTRIBUTE DESCRIPTIONS: NONE.

ANNOTATION DESCRIPTION: NONE.

COVERAGE HISTORY & DEVELOPMENT DESCRIPTION: NONE.

COVERAGE UPDATE DOCUMENTATION: NONE.

 COMPREHENSIVE COVERAGE DESCRIPTION

DATA LAYER SUMMARY

Date of Entry: 12/30/02
 Coverage Name: STR_EDGE
 Path: PUTNEY\PUTVILL
 Description: street edges, village of Putney, Vt
 Feature: LINE
 Status: 6
 Available: 05/30/02

DATA MANAGER

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DATA AUTOMATION

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 139 Main Street, Suite 505
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GEOGRAPHIC AREA and TILE STRUCTURE

Tile Structure: NONE (Avg.size: 0kB)
 Area: village of Putney, Vermont

DATA SOURCE & FORMAT

Source Map: 1:5000 digital orthophotos
 Source Date: 2002
 Source Scale: 1:5000
 Source Media: digital
 Data Format: pcArc/Info
 Projection : State Plane meters
 Datum: NAD 1983

SOURCE DESCRIPTION

The main data source used was a 2002 1:5000 Vermont digital orthophoto. It is based on aerial photographs taken in 2000. In a number of places, GPS points were taken to verify the edge of the street. Field visits were also made in 2002 to further refine the data.

ACCURACY & TOLERANCES

Resolution:
 Fuzzy: 0.000 Dangle: 0.000
 FEATURE ACCURACY (in meters)

The accuracy of this coverage is somewhat variable but is probably no more than 1 to 2 meters.

DATA AUTOMATION

Dates: May to December 2002
 Device: n/a (Resolution: 0.000)
 Maximum RMS: n/a
 Update Schedule: none planned
 Last Update: 12/30/02
 Software: pcArc/Info 3.5.2; ArcView 3.2

=====

QUALITY CONTROL

No formal quality control, other than verification using GPS, was performed.

DESCRIPTION, FEATURE DEFINITION, METHODOLOGY, etc.

This coverage contains the location of street edges in the village of Putney, Vermont. The coverage was created to give a general impression of the location of the road in the village

A combination of data sources was used to locate the street edges. The street edge was first delineated in ArcView using Vermont 1:5000 digital orthophotos. Field visits, ground photographs, and GPS points were then used to do final verification and fine tuning of the street edge.

LIMITS ON DATA USE & INTERPRETATION

This coverage was created to give a general feel for the overall location of streets in the village of Putney. Its primary purpose is cartographic; that is, to serve as a base map reference coverage for mapping in the village.

While the location of the street edge is probably within 1 (or possibly 2) meters of its true location, one should not use this coverage to determine actual pavement width.

POLYGON ATTRIBUTE DESCRIPTIONS: NONE.

ARC ATTRIBUTE DESCRIPTIONS: NONE.

ANNOTATION DESCRIPTION: NONE.

COVERAGE HISTORY & DEVELOPMENT DESCRIPTION: NONE.

COVERAGE UPDATE DOCUMENTATION: NONE.

=====

COMPREHENSIVE COVERAGE DESCRIPTION

DATA LAYER SUMMARY

Date of Entry: 03/06/03
Coverage Name: SIDEWALK
Path: PUTNEY\PUTVILL
Description: sidewalk centerline, village of Putney, Vt
Feature: LINE
Status: 2
Available: 02/03/03

DATA MANAGER

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DATA AUTOMATION

Jeff Nugent
Windham Regional Commission
139 Main Street, Suite 505
Brattleboro, VT 05301

GEOGRAPHIC AREA and TILE STRUCTURE

Tile Structure: NONE (Avg.size: 0kB)
Area: village of Putney, Vermont

DATA SOURCE & FORMAT

Source Map: 1:5000 digital orthophotos, GPS data
Source Date: 2002 Data Format: pcArc/Info
Source Scale: 1:5000 Projection : State Plane meters
Source Media: digital Datum: NAD 1983

SOURCE DESCRIPTION

GPS data points were captured during the summer of 2002 with a Trimble ProXR GPS receiver. Data were subsequently refined using a 2002 1:5000 Vermont digital orthophoto. It is based on aerial photographs taken in 2000.

ACCURACY & TOLERANCES

Resolution:
Fuzzy: 0.000 Dangle: 0.000
FEATURE ACCURACY (in meters)

The accuracy of this coverage is somewhat variable but is probably no more than 1 to 2 meters.

DATA AUTOMATION

Dates: May to December 2002 Software: pcArc/Info 3.5.2; ArcView 3.2
Device: n/a (Resolution: 0.000)
Maximum RMS: n/a
Update Schedule: none planned
Last Update: 12/30/02

QUALITY CONTROL

No formal quality control, other than verification using GPS, was performed.

DESCRIPTION, FEATURE DEFINITION, METHODOLOGY, etc.

This coverage contains the location of sidewalks along streets in the village of Putney, Vermont. The coverage was created to give a general impression of the location of the sidewalks and other infrastructure in the village

GPS data were captured by WRC GIS staff in the summer of 2002 using a Trimble ProXR GPS receiver. The data were differentially corrected. Using a Vermont 2002 1:5000 digital orthophoto, the data were refined in ArcView to smooth out the linework.

LIMITS ON DATA USE & INTERPRETATION

This coverage was created to give a general feel for the overall location of sidewalks in the village of Putney. Its primary purpose is cartographic; that is, to serve as a base map reference coverage for mapping in the village.

POLYGON ATTRIBUTE DESCRIPTIONS: NONE.

ARC ATTRIBUTE DESCRIPTIONS: NONE.

ANNOTATION DESCRIPTION: NONE.

COVERAGE HISTORY & DEVELOPMENT DESCRIPTION: NONE.

COVERAGE UPDATE DOCUMENTATION: NONE.

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COMPREHENSIVE COVERAGE DESCRIPTION

DATA LAYER SUMMARY

Date of Entry: 03/06/03
Coverage Name: SDWKEDGE
Path: PUTNEY\PUTVILL
Description: sidewalk edges, village of Putney, Vt.
Feature: LINE
Status: 2
Available: 02/03/03

DATA MANAGER

Jeff Nugent
Windham Regional Commission
139 Main Street, Suite 505
Brattleboro, VT 05301
802-257-4547

DATA AUTOMATION

Jeff Nugent
Windham Regional Commission
139 Main Street, Suite 505
Brattleboro, VT 05301

GEOGRAPHIC AREA and TILE STRUCTURE

Tile Structure: NONE (Avg.size: 0kB)
Area: village of Putney, Vermont

DATA SOURCE & FORMAT

Source Map: GPS data and field mapping
Source Date: 2002
Source Scale: n/a
Source Media: digital
Data Format: pcArc/Info
Projection : State Plane meters
Datum: NAD 1983

SOURCE DESCRIPTION

This coverage is a cartographic version of SIDEWALK, depicting sidewalk centerlines. The sidewalk edges in this coverage were developed from SIDEWALK and STR_EDGE, a coverage of street edges.

The main data source used for these two coverages was GPS field data captured in summer 20021, and a 2002 1:5000 Vermont digital orthophoto.

ACCURACY & TOLERANCES

Resolution:
Fuzzy: 0.000 Dangle: 0.000

FEATURE ACCURACY (in meters)

The accuracy of this coverage is somewhat variable is probably no more than 1 to 2 meters. The centerline of the sidewalk should fall within the sidewalk edges as depicted in this coverage, but the sidewalk edges as shown in this coverage are not necessarily accurate; they are intended only to give a polygonal, cartographic representation of the sidewalk centerline.

DATA AUTOMATION

Dates: summer 2002 Software: pcArc/Info 3.5.2; ArcView 3.2
Device: n/a (Resolution: 0.000)
Maximum RMS: n/a
Update Schedule: none planned
Last Update: 12/30/02

QUALITY CONTROL

No formal quality control, other than verification using GPS, was performed.

DESCRIPTION, FEATURE DEFINITION, METHODOLOGY, etc.

This is a cartographic coverage of sidewalks along streets in the village of Putney, Vermont. The coverage was created to give a general impression of the location of sidewalk edges in the village.

This coverage is a cartographic version of SIDEWALK, a coverage of the sidewalk centerlines. This coverage should not be used to determine actual sidewalk widths. It was created by buffering SIDEWALK roughly 3 feet. Where the actual sidewalk edge corresponded with the street edge, arcs from the coverage STR_EDGE were used.

ASSOCIATED FILES

The coverage SIDEWALK contains sidewalk centerlines.

LIMITS ON DATA USE & INTERPRETATION

This coverage was created to give a cartographic representation of sidewalk edges along streets in the village of Putney. Its primary purpose is cartographic; that is, to serve as a base map reference coverage for mapping in the village.

POLYGON ATTRIBUTE DESCRIPTIONS: NONE.

ARC ATTRIBUTE DESCRIPTIONS: NONE.

ANNOTATION DESCRIPTION: NONE.

COVERAGE HISTORY & DEVELOPMENT DESCRIPTION: NONE.

COVERAGE UPDATE DOCUMENTATION: NONE.

 COMPREHENSIVE COVERAGE DESCRIPTION

DATA LAYER SUMMARY

Date of Entry: 03/06/03
 Coverage Name: DRIVES
 Path: PUTNEY\PUTVILL
 Description: driveway and parking lot edges, village of Putney, Vt
 Feature: LINE
 Status: 2
 Available: 02/03/03

DATA MANAGER

Jeff Nugent
 Windham Regional Commission
 139 Main Street, Suite 505
 Brattleboro, VT 05301
 802-257-4547

DATA AUTOMATION

Jeff Nugent
 Windham Regional Commission
 139 Main Street, Suite 505
 Brattleboro, VT 05301

GEOGRAPHIC AREA and TILE STRUCTURE

Tile Structure: NONE (Avg.size: 0kB)
 Area: village of Putney, Vermont

DATA SOURCE & FORMAT

Source Map: 1:5000 digital orthophotos
 Source Date: 2002
 Source Scale: 1:5000
 Source Media: digital
 Data Format: pcArc/Info
 Projection : State Plane meters
 Datum: NAD 1983

SOURCE DESCRIPTION

The main data source used was a 2002 1:5000 Vermont digital orthophoto. It is based on aerial photographs taken in 2000. In a number of places, GPS points were taken to verify the edges of driveways where they join the street. Field visits were also made in 2002 to further refine the data.

ACCURACY & TOLERANCES

Resolution:
 Fuzzy: 0.000 Dangle: 0.000
 FEATURE ACCURACY (in meters)

The accuracy of this coverage is somewhat variable but is probably no more than 1 to 2 meters.

DATA AUTOMATION

Dates: May to December 2002
 Device: n/a (Resolution: 0.000)
 Maximum RMS: n/a
 Update Schedule: none planned
 Last Update: 12/30/02
 Software: pcArc/Info 3.5.2; ArcView 3.2

QUALITY CONTROL

No formal quality control, other than verification using GPS, was performed.

DESCRIPTION, FEATURE DEFINITION, METHODOLOGY, etc.

This coverage contains the location of the edges of many of the driveways and parking lots in the village of Putney, Vermont. The coverage was created to give a general impression of the location of these features, to attempt to depict parcel access, and to show what areas were dedicated to parking.

A combination of data sources was used to locate the street edges. Driveways and parking lots were delineated in ArcView using Vermont 1:5000 digital orthophotos, using field visits, ground photographs, and GPS points, the latter taken when sidewalks and street edges intersected drives and parking lots.

LIMITS ON DATA USE & INTERPRETATION

This coverage was created to show the general location of driveways and parking lots in the village of Putney. Its primary purpose is cartographic; that is, to serve as a base map reference coverage for mapping in the village, and also to help provide information on access to parcels.

POLYGON ATTRIBUTE DESCRIPTIONS: NONE.

ARC ATTRIBUTE DESCRIPTIONS: NONE.

ANNOTATION DESCRIPTION: NONE.

COVERAGE HISTORY & DEVELOPMENT DESCRIPTION: NONE.

COVERAGE UPDATE DOCUMENTATION: NONE.