



## 2. Status of Forestland in Vermont

### Vermont's Forest Landscape

Vermont is the third most forested of the lower 48 states<sup>1</sup> with approximately 4.6 million acres of forestland. The overwhelming majority of the state's forestland is privately owned (86%), while the rest is publicly owned (either at the municipal, state, or federal levels).<sup>2</sup>

Vermont's forests range in size from very large intact areas – such as those that make up the Green Mountain National Forest and other public and privately owned forests such as parts of the Northeastern Highlands – to small quarter acre backyard woodlots. As would be expected, parcel sizes vary, but mapping by the Vermont Agency of Natural Resources demonstrates that there are 4,061 intact “habitat blocks” in Vermont. A habitat block is defined as an area of natural cover that is surrounded, or not encroached upon, by roads, development and/or agriculture. The blocks are mostly forested, but are described as “habitat” blocks since they also include wetlands and shrublands that are important for wildlife. The largest of these blocks is 154,564 acres surrounding the Nuhllhegan Basin, but the average size is only 1,131 acres, reflecting the large number of much smaller blocks. These areas are integral to maintaining the overall health and viability of forest resources in Vermont.



Maintaining forestland in adequately sized, intact blocks is an important policy goal in Vermont. While in 2009 the median size of an individual parcel of land in Vermont was less than two acres, 71% of Vermont's overall land area is made up of parcels 50 acres or larger.<sup>3</sup> Thus, while many people own small parcels of land, looking more broadly across Vermont, much of the state's land base is contained in large parcels.

Since 3.4 million acres of privately owned land in Vermont is in parcels over 50 acres in size, these parcels are likely large enough to contribute to the myriad functions provided by relatively intact forestland.<sup>4</sup> These functions deliver various public benefits, including economic benefits, such as providing forest products and energy resources, and ecological benefits, such as maintaining intact wildlife habitat and protecting water supplies and watersheds.

### Forest Parcelization in Vermont

When forestland is broken up into smaller parcels it is referred to as “parcelization” and the result is typically an increase in the number of people who own the original piece of land. This land ownership pattern can result in new housing and infrastructure development (roads, septic, utility lines, etc.). When this development occurs, it “fragments” the landscape, and depending on the location and scale, can negatively affect plant and animal species, wildlife habitat (called habitat fragmentation), and water quality. It can also affect the contiguous ownership and management of forest parcels, and thus the viability of large tracts of forestland to contribute to Vermont's rural economy.

Though it can be hard to notice on a day-to-day basis, within Vermont, the parcelization trends are rather dramatic. For example, the number of parcels in Vermont increased from 61,900 parcels in 1983 to 88,000 in 2008, with the increase occurring predominately in smaller parcel sizes.<sup>5</sup> In Vermont, much of this parcelization is associated with residential development. Recent data demonstrate that the development of housing on previously undeveloped forestland has increased.

For example, the amount of forestland in parcels 50 acres or larger that was undeveloped decreased by about 34,000 acres between 2003 and 2009.<sup>6</sup> This is significant since the majority of these lands were developed with one or more new homes, along with new roads, driveways and utilities, reducing the intact nature of forestland in Vermont.

Increasing parcelization in Vermont reflects a national trend of more people owning smaller pieces of forestland.<sup>7</sup> At the regional scale, between 1980 and 2005, approximately 23.8 million acres changed hands in the Northern Forest, an area nearly equal to the entire 26 million acre region.<sup>8</sup> While many of these transactions may have involved the same parcel of land, these transactions indicate a trend that has helped to drive an increase in land values in the region.



## Causes of Parcelization

There are many causes of parcelization in Vermont, but perhaps the greatest driver may be escalating property values and land prices. As land values and development opportunities increase, landowners have greater incentive to subdivide and develop their property. Within Vermont, the average value of land rose at a higher rate than the national average from 1990 to 2007,<sup>9</sup> and according to assessment records, the value of forestland in parcels 50 acres or larger appreciated significantly in recent years, increasing from an average value of \$930 per acre in 2003 to \$1,615 in 2009.<sup>10</sup> These higher market values make it more difficult to own forestland for non-development purposes, and it also influences the rate of subdivision of larger parcels.<sup>11</sup>

There are other factors that drive forest parcelization as well, including:

- **Increasing property taxes.** Increasing land and property valuations, along with higher school and municipal spending, have led to rising property taxes. In some areas of Vermont, property tax rates have increased significantly.<sup>12</sup> This can put additional pressure on landowners to divide and sell a portion of their land. Not surprisingly, the National Woodland Owner Survey conducted by the United States Department of Agriculture (U.S.D.A.) Forest Service lists property taxes as the number one concern among landowners.<sup>13</sup>

In Vermont, the state offsets property taxes by providing income sensitivity payments to lower income residents, but landowners who own large tracts of forested open space are not eligible for this payment.<sup>14</sup> Landowners who are “land rich and cash poor” feel the pressure of rising property taxes, unless they have taken measures to reduce their property tax burden by enrolling in a local tax stabilization program or Vermont’s Use Value Appraisal (UVA) Program (commonly called “Current Use.”) Approximately 40.4% of all eligible forestland was enrolled in the Current Use Program as of 2008.<sup>15</sup> This is a significant accomplishment, yet it indicates that there is still a large percentage of forestland that remains vulnerable to property-tax-driven development pressures.

- **Changing demographics and lack of estate planning.** In addition to escalating land values, the aging population of forestland owners also contributes to parcelization. In the United States, as much as 25% of all privately owned forestland is owned by people who are 65 or older.<sup>16</sup> While estate planning can provide ways to keep forestland intact among successive generations of forest owners, the will of a deceased landowner often divides the ownership of land into smaller parcels for purposes of bequeathing the land to multiple children. This leads to the parcelization of forestland unless the landowner has provided a way to keep the land intact.<sup>17</sup>

- **“Exurbanization.”** Another driver of forest parcelization is people’s desire to either relocate or purchase second homes in rural settings where land is relatively cheap compared to urban real estate markets. This trend, known as “exurbanization,” is defined as the migration of urban residents to rural environments.<sup>18</sup> Rather than buying rural land for traditional uses such as timber and agriculture, more people are developing private residences a long distance from towns and services in order to maximize privacy and views. The demand for high-end homes in Vermont is contributing to the increasing parcelization of forestland.
- **Inadequate land use planning and regulation.** The rate of development (measured in housing units and developed acres) in Vermont is increasing twice as fast as the state’s population.<sup>19</sup> This problem is compounded by the fact that population growth is occurring mostly in rural areas (defined as communities with fewer than 2,500 residents), where forestland and other working and undeveloped lands are concentrated and at risk of parcelization.<sup>20</sup>

Part of the problem is that many municipalities value local forests, but have limited regulatory strategies for addressing the maintenance of forestland. For example, despite the fact that 87% of town plans identify forests as a valuable habitat type, a small percentage of municipalities that have zoning bylaws include a specific district that is geared towards the maintenance of forestland, such as a forest reserve district.<sup>21</sup> Furthermore, only approximately half of all municipalities in Vermont have subdivision regulations.<sup>22</sup> These deficiencies highlight land use trends that contribute to the parcelization of forestland resources.

## The Benefits of Forestland: What is at Stake?

The loss of Vermont’s forestland can have real implications for communities and landowners who want to see the forest for the trees. Without sound planning and strategy development, the integrity of our forests and Vermont’s rural economy can suffer. For example, maintaining the integrity of our forests is critical to sustaining billions of dollars in revenue from our tourism and rural economy. Forest-based manufacturing, recreation, and tourism employ approximately 13,000 Vermonters and bring about \$1.5 billion to the state every year.<sup>23</sup>

Vermont’s forestlands also provide a rich array of eco-



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logical functions and wildlife habitats. Intact blocks of forests provide habitat for a wide variety of species, and maintaining connectivity between large forest areas can ensure that wildlife species are able to travel between habitats and adapt to climate change. In addition, healthy forests protect water supplies, absorb precipitation, and filter water, thereby enhancing flood resilience and water quality in other parts of the watershed.

These ecosystem services are hard to quantify and easy to take for granted. When it comes to considering “value,” looking at a single example gives us a rough estimate of their monumental importance. Vermont’s forests are estimated to remove more than 75,000 metric tons of carbon (about as much as emitted by 14,000 light cars in a year) and 1,610 metric tons of other pollutants from the atmosphere each year – a function that would be worth about \$16 million if it was paid for out of pocket.<sup>24</sup>

Since forests have a huge capacity to sequester and store carbon, keeping our forests as forests is a surefire way to battle climate change. Several years ago, a Governor’s Commission on Climate Change reported that reducing the conversion of our forestland to non-forest uses would be one of the most effective policies to reduce the effects of greenhouse gas emissions in Vermont. In fact, the commission’s goal of reducing the conversion of Vermont’s forests by 50% by 2028 would have, perhaps, the highest measurable result of the 38 policies that were endorsed.<sup>25</sup>

Still, satellite imagery data shows we are moving in the wrong direction and are beginning to lose our forests in a noticeable way for the first time since the state was largely cleared in the first half of the 19th century. Certain data show that we lost a half percent of Vermont’s forests on an annual basis between 1992 and 2002.<sup>26</sup> Chittenden County

alone experienced a 4.4% reduction in forestland during a fifteen-year period from 1982 to 1997.<sup>27</sup> If such numbers are true, this means that we are beginning to whittle away at the integrity of our forests. The solution? We need to work together and take advantage of strategies to reduce the parcelization and conversion of forestland in the state.

## What Can Be Done?

Vermonters need to take strong action to maintain the integrity of the forests that support our environment, our economy, and our sense of place. And it truly must happen at the local level. Contrary to common belief, recent studies highlight that Act 250, the state’s land use law, only reviews a very nominal amount of subdivision activity and residential development in Vermont.<sup>28</sup> This means that many decisions that affect the integrity of our forests happen at the community level. Along with the decisions made by individuals, local officials – selectboard members, planning commissioners, conservation commissioners, and others – play a critical role in shaping land use in Vermont.

This guide provides concrete strategies to assist Vermont communities. We encourage communities to use the pages that follow to learn about the wide range of regulatory and non-regulatory options for maintaining the integrity of forests and keeping large blocks connected and intact for a range of forest functions and wildlife. Many communities will need to implement a range of strategies to achieve the right balance that implements the community’s vision with public support. We wish you success as you set a path for the future of your forests!

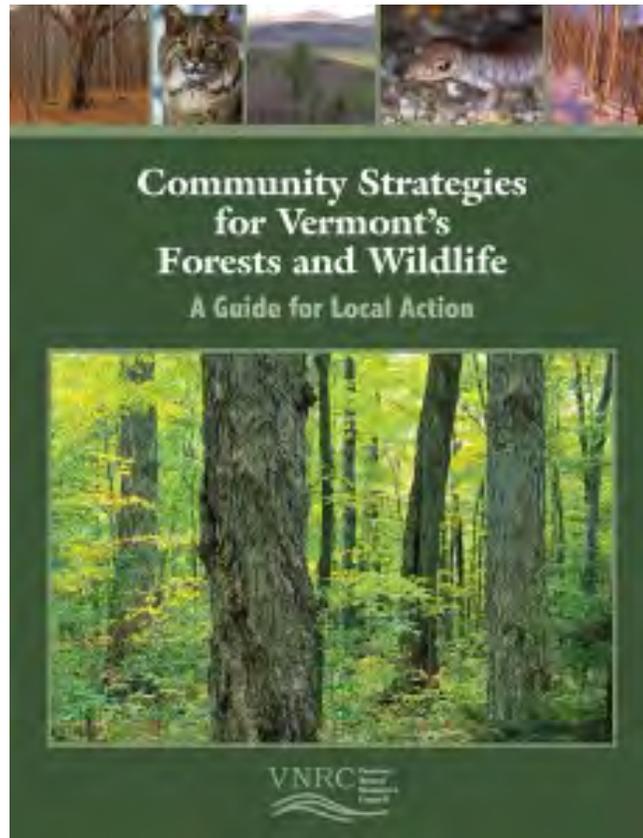


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This chapter is part of a larger publication called ***Community Strategies for Vermont's Forests and Wildlife: A Guide for Local Action***. You can download the entire publication or individual chapters (including the endnotes, resources, and credits page) for FREE at:

[www.vnrc.org/programs/forests-wildlife/guide/](http://www.vnrc.org/programs/forests-wildlife/guide/)



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