

**BARNET TOWN PLAN**

**Adopted by the Barnet Selectboard on:**

**May 13, 2019**

Barnet Planning Commission

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**BARNET TOWN PLAN**

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## **BARNET TOWN PLAN**

### **1. INTRODUCTION**

This May 2019 Town Plan supersedes the August 2015 Plan for the Town of Barnet. It has been prepared in accordance with Title 24 V.S.A., Chapter 117, as amended. This Plan is intended as a policy guideline without the same legal standing as zoning and subdivision regulations. However, it is considered by the District Environmental Commission in their hearings under Act 250, the development law of the State of Vermont. The Town Plan is also given due consideration by the Vermont Public Service Board in deciding whether to issue a "certificate of public good" under 30 V.S.A. Section 248 for the siting of utility projects (e.g., industrial wind turbines, cell towers). Furthermore, under Vermont statutes, the revised plan is required justification for the production of new or revised zoning and subdivision regulations.

The spirit of this document is the promotion of the maximum local control of planning that is allowed by state and federal law, to encourage the most desirable and appropriate use of land, to minimize the adverse impact of one land use upon another, and to provide for the gradual amelioration of undesirable conditions.

The primary purpose of the Town Plan is to encourage the appropriate private development of all land in the Town in a manner that will promote the public health, safety, prosperity, comfort, convenience, efficiency, economy and general welfare. The purpose is also to provide means and methods of planning for the prevention or minimization of such land development problems as may presently exist or which may be foreseen, and to implement such planning when and where appropriate. (Title 24 VSA, Chapter 117, Section 4382, paraphrased.)

The Plan helps to define the community by laying out the general direction for future development. It also identifies local needs and desires. Each section of the Plan identifies issues and recommends actions to help resolve the Town's problems. This document, then, attempts to identify the areas and resources which possess economic, historic, natural and scenic value and attempts to set reasonable priorities where two or more uses or values may conflict. The Plan provides guidelines for orderly growth and the intelligent appraisal of appropriate land use in Barnet, while maintaining a reasonable flexibility to allow for the consideration of changing trends.

We are fortunate to live in a beautiful, fertile township on the western slope of the Connecticut River Valley. Over the years since the founding of the town in 1763, the basic community

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structure has been made up of small villages and family farms, a combination that has preserved our pastoral beauty through the centuries.

### **2. OVERALL VISION**

It is our belief that the future of the Town of Barnet lies in the conservation of our natural resources and the enhancement of our economic climate, thus providing opportunities for prosperity to our residents while preserving the rural character of the town. All of the plan's goals and recommended actions are based on five underlying goals of our stewardship.

They are:

- A. The preservation of traditional land uses, particularly the remaining farms that dot our hillsides, the forest resource, and compact village centers.
- B. The encouragement of residential development which ensures a variety of housing units for all income groups, while improving our quality of life and preserving our natural resources.
- C. The conscientious utilization and protection of our abundant natural resources and recreational areas, and a recognition of their potential economic value to the citizens of Barnet.
- D. The preservation of the quality of air, water, and all common properties beneficial to the quality of life in Barnet.
- E. The recognition that preservation of traditional land uses, such as agriculture, may conflict with the preservation of common natural resource values in some instances, both short and long-term. Resolution of these conflicts will demand compromise solutions.

The residents of Barnet are custodians of a town of unquestioned natural beauty and significant resources which require diligent attention. Through adoption and implementation of this Plan, the Town's officials and its residents are exercising their best stewardship for those resources with which nature, history, and geography have so abundantly endowed them.



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### **3. GOALS**

#### Land Use Goals:

- A. To promote agriculture and farmland preservation.
- B. To encourage the productivity, the proper management, and the preservation of large contiguous tracts of forest land in the town.
- C. To encourage the maintenance of open land (defined by Vermont statute as land unencumbered by man-made structures) with good proportions of woodland, pasture and tillage.

#### Growth and Economic Development Goals:

- A. To encourage the development of businesses and services while enhancing the economic potential of our renewable natural resources, recognizing that tourism and recreation resources are economic resources.
- B. To provide for orderly growth and development at a rate that will not place an unreasonable burden on the town for the provision of educational and other municipal services.

#### Water Quality Goals:

- A. To preserve and enhance our wetland resources.
- B. To ensure the protection of Barnet's shorelines.
- C. To maintain and improve the water quality found in Barnet's lakes, ponds and streams and springs.
- D. To enhance the recreation, scenic and natural resource values of the rivers, streams and brooks in Barnet.

#### Natural Areas and Wildlife Goals:

- A. To identify, designate, and preserve significant natural areas in Barnet.
- B. To maintain the diversity of habitat and species that exists in Barnet.

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### Housing Goals:

- A. To ensure that residential development in the town is consistent with orderly growth and preserves the rural character of the town.
- B. To ensure a variety of housing units for all income levels within the town, emphasizing when possible the rehabilitation of existing structures.

### Village Issues Goals:

- A. To encourage the location of appropriate businesses and services within villages which are conducive to village life and within walking distance of the residents.

### Education: Goals

- A. To continue to provide a high quality and affordable education to the children of Barnet.

### Historic, Cultural and Scenic Resources Goals:

- A. To protect areas and structures of historic, architectural and cultural merit and to preserve the visual integrity of Barnet's villages and historic districts and individual structures.
- B. To preserve Barnet's many scenic vistas for the enjoyment of residents now and in the future.

### Recreation Goals:

- A. To enhance and co-ordinate the existing informal recreation opportunities in Barnet.

### Transportation Goals:

- A. To maintain a safe and passable network of roads at a cost affordable to the Town.
- B. To decrease the dependence of Barnet's residents on private automobile transportation whenever possible.

### Energy and Communications Goals:

- A. To promote a reduction in local dependence upon costly non-renewable energy sources.

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### **4. BARNET: A COMMUNITY PROFILE**

#### Physical Attributes

Settled by Scottish immigrants, Barnet was chartered in 1763. The town of Barnet, located at an altitude of 452 feet, occupies 27,136 acres, seven percent of the landmass of Caledonia County. Barnet lies along the shore of the Connecticut River, the eastern boundary of the State of Vermont. This section of the Connecticut, with its breathtaking scenery, is considered by some to be the best canoeing on the river. Barnet has several lakes and ponds, including Harvey's Lake (352 acres), which occupies a dramatic setting among open fields and wooded hills. Warden Pond and Jewett Pond are two other major water bodies in the town. Roy Mountain is the town's highest peak at 2,091 feet. It is surrounded by the state-owned, 1,590 acre Roy Mountain Wildlife Management Area.

The historic Bayley-Hazen Military Road passes through the town. Fifty-four miles long, it was designed as a means of entrance into Lower Canada at a time during the Revolutionary War when it was hoped to capture Canada as the fourteenth colony. Although it never served an important military purpose, the road helped to facilitate settlement of Barnet and other towns along the road when the war ended.

Five villages are located within the town: Barnet, East Barnet, West Barnet, Passumpsic at Barnet's north end and McIndoe Falls to the south. Exit 18 off Interstate 91 is located in the town, as is US Route 5, both of which pass through the entire length of Barnet.

#### Population

The 2010 U.S. Census of Population and Housing lists a population in Barnet of 1,708, making it the fifth most populous town in the county. This represents an increase of 18 individuals or about 1 percent since 2000 when the population was 1,690. The population of Caledonia County grew by 5.1 percent during the same period. The state grew by 2.8 percent overall between 2000 and 2010.

Barnet's 2010 population of 1,708 persons represents 5.4 percent of the county's total population of 31,196. Barnet experienced less than 2 percent population growth between the 2000 and 2010 Censuses, and is growing more slowly than most other towns in Caledonia County. Population projections developed from the 2010 Census are currently unavailable. According to population projections developed from the 2000 Census, the population of

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Barnet is growing more slowly than was anticipated.

### **Income**

Barnet's median family income in 2010 was \$65,313, slightly more than that of Caledonia County which was \$52,798 and less than that of the State of Vermont which was \$66,340.

## **5. LAND USE: AGRICULTURE AND FORESTRY**

### **Introduction**

Barnet enjoys a heritage of agricultural production which began when the first cow was brought to Barnet in 1775. This agricultural heritage is intrinsic to our vision of the Town, and preservation of the working agricultural landscape is a major goal of this Plan. The Plan recognizes that prime forested land is also worthy of preservation. It is the patchwork of open fields and forested hillsides dotted with compact villages and scattered farmhouses which characterizes our landscape. Preservation of the rural integrity of Barnet is a priority of the recommended actions in this section of the Plan.

Agriculture in Barnet is diverse. There are working dairy farms, several sheep farms, commercial fruit and vegetable operations, horse farms, beef farms, as well as landscape stock growing operations and intact farm properties not presently in active use.

About 80 percent of Barnet's land area is forested today. Forest growth in the town is diverse due to its location at the junction of the northern hardwood/oak and spruce/fir forests. The combination of this diversity and generally good soils make Barnet a good site for long-term forest investment. Much of Barnet's forest land is currently maintained for sustained timber yield. Barnet's forest land produces a variety of wood products: saw logs, pulpwood and fuel chips. Barnet expects that all timber harvesting in the town will comply with the Acceptable Management Practices (AMP's) required under the State's Water Quality Statutes. The AMP's are intended to prevent discharges, that is mud, petroleum products and woody debris from getting into our streams, ponds, lakes and rivers. They are meant to maintain natural water temperatures by requiring that trees be left as buffers along streams and other water bodies.

To ensure sustainable harvesting techniques are used, individual owners should consider working with a professional forester to draw up a forestry plan such as that required by the Use Value

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Appraisal Program.

Much of Barnet's farm and forest land is currently enrolled in the state Use Value Appraisal Program. Enrolled farm and forest land owners pay property tax based on the use value of their land with the state reimbursing the town for the difference between use value and fair market value. In exchange for this, farm and forest land owners agree to pay a penalty should the land ever be developed for other uses. Moreover, forest land owners agree to manage the land according to a state approved management plan.

Barnet's farm and forest land provides substantial economic, social and environmental benefits to the town. Therefore, it is in the town's best interest culturally and economically to encourage the continuance of farming and to preserve the rural character of the town. From an environmental standpoint, Barnet's forest land performs a critical role by collecting, cleaning, regulating and recycling the water we drink and the air we breathe. The forest is crucial to many watersheds, which in turn irrigate farmland and form wetlands for wildlife.

### **Agriculture: Goals**

Goal: To promote agriculture and farmland preservation.

#### **Recommended Actions:**

1. Make an inventory of the town's critical farm lands based on historic and existing use and soil categories; receiving gifts of land for conservation purposes; recommending appropriate local farm land conservation strategies; assisting the planning commission on natural resource issues; and encouraging residents' understanding of agricultural resources by conducting public educational activities. Explore effective local incentives for farm and forest land protection.
2. Encourage more local marketing of agricultural and forest products. Local consumption of local products profits the producer, the consumer and the environment.
3. Encourage residential development when practical within or on the edges of the villages in order to reduce development pressure on productive agricultural lands.

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### **Forest Land: Goals**

Goal: To encourage the productivity, the proper management, and the conservation of large contiguous tracts of forest land in the town.

#### Recommended Actions:

1. Promote the use of "Acceptable Management Practices" (AMP's) by forest land owners and commercial timber harvesters through locally sponsored education programs which also address sustainable harvesting techniques and the advantages of forest management plans.
2. Encourage development within or on the edges of the villages in order to reduce development pressure on productive forest lands.
3. The Planning Commission should give special consideration to the effects of development on critical natural resources including wetlands, wildlife habitat, water supply sources, and fragile natural areas.
4. It is recommended that available state technical forestry advice be utilized by landowners.

## **6. WATER QUALITY: WETLANDS, LAKES, RIVERS AND PONDS**

### **Wetlands**

According to 10 V.S.A. section 902, wetlands are those areas of the state that are inundated by surface or ground water with a frequency sufficient to support significant vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions. Wetlands may include marshes, swamps, sloughs, potholes, fens, river and lake overflows, mud flats, bogs and ponds. Wetlands are important because, among other things, they provide temporary water storage for flood waters, control the effects of erosion and runoff, enhance water quality, recharge ground water, provide wildlife habitat, provide recreation values and contribute to community open space and scenic beauty.

Based on National Wetland Inventory maps, Barnet has an estimated 570 acres of wetlands, which is just below the average for all

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Vermont towns. It should be noted that there is likely to be additional unidentified wetland acreage in Barnet. In recognition of the importance of wetlands to the balance of ecosystems, they are protected by the State of Vermont's Wetland Rules. However, on a local level, the preservation, enhancement and protection of this important natural resource should be a priority in local conservation efforts.

### **Lakes and Undeveloped Shoreline**

Undeveloped shorelines offer many benefits to lake front owners, recreational users, visitors to the town, and to the citizens of Barnet. Undeveloped shorelines help to maintain water quality. The natural vegetation along shores filters sediment out of runoff before it enters lakes. Many mammals, insects, amphibians and birds need significant amounts of undeveloped shoreline for habitat and hunting grounds. Humans depend on these waters for recreational activities and the quiet appreciation of nature in an undisturbed state.

In 1992 the Northeastern Vermont Development Association conducted an inventory of the undeveloped shoreline in northern Vermont. The study identified undeveloped tracts of shoreline on lakes over 10 acres and with less than 50 percent wetland area. An "undeveloped tract" was defined as having a minimum of 1000 feet of shore frontage with a depth of 250 horizontal feet and no permanent structures or year-round roads.

There are a total of three lakes in Barnet with combined shoreline of 30,560 feet. There are two tracts which can be considered undeveloped under the above definition. These tracts represent 23 percent of Barnet's shoreline, with a total of 7,019 undeveloped feet. According to the study definition, Harvey's Lake contains no undeveloped shoreline. A map of Barnet's undeveloped shoreline appears as Appendix III, Map E in this Town Plan. It is noted that current maps (2014) indicate that the shores of Sarah Moores Pond and Warden Pond are still largely undeveloped.

**Table 1: Barnet's Lakes and Undeveloped Shoreline**

Lake	Shoreline Total(ft.)	Undev. Shoreline (ft.)
Harvey's Lake	21,050	0
Sarah Moor Pond	3,061	1,507 (49%)
Warden Pond	6,449	5,512 (85%)

Source: NVDA Undeveloped Shoreline Inventory, 1992

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Note: Jewett Pond consists of greater than 50 percent wetland acreage and was therefore not included in the study.

Shoreline areas are important scenic and natural resources which should be protected. Without adequate protection these beautiful and fragile environments can be easily destroyed. Once damaged, shore lands are not easily returned to their natural state.

Barnet has adopted Shoreline Regulations which have effectively guided development on shoreline property. In 2014, the Vermont Shoreland Protection Act became effective and requires a State permit for development and clearing activities within 250 feet of lakes greater than 10 acres in size. The Department of Environmental Conservation within the Vermont Agency of Natural Resources administers the Shoreland Permit Program. Lakes regulated under this program in Barnet include the Comerford Reservoir (formed by the hydroelectric dam on the Connecticut River,) Harvey's Lake and Warden Pond. Towns that have a local shoreland protection ordinance that is functionally equivalent to the State's standards may seek delegation of permit authority from the State.

### **Rivers**

The current demand for the use of Vermont's rivers and riparian lands is unprecedented. This accelerating use is accompanied by a renewed recognition by the people of Barnet that the natural qualities associated with our rivers and river systems are essential to maintaining the high quality of life we enjoy.

Sportsmen and other conservationists are united in their position that river resources are not only vital to ecological vitality, but also have untapped economic potential in the growth of the recreation and tourism industries. There are a host of organizations, both public and private, which have organized to improve planning, water quality and other natural resource values in the Connecticut and Passumpsic River Watersheds. Barnet's public officials and private citizens are encouraged to take part in these efforts to ensure that the interests of our citizens are well represented.

Barnet is fortunate to possess a rich riverine resource. The following table based on the 1986 Vermont Rivers Study summarizes the important resources of Barnet's rivers and streams and brooks.



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**Table 2: The Important Features of Barnet's River Resource\***

Resource	River/Brook/Stream
Fish habitat	Passumpsic River, Joe's Brook, Water Andric, Sutton Brook, Stevens River, Connecticut River, Rake Factory Brook
Wildlife habitat	Passumpsic River, Joe's Brook, Stevens River
Natural Areas	Rake Factory Brook, Jewett Brook, Sutton Brook
Historic Districts/sites	Passumpsic River, Stevens River, Connecticut River
Geologic/hydrologic features	Sutton Brook, Stevens River
Archeological Features	Water Andric
Boating	Passumpsic River, Connecticut River
Public lands	Jewett Brook, Passumpsic River, Manchester Brook
Endangered Species habitat	Rake Factory Brook, Connecticut River, Passumpsic River, Manchester Brook

Source: Vermont Rivers Study, 1986, conducted by the Vermont Agency of Environmental Conservation

\* Local authorities might add or delete certain designations from this listing.

### Water Quality: Goals

Goal: To preserve and enhance our wetland resources.

#### Recommended Actions:

1. The Planning Commission should seek opportunities to inform land owners about Vermont's Wetland Rules in order to prevent development activities which are detrimental to the resource and may be irreversible.

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Goal: To ensure the protection of Barnet's shorelines.

### Recommended Actions:

1. For the sake of clarity, the Planning Commission should consider including the Town's designated shorelines on the zoning map.

Goal: To maintain and improve the water quality found in Barnet's lakes, ponds, streams and springs.

### Recommended Actions:

1. In order to protect the water quality, wilderness character, wildlife habitat and rare plant species, the Planning Commission should continue to encourage adequate undisturbed buffer strips around the designated undeveloped ponds and streams.
2. The Planning Commission should work with the Lake Harvey's Association to encourage the maintenance of the lake's water quality.
3. Encourage road construction in ways that minimize erosion and sedimentation.

Goal: To enhance the recreation, scenic and natural resource values of the rivers, streams and brooks in Barnet.

### Recommended Actions:

1. Barnet's public officials should continue to work closely with the Connecticut River Watershed Joint Commission in the development of the Corridor Management Plan.
2. Develop access sites at stream crossings at the juncture of town highways.
3. Label stream names at road crossing.

## **7. FLOOD RESILIENCE**

The Flood Resilience element and its goals and policies were developed over the course of 2014 and 2015. Assistance was provided to the Town by the Northeastern Vermont Development Association. The work was funded by a Municipal Planning Grant awarded by the Vermont Department of Housing and Community Development.

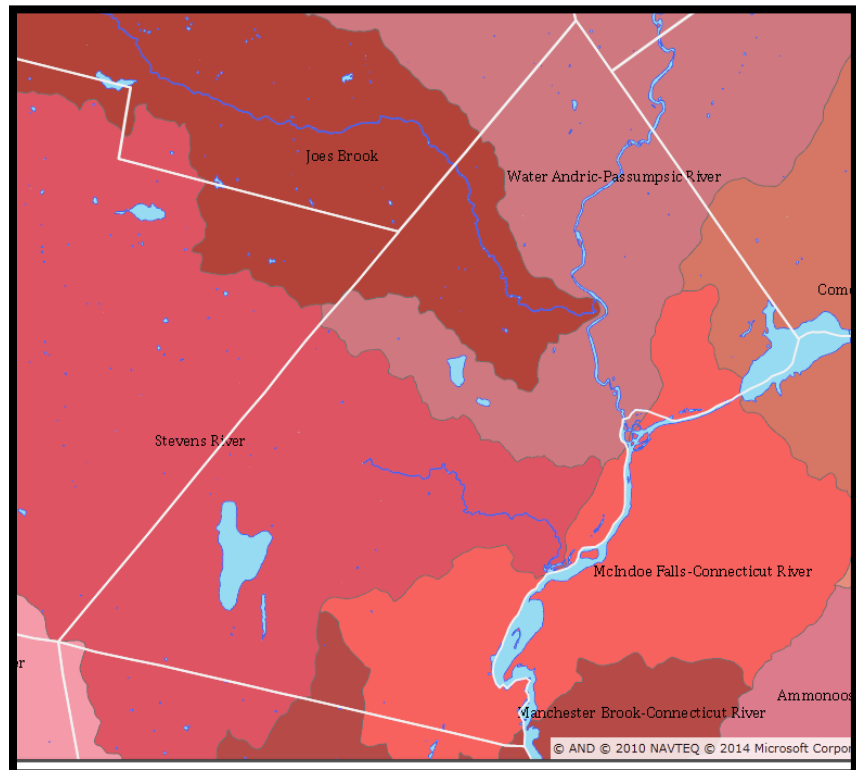
As described in previous pages, Barnet's water resources are a valuable asset to the community. These values are also coupled with the potential for damage, property loss and threats to safety when flooding or erosion events occur. In 2011, for example, the Town of Barnet experienced rain events that significantly damaged its road infrastructure due primarily to flood erosion. Thirty-eight separate roads in town were affected by these events, incurring over one million dollars in repair costs.

An understanding of the unique features and behavior of Barnet's watersheds and flood risk can help the community to maximize the benefits gained from its rich water resources, and minimize risks of suffering harm.

### **Barnet's Watersheds**

The Connecticut River makes up the entire eastern boundary of Barnet, and the whole town is in the Connecticut River Watershed. A watershed is all of the land that drains to a particular river or stream. Key sub-watersheds in Barnet are the Passumpsic River, Stevens River, Water Andric, and Joe's Brook, as depicted in the map at right. The water flowing in these streams and rivers has therefore accumulated from all over the watershed. Total volume, rate of flow, and quality of the streams and rivers is determined by precipitation falling in the watersheds, features of the land over which it flows and the way that the land has been used and developed.

### **Land Cover & Stream Flows**



Development and clearing of the land can have the effect of allowing more precipitation to run faster off the land and into streams and downstream rivers. Forested land cover, along with wetlands, has the greatest ability to detain this water and slow its arrival into streams and rivers. Leaves hold water droplets, roots suck up water in the soil, and undisturbed soil itself acts as a

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thicker sponge of air pockets and soil particles than tilled or post-construction soil. Land uses with less natural vegetation and soils, such as agriculture and developed areas allow faster, higher flows in streams. When significant loss of natural cover occurs in a drainage area, this can lead to more sudden and powerful flows that cause streambank erosion and property damage.

According to the Vermont Agency of Natural Resources, 5-10% developed land use in a watershed may cause altered flows significant enough to increase erosion damage (Vermont River Corridor Planning Guide, p. 28). It is important to note that this effect is also dependent on how much of the developed land is actually impervious cover. Impervious cover includes rooftops and paved surfaces that shed water rather than absorb it into the ground. River Corridor Plans prepared for the Stevens River and the Passumpsic River by the Caledonia County Conservation District break down the types of land use and coverage in those watersheds according to the following table:

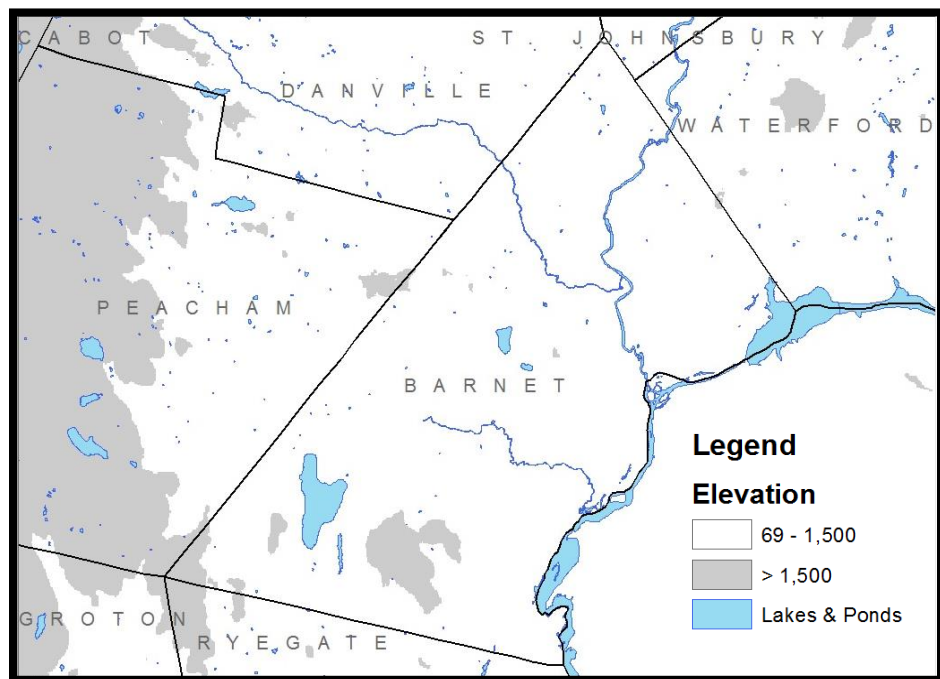
<b>Percent of Land Cover for Watersheds Encompassing the Town of Barnet</b>				
Watershed	Developed	Agricultural	Forest	Open Water & Other Cover
Water Andric	4%	11%	79%	6%
Joe's Brook	3%	19%	74%	4%
Stevens River	8%	18%	67%	7%

Although these watersheds extend beyond the Town of Barnet, it is noteworthy to see that the Stevens River watershed has reached an eight percent level of developed land cover. Development in towns upstream of Barnet can affect stream and river flows in Barnet.

### **Upland Soils**

Soils at higher elevations are more likely to be thinner and on steeper slopes than low land soils. This creates a higher likelihood that if disturbed, the soils will erode and contribute to sediment loading in streams. Disturbance of upland soils may also impair the ability of those soils to support natural forested vegetation. Act 250 criteria define

“headwaters” in part as locations above 1,500 feet in elevation. The adjacent map depicts areas in Barnet and surrounding towns that are above 1,500 feet in elevation.



## **Floodplains and River Erosion Corridors**

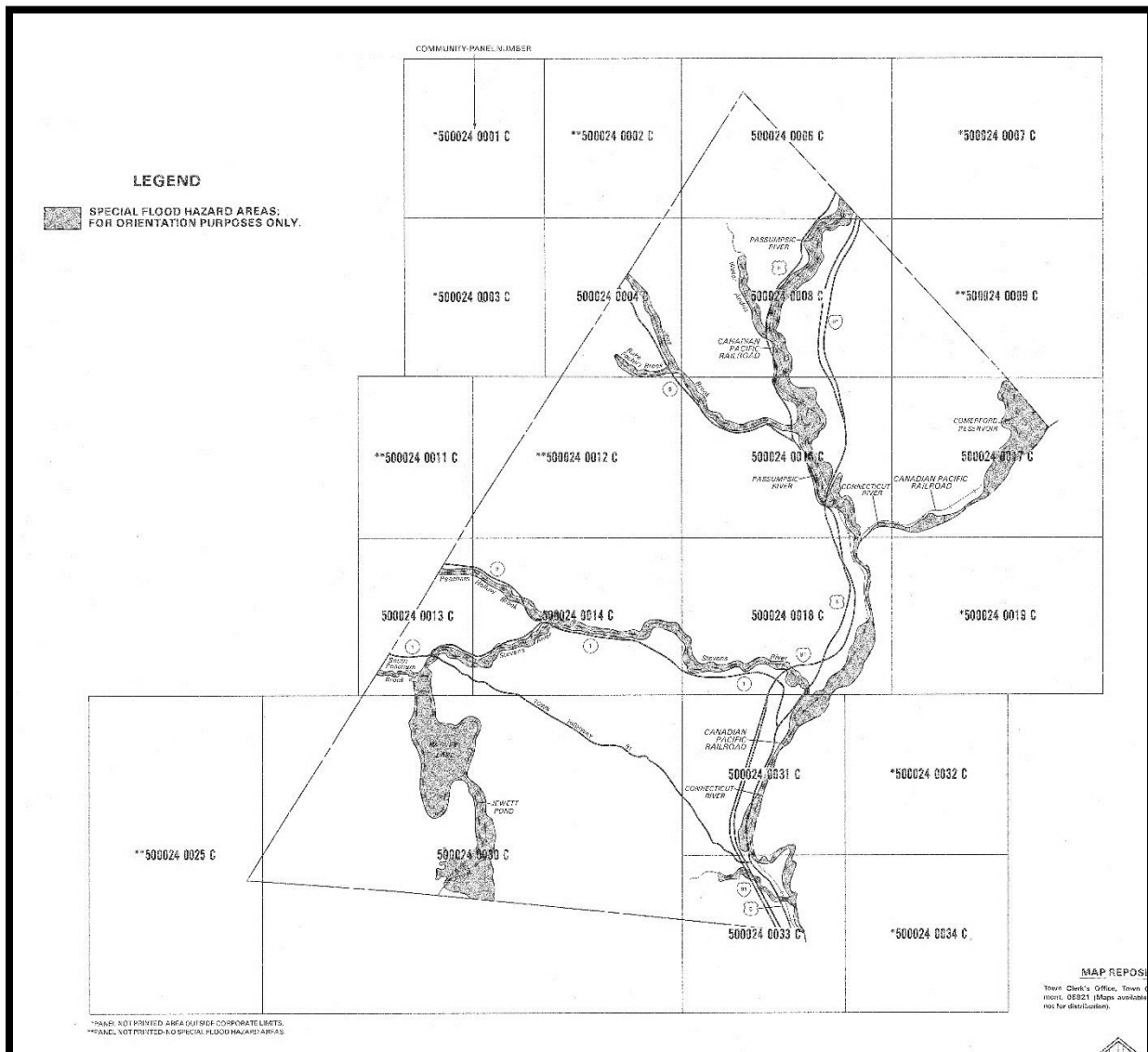
Two major types of flooding have the potential to affect Barnet. The first is inundation flooding and the other is erosive flooding. Inundation flooding occurs when water levels on a relatively slow moving river or lake rise, and the water spreads out gently onto adjoining lands. Property damage is caused simply by everything getting immersed and very wet. The area along a river affected by inundation flooding is called the floodplain. The floodplain will overlap with areas affected by erosive flooding, but they are not exactly the same.

Erosive flooding occurs when increased stream flows carry a great deal of powerful water. These fast moving flood waters erode stream banks and roadsides and can undermine buildings and carry away vehicles, equipment and other property. The area along a river subject to erosive flooding is called the river erosion corridor. Rivers meander naturally over time, and the river erosion corridor indicates the lands that will be subject to erosion damage at some point in the future.

The locations of both floodplains and river erosion corridors have been identified in Barnet. The Federal Emergency Management Agency (FEMA) has studied and created maps of floodplain lands that would be affected by a very large flood. A flood of this size has a one percent chance of occurring in any given year. These lands are called the Special Flood Hazard Area. The following index map indicates the location of the Special Flood Hazard Areas in Barnet, and is intended to orient the reader to the portions of Barnet affected by inundation flooding. A determination regarding whether a proposed development occurs within the FEMA Special Flood Hazard Area is made by the town Zoning Administrator, who consults the official Flood Insurance Rate Map (FIRM) issued by FEMA.

It can be seen that in addition to inundation flooding areas along Barnet's three major rivers, inundation flood hazard areas also exist along Joe's Brook, South Peacham Brook, Peacham Hollow Brook and Water Andric. The largest inundation flood areas occur along the Connecticut River and at the confluence of Joe's Brook and the Passumpsic River.

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**Index to the Town of Barnet FEMA Flood Insurance Rate Maps**

### Flooding & River Erosion History

The following timeline depicts notable flooding and river erosion events in Barnet. Inundation flooding history on the Passumpsic River is fairly well documented, with the assistance of a stream gage maintained by the U.S. Geological Survey (USGS). Other events have been noted by gathering information from Barnet residents.

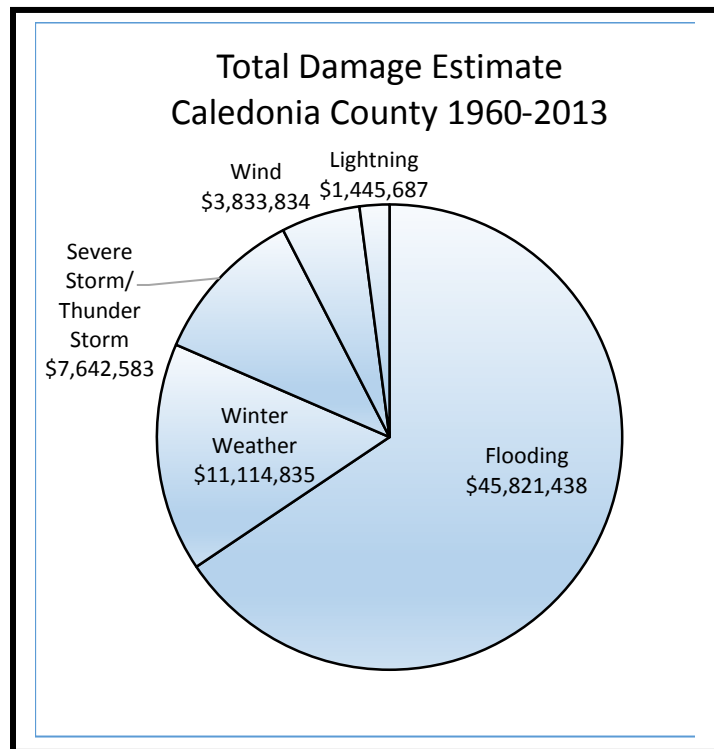
May 2011	VERY wet spring followed by 4-5 inch storm, road wash-outs all over town
April 2011	flooding at the mouth of the Stevens River surrounded Morrison's Feeds
August 2010	flash floods
2002	25-year flood level occurred on the Passumpsic
1998	storm overtopped a pond on Cloud Brook which dislodged a rock and burst the Town School water line
1995	10-year flood level on the Passumpsic

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1990	flood damaged Ben Threshers Mill, depositing large amounts of sediment in places downstream
1989	10-year flood level on the Passumpsic
1976	10-year flood level on the Passumpsic
1973	50-year flood level on the Passumpsic
1972	10-year flood level on the Passumpsic
1945	South Peacham Brook was very high
1936	50-year flood level occurred on the Passumpsic
Source: 2011 Stevens River Corridor Plan and 2013 Lower Passumpsic River Tributaries Phase 1 Stream Geomorphic Assessment Report prepared by the Caledonia County Conservation District	

### Vulnerable Assets

Flooding is the most damaging and costly natural disaster to affect Vermont and Caledonia County. The damage estimates in the pie chart below demonstrate that flood damage is far more costly to communities than more common natural bothers like winter weather and thunderstorms. This information was gathered by the National Weather Service and other sources. Both public and private assets suffer damage, and the following paragraphs outline vulnerabilities of each. (Source: SHEL DUS Hazard Losses Database, Hazards & Vulnerability Research Institute, University of South Carolina)



### **Public Infrastructure & Services**

Barnet's municipal infrastructure has been subject to similar trends as Caledonia County over the last decade. Since 2002, municipal infrastructure has been damaged in five presidentially declared disasters, requiring financial assistance from FEMA to pay for repairs.

Disaster Declaration Date	Incident	Damage Type	FEMA Funds
2002	Severe Storm	Road Erosion	\$19,051
2004	Severe Storm	Road Erosion	\$43,019
2008	Severe Storm	Roads & Bridges	\$29,832
May 2011	Severe Storm	Flooding & Erosion	\$721,228
Aug 2011	Tropical Storm Irene	Road Erosion	\$55,417
Source: OpenFEMA.gov, retrieved on August 4, 2014. FEMA and the Federal Government cannot vouch for the data or analyses derived from these data after the data have been retrieved from the Agency's website(s) and/or Data.gov.			



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A report prepared by the Barnet Town Clerk documents the damage to roads resulting from the May 2011 flooding and Tropical Storm Irene in August of 2011. Several roads had repetitive damage.

After the last flooding event in Town there were 16 locations where the water overtopped the roadway. The Town road foreman prioritized the top 6 problem areas, and the Vermont Agency of Transportation (VTrans) Hydraulics Unit prepared hydraulic studies for these 6 locations. The reports indicated that the structures at these locations were not properly sized, resulting in constriction of the channel width.

Work has been completed or is in the works at three of these locations. A culvert has been replaced on Garland Hill Road (TH 81) in accordance with recommendations by VTrans staff engineers. On Center Road (TH 9) engineering is complete and a stream alteration permit has been approved for the replacement of an undersized culvert. The Town intends to apply for a “Structures” grant to offset the cost of this work. On Mosquitoville Road (TH 90) near the intersection of School House road, VTrans is completing the engineering work and the Town will apply for a grant to offset the construction cost of this improvement.

The Barnet Village drinking water supply well is also subject to flooding at times, according to local residents. This well has recently been acquired by Barnet Fire District #2 and is in the process of being brought into compliance with Vermont Agency of Natural Resources regulations.

### **Vulnerable Property & Structures**

All of Barnet’s villages are clustered along streams or rivers. The shoreline of Harvey’s Lake has also been developed to its full capacity. As a result, there are homes and businesses vulnerable to the effects of flooding and/or fluvial erosion hazards. Some of them may not be covered with flood insurance, and a few have suffered flood damage repetitively.

Manual counts indicate that a total of 35 structures are located in Barnet within the floodplain. Manual counts could not be made around Harvey’s Lake; however a computer mapping comparison indicates that 100 or more structures are within 100 feet of Harvey’s Lake. A more detailed analysis will be required to determine the most accurate estimate of the number of structures at Harvey’s Lake in the flood zone. It is also important to note that these counts do not represent an official determination for permitting and/or insurance purposes on individual buildings.

<b>Structures Located in the Special Flood Hazard Area</b>	
Residential	24
Commercial	10
Historic	1
<b>Total</b>	<b>35</b>
The counts in this table were obtained manually by the Barnet Planning Commission. Structures were counted by hand on maps of the Barnet Special Flood Hazard Areas laid semi-transparently over aerial photos collected between 2007 to 2009.	



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Not all of the investment in buildings in Barnet is necessarily protected by flood insurance. There are 18 National Flood Insurance Policies held on structures in town (Nat'l Flood Insurance Program Insurance Report, Sept. 2013). This falls short of the total number of structures vulnerable to flooding, however. These 18 policies cover \$2.7 million dollars in property value. Assuming the remainder of structures in the floodplain do not have private flood insurance, there may be millions of dollars more of investment in Barnet that is not covered. (It is noted that the requirement to purchase flood insurance would be triggered if the property owner applies for a mortgage, as the lending institution would require a flood insurance policy.)

Structures in Barnet have suffered damage due to flooding. Since 1978, eight claims totaling \$98,000 have been filed with the National Flood Insurance Program (NFIP). Two structures have made multiple claims. Repetitive damage claims impact the insurance pool and the affordability of flood insurance in a town. Barnet residents have also had to turn to other FEMA programs for financial assistance following severe storms. Resulting from the flooding that occurred in 2011, approximately \$26,000 was paid to individuals and households for things such as temporary housing.

### **Flooding Due to Dam Failure**

Although dam failure is an uncommon event, it is important to note that Barnet has several dams that would be hazardous were they to fail.

The largest potential threat to Barnet is the Comerford Dam. This dam detains the large Comerford Reservoir on the Connecticut River. Barnet Village and McIndoe Falls are downstream of this dam. TransCanada, the owner of the dam, has developed an Emergency Action Plan (EAP) for the dam. This plan includes safety protocols in the event of signs of damage to the dam, as well as maps of the inundation area that would be affected were the dam to breach. The Moore Dam is of similar size to the Comerford Dam, 6 miles upstream. An EAP has also been developed for this dam.

The other dams in Barnet are summarized in the table below:

<b>Dam</b>	<b>Hazard Classification</b>	<b>Approximate Location</b>
McIndoes Falls	Undetermined	Next to McIndoes Village on Connecticut River
Harvey's Lake	Significant	On S. Peacham Brook in West Barnet Village
Barnet No. 14	Low	On Stevens River in Barnet Village
Roy Bros. Manufacturing Co.	Low	On the Passumpsic River just upstream of the confluence of the Passumpsic & Connecticut
Passumpsic	Low	Next to Passumpsic Village on Passumpsic River
Barnet 7	Undetermined	Approx. 1 mi. above confluence w/Passumpsic on Joe's Brook
Barnet 12	Undetermined	Near intersection of County Hill Rd & Tripp Lane

Source: Vermont Natural Resources Atlas: <http://anrmaps.vermont.gov/websites/anra/>

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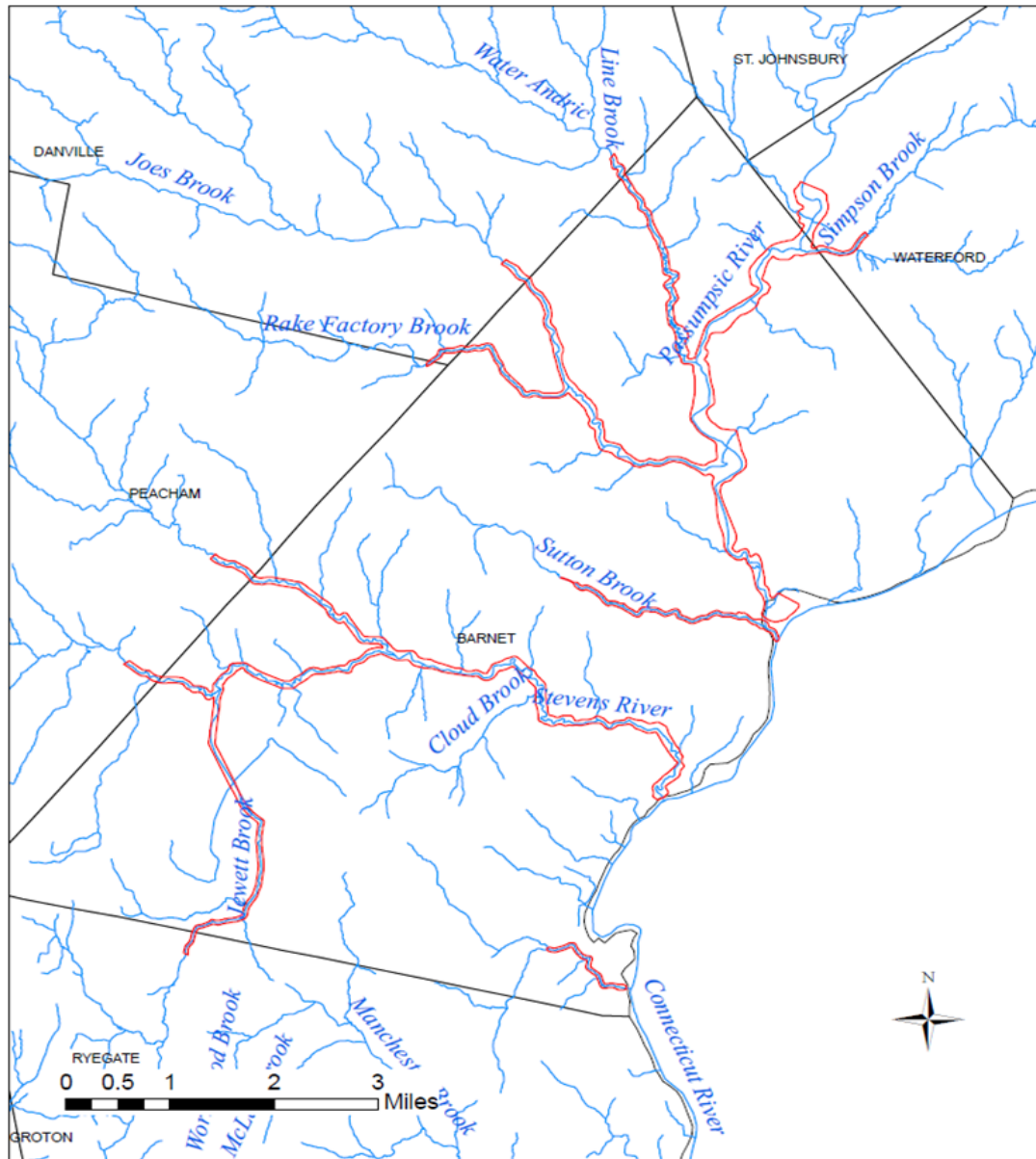
The Vermont Dept. of Environmental Conservation defines Significant Hazard Dams as those with the potential to cause few losses of lives (small number of inhabitable structures) and appreciable but not excessive economic loss (notable agriculture, industry or structures).

### **State River Corridors & Fluvial Erosion**

The State River Corridors were mapped to assist municipalities throughout Vermont identify areas that will likely be subject to fluvial erosion. The mapping is based on what is known of stream dynamics, and a variety of physical features, including drainage area of the streams. Detailed Phase 2 Stream Geomorphic data is available for Stevens River, South Peacham Brook and Peacham Hollow Brook, and can be used to further refine the mapped River Corridors. Although the State does not regulate uses within the River Corridor except for certain uses that are exempt from local zoning (like agricultural uses), the general recommendation is that new development in such areas should not significantly exacerbate flooding and fluvial erosion.

Streams and Rivers in Barnet that are within the mapped State River Corridors include the Passumpsic River, Water Andric, Joes's Brook, Rake Factory Brook, Sutton Brook from Sarah Moore's Pond to the Passumpsic, Peacham Hollow Brook, South Peacham Brook, Stevens River, Jewett Brook, and a segment of stream from Symns Brook Road to the Connecticut River at McIndoe's Falls.

**Barnet Draft River Corridor - Dec. 4, 2014**



**Existing Relevant Local Regulations and Programs**

Section 413 of Barnet's existing Zoning Bylaw contains Flood Hazard regulations, and Barnet is currently a member of the National Flood Insurance Program. The existing regulations only reference the FEMA-mapped flood hazard areas, as shown on the Flood Insurance Rate Maps (FIRM). The FEMA-mapped hazard areas are in the same general areas as most of the mapped River Corridors, with the exception of Sutton Brook River Corridor (which is not mapped as a flood hazard area at all by FEMA), and the upper reaches of the Water Andrie and Rake Factory Brook.

Section 422 of Barnet's Zoning Bylaw "Shoreland Regulations" establishes regulations for land in all districts, except the village district, located within 500 feet of surface waters that are

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specifically named in the ordinance. The regulations establish a setback of 100 feet from the named lakes, ponds and streams, and prohibit certain land uses within 200 feet or 500 feet of the named waters.

The regulations apply to the following waters:

- Harvey's Lake
- Warden Pond
- Sarah Moore Pond
- Jewett Pond
- Connecticut River
- Passumpsic River
- Stevens River
- South Peacham Brook
- Peacham Hollow Brook
- Joe's Brook
- Water Andric
- Jewett Brook

The above-named rivers and streams are all included in the State-mapped River Corridor. The only two rivers that are in the mapped State River Corridor that are *not* also currently regulated by the Town are Sutton Brook, Rake Factory Brook, and an unnamed stream in the southeast section of town that empties into the Connecticut River near McIndoe's Falls.

In addition to meeting the requirements of the above-referenced local regulations, any development within 250 feet of Comerford Reservoir, Harvey's Lake, or Warden Pond needs to comply with the recently enacted Vermont Shoreland Protection Act (see section 6 of this Plan, "Water Quality.")

Section 308 of Barnet's Zoning Bylaw establishes standards for planned unit developments (PUDs), which provides an alternative way of developing that is more efficient than large-lot residential subdivisions. Development utilizing PUD provisions can result in less impervious coverage, since shared access driveways can be utilized, and clearing of natural vegetation and other land disturbance can be kept to a minimum.

The Town has also adopted road and bridge standards that are closely modeled on those recommended by the State, and include requirements for the sizing of culverts, erosion control, and the construction and stabilization of roadside ditches. The beneficial effects of these standards are improved safety, reduced erosion and pollution of surface waters, reduced long-term road maintenance costs, and reduced flood hazards.

### ***ERAF***

The Emergency Relief Assistance Fund (ERAF) helps Vermont municipalities repair damaged infrastructure after a presidentially-declared disaster. ERAF funding typically covers half the required 25% non-federal match for approved projects. (FEMA provides 75% of the total project costs).

After October 23, 2014 Towns must adopt four flood hazard mitigation measures in order to maintain level state funding in the event of such a disaster: 1) Flood Hazard Regulations that meet minimum standards for enrollment in the National Flood Insurance Program; 2) the most recent Agency of Transportation Road and Bridge Standards; 3) a Local Emergency Operations Plan (LEOP); and 4) a Local Hazard Mitigation Plan and submit to FEMA for approval.

### **Relevant Reports/Studies**

Stream Geomorphic Assessments and River Corridor Plans have been completed on rivers and streams throughout the State to provide guidance on managing, protecting and restoring the equilibrium condition of rivers and streams in order to mitigate future flood and environmental hazards. Two studies that deal with streams and rivers in Barnet are the *Lower Passumpsic River Tributaries River Corridor Plan*, prepared in May 2014 by Fitzgerald Environmental Associates; and the *Stevens River Watershed Stream Geomorphic Assessment and River Corridor Plan* prepared in August 2011 by Redstart Consulting. Both reports can be accessed online at <https://anrweb.vt.gov/DEC/SGA/finalReports.aspx>.

The reports provide both general and site-specific recommendations that can be taken to reduce future hazards associated with fluvial erosion.

The *Lower Passumpsic River* plan, which primarily addresses river and stream segments in the towns of Lyndon and Danville, also includes two site-specific recommendations for which the Town of Barnet is identified as a potential partner. Both projects are located on Keyser Hill Road near a segment of the Water Andric (see table 13, page 93 in the Plan). One is a recommendation for the resizing of the Keyser Hill Road Bridge, at such time that it comes up for replacement, to relieve constriction of the channel. It is identified as a “moderate” hazard mitigation priority. Another recommendation is the construction of a vegetated swale between Keyser Hill Road and a gully that has formed due to stormwater runoff. This project, which is identified as a “low” hazard mitigation priority, would also include stabilization of the failing bank and buffer plantings.

The Stevens River plan notes that while parcel by parcel corridor protection focused on important stream assets is possible, it recommends that “municipal bodies can achieve many of the same goals more efficiently and effectively through town zoning, setbacks, or other protection... a municipal approach to limiting further development in stream corridors is thus a highly cost-effective method of not only reducing future conflicts and damages but also minimizing impacts on existing encroachments.” Page 4 of this report provides a “short list” of recommended measures, the top priority of which is municipal adoption of fluvial erosion hazard zones (a.k.a. “River Corridors”) which restricts new development or expansion of existing encroachments. It also lists a number of site-specific hazard mitigation projects along identified reaches of South Peacham Brook, Peacham Hollow Brook, and the Stevens River mainstem, including berm removal, buffer plantings, and channel management easements.

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### Goals & Recommended Actions

The following table identifies goals and recommended actions to reach those goals, in order of priority. Each action is identified as “regulatory” or “non-regulatory” and identifies the party/parties that would implement the action.

<b>Goal: Protect and restore areas identified and designated as flood plains, river corridors and land adjacent to streams.</b>	<b>Type of Action</b>	<b>Responsible Party/Parties</b>
<ul style="list-style-type: none"> <li>Continue to enforce the Flood Hazard Regulations (section 413) and Shoreland Regulations (section 422) contained in Barnet’s Zoning Bylaw.</li> </ul>	Regulatory	Zoning Administrator
<ul style="list-style-type: none"> <li>Consider amendments to local Shoreland Regulations to address the application of standards in the Village Zoning District</li> </ul>	Regulatory	Planning Commission/Selectboard
<ul style="list-style-type: none"> <li>Consider amending-Barnet’s Flood Hazard Regulations to be consistent with NFIP requirements. Amend other sections of the Town Zoning Bylaw as necessary for internal consistency.</li> </ul>	Regulatory	Planning Commission/Selectboard
<ul style="list-style-type: none"> <li>Investigate channel management easements, berm removal, fencing, and buffer plantings along segments of streams identified as high-asset areas.</li> </ul>	Non-regulatory	Caledonia County Natural Resource Conservation District/ landowner
<ul style="list-style-type: none"> <li>Engage in a working partnership with upstream towns that addresses control of stormwater runoff and actions that will allow rivers and streams to regain access to floodplains.</li> </ul>	Non-regulatory	Planning Commission/Selectboard of Barnet and neighboring towns/ Caledonia County Natural Resource Conservation District
<b>Goal: Protect upland forested areas and wetlands that attenuate and moderate flooding and streambank erosion</b>		
<ul style="list-style-type: none"> <li>Encourage property owners seeking to develop their land to utilize the existing Planned Unit Development provisions in the Town’s bylaws as a means to minimize impervious coverage and clearing.</li> </ul>	Non-regulatory	Planning Commission
<b>Goal: Mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments</b>		
<ul style="list-style-type: none"> <li>Evaluate the recommendations regarding resizing of culverts and other structures contained in previous stream geomorphic</li> </ul>	Non-regulatory	Selectboard in consultation with road foreman and VTrans

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assessments and the hydraulic studies prepared by VTrans, and formulate a plan of action.		
<ul style="list-style-type: none"><li>• Update the Local Hazard Mitigation Plan, seek FEMA approval, and seek FEMA funding for mitigation projects.</li></ul>	Non-regulatory	Planning Commission/ Selectboard
<ul style="list-style-type: none"><li>• Educate residents on high risk areas in Town so that they can be prepared in a flood event.</li></ul>	Non-regulatory	Planning Commission/ Caledonia County Natural Resource Conservation District

## **8. NATURAL AREAS AND WILDLIFE**

### Natural Areas

There are places in Barnet which are quite unusual because of their wildlife, plants, or geological features. The Roy Mountain Wildlife Management Area is an example of such a place. Often remote, quiet, or beautiful, these places have been known and frequented for generations. Our increasing ecological awareness and the pace of land development have made these natural areas more critical than ever before. There are three general categories of natural areas in Barnet: they are geological, hydrological and biological features.

In 1992, the Vermont Department of Fish and Wildlife's Natural Heritage Program completed an inventory of the significant biological areas within Barnet. Although this study is not exhaustive, it provides a good first step at locating areas with special natural features such as rare or endangered plants and special wildlife habitat. The intent of this inventory is educational, making landowners aware of what they have on their land and how they can preserve and protect it.

### Wildlife

Maintaining critical wildlife habitat such as the nesting areas of rare birds and the feeding areas of animals is important to Barnet and should be given priority in conservation efforts.

Deer in Vermont live near the northern limit of the white-tail deer range in eastern North America. This forces deer to use very specific winter habitat when severe weather becomes a threat to the animals' survival. Areas which are used year after year by deer seeking winter shelter are called wintering areas or deer yards.

Deer yards consist of two basic components: the "core range" characterized by concentrations of relatively tall, dense softwoods. This favored habitat offers reduced snow depth, protection from wind and increased average temperature and humidity. South facing slopes are often preferred by wildlife due to increased solar gain. The second component of deer yard consists of mixed hardwood and softwood adjacent to or within the "core range" which provides accessible browse. The State of Vermont has made protection of these areas a priority. On a local level, the Planning Commission should use the Natural Resources Constraints Map prepared as part of the updated 2015 Town Plan in



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an advisory fashion when conducting site plan reviews.

### **Natural Areas and Wildlife: Goals**

Goal: Preserve significant natural areas in Barnet.

#### Recommended Actions:

1. Identify natural areas within Barnet and assess their importance of priority for protective action.
2. Work with landowners to protect the sites which are in private ownership.

Goal: To maintain the diversity of habitat and species that exists in Barnet.

#### Recommended Actions:

1. Areas important to wildlife such as beech and red oak stands and spruce/fir forests should be identified and mapped.
2. Town Officials should contact the Vermont Department of Fish and Wildlife to investigate training opportunities available through the "Community Wildlife Program" regarding the enhancement of wildlife habitat on private land.

## **9. GROWTH AND ECONOMIC DEVELOPMENT**

### **Introduction**

The purpose of planning for orderly development is to encourage and promote that kind of community growth which will preserve the Town's physical beauty, unique character, quality of life, and the economic welfare of its citizens.

In recent years, much of Barnet's development has been residential, both year-round and seasonal. This trend will probably continue and can be compatible with a working agricultural and silvacultural landscape when planning techniques are effectively applied.

Barnet's primary economic assets are its skilled and hard-working

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people, its abundant natural resources, and the beauty of its landscape. Our important rivers provide the opportunity for hydropower generation which has provided economic advantage to the town. Forests support wood-using industries vital to continuing the economic viability of rural economies. Forests provide the environment for a host of non-timber forest activities ranging from hunting, fishing, and viewing fall foliage to camping and water storage. Harvey's Lake, Barnet's scenic roads, recreational opportunities, and the unspoiled rural landscape attract visitors to the town.

A good source of information and ideas on encouraging the development of low-impact, agriculturally-based enterprises is a publication produced in 2012 entitled *Facilitating Innovative Agricultural Enterprises*. A copy of this publication can be accessed online at the NVDA website: <http://www.nvda.net/files/VT-Ag-Guide.pdf>

We believe the economic future of Barnet lies substantially in the wise use of our renewable natural resources: the water and the land. Sustainable development in Barnet should be based on providing a wholesome residential setting for those employed in the region in services, trade, manufacturing and other categories and for those in their retirement years. The underlying strategy of a development plan for Barnet is to plan for orderly growth which maintains a sound tax base and anticipates the potential tax burdens for current and future needs.

### **Growth and Economic Development: Goals**

Goal: To encourage the development of businesses and services (including tourism and recreation resources) that will utilize the local labor market, will enhance the economic potential of our agricultural and renewable natural resources, and will be compatible with the rural setting of Barnet.

#### **Recommended actions:**

1. Create an inventory of the existing and potential recreational opportunities in the town which would include, for example, Harvey's Lake, existing hiking trails and potential recreation trails.
2. Encourage a diversity of sustainable uses in the town through zoning which would allow variety of low-impact commercial and recreational uses in a range of districts. Examples of such development would include

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Bed and Breakfast establishments and four season recreational centers like the Craftsbury Touring Center as well as a variety of home occupations and light industry.

3. Educate local entrepreneurs about the availability of small business development services and funds. Maintain a list of resources (including funding sources) that can be utilized by residents seeking to start or expand their business.
4. No large, heavy industry incompatible with the agricultural, rural and natural resource values of Barnet should be located in the town. There should be a diversity of local commercial and service enterprises and the local labor market should be used as much as possible in these enterprises.

Goal: To provide for orderly growth and development at a rate which will not place an unreasonable burden on the town for the provision of educational and other municipal services.

### Recommended Actions:

1. Consider costs that may result when making planning decisions.

## **10. HOUSING**

### Introduction

Of great concern to the residents of Barnet is the continuing availability of moderately priced housing in our community. Housing that is affordable for full-time workers, and that is within reasonable commuting distance from employment, should be available in Barnet. However, this housing should not be concentrated in any one area of the town. It has been abundantly demonstrated that undesirable social trends result when low-income families are segregated into poverty pockets at unreasonable distances from jobs and services. Barnet has shown over the years that attitudes of thrifty independence, worthwhile social values, and helpful neighborliness are fostered in areas where no particular income level predominates.

### Housing Characteristics

Most of Barnet's existing housing structures are located near or

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within the fire districts of the town. Many homes are occupied by one or two wage earners who find employment outside Barnet. Historically, many of the small clusters of houses or hamlets developed adjacent to a traditional industrial site, such as a water-powered mill. Barnet's five villages developed this way. It is of some concern to the Town that with modern transportation and better roads, previously inaccessible sites may be considered for residential development. According to the website maintained by the Vermont Housing Finance Agency, [housingdata.org](http://housingdata.org), as of 2010 Barnet had 950 housing units, 666 total occupied housing units (households), 481 family households (defined as 2 or more related persons living together), and average family size of 2.93.

Table: Population and Housing Growth

	<b>Barnet</b>		<b>Caledonia</b>	
	<b>2010</b>	<b>2000</b>	<b>2010</b>	<b>2000</b>
Population	1,708	1,690	31,227	29,702
Total Housing Units	950	831	15,942	14,504
Occupied Housing Units (households)	666	638	12,553	11,663
Owner-occupied units	560	540	9,233	8,499
Renter-Occupied Units	106	98	3,320	3,164
Vacant units for Seasonal, recreational, occasional use	233	152	2,376	2,004
Average household size	2.52	2.57	2.38	2.46
Average family size	2.93	3.11	2.86	2.95
Source: Vermont Housing Finance Agency, <a href="http://HousingData.org">HousingData.org</a>				

### Projected Growth

Barnet's population grew more slowly between 2000 and 2010 than was projected from estimates based on the 2000 Census. Although the number of housing units in Barnet increased 14 percent, Barnet's 2010 population of 1,708 represented an increase of only 18 people, or one (1) percent. These numbers reflect both a shrinking average household size and a growth in seasonally-occupied housing in town. Census data indicates that seasonal units comprised 18% of all housing units in 2000, whereas they accounted for 25% of the housing stock by 2010. Caledonia County housing units increased nearly 10 percent, and Vermont 9.6 percent. A report prepared by the Vermont Agency of Commerce and Community Development in August 2013 projects population growth under two scenarios: Scenario A is based on the more robust growth rates experienced in the 1990s, and Scenario B is based on the migration rates from 2000 to 2010, which were affected by the downturn in the national economy. Under Scenario A, Barnet's projected population is 1,779 by 2020, and 1,802 by 2030. Under

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Scenario B, these projections are 1,772 and 1,790, respectively.

### Affordability of Housing

Whether housing is affordable for Barnet residents depends on a wide variety of national, regional and local influences including housing sales prices, construction costs, land costs, mortgage interest rates, property taxes, and the expectations of buyers and sellers in the housing market. One way to assess affordability is to determine whether the median family income in Barnet is sufficient to purchase the median residential dwelling in the town. National and state housing policies agree that homeowners should expect to pay no more than thirty percent of their gross income on housing costs (mortgage, insurance, and taxes).

Table: Income and Housing Costs

	<b>Barnet</b>	<b>Caledonia County</b>
Median Household Income	\$61,016	\$44,433
Median Family Adjusted Gross Income, 2012	\$55,811	\$47,491
Median gross rent (all unit sizes)	\$950	\$643
Median gross rent as a percentage of household income	<b>32.5%</b>	
Median Monthly owner costs	<b>\$1,007</b>	<b>\$921</b>
...with mortgage	\$1,223	\$1226
...without mortgage	\$ 547	\$ 493
Median Monthly owner costs as a percentage of household income	21.1%	21%
Median price of primary residences sold, 2013	\$125,450	\$130,000
Median price of vacation residences sold	\$368,750	\$178,000
Source: Housing Data.org, American Community Survey 2007-2011 estimates, Vermont Department of Taxes		

Median household income in Barnet based on 2011 estimates was \$61,016 and median family adjusted gross income was \$55,811, based on 2012 tax records. The median sales price of a primary residence in Barnet in 2013 was \$125,450, which was based on the sale of 13 single family homes and one mobile home. The median price of vacation homes sold in Barnet in 2013 was significantly higher at \$368,750, but this was based on just 2 homes sold that year.

The rental housing market in Barnet is quite limited, consisting primarily of older single-family residences which have been subdivided into apartments, and a few apartment buildings. A significant proportion of the rental housing stock is in deteriorating, older buildings. The best units are difficult to

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secure because of lack of availability and pricing. National and state housing policies agree that renters should expect to pay no more than thirty percent of their gross income on rent. The census data indicate that rents in Barnet are higher than the county average, and that most renters in town pay more than 30% of income on rent (see table above.)

### **Special Populations**

Residents over the age of 65 accounted for 14.7% of the population in 2010.

### **Housing: Goals**

Goal: To ensure that residential development in the town is consistent with orderly growth and preserves the rural character of the town, and to ensure affordable housing by encouraging the availability of low income that those with low and moderate incomes have reasonable opportunities for housing, moderate income housing, multi-family dwellings, and accessory apartments.

#### **Recommended Actions:**

1. In order to preserve the rural character of the town, new housing should be encouraged where zoning permits a higher density of housing near the existing villages. This might be achieved through encouraging the use of the Planned Unit Development. However, moderate to low-income housing should not be confined to these areas.
2. Affordable housing opportunities for low and moderate income families should be encouraged by the development of affordable single, low and moderate income housing, multifamily dwellings, and accessory apartments.
3. Study the feasibility of adopting a Transfer of Development Rights program within the Zoning Ordinance to encourage development on the edges of existing villages and to preserve open space.
4. Those seeking building permits in less-accessible locations should be made aware that fire-fighting services for them may be limited, as compared to more accessible parts of town.
5. The town should adopt subdivision regulations that will allow orderly growth and the provision of municipal services at an affordable cost to the community.

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6. The Planning Commission should encourage development which preserves meadowland (land including pastureland, hay land or cropland) in rural districts by encouraging siting of new structures which are to be located outside the village districts in less visible areas along the edges of open fields or in wooded areas which border them.

Goal: To ensure a variety of housing units for all income levels within the town, emphasizing when possible the rehabilitation of existing structures.

### Recommended Actions:

1. Inform residents about federal and state programs for weatherizing, rehabilitation and home financing by making the information available through the town clerks office.
2. Consider the feasibility of offering density bonuses and other incentives for planned unit developments (PUD's) that provide affordable housing.
3. Single and two-family dwellings are most in keeping with the historic rural character of the town. Apartment structures of over four units will be considered under the provisions of the zoning by-law.
4. Town authorities should work with public and private housing agencies to provide adequate rental assisted apartments within the village district to meet the needs of Barnet's elderly, long-term residents.

## **11. VILLAGE ISSUES**

### Introduction

There are five incorporated villages in the town of Barnet: Barnet, East Barnet, West Barnet, Passumpsic and McIndoe Falls. Traditional development with homes clustered tightly together surrounded by farms, forest land, dispersed residential housing, commercial activity and recreational areas is essential to the beauty and traditional rural character of Barnet, and should be encouraged and preserved. Commercial enterprise within the larger villages provides essential goods and services within walking distance of residents thereby enhancing village life. However, increased traffic congestion, strip development, inharmonious new construction and the lack of affordable housing within villages are all threats to Barnet's traditional villages.

### Village Issues: Goals

Goal: To encourage the location of appropriate businesses and services within villages which are conducive to village life and within walking distance of the residents.

#### Recommended actions:

1. Identify which commercial enterprises and essential services needed by the residents are currently lacking.
2. Work with regional economic development organizations to encourage the location of these businesses and services within the villages.
3. Pursue Village Center designation for qualifying village cores, including McIndoe Falls, Barnet Village, West Barnet, and Passumpsic. This designation, while not regulatory, would make tax credits available for fix up of income-producing properties, and enhance eligibility for grants to improve infrastructure and civic and governmental buildings.
4. Commercial enterprises such as stores should be located where they are convenient to the walking public, thereby contributing to village life and reducing the traffic congestion which results from dependence on the automobile.
5. Acceptable commercial structures for the I-91 interchange area should be limited in number and



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carefully situated to maintain the rural character of the village of Barnet.

Goal: To protect areas and structures of historic, architectural and cultural merit and to preserve the visual integrity of Barnet's villages and historic districts.

Recommended actions:

1. Church Street should continue to be primarily residential in order to maintain the beauty and character of the Village of Barnet.

## **12. EDUCATION**

The high quality and reasonable cost of public education in Barnet tends to attract new residents to the community. The increased space requirements and other costs related to providing educational services may become burdensome to the Town. The capabilities of our schools, particularly maintaining the current student-teacher ratio, should keep pace with expanding new requirements in order to retain the high quality of education Barnet now provides.

### Education: Goals

Goal: To continue to provide high quality and affordable education to the children of Barnet.

Recommended Action:

1. The Planning Commission should maintain communication with the School Directors concerning long-range facility needs.

Childcare in Barnet is provided by several small daycare services in the community and neighboring towns. There is currently one home daycare in McIndoe Village and a second childcare provider in Monroe, NH that a few Barnet families utilize. Community members have been exploring the feasibility of an after-school program at the school which would serve a need for many working families within Barnet.

Recommended Action:

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1. The planning commission should encourage the development of an adequate number of childcare facilities with the town to meet the needs of its residents.
2. The planning commission supports the development of after school programs to meet the needs of working families within the community.

### **13. HISTORIC, CULTURAL AND SCENIC RESOURCES**

The general constancy of late 18th and 19th-century Vermont farm and village architecture has caused the Barnet area to be visited and photographed by thousands of tourists who appreciate its uniqueness. Radical departures from traditional architecture are inappropriate and should be discouraged in areas where particularly fine old buildings now stand.

Very historic houses, barns, and commercial buildings which have retained most of their original character should be preserved as having both historic and cultural significance. Examples of historic houses are the Galbraith-Kitchel House (also known as the Gilkerson Kitchell Stone House), the Thurston-Kinney-White Place (also known as the Thurston, Phineas House), and the Strobridge House on West Barnet Road, a salt box. Examples of unusual barns are the Moore-Willis round barn, Ernest Roy's high-drive barn, the Bailey New-England-style barn, and Hoyt's English-style barn. Examples of the prominent remaining commercial buildings are Ben Thresher's Mill, Burbank's Store (The Barnet Village Store), Fairbank's Store (The Dunbar home) and the former Ide's Feed Store. These structures, and others, exemplify both our historic and our cultural heritage and should be preserved for future generations.

In addition to being identified on the Town's historic properties list, the following properties are also individually listed on the National Register of Historic Places: McIndoes Academy; Thurston-Kinney-White House; William and Agnes Gilkerson Farm; and Ben Thresher's Mill. In addition, the Barnet Center Historic District is listed on the National Register.

The National Register listings can be viewed on the "Online Resource Center" maintained by the Vermont Division for Historic Preservation: <http://www.orc.vermont.gov/Resource/Show-Resource-Table.aspx>.

Barnet's scenic areas and magnificent vistas are too numerous to

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list; each of us has a particular favorite. They offer pleasure to residents and visitors alike, enjoyed from our roadsides and our porches, and are an integral part of our community's identity.

### **Historic, Cultural and Scenic Resources: Goals**

Goal: To protect areas and structures of historic, architectural and cultural merit and to preserve the visual integrity of Barnet's villages and historic districts and individual structures.

#### Recommended actions:

1. Encourage the owners of historic structures to preserve and maintain them for posterity and continue their historic use.
2. Encourage regulatory agencies to respect the value of preserving our historical buildings and to support the restoration of Ben Thresher's mill and waterworks.
3. The protection of existing churches, and cemeteries should have a high priority.
4. Markers should be erected where appropriate indicating locations of historic brick kilns, granite quarries, and the Marl Kiln, and an inventory of archeological sites within the Town should be created.

Goal: To protect Barnet's many scenic vistas for the enjoyment of residents now and in the future.

#### Recommended Actions:

1. Encourage the siting of residential development which does not degrade our scenic vistas.

## **14. RECREATION**

Barnet offers many recreation opportunities to be enjoyed by all ages. These include an ample opportunity for recreation, whether enjoyed alone, within the family, or in other small groups. Boating, swimming, water skiing, and fishing are permitted on the many high-quality waters of the Town. Opportunities for snow travel by cross-country skis, snowshoes, and snowmobile are plentiful through Barnet's forests and meadows. Hunters are able

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to enjoy easy travel, fine scenery and game. Bicycling, hiking, picnicking, ice skating, snow sliding, softball and other activities are enjoyed informally by Barnet's residents. An active program of organized sports activities, including swimming lessons and basketball are offered through the school and the Harvey's Lake Beach Committee. Besides a recreation field for soccer and baseball, The Barnet School property includes a Nature Trail and cross-country ski trail.

In 2010 Barnet selectmen adopted an All-Terrain Vehicles (ATV) Ordinance that requires there to be a Barnet Club that uses the VASA rules and establishes trails on private property, using Town Highways as connectors as needed, which are reviewed each March. Trails are open May 15 through October 1.

Despite many existing informal recreation opportunities, a multi-purpose trail dedicated to outdoor recreation should be considered. Abandoned railroad beds and flood plain areas on riverbanks make ideal locations for multi-purpose greenways. In addition, the improvement of boating access to the Town's scenic rivers can be combined with the development of greenway trails to create a network of recreational and transportation opportunities. As mentioned in the Economic Development section of this plan, existing recreational resources, and those yet to be developed, by attracting multi-season visitors to Barnet, can make a substantial contribution to the economic base of the Town.

### **Recreation Goals:**

Goal: To enhance and co-ordinate the existing informal recreation opportunities in Barnet.

#### **Recommended actions:**

1. Study recreation needs and work with existing organizations to develop greenway trails and improved river recreation access in Barnet.
2. Work to obtain recreation easements which will assure public access for low-impact recreation like fishing and walking along Joe's Brook, the Steven's River, the Barnet Center Road, Sara Moore Pond, Warden's Pond and the Rake Factory and Bony Woods area.
3. As local paved roads are improved and resurfaced, the shoulders should be widened to make recreational and non-motorized use of these scenic roads safer and more attractive.

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4. Continued co-operation between sportsmen's groups, such as The Vermont Association of Snow Travelers (VAST) and Vermont All-Terrain Vehicle Association (VASA), and private landowners should be encouraged so responsible enjoyment of nature will not be encumbered by trespassing problems.
5. Development and maintenance of trails in remote areas by public or private sector should be encouraged to provide the opportunity for serious hiking.
6. Encourage recreational use of the Barnet Town Forest and Roy Mountain Wildlife Management Area.

## **15. TRANSPORTATION**

### Introduction

Barnet's geography dictates that transportation needs within its boundaries are met almost exclusively by the private automobile. Barnet residents are therefore dependent upon a well-maintained road system. Other transportation services are available, though limited. Rural Community Transportation (RCT) currently provides van transportation to disabled, elderly or incapacitated Barnet residents, primarily on a contract basis with local health care and social service providers. These services are available on a limited basis for other residents on a fee-for-service basis.

Approximately 82 miles of roads are maintained in Barnet. Many of these are used by school buses, which makes it especially important that they be passable and safe. Many of the Class III roads are difficult to plow because of close banks and trees. The Town Highway Department continues to improve Class III and Class II roads as money becomes available. There is some resistance to the change in scenery that road improvements cause. Such surface improvements can have a negative impact on the scenic value of a road.

Barnet's road infrastructure suffered significant and costly damage from the spring flooding in May 2011 and again as a result of Tropical Storm Irene in August of 2011. The Barnet Town Clerk compiled a summary of 2011 flood repair projects, identifying roads affected and the cost of repairs, a portion of which was covered by the Federal Emergency Management Agency (FEMA). Thirty-seven (37) roads were damaged in the May 2011 flooding, including "repeat offenders" Cloud Brook Road, Ferguson Road,

## **BARNET TOWN PLAN**

Little Scotland Road, and Town Forest Road. The three roads requiring the most costly repairs in May 2011 included Whitehill Road (\$113,079 in repairs), Cloud Brook Road (\$133,500 in repairs), and Joe's Brook Road (\$141,384 in repairs).

Roads damaged from Tropical Storm Irene in August 2011 included Farrow Road/Ferguson Road, Roy Mountain Road and Whitehill Road.

(See "Flood Resilience" section for information on hydraulic studies and work completed on culverts since the 2011 flooding events)

Highways. The following classes of highways have been designated within the town of Barnet:

Class I (State highways maintained by the Town) There are no Class I highways in the Town of Barnet.

Class II (State-aid highways) There are 23.51 miles of state-aid roads in Barnet consisting of Joe's Brook Road, Comerford Road, West Barnet Road, Barnet Center, Roy Mountain Road, Harvey Mountain Road and several short pieces. The Vermont Agency of Transportation allows the Town a variable sum per mile per year for maintenance and Construction of Class II roads.

Class III (Town highways) There are 58.46 miles of Town highway for which the state allows a variable sum per mile per year for maintenance, but gives no construction costs. The State has its own minimum standards for these roads, which frequently are not in keeping with the wishes of property owners because the density of traffic may not warrant required upgrading. The unnecessary upgrading of a little-used road can change the character of an area and should be carefully considered prior to approval.

Class IV (10.95 miles) No work is done, except for water crossings, on these roads.

Legal Trails. There are 0.09 miles of Legal Trails, (that were part of Town highways #27 and #37).

Interstate 91. Maintained by the State of Vermont, I-91 runs for approximately ten miles within the Town, and Exit 18 is located on the edge of Barnet Village. The right-of-way acquisition of land to construct this highway removed approximately 380 acres from the Town's tax base.

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US Route 5. A major north-south highway in the State, Route 5 links four of Barnet's villages and is maintained by the State of Vermont.

Rail Service. The Railroad has been important to the Town of Barnet ever since the first train arrived in 1850, linking the town with Canada to the north, and rest of New England to the south. For over a hundred years, the railroad took butter, cheese and milk to market, brought in western grain, and provided passenger service. Today, the right-of-way is owned by the State of Vermont, which has granted an operating lease to the Washington County Railroad division of Vermont Rail Systems. Daily freight service has been restored after extensive repairs to the line, and Morrison's Custom Feeds is one of the lines biggest customers. There is no passenger service available.

### Transportation: Goals

Goal: To maintain a safe and passable network of roads at a cost affordable to the Town.

#### Recommended actions:

1. Keeping in mind that the improvement or upgrading of roads can have a negative impact on the scenic value of an area, the wishes of adjacent property owners and the density of traffic should be considered by the Selectmen in the improvement of Class II and Class III roads in Barnet.

Goal: To decrease the dependence of Barnet's residents on private automobile transportation whenever possible.

#### Recommended actions:

1. Barnet should encourage the continued availability and extension of public van service like the Rural Transportation Corporation now provides.
2. The Town should encourage the development of better bicycle-pedestrian pathways within the developed areas of Barnet.
3. Maintain the commuter parking area in the vicinity of the I-91 Interchange 18 to encourage car-pooling and to

discourage roadside parking.

## **16. ENERGY AND COMMUNICATIONS**

Electrical power is provided in Barnet by Green Mountain Power and Washington Electric. There are also some private solar collectors being installed. Telephone service is provided by Verizon and Fair Point Communications. Cable television service is available within the village limits of Passumpsic, Barnet Village and McIndoe Falls.

There is a growing awareness of the long-term economic, environmental, and social costs of our energy choices. The use of energy should be an important consideration in local decisions about municipal services and facilities, land use, building standards, and our local economy.

Improvements in communication made possible by fiber-optics and other advanced communication technologies will have an enormous impact on how and where business is conducted in Barnet, and in the state. However, rural areas like Barnet are traditionally the last and least served with access to new technologies. The availability of the most advanced communication technology is a priority for Barnet, not only because of its economic value to residents, but also because it has the potential to bring the outside world into the lives of residents. There have been new towers built and more planned.

### **Energy and Communications: Goals:**

Goal: To promote a reduction in local dependence upon costly non-renewable energy sources.

#### **Recommended Actions:**

1. Encourage the development of alternative energy sources in the Town, especially renewable energy sources such as solar and hydroelectric.
2. Continue the town policy that projects for the construction or maintenance of public buildings will consider energy efficiency and costs in the planning process.
3. Encourage the building of energy efficient structures



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within Town by supporting the efforts of Efficiency Vermont and similar organizations.

### **17. MUNICIPAL SERVICES**

Public Buildings, Facilities and Land. (These facilities can be located in Appendix III, Map F.)

Town Forest. The Town Forest was acquired by the Town of Barnet in 1957 and covers an approximate area of 196 acres. It is located on the east side of the Passumpsic River in Passumpsic and contains a substantial stand of hard and soft wood. The area also has a borrow pit for gravel which serves the Town's needs. The municipal landfill formerly located here was sealed and closed in 1992. The Town is responsible for monitoring and maintaining this area.

Roy's Mountain Wildlife Management Area. Located in the towns of Barnet and Ryegate, this area is state-owned and contains approximately 1,590 acres that are within the Town of Barnet. The area is located in the south central part of Town and contains the summit of Roy's Mountain, part of Jewett Pond and wetlands south of Harvey's lake to the Ryegate town line. It is managed by the state as wildlife habitat and is accessible to the public.

Harvey's Lake Beach and Picnic Area. The Harvey's Lake Beach, traditionally called Sunny Beach, and the adjoining picnic areas, which contains a permanent picnic shelter, are situated at the north end of Harvey's Lake. The beach and picnic area are bordered on the east by the Stevens River and cover about one half the north beach area. The area is supervised in the summer months and organized swimming instruction is offered. A fee is charged for the use of the parking, beach, bathhouse and picnic area.

Town Garage and Equipment. The Town Garage built in 2010, which is capable of housing the equipment for the highway department, is located at 131 Granger Street with easy access to US Route 5. A salt shed was added at this location in 2012. Equipment is updated or replaced as required by funds put aside in each budget.

Town Clerk's Office . The Town Clerk's Office is a two-story

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wood-frame building on the east side of US Route 5 just north of the center of Barnet Village. Recent improvements to this building have increased its energy efficiency and reduced maintenance costs. There is adequate parking. The Town Office on the first-floor level is open on week days from 9:00 AM to 12:00 PM and 1:00 PM 4:30 PM. Vault capacity is growing short.

The Public Library. The Barnet Public Library was established in 1900 and funded with donations by Horace Fairbanks and Albert Warden. The Library opened its doors above the Town Clerk's Office on January 16, 1902. The Library has served the community continuously since that day. In January of 2001, the Library moved into the first floor of the former Barnet Village Schoolhouse. The new location allowed for handicapped accessibility and provided twice the space. The Library currently offers books, magazines, audio books, videos, high-speed wireless internet access, inter-library loans, deliveries to seniors, story hour, special events and public meeting space. Nearly three times as many people use the library in its new location as did in the old.

Town Hall. The Barnet Town Hall is located on the north side of Church Street in Barnet Village. The Town Hall is a wood-frame building built circa 1850. It is available on a limited basis for social and recreational use. Handicapped parking and an access ramp in to the Town Hall are available. New and expanded uses for the under-utilized Town Hall will be explored within the life of this plan.

Town School and Land. The Barnet School, completed in 1990 and replacing the four village schools, and the adjoining recreation field occupy a ninety-six acre site at 163 Kid Row, off the West Barnet Road. The school Vision Statement follows: "Barnet School strives to be a supportive community of learners in which every member meets the highest standards. We are becoming local and world citizens who honor the environment, people, and cultures of the world". The school population for 2013-2014 is as follows: pre-Kindergarten - 26; Kindergarten - 23; first grade - 22; second grade - 17; third grade - 23; fourth grade - 16; fifth grade - 20; sixth grade - 23; seventh grade - 22; eighth grade - 21; ninth grade - 13; tenth grade - 15; eleventh grade - 23; twelfth grade 20. All ninth through twelfth grade students are tuitioned to area high schools.

Police Protection. Town-organized police protection and law enforcement is limited. Accordingly, strong support should be given the State Police, the County Sheriff, and local constables.

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The Caledonia County Sheriff provides regular highway patrol services to the Town.

Fire Protection, First-Aid and Rescue Services. Fire protection is provided by Barnet Fire & Rescue, backed up by mutual aid from surrounding towns. A facility built in 2004 off Bimson Drive in Barnet Village houses the majority of the fire fighting equipment. There is a fire house with a pumper truck and other firefighting equipment located in West Barnet. The Barnet Fire and Rescue volunteers respond to emergency medical calls and all fire calls. In addition, Barnet is served by the Caledonia-Essex Area Ambulance Service (CALEX) which provides pre-hospital emergency care.

Solid Waste. With the closing of the Town Landfill in 1992, Barnet joined the Northeast Kingdom Waste Management District in order to meet its legal and environmental obligation to protect the public health and welfare under Act 78. Barnet has one supervisor and one alternate on the District's Board. The District provides Barnet with programs for recycling, household hazardous waste collections, and planning for collection and disposal of household trash. Barnet maintains a solid-waste transfer station and a recycling facility for its residents at the end of Town Forest Road and accepts household trash. There are also trash haulers who collect door-to-door for those householders who wish.

Sewage Disposal and Water Supply. Barnet Village has a water system owned by Fire District #2. McIndoe Falls water system is owned by the local fire district. Passumpsic Village is served by the Town of St. Johnsbury Water System. The remaining Barnet households maintain private water supplies. There are presently no public sewage treatment facilities in the Town.

Cemeteries. The Town contributes to the maintenance of three cemeteries: Stevens Cemetery, Palmer Cemetery, Pleasant View Cemetery, and McIndoe Falls Cemetery. Other cemeteries include the West Barnet, Barnet Center, and Walter Harvey.

### Municipal Services: Goals

Goal: To provide adequately for the health, safety and general welfare of the citizens of Barnet.

Recommended actions:

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1. The Selectmen should continue to plan to provide adequate facilities for the Town.

### **18. ADJACENT COMMUNITIES**

Barnet depends on adjacent communities for many services. The town is part of a mutual aid agreement for fire fighting, the Town's high school students all go out of Barnet for their education, and many of the jobs that residents rely on are in other communities. Barnet has always maintained an excellent relationship with its neighbors, a relationship that should continue. Moreover, the people of Barnet recognize that, because the Town does not exist in isolation from the region, Barnet should take an interest in planning decisions made by adjacent communities.

### **19. IMPLEMENTATION OF THE PLAN**

The following is a comprehensive list of actions recommended by this Plan, arranged by section for easy reference. A time line for achieving each objective is noted, as well as the public or private entity which is most appropriately responsible for achieving the objective.

#### **Agriculture:**

1. Encourage more local marketing of agricultural and forest products. Local consumption of local products profits the producer, the consumer and the environment.

**Town-wide: on-going**

2. Explore effective local incentives for farm and forest land protection. Strategies which might be explored are: tax stabilization, purchase of development rights, deeding of conservation easements to land trusts, local transfer of development rights (TDR) provision for the zoning bylaw.

**Town-wide: on-going**

3. Encourage residential development within or on the edges of the villages in order to reduce development pressure on

## **BARNET TOWN PLAN**

productive agricultural lands.

**Planning Commission: on-going**

### **Forest Land**

1. Promote the use of "Acceptable Management Practices" (AMP's) by forest land owners and commercial timber harvesters through locally sponsored education programs which also address sustainable harvesting techniques and the advantages of forest management plans.

**Planning Commission: on-going**

### **Water Quality:**

1. The Planning Commission should seek opportunities to inform land owners about Vermont's Wetland Rules in order to prevent development activities which are detrimental to the resource and may be irreversible.

**Planning Commission: on-going**

2. For the sake of clarity, the Planning Commission should consider including the Town's designated shoreline on the zoning map as a Shoreline Zoning District subject to the existing Shoreline Regulations in the Zoning Bylaw.

**Planning Commission: 1-5**

3. In order to protect the water quality, wilderness character, wildlife habitat and rare plant species, the Planning Commission should continue to require adequate undisturbed buffer strips around the designated undeveloped ponds and streams.

**Planning Commission: years on-going**

4. The Planning Commission should work with the Lake Harvey's Association to encourage the maintenance of the lake's water quality.

**Planning Commission: on-going**

5. Barnet's public officials should continue to cooperate with the Connecticut River Watershed Joint Commission in the development of the Corridor Management Plan.

**All local officials: on-going**

### **Flood Resilience:**

## BARNET TOWN PLAN

<b>Goal: Protect and restore areas identified and designated as flood plains, river corridors and land adjacent to streams.</b>	<b>Type of Action</b>	<b>Responsible Party/Parties</b>
<ul style="list-style-type: none"> <li>Continue to enforce the Flood Hazard Regulations (section 413) and Shoreland Regulations (section 422) contained in Barnet's Zoning Bylaw.</li> </ul>	Regulatory	Zoning Administrator
<ul style="list-style-type: none"> <li>Consider amendments to local Shoreland Regulations to address the application of standards in the Village Zoning District</li> </ul>	Regulatory	Planning Commission/Selectboard
<ul style="list-style-type: none"> <li><u>Consider amending</u> <del>Amend</del> Barnet's Flood Hazard Regulations to be consistent with NFIP requirements. Amend other sections of the Town Zoning Bylaw as necessary for internal consistency.</li> </ul>	Regulatory	Planning Commission/Selectboard
<ul style="list-style-type: none"> <li>Investigate channel management easements, berm removal, fencing, and buffer plantings along segment of streams identified as high-asset areas.</li> </ul>	Non-regulatory	Caledonia County Natural Resource Conservation District/landowner
<ul style="list-style-type: none"> <li>Engage in a working partnership with upstream towns that addresses control of stormwater runoff and actions that will allow rivers and streams to regain access to floodplains.</li> </ul>	Non-regulatory	Planning Commission/Selectboard of Barnet and neighboring towns/Caledonia County Natural Resource Conservation District
<b>Goal: Protect upland forested areas and wetlands that attenuate and moderate flooding and streambank erosion</b>		
<ul style="list-style-type: none"> <li>Encourage property owners seeking to develop their land to utilize the existing Planned Unit Development provisions in the Town's bylaws as a means to minimize impervious coverage and clearing.</li> </ul>	Non-regulatory	Planning Commission
<b>Goal: Mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments</b>		
<ul style="list-style-type: none"> <li>Evaluate the recommendations regarding resizing of culverts and other structures contained in previous stream geomorphic assessments and the hydraulic studies prepared by VTrans, and formulate a plan of action.</li> </ul>	Non-regulatory	Selectboard in consultation with road foreman and VTrans
<ul style="list-style-type: none"> <li>Update the Local Hazard Mitigation Plan, seek FEMA approval, and seek FEMA funding for mitigation projects.</li> </ul>	Non-regulatory	Planning Commission/Selectboard

## **BARNET TOWN PLAN**

<ul style="list-style-type: none"><li>• Educate residents on high risk areas in Town so that they can be prepared in a flood event.</li></ul>	Non-regulatory	Planning Commission/ Caledonia County Natural Resource Conservation District
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### **Natural Areas and Wildlife:**

1. Identify natural areas within Barnet and assess their importance.

**Planning Commission: on-going**

2. The Planning Commission should sponsor a workshop for landowners on the enhancement of wildlife habitat on private land.

**Planning Commission: year on-going**

### **Growth and Economic Development:**

1. Create an inventory of the existing and potential recreational opportunities in the town which would include, for example, Harvey's Lake, existing hiking trails and potential recreation trails.

**Recreation Committee: year 2**

2. Encourage a diversity of sustainable uses in the town through zoning which would allow variety of low-impact commercial and recreational uses in a range of districts. Examples of such development would include Bed and Breakfast establishments and four season recreational centers like the Craftsbury Touring Center as well as a variety of home occupations and light industry.

**Planning Commission: years 2-5**

3. Educate local entrepreneurs about the availability of small business development services and funds.

**State and regional economic development agencies: on going**

4. No large, heavy industry incompatible with the agricultural, rural and natural resource values of Barnet should be located in the town. There should be a diversity of local commercial and service enterprises and the local labor market should be used as much as possible in these enterprises.

**Selectmen: On-going; Planning Commission: on-going**

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### **Housing:**

1. In order to preserve the rural character of the town, new housing should be encouraged where sewage capability permits a higher density of housing near the existing villages. This might be achieved through encouraging the use of the Planned Unit Development. However, moderate to low-income housing should not be confined to these areas.

**Planning Commission: On-going**

2. Those seeking building permits in less-accessible locations should be made aware that fire-fighting services for them may be limited, as compared to more accessible parts of town.

**Planning Commission: on-going**

3. The town should adopt subdivision regulations that will allow orderly growth and the provision of municipal services at an affordable cost to the community.

**Planning Commission: on-going**

4. Inform residents about federal and state programs for weatherizing, rehabilitation and home financing by making the information available through the town clerk's office.

**Town Clerk: on-going**

5. Consider the feasibility of offering density bonuses and other incentives for planned unit developments (PUD's) that provide affordable housing.

**Planning Commission: years 2-5**

6. Single and two-family dwellings are most in keeping with the historic rural character of the town. Apartment structures of over four units should be considered under the provisions of the zoning by-law.

**Planning Commission: on-going**

7. Town authorities should work with public and private housing agencies to provide adequate rental assisted apartments within the village district to meet the needs of Barnet's elderly, long-term residents.

**Selectmen: on-going; Planning Commission: on-going**

### **Village Issues:**



## **BARNET TOWN PLAN**

1. Identify which commercial enterprises and essential services needed by the residents are currently lacking.

**Planning Commission: on-going**

2. Work with regional economic development organizations to encourage the location of these businesses and services within the villages.

**Planning Commission: on-going; Selectmen: on-going**

3. Commercial enterprises such as stores should be located where they are convenient to the walking public, thereby contributing to village life and reducing the traffic congestion which results from dependence on the automobile.

**Planning Commission: on-going**

4. Acceptable commercial structures for the I-91 interchange area should be limited in number and carefully situated to maintain the rural character of the village of Barnet.

**Planning Commission: on-going**

5. Church Street should continue to be primarily residential in order to maintain the beauty and character of the Village of Barnet.

**Planning Commission: on-going**

### **Education:**

1. The Planning Commission should maintain communication with the School Directors concerning long-range facility needs.

**Planning Commission: on-going**

### **Historic, Cultural and Scenic Resources:**

1. Encourage the owners of historic structures to preserve and maintain them for posterity and continue their historic use.

**Historical Society and Planning Commission: on-going**

2. The protection of existing churches and cemeteries should have a high priority.

**Planning Commission and Historical Society: on-going**

3. Markers should be erected where appropriate indicating locations of historic brick kilns, granite quarries, and the Marl Kiln, and an inventory of archeological sites within the Town should be created.

## **BARNET TOWN PLAN**

### **Historical Society: years 2-5**

4. Encourage the siting of residential development which does not degrade our scenic vistas.

**Planning Commission: on-going**

### **Recreation:**

1. Study recreation needs and work with existing organizations to develop greenway trails and improved river recreation access in Barnet.

**Selectmen: year 2**

2. Work to obtain recreation easements to assure continuing public access for low-impact recreation like fishing and walking to areas such as Joe's Brook, the Steven's River, the Barnet center Road, Sara Moore Pond, Warden's Pond and the Rake Factory and Bony Woods area.

**Selectmen: on-going;**

3. As local paved roads are improved and resurfaced, the shoulders should be widened to make recreational and non-motorized use of these scenic roads safer and more attractive.

**Selectmen: on-going**

4. Continued co-operation between sportsmen's groups, such as The Vermont Association of Snow Travelers (VAST) and Vermont All-Terrain Vehicle Association (VASA), and private landowners should be encouraged so responsible enjoyment of nature will not be encumbered by trespassing problems.

**Selectmen: on-going**

5. Development and maintenance of trails in remote areas by public or private sector should be encouraged to provide the opportunity for serious hiking.

**Selectmen: on-going**

### **Transportation:**

1. Keeping in mind that the improvement or upgrading of roads can have a negative impact on the scenic value of an area, the wishes of adjacent property owners and the density of traffic should be considered by the Selectmen in the improvement of Class II and Class III roads in Barnet.

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### **Selectmen: on-going**

2. Barnet should encourage the continued availability and extension of public van service like the Rural Transportation Corporation now provides.

### **Selectmen: on-going**

3. The Town should encourage the development of better bicycle-pedestrian pathways within the developed areas of Barnet, and the construction of bicycle-pedestrian lanes along paved town roads as they are improved or repaired.

### **Selectmen: on-going;**

4. The feasibility of rails-to-trails projects for both transportation and recreation in Barnet should be studied.

### **Selectmen: on-going;**

5. Maintain the commuter parking area in the vicinity of the I-91 Interchange 18 to encourage car-pooling and to discourage roadside parking.

### **Selectmen: on-going;**

## **Energy and Communications:**

1. Encourage the development of alternative energy sources in the Town, especially renewable energy sources such as wood and solar.

### **Town-wide: on-going**

2. Continue the town policy that projects for the construction or maintenance of public buildings will consider energy efficiency and costs in the planning process.

### **Selectmen and School Board: on-going**

## **Municipal Services:**

1. Appropriate expanded and alternative uses for the Town Hall should be considered.

### **Planning Commission: on-going; Selectmen: on-going**

2. A number system, eventually computerized, has been developed in order to identify quickly the precise location of every residence in the Town.

### **U.S. Government and Barnet Emergency Service providers: on-going**

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3. Installation of central water systems should be encouraged in cluster developments. Such water supply, when installed, should be of drinking quality.

**Planning Commission and Zoning Administrator: on-going**

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### APPENDIX I. TWELVE ELEMENTS OF CHAPTER 117

Vermont Statute Title 24, Chapter 117, as amended through 2013, is the enabling legislation for local land use planning and regulation in Vermont. It requires that the twelve elements in Section 4382 be addressed in the municipal plan. The following list gives the location of each element within the plan.

- (1) A statement of objectives and policies
  - \* The entire document presents policies and objectives
  - \* Sections 1,2,3,8,18
- (2) A land use plan consisting of a land use plan and maps
  - \* Sections 1,2,3,5 and Appendix III
- (3) A transportation plan
  - \* Section 15 and Appendix III
- (4) A utilities and facilities plan
  - \*Sections 16 and 17 and Appendices II&III
- (5) A plan for the preservation of natural areas, and scenic and historic features
  - \*Sections 6, 8, and 13 and Appendix III
- (6) An educational facilities plan
  - \* Sections 12 and 17 and Appendix III
- (7) An implementation program
  - \* Section 19
- (8) Adjacent Municipalities
  - \* Section 18
- (9) An energy plan
  - \* Section 16
- (10) A housing element
  - \* Section 10
- (11) Economic development
  - \* Section 9
- (12) Flood Resilience
  - \* Section 7

## **BARNET TOWN PLAN**

### **Appendix II. LOCATION CODES FOR SITES, STRUCTURES AND TOWN PROPERTY OF BARNET, VERMONT**

#### **HISTORIC HOUSES**

1. 26-01-24 Hall-Sizen
2. 09-02-18 Goodwillie
3. 04-01-07 Gilkerson Kitchel stone
4. 05-02-04 Thurston-Kinney-White
5. 08-01-63 Stuart-Strobridge saltbox
6. 12-01-39 Hadley-Cookson
7. 21-21-05.1 Lackey-Roy
8. 08-01-51 Cross-Somers
9. 04-02-05 Shearer-Chamberlin
10. 04-02-27 McCallum-Ackerman
11. 09-01-03 Laird-Carrick
12. 14-01-59 Gilchrist-Rider brick
13. 03-01-04 Laird-Smith-Gray brick
14. 26-01-47 Senator Flanders birthplace
15. 12-01-04 Alexander Harvey Homestead

#### **WATER-POWER MILLS**

- 16.09-01-54 Ben Thresher's Mill
- 17.20-21-25 Ide's Grist Mill
- 18.26-01-45 For All Grist Mill

#### **COMMERCIAL BUILDINGS**

19. 20-21-21 Ritchie-Warden Gen. Store
20. 24-01-18 Parks General Store
21. 26-01-36 Johnson Shoe Shop
22. 26-01-51 Hardware Store
23. 26-01-52 Fairbanks General Store
24. 25-01-23 Gilfillian General Store
25. 26-01-37 Burbanks Store

#### **INNS AND TAVERNS**

26. 26-01-18 Old Homestead
27. 05-01-03 Cushman-Willey
28. 24-01-20 Passumpsic Hotel
29. 23-01-55 Hawes Tavern
30. 25-01-12 Roy Mill Boarding House

#### **QUARRIES AND KILNS**

31. 09-01-24 Warden Marl Kiln
32. 21-21-05.1 Somers' Hill Quarry

#### **CHURCHES**

33. 13-01-26 Walter Harvey Meeting House
34. 09-02-26 Barnet Center Presbyterian
35. 14-01-58 McIndoe Falls Congregational
36. 26-01-54 Barnet Village Congregational
37. 20-21-21 West Barnet Presbyterian
38. 25-01-38 (St. Johnsbury United Pentecostal Church, Inc.)
39. 24-01-41 Passumpsic Baptist

#### **CEMETERIES**

40. 20-21-02 West Barnet
41. 09-02-25 Barnet Center
42. 13-01-27 Walter Harvey
43. 14-01-58 McIndoe Falls
44. 01-01-12 Palmer (county)
45. 26-01-13&19 Pleasant View
46. 26-01-10 Stevens

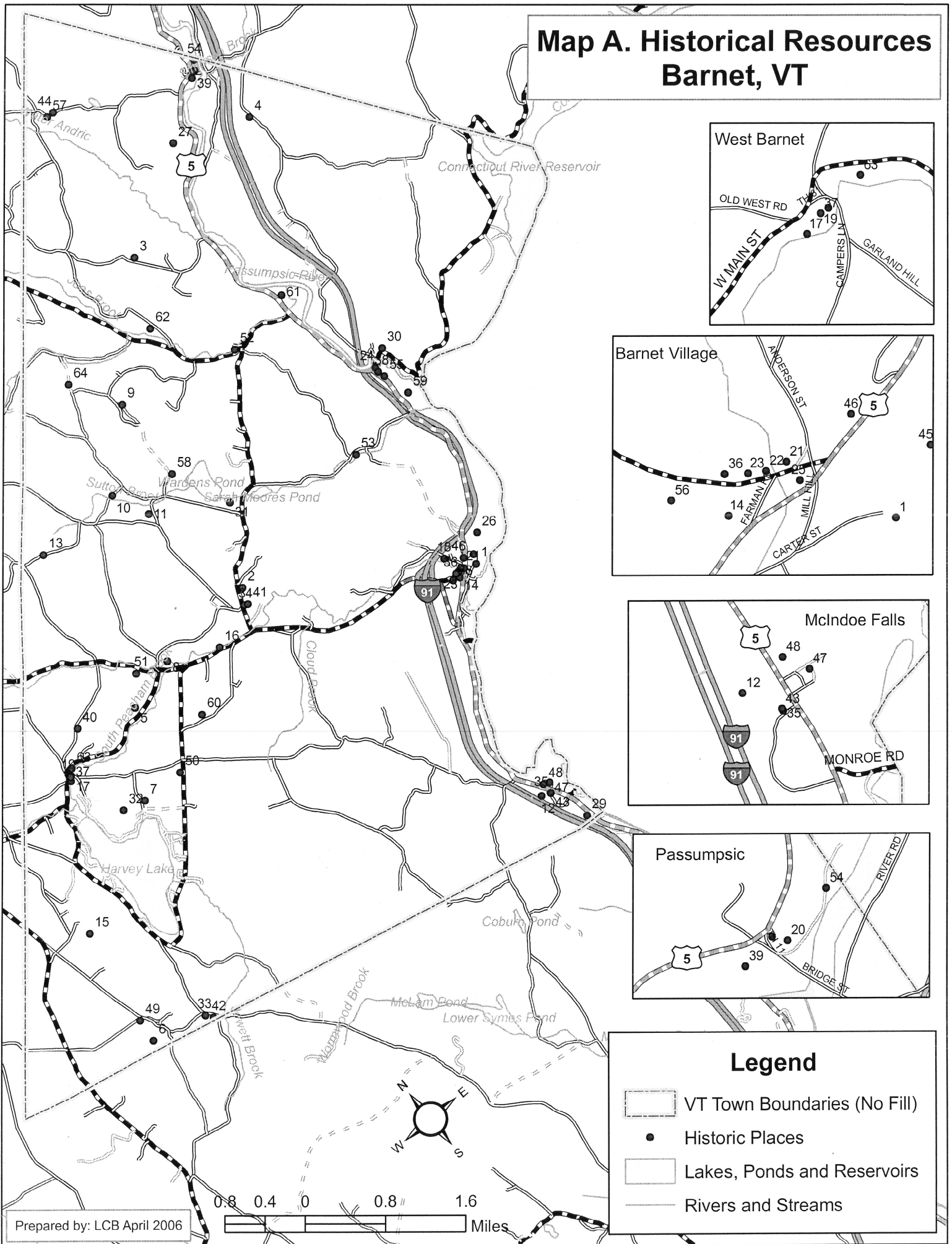
#### **FORMER SCHOOLS**

47. 14-01-53 McIndoes Academy
48. 14-01-51 McIndoe Village
49. 12-01-34 Walter Harvey
50. 08-01-81 Roy
51. 08-01-43 Four Corners
52. 04-01-67 Joe's Brook
53. 25-01-58 Little France
54. 24-01-27 Passumpsic Village
55. 25-01-41 East Barnet Village
56. 26-01-60 Barnet Village
57. 01-01-11 County

#### **AGRICULTURAL STRUCTURES**

58. 09-01-06 Warden Granary
59. 25-01-49 Bailey Barn
60. 08-01-75 Ernest Roy Barn
61. 05-01-41 Moore Round Barn
62. 04-01-54 Hoyt Barn
63. 20-21-08 West Barnet Creamery
64. TH #34 Stone Livestock Underpass

# Map A. Historical Resources Barnet, VT

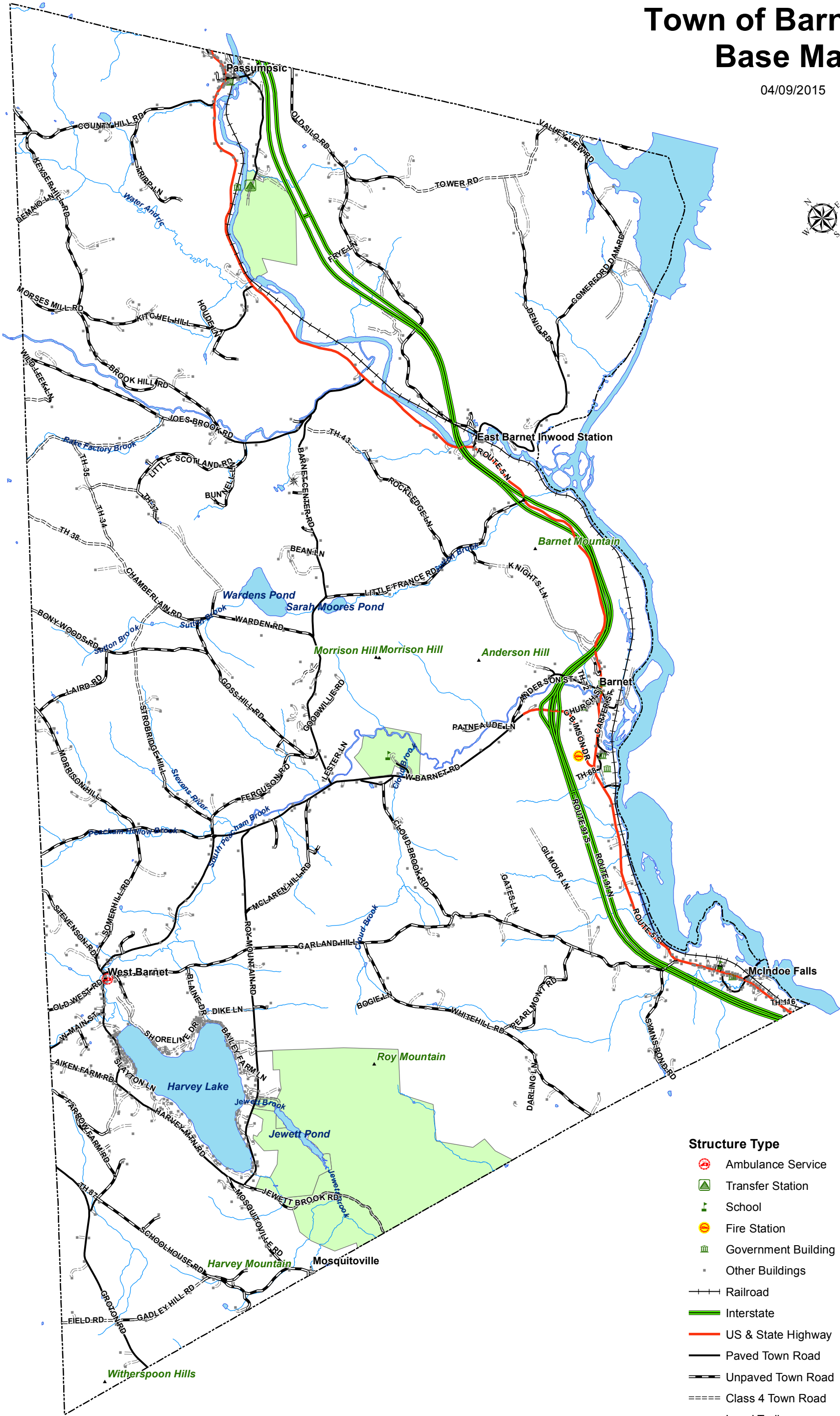




# Town of Barnet, VT

## Base Map

04/09/2015



**Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.**

0 1 2 Miles

- Structure Type**
- Ambulance Service
  - Transfer Station
  - School
  - Fire Station
  - Government Building
  - Other Buildings
  - Railroad
  - Interstate
  - US & State Highway
  - Paved Town Road
  - Unpaved Town Road
  - Class 4 Town Road
  - Legal Trail
  - Private Road
  - Streams
  - Town Boundary
  - Lakes, Ponds & Rivers
  - Public Lands



# Town of Barnet, VT Land Use/Cover Map

04/09/2015



- Structure Type**
- Ambulance Service
  - Transfer Station
  - School
  - Fire Station
  - Government Building
  - Other Buildings
  - Railroad
  - Interstate
  - US & State Highway
  - Paved Town Road
  - Unpaved Town Road
  - Class 4 Town Road
  - Legal Trail
  - Private Road
  - Streams
  - Lakes, Ponds & Rivers
  - Developed
  - Open
  - Forested
  - Barren
  - Town Boundary

Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

0 1 2 Miles



# Town of Barnet, VT Natural Resource Constraints Map

04/09/2015



- Structure Type**
- Ambulance Service
  - Transfer Station
  - School
  - Fire Station
  - Government Building
  - Other Buildings
  - 20' Elevation Contours
  - Railroad
  - Interstate
  - US & State Highway
  - Paved Town Road
  - Unpaved Town Road
  - Class 4 Town Road
  - Legal Trail
  - Private Road
  - Streams
  - Protected Species/Habitat
  - Deer Wintering Areas
  - Town Boundary
  - Lakes, Ponds & Rivers
  - Federal & State Wetlands
  - Source Protection Area - Surface Water
  - Source Protection Area - Groundwater
  - Steep Slopes Over 20%
  - Public Lands

Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

0 1 2 Miles



# Town of Barnet, VT Soils Constraints Map

04/09/2015



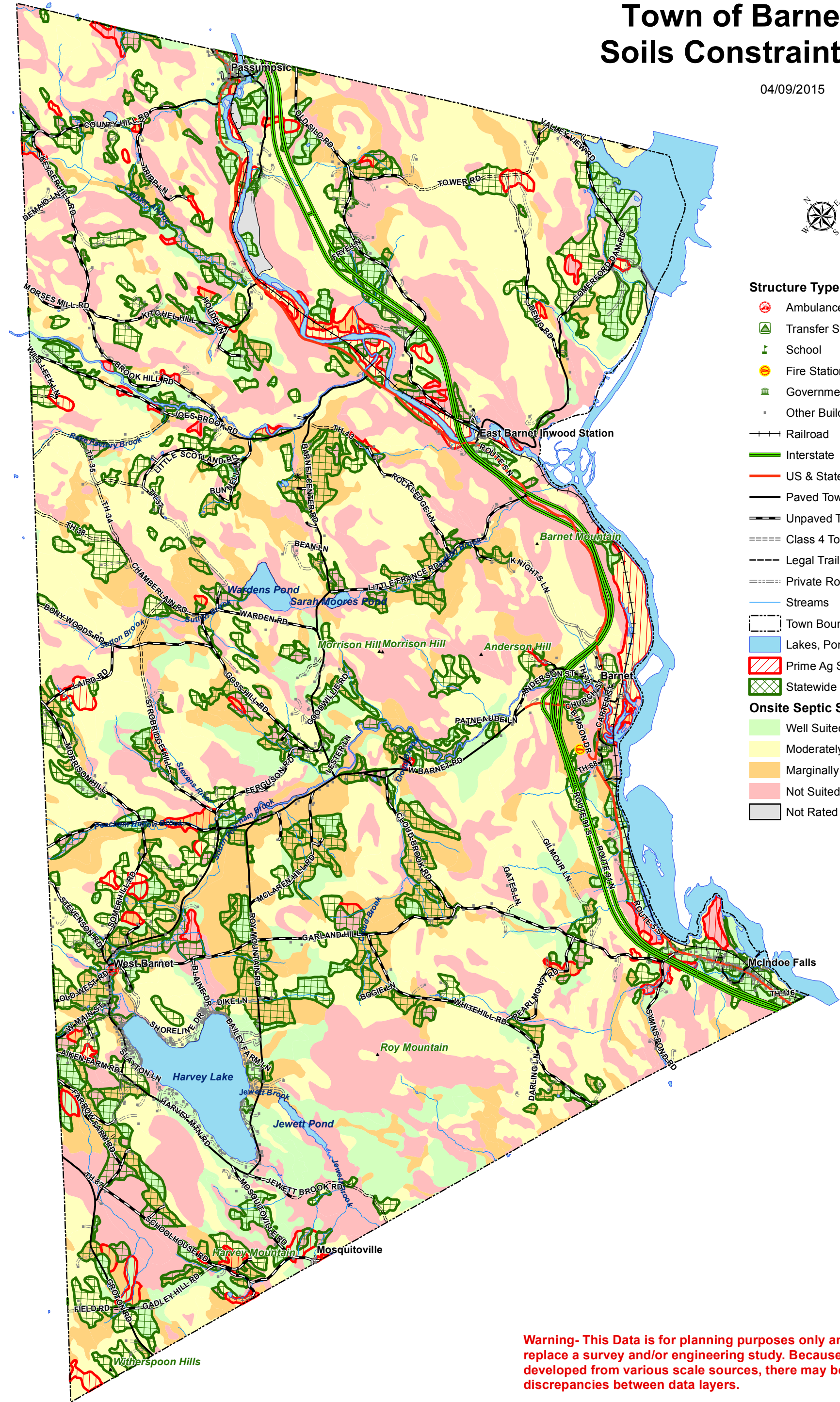
## Structure Type

- Ambulance Service
  - Transfer Station
  - School
  - Fire Station
  - Government Building
  - Other Buildings
  - Railroad
  - Interstate
  - US & State Highway
  - Paved Town Road
  - Unpaved Town Road
  - Class 4 Town Road
  - Legal Trail
  - Private Road
  - Streams
  - Town Boundary
  - Lakes, Ponds & Rivers
  - Prime Ag Soils
  - Statewide Important Soils
- ## Onsite Septic Suitability
- Well Suited
  - Moderately Suited
  - Marginally Suited
  - Not Suited
  - Not Rated

**Warning- This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.**

**Soils Data - Was developed by the The U.S. Department of Agriculture, Natural Resources Conservation Service. They warn the following:**

**"This data set is not designed for use as a primary regulatory tool in permitting or siting decisions, but may be used as a reference source."**



0 1 2 Miles

ST. JOHNSBURY

Map F. Zoning Districts-PARCELS- Town Propertys



TOWN PROPERTY

- A. 20-21-44 Beach (13.2A +/-)
- B. 22-01-30 Fire Station (21A +/-)
- C. 22-01-27 Town Garage (10.8A +/-)
- D. 26-01-60 Library & Historical Society (0.52A +/-)
- E. 26-01-33 Monument (0.04A +/-)
- F. 26-01-61 Town Hall (0.25A +/-)
- G. 26-01-21 Town Clerk's Office (0.22A +/-)
- H. 05-01-15 Pit & Transfer Station/closed landfill (179A +/-)
- I. 05-01-22 Town Forest (26A +/-)
- J. 09-02-40 Lot Jct TH #108 & SA #1 (0.92A +/-)
- K. 09-02-45 Lot on TH #57 (1A +/-)
- L. 26-01-10 Lot across from Town Clerk's Office (0.95A +/-)
- M. 22-01-39 Lot north of SA #6 (0.23A +/-)
- N. 09-02-41&43 School & recreation building (96A +/-)
- O. 20-21-01 West Barnet Rescue Building (unlanded)

ZONING LEGEND  
AG = AGRICULTURAL  
RR = RURAL RESIDENTIAL  
V. = VILLAGE DISTRICT  
LD = LOW DENSITY  
--- ZONE LIMITS

NOTE:  
ZONING INFORMATION SHOWN  
HEREON WAS COMPILED BY  
THE BARNET PLANNING  
COMMISSION.

THIS MAP IS BASED ON THE  
TOWN OF BARNET PROPERTY  
MAPS. IT IS INTENDED FOR  
REFERENCE AND PLANNING  
PURPOSES ONLY.



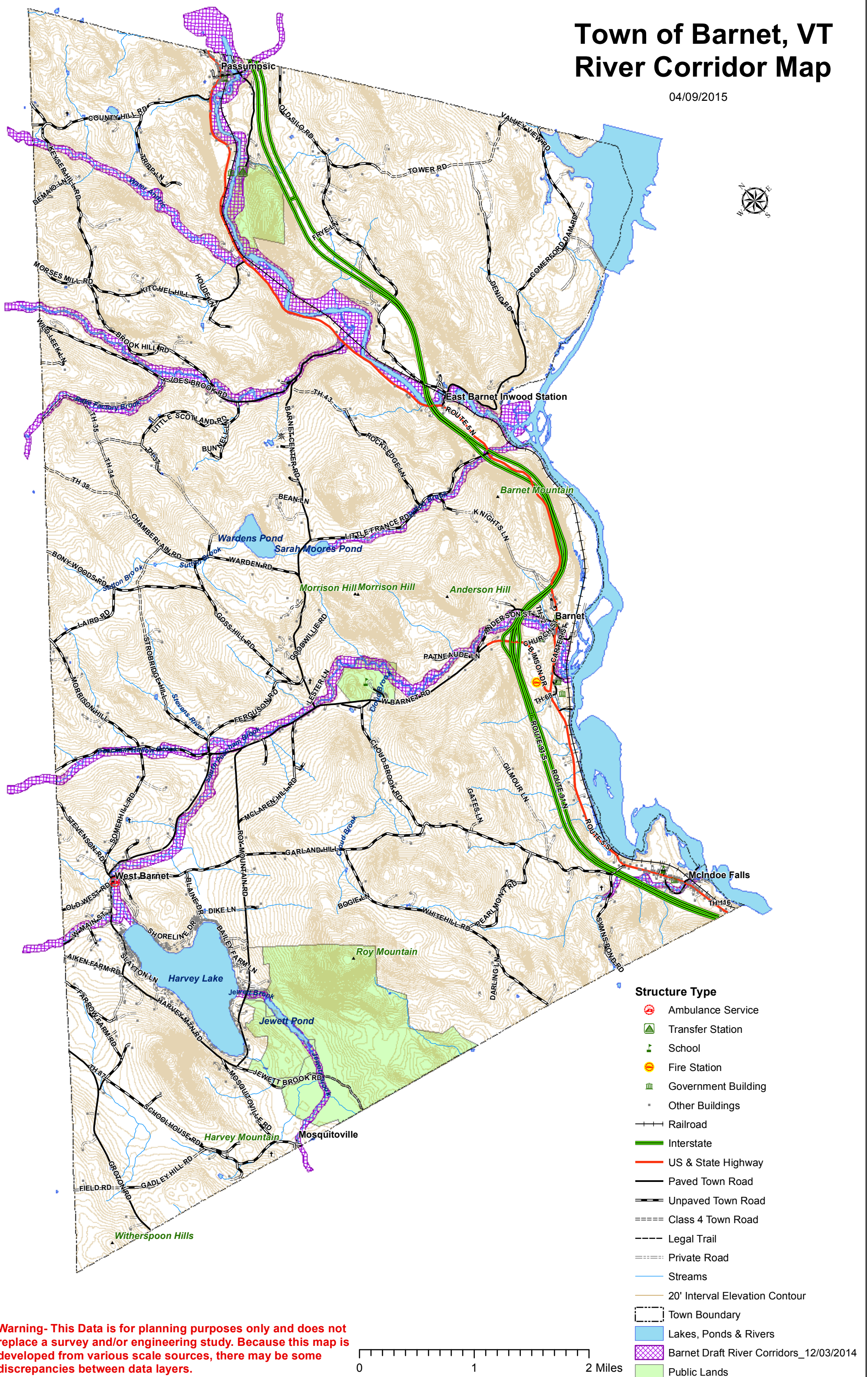
SCALE 1" = 1000'  
FEET  
METERS  
REVISED AND  
REPRINTED TO  
APRIL 1, 2013

TOWN OF  
BARNET  
VERMONT

ZONING MAP



## 04/09/2015



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