



FOREST

F r a g m e n t a t i o n

Seeing the Forest for the Trees: Reducing Forest Fragmentation in Vermont

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Maintaining the long-term viability of Vermont’s forests for wildlife, recreation, timber products, carbon sequestration, and watershed protection is integral to our economy and quality of life. This is why the increasing fragmentation of our forests deserves public attention.

Trends show that forest fragmentation through parcelization (the subdivision of forestland into smaller pieces and multiple ownerships) is gaining momentum. On a regional scale, between 1980 and 2005, approximately 23.8 million acres changed hands in the Northern New England Forest, an area nearly equal to the entire 26 million acre region.¹

Amazingly, 45% of these land transactions occurred during the last five years.² While many of these transactions may have involved the same parcel of land, they indicate a recent trend in real estate activity that has helped to drive an increase in land values in the region, and to a certain degree, the parcelization of our forests.



Satellite imagery data show that Vermont is beginning to lose our forest base in a noticeable way for the first time since our forests were heavily cut around the turn of the last century.

When large areas of forestland are sold and subdivided the result is often a disjointed land ownership pattern that promotes new housing and requires infrastructure development (roads, septic, utilities and other services).

In the process of building more homes, wildlife and plant habitat is also fragmented; species that require larger areas of forest land to survive and reproduce are adversely affected.

Another concern is that fragmentation affects the contiguous ownership and sound management of forestland and the viability of large tracts to contribute to Vermont’s rural economy.

Within Vermont, the parcelization trend is very noticeable with many more people owning smaller pieces of forestland. Twenty five years ago 19,000 individuals owned forest parcels 1-9 acres in size. By 1993, there were 40,900 owners of 1-9

acre parcels.³ This increasing parcelization in Vermont reflects a national trend.

The parcelization and fragmentation of Vermont’s forestland has real implications for communities and landowners who want to see the forest for the trees.

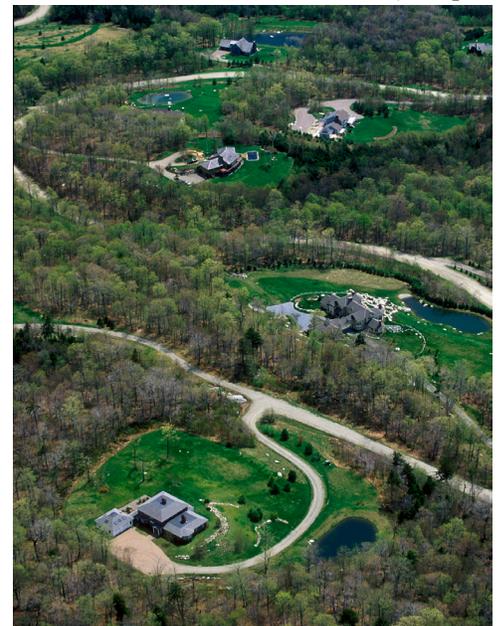
Vermont’s rural economy thrives on healthy forests that contribute to our tourism industry, recreational opportunities, and the forest products industry. Furthermore, forestlands provide a rich array of ecological functions and wildlife habitats and are vital to maintaining the integrity of our watersheds and water quality.

Another emerging value is the role of forests as a tool to fight climate change. Forests have a huge capacity to sequester and store carbon dioxide, the main greenhouse gas causing global warming. Keeping our forests is a surefire way to battle climate change.

The Governor’s Commission on Climate Change recently reported that reducing the conversion of our forestland to non-forest uses would be one of the most effective poli-

VERMONT’S RURAL ECONOMY THRIVES ON HEALTHY FORESTS

cies to reduce greenhouse gas emissions. In fact, the commission’s goal of reducing the conversion of Vermont’s forests by 50 per-



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cent by 2028 would have, perhaps, the highest measurable result of the 38 policies that were endorsed.⁴

Taking strong action to conserve our forests is necessary. Certain data show that we lost a half percent of Vermont's forests on an annual basis between 1992 and 2002.⁵ Chittenden County alone experienced a 4.4% reduction in forestland over the past 15 years.⁶

If such numbers are true, we are beginning to whittle away at the integrity of our forests and need to implement strategies to reduce the fragmentation and conversion of forestland.

TAKING ACTION ON YOUR LAND

Owning land in Vermont can be a truly rewarding experience, but it can be challenging. Many landowners find it difficult to pay property taxes on large tracts of forestland, and the potential to develop land in Vermont is often a lucrative proposition. In addition, landowners wrestle with complex decisions ranging from estate planning to the on-

the-ground management of woodland and forest resources.

Fortunately there are programs that are available to help landowners keep their land intact.

Enroll in Current Use

If you own 25 acres or more of forestland, it may make sense to enroll in Vermont's Use Value Appraisal or Current Use Program. The program, which taxes land at its use value instead of its development value, makes it easier for landowners to keep their parcels intact and productive because the land is assessed at a lower tax rate. Landowners who enroll in the program are required to develop a forest management plan that is approved by the county forester.

In exchange for managing the property with a forest plan, landowners must keep their land undeveloped while they are enrolled. The land can be taken out of the program, but the owner pays a land use change tax.

The state reimburses towns for revenue they forgo as a result of land that

is enrolled in the Program. Therefore, municipal tax rates are not affected by the amount of land in the Current Use Program. Approximately 1.5 million acres of forestland is enrolled in the program and current use is widely credited with helping to keep Vermont's working lands viable and intact.

Write a Management Plan

Having a management plan for your property can help you think about the long-term management of your property.

Consulting foresters and ecologists are available to conduct an inventory of your property. They can suggest management approaches, sustainable harvesting techniques, and help ensure the protection of important ecological areas. Having a baseline inventory of your property can also potentially help landowners apply for state and federal programs that exist to help landowners with conservation or management projects.

WILDLIFE PRESENT IN DIFFERENT SIZED FOREST PATCHES

TIER 1 UNDEVELOPED

Small rodents
Raccoon
Hare
Coyote
Porcupine
Bobcat
Cottontail
Beaver
Black bear
Squirrel
Skunk
Weasel
Mink
Fisher
Woodchuck
Deer
Muskrat
Moose
Red fox
Sharp-shinned hawk
Bald eagle
Cooper's hawk
Harrier
Broad-winged hawk
Goshawk
Kestrel
Red-tailed hawk
Horned owl
Raven
Barred owl
Osprey
Turkey vulture
Turkey

TIER 2 500-2500 acre blocks

Small rodents
Raccoon
Hare
Porcupine
Cottontail
Beaver
Squirrel
Skunk
Weasel
Mink
Woodchuck
Deer
Muskrat
Moose
Red fox
Sharp-shinned hawk
Bald eagle
Cooper's hawk
Harrier
Broad-winged hawk
Goshawk
Kestrel
Red-tailed hawk
Horned owl
Raven
Barred owl
Osprey
Turkey vulture
Turkey

TIER 3 100-500 acre blocks

Small rodents
Raccoon
Hare
Porcupine
Cottontail
Beaver
Squirrel
Skunk
Weasel
Mink
Woodchuck
Deer
Muskrat
Red fox
Sharp-shinned hawk
Cooper's hawk
Harrier
Broad-winged hawk
Horned owl
Barred owl
Osprey
Turkey vulture
Turkey

TIER 4 20-100 acre blocks

Small rodents
Raccoon
Hare
Porcupine
Cottontail
Beaver
Squirrel
Skunk
Weasel
Woodchuck
Muskrat
Red fox

TIER 5 1-20 acre blocks

Small rodents
Raccoon
Cottontail
Squirrel
Skunk
Muskrat
Red fox



Donate or Sell Development Rights

Another way to conserve your land is to donate or sell the rights to develop the land to a third party, such as a local or statewide land trust. Conservation easements are important tools for landowners who want to conserve their land in perpetuity.

Easements are voluntary agreements that allow landowners to restrict the amount or type of development on their land while retaining private ownership, and in most cases, the use of the land for recreation, forestry, or other interests.

Landowners typically receive a federal income tax deduction for the gift of a conservation easement. There may be other tax benefits as well, such as reduced property taxes in some circumstances. Generally conservation easements are permanent, so you may want to seek the assistance of an accountant or attorney to help you with your estate planning.

Talk about the Future

It's wise to discuss the goals for managing your property with your family, including your long-term vision for the land. Open communication about your desires, your heirs' desires, potential estate tax obligations, and the long-term viability of the land should all be discussed. Annual family meetings to discuss the long-term goals of the property can be useful.

Join with the Neighbors

If you sense that your neighbors are interested in similar forest manage-

ment goals, consider joining together to leverage resources for owning and managing contiguous blocks of forestland. Landowners can create cooperatives to share in the cost of managing land to foster conservation and stewardship.

Landowners who coordinate activities can potentially apply for federal or state assistance, share in road and timber management improvements, develop comprehensive wildlife habitat conservation, recreation and forest management plans, market forest products, and seek conservation easements or third party certification for sustainable forest management if desired.

Get Certified

Third party certification allows landowners to receive an independent audit certifying your land is being managed in a sustainable fashion. Markets are still emerging for certified wood products, but in the coming years certification is expected to boost prices paid to landowners because of increasing demand for sustainably harvested wood.

TAKING ACTION IN YOUR COMMUNITY

Communities have a wealth of options to promote forestland conservation at the local level. Working to establish traditional growth patterns by promoting development in growth centers while conserving rural lands sounds idealistic, but it is a proven land use pattern with long-standing recognition in Vermont's

planning and development laws.

It is important to get involved in the local planning process, whether it is the development of your town plan and zoning ordinances or non-regulatory conservation and education approaches that are carried out by your conservation commission or like-minded organizations. The following examples provide several options for maintaining and conserving forestland in your community:

On any given Monday or Tuesday night, planning commissions are busy drafting town plans, zoning bylaws, subdivision regulations, and municipal ordinances that shape land use development in Vermont.

Engage in Forestland Conservation Planning

Planning and zoning solutions that can promote growth in appropriate locations while conserving land that is rich in forestland resources include creating forest reserve districts, natural resource overlay districts, and clustering through planned unit developments. Subdivision regulations and site development standards can establish policies for discouraging and/or mitigating forest fragmentation. Trail and road policies and frontage standards also play a prominent role in shaping the manner in which forestland is developed.

Finally, the creation of growth centers can funnel development to appropriate locations that have the necessary infrastructure to accommodate high-density growth. Regional planning commissions, the Fish and Wildlife Department, and land use organizations such as Vermont Natural Resources Council and Smart Growth Vermont offer technical assistance for planning and zoning.

Create a Town Forest

Many cities and towns already own forested parcels. For those that do, there are many exciting possibilities for engaging the community in activities that demonstrate excellent stewardship of forestland resources.

Municipalities can create new town forests that are publicly owned, assuming there are landowners who are willing to sell or donate their land to their town.

Organizations such as the Trust for Public Land, Vermont Land Trust and the Northern Forest Alliance engage in town forest projects. The Department of Forests, Parks, and Recreation can help in the stewardship of town owned forests.

Promote Local Forest Products

Diverse forest products are an important part of Vermont's rural economy. Sawmills, wood or lumber processing, and wood manufacturing facilities rely on productive woodlands. Residents, architects, and builders should be educated about the importance of buying and using local forest products to support productive woodlands that are sustainably harvested.

Looking to the Future

There is much we can do as landowners and members of our communities to plan for the future of our forests. We are extremely lucky to have a majority of the state that is blanketed with forests. Our forestlands serve as the backbone for our economy and offer a rich natural heritage that makes our state a unique treasure.

We have the opportunity to ensure that our forestlands remain intact and productive, both economically and ecologically. As pressure mounts to fragment our forests through the parcelization and subdivision of our land, please consider the many strategies that exist to promote smart growth while conserving the forests for present and future generations.

Jamey Fidel is the primary author of the Final Report and Recommendations of the Roundtable on Parcelization Forest Fragmentation. The roundtable involved participation by more than 60 experts in the state to identify the causes of forest fragmentation and parcelization; to create workable solutions for landowners, municipalities, and state government, and to adequately plan for appropriate forest-land conservation.

RESOURCES FOR ADDITIONAL INFORMATION



Audubon Vermont
255 Sherman Hollow Rd. Huntington, VT 05462
802/ 434-3068 www.vt.audubon.org

Northern Forest Alliance
www.northernforestalliance.org

Smart Growth Vermont
110 Main Street, Burlington, VT 05401
802/ 864 6310 www.smartgrowthvermont.org

Vermont Fish & Wildlife Department
103 S. Main St, Waterbury, VT 05671
802/ 241-3700 www.vtfishandwildlife.com

Vermont Department of Forests, Parks and Recreation
103 S. Main St., Waterbury, VT 05671
www.vtfor.org

The Trust for Public Land
3 Shipman Place, Montpelier, VT 05602
802/ 223 1373 www.tpl.org

The Vermont Land Trust
8 Bailey Avenue, Montpelier, VT 05602
802/ 223 5234 www.vlt.org

Vermont Natural Resources Council
9 Bailey Avenue, Montpelier, VT 05602
802/ 223 2328 www.vnrc.org

Upper Valley Land Trust
19 Buck Road, Hanover, NH, 03755
603/ 643-6626 www.uvlt.org

List of consulting foresters
www.cfvt.org/directory_2005_06.pdf

List of county foresters
www.vtfor.org/resource/for_forres_countfor.cfm

List of other land trust organizations
www.crs.uvm.edu/landtrusts/listlt.htm

The report is available on line at www.vnrc.org/article/articleview/15879/1/629. For additional information, contact Jamey Fidel at jfidel@vnrc.org or 802-223-2328.

(Footnotes)

¹ Hagen, J.M., L.C. Irland, and A.A. Whitman. 2005. Changing timberland ownership in the Northern Forest and implication for biodiversity. Manomet Center for Conservation Sciences, report #MCCSoFP-2005-1, Brunswick, Maine, at iii.

² Id. at 4.

³ Birch, T. 1996. Private forest-land owners of the Northern United States. 1994. Res. Bul. NE-136. Radnor, PA. USDA-FS, Northeastern Forest Experiment Sta. 293 p.

⁴ LaPierre S. and Germain R.H. Forestland parcelization in the New York City watershed. 2005. Journal of Forestry 103 (3) : 139 - 145.

⁴ Final Report and Recommendations of the Governor's Commission on Climate Change, Appendix 3: GCCC Deliberation Matrix at 314, October 2007.

⁵ Final Report and Recommendations of the Governor's Commission on Climate Change, Appendix H. Agriculture, Forestry, and Waste Management Policy Recommendations at H-40. Citing J. Jenkins and E. Quigley, UVM.

⁶Id.

This publication is the first in a series of special inserts to Woodlands for Wildlife, the newsletter of Vermont Coverts: Woodlands for Wildlife, Inc.

The second insert will focus on cross-boundary land management, cooperative land ownership and conservation easements.

Vermont Coverts was established in 1985 to educate landowners about sound forest management and wildlife stewardship. Coverts offers intensive three-day wildlife and forest management training workshops and one-day workshops on specific forest or wildlife management topics.

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