

## **b. NATURAL RESOURCES**

### **SOILS, GEOLOGY, FORESTS, WATER, WILDLIFE, SCENIC BEAUTY**

#### **SOILS**

##### **Primary agricultural soils**

Primary agricultural soils are defined as soil map units with the best combination of physical and chemical characteristics that have a potential for growing food, feed, and forage crops; have sufficient moisture and drainage, plant nutrients or responsiveness to fertilizers; few limitations for cultivation or limitations which may be easily overcome; and an average slope that does not exceed 15 percent. Present uses may be cropland, pasture, regenerating forests, forestland, or other agricultural or silvicultural uses.

Primary agricultural soils include important farmland soil map units with a rating of prime, statewide, or local importance as defined by the Natural Resources Conservation Service (N.R.C.S.) of the United States Department of Agriculture (U.S.D.A.). Map II b 1

U.S.D.A. Important Farmland Ratings identify soil map units that represent the best land for producing food, feed, fiber, forage, and oilseed crops in Vermont. Important Farmland inventories identify soil map units that consist of Prime Farmland, Unique Farmland, Additional Farmland of Statewide Importance, and Additional Farmland of Local Importance

The maps do not indicate whether a particular tract of land contains primary agricultural soils which are "of a size and location, relative to adjoining land uses, so that those soils will be capable, following removal of any identified limitations, of supporting or contributing to an economic or commercial agricultural operation".

##### **Soils – Septic Suitability**

A major problem limiting the size of development in Mount Holly is the lack of soils suitable for on-site waste disposal. In most parts of Town, commercial operations are limited to less than ten employees and clustered housing cannot be considered. The village of Belmont is unable to expand. The size of the problem is seen on Map II b 2.

#### **GEOLOGY**

##### **Geologic and Mineral Resources**

The primary known mineral resources in Town are sands, gravels (Map II b 1) and some clays left by the retreat of the glaciers. A large rock quarry exists on the north slope of Okemo Mountain just south of Route 103 at the Mount Holly-Ludlow town line. Material was removed from this site for construction of the relocated Route 103 in the 1960s. Reportedly uranium exists on Okemo Mountain, and there are some small outcrops of asbestos also occurring in Town. Quantities of clay and asbestos are probably not present in quantities worth removing. Sand and gravel continue to be extracted.

#### **FORESTS**

Approximately 55% of the Town is currently covered by hardwood forests - primarily sugar maple, yellow birch, and beech; while 31% is in soft wood cover mainly red spruce and balsam fir.

Presently private and public forest lands in Town produce income through production of maple syrup, hardwood and softwood logs, pulp wood, fire wood, and Christmas trees. Indirect income comes from wildlife and recreational uses.

## **WATER**

### **Wetlands**

Winslow's Flats Wetlands is an extensive area of wetlands, marsh, and alder swamp that extends along the south side of Route 103. The Vermont Department of Fish and Wildlife has identified this area (Inventory number 941B) as a significant natural community (Natural Areas of Vermont: An Inventory of Natural Areas, 1972-73). It is listed as excellent for food and cover of moderate use by nesting waterfowl and for various fur-bearing animals. Moose have been seen in the area. Though close to the highway, its size and the undeveloped area surrounding it provide excellent habitat.

Historically, the fossil remains of a woolly mammoth were found near here during construction of the railroad. Undoubtedly more fossils remain below the surface (see historical heritage)

Class I and 2 wetlands are protected from development by the Vermont Wetland Rules as amended from time to time. (Map II b 3)

### **Flood Plains**

Flood plains are important areas for reducing runoff and downstream damage during periods of flooding. These areas have been identified and designated on the Mount Holly Flood Hazard Area Maps (scheduled for 2008 update).

### **Shorelines**

Naturally vegetated shorelines of ponds, streams, and rivers are important for several reasons. They help reduce summer water temperatures, prevent erosion and slow surface runoff, provide bank stabilization, provide food and shelter for fish and other wildlife, and are aesthetically pleasing.

## **LAKES**

### **Star Lake**

Star Lake (formerly Jackson Pond) is approximately 50 acres in size and is important for swimming with a beach located near its outlet. The pond itself is shallow with few areas over six feet in depth.

The character of Star Lake changed due to the introduction of Eurasian Milfoil in 1997. This invasive weed has become the dominant environmental problem in the lake due to its tendency to choke out other growth with its extremely dense formation. During the summer of 1998, Town volunteers supported by a state grant began a campaign of hand pulling the milfoil. Further funds were raised in 2002 to obtain technical assistance and to purchase the chemical Sonar. Sonar was approved by the State for application in 2004.

Over the years the lake has received runoff from surrounding agricultural fields that, when actively farmed, were heavily fertilized. Consequently, algae growth has often become a significant problem in late summer.

In 1997, the Belmont Playground Society offered the Town of Mount Holly ownership of the Star Lake beach and dam. Although the Army Corps of Engineers had reported the dam flume to be inadequate and its rebuilding expensive, the Select Board accepted the property in 2001.

The Lake originally supported a standard warm water fishery including sunfish, perch, bullhead, and pickerel. Today these have been replaced by bass, channel catfish, perch, and trout - the latter on a put and take basis. The island supports a small bog community of sphagnum moss, pitcher plants, and speckled alder, as well as a beaver lodge. Ospreys, Great Blue Herons, and loons are still seen occasionally on the lake, along with migrating waterfowl in both spring and fall. A seasonal population of Canada Geese

enjoys the lake and has become a nuisance especially at the Belmont beach. The Vermont Department of Fish and Wildlife lists the Lake as a significant natural community.

### **Lake Ninevah**

Lake Ninevah (formerly Patch Pond) is the largest pond in Town, approximately 270 acres in size, and currently supports a standard warm water fishery. Almost all of the land around the pond is privately owned, so that public access is limited to a small boat access ramp owned by the Vermont Department of Fish and Wildlife. There is no public beach or swimming area on the lake.

It is listed in the Natural Areas of Vermont: An Inventory of Natural Areas, 1972-73 (Inventory number 939B) by the Vermont Department of Fish and Wildlife as a moderate to good waterfowl nesting and feeding area. Nesting loons have frequently been reported on the lake in recent years.

### **Tiny Pond**

Tiny Pond, on the boundary between Mount Holly and Ludlow, is smaller than Star Lake and totally surrounded by private land and is not accessible to the public.

### **Ground Water**

A significant recharge area is on the summit of Hedgehog Hill marked by a seasonal pond and permanent wetland of about an acre – it provides springs on the flanks of the hill and to the springs feeding the village of Belmont

The only water system in Mount Holly is the spring-fed Mechanicsville Aquifer system that once supplied water to most of Belmont. Although no longer a business entity it still supplies a few buildings in the village. The rest of the Town relies on drilled wells or natural springs. (A map of town aquifers is being researched).

In Mount Holly the depth to bedrock or impervious soils (hardpan) is minimal – subsurface water moves more easily laterally rather than vertically – presenting a potential pollution problem.

## **WILDLIFE**

### **Rare Flora and Fauna**

See above Winslow Flats.

### **Black Bear**

The western slope of Okemo mountain's upper elevations support significant beech stands, which are of major importance to bears locally. Lower elevations provide aquatic habitats with an abundance of early spring foods.

The Okemo State Forest thus provides a corridor connecting the Green Mountain National Forest to the south with conserved lands north of Route 103 and beyond that with the northern portion of the Green Mountain National Forest. Private lands on the north side of Route 103 and north side of Route 155 are critical to maintaining the land as wildlife territory. Collaborative work by the Forest Legacy program, the state of Vermont, the Nature Conservancy, and the Mount Holly Conservation Trust is in progress with the goal of making the bear corridor a continuous strip of conserved and protected land. (Map II b 4).

### **Deer Yards**

In the winter, deer need the cover provided by conifer trees to reduce wind chill and heat loss, and to minimize energy expenditure by minimizing snow depth. The Vermont Department of Fish and

Wildlife has identified eight white deer yard areas in Mount Holly (Map II b 4). Remote sensing mapping – currently in progress - indicates that the number of deer wintering areas may be larger.

### **Other Wildlife**

Mount Holly is home to about 25 species of mammals that are on the state’s protection lists. In addition there are birds, fish, invertebrates, reptiles and amphibians, and plants that will disappear if their habitats are not protected.

## **SCENIC BEAUTY**

### **Scenic Roads**

The beauty of Mount Holly is seen all over Town – particularly where roads provide vistas of adjacent farm land and buildings and distant mountains with their patchwork of agricultural land and forest. Perhaps nothing typifies New England and Vermont more than tree-lined gravel roads defined by stonewalls. Maple Hill Road (Town Highway 22) is one such road. It is designated a Scenic Road by Town policy. The road has maple trees along the roadside and stone walls. It has been suggested that designation as a Vermont Scenic Road be explored. (Map II b 5).

Previous Town plans have suggested that sections of these roads be added to the list of Town scenic roads:

- Old Turnpike
- Healdville
- Packer Cemetery
- Shunpike
- Cole
- Hedgehog Hill North
- Okemo Mountain

### **Scenic Ridge Lines**

Views of hills and mountains either forested or in agricultural use are important aesthetic resources for Mount Holly.

Early Vermonters built below ridge lines (probably in part to avoid the buffeting of winter winds), which created the vistas valued today. The historically significant fire tower on the ridge line of Okemo Mountain has been, until recently, the one exception to the general avoidance of ridge line building.

The Select Board passed an ordinance regulating Telecommunications facilities in the Town on Dec 8, 2001 under the provisions of Vermont’s Telecommunications Law (24 V.S.A. ss 2291 (19), 24 V.S.A. Chapter 59, and 24 V.S.A. Chapter 117

### **A photographic inventory of scenic areas**

The inventory – primarily roads and vistas in Mount Holly - was made in early 2003 by the Working Group of the Planning Commission. The documentation of the scenic beauty of the Town continues to be seen in the Annual Mount Holly Photo Contest and Calendar.