

## NATURAL AREAS & WILDLIFE RESOURCES

### Critical wildlife habitat in Hardwick

#### Deer Wintering Areas

Vermont's deer require specific winter habitat to survive the seasonally severe weather and heavy snowfall. Winter deeryards provide two features important to whitetail deer survival: shelter and food. Statewide, between 6% and 8% of Vermont's forestland is suitable for winter deer range under average winter conditions. Wintering areas do not change significantly between years and can be used by generations of deer over several decades if appropriate habitat conditions remain favorable.

#### Bear Habitat

Bears require large areas of uninterrupted forestland for breeding. They also require travel corridors to move from one part of their habitat to another, especially as forested areas may be subdivided and developed. According to the Vermont Natural Resources Inventory, Buffalo Mountain and the hills in the northwest part of town are areas that can support bear year-round. Much of the river valleys support bears seasonally. Only the center of town does not have habitat to support regular use by bears.

#### Rare & Endangered Species Habitat

Rare plants and animals are important for a variety of reasons. Some are indicators of unusual habitats or of environmental quality. Still others may provide compounds for medicines. Hardwick has two areas in town with rare, threatened or endangered species. To prevent disturbance or illegal collection of these species, the specific information on the species is withheld.

#### Fisheries

According to Vermont Fish and Game Department's 2018 Vermont Trout Map, the entire length of the Lamoille River in Hardwick is recognized as a wild trout fishery. The river has naturally sustaining populations of rainbow trout, brown trout and brook trout. Additionally, the State of Vermont stocks the Lamoille River on a yearly basis with rainbow trout. Alder Brook and Haynesville Brook are also identified as wild trout fisheries.

#### Forest Blocks & Habitat Connectors

Large blocks of unfragmented forestland provide ample opportunity for wildlife habitat and travel. Fragmentation occurs when human settlement divides large blocks of land into smaller and smaller areas. By creating gaps between blocks, fragmentation results in the direct loss of habitat. The smaller the habitat block, the smaller the number and diversity of species that can survive there.

For the first time in a century, Vermont is experiencing an overall loss of forest cover; possibly up to 69,000 acres between 2010 and 2015. The primary driver of forest fragmentation is rural

sprawl. This type of fragmentation occurs incrementally, beginning with cleared swaths or pockets within an otherwise unbroken expanse of tree cover.

The loss of forests and their benefits reduces the overall sustainability and resiliency of communities both near and far from the forest. In the short term, a forest loss results in a reduction of economic goods and services, wildlife habitat, and flood mitigation capabilities. In the long term, carbon absorption and climate change mitigation benefits are lost. These short and long-term impacts can also have fiscal implications on towns through increased costs associated with infrastructure, water quality, or flood resilience previously supplied by forests.

Since 2016, Act 171 requires town plans to identify and map forest blocks and habitat connectors that are important to the community and beyond. An assessment of the Biofinder data (<http://anr.vermont.gov/maps/biofinder>) helps to identify priority planning areas for Hardwick, which are depicted on the attached Forest Blocks and Wildlife Habitat Maps.

- **Highest priority interior forest blocks:** Areas with high-quality interior, unfragmented core forest cover (i.e. land that is more than 100 meters from the non-forest boundary).
- **Highest quality connectivity blocks:** Land or water that function as “stepping stones” between core forest, as well as riparian habitat, or strips of forest cover between developed areas.
- **Highest value wildlife blocks:** Lands that support the greatest diversity of wildlife.

Looking at these layers collectively -- and they clearly overlap -- it is evident that Hardwick’s northwest area (including Jeudevine Mountain), west (including Keeler Brook and Millard Brook) and southwest (including Buffalo Mountain area) all provide critical connectivity to a vast expanse that encompasses Wolcott, Elmore, Woodbury, and even Worcester. Places where forest blocks are close to sides of roads are likely to be important wildlife crossings, such as long stretches of Route 15 and the Craftsbury Road. Roughly half of the critical areas are included in the Forest Reserve District and the remaining half is included in the Rural Residential District. Clustering provisions and incentives in the zoning bylaw should be reviewed to determine if they are effective in promoting clustering as appropriate. Enrollment in the Current Use program and conservation easements may also effective land use tools for protected these assets.

## Goals, Policies, & Recommendations

### GOAL

- Maintain and enhance the abundance and diversity of game and non-game wildlife in Hardwick.

### POLICIES

- Critical wildlife habitat should be protected from development and other uses that threaten the ability of the habitat to support its species.

- Subdivisions and other development should avoid fragmenting habitat. Core habitat areas and interconnecting links (e.g. wetland areas, riparian zones, and travel corridors) are to be preserved.
- Rare, threatened and endangered plants and animals and their habitats will be protected and preserved through appropriate conservation techniques. Where appropriate, a buffer strip should be designed and maintained to ensure protection.

#### **ACTIONS & RECOMMENDATIONS FOR IMPLEMENTATION**

- The Planning Commission and the Conservation Commission will support and provide guidance to any property owner with questions or concerns about their natural resources.
- A Natural Resources Inventory should be conducted throughout Hardwick.