BACKGROUND

Protecting Contiguous Habitat

In New England, large blocks of undeveloped forest protect ecological processes as well as the traditional uses of those who live or utilize these areas. There is no exact acreage associated with contiguous forest land, but the figures suggest these core forests are located minimally 300 feet from human development including roads and houses in parcels of 500 acres or more. The benefits from these lands are many, and thus the larger the interior acreage the better.[1] These contiguous forest blocks minimize the long term modification and reductions in water quality. For example they decrease the amount of land covered by impervious material such as pavement, and concrete. Large neighboring tracts of land minimize the movement of non-invasive species, stopping native species from flourishing. These contiguous blocks of forest and the corridors between them also provide critical habitat for wildlife. [2] Contiguous blocks of forestland are important for humans, too, as they enhance scenic quality and offer many recreational opportunities.

This case study focuses on the concerns of protecting contiguous forest habitat in Dummerston, Vermont.[3]

Large tracts of contiguous forest habitat can support higher levels of biodiversity than smaller, parcelized forest areas.[4] As such, contiguous forests support viable populations of animals such as bears, bobcats, moose, and fish by providing some, if not all, components necessary for survival. For example, bears require very large tracts of forestland. Females require approximately 6-9 square miles of core forests while males require even larger land areas to meet their needs[5]. Since it is unusual to find all the necessary survival components in one contiguous forest habitat, it is also essential to protect the corridors that connect them.

The Vermont Natural Heritage Program Director theorizes that the resiliency of contiguous forest habitat increases as the size of contiguous forest habitat increases. He speculates this could be critical for pressures like global warming or acid precipitation. [6] Additionally, fragmented areas also cause a proliferation of nascence species including raccoon, skunk, and cowbird which can negatively affect bird and amphibian populations.[7]

Are contiguous forest habitats in New England at risk? Is forest fragmentation occurring at a worrisome rate? Forest fragmentation is defined as forestland that being broken into smaller, more isolated fragments surrounded by human-modified environments.

Is parcelization happening at such a speed that it is troublesome? Parcelization is defined as the reduction in the size of forestland ownership frequently resulting from the division of properties during land transfer. It often leads to forest fragmentation.

Here are some statistics that will allow you be the judge.

New England

- In 1997-2005, the rate of land development doubled.
- Approximately 167 acres a day -- or 7 acres an hour – are lost to development[8]

Vermont

- In 1987-1997, the amount of forest land developed was 25%. At that rate, the amount of forestland lost to development would have doubled in 10 years.
- In 1997-2005, the rate of land development doubled. [9]
- In 1997-2005, the amount of parcels subdivided into 1-9 acres increased 3-fold while the amount of parcels 500 acres or greater decreased by approximately 15%.[10]

New Hamphire

- Visit http://www.nhplt.org/Secondary%20Fact%20Sheets/webSPRAWL.pdf for in depth statistics on fragmentation and parcelization in New Hampshire.

What do you think the future will bring?

1 E-mails, Vermont Audubon Society and Vermont Fish and Wildlife Department 2009

2 http://www.nhplt.org/Secondary%20Fact%20Sheets/webSPRAWL.pdf

3 The Dummerston Handbook, 2008

4 Conserving Vermont's Natural Heritage, Vermont Fish & Wildlife Department Forest and Parks 2004

5 New England Wildife, Richard DeGraaf amd Mariko Yamasaki 2000

6 Eric Sorension-phone conversation, Director of Vermont Natural Heritate Program 2009

7 Conserving Vermonts Natural Heritage, Vermont Fish and Wildlife Department Forest and Parks 2004

8 www.umass.edu/nre/news/?art=897&prog=0&dept=0&fac=0&sor

9 Kim Royar VT wildlife biologist as referenced in the final report Vermont Forest Roundtable, 2007

10 svr3.acornhost.com/~vnrcorg/frt/VTParcelization-ButlerII.ppt