

LOSING GROUND:

**The Case for Land Conservation in
Massachusetts**

Executive Summary



Massachusetts Audubon Society

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Massachusetts is enjoying economic growth of unprecedented proportion. But with unprecedented economic growth has come unprecedented pressure on the open spaces of the Commonwealth - its farmlands, forests, wetlands, water supplies, and wildlife habitat. And as open space disappears, so do many of the amenities - the clean beaches, the parklands, the uncontaminated water - that have made Massachusetts such an attractive place to live and work.

Over 100,000 Acres of Open Space Have Been Lost Since 1981

Open land lost to residential and commercial development since 1981 totaled 103,000 acres¹. When land lost to roadways and other transportation is included, over 112,000 acres were lost in the last six years.

In 1986 alone, over 30,000 acres were lost, or nearly 600 acres every week. This amounts to losing the equivalent of 12 Boston Commons every week, or one area the size of Forest Park in Springfield.

Cape Cod, Islands, and Merrimack Valley Have Lost the Most Open Space

Development of open space since 1981 has not been evenly spread across the state (Figure 1). Of the five towns with the highest land consumption, four are communities on Cape Cod. An estimated 14,600 acres were developed on the Cape since 1981. Beyond Cape Cod, the Merrimack Valley (in the Lowell area), suburbs to the south and west of Boston, and the islands of Nantucket and Martha's Vineyard have lost the most open space since 1981 (Table 1).

¹ Philip S. Herr and Phyllis Robinson, Analysis of Land Consumption, 1981 - 1986, Prepared for the Massachusetts Audubon Society, July 1987 (see Appendix 1).

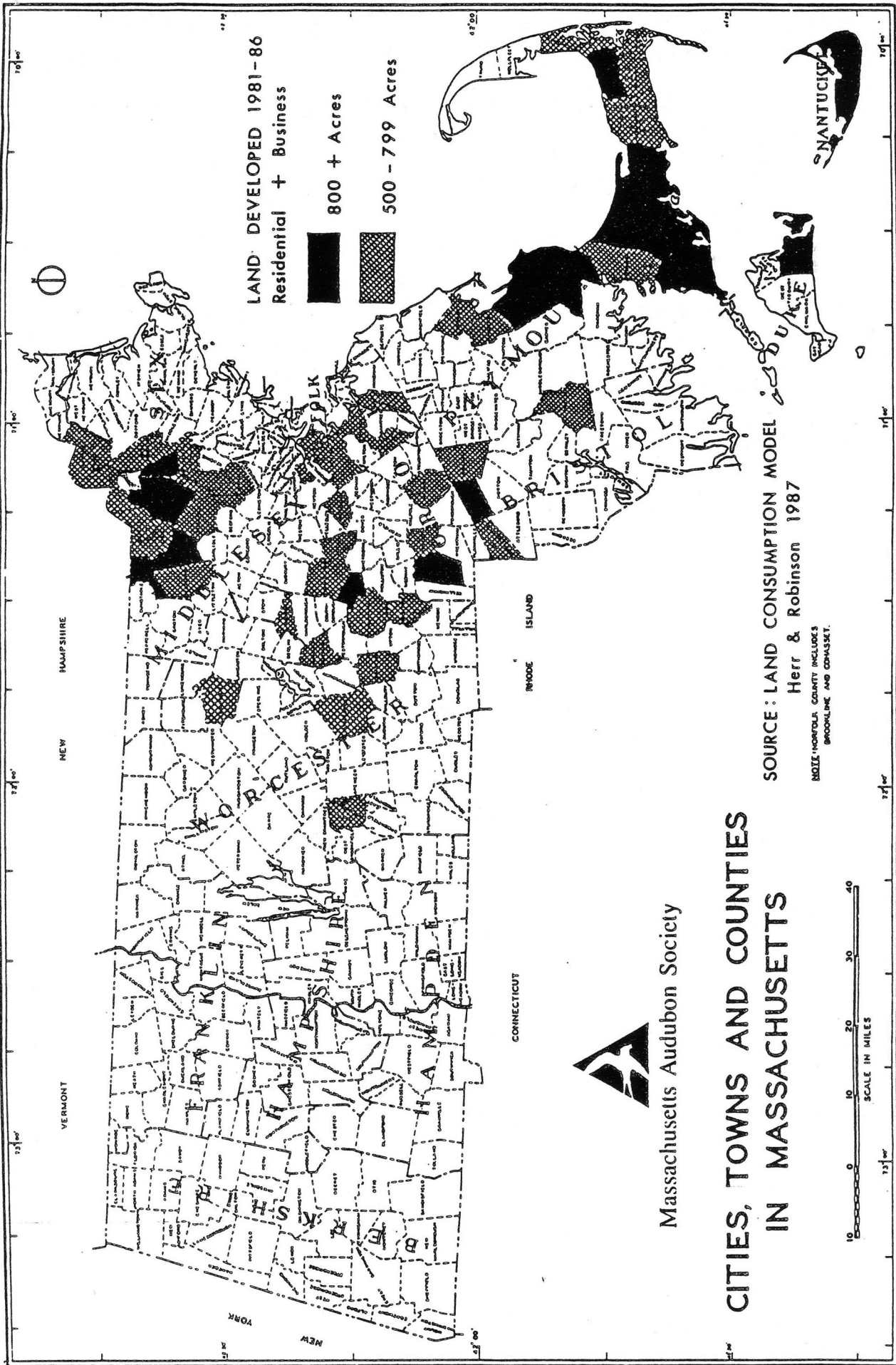


Figure 1

Table 1

Communities With Highest Estimated Acres Lost
1981 - 1986

<u>Rank</u>	<u>Municipality</u>	<u>Area</u>	<u>Acres Used</u>
1.	Mashpee	Cape Cod	2,215
2.	Brewster	Cape Cod	1,829
3.	Barnstable	Cape Cod	1,548
4.	Sandwich	Cape Cod	1,426
5.	Ashland	W. of Boston	1,306
6.	Mansfield	S.W. of Boston	1,057
7.	Edgartown	Martha's Vineyard	1,038
8.	Chelmsford	Merrimack Valley	958
9.	Falmouth	Cape Cod	951
10.	Franklin	S.W. of Boston	940
11.	Tewksbury	Merrimack Valley	919
12.	Nantucket	Nantucket	891
13.	Plymouth	Plymouth County	816
14.	Tyngsborough	Merrimack Valley	811
15.	Andover	Merrimack Valley	804

Source: Philip S. Herr and Phyllis Robinson, Analysis of Land Consumption 1981 - 1986 (Appendix 1)

Worcester County and the Connecticut Valley Saw Accelerating Growth in 1985 and 1986

The number of acres of land lost is only one measure of the rate of growth. When one ranks Massachusetts communities by the percentage growth in development since 1981, four small towns in Worcester County - Hopedale, Oakham, Hubbardston, and North Brookfield - rank among the top 15 fastest growing communities in the state. And in 1986 alone, 12 communities in the Connecticut Valley each saw development of 100 acres or more².

Over 2,000,000 Acres Will be Developed by 2030

Even if one assumes that the experience of the past six years is unusual, and that growth in land development will slow over the next 40 years (from 2% per year today, to 1.5% per year in 2020), a total of 2,044,000 acres will likely be developed by the year 2030. This amounts to a loss of an area nearly three times the size of the state of Rhode Island (see Figure 2).

2 ibid.

MASSACHUSETTS IS LOSING GROUND

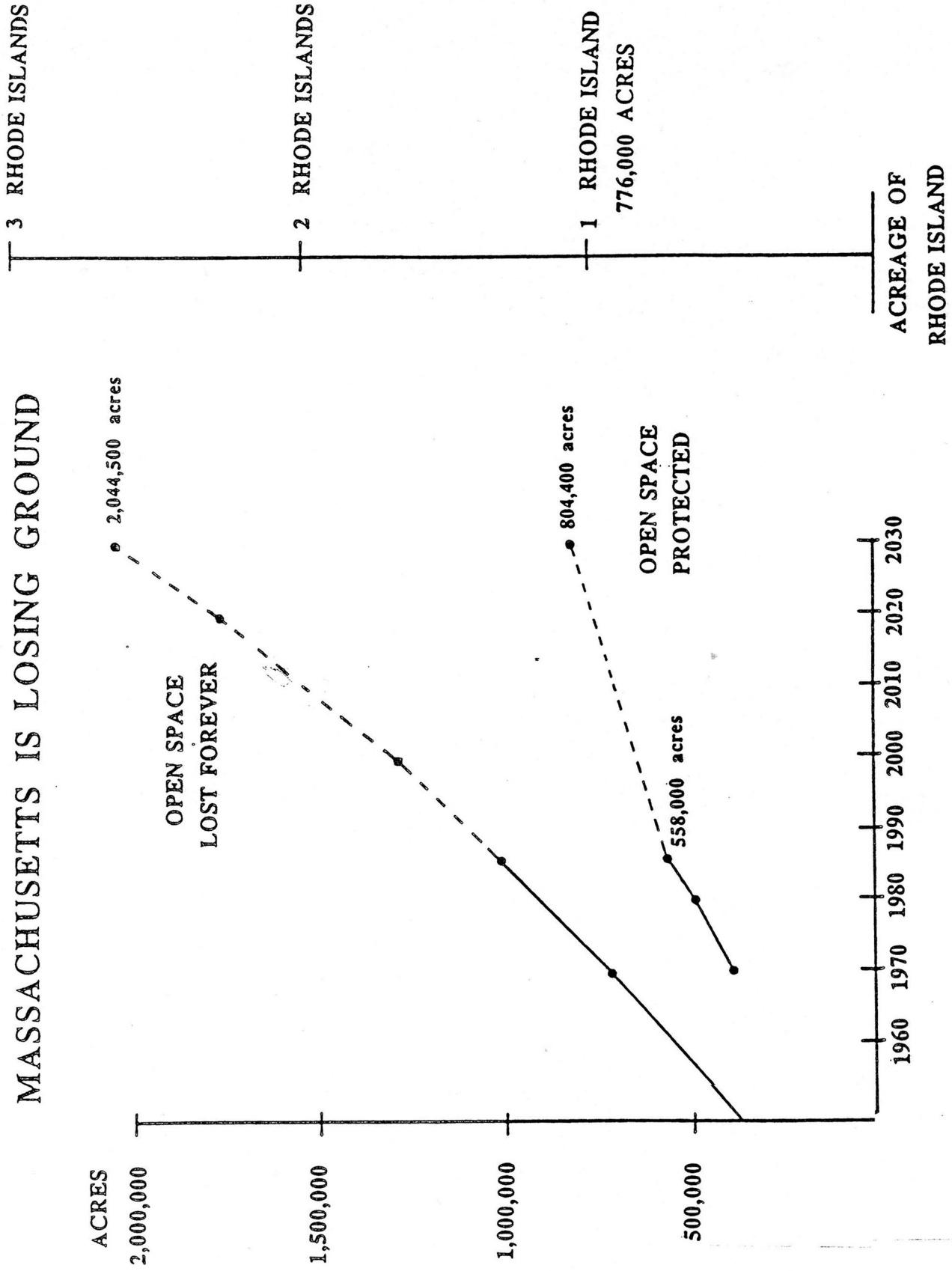


Figure 2

Less Than 1/10 of an Acre is Protected for Every Person

Though 558,000 acres of Massachusetts land has been protected for conservation since 1893, this represents barely 10% of all Massachusetts land, and equals less than 1/10 of one acre for every man, woman, and child in the Commonwealth. The vast majority of this land (nearly 80%) has been protected only because of extraordinary legislative and financial commitment from the state and federal governments (see Table 2).

Table 2

Summary of Land Protected - 1986

	<u>Acres</u>	<u>Percent</u>
Federal Government	56,775	10.2%
State Government	384,630	68.9%
Private Non-Profits	85,455	15.3%
Local Governments	31,140	5.6%
Total	<u>558,000</u>	<u>100%</u>

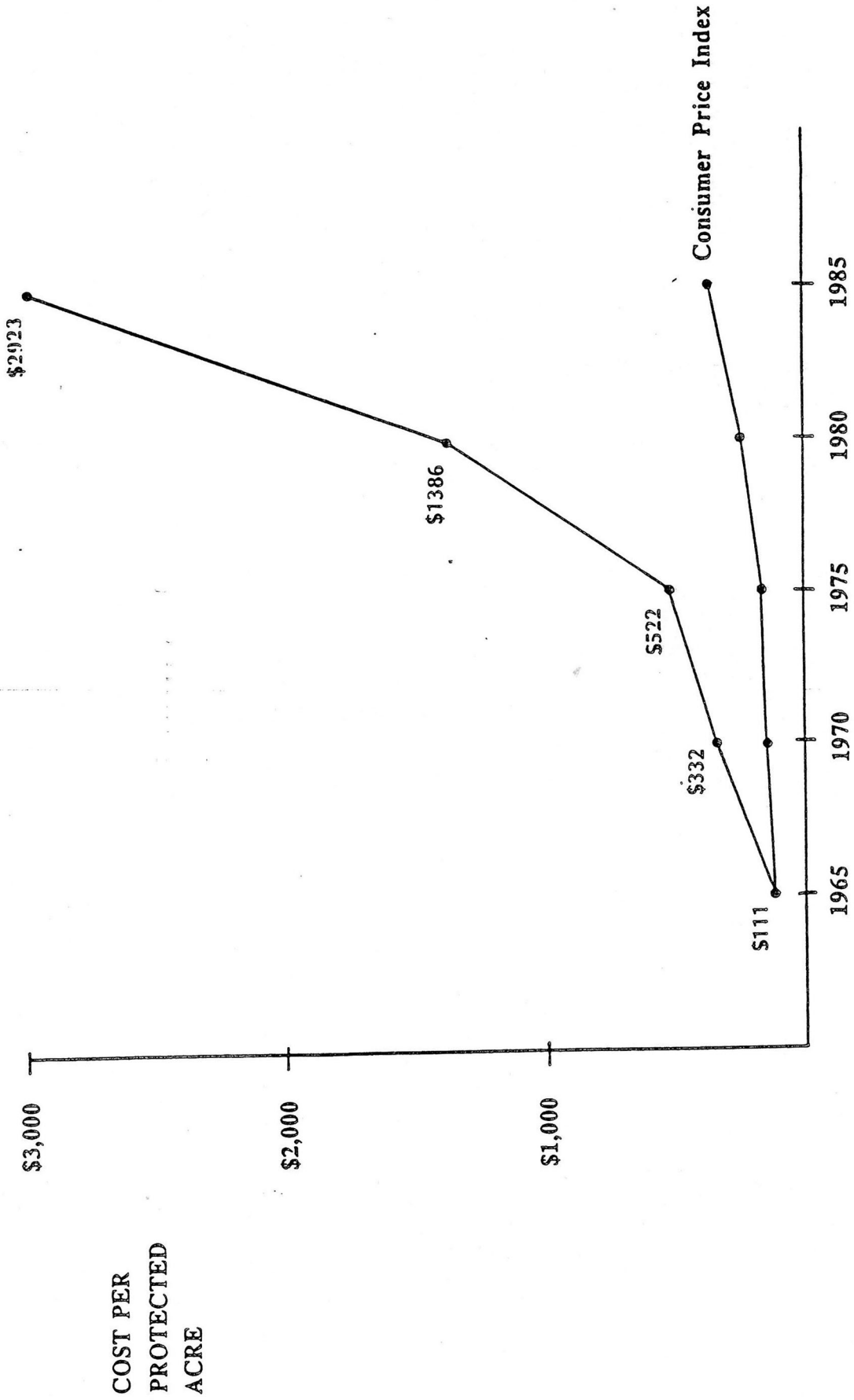
The Cost of Protecting Open Space Has More Than Doubled in the Last 5 Years

The development boom in Massachusetts has increased land prices at a rate more than double the rate of inflation. For one state program - the self-help program which helps communities purchase open space - land conservation costs in the period 1981 - 1986 averaged over \$2900 per acre, a 115% increase over the previous five years (Figure 3). Thus the \$162 million state open space capital outlay budget, which the Legislature enacted in 1983, would today have to be over \$360 million, just to keep pace with the rate at which property prices in Massachusetts have increased since 1983.

Open Space Contributes Nearly \$3 Billion Each Year to the Massachusetts Economy

Open space - beaches, hills, farms, and woods - contributes directly to key industries within the Commonwealth, attracting tourists, providing land for farming, and providing woods and streams for hunting and fishing. Tourism is the second largest industry in the state, and the annual tourism expenditures on Cape Cod, the Islands, and the Berkshires totalled nearly \$1.5 billion in 1985. When open-space related farm income, and fishing and hunting expenditures are included, the total contribution of open space to the Massachusetts economy in 1985 was nearly \$3 billion (Table 3). In addition, independent studies have concluded the quality of life offered by a location is more important to businesses considering relocation than are business-related factors such as taxes and land costs.

LAND COSTS HAVE MORE THAN DOUBLED



COST PER
PROTECTED
ACRE

SOURCE: Massachusetts Office of Environmental
Affairs Division of Conservation Services

Figure 3

Table 3

Massachusetts Economic Activity Attributable
to Open Space - 1985

Tourism	\$2,336,007,000
Agriculture	393,000,000
Hunting and Fishing	235,275,000
	<hr/>
Total	\$2,964,282,000

Sources: Mass. Division of Tourism, U.S. Department of Agriculture, U.S. Fish and Wildlife Service

Open Space Is Critical to Protecting Water Supplies and Avoiding Floods

Wetlands, watersheds, and aquifers play key roles in protecting Massachusetts citizens against floods, and providing them with abundant, safe drinking water. Wetlands control flooding by absorbing flood waters and releasing them slowly. In 1976, the U.S. Army Corps of Engineers estimated that the loss of remaining wetlands in the Charles River valley would result in flood damage costing over \$17 million, or \$33,000 per acre.

Aquifer recharge areas absorb rainfall and filter the water as it passes into groundwater and makes its way to drinking water supply wells. Seventy-five percent of all Massachusetts communities rely, at least in part, on groundwater for private and public water supplies. And that groundwater can be contaminated if development occurs within the aquifer recharge area. Calculating solely the value of the water which can be obtained from the average recharge area, an acre of aquifer land is worth \$13,300. If the benefits of avoiding having to pay to clean up polluted wells is added, the value of an acre of protected aquifer rises to \$18,000.

The Need: An Aggressive Program to Acquire Open Space and Redirect Development

If historical trends continue, by the year 2030 over 2 million acres will be developed, while less than half as much land will be protected (Figure 2). Only an aggressive program of (1) increased and continued state acquisition, (2) new sources of funds for local acquisition, and (3) development incentives and laws which redirect growth to existing developed areas can assure that citizens of the Commonwealth will continue to enjoy the open space benefits in the 21st century which they enjoy today.

1. Increased and Continued State Acquisition - The state has been, and will continue to be, the primary protector of land in the state. Yet even with the \$162 million open space capital outlay in 1983, annual state expenditures for open space averaged less than 1/2 of 1% of all

state spending. While the legislature is now close to approving a new, record capital outlay for open space, even the highest level of outlay being considered (\$542 million) will only begin to catch up with the rate of loss of open space. Only by passing regular open space bonds, which provide a comparable level of support every 2 - 3 years, will we be capable of approaching open space acquisition needs. If such funds are appropriated, an additional 224,000 acres can be saved by the year 2030 (Figure 4).

2. New Sources of Funds for Local Acquisition - Land conservation efforts by local communities, constrained by Proposition 2 1/2, have been unable, with a few exceptions, to keep pace with the rapid escalation of land prices. The land bank bill, currently pending in the Legislature, would give local communities the option of establishing a fee of up to 2% on all real estate transfers within the community, with the proceeds to be used to establish land and housing banks within the community to fund both affordable housing and open space initiatives. Similar funds on Nantucket and Martha's Vineyard have enabled a substantial number of acres to be conserved and, because the fee is tied to the level of real estate activity in the community, it allows those communities which have the greatest level of development, and which are losing the most open space, to have the most funds available for conservation. If land banks are established, an additional 112,000 acres could be saved by 2030.
3. Development Incentives and Laws Which Redirect Growth - The areas of the state which are losing the most open space are resort areas and suburban communities where development, on average, consumes more land. At the same time, many of the core cities and older town centers of the Commonwealth have been seeking ways to encourage development, particularly of new and affordable housing, yet have been seeing slower rates of growth. On average, development in these communities is denser, consuming far less land per housing unit. In an analysis prepared for the Massachusetts Audubon Society, urban planners Philip S. Herr and Phyllis Robinson estimated that since 1981, if policies had been in place which encouraged development in city and town centers, and discouraged suburban sprawl, 11,000 fewer acres of open space would have been lost³. Assuming such policies were put into place - city and town center revitalization programs, legislation to discourage development in critical areas such as farmlands and watersheds, and zoning legislation to encourage denser development in existing developed areas - nearly 100,000 fewer acres could be developed by 2030.

3 *ibid.*

LAND ACQUISITION FUNDS ARE ESSENTIAL

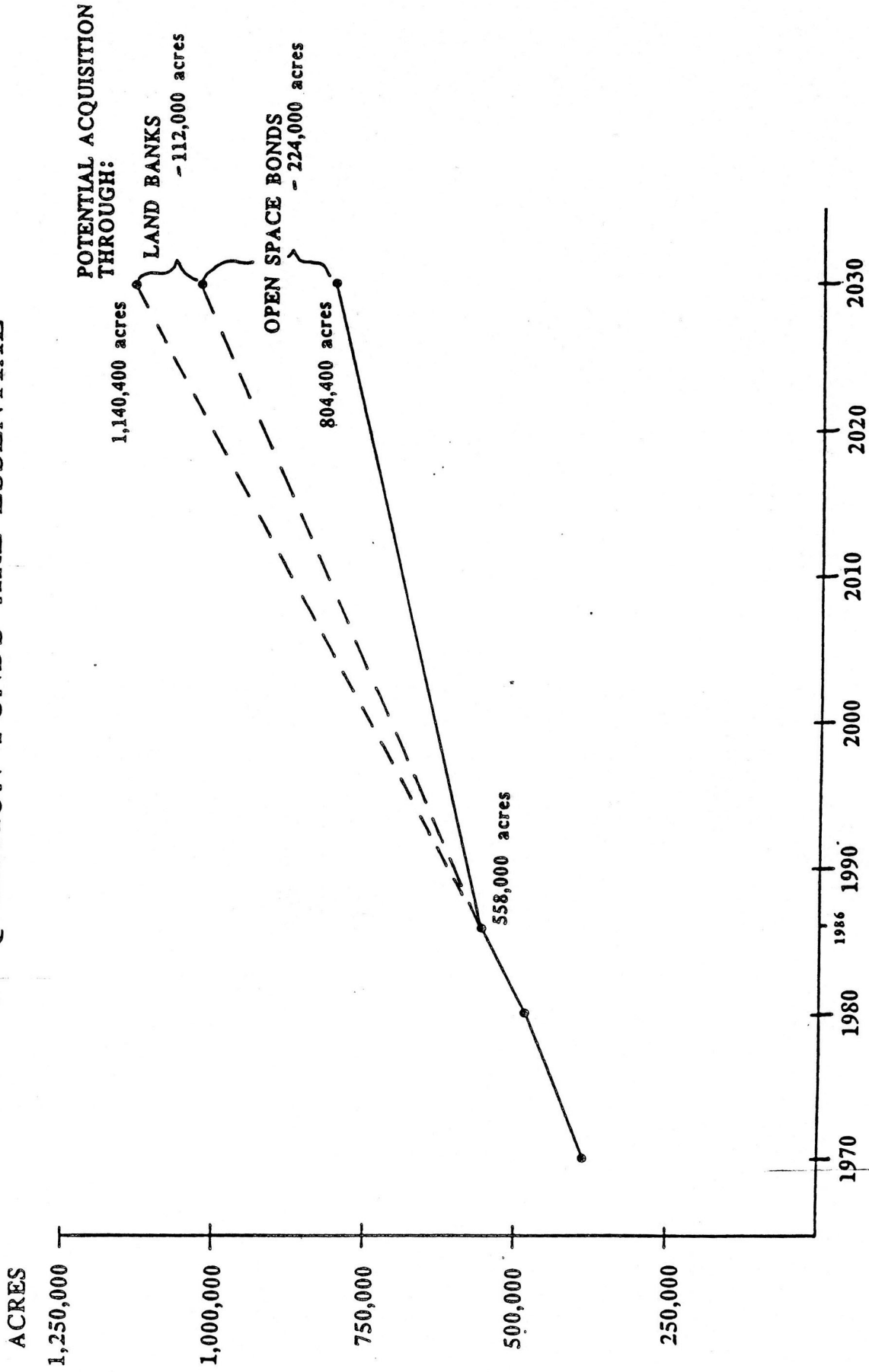


Figure 4