

LOSING HUNTING ACCESS in Massachusetts

by Tom O'Shea

There are few issues over which we have some control that affect the retention of hunters...

Talk to any hunter or the members of a hunting club and they are likely to tell you that the continuing decline in the number of hunters in Massachusetts and beyond is the result of fewer young people taking up the sport. State fish and wildlife agencies and many partners from the hunting, shooting sports, and wildlife management communities have responded to this troubling erosion by investing more resources and intensifying their focus on recruitment programs and youth hunting opportunities.

But hunter recruitment is only part of the equation. The mathematical formula for sustaining the hunting population is as simple as that of any population: "flow-in" must equal or exceed "flow-out":

(new hunters in)/year=(hunters out)/year

Put another way, a lake of 65,000 gallons (about the number of hunters in the state) will eventually dry up if the number of gallons of water flowing in is less than the number of gallons flowing out. Hunter initiation programs and youth opportunities concentrate on the flow-in side of the equation, but how about the flow-out side of the equation: hunters who stop hunting?

Based on figures from the Division of Fisheries and Wildlife's Annual Reports, the number of resident hunters in Massachusetts declined by 49% – from 124,849

to 63,667 – between 1958 and 2008. In short, we have lost almost half of our hunters in the last 50 years. In addition to the many cultural and health benefits of hunting, hunters are a crucial tool that wildlife biologists – and the general public – rely on to manage game populations and support wildlife research, land protection, and natural resource conservation programs. It should therefore be of concern to everyone if this tool is showing signs of rust. Shouldn't we try to find out why it is deteriorating and what can be done to get it honed and oiled again? Why do hunters decide not to hunt?

According to a nationwide survey in 2008 by Responsive Management, **the top three reasons why people no longer continue hunting are: 1) aging and associated physical limitations, 2) time constraints because of work and family obligations, and, 3) lack of access for hunting.** Of these top three reasons, "lack of access" is the only one that fish and wildlife agencies, conservation and sporting organizations, communities, and landowners can realistically expect to influence in any significant way.

But how do we define "hunting access" for the purposes of this discussion? We have to look at the subject from two perspectives. One is entirely objective: how much of the landscape is legally open

to hunting. The other is subjective and psychological: the *perception* of how easy or difficult it is to gain access to land for hunting purposes.

In Massachusetts, the third most densely populated state, it is not surprising that the urbanization of the landscape presents a barrier to access. It erects both physical and psychological barricades between people and undeveloped lands. This can gradually separate and isolate us from participating in traditional outdoor activities like fishing and hunting, and even more insidiously, prevent us from developing a healthy relationship with nature and acquiring a realistic understanding of its workings. Kids are now largely separated from the natural world and spending less time outdoors than any previous generation, as brought to public attention by author Richard Louv in his acclaimed book, "Last Child in the Woods."

But are hunters separated from access in Massachusetts? What barriers to hunting do they encounter on our landscape? Have you ever wondered how much land is open to hunting in the Commonwealth?

To answer these questions, we need to look at three major barriers to hunting access in Massachusetts: 1) discharge setbacks around development, 2) private land posted against trespassing, and 3) city/town restrictions on hunting practices.

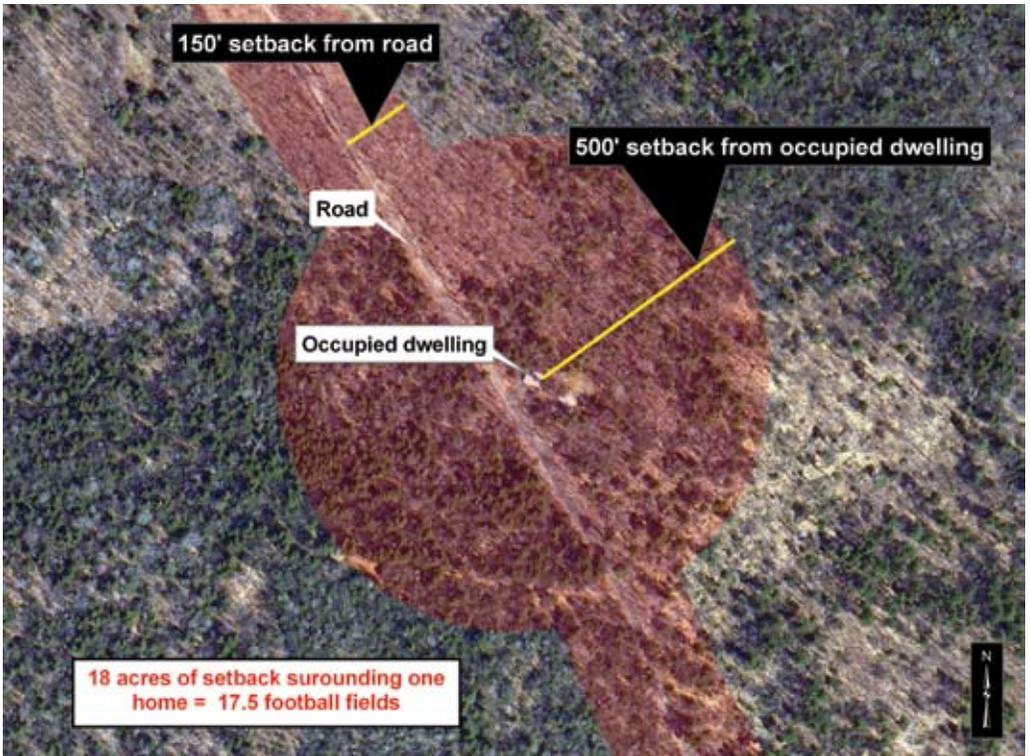
Discharge Setbacks and Sprawl

Today, using MassGIS 2005 landcover data and the precision of geographic information systems tools, we have calculated that 60% – roughly 3.1 million acres – of Massachusetts is within a discharge



Photo © by Bill Byrne

As development continues its inexorable sprawl across the landscape, it becomes incrementally more difficult for hunters to access both private and public lands.



MassGIS Orthophoto map prepared by Michael Huguenin

Figure. 1. Conceptual graphic showing the discharge setback or “safety zone” as applied on the ground around one house and a road using computer mapping.

setback or “safety zone” (see Figures 1 and 2 on this and the facing page).

What is a discharge setback? The discharge setback is defined by a state law (Chapter 131, Section 58) which states that a person cannot discharge any firearm or release any arrow across or within 150 feet of a “hard-surfaced highway” or “possess a loaded firearm or hunt by any means on the land of another within 500 feet of a dwelling in use, except as authorized by the owner or occupant thereof.” This state statute has been around for over 50 years to provide a “safety zone” for the public, landowners, and hunters alike. In fact, the Division of Fisheries and Wildlife provides landowners with “safety zone” signs to help demarcate the setback on the ground.

Further restrictions are set forth in a public safety statute (Chapter 269, Section 12E) that prohibits the discharge of a rifle or shotgun within 500 feet of a dwelling or building in use without the consent of the owner or legal occupant. This statute is different from the previous statute in that it does not relate specifically to hunting or release of arrows.

One House = 18 Acres

The area of the discharge setback around a dwelling can be calculated as the area of a circle ($\text{Area} = \pi r^2$). Do the math ($3.14 \times 500 \times 500$) and it comes out to 785,000 square feet. Divide this by the 43,560 square feet in an acre, and the result is 18 acres of discharge setback per house.

While discharge setbacks around roads and houses are important for public safety, the loss of hunting access they cause is exacerbated by sprawl and rapid development of the landscape. Sprawl is driven not just by human population growth, but also by zoning regulations (see Figures 3A and 3B). Massachusetts Audubon’s *Losing Ground IV: Beyond the Footprint*, published in 2009, explains that the zoning regulations in many communities in Massachusetts require a 1- or 2-acre minimum lot size for all new houses.

This type of low-density residential zoning distributes fewer houses over much more land than higher density zoning. In fact, the Audubon report found that low-density zoning in Massachusetts has resulted in one house per 2.6 acres, whereas higher density zoning has resulted in one house per 0.5 acre. Because one house essentially closes 18 acres of hunting access due to discharge setback buffers, *the lower the zoning density, the greater the loss of hunting access*. Community planning and zoning regulations can obviously work to minimize this impact, not only on the loss of hunting access, but on other valuable public recreational and ecological resources as well.

The Town of Shutesbury offers an interesting approach to this problem. Shutesbury requires that any proposed subdivision that will extend more than 500 feet back from a town road must protect 80% of the land involved through a conservation restriction. The subdivision itself must be clustered on the remaining 20% of the land. This not only secures environmental and recreational values for the public, but also insures that those who live in the development, especially children, will have ready, back-door access to the joys of the great outdoors.

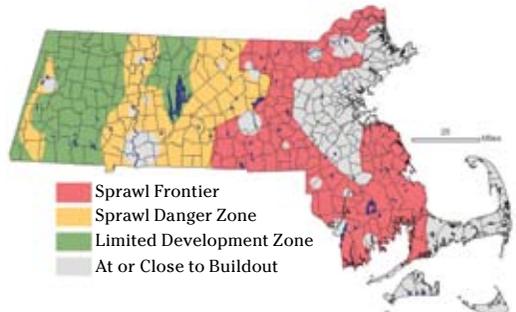


Figure 3A. Development "Sprawl" in Mass.

Maps after Massachusetts Audubon's *Losing Ground IV* report (2009)

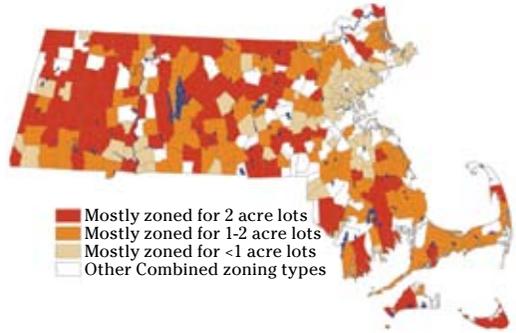


Figure 3B. Zoning Density in Mass.

Map prepared by MDFW biologist Michael Huguenin

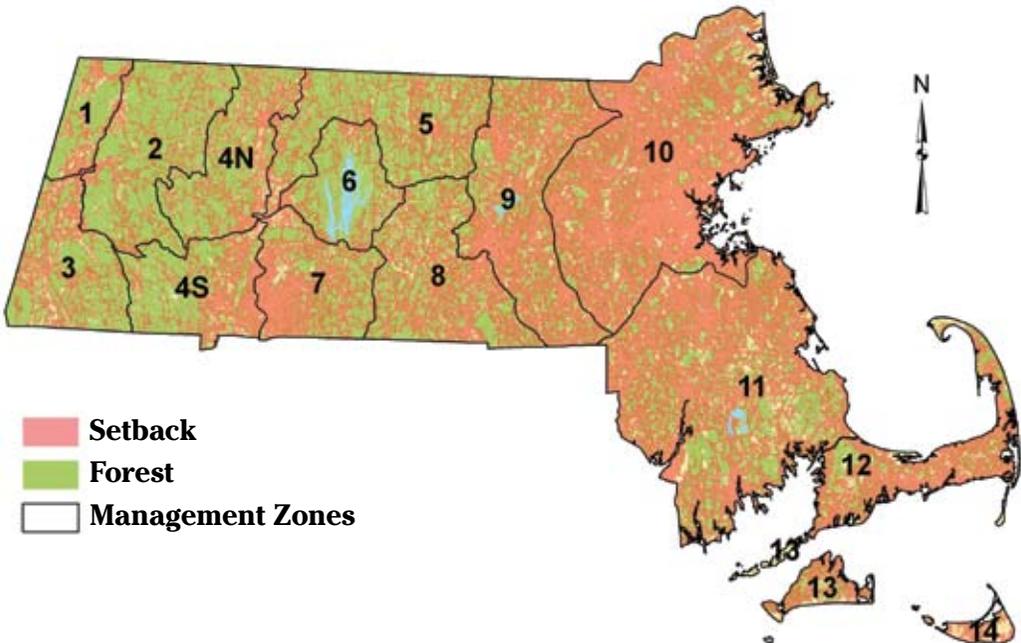


Figure 2: Discharge Setbacks in Massachusetts.

Discharge Setbacks and Deer Management

Communities with a large percentage of their land area closed by discharge setback or special town restrictions on hunting, coupled with 25% or more forest cover, frequently experience impacts from higher deer densities. Such communities frequently ask the Division of Fisheries and Wildlife for assistance in finding ways to deal with their concerns, which typically include the incidence of Lyme disease, vehicle collisions with deer, and damage to landscaping and agricultural crops. Examples of communities experiencing such concerns include Acton, Framingham, and Sudbury. As of 2003, all three of these communities require hunters to obtain written permission of landowner(s) or town authorities.

Take a look at Figure 4A below. Notice the large amount of forested area shown in green. Now look at Figure 4B on the facing page and note the significant area, shown in red, encompassed by discharge setbacks. From our analysis, Sudbury has about 6,678 acres of forest, of which

71% is within the discharge setback. The Town of Framingham has opened some of its town land to archery deer hunting in response to concerns related to high deer densities. Suburban communities such as Framingham offer a favorable landscape for deer: plenty of food (including abundant ornamental plants) and protection afforded by restrictions on hunting access.

The Town of Duxbury is an interesting case. Duxbury has not only opened their sizeable town lands to archery deer hunting, but some of its residents and landowners have worked together to collectively grant permission to certain hunters to hunt deer within the discharge setback as allowed by law. While the law restricts both firearms discharge and release of arrows, one group of neighborhood landowners allowed deer hunters to use bows within an adjacent forested open space. The group was initiated by parents concerned about the number of children in the neighborhood who had been infected with Lyme disease. They worked with Division staff to find ways of reducing deer densities. After a few years,



Figure 4A: The map above shows the amount of forest cover within part of Middlesex County. The map on the facing page (Figure 4B) shows the amount of discharge setback in the same area. While setback areas are not necessarily closed

As the colonial agrarian landscape of Massachusetts began to change, posted land probably increased with the growing population associated with industrialization. In the Commonwealth of Massachusetts' 1918 Annual Reports of Public

The reasons landowners post their lands include 1) fear of property damage, 2) concern for liability, 3) negative interactions with hunters, and, 4) exclusive use (hunters wishing to exclude other hunters).

Officers and Institutions, it is stated that "it is no novelty to find land posted against trespass, hunting, and fishing..."

Almost four decades later, in 1956, Dr.

Joseph Larson conducted a study in which 1,165 landowners in Massachusetts were surveyed to determine how many posted their land and why. At that time, 20% of private landowners in the Commonwealth posted their land.

A 2004 National Woodland Owner Survey estimated that about 477,000 acres of 1,662,000 acres, or 29%, were posted by woodland owners in Massachusetts. However, the study reported only acres posted by landowners who were individuals, families, trusts, or joint ownership ventures, and it was based on a small sample size. Dr. David Kittredge, extension forester with the University of Massachusetts, and colleagues estimated in 2007 that there were a total of 111,706 ownerships covering 2,004,325 acres of non-industrial private forestland. Thus, there are likely thousands of additional acres posted by other types of landowners including land trusts and other non-profit organizations. Some organizations, including the Trustees of Reservations, recognize the need for deer control and have opened some of their lands to deer hunting.

Research surveys in various states regarding why landowners post their land have yielded conflicting results. Ironically, being an absentee landowner, the size of the parcel of land, the age of owner, and even the reason for ownership have not consistently explained the posting behavior of landowners across these studies. But there

are a few reasons that float to the top consistently. These include 1) fear of property damage, 2) concern for liability, 3) negative interactions with hunters, and, 4) exclusive use (hunters wishing to exclude other hunters). Interestingly, Dr. Larson found in his 1956 study of 1,165 landowners that "most post because of real or anticipated destruction of their property" and that the second biggest reason was "shooting too close to buildings" yet "59% of landowners who post their land will allow hunters if permission is asked."

From this finding, Dr. Larson emphasized that hunters should display respect for landowners by first asking for permission to hunt. That landowners will allow hunters access, if asked, still rings true today. In fact, 79% of landowners who post their land in New York state will allow some hunting

on their property, 66% in one Texas study, and 54% in Minnesota. Fifty years after Dr. Larson's study, landowners continue to post their lands for the same primary reasons – but many also continue to grant hunters access if permission is asked.

The good news from these findings is that hunters may be able to have a genuine, positive influence in changing landowner attitudes and gaining access. A hunter can go a long way toward gaining access from a landowner by showing respect and developing a friendly relationship. There are any number of ways to do this including politely asking for permission from landowners,

161 cities and towns, or 45% of all municipalities in the Commonwealth, have restricted hunting access in some way.

educating them about the safety and benefits of hunting, learning what is important to them, helping them with property stewardship (including picking up litter and keeping an eye on activities on their property), and informing them about your own experience, ethics, and safety. Be friendly and positive, and refrain from criticizing other hunters. This is a healthy reminder that the future of hunting access is dependent on how we conduct ourselves and the relationships we build with private landowners.



Thank A Landowner

If a landowner gives you permission to hunt on his or her land, you can do many things to help retain that privilege. Here's some common sense advice:

Be thoughtful and personal in expressing your appreciation, and always treat the landowner as you would like to be treated.

Visit the landowner at the end of every season to express your appreciation in person, and if possible, provide/share some of your fish and game harvest. A list of the wildlife you saw on the property and/or images of any wildlife you photographed on the property are almost always welcome gifts.

Send a personal note or card to thank the owner for the opportunity to use his land. Consider giving a small gift – a certificate to a local restaurant, a gift basket, or perhaps a subscription to Massachusetts Wildlife magazine.

Offer to assist with needed tasks around the property that would be helpful to the landowner. Pick up and dispose of any trash or litter you encounter on the property.

Assist the landowner in protecting his or her property by documenting and reporting any suspicious activities you observe to the Environmental Police at 1 (800) 632-8075.

City / Town Restrictions

Not a year goes by without a town or city in Massachusetts considering the question of hunting access. Conservation commissions and municipal officials are often faced with questions over whether a town or city should open or close its municipal lands to hunting. What types of hunting should be allowed and under what conditions? What can be done about managing the deer population? Is the bylaw necessary? Often, MassWildlife staff find themselves providing technical assistance and guidance in the middle of what can be a contentious local issue.

It is understandable that communities tend to look at such issues – and the consequences of whatever decisions they make – as solely their own, but the results of each city or town's decisions if they

close lands to hunting can accumulate to significant regional and statewide losses of access. As of 2003 (see map page 26), about 41 towns prohibited the discharge of firearms within municipal boundaries, 85 towns require hunters to obtain written permission from the landowner or town authorities, and 35 towns have special restrictions which may include restrictions on the release of arrows.



The result: a total of 161 cities and towns or 45% of all municipalities in the Commonwealth have restricted hunting access in some way. In comparison, Dr. Larson reported in 1956 that 20 cities and towns prohibited the discharge of firearms, 23 required hunters to obtain permission from landowners, and a small number imposed special restrictions. Only about 12% of municipalities restricted hunting access in 1956.

Behind many of these restrictions are the same reasons that private land is posted. Like landowners, cities and towns may not be aware that the discharge setback already encompasses most of their community and has worked to protect landowners, hunters, and the public. They often do not know that Massachusetts has an excellent record of hunter safety and requires all first time hunters to attend and pass a comprehensive hunter education program.

Cities and towns will undoubtedly continue to grapple with the issue of hunting access. Whether or not communities view such access as a net benefit to them, their local decision will impact their neighbors.

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Access, Continued from page 11

Because each local decision impacts hunters directly, hunters are reminded that they can play an important role not only in the discussion of the public benefits of hunting access, but also in bringing facts and evidence to bear in the local decision-making process. Local bylaws and restrictions change periodically, so hunters should always check the town's current status before they hunt within any particular community.

Hunter Use of Private Land

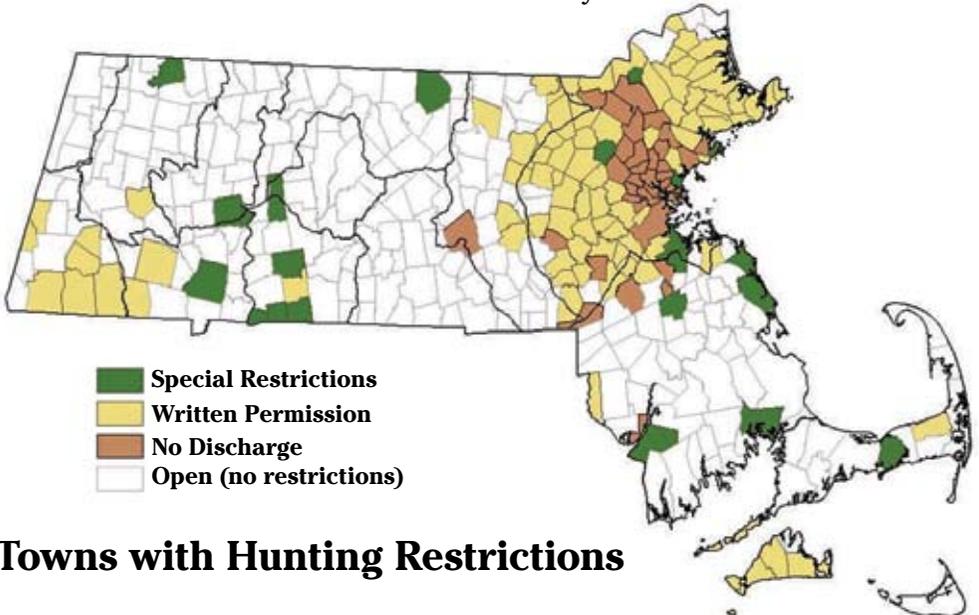
While maintaining and even increasing hunter access to state and municipal lands is important, access to private land is and always will remain a crucial factor in responsible deer management. The deer herd does not restrict its range to public lands open to hunting, so in order to manage the herd, we cannot restrict hunters to public lands open to hunting. In fact, if all private land in the state were closed to hunting, the deer harvest would be reduced by more than half and the herd would quickly grow out of control. Results from our deer hunter surveys and check station data in 2008 (see tables bottom of facing page) show that 56% of the statewide deer harvest

comes from private land. Approximately 78% of the hunters we surveyed reported that they used private land for all types of hunting.

Landowner Concern about Liability

Another issue related to hunter access is that some landowners post their land because they are concerned about the risk of liability if someone is hurt while using their property. Unfortunately, many landowners are unaware of a landowner liability statute (Chapter 21, Section 17C) in Massachusetts which protects landowners from liability for "personal injuries or property damage sustained by such members of the public" when they permit the public to use their land for "recreational, conservation, scientific, educational, environmental, ecological, research, religious, or charitable purposes without imposing a charge or fee..."

Landowners should understand that they are protected by this statute unless they charge a fee for access to their land. Some landowners will always remain skeptical of the protection this law provides, but it appears to be ironclad. If you don't trust our word on it, talk to a lawyer.



Towns with Hunting Restrictions

Based on data last compiled in 2003, at least 161 communities in Massachusetts have enacted local hunting restrictions. The percentage of such communities has increased from about 12% in 1956 to more than 45% today.

Did you know?

☀ Today a minimum of 60% – roughly 3.1 million acres – of Massachusetts falls within one or both statewide “safety zone” setbacks: 500 feet for a “building in use” and 150 feet for a “hard-surfaced highway”.

☀ Of the 2.9 million acres of forest in the Commonwealth, approximately 1.4 million acres, or 48%, of all upland forest falls within a setback.

☀ In 1956, 20% of private land in Massachusetts was posted against trespassing.

☀ According to a 2003 MassWildlife analysis, 41 towns prohibit discharge of firearms, 85 towns require hunters to obtain written permission from landowner or town authorities, and 35 towns have special restrictions which may include release of arrows.

☀ The 2004 National Woodland Landowner Survey estimated that about 29% or 477,000 acres of private family forests are posted against public access in Massachusetts.

☀ The Massachusetts Outdoor Recreation Map lists 339,856 acres of state Wildlife Management Areas, State Forests and Parks open to hunting – or about 5.3 acres/hunter in Massachusetts.

☀ It is unknown how many thousands of additional acres are closed by towns, land trusts, non-profit organizations, and industrial/business ownerships.



2008 HUNTER SURVEY: Use of Public and Private Land

Type of ownership hunted	Number of hunters using	Percent of total
Private land	923	27%
Public land	709	21%
Both	1,733	52%
Total	3,365	100%

2008 DEER HARVEST from either Public or Private Land

Type of ownership	Number of deer harvested	Percent of total
Private land	6,169	56%
Public land	4,835	44%
Total	11,004	100%

Hunting Leases

Though similar landowner liability or recreational use statutes are reported to exist in all 50 states, charging for access is quite common through contractual hunting “leases” among landowners in other parts of the country, particularly in the South. Such leases are much less common in the Northeast, probably because the small parcel sizes prevalent in the region are not as economically viable for leasing. A major criticism of hunting leases is that they preclude public access for all and favor only the highest bidders. This is anathema to “common use” of a public resource and runs counter to outdoor cultural tradition in New England.

What Will the Future Look Like?

According to Mass Audubon’s *Losing Ground IV* report, the rate of development in Massachusetts between 1995 and 2005 was 22 acres per day. If this rate continues over the next 50 years, what will this mean for the loss of hunting access? It depends on where the development will occur. The areas noted on Mass Audubon’s “sprawl” map as the “sprawl danger zone” (page 7) still offer significant areas outside of the discharge setback for hunting access and include wildlife management zones 5, 7, 8, 4S, 4N, and parts of 3. Worcester County overall is likely to lose the most access in the coming years. While not all of the development will occur in areas outside of discharge setbacks, a good portion probably will, especially in the less developed areas of Worcester County and the Connecticut Valley.

How might future development rates affect hunting access in the future? First, consider that a 22-acre development in a forest, without overlap of any existing setbacks, can remove at least 54 acres through the discharge setback. Let’s next assume that future development of 22 acres per day removes only one-half of that, or 27 acres. At this rate, there would be a loss of nearly 500,000 acres in discharge setback over the next 50 years, plus another 400,000 acres in actual direct loss from development. Is a loss of one million acres over the next 50 years unreasonable?

If our estimates are correct, over 75% of the state would fall within discharge setback! Add in closures on posted private land, conservation organizations, land trusts, and town lands, and the majority of hunting access in the future may likely rest squarely on state public land, most of which is located in western and parts of central Massachusetts.

Sure, 50 years is a long time and the loss of hunting access is gradual. It’s so gradual that we can forget that we are losing it. Although land acquisition has been valuable for ensuring hunter access (MassWildlife purchased over 10,000 acres of land last year – about 27 acres per day – surpassing development rates statewide thanks to sportsmen and women through their purchase of the land stamp, as well as through open space bond funding), land acquisition alone may not be enough.

Non-industrial private forest landowners control about 76% of all forestland in the state. These landowners, along with communities, will be part of any long-term solution for providing hunting access and the public benefits hunting and wildlife management sustain. From this perspective, hunters and other conservation and environmental advocates have a shared interest in protecting these lands from development.

As many of you know, the older you get, the faster time seems to slip away. Fifty years will be here in no time. If you think hunting is an important tradition to pass on to your children here in Massachusetts, don’t forget: they will need a place to hunt....



Tom O’Shea (MF, MPA) is Assistant Director of Wildlife for the MDFW and a licensed Massachusetts forester. He oversees the Wildlife Section which is responsible for research and management of the state’s game and furbearer species, as well as the agency’s forestry and upland habitat management programs. **Michael Huguenin** is a wildlife biologist within the Wildlife Section. His tireless geographic information systems analysis of the discharge setback in Massachusetts, with support from staff colleagues Dave Szczebak and Trina Moruzzi, resulted in the outstanding “setback” maps that accompany this article.