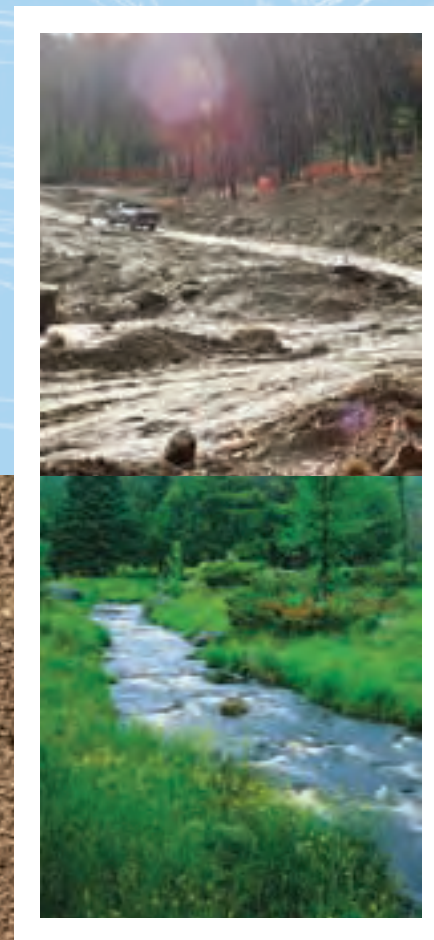


LOSING GROUND

BEYOND THE FOOTPRINT

Patterns of development and their impact on
the nature of Massachusetts



Fourth Edition of the Losing Ground Series

James DeNormandie

Claire Corcoran, Editor and Writer

John J. Clarke,
Director of Public Policy and
Governmental Relations
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TABLE OF CONTENTS

Acknowledgments	1
Executive Summary/Call to Action	2
Chapter 1 Land Use Changes in Massachusetts	4
Chapter 2 Housing as a Driver of Land Use	8
Chapter 3 Quantifying Ecological Impact	12
Chapter 4 The State of Land Protection in Massachusetts— Forests, Wetlands, and Agriculture	17
Chapter 5 Biodiversity in Massachusetts—Protection and Threats	22
Chapter 6 Conclusions and Recommendations	27
References	Inside back cover



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EXECUTIVE SUMMARY/CALL TO ACTION

Over the past 40 years, the landscape of Massachusetts has been transformed by new residential and commercial development. Eastern and southeastern Massachusetts have undergone the most change, but virtually every community in the Commonwealth has experienced rapid growth driven by economic and demographic factors. Starting in 1991, Mass Audubon's *Losing Ground* series has analyzed these changes every 5 years using the most up-to-date technology and methods, providing conservationists, town planners, and agencies with information for planning and advocacy. This edition of *Losing Ground* examines recent changes in land use based on data from 1999 through 2005 (Chapters 1 and 2). It also examines the ecological impacts of development over a longer period of time, from 1971-2005 (Chapter 3). These analyses capture change in the Commonwealth of Massachusetts prior to the current, severe economic downturn. Although data are not available on the rate of development at present, it is a safe assumption that development has stalled significantly in the current economic climate. While the troubled economy is a serious challenge for our state and its people, it provides an opportunity for those concerned with land conservation to assess our progress thus far, enhance our communication and coordination, and strategically plan to continue to protect the most important land, so that we can sustain our supply of clean water, our biodiversity and wildlife habitat, and the recreational and psychological services provided by land in its natural—or nearly natural—condition.

Goals of this Report

This edition of *Losing Ground* assesses the progress that has been made in conservation of natural and agricultural lands, as well as how well these efforts are protecting the terrestrial and freshwater aquatic biodiversity of Massachusetts. Through our analyses, we seek to better understand the rate of transformation of the landscape, both agricultural and naturally vegetated, resulting from development. We identify areas in the state where development is rampant, and we also highlight areas where unchecked development is most likely to have impact in the future. We identify lands that are high priorities for conservation using a new metric of ecological integrity, the Conservation Assessment and

For a glossary of terms and frequently asked questions, please visit www.massaudubon.org/losingground.

Prioritization System (CAPS). We advocate for public policy changes that will provide communities, organizations, and individuals with the tools necessary to guide future development in Massachusetts in a more sustainable direction.

Our findings are encouraging in that we are making significant progress in protecting our biodiversity, but they also highlight continuing threats to the nature of Massachusetts. The rate of development has declined considerably since the late 1980s and the 1990s. While the rate has slowed, development is still threatening our most sensitive rare species habitat and important natural communities. The trend toward larger, more dispersed homes continues as well—driving up energy use in the Commonwealth and using more land to house fewer people.

Key Findings

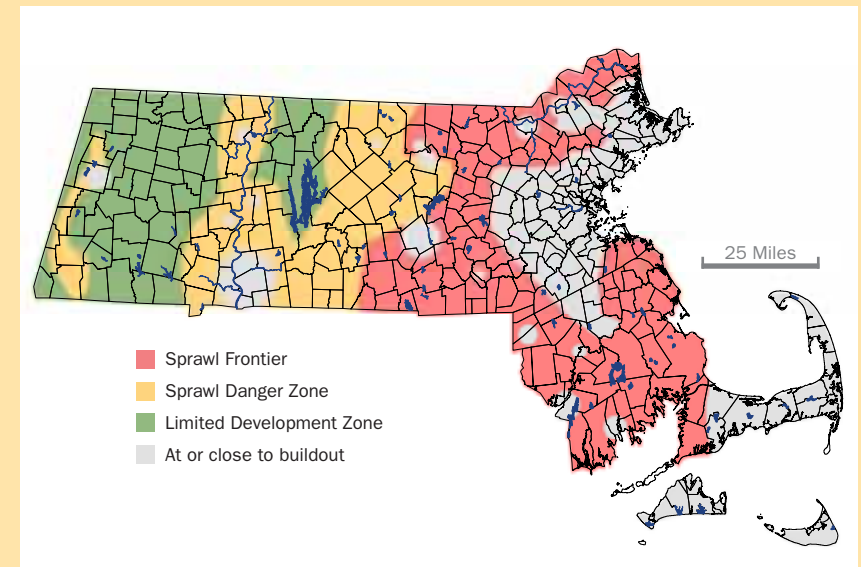
- Between 1999 and 2005, we lost 22 acres of land to development each day. Residential housing remains the key driver of land development in the Commonwealth, accounting for nearly 87% of land use change. Over 40,000 acres were converted to residential development in those six years—30,000 acres from forest and 10,000 acres from agricultural land.
- According to a new measure of ecological impact that allows us to look beyond the footprint of development, its indirect impacts on ecological function are three times higher than the direct impacts of development. More importantly, we found that in towns that are less developed, the indirect ecological impacts can be as much as eight times higher than the direct impacts.
- The Sprawl Frontier identified in the 2003 edition of *Losing Ground* has continued to push west and southeast from Boston. Unprotected natural land remaining in the affected towns must continue to be a focus of conservation efforts. Development pressure remains high in the southeast, where many towns have globally significant and highly imperiled biodiversity.
- We have identified the Sprawl Danger Zone, where communities beyond the Sprawl Frontiers are already experiencing increased development pressure as the towns eastward or northward approach buildout. Municipalities in this zone are not the fastest growing in the state, but they are experiencing increased growth rates that warrant attention. At the same time, they still have significant ecological integrity that urgently needs protection.

- Beyond the Sprawl Frontier west to the Quabbin Reservoir and all along the Connecticut River, the ecological impacts of development are significant. In addition, demand for municipal services in these towns—roads, schools, waste disposal/treatment, and energy use—is straining resources. Many of these municipalities have large areas of suburban-style zoning, which will further fragment the landscape and degrade ecosystem function.
- From 1999 to 2005, a total of 109,863 additional acres of land were protected in Massachusetts. This represents an additional 2.2% of the state's total land area.
- Between 1999 and 2005, conservation agencies and organizations protected twice the land that was developed. This is largely thanks to three banner years from 2000 to 2002.
- The current economic downturn presents a unique window of opportunity—gains in land protection can be made while development pressure has dropped off. The Patrick Administration pledge to spend \$50 million each year from the Environmental Bond on land protection will significantly advance the state's efforts to secure important land while there is a lull in development.
- Meaningful zoning reform is crucial to providing municipalities with better tools for planning and managing future growth. Sustainable development patterns put higher density zoning in places where infrastructure is in place, or can be readily expanded.
- Despite the large lot zoning prevalent in many towns within the Interstate 495 corridor, ecological function has been severely degraded by landscape fragmentation. The areas with the greatest loss in their ecological integrity mirror the Sprawl Frontier precisely. However, great opportunities to protect intact ecosystem processes persist in the western half of Massachusetts.
- We are building larger houses, farther from metropolitan centers, and using more energy to heat and power these bigger homes. This trend encourages increased reliance on automobiles, increased consumption of fossil fuels, and increased carbon release into the atmosphere, exacerbating global climate change.
- Agricultural land is also highly threatened by development in many of Massachusetts' communities at the edge of the Sprawl Frontier—statewide, 215 towns had less than 5% of their land in agriculture in 2005, compared to 153 and 184 in 1985 and 1999 respectively.
- 55% of BioMap areas still lack permanent protection. Of the areas identified as Supporting Natural Landscape in the BioMap, 73% are unprotected. Aquatic rare species habitat is in dire need of protection. Only 16% of the Living Waters Core Habitat areas, and only 26% of the Living Waters Critical Supporting Watersheds areas, are protected.
- At the same time, remaining ecological integrity in cities and more developed towns must be protected. Urban open space and forests help cool urban heat islands, reducing energy use in cities. Access to protected lands helps urban residents understand why tax dollars are being spent on land protection elsewhere in the state, while providing cultural, recreational, and psychological benefits.

THE ECOLOGICAL FUNCTION OF THE MASSACHUSETTS LANDSCAPE

Using a new computer model, we analyzed the ecological impacts of development in Massachusetts. The map of Development Impact Zones delineates the new Sprawl Frontier. It also shifts focus farther west to the towns in the Sprawl Danger Zone. Although development is not occurring at the highest rates in these towns, it has had significant ecological impact (Figure 3.5). Important ecological resources remain in these municipalities, and attention must be paid to their protection. Many of these communities have large lot zoning (Figure 2.3) and have had a significant increase in their housing stock in recent years (Figure 2.1), underscoring their urgent need for both planning resources and protection dollars. Finally, the towns shown in green still have high levels of ecological integrity because of relatively low rates of development. However, in these less developed areas, the indirect impacts of development are magnified the most (Figure 3.7).

Development Impact Zones



CHAPTER 1: LAND USE CHANGES IN MASSACHUSETTS

Massachusetts has a large, hardworking conservation community consisting of activists, philanthropists, nonprofit organizations, state and federal government agencies, towns, and cities. During the past 40 years, development has transformed the landscape of Massachusetts. At the same time, land protection efforts by conservation agencies and organizations have accelerated in the face of the sprawling patterns of land use change. This edition of *Losing Ground* will analyze and quantify recent land use change by examining data from 1999 through 2005.

Massachusetts' greatest environmental challenges are caused by land use change. In transforming our landscape, development has degraded ecological functions and reduced our ecosystems' inherent resilience to change. With climate change now expected to significantly impact our region, we need to be strategic in our land protection efforts to protect the resilience of our ecosystem as well as its functional components, i.e., individual species. Through this analysis, we seek a better understanding of land use change in Massachusetts, to inform local, regional, and statewide planning. Thoughtful planning that preserves the traditional character of our towns, while protecting our biodiversity and natural resources, is possible, but it requires an understanding of how development pressures have shaped our land use to date, as well as of current trends in land protection.

International Connections

Massachusetts is home to a great diversity of species of regional, national, and global significance. Not only do we have resident populations of rare and endangered species, but our state also provides habitat for migratory birds that fly thousands of miles to feed or breed here. Our biodiversity is of global significance: the sandplains of southeastern Massachusetts and the Cape and Islands support globally rare natural communities such as pine barrens, coastal plain pondshores, grasslands, heathlands, and oak savannah—home to myriad rare and endangered plants and animals.

Are We Getting the Job Done?

How are we using our land base in Massachusetts? Where is the most rapid development taking place? How efficiently are we using our resource to provide housing for people? What types of land are being converted from one use to another? In order to answer these and other questions, we used the spring 2005 Land Use/Land Cover data layer created by MassGIS and compared it with the previous version from 1999.

COMPARING DATA SETS

The 2005 Land Use/Land Cover data was created using a computer model that sorts the aerial images into various cover types. The previous 1999 version of the Land Use/Land Cover data layer was created through manual digitization of aerial images. Combining the two data sets allowed us to isolate new development between 1999 and 2005. Since the two data sets were produced using different methods, the results had to be checked manually and corrections were applied to the raw data in order to increase the accuracy of our estimates of land use change. For a more detailed discussion of these methods, please see the *Losing Ground Technical Report*, available online at www.massaudubon.org/losingground.

Figure 1.1: Land converted to development in Massachusetts 1999-2005

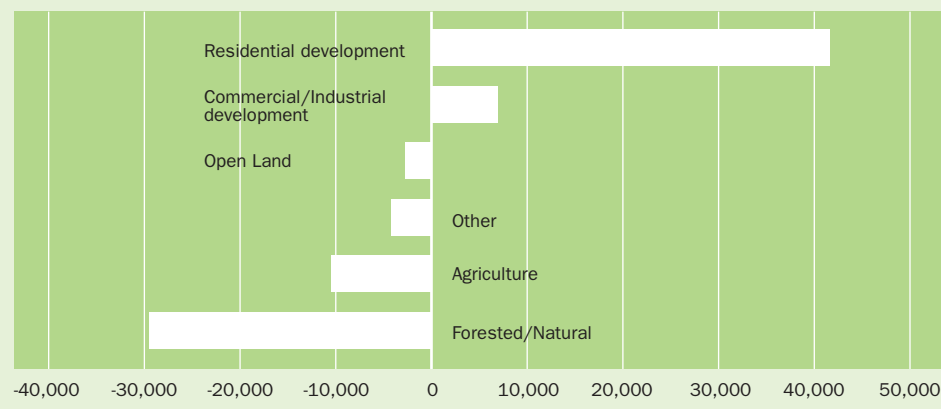
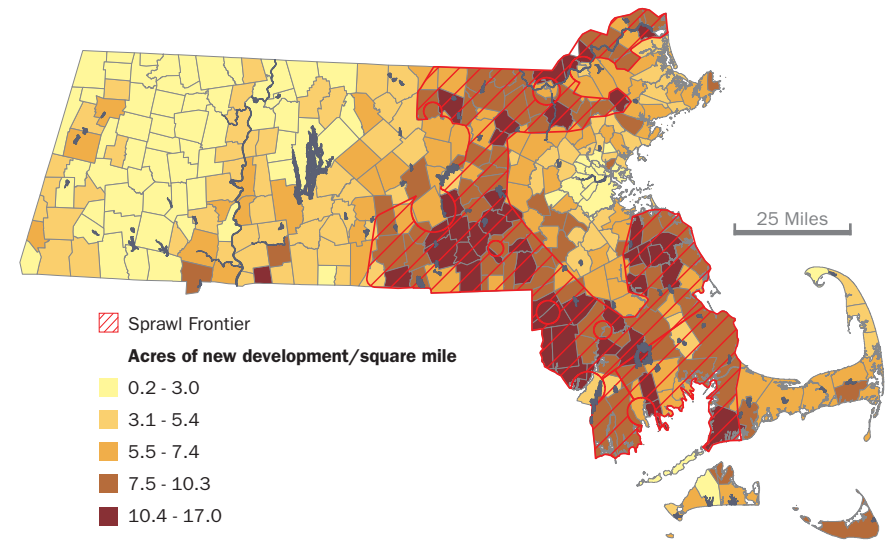


Figure 1.1 shows the change in land use in acres from 1999-2005, giving a complete picture of overall land use change during those six years. Between 1999 and 2005, we estimate that 47,600 acres of development took place. Over 40,000 acres of residential development were added to the Massachusetts landscape during those six years. The majority of the land developed was originally forested land, at nearly 30,000 acres, with an additional 10,000 acres of agricultural land converted into development.

Figure 1.2: Recent development trends in Massachusetts (1999-2005)



From 1999-2005, Massachusetts lost an estimated 22 acres per day to all forms of development. Conversion of 22 acres per day from a natural to a developed state is like creating a development the size of the cities of New Bedford, Lawrence, and Springfield combined every 5 years. This represents a decrease from the period 1985-1999, during which the rate of development in Massachusetts was estimated at 40 acres a day. Figure 1.2 shows acres of new development per square mile, with the darker towns undergoing the highest rates of land conversion.

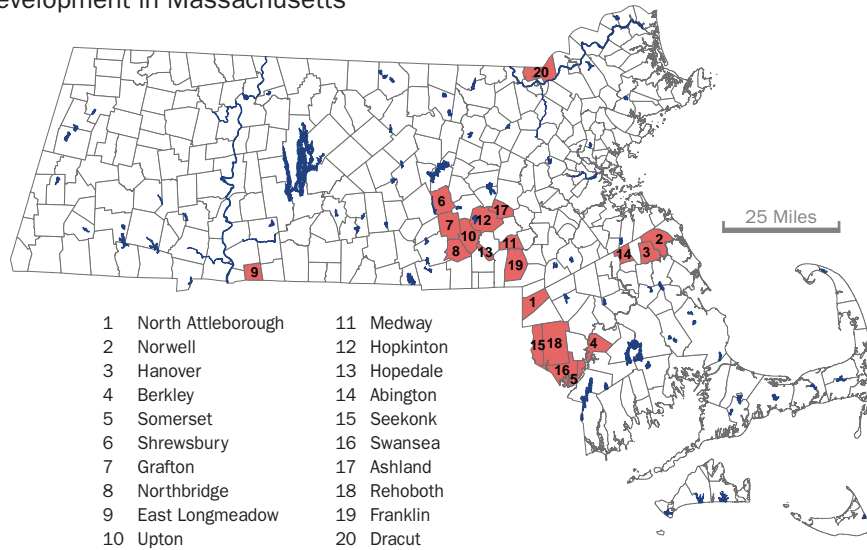
The Sprawl Frontier: How far has it spread?

The last edition of *Losing Ground* highlighted the Sprawl Frontier, the area where development was the most rapid. In these communities, the remaining land is being converted to residential and commercial uses at the greatest rates. A new Sprawl Frontier was identified by delineating the towns with the highest rates of development (Figure 1.2). The Sprawl Frontier is an area that radiates out from the metropolitan centers of Boston, Providence, and Worcester and has crept farther west and south since the last edition of *Losing Ground*.

Two significant clusters of high-growth communities are apparent (Figure 1.3): one concentrated in the Blackstone River watershed (formed by the towns of Shrewsbury, Grafton, Northbridge, Upton, Hopedale, Hopkinton, Ashland, Medway, and Franklin) and one primarily in the Ten Mile and Narragansett Bay watersheds (made up of the towns of North Attleboro, Seekonk, Rehoboth, Swansea, Somerset, and Berkley). While parcels of unprotected natural land tend to be smaller in the Sprawl Frontier, their protection is nevertheless crucial.

CONVERSION OF 22 ACRES PER DAY
FROM A NATURAL TO A DEVELOPED
STATE IS LIKE CREATING A DEVELOPMENT
THE SIZE OF THE CITIES OF NEW
BEDFORD, LAWRENCE, AND SPRINGFIELD
COMBINED EVERY 5 YEARS.

Figure 1.3: Hot spots of development: 20 Towns with the highest rate of development in Massachusetts



In addition to the Sprawl Frontier, this edition of *Losing Ground* identifies the Sprawl Danger Zone: areas where development pressure is increasing and significant ecological impacts have already occurred, yet significant regional conservation opportunities still exist. Many of these towns are still rural in character. We delineated the Sprawl Danger Zone using information on land use change (Figure 1.2), recent housing growth (Figure 2.1), as well as consideration of ecological impacts (Figure 3.5). Further discussion of the Sprawl Danger Zone follows in Chapters 2 and 3.

NORMALIZED DATA

It is important to “normalize” spatial data when comparing cities and towns with each other. Municipalities in Massachusetts vary greatly in size. As a result, it is not always accurate to compare absolute rates of change. For instance, Plymouth (66,800 acres) is far larger than North Attleboro (12,400 acres). The absolute amount of development in Plymouth from 1999-2005 was 790 acres, while in North Attleboro it was 330 acres. However, the rate of development, when normalized, highlights that development is occurring far more rapidly in North Attleboro (17 acres per square mile) than in Plymouth (7.7 acres per square mile). Presenting the information this way is intended to give the reader the ability to look at land use change as it impacts each individual community. In some cases, however, it is instructive to examine *both* normalized data and absolute acres of conversion because different patterns will emerge from the data (e.g., Figure 1.4).

What Types of Land Are We Losing in Massachusetts?

This section examines the forest and agricultural resources that have been lost to development between 1999 and 2005.

Figure 1.4: Forest conversion in Massachusetts, 1999-2005

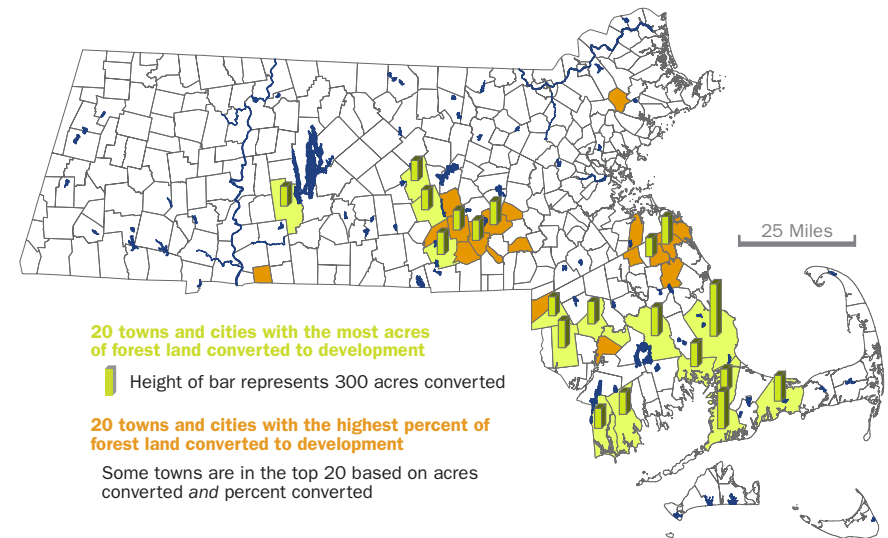
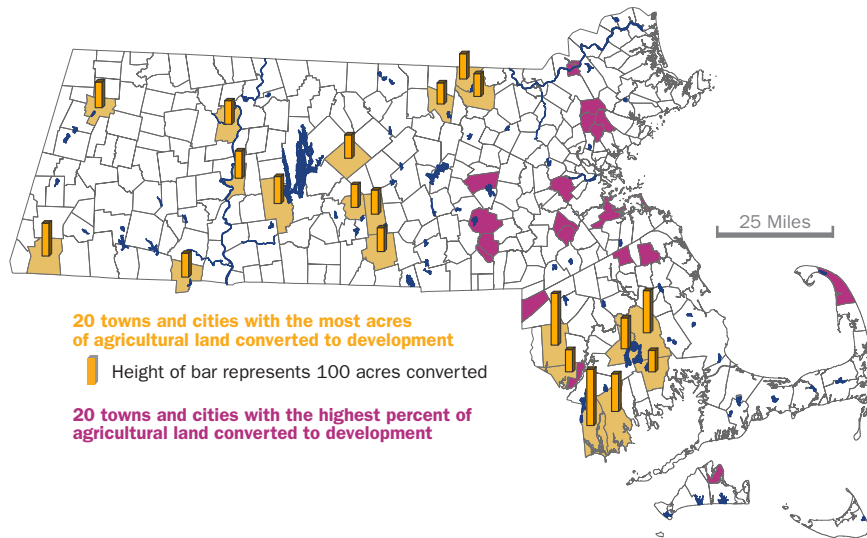


Figure 1.4 shows a ranking of the 20 municipalities with the greatest amount of forest loss between 1999 and 2005. The towns with the green bars are those with the highest amount of forest lost in acres, while the orange towns are those with the highest percent of the town's forest converted. Southeastern Massachusetts continues to lose forest at an alarming rate. This land use conversion threatens some of the most vulnerable rare species and significant natural communities in the state. A cluster of towns around Worcester, primarily in the Blackstone River watershed, has undergone an explosion of forest loss since 1999.

Forested and natural lands provide important habitat for the full range of our native biodiversity, supporting both common species and rare species, but they also provide other crucial environmental services to our state. One of the most critical is water supply protection—forested lands keep our water supplies clean and reduce the need for costly filtration and treatment facilities for drinking water. The value of these “ecosystem services” provided by undeveloped land was calculated in the last edition of *Losing Ground* at over 6.3 billion dollars annually.

Figure 1.5: Agriculture conversion in Massachusetts, 1999-2005



Agricultural lands can be particularly vulnerable to development pressures because they have already been cleared and leveled. Financial pressures on farmers also contribute to loss of agricultural land, particularly during the transfer of family farms through generations. Figure 1.5 shows that many of the smaller communities closer to Boston are losing the highest *percentages* of their last remaining agricultural land to development. The percentage loss is high in communities close to Boston because they have small acreages of agricultural land to begin with. Hot spots, where large acreages of agriculture have been converted, are more broadly distributed, with small clusters of towns in the southeastern and central regions, and with some outlying municipalities also experiencing high levels of agricultural loss. Agricultural land use conversion must be confronted as a statewide issue and is not localized within the Sprawl Frontier.

The loss of agricultural land has ramifications beyond changing the aesthetics of the landscape and increasing the demand for services in formerly rural towns. It also removes land from food production, while the increased interest in and demand for locally grown fresh produce, meat, and dairy products reflects a growing desire by consumers to reduce their carbon footprints by eating locally whenever possible.

SPOTLIGHT YOUR TOWN!

The new *Losing Ground* interactive website (www.massaudubon.org/losingground) allows you to take a closer look at development trends in your community, as well as protection of forestland and agricultural land. *Losing Ground* generates a variety of statistics, many of them at a statewide level. Conservation agencies and organizations in Massachusetts direct their activities on many different levels. Local land trusts most frequently focus protection efforts in their municipality while the Commonwealth's many watershed associations have a broader perspective.

The *Losing Ground* website makes available key statistics and maps at *all* of the following levels: town, watershed, ecoregion, county, and regional planning agency. For example, Rehoboth:

- has more than 20,000 acres of unprotected forest
- has more than 50% of the town zoned in over 2-acre lots
- is among the top 20 fastest developing towns
- is one of the top 20 towns in acres of forest developed between 1999 and 2005
- is only 4% protected
- is number 2 in the state for acres of agriculture developed between 1999 and 2005
- is number 2 in change in the town Index of Ecological Integrity between 1999 and 2005

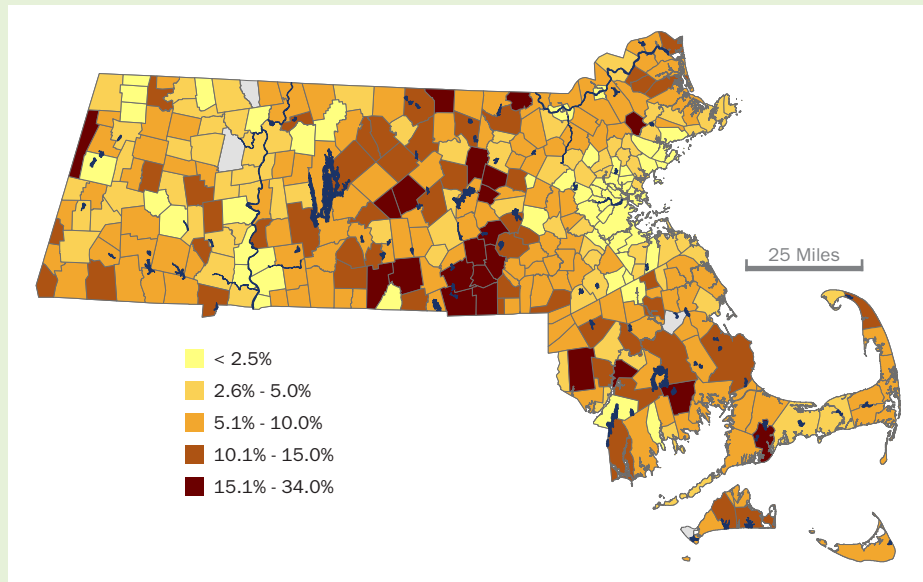
In addition to accessing this tabular data, the user will be able to view maps of the town's development pattern in 2005, as well as the location of important forest, agricultural, and other ecological resources. We anticipate that this additional resource will greatly increase the utility of *Losing Ground* for municipalities, conservation agencies, and organizations.

CHAPTER 2: HOUSING AS A DRIVER OF LAND USE

Demographics

In comparison with other states, Massachusetts' population growth has been mostly flat over the past six years, and actually declined between 2003 and 2005. In fact, Massachusetts 2.3% growth rate this decade is 43rd in the country. Despite this slow growth, Massachusetts is still the third most densely populated state after Rhode Island and New Jersey, and new homes continue to be built far from existing cities.

Figure 2.1: New homes in Massachusetts cities and towns (1999-2005), as a percentage of existing housing units in 2000 (US Census Bureau)



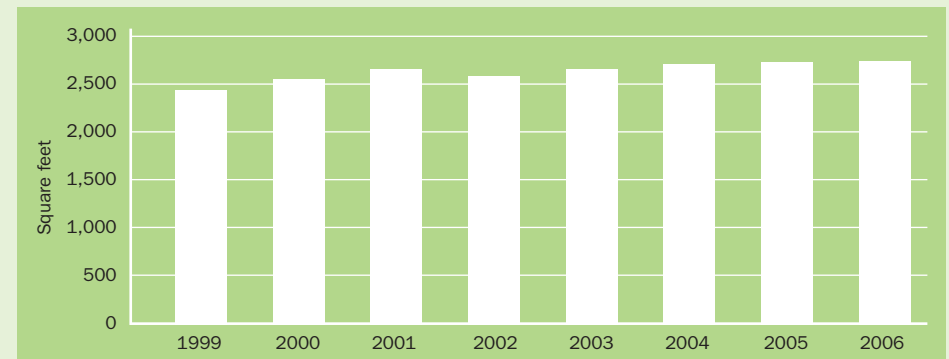
High-Vulnerability Areas: Sprawl Danger Zones

Figure 2.1 shows the relative growth of housing in each municipality. The darkest areas are towns where the housing stock has increased by between 15 and 34% in only six years. In a band of towns running north to south just east of the Quabbin Reservoir, there have been surprising increases in the housing stock. The rate of land use change is not the fastest in these towns, but the relative changes are significant and represent the Sprawl Danger Zone that has already arrived in this part of Massachusetts. Many of these towns have added 10 to 15% to their housing stock during the six years in question, are experiencing rapid growth, and until recently were facing increasing development pressure. Such rapid development leads to drastic increases in demand for services such as road maintenance, schools, and waste treatment and disposal, and these municipalities will need to increase their infrastructure and spending to meet those demands. At the moment, the opportunity still exists to engage in thoughtful planning to shape the future growth of these communities.

Trends in Housing

Figure 2.2: Home sizes continue to increase

Average living area of new homes in Massachusetts (1999-2006)



Bigger Houses, More Sprawl

The average size of new homes constructed in Massachusetts continues to rise steadily to a peak of over 2,700 square feet in 2006. These larger homes not only have a larger footprint but also bring more secondary impact to the environment of Massachusetts, creating larger driveways and more impermeable surfaces, more edge effect into surrounding forestland, and more hydrological disruption above and below ground.

Since the 1980s, many communities in Massachusetts increased their minimum lot sizes in their zoning regulations, often to comply with Title 5, the state’s regulations for siting septic systems. Larger lot sizes were seen as desirable, and many communities now require a one- or two-acre minimum lot size in the hope they will retain the traditional character of their communities by discouraging density. However, the resulting suburban development pattern, combined with the many loopholes in current zoning laws, encourages sprawling development, using more land to house a smaller population and impacting a larger area with land use change.

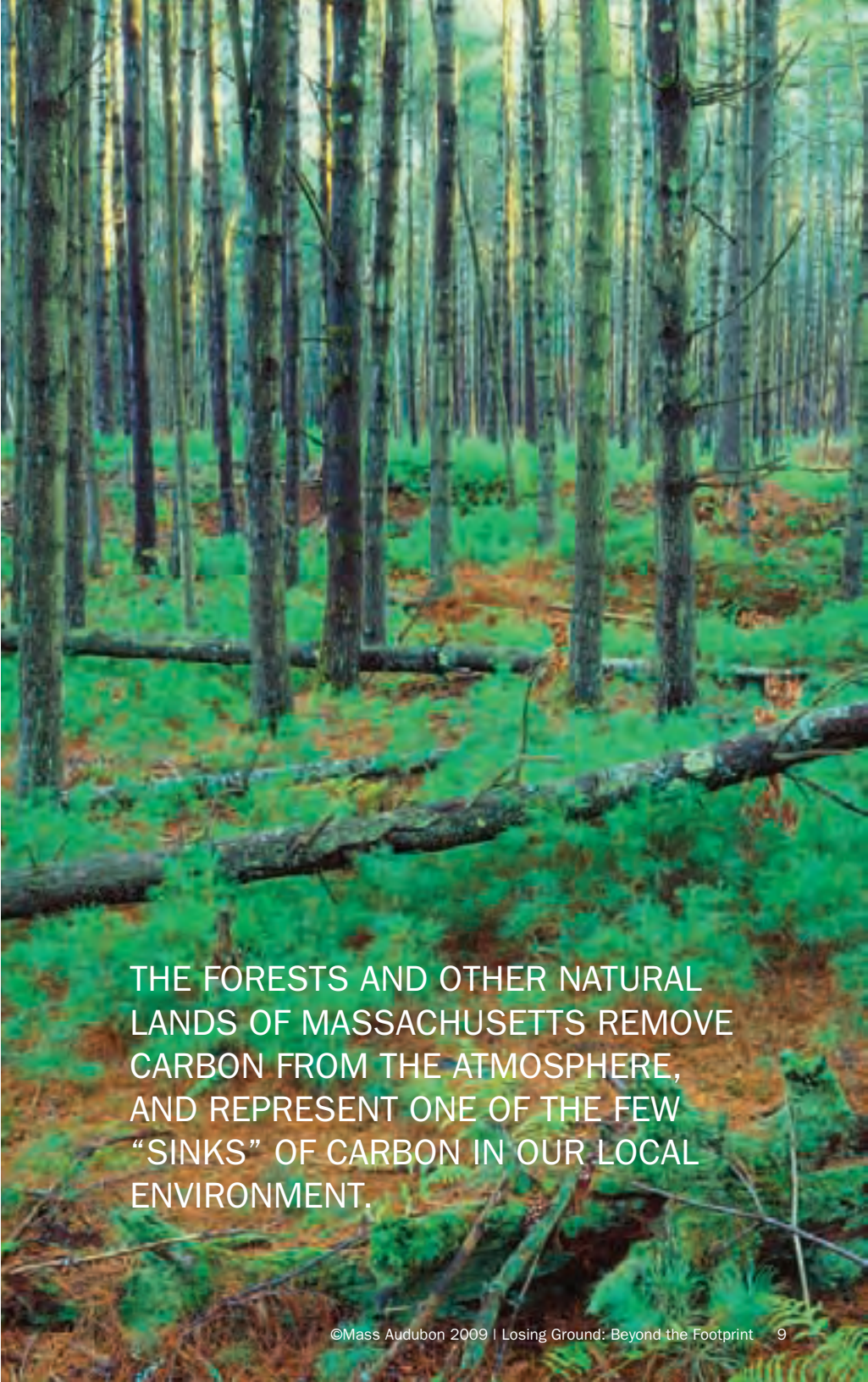
Figure 2.2 illustrates the trend in new house size from 1999 to 2006. It shows that for most of our recent housing boom, developers were building larger houses. As we will show in Chapter 3, the lower density of population has a greater ecological impact, fragmenting the landscape further and using more energy and natural resources to construct and maintain.

Climate Connection

The importance of curbing our appetite for land becomes more urgent in the face of climate change. The forests and other natural lands of Massachusetts remove carbon from the atmosphere, and represent one of the few “sinks” of carbon in our local environment. Meanwhile, the continued proliferation of large houses means that we are consuming more land to house fewer people, in larger houses that consume more energy—creating more “sources” of carbon in the atmosphere, and further exacerbating the global problem of climate change. Sprawling development encourages increased reliance on automobiles, contributing still more carbon to the atmosphere.

Table 2.1: Zoning for density consumes less land

	Predominantly zoned for 2-acre lots	Predominantly zoned for 1- to 2-acre lots	Predominantly zoned for less than 1-acre lot
New residential units	20,617	32,937	28,283
Total parcel-acres	53,790	48,136	15,503
New units/parcel-acre	0.38	0.68	1.95



THE FORESTS AND OTHER NATURAL LANDS OF MASSACHUSETTS REMOVE CARBON FROM THE ATMOSPHERE, AND REPRESENT ONE OF THE FEW “SINKS” OF CARBON IN OUR LOCAL ENVIRONMENT.

Zoning regulations are complex, but to enable our analysis, we considered three categories of zoning—two acres or larger, one to two acres, and less than one acre. Table 2.1 looks at the amount of land used by these three different types of zoning. In towns where more than 50% of the town is zoned for density, with less than one-acre lots, over 28,000 units of housing were created, spread over 14,500 parcel-acres. In contrast, in towns with primarily greater than 2-acre zoning, 20,600 housing units were created, spread over almost 54,000 parcel-acres. When the number of housing units per parcel-acre is calculated, the primarily denser zoning creates almost 2 units of housing per parcel-acre, whereas the least dense zoning is distributed over much more land, creating only 0.38 units of housing per parcel-acre. In general, we advocate for flexibility that would allow the placement of more units on each lot, which, in concert with a strong land conservation program, would allow for development of housing stock and protection of open space in towns that need both.

Figure 2.3: Zoning in Massachusetts—Towns with greater than 50% of area in low-, medium-, or high-density zoning

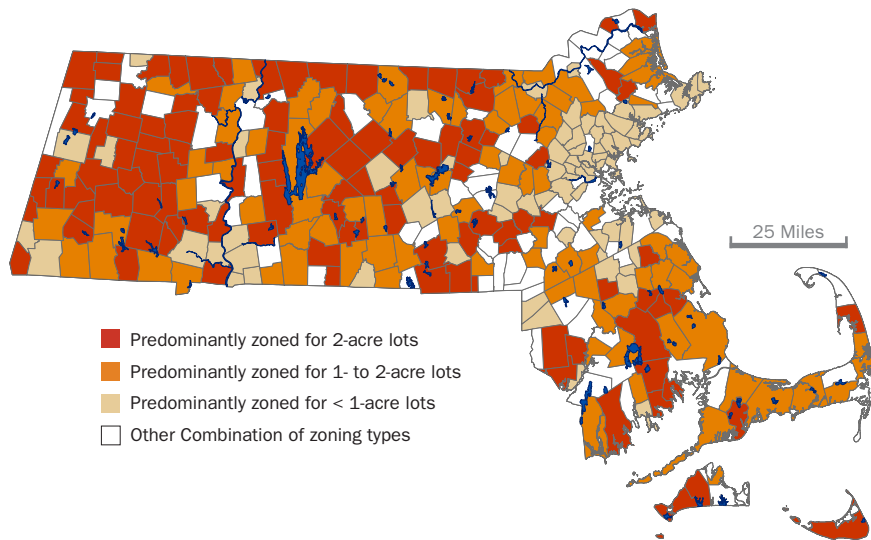


Figure 2.3 highlights the towns in Massachusetts with greater than 50% of their area zoned for 2-acre lots or larger. There are large clusters of towns within the Sprawl Frontier and Sprawl Danger Zone that are dominated by large-lot zoning. Much of the northern edge and western half of Massachusetts remains dominated by large-lot zoning, which if left unchanged could lead to a great loss in ecological integrity in the future. Meaningful reform of Massachusetts' outdated zoning ordinance could give those communities new flexibility and new tools to guide both development and conservation as their populations continue to grow.

IMPROVING THE COMMUNITY PRESERVATION ACT

Mass Audubon advocates improving the Community Preservation Act (CPA) by broadening municipal participation to promote sustainable communities. Legislation has been filed to advance and strengthen these goals to accomplish the following.

Ensure lasting success. One of the most important amendments in this bill would increase the annual minimum CPA trust fund match to 75%. The trust fund derives its revenue from fees collected at the Registries of Deeds statewide. This legislation seeks to stabilize the statewide trust fund by guaranteeing that CPA communities receive a minimum 75 percent annual match. In 2008, for the first time in the CPA's eight-year history, CPA communities received an average match of 74 percent, rather than the dollar-for-dollar match seen in previous years. The state Department of Revenue projects that the match will fall dramatically this year, likely as low as 35 percent for many communities, due in part to the popularity of the program as well as the decline in real estate activity.

Broaden CPA participation. The second component of the bill would help cities and less affluent communities, many of which have yet to adopt the CPA. It would allow communities to combine a traditional 1% CPA property tax surcharge with up to 2% of other municipal revenue in order to fund their local Community Preservation account. This alternate method of adoption relies less on the local property tax surcharge to raise revenue and provides a higher level of matching funds from the statewide CPA Trust, which will spur more CPA adoption in urban communities. Furthermore, the bill adds a new optional commercial exemption for the first \$100,000 of property value for commercial and industrial properties to mirror the current \$100,000 residential exemption. This new exemption is especially beneficial to small businesses. These two important changes are designed to broaden CPA adoption.

Clarify allowable uses to promote sustainable communities. Another important amendment would clarify the allowable uses for CPA funds so that communities can rehabilitate existing outdoor parks and other recreational resources. Currently, rehabilitation projects are restricted to recreational resources that were acquired or created with CPA funds. This has been extremely limiting in many communities, including larger urban communities with less open space to protect but with many older parks in need of capital rehabilitation. In addition, it may force some communities to create needed playing fields on land used for passive open space instead of rehabilitating existing fields. This change would mirror a legislative amendment made in 2002 allowing CPA funds to be devoted to rehabilitation of historic assets not acquired under CPA.

PLANNING FOR FUTURE GROWTH: THE LAND USE PARTNERSHIP ACT

Mass Audubon advocates reforming our outdated zoning regulations that for many years have allowed for sprawling, unplanned development. For the past several years, a Patrick Administration task force of conservationists, planners, developers, and state officials has been working toward a new framework for developing land in Massachusetts while providing open space protection and affordable housing opportunities, by recommending to the state legislature amendments to the outdated Massachusetts General Laws Chapter 40A—the state’s zoning act. The Land Use Partnership Act (LUPA) would provide communities with new flexibility to implement land use regulations that reflect their common vision for growth. It would increase flexibility in zoning and permitting, foster housing affordability and open-space protection, and close loopholes that undermine planning efforts. It would also improve local regulatory procedures, streamline reviews, and promote mediation of appeals. In addition, it would allow municipalities to opt-in to a higher performance standard and thereby receive new tools for directing development.

If enacted, this legislation would allow all municipalities in the Commonwealth to:

- Curb “McMansions;”
- Allow a majority vote for adopting zoning changes, as opposed to the 2/3 vote required now;
- Limit “zoning freezes” to project plans, and not the underlying land itself;
- Establish a framework for site plan review;
- Authorize municipalities to institute the Transfer of Development Rights to protect important landscapes;
- Expand the use of “cluster development” to protect open space within residential developments;
- Empower municipalities to charge impact fees to offset the costs of increased public services.

For those municipalities that choose to go a step further and locally adopt certain provisions of LUPA, benefits are extended to include authority to:

- Create a plan and enact local zoning consistent with the plan;
- Provide for prompt and predictable permitting;
- Mandate Open Space Residential Design to protect open space;
- Mandate low-impact development techniques to help replenish groundwater;
- Eliminate the approval-not-required exemption for residential projects;
- Reduce the subdivision zoning freeze from eight to three years;
- Impose reasonable rate-of-growth programs within growth areas;
- Permit natural resource protection;
- Receive technical and financial assistance from the Commonwealth.

Mass Audubon advocates for tools to help Massachusetts communities plan future development, siting areas of density where appropriate, to preserve the traditional character of our landscapes; to protect biodiversity and open space; and to provide more affordable housing. The Land Use Partnership Act, with refinements, would provide valuable tools for communities to meet these goals.