2009 UNDERHILL TOWN PLAN
DECEMBER 4, 2009

TABLE OF CONTENTS

CHAPTER 1: NATURAL RESOURCES 1
Section 1.0 Overview 1
Section 1.1 Forestry 1
Section 1.2 Agriculture 2
Section 1.3 Open Space Planning 3
Section 1.4 Water Quality 4
Surface Waters 4
Lamoille River Basin – Water Quality Management Plan 4
Brown River Corridor Plan – Browns River Watershed 5
Water Quality & Stormwater 5
Wetlands and Vernal Pools 6
Groundwater 7
Flood Hazard Areas 8
Fluvial Erosion Hazard Overlay District 9
Section 1.5 Wildlife Habitat 9
Section 1.6 Sensitive Areas 10
Natural Areas 10
Mount Mansfield Natural Area 11
Hills and Ridgelines 11
Scenic Areas 11
Section 1.7 Geological Resources 12
Section 1.8 Invasive Species 12
Section 1.9 Air Quality 12
Section 1.10 Climate Change 13
Section 1.11 Natural Resources Policy 14
Section 1.12 Goals and Strategies: Forestry and Agriculture 15
Section 1.13 Goal and Strategies: Open Space 16
Section 1.14 Goals and Strategies: Water Quality 17
Section 1.15 Goals and Strategies: Wildlife and Habitat 19
Section 1.16 Goal and Strategies: Hills and Ridgelines 20
Section 1.17 Goal and Strategies: Geological Resources 21
Section 1.18 Goal and Strategies: Air Quality 21
CHAPTER 2: LAND USE 22
Section 2.0 Land Use Defined: 22
Section 2.1 Land Use Definitions 23
Section 2.2 Land Use Planning and Underhill 23
Section 2.3 Residential Zoning District 25
Section 2.4 Rural Residential Zoning District 27
Section 2.5 Water Conservation Zoning District 29
Section 2.6 Mount Mansfield Scenic Preservation Zoning District 33
Section 2.7 Soil and Water Conservation Zoning District 35
Section 2.8 Special Flood Hazard District 37
Section 2.9 Fluvial Erosion Hazard Areas ("FEH") 38
Section 2.10 Land Use Regulation 39
Section 2.12 Land Use Contracts 40

TABLE OF CONTENTS

CHAPTER 3: SERVICES 41
Adequate Services 41
Section 3.1 Police, Emergency Services, Fire Protection 41
Section 3.2 Health Care 41
Section 3.3 Water and Septic Systems 41
Section 3.4 Solid Waste Disposal 42
Section 3.5 Electricity 42
Section 3.6 Post Office 42
Section 3.8 Library 42
Section 3.9 Cemeteries 42
Section 3.10 Adequate Services: A Note 43
Inadequate Services 43
Section 3.11 Public Transportation 43
Section 3.13 High-speed Internet Service 44
Section 3.14 Emergency Operations Planning 44
CHAPTER 4: INFRASTRUCTURE 46
Section 4.1 Background Information 46
Section 4.2 2008 Planning Survey 47
Section 4.3 Capital Improvement Program and Capital Budget 47
Section 4.4 Town Buildings 49
Section 4.5 Town Lands 50
Section 4.6 Town Roads 50
Section 4.7 Other Town Infrastructure 51
Section 4.8 Communications Systems 52
Section 4.9 Village Centers 52
Section 4.8 Development of Recreational Trails 52
CHAPTER 5: TRANSPORTATION 53
Section 5.1 Current Conditions 53
Section 5.2 Town Roads 54
Section 5.3: Public Transportation 55
Section 5.4 Alternative Modes of Transportation 56
CHAPTER 6: HOUSING 57
Section 6.1 Background 57
Housing Targets 58
Section 6.2 Housing and Income 59
Section 6.3 Housing and Age 59
Section 6.4 Housing Targets 60
CHAPTER 7: ECONOMIC DEVELOPMENT 61
Section 7.1 Background 61
Section 7.2 Economic Policy, Goals and Strategies 61
CHAPTER 8: ENERGY 63
Section 8.1: Background 63
Section 8.2 Energy Consumption Reduction 64
Section 8.3: Development of Renewable Energy Resources 65
CHAPTER 9: RECREATION 67
Section 9.1 Recreational Trails 67

TABLE OF CONTENTS

1 Section 9.2 Ancient Roads 68
2 Section 9.3 Town Pond/Tennis Courts/Casey's Hill 69
3 Section 9.4 Trail Development and Maintenance 69
4 Section 9.5 Town Recreational Infrastructure 70
5 Appendix A: References 72
6 Appendix B: Planning Survey……..73
7 Appendix C: Maps……91

CHAPTER 1: NATURAL RESOURCES

Section 1.0 Overview

The Town of Underhill lies between the Champlain Valley to the west and the spine of the Green Mountains to the east. The physical features of Underhill's landscape have greatly influenced local patterns of human activity, settlement and commerce. Settlement in Underhill developed around the most reliable source of power at the time—the Browns River and its many tributaries. The Town's traditional agricultural base, which once extended into the surrounding hills, is today largely confined to its most productive soils, found along the river valley. Those areas least desirable for development—Underhill's remote and rocky uplands—form a scenic backdrop and include productive forest lands, headwaters, and important wildlife habitat.

The quality of life Underhill residents enjoy and have stated they want to protect is closely tied to the quality of the Town's rural character and natural resources. A Community Planning Survey, conducted by the Center for Rural Studies, indicated that 86.8% of survey respondents feel it is important to "protect wetlands, wildlife habitat, endangered species, forest land, water quality, and other natural resources" in Underhill. (Moser, 2009)

The location and approximate boundaries of a variety of natural resources have been mapped by local, regional or State sources. With most of these mapped resources available as data layers in the Vermont Geographic Information System (GIS), they can be viewed collectively for any parcel or area within Underhill. This system permits cohesive open space planning and gives Underhill officials the ability to protect significant natural resources both in the preparation of zoning regulations and during review of proposals for development.

Section 1.1 Forestry

Underhill, a town of 32,828 acres, has abundant forest cover throughout the Town. Underhill has over 7612 acres of productive forestland growing lumber to meet local and regional current and future needs (based on forest lands enrolled in the State's current use program). An additional 9,659 acres is contained within the Mount Mansfield State Forest (6,035 acres), the Ethan Allen Firing Range (3,292 acres), and UVM properties (Proctor Research and the Chin, 332 acres). 4004 acres are also enrolled in Town Contracts although it is not clear how this acreage is being used other than being protected from subdivision.

Much of the Town's forest resources are managed by private landowners. However, The Mount Mansfield State Forest is logged under management of the State Department of Forests and Parks. Some private lands in Underhill are logged commercially; many are under forest management in one of the Town or State current use or conservation easement programs (about 2,000 acres). Over 70% of the total acreage in Underhill is reflected in the data mentioned above.

Continued management of these woodlands is an important community goal. Forest land and its traditional uses (timber extraction, wildlife habitat, recreation, scenic resources, etc.) help define the rural character of the Town. The viability of our working forests is tied inextricably to adequate access and overall land base. Indiscriminate subdivision and development has the potential to fragment large blocks of forest land into smaller ownerships (parcelization) making long-term timber management more difficult. More importantly, even if large forest parcels are maintained, development along Town roads must be carefully planned to avoid isolating interior forest lands. Given low profit margins and site-specific constraints, working forests require suitable access for equipment and timber harvesting.

The impacts of fragmentation on wildlife that rely on ”Core Forests” are also a concern. These are forests that provide at least 100 yards free from human disturbance. Core forests have declined, in Underhill, from 1978 (25,544 acres) to 1993 (19,580 acres). This was a 22% decline from 1978 to 1993; and likely has not improved in 2009 (CCRPC, 2001).

Planning for all of Underhill’s forest resources could be improved through a more thorough evaluation of site-specific potential and value to the community. Frequently, during local development review, town boards find it difficult to assess the value of a particular area for residential development versus timber production versus conservation. Given the wealth of GIS data available, it may be possible to develop a system or model that better establishes the value of a particular area for a number of competing or overlapping values.

Section 1.2 <u>Agriculture</u>

Agriculture is an important contributor to the character of the Town. In 2003 there were 4,973 acres devoted to farming in Underhill (CCRPC Regional Plan, 2006). Farmers have the ability to produce an income from the land and keep it open. However, the farmer is under constant pressure to sell or develop the land due to the discrepancy between income from production and what he or she could expect from real estate development. Once the land has been developed for nonagricultural purposes, it is forever lost to agriculture. Preserving agricultural land, while maintaining the landowner’s equity in that land, is one of the planning challenges facing the Town.

Agriculture contributes to the Town economically, socially, environmentally, and aesthetically.

Economic Benefits:

- Property taxes paid and fewer services demanded
- Sale of agricultural products
- Local jobs and services for businesses and industries
- Slows diversion of farmland to other uses
- Local food products
- Direct and indirect contribution to the local and regional economy

Social Benefits:

- Space for recreation
- Educational opportunities
- Scenic views
- Makes Underhill an attractive place to live and work
- Cultural diversity
- Retention of town heritage and rural character

Environmental Benefits:

- Cultivation of open land
- Helps water recharge areas
- Helps to maintain healthy forests
- Provides wildlife habitat

Due to hilly terrain, prime agricultural land in Underhill is limited to the river valleys and some of the flatter hillsides. While there is no data available at this time, interest in locally grown meat from pastured animals in recent years appears to be increasing landowner interest in maintaining available farm land, including small fields and pastures. Commercial farming operations are leasing small pastures and individuals are raising animals for their own use. This trend should be documented and encouraged for all the reasons stated above. Conversion of prime farm land for other uses should be discouraged.

Section 1.3 Open Space Planning

"Open space" refers to all types of lands that are valued for being undeveloped including those areas that provide for natural processes and wildlife, for agriculture and sylvan production, for active and passive recreation, and/or for providing other public benefits.

Open space planning is one way for communities to determine what resources are important to protect, identify those resources, weigh their relative value and arrive at strategies for protecting or managing them, such as natural resource overlay districts, conservation land acquisition, and management of public lands. Open space planning in Underhill could benefit the town by taking a more comprehensive look at the entire town and adjoining towns to identify important land and natural resources and connectivity that allows for continued ecological function and value to Underhill.

The Community Planning Survey (Moser, 2009) indicated that 84.7% of Underhill residents feel that it is important to protect open space now and for the future of Underhill. This suggests that an Open Space Plan may be a logical next step for Underhill to take in determining how best to conserve the natural areas that residents value so highly.

Section 1.4 Water Quality

Surface Waters

The main watercourse in Underhill is the Browns River, a major tributary of the Lamoille River and the headwaters of the Browns River sub-watershed; the largest sub-watershed of the Lamoille River watershed . The Browns River begins on Mount Mansfield and is joined in Underhill Center by Stevensville Brook and Clay Brook, which also begin their journey high on the mountain. Harvey Brook, Crane Brook and Mill Brook, which drain the lower hillsides, also join the Browns River in the village of Underhill Center, creating special problems, due to a high ground water level and vulnerability to flooding. It then flows parallel to South Hill and is joined in Jericho by the Creek, a slow flowing stream and important wetland paralleling VT 15. Roaring Brook, a significant tributary to the Creek, joins the Creek right before it crosses into Jericho.

The Browns River meanders through a broad floodplain along the River Road, often changing its course during spring floods. The small farming area along River Road is the major beneficiary of the post glacial flooding in Underhill, the only concentrated area of prime agricultural soils in town and a working landscape which should be preserved.

Other surface waters outside of the Browns River watershed, in Underhill, are the Seymour River and Beaver Brook. The Seymour River, which flows directly into the Lamoille River on its journey from Underhill through Cambridge is responsible for the rich agricultural soil along Pleasant Valley. In North Underhill Beaver Brook drains Metcalfe Hill and flows across Westford into the Lamoille River.

In addition to these named streams there are numerous unnamed streams. Although these streams are low volume or intermittent in nature, they serve important functions as seasonal drainage ways.

The rivers, streams and lakes in Underhill have great value aesthetically, as wildlife habitat and corridors and for recreation. All of these waterways eventually drain to Lake Champlain, which is an important natural, cultural, and economic resource for Underhill residents and Vermont at large. Access to these waterways is an important part of the enjoyment of Underhill's rural setting. The use or misuse of surface waters has an impact on all communities within a drainage basin.

Lamoille River Basin – Water Quality Management Plan

In November 2008 the Vermont Agency of Natural Resources released an "Interim Final Plan" called the Lamoille River Basin – Water Quality Management Plan. This is a 5 – year plan for the Lamoille River Watershed. Of importance to Underhill is the development of a comprehensive river corridor plan for the entire Browns River. The plan lists 4 specific action items:

1. Develop a river corridor protection plan for the Browns River;
2. Implement river corridor restoration and protection projects in the Browns River Watershed;

Develop and implement capital budgets for Browns River watershed towns for stream crossings and road improvements; and
Develop a Fluvial Erosion Hazard Plan and Map for the Town of Underhill.

Brown River Corridor Plan – Browns River Watershed

In the winter of 2007 the Winooski Natural Resources Conservation District, as part of a project funded by the Vermont Department of Environmental Conservation River Corridor Grant Program, initiated development of a community-based river corridor management plan for the main branch of the Browns River and select tributaries. The Browns River watershed encompasses much of Underhill and parts of Jericho, Essex, Westford and Fairfax. Phase I and Phase 2 Stream Geomorphic Assessments were conducted for the Browns River Watershed. The Phase 1 assessments identified priority reaches for the Phase 2 assessments. The assessments were completed by the Winooski Conservation District and Arrowwood Environmental over the course of approximately 5 years. This Corridor Plan focuses on the twenty-two Phase 2 assessed stream reaches. (Barton, 2009)

The findings of the Browns River Corridor Plan are summarized as follows:

- Historically, the Browns River watershed acted as a sediment and nutrient attenuation zone, with incoming fine sediments from upstream stored on the floodplain, and inputs of coarse sediment essentially in balance and equal to outputs of coarse sediment.
- The watershed has largely been transformed into a sediment and nutrient source and transport zone where floodplain access is limited and sediment and nutrients are funneled through the system to downstream receiving waters, due to the historic and ongoing adjustment processes and stressors documented in the watershed.
- The highest priority projects developed for the watershed are those that attempt to restore the sediment and nutrient attenuation assets which once dominated the system.
- Other recommended project types include riparian buffer and corridor enhancement to filter out excess nutrients, help stabilize streambanks, restore wetlands, and provide shade and cover to improve aquatic habitat; and replacement of undersized bridges and culverts to reduce channel constrictions, restore normal flow patterns, and improve aquatic habitat (Barton, 2009).

Water Quality & Stormwater

Surface waters are subject to many sources of pollution. These are generally divided into point and non-point designations. Point sources are those for which there is a clearly defined source, such as a malfunctioning septic system. Non-point sources are those for which there is no clearly recognizable source. Non-point sources, such as storm water runoff from roads, driveways (paved and unpaved) or parking lots, are far more difficult to locate and control although their potential for damage is great. Agricultural practices can have a significant impact on the quality of surface water.

Surface waters are also subject to damage from erosion of stream banks and siltation. Current Town regulations attempt to mitigate these potential damages by requiring a 100' setback of all principal structures from named streams and bodies of water. Riparian, or riverbank, forests and vegetation can contribute to the stabilization of stream banks, but riparian forest areas are lacking in parts of river and stream corridors in Underhill and there are no requirements for maintaining vegetated buffer strips around water bodies. The adequacy of the current regulations for both erosion and pollution control is a question to be addressed in planning for the protection of surface waters.

Depending on soil characteristics and the type of ground cover, the earth has a varying capacity to absorb water. When precipitation accumulates on the ground surface faster than it can be absorbed into the earth, the excess water becomes stormwater runoff. Particularly during major storms, the intensity and duration of rainfall can exceed the earth's capacity to absorb water. Impervious and hardened surfaces (such as rooftops, roadways, and parking lots) totally prevent or greatly hinder water from percolating into the ground.

Stormwater runoff flowing across the earth's surface absorbs chemicals and physically propels un-dissolved particles and other suspended material. Increased volumes of runoff tend to transport more absorbed chemicals and suspended material. Steep slopes, which Underhill has in abundance, and hardened surfaces with less friction, increase the velocity of the runoff and the speed that it accumulates into greater volumes. Increased stormwater volume and velocity enable runoff to scour larger particles and to transport them downstream. Vegetative groundcover and reduced slopes slow runoff, diminishing its ability to transport materials. Increased runoff from impervious surfaces also increases the volumes of stormwater running into streams, increasing the severity of flooding and subsequent potential to damage roads and property.

Wetlands and Vernal Pools

Wetlands are areas that are inundated by surface or ground water with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands perform several important ecological functions: they contribute to protection of surface and ground water quality, recharge ground water aquifers, and control erosion by binding and stabilizing soil. In addition, wetlands provide necessary fish and wildlife habitat; may contain rare and endangered flora and/or fauna; may represent a rare or outstanding wetland community type; and provide opportunities for recreation, education, research, and aesthetic enjoyment.

Vernal pools are small, open-water wetlands that are filled by rain and snowmelt in spring or fall and are typically dry during the summer months. Vernal pools are usually contained within a small forested basin with no permanent inlet or outlet, and supporting no fish that prey on other species. Years of filling and drying result in a unique set of conditions that support a variety of wildlife specialized to take advantage of these

conditions. Vernal pools are known as important breeding habitats for amphibians such as several salamander species and wood frogs. In Vermont, information regarding the distribution of vernal pools is limited and further study is needed to better understand this natural resource (VTF&W, 2004).

The Vermont Water Resources Panel uses a three-tier system to classify wetlands for protection. Class One and Class Two wetlands are considered "significant" as determined by the degree to which they carry out the above described functions, and are protected by the Vermont Wetlands Rules. The locations of Class One and Class Two wetlands are wetlands roughly identified on the National Wetlands Inventory (NWI) maps. The wetlands along Route 15 in Underhill, and Crane Brook are great examples of Class 2 wetlands. The location of wetlands on a particular parcel as indicated on State Wetland Inventory Maps, according to current zoning regulations, are to be confirmed through site investigation.

Class Three wetlands are those wetlands that have not yet been evaluated or those not considered significant under the Vermont Wetland Rules. Class Three wetlands are currently regulated in Underhill. Although the most comprehensive source of information on wetlands locations currently available for Underhill is the NWI, this information should be used with caution. The maps were prepared using aerial photography rather than field inventory, so wetlands that are hard to see on aerial photos are not mapped. Many forested wetlands, for example, are not on NWI maps. Understanding the functions and values of each wetland requires field inventory and assessment by a natural resource professional (VTF&W, 2004).

Groundwater

Clean and plentiful groundwater is a critical resource for the health and well being of Underhill's residents. Statewide, 66% of Vermonters depend on groundwater for their primary water supply (Becker, 2006). This number is significantly higher in Underhill, where nearly all residents obtain their water from public and private wells and springs. The most significant quantities of groundwater are found in aquifers, which are geologic formations that have the capability to store, transmit and yield useful quantities of water to a well or spring. Land through which water percolates to become groundwater is called a recharge area.

The metamorphic schist which forms the bedrock of Underhill is an important groundwater recharge aquifer, holding water in the cracks and providing storage which can be tapped for wells. The aquifer is extremely vulnerable to pollution because of the many interconnecting cracks in the rocks. Unlike porous materials, such as sand and gravels, in which bacterial pollution can be filtered over relatively short distances, polluted water can travel for miles through the cracks in the schist, contaminating wells far from the source of the problem.

Recharge areas and the groundwater they supply can become contaminated by many sources, including failing septic systems, animal waste, leaking underground storage tanks, improper disposal of household and industrial waste, inappropriate use of

pesticides and fertilizers, and excessive road salting. Groundwater can also be contaminated by naturally occurring substances including radioactivity in deep layers of bedrock and decaying plant and animal matter in areas closer to or on the surface. Similarly, over-development can deplete groundwater resources by increasing the amount of impervious cover and preventing infiltration of water underground. Understanding the potential sources of contamination and the location of Underhill's aquifers will be essential if future growth is to occur in locations and ways that do not harm groundwater sources.

In Underhill, the importance of groundwater to the health of Town residents, present and future, makes protection of groundwater resources a top priority. Higher quality water is also less expensive to treat. Both the quality and quantity of water is of concern for the future.

The State's Agency of Natural Resources has mapped all Source Protection Areas, which are the recharge areas for public community water supplies (those serving 25 or more full-time users). There are a number of public and private water systems active in Underhill at this time e.g.

Jericho-Underhill Water District
Roaring Brook
Beartown Rd
Timber Ridge
Underhill Central School
Maple Leaf Farm

Identifying water yields and groundwater resources for planning areas will be an important issue for the Planning Commission to consider as they develop new regulations for zoning districts.

Flood Hazard Areas

A floodplain is the area bordering a lake or river that is subject to flooding. Floodplain borders are usually determined by the 100- or 500-year flood levels. A 100-year flood has a 1 in 100 chance of occurring in any given year. Floodplain boundaries are determined by the Federal Emergency Management Agency (FEMA), and are determined based on topography and estimated flood flows. Severe flooding can also have long term effects on stream banks. Underhill has been able to identify portions of waterways susceptible to erosion through a Geomorphic Assessment (Phase 1 and II) of the Browns River (Willard, 2006).

Floodplains not only protect property and life by reducing the severity of flooding but also provide wildlife habitat and serve as corridors for animal movement. They also represent some of the richest and most viable agricultural land in Underhill because of a concentration of alluvial deposits left by past floods. Because floodplains serve as an integral part of the overall natural resource pattern of the Town it is important to maintain them in accord with floodplain regulation.

Current town regulations allow development in flood hazard areas if drainage courses are conserved and if there is no impact that would divert flood waters or increase flood hazards. The regulations have been developed based on recommended language for communities enrolled in the National Flood Insurance Program.

Current FEMA maps may be flawed due to river movement. FEMA is currently in the process of updating the official flood hazard maps for Underhill.

Fluvial Erosion Hazard Overlay District

Areas subject to fluvial (stream) erosion hazards, from gradual stream bank erosion or catastrophic bank failure due to naturally occurring stream channel adjustments, have not yet been identified and mapped in Underhill, although data collection for this work has been substantially completed.

Part of the consideration of whether the Town should adopt fluvial erosion overlay districts is to determine what kind of uses should be allowed as permitted, conditional or prohibited outright. These could include: filling; dredging; new structures; parking areas; infrastructure; utilities; public investments; forestry; agriculture; passive recreation; functionally dependent facilities; limited improvements to existing structures and facilities; and state-recommended channel management activities within these areas.

The purposes of the Fluvial Erosion Hazard (FEH) Overlay District would be to:

a. Protect mapped river and stream corridors that are highly subject to erosion due to naturally occurring stream channel migration, modification and adjustment;

b. Limit new development as necessary within fluvial erosion hazard zones to protect public safety and welfare, and to minimize property damage and loss due to bank erosion and failure; and

c. Allow rivers and streams to maintain or re-establish their natural equilibrium and flow, thereby avoiding the need for costly, and environmentally degrading, stream channelization and bank stabilization measures.

Section 1.5 <u>Wildlife Habitat</u>

Wildlife habitat contributes to the rural character of Underhill and reflects the diversity of the Town's natural landscape. All wildlife species require three elements for viable habitat - food, water and cover. Even with these elements, viable habitat for many species is dependent on contiguous tracts of undisturbed land to serve as reservoirs for diverse species. Smaller tracts can serve as habitat if corridors connecting smaller and larger areas are preserved. Fragmenting habitat areas and the connecting corridors limits the availability and diversity of life supporting elements. As areas become isolated, species diversity diminishes or disappears.

The status of viable and varied wildlife habitat is an important barometer of the Town's ability to maintain its rural landscape while accommodating growth. Given the vast array of wildlife species, from butterflies to salamanders to black bears, nearly every parcel of land in Underhill provides habitat to one or more wildlife species. As noted above, overall species or habitat diversity is one important component of Underhill's rural landscape.

Critical wildlife habitat is another important piece of this equation. For the purposes of this Plan, "critical wildlife habitat" refers to those areas that provide habitat to species or suites of species of special importance to Underhill. These areas include: 1) large tracts of forest with few, if any, roads or house sites – i.e., forest interior habitat; 2) large tracts of open fields; 3) early succession or transition shrub/forest areas; 4) wetlands and riparian areas (i.e., stream areas); 5) unique habitat related to rare, threatened, or endangered species.

As Underhill experiences increased development pressures, providing for the integration of continued growth and open space areas for habitat will be necessary if Underhill is to maintain its wildlife diversity. Minimizing forest fragmentation by road building and development will be important if the rich diversity of these areas is to be maintained. Surface waters, wetlands and floodplains provide some of the richest habitat opportunities in Underhill. Some, such as the Creek wetlands (Route 15) have been identified as regionally significant natural areas. Wetland and riparian areas throughout Underhill are important both locally and for adjoining towns as corridors for wildlife movement.

These areas also merit protection for other reasons such as open space, water quality protection and recreation. A thorough look at the patterns of development, the potential impacts and the possibilities for preserving the multiple values of these areas will benefit wildlife habitat as well.

In July 2009 the Underhill Conservation Commission began work on a collaborative project with the towns of Jericho and Richmond, to identify and analyze regional connectivity and priority large habitat blocks in the Jericho, Underhill, and Richmond areas. A GIS database and annotated map of "priority large habitat blocks" and "connectivity areas" will be developed as deliverables of the project.

Section 1.6 <u>Sensitive Areas</u>

Natural Areas

Natural areas are areas of land or water that retain their natural character and contain unusual or significant flora, fauna, geological or similar features. These areas are the best examples of the various biological communities that presently or historically existed in town. The Vermont Natural Heritage Program identifies natural areas within Underhill that are of statewide or regional significance.
Currently these include:

Mount Mansfield Natural Area

This area has the largest alpine tundra in Vermont as well as sub-alpine areas and alpine bogs. It contains some of the rarest and most fragile plants in Vermont.

Natural areas contain some of the most significant and irreplaceable natural resources of a town. These areas are particularly vulnerable to the impacts of development or misuse. Ideally these areas should be large enough to act as biological refuges where human disturbance is kept to a minimum and should represent the diversity of Underhill's natural features. Planning for natural area protection, while accommodating landowners' needs, will be one of the main issues in planning for the protection of the Town's natural resources. At a minimum, anyone seeking a permit to undertake disturbance in the vicinity of a known rare, threatened or endangered species, should be informed of the resource and measures to reduce impacts on the species recommended. In any subdivision or conditional use review, protection of those species should be included as a permit requirement.

Hills and Ridgelines

A ridgeline is defined as a line marking or following a ridge, top of a hill or ledged area, behind which is open space or horizon. Ridgeline development creates highly visible structures that become prominent features on the landscape, detracting from the natural beauty and nature of Vermont and rural Underhill. If the development is visible from a large area, it intrudes upon the rural contours and disrupts the natural environment. 84% of respondents to the 2008 Community Planning Survey feel it is important to maintain the Town’s current policy of protecting all land in Underhill above the 1500 feet elevation mark from development. (Moser, 2009)

The eastern portion of Town, with its higher elevations, contains the most visible of Underhill's ridgelines. Although topography is not as dramatic on the western side of Underhill the hillsides are visually important because of their contrast to the surrounding landscape. Uncontrolled or improperly planned development could threaten the environment of hills and ridgelines. Wind energy and telecommunication towers, while supported elsewhere in this plan, require special attention if they impinge on hillsides and ridgelines.

Scenic Areas

The scenic resources of Underhill are numerous and varied - including dramatic mountain vistas, steep wooded hillsides, streams and rivers, open fields, large expanses of wetlands, and beautiful valleys. Together these elements form a pattern that we see every day and have come to associate with Underhill's character. These areas also form the impression others have of Underhill and affect the way the Town is seen as a place to visit, work or live. Generally, changes to the scenic character of the Town happen incrementally.

Although each change is small in itself, the cumulative impact over time is large. An essential first step in protecting Underhill's scenic qualities is to identify those areas that are integral to the scenic landscape. Views from points along roads and highways, from public recreation areas and trails, from watercourses, and from other areas where public access is available are important considerations in a plan to preserve scenic resources in

Underhill. An inventory should consider topographic variety, diversity of the landscape features and the length of the view as criteria in assessing priority scenic areas.

Section 1.7 Geological Resources

Geological resources consist of raw materials like gravel, sand, and stone. These materials are finite commodities that are absolutely essential for our roads, schools, houses, etc. Although extraction can pose challenges due to pollution issues and impact on the surrounding environment, it is important that critical supplies of these resources be available for use.

Section 1.8 Invasive Species

People have been moving plants, intentionally or accidentally, from one habitat to another over the course of human history. In most cases, introduced or exotic species are not a threat to new habitats. If the new plants have natural predators in the new habitat they do not significantly change the balance of the ecosystem. On the other hand invasive species are plants or animals that lack predators in their new habitat and have an aggressive growth pattern. When the ecosystem cannot keep a plant's population within a manageable range, the balance of that ecosystem is tipped, causing the rest of the native species to suffer, decline or become extinct.

If we let nature take its course an invasive species can significantly disrupt and alter long established habitats. Without predators or plant competition the invasive species reproduces at aggressive rates, out-competing native plants for sunlight, nutrients and space and out-competing native animals or fish for food. As the native populations decrease or become extinct the genetic pool within the ecosystem is reduced. Wildlife populations within the ecosystem can find themselves without an adequate food source. Smaller animals that depend on plants for food will decline in numbers. The larger animals that depend on the smaller animals for food are then without an adequate food supply and so on up the food chain. Additionally a diverse selection of native plants and animals keep an ecosystem more resistant to weather disasters and climate change as there is a wider genetic pool of plants and animals to adapt to changing conditions.

The Conservation Commission should take the lead in informing residents about invasive species and eradication methods.

Section 1.9 Air Quality

Air pollution can cause a number of serious illnesses such as chronic bronchitis, asthma, emphysema, cancer or damage to the kidneys, liver and central nervous system. There are a number of significant sources of air pollution in Vermont, the largest being the automobile. Each year motor vehicles in Vermont emit about 1,000 tons of toxic and carcinogenic compounds into the air (ANR, 1998). Various steps have been taken over the last several decades to lower the emissions from automobiles nationwide. However, while the controls have reduced the amount of pollution from each vehicle, the number of vehicles on Vermont roads and the number of miles they travel have increased dramatically. Motor vehicles now travel over 6 billion miles annually in Vermont, double

the amount traveled in 1972 (ANR, 1998). Fuel-efficient vehicles are in popular use. The increase in vehicles and road miles is a trend that is expected to continue into the foreseeable future.

Another source of air pollution once common in Vermont is trash burning. As air pollution has become better understood, fewer and fewer people are burning trash. Unfortunately, some still believe burning trash is a viable alternative to paying for land filling. Household burn barrels produce low temperature fires which release many toxic chemicals close to the ground.

The US Environmental Protection Agency has required each state to measure its ambient air for six "criteria" pollutants since 1970. Ambient air refers to air that is not directly at the source of pollution, but the air we breathe in neighborhoods, on farms and in the marketplace. These six pollutants are particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and lead. These pollutants are by no means the only harmful ones. In fact the Vermont Air Pollution Control Division monitors the ambient air for several hundred pollutants, but the six "criteria" pollutants are considered the most common.

With energy costs increasing, many people are returning to heating their homes with wood. While wood is a cost effective, renewable resource, older wood stoves may actually emit more pollutants, particularly particulate matter, than the sources they replace. Since 1988, the US Environmental Protection Agency has required all new stoves to be equipped with catalytic converters or other technologies which reduce air pollution emissions by 50% to 60%. Newer woodstoves are also more efficient, requiring a third less wood to produce the same amount of heat (Varney, 2005).

However, as with automobile travel, increases in usage may offset the improvements in the technologies. Another concern is the growing popularity of outdoor, wood-fired boilers, which, unlike wood stoves, are not required to have pollution controls and which often must burn wood year-round to provide hot water to the home. A study in 2006 by the northeastern states notes that wood-fired boilers "emit significantly more particulate matter than other residential wood burning devices and short term particulate matter spikes can be extremely high (NES, 2006).

The Energy Committee should take the lead in investigating ways that the town and citizens in the town can work to reduce air quality impacts while reducing energy consumption and switching to cleaner, more efficient technologies. *See* Energy Chapter 8.

Section 1.10 <u>Climate Change</u>

Climate is the average, characteristic weather conditions of an area over time. Weather patterns are an important planning and design consideration because of their effect on such things as soil erosion, plant growth, air quality, storm water runoff and flooding, groundwater supplies, road maintenance, energy demand for cooling and heating, access to alternative energy sources and the viability of weather-dependent recreation. Climate

change may also have profound impacts on wildlife corridors creating a need to anticipate the shift in these corridors and how that might impact conservation and development.

Vermont's northern climate is dominated in winter months by cold, dry Canadian air and in summer by warm moist air from the Gulf of Mexico. Weather patterns vary locally with topography and relief.

Much attention has been given to global climate change in recent years. The vast majority of scientists studying the earth's evolving climate agree that average temperatures are rising, which raises a host of considerations regarding the fate of the planet and humankind. Underhill should anticipate that a changing climate may bring dramatic social, economic, and environmental change to the area.

Some climate models predict that average temperatures in Vermont could increase by 6ºF over the next several decades.

The result:

- More volatile and variable weather conditions
- More frequent dry spells and water shortages
- Increases in heat-related illnesses and deaths
- Increased storm events and stormwater runoff
- Decreased water quality
- Loss of hardwood forests, including sugar maples
- Loss of migratory bird and endangered species
- Introduction of warmer climate species and pests
- Loss of cold water fisheries
- Shorter ski and fall foliage seasons (US EPA, 1998)

By taking measures to protect natural resources in Underhill, and reducing our impacts on air, water, soil and plant resources, and reducing our carbon footprint, we can all help to avoid drastic climate change

Section 1.11 <u>Natural Resources Policy</u>

The Town should make a commitment to the responsible stewardship and sustainable use of Underhill's natural resources in a manner that protects and enhances the Town's environmental well-being for the benefit of future generations; the preservation of natural features that contribute to Underhill's ecological health and biological diversity; and the preservation of Underhill's rural character, cultural heritage, scenic landscape, working farms and managed forestlands.

Section 1.12 Goals and Strategies: Forestry and Agriculture

Goal: To better assess the value of land for forests and agricultural uses.

Strategy:

The Conservation Commission should conduct an assessment which will identify working lands in Underhill and rank the importance and viability of agricultural, forestry, and natural resource lands as part of an Open Space Plan and make a recommendation to the Planning Commission.

Goal: To ensure that growth and development don't negatively impact the viability of forest and agricultural uses.

Strategies:

1. The Conservation Commission should work with existing agricultural and forest land owners to help with future planning of their land. Ensure that Underhill landowners have every opportunity to obtain good information about sustainable land management practices as well as funding and technical assistance opportunities.

2. Development planning should preserve the Town's valuable agricultural, forest and natural resources by directing growth to locations that do not impact these resources. Provisions will be made, through zoning techniques or voluntary preservation means, to preserve agricultural and forestry resources.

3. Minimizing conflicts between residential and agricultural or forestry uses of land will be essential in maintaining these operations. The Town should consider adopting policies such as "Right to Farm" to address these issues for both agricultural and forestry uses. Generally a "Right to Farm" policy protects farmers from nuisance suits as long as the farm was established before surrounding suburban activities were put in place, and as long as the farm's activities did not "jeopardize public health and safety."

4. Regulations should be written so that in any development review proceeding access to forest land and proper right of ways is considered.

Goal: To support the working forest and agricultural landscape in Underhill, and provide incentives for uses that keep lands open and viable.

Strategies:

1. Promotion of local agricultural and forest products and marketing of value added products will be encouraged as a means of fostering the economic vitality of local farms and woodlands. *See* Economic Development, Chapter 7.

2. The Town of Underhill shall be encouraged to continue to offer an open land contract as an alternative to State of Vermont Current Use contracts.

3. The Town should consider establishing a fund to preserve priority resource land by promoting the use of a Land Conservation Fund.

4. The Town should work with the Jericho Underhill and Vermont Land Trusts, and other appropriate nonprofit organizations, to encourage the voluntary protection of productive agricultural and forest lands. Techniques such as conservation easements or donation of land with retained timber rights will be explored as possible options.

Section 1.13 Goal and Strategies: Open Space

Goal: To develop an open space plan for the Town.

Strategies:

1. The Conservation Commission, working closely with the Planning Commission and the Jericho/Underhill Land Trust, will develop an open space plan. This plan should include information on the location of significant agricultural and natural resources, high priority scenic areas, potential greenways, environmentally sensitive lands and water resources, compiling information from previous studies and incorporating new data as it is developed. The current Regional Connectivity and Priority Large Habitat Blocks project will provide a foundation for an Open Space Plan.

2. The purpose of this plan should not be to exclude all development from these lands but to serve as a framework for prioritizing and developing a network of interconnected open space.

3. Develop a program for the protection of significant features identified in the open space plan.

4. This program should include means of protecting priority areas and may include conservation easements, purchase of development rights or acquisition of priority sites.

5. The open space plan and conservation program should identify sites that are most vulnerable and that are not adequately protected through other regulatory or voluntary means so that conservation efforts and funds may be focused where need is greatest.
6. Consider developing a method to assess the relative value of lands for agricultural, forestry, and natural resource preservation purposes. This method will be built upon local knowledge, local values, and GIS data.

7. The Planning Commission should consider proposing regulations that would incorporate the open space plan in development review.

Section 1.14 Goals and Strategies: Water Quality

Goal: To protect, enhance, and restore Underhill's surface water resources.

Strategies:

1. Require adequate vegetative buffers and erosion control along rivers, streams, and lakes to protect water quality, allow natural channel modification, and protect buildings. Consider differentiating buffers based on land use.

2. The Planning Commission, in consultation with the Conservation Commission should review and propose regulatory revisions as necessary to protect, enhance and restore surface waters.

3. Encourage reforestation of native plants where appropriate along the riverbanks. For tributaries and creeks, maintain setbacks, and encourage preservation of existing vegetative buffers and reforestation of riparian buffers.

4. The Town should be an active participant on watershed protection associations, such as the Browns River Watershed Council.

Goal: To control impacts from storm water runoff**.**

Strategies:

1. Study and address the contribution of town roads to storm water runoff. Both the Lamoille River Watershed Basin and the Browns River Corridor Management Plans identify culverts and bridges in Underhill in need of improvement. Blend the recommendations of these Plans with the assessment of the Town's road crew on needed improvements of the Town's infrastructure in the development of capital budgets.

2. The road and land use regulations shall continue to require that all new roads and driveways are properly constructed to minimize erosion and scouring.

3. All new construction shall be required to employ effective erosion control measures.

4. The Planning Commission should consider adding low impact development regulations for stormwater control.

Goal: Protect floodplains in order to reduce the risk to property and life.

Strategies:

1. The Planning Commission shall amend the regulations within the required FEMA time frame so they are compliant with federal flood insurance program requirements; and

2. The Planning Commission will investigate whether they want to pass a minimum regulation to meet the timeframe; or if they would like to regulate above the required minimum compliance level.

Goal: To create a Fluvial Erosion Hazard Overlay District that conserves and restores riparian corridors vital to natural resource communities and species.

Strategies:

1. Consider in consultation with the Conservation Commission the recommendations of the Browns River Corridor Management Plan, prepared for the Winooski Natural Conservation District and the Vermont Agency of Natural Resources River Management Program, released in March 2009.

2. Consider in consultation with the Conservation Commission the findings of the Lamoille River Watershed Basin Plan, prepared by the Vermont Department of Environmental Conservation, released in Fall 2008. The Plan called for the development of a Fluvial Erosion Hazard Plan and Map for the Town of Underhill.

3. Consider a proposal to adopt fluvial erosion hazard area regulations − as an overlay district or stream setback requirements − under updated land use regulations.

Goal: To protect Underhill's groundwater resources

Strategies:

1. Create a groundwater conservation overlay district that includes source water protection areas. Development in these areas should receive a higher level of scrutiny. Review the data already collected and supplement with field studies, if needed.

2. Decide how best to provide well-yield data to the DRB: either review town-wide well-log data to identify low-yield areas or require developers to provide such information.

3. The Town should consider conducting a groundwater analysis of each planning area. This could be done with public funds, grant funds, or could be required as part of a development review application.

4. Expand the capacity of the Town water supply via the options listed above. Finance these expansions via impact fees or other comparable mechanisms.

5. Encourage water conservation.

Goal: To preserve wetlands within Underhill

Strategies

1. Review regulations and consider proposing new regulations to protect town wetlands that are essential for treating storm water runoff, protecting surface water quality and providing habitat.

2. Work to clarify the location of wetlands (Class I, II, and III) in Underhill. Utilize the NWI wetland locations or more detailed site specific studies if available, for planning and development review with appropriate field delineation as needed.

3. Consider conducting field studies to identify and better understand priority wetlands.

4. Continue to strive to insure that wetlands are not adversely impacted by development or alteration to lands around them.

5. Consider acquiring easements to, or purchasing, priority wetlands that are particularly vulnerable, identified through the Open Space Plan.

6. Restore wetlands in a public/private partnership to improve water quality, habitat, and facilitate stormwater management.

7. Educate landowners about the value and fragility of vernal pools, how to identify them, and how to protect them.

8. Create partnerships with State and Federal Agencies for planning and funding (implementation) support.

Section 1.15 Goals and Strategies: Wildlife and Habitat

Goal: To protect, with the help of landowners, important natural areas; rare, threatened and endangered species; critical wildlife habitat; and overall biodiversity.

Strategies:

1. Continue working on the ongoing Regional Connectivity and Priority Large Habitat Blocks project, to be completed in 2010.

2. Develop a "Significant Wildlife Habitat" map. This map would bring together known natural resources into a single product.

3. Develop a town wide Natural Communities Map for a finer level view of the Town's natural resources.

4. Encourage protection of areas of sufficient size and character to support continued preservation of critical wildlife habitat and hunting through mechanisms like landowner covenants, conservation easements, etc.

5. When reviewing new development, encourage the preservation of small and large blocks of forest.

6. The Vermont Fish and Wildlife "Heritage Database" contains information about rare, threatened and endangered plant and animal species in Vermont. The Town's development regulations should reference the "Heritage Database" and should be referenced in any development request.

Goal: To provide connectivity among natural areas and critical wildlife habitat**.**

Strategies:

1. Identify connections through the completion of Regional Connectivity and Priority Large Habitat Blocks project and the development of "Significant Wildlife Habitat" and "Natural Communities" maps.

2. When reviewing new development, encourage areas separate from housing sites to provide connectivity between forest blocks, riparian corridors, and wetlands.

Section 1.16 Goal and Strategies: Hills and Ridgelines

Goal: To protect ridgelines and hillsides from improperly planned development.

Strategies:

1. The Planning Commission in consultation with the Conservation Commission should consider identifying ridgelines and hillsides requiring protection from improperly planned development.

2. Develop strategies, including proposed development review standards in zoning and subdivision regulations, to protect identified ridgelines and hillsides.

3. The Planning Commission should continue to support the current regulation prohibiting development above 1500'; but the Commission should also ascertain whether the community desires alternative energy structures on hillsides and ridgelines, including those above the 1500' elevation level.

Section 1.17 Goal and Strategies: Geological Resources

Goal: Ensure that known areas of quality sand, gravel, and stone are protected for current or future use.

Strategies:

1. Review zoning regulations to ensure the protection of these natural resources.

2. Review zoning regulations to ensure appropriate and well planned extraction of these resources is possible in appropriate areas.

Section 1.18 Goal and Strategies: Air Quality

Goal: To reduce air pollution

Strategies:

1. Educate the community on air quality issues and ways they can reduce air pollution with brochures, links on Town website, educational forums.

2. The Conservation Commission will collaborate with the Underhill Energy Committee to achieve this goal when possible.

3. The Planning Commission should consider proposing regulations on outdoor wood burning stoves in certain zoning districts.

CHAPTER 2: LAND USE

Section 2.0 Land Use Defined:

Land use refers to the general characteristics of areas in Town. Generally speaking, in Underhill, there are three categories of land use: traditional village centers, residential lands, and open/agricultural lands.

1. Traditional Village Centers: Underhill has two traditional village centers, Underhill Center and the Underhill Flats area. These areas are characterized by denser, mixed use development.

2. Residential Lands: Characterized by private housing, with the majority of housing single-family homes with perhaps an accessory unit. This is because for the most part current zoning regulations do not allow for any other type of residential structures as a permitted use. (In the Residential zoning district 3 and 4 unit structures are allowed as a conditional use. This is the only zoning district where another type of residential structure is allowed.) All the zoning districts allow for residential structures, and residential structures are present throughout Town. In addition, because of allowed conditional uses, commercial operations are scattered throughout all of the zoning districts.

3. Open/Agricultural Lands: Mount Mansfield, Vermont's highest peak lies within the boundaries of the Town of Underhill, and the Town's open lands include state forest lands. In addition, there is a prohibition on building above the 1500' elevation level, leaving open ridge lines in all areas of Town.

   There are still some agricultural operations in the community which also serve to preserve open space, most notably along the Brown's River corridor, which has a substantial flood plain. Other areas of Town are used for maple sugaring, logging, and animal husbandry. Casey's Hill in Underhill Center is conserved land that is used as a popular sledding hill in the winter. There are also some conserved lands located in Underhill at the Mills Riverside Park.

   a. Town Land Contracts: 4003.98 Underhill acreage is enrolled in a program that offers landowners tax reductions when they agree not to subdivide land. Presently under the Town contract, the landowner must have a minimum of 10 acres and agree not to subdivide the land for 10 years. In return, the town taxes the landowner at 50% of the regular rate on land above the10-acre required minimum. Underhill taxpayers pay the difference between this lower tax and the tax at full listed value. When withdrawing from the program before the 10-year term, the

landowner must pay the taxes saved over the last five years plus a penalty.

b. State Current Use Contracts: 7,611.91 acres of Underhill acreage is under a state current use contract. Under this program, the state taxes farm and forestry land according to its "actual use value" rather than its potential development value. The value is determined by the State Advisory board. Farm buildings are valued at 30% of fair market value. State contracts require a minimum of 25 acres and a land management program. Unlike the Town contract which has a term of 10 years, the state current use contract does not have a term, the land is enrolled indefinitely. Substantial penalties are assessed if this contract is broken. The landowner pays municipal taxes on the actual use value, and the state reimburses the Town for the difference between this lower tax and the tax at full listed value.

Section 2.1 Land Use Definitions:

Clustered Development: As used in this Plan, clustered development means development that allows residential or commercial development while still protecting the area's environmental features, allowing for more open space, and protecting farmland and the character of rural communities.

Low Impact Development: A type of development that utilizes methods whose primary goal is to mimic the predevelopment site hydrology by using site design techniques that store, infiltrate, and detain runoff. Use of these techniques helps to reduce off-site runoff and ensures adequate ground water recharge.

Outlier: That which lies, or is away from the main body. In particular for this chapter the "outlier areas" referred to herein mean the pockets of soil and water conservation district zones on the western side of town.

Section 2.2 Land Use Planning and Underhill

The goal of this Town Plan is to accommodate a unified development plan for the Town of Underhill that is characterized by denser, clustered development in traditional village center areas, and to have larger tracts of land outside the traditional centers for agricultural, forest, recreational, and appropriate commercial and clustered residential uses. The purpose of this type of development is to avoid sprawl and to maintain our rural heritage as a town. This type of development encourages growth that makes Underhill a more sustainable community by creating economic development opportunities for residents in the traditional village centers while leaving larger tracts of land outside of the village centers and designated residential areas to preserve a working landscape and recreation and wildlife habitat.

This goal is a reflection of the responses to the Town Plan survey conducted for the purpose of this Plan renewal. In the Town Plan survey, among those answering who had an opinion, there is strong support for encouraging density and mixed use development in the traditional village center areas and clustering of development in the rural areas.[1] There is also very strong support for the protection of open space and natural resources/habitat.[2]

However, our current scheme of zoning districts is somewhat at odds with this method of land use planning. Since 1973 Underhill has had the following zoning districts:

1. Residential District 1-2 acre lot size;
2. Rural Residential-Agricultural District 3 acre lot size;
3. Water Conservation District 5 acre lot size;
4. Mt. Mansfield Scenic Preservation District 10 acre lot size;
5. Soil and Water Conservation District 15 acre lot size.

The zoning districts were originally established based on soil types, geologic considerations (such as gravel aquifers and recharge areas), and land use. As a result, three acre zoning extends from one end of town to another, with 15 acre zoning (soil and water conservation district) located in pockets on the west side of town, all down the spine of the geographic center of town, and on the east side of town, which encompasses Mt. Mansfield and the portions of the Mt. Mansfield state forest. 10 acre zoning extends along Pleasant Valley Road on the eastern side of town and is the one district that is not based on soils, but on aesthetic considerations. The residential district at 1-2 acre zoning is located within a traditional village center in the Underhill Flats area of town, but the traditional village center in Underhill Center is in a 5 acre district.

Given the well-established zoning districts, it would be difficult to strictly conform to the clustered development land use model. However, the town can achieve many of the objectives of clustered development within its current zoning structure by using several strategies. The Town can:

- Re-define the objectives of the different zoning districts;
- Re-examine and re-define permitted and conditional uses that will be allowed in each zoning district so that district uses comply with the purpose of each district; and
- Where appropriate, propose amendments to the current zoning district map so that traditional and future development is accommodated in accord with allowed uses and reflects updated information about soil characteristics.

The benefit of taking this approach is that our regulations should become more enforceable with clear objectives and uses, thus giving residents better notice of what they may do within any given zoning district. Below is an examination of each district,

[1] Town of Underhill Community Planning Survey 2008, UVM Center for Rural Studies, M. Moser, p 5.
[2] Id., p.9.

including the current name and definition, the traditional use and proposed future definitions and uses.

Section 2.3 Residential Zoning District

Current Definition and Uses:
The current purpose of the Residential District is "to encourage higher density residential development and associated community services where a public water supply is available." This district encompasses the traditional village center of Underhill Flats. In this district the zoning is one acre if the property is supplied by water from the Jericho-Underhill Water District.

This is not necessarily reflective of the current lot size, as many lots are smaller than 1 acre, as their creation preceded local zoning. Since the district was last defined, the service area of the Jericho-Underhill Water District has expanded beyond the mapped boundaries, extending into the rural residential zoning district.

There is developed mixed use along Park Street and Route 15; the rest of the district use is residential. Commercial businesses in this area include: a grocery store; a post office; a print shop; a bakery/café; a variety of small business operating offices, an automotive repair shop; a place of worship; and home-based occupations.

Available Services:
The Jericho-Underhill Water District provides water to most of the district. The Water District is a private entity. At the time that this plan is being written, Vermont Gas Systems is providing gas utility lines in parts of the district. Fairpoint Communications has a central office on Park Street. Comcast, Fairpoint, Direct TV and Dish Network are available in this district for internet services. Cell telephone coverage can be spotty. There is currently no community wastewater system in the Underhill Flats area.

Abutting Community:
The border with the town of Jericho lies on the southern side of Park Street. There have long been discussions about the potential of a joint development project, with the two towns working together to create a unified development plan for this area.

Policy: **Zoning District Name and Purpose**
The zoning district name and purpose definition should both reflect the traditional use within the zoning district and provide guidance for future development within the zoning district.

Goal: Rename and Redefine Zoning District
The name and the purpose definition of the Residential zoning district should be changed to reflect the traditional use of the area and to provide guidance for future development.

Strategy:

1. Rename and Re-Define the Residential Zoning District: The Commission is proposing to rename this district the "Underhill Flats Village Center District." The new purpose of this district could be as follows:
"The purpose of the Underhill Flats Village Center District is to allow for the continuation of existing small-scale commercial, residential, and public uses and to encourage development that is compatible with and promotes a compact, historic village settlement pattern. This may include higher density of development as supported by existing and planned infrastructure. Formerly known as the Residential District."

Policy: **Underhill Flats Village Center Planning:**
The Underhill Flats Zoning District regulations should reflect traditional development pattern, uses, and lot sizes that maintain the historic settlement pattern of the compact village center and encourages future development within the village center.

Goal: Amend Regulations: To amend the zoning district regulations so that they accurately reflect the traditional development pattern and lot sizes and encourage denser development should the community so desire.

Strategies:

1. Working with Jericho, the Abutting Community: The Underhill Planning Commission shall contact the Jericho Planning Commission to see if they are interested in a joint planning effort for this district. Working with the Jericho Planning Commission to develop a mixed use village center in Underhill that complements development plans in Jericho is recommended.

2. Boundaries: The Planning Commission shall hold public forums with community members to determine if the boundaries of the Underhill Flats Village Center District should be expanded. These hearings would require the input of service providers in the area.

3. Lot Sizes: The Planning Commission shall hold public forums to determine if the community would like lot sizes to change to encourage mixed use development, in-fill, greater densities and reduced dimensional requirements for lots than the current zoning allows.

4. Permitted/Conditional Uses: The Planning Commission shall reexamine the types of permitted and conditional uses in this area to determine if these uses should change. Public forums and hearings will be held.

5. Land Use Regulations Amendment: After public forums that gather information on community opinion in regard to boundaries, uses, and dimensional lot requirements of the district, the Planning Commission shall, if

required, amend the land use and development regulations to allow for the new requirements of the district and recommend adoption of the amendments to the Selectboard; and

6. State Village Center Designation: The Town shall apply for Village Center designation for the Underhill Flats Village Center district from the State of Vermont Department of Housing and Community Affairs. This designation will make various grant programs for improvements available to landowners within the district.

Section 2.4 Rural Residential Zoning District

Current Definition and Uses:

The current purpose of the Rural-Residential District is "to afford medium density residential development along the roads where houses have been traditionally built and where soil cover is thicker than on the hillside." This definition does not reflect the commercial development along Route 15, nor does it make any zoning accommodation for that commercial development within this area. The zoning district includes two of Underhill's longest stretches of road: Poker Hill Road on the Underhill Flats side of town and Irish Settlement Road, on the Underhill Center side of town. Over time, these roads which traditionally served the farm community have developed into residential areas.

The minimum lot size for this zoning district is three (3) acres. Permitted residential development in this area is limited to a "single unit structure" (interpreted to mean a primary dwelling) and an "accessory apartment" (interpreted to mean an accessory dwelling unit). No other forms of residential structures are currently allowed in this district as either a conditional or a permitted use.

Conditional uses in this area are: schools; place of worship; public buildings; medical care facilities; indoor and outdoor recreation clubs; convenience retail stores; personal services; public utility structures; funeral homes; home occupations; towers; natural resource extractions; ponds; overnight camp grounds; kennels; and cemeteries. Many of these categories of use can be interpreted to cover a wide variety of activities.

Since there has never been a defined commercial area within town, there is a broad range of commercial uses allowed in this putatively residential zoning district. As a result, the broad range of conditional uses allowed in this residential area has resulted in some conflict. The community should take a close look at purpose definition for this district and the permitted and conditional uses.

As a town, we should be considering whether in the future we want to continue to allow this mix of commercial and residential use throughout the district. We could explore the use of overlay districts within the district, which would allow for certain commercial uses within the zoning district, while preserving the rest of the district to strictly residential

use. Or, we could look at creating new smaller districts altogether out of this large district to accommodate certain uses in certain areas.

Available Services: Depending on the provider, telephone cellular service is spotty in this zoning district. While a substantial portion of residents in the Underhill Flats side of town have high speed internet connections, coverage in the portions of the zoning district lying in the Underhill Center side of town is limited. Some zoning district residents located near Underhill Flats have had service from the Water District extended to them. VT Gas Systems has recently expanded service to some residents in the Flats area. There are not large community septic systems available, although soils may support this kind of use in some areas.

Abutting Community**:** This zoning district is bound by borders with Westford to the West and Cambridge to the North.

Policy **Land Uses**

Land uses allowed within a zoning district should conform with the defined purpose of the zoning district and be approved by the community.

Goal: The Planning Commission shall determine the type of land use that will be allowed in this district, and where those uses shall be allowed.

Strategies:

1. The Planning Commission shall gather information from citizens as to what kind of uses should be allowed in this zoning district. Part of that discussion should be a proposal to create either smaller districts out of this current district or overlay districts within the current district to direct certain kinds of development to certain areas.
2. The Planning Commission shall examine and revise, if necessary, the current regulations, giving more precise definitions of permitted and conditional uses allowed in this district(s).
3. If required by new information, the Planning Commission shall propose changes to the zoning map to reflect new district configurations.
4. The Planning Commission shall examine and revise, if necessary, dimensional requirements to reflect different uses in the district(s). The Planning Commission shall hold public forums and hearings to get community feedback on any proposed amendments.

Policy: **Zoning District Definitions**

The Rural-Residential Zoning district(s) purpose definition should reflect both the traditional use within the zoning district and provide guidance for future development within the zoning district.

Goal: The Planning Commission shall propose a new definition of this zoning district to take into consideration the uses that may occur within this district beyond residential use. The clearer definition shall provide notice to zoning district residents about the kinds of use that will be allowed in their area.

Strategies:

Re-Define the Purpose of the Rural-Residential Zoning District:

1. Once the Planning Commission has determined what types of uses shall be allowed in the district and how the district(s) shall be configured they will propose a new definition for the district(s).
2. To begin discussion, a proposed zoning district definition for the current district with overlays may be: "The purpose of the Rural-Residential District is to afford development on land that has access to public roads where traditional development has taken place. The Rural-Residential district allows for the continuation of existing mixed use commercial, residential, and public uses along Route 15, and, to encourage future organized development, a mixed use overlay district located [to be determined]. Outside of the mixed use overlay district, the list of conditional and permitted uses shall be restricted to those that are typical for a residential area."
3. If new districts are created out of the current district the Planning Commission shall have to redefine each new district based on land use.

Section 2.5 Water Conservation Zoning District

Current Definition and Uses:

The current purpose of the Water Conservation zoning district is "to protect the important gravel aquifer recharge area in Underhill Center." This district encompasses the traditional village center of Underhill Center. In this district the zoning is for five-acre lots. This is not reflective of the current lot size, particularly in the village center, as many of the lots' creation preceded local zoning.

A problem with zoning that is not reflective of the actual traditional development pattern is that landowners on preexisting small lots are forced into variance hearings when they cannot meet the stated set-backs that would not be problematic for development on a 5-acre lot. This can add permitting time and expense for landowners that their neighbors do not have to expend. A remedy to this problem is to create a village center overlay district within the Water Conservation district that would allow for denser development, smaller lot sizes and set-backs. The requirements of the overlay district would encourage development in the traditional village center, while preserving the underlying goal of the zoning district, to protect the gravel aquifer recharge area.

Currently, there is mixed use development along River Road/Pleasant Valley Road in Underhill Center. Other development in this zoning district includes: markets; a post office; agricultural operations; a variety of home-based occupations; a place of worship; a municipal recreation area including tennis courts, volleyball areas, and the town pond; a school; and municipal offices and facilities. The area has some development limitations because of the presence of floodplain areas, streams, and high water table.

The lot size for this zoning district is 5 acres. Permitted residential development in this area is limited to a "single unit structure" (interpreted to mean a primary dwelling) and an "accessory apartment" (interpreted to mean an accessory dwelling unit). As in the Rural-Residential district, no other forms of residential structures are allowed as permitted or conditional uses.

Conditional uses in this area include: schools; place of worship; public buildings; medical care facilities; indoor and outdoor recreation clubs; convenience retail stores; personal services; public utility structures; funeral homes; home occupations; towers; natural resource extractions; ponds; overnight camp grounds; kennels; and cemeteries. Many of these broad categories of use can be interpreted to cover a wide variety of activities.

As with the rural-residential district, a result of the long list of conditional uses allowed in this district is that some conflict has arisen when residential uses conflict with a proposed non-residential use. However, unlike the rural-residential zoning district, this is not a designated residential district. The community should take a close look at the uses both permitted and allowed as conditional in this zoning district, and discuss what the plan for this zoning district should be: primarily a residential area or an area that encourages the continuation of the present "working landscape" of the district.

Available Services:
Depending on the provider, telephone cellular service is spotty in this zoning district. There are no large community septic systems available, although soils may support this kind of use in certain areas. There are public water sources located at the Underhill Town Hall, Underhill Central School; Maple Leaf Farm; and the Water District station on River Road.

Abutting Community:
The border with the town of Jericho lies on the western side of Park Street.

Policy: **Underhill Center Village Center Planning:**
The town should establish either a village center overlay district or separate district in Underhill Center that: reflects traditional development pattern; has permitted and conditional uses and lot sizes that maintain the historic settlement pattern of the compact village center; and encourages future development within the village center.

Goal: Amend Regulations: To amend the zoning district regulations to add either an overlay or separate district that accurately reflects the traditional

development pattern and lot sizes in Underhill Center and encourages denser development.

Strategies:

1. Overlay District vs. Separate District: The Planning Commission should examine whether to propose an overlay district or a separate zoning district for the Underhill Center Village district.

2. Boundaries: The Planning Commission shall hold public forums with community members to determine where the boundaries of the Underhill Center overlay or separate district should be.

3. Lot Sizes and Set-backs: The Planning Commission shall hold public forums on proposals as to lot size and set-backs in the Village Center district so that mixed use development, in-fill, and greater densities are encouraged.

4. Permitted/Conditional Uses: The Planning Commission shall hold public forums on proposed types of permitted and conditional uses in this area.

5. Proposed Purpose Definition: "To allow for the continuation of existing small-scale commercial, residential, and public uses and to encourage development that is compatible with and promotes a compact, historic village settlement pattern. This may include higher density of development as supported by existing and planned infrastructure, while being mindful of the important gravel recharge area."

6. Gravel Recharge Area Regulations: The Planning Commission, in consultation with the Conservation Commission, should develop regulations that give guidance to landowners as to how to protect the gravel recharge area while allowing for the proposed increased density of the Village Center.

7. Community Septic Systems: The Town shall encourage through regulations the development of community septic systems and innovative septic designs as allowed by the state to encourage the denser development of the proposed village center overlay district.

8. Land Use Regulations Amendment: After public forums and consensus on the boundaries, uses, and dimensional lot requirements of the district, the Planning Commission will amend the land use and development regulations to allow for the new requirements of the district and recommend adoption of the amendments to the Selectboard.

9. Zoning Map Changes: If required by new information, the Planning Commission shall propose changes to the zoning map to reflect new district configurations; and

10. State Village Center Designation: The Town should apply for Village Center designation for the Underhill Center overlay district from the State of Vermont Department of Housing and Community Affairs. This designation will make various grant programs for improvements available to landowners within the overlay district.

Policy: **Land Uses in Water Conservation District**
Land uses allowed within a zoning district shall conform with the purpose of the zoning district and be approved by the community.

Goal: Permitted and conditional uses, and lot size and set-backs for the Water Conservation district shall be reviewed by the Planning Commission and amended based on feedback from the community.

Strategies:

1. The Planning Commission shall gather information from citizens as to what kind of uses should be allowed and whether they should be allowed as permitted or conditional, in this zoning district.
2. The Planning Commission shall propose amendment of the current regulations, giving more precise definitions of permitted and conditional uses allowed in this district(s).
3. The Planning Commission shall examine and revise, if necessary, dimensional requirements to reflect different uses in the district(s). The Planning Commission shall hold public forums and hearings to get community feedback on any proposed amendments.

Policy: **Water Conservation Zoning District Purpose Definition**
The zoning district purpose definition should reflect both the traditional use within the zoning district and provide guidance for future development within the zoning district.

Goal: Water Conservation Zoning District Definitions
The Water Conservation zoning district purpose definition should reflect the geologic reason for creation of the district and the traditional uses within the zoning district and also provide guidance for future development within the zoning district.

Strategy:

Re-Define the Purpose of the Water Conservation Zoning District:

1. Once the Planning Commission has determined what types of uses shall be allowed in the district and how the district(s) shall be configured, they should propose a new definition for the district(s).

Section 2.6 Mount Mansfield Scenic Preservation Zoning District

Current Definition and Uses:

The current purpose of the "Scenic Preservation" district is "to protect the scenic vistas along Pleasant Valley Road." The lot size for this zoning district is ten (10) acres. This zoning district was established when the land along Pleasant Valley Road was largely clear cut for logging and farming. Since the creation of this district, the trees along Pleasant Valley Road have grown in and mountain views are intermittent.

This is another district whose purpose should be redefined to reflect the current reasons for maintaining these large lot sizes. The Scenic Preservation district contains some upland areas that do not support great density, and make access difficult. Front-lot set-back requirements, currently at 200 feet, should be reduced so as to lessen the creation of impermeable surfaces, to accommodate low-impact development policies for stormwater management. Another benefit of the larger lot size is that the lower density aids in animal migration patterns from the west to the green mountain forest system, *see* Natural Resources Section.

Permitted residential development in this area is limited to a "single unit structure" (interpreted to mean a primary dwelling) and an "accessory apartment" (interpreted to mean an accessory dwelling unit). Conditional uses in this district are: private schools; indoor and outdoor recreation clubs; public utility structures; home occupations; towers; natural resource extractions; ponds; commercial camp grounds; kennels; and cemeteries.

Available Services:
Depending on the provider, telephone cellular service is spotty in this zoning district. There are not large community septic systems available, although soils may support this kind of use in certain areas.

Abutting Community**:** This zoning district is bound by a border with Cambridge.

Policy: **Zoning District Definitions**
The Scenic Preservation zoning district purpose definition should reflect both the traditional use within the zoning district and provide guidance for future development within the zoning district.

Goal: The Planning Commission shall propose a new definition of this zoning district to reflect the current reasons for maintaining the large lot sizes as well as the traditional purpose of the zoning district.

Strategy:

Re-Define the Purpose of the Scenic Preservation Zoning District:

1. A proposed zoning district definition to begin discussion may be:
   "The purpose of the Scenic Preservation District is to protect the scenic vistas along Pleasant Valley Road; to protect animal migration routes; and to protect upland areas that have development and access constraints. This is achieved by allowing lower densities of development or clustered development that maintains Underhill's rural character while protecting the views along Pleasant Valley Road";

2. The Planning Commission shall hold public forums to determine if there is community support for the proposed definition change.

Policy: **Land Uses**
Land uses allowed within a zoning district should conform with the purpose of the zoning district and be approved by the community.

Goal: Permitted and conditional uses, and lot size and set-backs for the Scenic Preservation district should be reviewed by the Planning Commission and if necessary, recommendations for changes made to the community in the course of regulatory amendment.

Strategies:

1. The Planning Commission shall review and propose amendments for permitted and conditional uses, lot dimensional and set-back requirements if deemed necessary to comply with the new definition and this Plan.
2. The Planning Commission shall hold public forums and hearings to get community feedback on any proposed amendments.

Goal: Protect Animal Migration Routes:

Strategies:

1. The Commission shall consult with the Conservation Commission to find out about animal migration and develop proposed regulation changes to achieve this goal;
2. The Planning Commission and the Conservation Commission shall hold public forums to educate the public about animal migration; and
3. The Planning Commission should propose amendments to the regulations to promote protection of animal corridors and hold public forums to seek community approval of this goal.

Section 2.7 Soil and Water Conservation Zoning District

Current Definition and Uses:

The current purpose of the Soil and Water district is "to protect the vulnerable bedrock aquifer recharge areas." The current lot size is 15 acres. The purpose language should be amended to more fully explain the reason behind the large lot size. This district includes the steepest land in town and the soils are notably thin. This district also includes the 1500' elevation overlay district. Development above the 1500' elevation mark is currently prohibited.

As noted earlier, the zoning district is located in pockets on the west side of town, all down the spine of the geographic center of town, and on the east side of town, which encompasses portions of Mt. Mansfield and the Mt. Mansfield state forest. While expanding the definition of the zoning district will bolster the reason for the large lot size on the high land located in the center of town and on the eastern edge of town, it remains to be seen if the large lot sizes can be reasonably supported in the odd outlier areas located in the western part of town by the new proposed definition.

Currently these small "outlier" areas are inserted within the 3 acre rural-residential zoning district. Landowners in these areas cannot understand why their surrounding neighbors are only required to have three acres, while they must have 15 acres. The current zoning district is defined by its geology alone. Expanding the definition to include additional considerations for these large lots should make it easier for the Planning Commission to re-evaluate the outlier areas and determine if changes to these areas should be made.

Permitted residential development in this area is limited to a "single unit structure" (interpreted to mean a primary dwelling) and an "accessory apartment" (interpreted to mean an accessory dwelling unit); and one camp unit. Public parks and playgrounds are also currently permitted in the district. Conditional uses in this area are: private schools; agricultural operations; indoor and outdoor recreation clubs; public utility structures; home occupations; towers; natural resource extractions; ponds; commercial camp grounds; kennels; and cemeteries.

Available Services:
Depending on the provider, telephone cellular service and high speed internet connections are spotty in this zoning district. There are no community water or septic, systems.

Abutting Community**:** This zoning district is bound by a border with Cambridge and Stowe.

Policy: **Zoning District Definitions**

The Soil and Water district purpose definition should reflect both the traditional use within the zoning district and provide guidance for future development within the zoning district.

Goal: The Planning Commission shall propose a new definition of this zoning district to reflect the current reasons for maintaining the large lot sizes as well as the traditional purpose of the zoning district.

Strategy:

Re-Define the Purpose of the Soil and Water Conservation Zoning District:

1. A proposed zoning district definition to begin discussion may be: "The Soil and Water Conservation District includes significant headwater and aquifer recharge areas; unique and fragile natural areas; critical wildlife habitat; and mountainsides and ridges characterized by steep slopes and shallow soils. The purpose of this district is to protect Underhill's more remote and inaccessible forested upland areas from fragmentation, development, and undue environmental disturbance, while allowing for the continuation of traditional uses such as forestry, outdoor recreation, and compatible development."

2. The Planning Commission shall hold public forums to seek community approval for the proposed definition change.

Policy: **Lands to which District Requirements Apply**

Land use zoning districts are in themselves a restriction on land development. As such, lands designated within a zoning district must meet the definition of the district purpose.

Goal: Determine Proper Zoning District for Outlier Soil and Water District areas

The Planning Commission shall determine if the outlier areas in the soil and water district meet the protection needs as stated in the purpose definition for the district. If not, the Commission shall determine the correct district.

Strategies:

1. Using the new zoning district definition, the Planning Commission shall determine if the outlier 15-acre zones on the zoning map achieve the purpose of the district.

2. The Commission shall hold public meetings for community input when making this determination.

3. If the Commission finds that the outlier areas do not meet the zoning district requirements, they shall assign the outlier areas to the appropriate zoning district.

4. The zoning map shall be amended to reflect any changes made.

Policy: **Land Uses**
Land uses allowed within a zoning district should conform with the purpose of the zoning district and be approved by the community.

Goal: Permitted and conditional uses, and lot size and set-backs for the Soil and Water district shall be reviewed by the community in the course of regulatory amendment.

Strategies:

1. The Planning Commission shall amend the current regulations, *see* §2.10 below. During that process, the permitted and conditional land uses and the lot size and set-backs for the district shall be reviewed, and may be amended.
2. The Planning Commission shall hold public forums and hearings to get community feedback on any proposed amendments.

Section 2.8 Special Flood Hazard District

In June of 1988 the Underhill Selectboard adopted a "Flood Hazard Zoning By-law" as part of its agreement with the federal government to be a part of the National Flood Insurance Program (NFIP). The NFIP is a federal program administered through the state floodplain coordinator that provides insurance for structures located in a floodplain. The NFIP makes it affordable for Town residents to buy flood insurance if there are any structures on their land that is within the special flood hazard area. Currently NFIP flood maps are being updated and digitized. These maps should be adopted once they have been fully vetted and the public comment period complete. See Natural Resources, Chapter 1 §§ 1.4 & 1.14 for more information on flood plains.

The Town currently has an overlay district based on the federal floodplain maps. As part of the federal program we are required to meet federal minimum standards in regards to: allowed structures/development in a floodplain and flood way; storage of materials in a flood plain/floodway; and procedures that the Town and floodplain residents must follow should residents want to further develop in a floodplain. New FEMA maps mean a new timeframe that our regulations need to be updated by. For the floodplain regulations, the Planning Commission shall have an amendment to the current floodplain regulation that meets at least the minimum standard. The Town shall update the floodplain regulations to assure compliance with federal program requirements.

Policy: **The Town's floodplain regulation shall be compliant with federal requirements so compliance with the NFIP is assured and our regulation is enforceable.**

Goal: The floodplain regulation shall be compliant with federal flood insurance program requirements.

Strategies:

1. The Planning Commission shall amend the regulations within the required FEMA time frame.
2. The Planning Commission will investigate whether it wants to pass a minimum regulation to meet the timeframe, or if it would like to regulate above the required minimum compliance level.

Section 2.9 Fluvial Erosion Hazard Areas ("FEH")

The State of Vermont has recently taken the lead in the nation with "fluvial erosion hazards" (FEH), those areas that are especially vulnerable to stream erosion. While a FEH area may overlap on a map with a special flood hazard district the purpose for each program is distinctly different. One, the NFIP, is an insurance program that serves to protect structures and by extension life. The Fluvial Erosion Hazard area is, by contrast, an environmental protection for a sensitive natural area. *See* Natural Resources §1.16. It is important when proposing regulations for these two areas to keep the distinct purpose of each planning area in mind: one is to assure compliance with a federally-regulated insurance program and one is to provide enhanced environmental protection for a sensitive natural resource area.

The Planning Commission, in considering whether to add a fluvial erosion hazard district as a layer of regulation and another overlay district shall have a draft map from the state Agency of Natural Resources to ascertain how much of an area is proposed to be encompassed by this new district. Much public education and outreach would need to be done before this new district is incorporated into regulations. See Natural Resources section 1.16.

Policy: **A fluvial erosion hazard area should be considered if it provides a higher level of environmental protection than currently afforded by zoning set-backs from streambanks.**

Goal: The Planning Commission shall investigate and make a decision about adding fluvial erosion hazard areas as an additional overlay district to the zoning map and what regulations will be appropriate for this area.

Strategies:

1. The Planning Commission shall request a draft fluvial erosion hazard area map from the Agency of Natural Resources. This map will allow the Planning Commission to see the extent of the hazard area and the extent of additional

environmental protection it shall afford. No fluvial erosion hazard regulations shall be proposed without a map.

2. The Planning Commission shall consult with the Conservation Commission on the FEH.

3. Based on the map and using models from other towns or state agencies or planning organizations the Planning Commission may propose regulations for a fluvial erosion hazard area.

4. The Planning Commission shall hold informational meetings with the public and in particular affected landowners to get their feedback on the proposed regulation/zoning overlay district.

5. Based on community feedback and science, the Planning Commission may decide to add a fluvial erosion hazard area to Town regulations.

Section 2.10 Land Use Regulation

Policy: **Land Use Regulations: Underhill land use regulations should be user-friendly, enforceable, compliant with state law, internally consistent, and externally consistent with other town ordinances and regulations.**

Goal: Unified Land Use and Development Bylaw ("Unified By-law"):
To develop a unified by-law that will effectuate the policies of this plan.

Strategies:

1. The Planning Commission shall work with the consultant hired under a grant from the Department of Housing and Community Affairs to complete the proposed Unified By-law.

2. The Commission will hold a series of public forums and hearings and publish articles in the local paper explaining the proposed changes.

3. The first regulation revision shall bring Town regulations into compliance with state law, shall correct inconsistencies internally, and externally to other town regulations, and shall re-define the purpose sections for the zoning districts.

4. A second revision shall then be immediately undertaken by the Planning Commission to develop village center regulations for Underhill Flats and Underhill Center, and to also determine if changes to the zoning map are required.

5. Public outreach for this second revision could be achieved through community visioning sessions and other outreach strategies. The Commission shall consult with planning professional whenever possible to aid in this public outreach effort.

6. The Commission shall pursue all available grant opportunities to achieve the goals of the second revision and conduct public outreach.

Section 2.12 Land Use Contracts

There is support in the town plan survey to use tax incentives such as those eligible under state law (24 V.S.A. §2741) as a tool to keep open lands undeveloped.[3]

Policy: **Underhill shall continue to use the open space land/farmland/forest land contracts to preserve undeveloped, productive space.**

Goal: Town open space land/farmland/forest land contracts shall be compliant with state law

Strategies:

1. The Planning Commission should make recommendations to the Selectboard as to any changes to the contract so that the goals of this Plan are implemented.

2. Working with legal counsel, the Town will amend the current town contract if necessary to assure compliance with state law.

Goal: The Town land contracts will achieve the purpose of maintaining productive space by amending it to include farmland and forest land.

Strategies:

1. The Town should amend the contract; and

2. The Town will determine the required acreage to achieve this goal.

[3] Id., p 9.

CHAPTER 3: SERVICES

The quality of life in a rural community in Vermont depends to a large extent on the services offered to residents. Underhill, at present, offers its residence a variety of services, some of which are adequate to meet current needs and those projected for the next five years. For these, no changes are required and only a brief description suffices. Other services however, are either not available or will be inadequate to meet needs in the near future. These are discussed in more detail, presenting the Town policy regarding the service**,** the specific service, described as a goal, and the strategy required to implement the service.

Adequate Services

The following services appear to be adequate for current needs and are likely to remain so for the next five years.

Section 3.1 <u>Police, Emergency Services, Fire Protection</u>

Police services are provided by the Vermont State Police. In addition, the Town currently contracts with the Chittenden County Sherriff, who provides 5-6 hours per week of additional traffic control coverage. Essex Junction and Cambridge support ambulance services which are readily accessed and respond to 911 calls. The volunteer Underhill-Jericho Fire Department provides fire protection. There are two stations; one on Route 15 in Underhill Flats and the other on Browns Trace Road in Jericho Center. Where hydrants are not available, water must be transported by tanker trucks or pumped from local ponds and streams. The Fire Department has mutual assistance agreements with other Chittenden County municipalities and the Vermont Air National Guard.

Section 3.2 <u>Health Care</u>

The closest facility where comprehensive medical care is available is Family Practice Associates in Cambridge. This facility includes five physicians, two nurse practitioners, one dentist, one optometrist, one physical therapist and two mental health practitioners. Essex Junction also has several health care centers. Burlington has many health care centers, some associated with the University of Vermont/Fletcher-Allen Health Care Facility and others not. In addition to the comprehensive health care available in many localities (Cambridge, Essex Junction, Burlington and Morrisville), all medical and surgical specialties are available at the UVM/FAHC facilities. Comprehensive home nursing care, physical therapy and medical social services are available through the Visiting Nurses Association of Chittenden and Grand Isle Counties. There are no long-term nursing care facilities within the Town of Underhill.

Section 3.3 Water and Septic Systems

The Jericho-Underhill Water District is a separate municipal entity that serves the Underhill Flats population and maintains a network of fire hydrants. Privately managed water systems exist on Beartown Road in Underhill Center and on Timber Ridge Road off of Poker Hill Road. The Roaring Brook community operates a common water and

septic system, the operations of which are reported to the State of Vermont and the Town of Underhill, respectively. All other water and septic systems are private.

Section 3.4 Solid Waste Disposal

The Town of Underhill is a part of the Chittenden-Solid Waste District, with drop-off centers at Richmond, Essex, Hinesburg, Milton, South Burlington and Williston. All but Hinesburg accept bulky items. Hazardous waste is accepted at the Environmental Depot.[4] CSWD also sends around the Rover to each Town in the service area once a year to pick up hazardous household waste. The Town of Underhill has a contract with a private hauler for curbside trash and garbage collection although residents are free to choose another hauler. The program is a sticker program, where residents purchase a sticker for each bag of trash they put out curbside. Recycling is also picked up at no charge if it accompanies a bag with a sticker. Recycling is mandatory.

Section 3.5 Electricity

Electricity is provided to residents of Underhill by Central Vermont Public Service and Vermont Electric Cooperative.

Section 3.6 Post Office

There are two Post Offices in Underhill. One is in Underhill Center and the other in Underhill Flats. Both provide counter service and postboxes; the office in Underhill Flats provides rural mail delivery for the entire Town.

Section 3.7 Veterinarians

Animal hospitals in Jeffersonville, Jericho and Essex provide care for small animals. Large animal care can be obtained from veterinarians in Burlington, Charlotte, Morrisville and Stowe.

Section 3.8 Library

The Deborah Rawson Library serves the Underhill-Jericho Library District. The Library's computer network allows Underhill residents to borrow specific books from other libraries throughout the State of Vermont. A "home-card" system also allows members to borrow books at eleven nearby libraries. Library users can access the internet through high-speed wireless available in the building.

Section 3.9 Cemeteries

The three non-denominational cemeteries available to Underhill residents are the Underhill Cemetery on Park Street, the North Underhill Cemetery on Poker Hill Road and the Deane Road Cemetery. St. Thomas Cemetery on Range Road, Irish Settlement

[4] Environmental Depot is located at 1011 Airport Parkway So. Burlington, VT. The Depot is open W, Th, and Fri from 8:00-2:00 PM and Sat 8:00-3:30 PM.

Cemetery and Doran Cemetery on Pleasant Valley Road are owned by the Catholic Church.

Section 3.10 Adequate Services: A Note

While some of the services listed above can be found in neighboring communities, the Planning Commission feels strongly that having these services provided in our own community would add to the quality of life in Underhill, make the community more sustainable, and reduce the necessity for residents to travel several miles to avail themselves of those services. The Planning Commission shall endeavor in the course of Village Center Planning to accommodate the development of these services by proposing regulations that make it attractive for service providers to work in Underhill.

Inadequate Services

In three areas, the level of services available to Underhill residents is non-existent or inadequate.

Section 3.11 Public Transportation

At present, there is no public transportation with local stops that is available to residents of Underhill. Given the anticipated growth in the Town with more affordable housing, it is expected that there will be an increasing need for residents to have reliable and reasonably convenient transportation between Underhill and Burlington. In addition, increased availability of public transportation may reduce residents reliance on personal transportation, thus reducing greenhouse gas emissions. The development of village centers with higher density residential units should make it profitable for transportation companies to locate pick-ups near to where potential commuters live. *See* Transportation, Chapter 5; Energy Chapter 8.

Policy: **The Town shall explore available public transportation options to serve Underhill**

Goal: To provide cost-effective, convenient, and accessible public transportation services.

Strategies:

1. Explore the requirements, costs, and benefits of joining the Chittenden County Transit Authority ("CCTA").
2. Conduct public forums to determine the needs of the Town's residents.
3. Join the CCTA if the need is warranted and the service is economically feasible.

See Also: Transportation Chapter 5

Section 3.12 Telephone Services

Verizon provided all telephone service to Underhill residents until recently, when they sold the "land-line" telephone service to Fairpoint. Verizon however, retained its cell phone service for Underhill. This service is currently inadequate with many (most) areas in the Town being "dead zones". AT&T also provides cellular telephone service to the Underhill area which is currently more reliable than that provided by Verizon. Cellular telephone service is a necessary service in the 21st Century and an argument can be made that it is more important in a rural area than in an urban community. Residents of Underhill must demand such service.

Policy: **The telephone service in Underhill, with special emphasis on cellular telephone service, shall be made comparable to that in urban centers in Vermont.**

Goal: All areas in Underhill will be accessible to cellular telephones.

Strategies:

1. Amend Town regulations so that the placement of cell towers is encouraged in accord with Natural Resources Sections for ridge and hillside protection. S*ee* Natural Resources Chapter 1.

2. Provide links on the Town web site to cell service providers so that residents can check on whether a provider serves their area.

Section 3.13 High-speed Internet Service

Most residents of Underhill currently do not have high-speed internet access. Consistent with the changing face of employment everywhere, more and more Town residents can potentially work at home or in local (home) offices, given internet support. For this reason, which is a factor in the economic development of Underhill, and because high-speed internet access is a necessity for modern informed citizens, the current situation is unacceptable.

Policy: **High-speed internet access is a necessity that shall be provided in Underhill**

Goal: All residents in Underhill shall have high-speed internet access.

Strategy:

1. Continue to put pressure on providers and state regulators to provide wireless high-speed internet access to all areas in Town.

Section 3.14 Emergency Operations Planning

Policy: Underhill shall have an Emergency Operations Plan (EOP) for use in an emergency or incident in accord with state and federal regulations.

Goal: To develop a functional plan that guides the Town's response in an emergency.

Strategies:

1. To continue to meet with an EOP team consisting of the Selectboard members, Town Administrator, Town Clerk, Essex Rescue, UJFD, State Police, CCRPC representatives, and other stakeholders;
2. To develop and maintain an EOP by modifying templates from Vermont Emergency Management.
3. To conduct one or more tabletop exercises to identify areas of improvement, additional hazards, and to outline response and mitigation strategies.

Goal: To inform the community of local emergency response developments, strategies, and resources.

Strategies:

1. Utilize mailings, the Town website, and other resources to inform the community of meetings and/or documents available related to the local Emergency Operations Plan;

Goal: To train local volunteers and officials in required emergency response roles and responsibilities.

Strategies:

1. Establish a volunteer Underhill Community Emergency Response Team that has gone through CERT training
2. Have local officials and volunteers participate in trainings as provided/required by the federal and state government;
3. Participate in other training opportunities as offered by the UJFD and Essex Rescue.

Goal: To identify at-risk citizens in the community while maintaining their confidentiality.

Strategies:

1. Utilize local resources, such as the Champlain Valley Agency on Aging, Visiting Nurse Association, Jeri-Hill Seniors, and mass mailings to residents to help identify vulnerable populations;
2. Develop a record keeping system if necessary that protects the confidentiality of any list developed and that is compliant with HIPPA requirements;
3. Develop a system of volunteers who will perform safety checks on those identified as vulnerable in an emergency.

CHAPTER 4: INFRASTRUCTURE

As used here, "infrastructure" includes, but is not necessarily limited to, all land, buildings, roads, road equipment and supplies, water and septic capacity, energy networks, and communications networks owned by the Town.

In planning for the future, the Town should be aware of potential population growth as well as changing needs and priorities of its residents, but should think in terms of developing only the infrastructure appropriate to the requirements and budget of a rural town. Any Town infrastructure component that is determined to be unnecessary should be eliminated.

Section 4.1 Background Information

Town assets, as of March 1, 2009, consisted of the following, with an aggregate approximate value of $5,357,900[5]

Buildings: Town Hall, Underhill Center Post Office, Town Garage and outbuildings, Old Schoolhouse No. 5

Land: a total of approximately 132 acres, including Casey's Hill, Recreation area on Stevensville Road, Moore Park, Underhill Center Park, Veterans' Park in Underhill Flats, land on New Road, old gravel pit on Beartown Road, Sand Hill Cemetery

Roads: 63.47 miles of public roads and bridges, 20.29 miles of which are paved and 43.18 are gravel. There are 5 miles of state highway, 8.75 miles of Class 2 town highways, 42.97 miles of Class 3 town highways, 6.42 miles of Class 4 town highways, and .33 miles of Trails.

Drainage culverts: 759

Bridges: 16

Equipment:
Road: 7 trucks, 1 excavator, 1 grader, 1 loader, 1 equipment trailer, 4 sanders, 16 plows. The oldest truck was purchased in 1995; the newest in 2008

In addition to upkeep on the above assets, the town is also responsible for maintaining the sidewalks in the Underhill Flats area, and providing electricity for street lights located in the Flats and in the Center.

Other infrastructure components are dealt with in the Services section of the Plan, and include fire, police and emergency services, water, waste water, solid waste, electricity, communications systems.

[5] Based on VLCT Property and Casualty insurance valuation. Detailed information available in the 2008 Town Report.

Section 4.2 2008 Planning Survey

The 2008 Underhill Planning Survey included several questions relating to infrastructure.

Road maintenance: 78.6% of respondents registered a level of satisfaction with current town road maintenance compared to 8% who expressed a level of dissatisfaction. 13.5 % were neither satisfied nor dissatisfied.[6]

Bicycle paths and recreation trails: 63.1 % of survey respondents stated that the construction of bicycle paths and recreation trails in Underhill had a degree of importance, while 27.7% of respondents felt this proposal had a degree of unimportance. 9.1% had no opinion.[7] 72.9% of respondents supported extending the shoulders to Town right-of-way limits to accommodate shared recreational uses such as walking and biking; while 23.5% did not support this effort.[8] However, only 48.9% of respondents were willing to pay for the shoulder expansion while 35.9% would not be willing to pay for that expansion and 15.2% did not know if they would be willing to pay for shoulder expansion. There were questions in the Planning Survey about the types of trail use that would be supported if a town trail system were developed; these questions will be discussed in further detail in the Recreation Chapter. *See* §§9.1; 9.2 & 9.4.

Tennis courts: 52.3% support repairs; 31.4% do not support repairs; and 16.3% undecided. [9]

These statistics indicate that the Town should continue the existing level of road maintenance, and should investigate shoulder widening to possibly accommodate recreational uses, including exploring non-tax methods of financing this project, such as grants. Through a capital improvement program, the Town should make plans to maintain all its infrastructure assets, including the recreational ones such as the tennis courts, the town pond, and Casey's Hill.

Section 4.3 Capital Improvement Program and Capital Budget

It is essential that Underhill plan for and maintain infrastructure that is sufficient to meet the needs of a rural town in the 21st century. To do this effectively a capital improvement plan should be developed and adhered to.

Capital planning and budgeting is only effective if the Town has a way to finance the plan consistently. In order to accomplish this, it is recommended that the Selectboard ask the voters at an annual Town Meeting to create two reserve funds:

---

[6]Very Satisfied: 43.3%; Somewhat Satisfied: 35.3%; Neither Satisfied nor Dissatisfied: 13.5%; Somewhat Dissatisfied: 6.6%; Very Dissatisfied: 1.4%. Planning Survey, page 8.

[7] Very Important 36.3%; Somewhat Important 23.8%; Neither Important of Unimportant 9.1%; Somewhat Unimportant 9.7%; Very Unimportant 18%. Town Planning Survey, page 12.

[8] Town Planning Survey, page 12.

[9] Town Planning Survey page 13.

- A capital reserve fund dedicated to funding only capital improvement projects
- A "rainy day" fund to create a cushion should an infrastructure crisis occur in any given year

Creation of these funds would reduce the need for the Town to borrow for the cost of capital improvements.

The Planning Commission believes that the establishment of a "rainy day" fund is a responsible way to manage the Town's financial affairs and to insure that the Town continues its program of capital improvement. Without such a fund, we could be one major unforeseen disaster away from considerable debt. We recommend that the "rainy day" fund be established with enabling language allowing it to be used in a variety of circumstances, for example:

- To defray an unanticipated budget deficit so the Town does not have to borrow;
- In case of a crisis, such as urgent road repairs after a flood, so the capital budget program for that year can still be accomplished;
- To help defray the cost of a major purchase, such as a plow truck, if such a purchase exceeds the capacity of the capital reserve fund.

The Commission recommends that the establishment and funding of these accounts be part of a Capital Improvement Plan and Budget developed by the Selectboard and that the Selectboard establish a policy for each account that defines how each will be funded, under what circumstances the fund can be draw on, and the minimum and maximum fund balances. This information should be presented at a public hearing.

There are two mechanisms that are typically used to fund such accounts when established. One is to use surplus funds. The other is to add a penny or two onto the tax rate and dedicate that income to the reserve funds. Initially, it might be advisable to use a combination of these two funding mechanisms to get the funds up and running. For instance, because of the nature of the "rainy day" fund, it might be funded only with available surplus funds. However, because of the ongoing nature of capital improvement projects that create continuing obligations each year, it might be preferable to fund the capital reserve fund with a dedicated tax to insure fund stability. Initially, if there are sufficient surplus funds, we may want to roll some of those surplus funds into both the "rainy day" fund and the capital reserve fund so that the corpus of the capital reserve fund is more quickly established.

Policy: **Financing Infrastructure Projects: The Town should create mechanisms to guarantee that capital improvement projects can be accomplished without borrowing for each project.**

Goal: Creation of Reserve Funds: The Town should establish two reserve funds, a capital improvement fund and a "rainy day" fund.

Strategies:

1. As part of a Capital Improvement Plan and Budget project, the Selectboard should include the creation of the two reserve funds to pay for projects and defray debt.

2. The Selectboard in conjunction with the Planning Commission will hold a public hearing to educate the public about the advisability of these funds to accomplish established Town goals for capital improvement and reduction of debt, and to gain input from residents on how they would like a "rainy day" fund to be used.

3. The Selectboard will place on the Annual Town Meeting Australian ballot questions to establish the two proposed funds.

Policy: **Planning: To plan for, finance, provide and maintain infrastructure that is adequate to meet the needs of Underhill town residents and government.**

Goal: Since Underhill's infrastructure has grown over the years and will continue to evolve, a Capital Improvement Plan (CIP) should be developed by the Selectboard

Strategies:

1. Formulate capital improvement policies, procedures, and evaluation criteria for the CIP;

2. In accord with CIP policy: Create a capital assets inventory and assess the condition of all town properties, including but not limited to roads, buildings, land and recreational facilities;

3. Prioritize needed repairs, restoration, maintenance, and acquisitions; and

4. Determine proposed method of financing for each project or asset.

5. Selectboard shall establish a capital budget for the each fiscal year.

6. The Planning Commission shall review the CIP annually and make recommendations for plan amendment to the Selectboard.

Section 4.4 Town Buildings

Policy: **Town buildings shall be well maintained and provide a safe and efficient environment for town employees**

Goal: To implement the above policy without undue tax burden

Strategies:

1. Establish a regular maintenance program in accordance with CIP policy

2. Carry out energy audits and budget for and follow recommendations made when economically feasibile.

Section 4.5 **<u>Town Lands</u>**

Policy: **To maintain town-owned land and natural resources in a manner that is compliant with state and local environmental rules and regulations while maximizing the Town-approved uses of these areas.**

<u>Goal</u>: The Town should maintain town land in a manner that protects the health, safety, and public welfare of users. Town land should be utilized for approved town uses and the Town should encourage maximum use through its maintenance of the lands.

<u>Strategies</u>:

1. Plan and budget for the rehabilitation of the former gravel pit on Beartown Road to reduce safety hazards and erosion. Once rehabilitated, the Selectboard should hold a public hearing on what the Town can and should do with this land.

2. Establish a Garden Committee to maintain all Town park gardens and develop new ones.

3. Seek donations of time and materials to make Town lands more attractive.

4. Investigate potential recreation opportunities for Town lands. *See* Recreation Chapter 9.

Section 4.6 **<u>Town Roads</u>**

<u>Policy</u>: **The Town shall strive to provide a safe, convenient and economic transportation system that respects the integrity of the natural environment.**

<u>Goal</u>: To look for all possible efficiencies while maintaining town residents' high level of satisfaction with current maintenance

Strategies:

1. Explore using possible local sources of sand and gravel, with considerations to include both cost effectiveness and environmental issues. *See* Natural Resources §§ 1.7 & 1.17.

2. Protect roadways from floods and stormwater runoff by adopting and implementing low impact development strategies and land use practices through Unified Development Bylaws. See Natural Resources §§ 1.4 & 1.14; Land Use §2.6; Transportation §5.2.

3. Ensure private roads and driveways are adequately designed by revising the Town Road Standards and incorporating them into the Unified Development Bylaws. See Transportation § 5.2.

4. Continue to require "shared maintenance agreements" for all new subdivisions to ensure private roads and driveways are properly maintained so as not to negatively impact town roads. See Transportation §5.2.

5. To reduce budget expenditures, the Selectboard should consider whether to make homeowners responsible for the expense of driveway culvert maintenance. See Transportation § 5.2.

6. The Town should continue to actively pursue grants for road infrastructure improvements from entities such as the Agency of Transportation and the Northern Vermont RC&D Council, Better Backroads Program.

Section 4.7 Other Town Infrastructure

Policy: **The Town shall maintain and replace its highway equipment and maintain other Town assets such as Casey's Hill, the Town Pond, and the tennis courts in accord with the CIP.**

Goal: Town assets and equipment shall be maintained and replaced on a schedule so that the Town reduces unexpected expenses and deterioration of assets to a point where the cost of repair is high.

Strategies:

1. The Town shall include all Town assets in the CIP;

2. Town Highway equipment should be evaluated annually for operating status, anticipated repairs, and energy efficiency;

3. If equipment is inefficient, a cost benefit analysis should be done to determine if an efficiency upgrade would be cost effective; and

4. Casey's Hill, the Town Pond, and the tennis courts shall be maintained annually so that they do not deteriorate and lose value.

Section 4.8 **Communications Systems**

Policy: **The Town shall have high-speed internet and cellular telephone service throughout Town.**
See Chapter 3, §§ 3.11 and 3.12 for goals and strategies.

Section 4.9 **Village Centers**

Policy: **As part of Village Center planning, the Town shall assure that existing or potential infrastructure could meet the needs of more densely populated village centers.**

Goal: Since the Town Survey indicates that residents would like to see population concentrated in the village centers, enabling regulations should be enacted to allow for greater housing density and increased water and septic/sewage capacity in designated areas of town.
See Land Use Chapter 2.

Strategies:

See §§ 2.3 and 2.5 for detailed strategies for this goal.

Section 4.8 **Development of Recreational Trails**

See Chapter 9, Recreation for a detailed discussion of this topic**.**

CHAPTER 5: TRANSPORTATION

The Town of Underhill is committed to providing safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.[10]

Section 5.1 Current Conditions

Underhill's physical geography of parallel north-south trending mountains and valleys has had a limiting effect on the development of roads in town. Route 15 is the major transportation artery for through traffic, and for town roads that feed into it, and generally runs north -south along the western side of town. The eastern part of town, Underhill Center, is connected to the west by River Road which runs east-west and connects to Route 15. [11] River Road turns into Pleasant Valley Road in Underhill Center and connects to Cambridge, the abutting community to the north.

The existing public transportation infrastructure in Underhill is comprised of 63.47 miles of public roads and bridges, 20.29 miles of which are paved and 43.18 are gravel. There are 5 miles of state highway, 8.75 miles of Class 2 town highways, 42.97 miles of Class 3 town highways, 6.42 miles of Class 4 town highways, and .33 miles of Trails.[12] There is an additional 13.34 miles of private gravel roads. All public and private roads are shown on the Transportation Map. In addition to roads, there are 16 bridges and 759 culverts.

Maintenance of Underhill's roads is carried out by the Town Highway Department which is headed by the Town Highway Foreman and located at the Town Garage. A recent survey conducted for the Town by the Center for Rural Studies at UVM ("Town of Underhill Community Planning Survey 2008") demonstrated a high level of satisfaction among Underhill residents with current town maintenance and snowplowing services with 43.3% very satisfied, 35.3 % somewhat satisfied, 13.5 % neutral, 6.6 % somewhat satisfied and 1.4 % very dissatisfied. In light of this high level of satisfaction, that same survey found a majority of residents (52.1%) would not be willing to pay for increased road maintenance. [13]

The Town Plan Survey 2008 also asked residents if they would use a Park and Ride commuter lot located near Route 15. The response was divided with 44.6 % of respondents answering yes, 37.7% of respondents answering in the negative, and 17% of respondents undecided.[14]

The Survey also asked respondents about their support of expanding Chittenden County Transportation Authority (CCTA) bus service including Senior Services Transportation

[10] 24 V.S.A. § 4302(c)(4).
[11] See Town Profile, Pg. 1.
[12] 17 V.S.A. § 302, "Classification of Town Highways" provides descriptions of each class of town highway.
[13] Town Planning Survey page 8.
[14] Town Planning Survey page 8.

into Underhill. When asked how important this expansion of service would be, 42.6% felt it was very important; 36.3% felt it was somewhat important; 7.1 % responded it was neither important nor unimportant; 5.2% felt it was somewhat unimportant, and 6.4% felt it was very unimportant. All totaled those who felt it held a degree of importance was 78.9% compared to 13.9% who felt it held a degree of unimportance.[15]

The Town of Underhill Community Planning Survey 2008 revealed strong support among residents for the construction of multi-modal recreation paths with 63.1% of residents stating such construction was either "very important" or "somewhat important." Nearly 73% of residents support extending road shoulders to town right of way limits to accommodate shared recreational uses and 48.9% of residents would be willing to pay for the expansion. [16]

This Transportation Plan is designed to meet the requirements of the state statute, conform to the Chittenden County Regional Plan, and serve the needs and interests of the residents of Underhill. Therefore, in order to maintain a high level of resident satisfaction and to continue to provide safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers, the Town of Underhill's Transportation Plan will pursue the following Policies, Goals and Strategies:

Section 5.2 <u>Town Roads</u>

<u>Policy</u>: The Town shall strive to provide a safe, convenient, and economic transportation system that respects the integrity of the natural environment.

<u>Goal</u>: To look for all possible efficiencies while maintaining town residents' high level of satisfaction with road maintenance.

<u>Strategies</u>:

1. Protect roadways from floods and stormwater runoff by adopting and implementing low impact development strategies and land use practices through Unified Development Bylaws. *See* Natural Resources §§ 1.4 & 1.14.

2. Ensure private roads and driveways are adequately designed by revising the Town Road Standards and incorporating them into the Unified Development Bylaws.

3. Continue to require "shared maintenance agreements" for all new subdivisions to ensure private roads and driveways are properly maintained so as not to negatively impact town roads.

[15] Town Planning Survey page 7.
[16] Town Planning Survey pages 12-13.

4. To reduce budget expenditures, the Selectboard should consider whether to make homeowners responsible for the expense of driveway culvert maintenance.

Policy: **The Town shall preserve and enhance the rural character and livability of Underhill's roads while at the same time promoting safety.**

Goal: Ensure safe operating conditions are maintained on public roads.

Strategies:

1. Ensure public transportation infrastructure repair is appropriately planned by developing a Capital Budget Plan with a schedule of annual repairs to roads and culverts.

2. Implement the following 2008-2009 Traffic Committee recommendations:
    a. Commence dynamic striping experiment on River Road leading into Sand Hill Road;
    b. Square off entry of Beartown Road onto Pleasant Valley Road;
    c. Narrow fog lines for purpose of traffic calming along Park Street and River Road;
    d. Reevaluate the speed limit of 35 mph on hill section of Pleasant Valley Road;
    e. Complete warning and regulatory sign update;
    f. Change configuration of intersection of Stevensville road and Pleasant Valley Road;
    g. Conduct follow-up studies where traffic calming measures have been taken to measure effectiveness;
    h. Utilize VTRANS District 5 resources by making use of their available radar speed sign. It is the recommendation of the Traffic Committee to not purchase a radar sign;
    i. Paint crosswalks with designating signs in appropriate areas;
    j. Consider treescape and landscape options that will provide traffic calming initiatives as part of Village Center planning; and
    k. Study treescape options for the purpose of traffic calming on all Town roads.

Section 5.3: Public Transportation

Policy: **The Town shall explore available public transportation options to serve Underhill.**

Goal: To provide cost-effective, convenient, and accessible public transportation services.

Strategies:

1. Explore the requirements, costs, and benefits of joining the Chittenden County Transit Authority ("CCTA").

2. Conduct public forums to determine the needs of the Town's residents.

3. Join the CCTA if the need is warranted and the service is economically feasible.

Section 5.4 **<u>Alternative Modes of Transportation</u>**

<u>Policy</u>: **To provide facilities for alternative modes of transportation such as bicycling, walking, and carpooling.**

<u>Goal</u>: Pursue the development of a multi-modal trail system.

<u>Strategy</u>:

1. Coordinate efforts and expertise of the Selectboard, Planning Commission, Recreation Commission and the Trails Committee to identify funding sources and begin a coordinated planning effort. *See* Recreation Chapter 9.

Goal: Encourage carpooling.

Strategies:

1. Advertise the availability of the existing Park and Ride facility located at the old school house at the corner of Stevensville Road and Pleasant Valley Road.

2. Conduct a public forum(s) aimed at providing information to town residents about carpooling, particularly those residents represented by the 17.6 % identified in the Town of Underhill Community Planning Survey 2008 as "undecided" about whether or not they would use a new Park and Ride facility located on Route 15.

3. Investigate the possibility of a Park and Ride lot on Route 15 in Underhill.

CHAPTER 6: HOUSING

Section 6.1 Background

Per the Vermont Planning and Development Act (24 V.S.A. Chapter 117), municipal plans are required to include a plan addressing the housing needs of low and moderate income persons as identified by the regional planning commission. (4382).

According to 24 V.S.A 4303, the definition of affordable housing is housing that is owned or rented by its inhabitants, whose gross annual income does not exceed 80 % of the county median income, or 80% of the standard metropolitan statistical area (MSA) as defined by the U.S. Department of Housing and Urban Development, and the total annual cost of housing is not more than 30% of the household's gross income. Housing costs for homeowners include principal, interest, taxes, insurance, and condominium association fees. For renters, costs include rent, utilities, and association fees.

In 2008 only 1.6% of Vermont's housing stock was vacant and available for homeownership. This percentage was the fourth lowest in the nation. Vermont's rental vacancy rate of 3.5% was the lowest in the country. It is generally agreed that a healthy housing stock for homeownership is 3.5% and for rentals, 5%. The lack of availability drives up the market cost making the homes less affordable for many as the median purchase price of a home has out-paced the growth of median household incomes. Chittenden County and Underhill have some of the tightest markets in the state which makes it difficult for both the young people and elderly of our community to remain in Underhill. While 72.8% of Vermonters own their own homes, most of these homes were purchased prior to 2000.

28 properties were sold in Underhill in 2008. The average price was $274,729, the median price sold was $260,000, while the median price for a primary home in VT was $200,000. The median income for all VT households is $51,566. A household with that income could purchase a home priced at $163,000 with $11,000 cash for closing costs. To purchase a home of $200,000 a VT household would need an annual income of $63,000 as well as $14,000 in cash. The median price for a newly constructed home was $270,000. A household would need an annual income of $85,000 and $18,000 for closing costs.

While applications for small lot subdivisions have remained stable these past five years, the number of building permits for new dwellings in Underhill has declined. In 2005 there were 12 permits, in 2006 there were 10. This is similar to the number of permits in the previous five years. In 2007 the number declined to 7, there were no permits issued in 2008 and only three for the fiscal year ending June 30, 2009.

In the 2008 Town Plan Survey, there was strong support for single family housing (75.7% for vs. 7.2% against). Two-family housing (duplexes) were also favored, with 46.1% favoring this type of housing versus 30.5% against this type of housing option, although 23.5% had no opinion. Multi-family housing was not supported, with 54.9%

against, 23.8% for and 21.3% with no opinion. Seeming somewhat at odds with this result is the very strong support for senior housing, which is typically a multi-unit type of housing. 73.1% of respondents were in favor of senior housing with 9.2% of respondents against this type of housing.[17]

Other survey results that were relevant to housing include that 64.8 % of respondents agree that the Town should encourage increased density and mixed-use development (commercial and residential development) in the Underhill Flats Village Center area compared to 21.6 % who were against this kind of housing development for the Flats. In the Underhill Center village center area, 47.9% agreed with development scheme while 37% opposed it. For rural areas outside of the traditional village centers, 74.7% of respondents agreed that housing development should be grouped to protect scenic, natural resources and/or open space areas while only 12.5% disagreed.

Housing Targets

In the 2006 Chittenden County Regional Plan a housing target for new housing units in Underhill was identified. The target was to develop 205 new housing units in Underhill by 2010, with 21 of those units being moderate income housing and 21 being affordable housing.[18] The Plan clearly articulates that these are goals, not mandates. The Town is obligated to identify whether or not we expect to achieve the housing target by 2010; if we are not able to achieve the target the factors that likely cause this; and the local actions designed to address the identified housing factors the community agrees should be addressed and that the community is capable of addressing.

Currently the Town has roughly 1100 housing units, so 205 units represent a 20% increase in new housing units. Since 2006 there have been17 new housing units developed in Underhill.[19] The Town will not be able to meet the 2006 RPC housing target.

Why will Underhill not be able to reach the housing targets? There are a variety of reasons: land prices in Underhill are high; the land that is left to build on is harder to develop; there is not a municipal septic system in Underhill so all new homes must be able to support a septic system; 55 % of Underhill's land is in 10 and 15 acre zoning;[20] there is a prohibition on development above 1500' elevation which comprises 21% of developable land;[21] current zoning only allows for duplexes or multi-family housing in one out of five districts; the Town has 4003 acres in either Town land contracts or state

[17] Town Planning Survey 2008 pg.11

[18] 2006 Regional Plan page 7.9. "moderate income is defined as and affordable housing is defined as___.

[19] This includes both single family homes and accessory apartments. The totals were: 2006: 8; 2007: 5; 2008: 0; 2009 to date [August 09]: 4.

[20] 18,017 acres are in the Scenic Preservation (10 acre) zone or Soil and Water Conservation (15 acre) zone. The 18,017 acres does not include acreage in the state park or the Ethan Allen Firing Range. Information from Underhill Zoning Administrator.

[21] 7,058 acres are above the 1500' elevation mark. The 7,058 acres does not include acreage in the state park or the Ethan Allen Firing Range. Information from Underhill Zoning Administrator.

current use contracts, which represents 12 % of the developable land in Underhill; and the economic downturn has had a negative effect on land development in Underhill.

What can the Town do to encourage development of new housing units? We can make zoning regulations accommodate multi-family housing in more districts; we can ease the zoning regulations regarding accessory apartments to encourage affordable, multi-generational housing on individual lots; and in the course of village center planning we can discuss with the community creating greater density and mixed use development in these distinct planning areas to encourage development of additional housing units. *See* §§ 6.2; 6.3 below and Chapter 2, Land Use.

Section 6.2 Housing and Income

Policy: **The Town should strive to make residence in the Town available to all income levels.**

Goal: Increase the affordable housing stock for those of low and moderate incomes.

Strategies:

1. Encourage density in areas designated as village centers by writing regulation that allows for duplexes and small multi-family dwellings. *See* Land Use, Chapter 2.

2. Encourage density in areas designated as village centers by writing regulation that decreases the minimum lot size. *See* Land Use, Chapter 2

3. Encourage affordable housing by writing regulations that remove some of the strictures on accessory dwellings. *See* Land Use, Chapter 2.

4. Establish an Affordable Housing Task Force (or Committee). This would be an advisory committee for the Selectboard and the Planning Commission which would gather information, formulate and prioritize ideas and plans to stimulate the development of affordable housing, i.e. inclusionary zoning.

Section 6.3 Housing and Age

Policy: **The Town should strive to make housing affordable for all residents.**

Goal: To increase housing stock that allows for young families and individuals and older community members to remain in the community.

Strategies:

1. Educate residents through a housing forum about what the term "affordable housing" means and the necessity for affordable housing so young families can live here and older residents can afford to stay in Underhill.

2. Encourage multi-generational and multi-income residents by including planned residential and planned unit development as a form of development as well as a form of subdivision.

3. Allow for condominiums;

4. Encourage cottage housing;

5. Encourage multi-generational, multi-income and senior housing in the village centers.

Section 6.4 **Housing Targets**

Policy: The Town of Underhill should have achievable housing targets.

Goal: To work with the Regional Planning Commission to modify the housing target identified in the 2006 Regional Plan for Underhill and then to propose regulation changes that will make it possible to achieve those goals.

Strategies:

1. Encourage housing density in areas designated as village centers by writing regulation that allows for duplexes and small multi-family dwellings. *See* Land Use, Chapter 2.

2. Encourage housing density in areas designated as village centers by writing regulation that decreases the minimum lot size. *See* Land Use, Chapter 2

3. Encourage housing development by writing regulations that remove some of the strictures on accessory dwellings. *See* Land Use, Chapter 2.

4. Encourage multi-generational and multi-income residents by including planned residential and planned unit development as a form of development as well as a form of subdivision.

5. Allow for condominiums;

6. Encourage cottage housing;

7. Encourage multi-generational, multi-income and senior housing in the village centers.
8. Consider development bonuses for plans that implement the above strategies.

CHAPTER 7: ECONOMIC DEVELOPMENT

Section 7.1 Background

There seems to be serious interest in creating a more vibrant local economy that allows residents to work and meet their household and recreational needs without leaving Underhill. In response to this, it is recommended that economic incentives (tax breaks, appropriate zoning regulations, etc.) be developed for accomplishing the goals listed below.

This is the first time an Economic Development section has appeared in the Town Plan. It is a response to the evolving character of the Town and the preferences and concerns expressed in the 2008 Community Planning Survey. 63% of respondents think it is important to increase local employment opportunities;[22] 79% would like more small retail business;[23] 77% want a local restaurant;[24] 66% would like to see more professional and trade services.[25] At the same time, 88% think it is important to protect natural resources[26] and 85% think we should protect open spaces.[27] This seeming conflict can be resolved by the development of Village Centers in Underhill Flats and Underhill Center, allowing for mixed use development and increased density in these areas while preserving the outlying areas for open space and larger lot residential development. With careful long-range planning, it should be possible to develop local commerce and employment while maintaining Underhill's rural character. *See* Land Use Chapter 2.

Section 7.2 Economic Policy, Goals and Strategies

Policy: **Underhill shall strive to be an affordable community for the full socio-economic range its population, and shall encourage the development of small-scale local services and employment opportunities.**

Goals

1. To increase local economic activity (home-based employment as well as local businesses);

2. To expand availability of affordable housing; and

3. To maintain and increase working landscape.

[22] Town Planning Survey page 12.
[23] Id.
[24] Town Planning Survey page 5.
[25] Town Planning Survey page 6.
[26] Town Planning Survey page 9.
[27] Id.

Strategies

1. Establish an economic development committee to make recommendations to the Planning Commission and Selectboard on how to achieve goals and pursue funding;

2. Strengthen relevant infrastructure, especially access to high speed internet service See Services § 3.13;

3. Hold public forums to determine what residents consider the appropriate type of business; industries, and land uses for Underhill;

4. Have the Economic Development Committee identify products and services not currently available locally and encourage their development;

5. Explore development of Village Centers in Underhill Center and Underhill Flats that encourage greater densities and mixed-use development; *See* Land Use Chapter;

6. Consider land use regulations that provide incentives for commercial development in village centers (see Infrastructure section); and

7. Utilize existing facilities for local production, sales, and services.

CHAPTER 8: ENERGY

Section 8.1: Background

In 2008, the Underhill Selectboard created an Energy Committee with a charge to research the energy issues for the Town and to make recommendations for changes and best practices to the Planning Commission and the Selectboard. The guiding principle of the Energy Committee's recommendations is for the Town as an entity and for Town residents to reduce greenhouse gas emissions. *See* Natural Resources §§ 1.10 & 1.18. This will be accomplished through setting town policies that require energy efficiency in Town infrastructure and encouraging residents to do the same in their own homes and by utilizing renewable energy resources.

In the early 2000's the Town voted to become a part of the "10 % Challenge", a voluntary program to raise public awareness about global climate change and to encourage households and businesses to reduce their greenhouse gas emissions by at least 10 percent. The Energy Committee has already held informational sessions about how residents can lower their energy use, (thus lowering greenhouse gas emissions) and what resources are available to community members to help them become more energy efficient. In addition to this work, the Town should encourage measurable energy efficiencies through regulations and fees structures. It may also prove useful to have the Energy Committee develop recommended targeted emission standards of Town infrastructure. In developing this recommendation the Energy Committee should consult with the Conservation Commission for data about how much CO2 is absorbed by Underhill's current tree canopy.

In the Underhill Town Plan Survey, overall 85.5 % of respondents thought the development of renewable energy sources in Underhill was important (56.9% very important, 28.6% somewhat important); while only 6.9% thought it was neither important nor unimportant; 2.7% thought it was somewhat unimportant; and 4.9% thought it was very unimportant.[28] Another interesting result of the planning survey came in response to the question: "how important is maintaining our current policy of protecting all land in Underhill above the 1500' elevation mark from development?" To this question, 67% felt it was very important, 17% felt it was somewhat important, 6.6 % felt it was neither important nor unimportant, 2.8% felt it was somewhat important and 6.4% felt it was very unimportant. [29]

Based on these responses and the goal of reducing greenhouse gas emissions, the Town should encourage through its regulations and fee structure the development of renewable energy. However, in reviewing and amending regulations, the Planning Commission shall have to reconcile the development of renewable power sources such as wind power with the desire to protect the natural ridgelines above the 1500' elevation mark.

---

[28] Town Planning Survey pg. 10.

[29] Town of Underhill Community Planning Survey 2008 pg. 7

Finally, as a possible alternative source of energy, it has been suggested that methane from the old town landfill on New Road could be used to fuel the Town garage. The viability and economic benefit of doing this should be investigated.

Section 8.2 **Energy Consumption Reduction**

Policy: **The Town shall work to reduce energy consumption of Town equipment and Town properties and also encourage Town residents to do the same.**

Goal: The Town shall have energy efficient infrastructure

Strategies:

1. The Town shall implement the recommendations of the energy audit for the Town Hall in fiscal year 2009-2010.

2. The Town shall conduct an energy audit for the Schoolhouse and the Town Garage and schedule these improvements in the capital plan. See Infrastructure chapter.

3. Once energy improvements are made, the Town shall continue to maintain and improve the energy efficiency of Town buildings through capital planning. See Infrastructure § 4.3.

4. As a part of having energy efficient infrastructure, Town vehicles shall adhere to all emission standards as established by the state and federal government.

5. The Town should use local natural resources whenever feasible to reduce Town energy expenditures.

6. The Town shall follow the recommendations of the Transportation Chapter, in particular Policies 3 and 4 in regard to public and alternative forms of transportation.

7. Energy performance values should be established for any new Town of Underhill infrastructure construction.

Goal: To encourage public and private entities to reduce energy use**.**

Strategies:

1. The Energy Committee shall continue to educate residents in ways to reduce their energy consumption.

2. The Planning Committee shall consult with the Energy Committee and review Town regulations and fee structures to consider ways to encourage energy efficient construction. One possible solution is to offer building fee rebates based on the proven energy efficiency of new construction and existing structure improvements. A recommendation shall be made by the Planning Commission to the Selectboard about fee rebates or other strategies to achieve energy savings in conjunction with regulatory amendments.

3. The Energy Committee, in consultation with the Conservation Commission, shall make recommendations to the Planning Commission and Selectboard to consider about targeted emission standards for Town infrastructure, as well as suggested methods for achieving those targeted standards by 2014.

4. The Town shall explore the development of a public transportation system and alternative transportation systems such as multi-modal paths in accord with the planning goals set forth in the Transportation chapter of this Plan. See Transportation, Chapter 5.

Section 8.3: **Development of Renewable Energy Resources**

Goal: Encourage the development of alternative renewable energy sources in Underhill.

Strategies:

1. The Planning Commission shall review Town regulations to determine if they are flexible enough to accommodate development of renewable energy sources in identified use areas.

2. If necessary, the Planning Commission shall propose amendments to the regulations and hold public forums on the proposed changes.

3. When drafting amendments to accommodate development of renewable energy sources, the Planning Commission shall consult both the Conservation Commission and the Energy Committee.

4. The Planning Commission shall reconcile the seeming conflict between the competing interest of 1500' elevation ridgeline protection and wind power development through regulatory tools such as specific regulations; individual site plan review; and conditional use review.

5. The Energy Committee shall make a recommendation to the Planning Commission as to the viability of potentially capturing methane gas resources from the former New Road landfill and using it to fuel the Town garage.

1
2

CHAPTER 9: RECREATION

Section 9.1 Recreational Trails

Underhill has traditionally been a community that has been characterized as an active area for hiking, biking, horse-back riding, skiing, sledding, swimming, and other outdoor activities. At times, as population increased and the traditional trails in town became better known, tension has arisen between private user groups and private landowners. When landowners feel that they have been ill-used, private land is posted and trails are lost to community use.

The Town Plan survey had several questions regarding recreational opportunities and how important recreational services are to the community. In response to a question regarding the desirability of "entertainment facilities" in town, these types of services ranked second to last on a favorability scale, just above large scale retail. Roughly 30% of survey respondents favored this type of development, while over 50% were against this type of development.[30]

In contrast to this, over 63% responded that the development of recreational trails and bicycle paths was important, with only 28% responding that it was unimportant. A further question found that 69% supported development of a non-motorized recreation trail network compared to 27% who did not support this type of development. When questioned about development of motorized recreational trails, an overwhelming 78% of respondents did not support this type of trail development compared with 15% who did support it.

When asked about expanding road shoulders to right-of-way limits to the extent possible to accommodate shared recreation uses, 73% of respondents supported this idea compared to 24% who did not. However, not quite as many people were willing to pay for the shoulder expansion, with 49% agreeing to pay for the expansion while 36% did not want to foot the bill. Finally, 52% of respondents supported repairing the Town tennis courts, while 31 % did not.[31]

While there is a clear desire on the part of town residents to develop non-motorized trail networks in town, unless the Town owns the land we have little control over trail development. In the past, the Town has required the preservation of existing trails in the course of subdivision review, and the Town could look at the open land contract as a mechanism to give a tax incentive for providing user access to a trail. However, these ideas would need to be thoroughly discussed and any policy developed along these lines must be cognizant of the inherent property rights of the private landowner.

In January of 2008 the Selectboard created a Trails Committee consisting of members of the public, the Planning Commission, the Conservation Commission, and the Recreation Committee to develop a policy for use of trails on Town-owned land and to develop a

[30] Town Plan Survey, p7.
[31] Town Plan Survey, pages 12-13.

trail use model that could be used by residents and user-groups in their private establishment of trails. As of the writing of this plan, the Committee has drafted a "Trails Handbook" a guide to public and private property owners and user groups that suggests best practices and gives information about the development of a trail or the maintenance of an existing trail. This document was the result of over a years worth of investigation by the Committee into how a trail could be developed or maintained while being respectful of the natural environment and the private property rights of landowners.

Outdoor recreation provides great exercise in a natural setting. However, trail users and landowners should be cognizant of the effect of trail use on the natural environment: from the soils and tree roots underfoot to the fragile vegetation and special habitats that exist along the trail route to the wildlife that lives there. Users also need to recognize the importance of the landowner's wishes with regard to trail use on private property. A good trail conserves the total trail environment, actively respects a landowner's property rights, and provides a fun and healthy recreational opportunity for users.

The use of the Town shoulder rights-of-way to make more room for walkers, bikers and other recreational users of the Town roads is an idea that should be investigated. In the past there has been a discussion about connecting the Underhill Flats area with the Underhill Center area by some sort of path, and when efforts have been made they have not been successful. It may be time to consider this again as part of our proposed village center planning efforts. *See* Chapter 1 Land Use. It may be that we find that the only feasible way to accomplish this goal is to widen the shoulders along River Road. If that is the solution for River Road or any other road in Town, we should either look for available funding through grant programs or make this a part of a capital improvement plan that is presented to the voters.

Section 9.2 <u>Ancient Roads</u>

Ancient roads have been defined by the legislature as:

a. Highways that were laid out by proper authority through the process provided by law a the time they were created or by dedication and acceptance;
b. Do not, as of July 1, 2010 appear on the town highway map;
c. Are not otherwise clearly observable by physical evidence of their use as a highway or trail; and
d. Are not legal trails.[32]

The Town has procured a grant through the Vermont's Department of Housing and Community Affairs to identify any ancient roads we may currently have and where they are located. Once all the ancient roads are identified, the Selectboard will hold a public hearing about the results of the ancient road study and ask voters what they would like to do about these rights of way, either retain some or all of them or discontinue them.

[32] 19 V.S.A. § 302 (6)(A).

The statute provides that unidentified corridors shall be open to use by the public, but only in the manner as they were used from January 1, 1996-January 1, 2006, although neither the landowner nor the Town shall owe any duty of care to a user.[33] Some communities have used this section of the law to use ancient roads as a method for developing trail systems.

This is a method of trail development that is fraught with potential problems. Oftentimes, a landowner is not aware that such an encumbrance on his land even exists. This is because the record of the road has been buried in the town records long before the 40-year look-back period required under the law for title searches; and the right of way by definition is no longer discernable by use as a highway or trail.

In general, the Planning Commission is not in favor of using ancient roads to develop trail systems. However, the Commission will withhold final judgment and recommendation to the Selectboard until the ancient road project is finished and the rights of way have been identified. This is a discussion for all community members to have at public hearing. In addition to the Planning Commission, the Conservation Commission and the Recreation Committee should also weigh in with recommendations to the Selectboard as they make a final decision as to the disposition of ancient roads.

Section 9.3 Town Pond/Tennis Courts/Casey's Hill

The Town has a town pond, a tennis court and a sledding hill. These are all valuable Town assets that add to the quality of life for all Underhill residents. These assets should be maintained as part of our capital improvement program. *See* Chapter 4, Infrastructure.

Section 9.4 Trail Development and Maintenance

Policy: **It is a benefit to Underhill residents to have access to traditional trail systems. Those trail systems should protect the flora and fauna of the trail area, should respect the rights of private landowners and be maintained in an environmentally responsible manner.**

Goal: The Town shall facilitate recreational trail usage through the development of a trail use handbook that compiles best practices for trail development and maintenance and encourages users to be respectful of all aspects of the environment and of private property owners wishes.

Strategies:

1. The Trails Committee will continue work on the Trails Handbook.

[33] 16 V.S.A. § 302(C), (E).

2. The Committee will forward the proposed Handbook to the Selectboard for adoption. It should be reviewed by the Conservation Commission, the Planning Commission, and the Recreation Committee.

3. The Selectboard will hold a public meeting on the proposed Handbook before adoption.

Policy: **The Town shall encourage recreational trail development throughout Town, particularly along the River Road corridor to connect Underhill Flats and Underhill Center.**

Goal: To provide incentives to private landowners to allow for community use of trails on their land.

Strategies:

1. The Planning Commission shall explore the use of density bonuses and other development incentives for sub-dividers to either preserve existing or to create new trails when creating a subdivision.

2. The Planning Commission shall explore the use of the open land contract to aid in development of a trail network.

3. If adopted, the Town shall make available the Trails Handbook to private landowners and user groups and encourage its use when developing trail systems.

4. The Planning Commission should investigate the feasibility, cost, and identify potential funding sources for expanding road shoulders for recreational use and make a capital plan recommendation to the Selectboard.

5. The Planning Commission should investigate connecting the two proposed village centers with a recreational path of some kind as part of Village Center planning.

Section 9.5 Town Recreational Infrastructure

Policy: **The Town shall maintain all its recreational infrastructure.**

Goal: The Town shall make maintenance of Town infrastructure a part of the capital improvement plan per §4.7 of this Plan.

Strategies: See §4.2 & 4.7 of this Plan**.**

Section 9.6 Ancient Roads

Policy: **The Town should know where their ancient roads lie and make decisions as to continuance based on public input.**

Goals: The Town shall complete the Ancient Road project identifying the ancient roads to the best of our abilities, and hold a public hearing to discuss what should be done in regards to them.

Strategies:

1. The Town shall continue to complete the work under the DHCA grant to identify our ancient roads;

2. The Selectboard shall hold a public hearing for comment on whether to discontinue the ancient roads;

3. After public hearing, the Planning Commission, Conservation Commission, and Recreation Committee shall make a recommendation to the Selectboard in regards to the disposition of the ancient roads;

4. The Selectboard shall make a decision after considering all available public comments and recommendations.

APPENDIX A: REFERENCES

References

Agency of Natural Resources. 1998. *Air Pollution from Motor Vehicles in Vermont*. Vermont Agency of Natural Resources. Air Pollution Control Division. Waterbury, VT

Barton, D. and Worthley, A. 2009. *Browns River Corridor Plan: Browns River Watershed*. Arrowwood Environmental, Huntington, Vermont. Prepared for Winooski Natural Conservation District and Agency of Natural Resources; River Management Program.

Becker, L. 2006.*U. S. Senate Committee on Energy & Natural Resources, Water and Power Subcommittee Hearing, 3/30/2006*. State Geologist. Vermont Agency of Natural Resources. Waterbury, VT

Between a Rock and a Hard Place. Housing and Wages in Vermont. April 2009

CCRPC. 2006. *Chittenden County Regional Plan*. Chittenden County Regional Planning Commission

CCRPC. 2001. *Our Changing Landscape: Forest Fragmentation in Chittenden County*. Chittenden County Regional Planning Commission

Moser, Michael. 2009. *Town of Underhill: Community Planning Survey 2008*. The Center For Rural Studies. University of Vermont. Burlington, VT

Northeast States for Coordinated Air Use Management. 2006. *Assessment of Outdoor Wood-fired Boilers.*

US Environmental Protection Agency. 1998. *Climate Change and Vermont*. US EPA

Varney, R. 2005. *Green and Clean Heating Tips*. US Environmental Protection Agency. Region 1.

Vermont Fish and Wildlife. 2004. *Conserving Vermont's Natural Heritage.* Agency of Natural Resources. Waterbury, VT.

Vermont Land Use Education & Training Collaborative. Housing Programs (Brochure #13).

Vermont Housing Data, Vermont Housing Needs Assessment

Willard, A. (2006). *Browns River Phase I & II Geomorphic Assessment Project*. Winooski Natural Resources Conservation District. US Department of Agriculture