



**Patterns of Growth  
in the  
Midcoast Region**

**Friends of Midcoast Maine**

**October, 2003**

**This report has been prepared by  
The Friends of Midcoast Maine,  
a smart growth educational and advocacy organization.**

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**October 2003**

**This report is funded by generous grants from the  
Jessie B. Cox Charitable Trust,  
The New England Grass Roots Environmental Fund,  
Maine Initiatives,  
The Horizon Foundation,  
and  
The Maine Community Foundation.**

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# Introduction

## INTRODUCTION

Sprawl... a popular word these days, but is it happening in midcoast Maine? Clearly, there is still open space, there are still farms, and there are still large tracts of undeveloped land. Has sprawl really come to the midcoast area? Surely we are not as bad as other portions of New England! Yes, we have a few traffic problems, but nothing like the problems in Massachusetts, Connecticut, or even Southern New Hampshire. So, do we have a problem? What are the “Patterns of Growth” in the midcoast Maine area? Do we have sprawl? This report attempts to answer that question.

### **What is sprawl?**

But first, what is sprawl? Sprawl is the shift of population and businesses from the compact downtowns and villages to the countryside. Sprawl is low density development outside compact villages and urban centers. It is the shift of development from service centers to the rural countryside and along highways. Sprawl can be strip developments or single family homes built on former farms and woodlots. Sprawl can be large lot developments, low densities outside town centers, fragmented open space and large paved areas. Sprawl requires a car to get places. Sprawl is not growth...it is the *shift* of growth from an area that already has services to a new area that will demand increased or new services. So, does midcoast Maine have sprawl and how can we tell for sure?

### **How do we know if we have sprawl?**

- If there is sprawl, population and housing will be increasing in the outlying areas more than in the villages and towns or service centers.
- If there is sprawl, the commute to work will be greater for those communities because people have to travel further to workplaces.
- If there is sprawl, farmland will be disappearing and turned into developments.
- If there is sprawl, school construction cost will increase in smaller towns, rather than in service centers.
- If there is sprawl, the tax rates will increase in smaller outlying towns to provide the services needed for these people.

So, is there sprawl in the midcoast area? This report demonstrates that, based on these criteria, midcoast Maine is sprawling.

# Findings

## Findings

### Maine's Midcoast: A Changing Place

Maine's midcoast area stretches from Brunswick to Bucksport and includes four counties, Sagadahoc, Lincoln, Knox and Waldo. Throughout history, the coastal area of midcoast Maine has served as a destination for Maine visitors, as well as a home to thousands of Mainers who make their livings from the sea, the land, the lakes and streams and in the communities along Route 1. Midcoast Maine has been known for its rolling hills, glimpses of Penobscot Bay, quaint New England villages and downtowns and acres of open land. Not long ago, a child could walk to the library or the store for a quart of milk, or to the post office or even to school. But there are very few places where this can still happen. Progress? Perhaps, but perhaps it is something more that will forever change the face of the midcoast area.



# Shifting Patterns of Growth

## Shifting Midcoast Patterns of Growth

Like many communities nationwide, we are now facing a critical turning point where the face of the country side is changing. Our towns and villages are no longer the places they once were. The outlying farm land is disappearing to make way for stores, malls, developments, or single house lots that, over time, eat up open space. Mainers are spending more time in their cars commuting to workplaces. Towns are feeling increasing pressures to provide services (schools, roads and police/fire) to areas where they never once had to while still maintaining the older villages. Tax rates are increasing in small towns at a greater rate than in the larger towns. School, police and fire costs are increasing. In many places, incomes will be decreasing in service centers and increasing in smaller towns since those moving out are likely to be middle income families, leaving poorer people in the centers. In some coastal Maine towns, incomes will be increasing due to the pressures out-of-state buyers put on land costs forcing lower income people out of coastal communities.

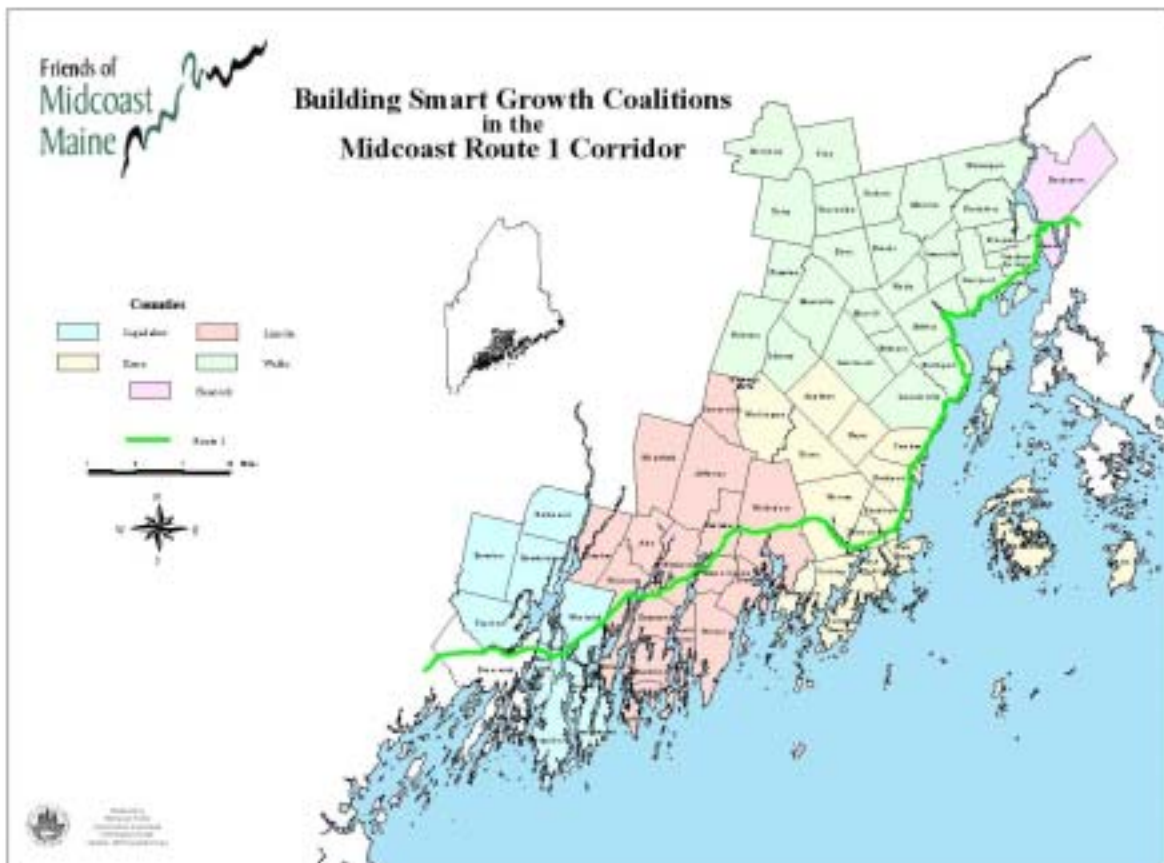
Yes, the midcoast is experiencing sprawl. It may be gradual and unnoticeable over short periods of time. But the cumulative effect of personal and institutional decisions is changing our countryside, wasting land and water resources and above all, costing more money. This report shows the proof of our changing midcoast landscape and suggests that we must do something to change these Sprawling Patterns of Growth.



# Midcoast Study Area

## MIDCOAST STUDY AREA

This report looks at US Census, agricultural and economic data for 73 towns within 4 counties. Eleven are service center towns shown in **bold**.



# The Midcoast Study Area

The Midcoast area consists of four counties and seventy three towns.

## **KNOX COUNTY**

Appleton  
**Camden**  
Cushing  
Friendship  
Hope  
Isle Au Haut  
Matinicus Isle  
North Haven  
Owls Head  
**Rockland**  
**Rockport \***  
St. George  
South Thomaston  
**Thomaston**  
Union  
Vinalhaven  
Warren  
Washington

## **LINCOLN COUNTY**

Alna  
Boothbay  
**Boothbay Harbor**  
Bremen  
Bristol  
**Damariscotta**  
Dresden  
Edgecomb  
Jefferson  
Monhegan  
Newcastle  
Nobleboro  
Somerville  
South Bristol  
Southport  
**Waldoboro \***  
Westport  
Whitefield  
**Wiscasset**

## **SAGadahoc COUNTY**

Arrowsic  
**Bath**  
Bowdoin  
Bowdoinham  
Georgetown  
Phippsburg  
Richmond  
Topsham  
West Bath  
Woolwich

## **WALDO COUNTY**

**Belfast**  
Belmont  
Brooks  
Burnham  
Frankfort  
Freedom  
Isleboro  
Jackson  
Knox  
Liberty  
Lincolntonville  
Monroe  
Montville  
Morrill  
Northport  
Palermo  
Prospect  
Searsmont  
**Searsport \***  
Stockton Springs  
Swanville  
Thorndike  
Troy  
Unity  
Waldo  
Winterport

**BOLD:** The Maine State Planning Office defines Service Center Towns by the following criteria: level of retail use, jobs to workers ratio, amount of federally assisted housing and the volume of service center jobs.

**BOLD \*** Specialized retail centers do not meet the criteria to be defined as a regional center but have the history, urban character, and proximity to other retail centers.



# Population

Looking at the recent census population data for the four counties in our midcoast study area, we see an average increase of 11.4% for the four counties between 1990 and 2000. The midcoast area has outpaced the state's rate of growth (3.8%) by nearly three times. This increase is interesting when we determine exactly where that population growth occurs. In many midcoast communities we find the trends in population increases shifting from the primary service centers to that of the outlying communities. The following table provides a look at the population change between 1990 and 2000. It also makes us aware of the rate of change a particular community has recently seen.

Looking at the service centers rate of population change in comparison to outlying towns or even the "county average" we see the contrast of where the population is shifting. With few exceptions we find that the majority of primary service centers in the midcoast area are either losing population or experiencing a very low rate of population change compared to their outlying neighbors. This shift in population dispersion is due to many factors, and is cause for concern in terms of the costs associated with "sprawl" in the midcoast.

	Population		Rate of
	1990	2000	Change
<b>Sagadahoc County</b>			
Arrowsic	498	477	-4.2%
Bath	9,799	9,266	-5.4%
Bowdoin	2,207	2,727	23.6%
Bowdoinham	2,192	2,612	19.2%
Georgetown	914	1,020	11.6%
Phippsburg	1,815	2,106	16.0%
Richmond	3,072	3,298	7.4%
Topsham	8,746	9,100	4.0%
West Bath	1,716	1,798	4.8%
Woolwich	2,570	2,810	9.3%
<b>County</b>	<b>33,031</b>	<b>34,737</b>	<b>5.2%</b>

Source: US Census Data, 1990-2000

It is interesting to look at the rates of growth in the outlying towns as compared to the primary service centers. We clearly see the towns of Bowdoin, Bowdoinham, and Phippsburg doubling the rates of population growth of the service center towns in Sagadahoc County.

*“Overall, Maine’s population growth has been among the slowest in the nation, at only 3.8 percent over the past 10 years. However, behind that number lies a picture of a state in flux, where new people, new communities and new ideas are replacing old patterns and places of living.” - DIETER BRADBURY, Portland Press Herald 2001*

# Population

County Subdivision	Population		Rate of Change
	1990	2000	
<b>Lincoln County</b>			
Alna	571	675	18.2%
Boothbay	2,648	2,960	11.8%
Boothbay Harbor	2,347	2,334	-0.6%
Bremen	674	782	16.0%
Bristol	2,326	2,644	13.7%
Damariscotta	1,811	2,041	12.7%
Dresden	1,332	1,625	22.0%
Edgecomb	993	1,090	9.8%
Jefferson	2,111	2,388	13.1%
Monhegan	88	75	-14.8%
Newcastle	1,538	1,748	13.7%
Nobleboro	1,455	1,626	11.8%
Somerville	458	509	11.1%
South Bristol	825	897	8.7%
Southport	645	684	6.0%
Waldoboro	4,601	4,916	6.8%
Westport	663	745	12.4%
Whitefield	1,931	2,273	17.7%
Wiscasset	3,339	3,603	7.9%
*Brunswick	20,906	21,172	1.3%
<b>County</b>	<b>30,356</b>	<b>33,615</b>	<b>10.7%</b>

\*Brunswick is located in Cumberland County

Source: US Census Data, 1990-2000

We notice that the three towns in Lincoln County experiencing a rapid growth in population are Whitefield, Dresden, and Alna. These towns have experienced a rate of growth of over 15%.

With the exception of Damariscotta, the primary service centers of Lincoln County are experiencing slower rates of growth than the county average, and subsequently their neighboring towns. This serves as an example of where our increase of population is shifting.

# Population

County Subdivision	Population		Rate of Change
	1990	2000	
<b>Knox County</b>			
Appleton	1,069	1,271	18.9%
Camden	5,060	5,254	3.8%
Criehaven	0	0	0.0%
Cushing	988	1,322	33.8%
Friendship	1,099	1,204	9.6%
Hope	1,017	1,310	28.8%
Isle au Haut	46	79	71.7%
Matinicus Isle	67	51	-23.9%
North Haven	332	381	14.8%
Owls Head	1,574	1,601	1.7%
Rockland	7,972	7,609	-4.6%
Rockport	2,854	3,209	12.4%
St. George	2,261	2,580	14.1%
South Thomaston	1,227	1,416	15.4%
Thomaston	3,306	3,748	13.4%
Union	1,989	2,209	11.1%
Vinalhaven	1,072	1,235	15.2%
Warren	3,192	3,794	18.9%
Washington	1,185	1,345	13.5%
<b>County</b>	<b>36,310</b>	<b>39,618</b>	<b>9.1%</b>

*Source: US Census Data, 1990-2000*

In Knox County we see that the rapidly growing communities are those which border the primary service centers. Of note here are the towns of Hope, Appleton, Cushing, and Warren. These towns have doubled the rates of growth as compared to the primary service centers of Knox County.

# Population

County Subdivision	Population		Rate of Change
	1990	2000	
<b>Waldo County</b>			
Belfast	6,355	6,381	0.4%
Belmont	652	821	25.9%
Brooks	900	1,022	13.6%
Burnham	961	1,142	18.8%
Frankfort	1,020	1,041	2.1%
Freedom	593	645	8.8%
Islesboro	579	603	4.1%
Jackson	415	506	21.9%
Knox	681	747	9.7%
Liberty	790	927	17.3%
Lincolnton	1,809	2,042	12.9%
Monroe	802	882	10.0%
Montville	877	1,002	14.3%
Morrill	644	774	20.2%
Northport	1,201	1,331	10.8%
Palermo	1,021	1,220	19.5%
Prospect	542	642	18.5%
Searsmont	938	1,174	25.2%
Searsport	2,603	2,641	1.5%
Stockton Springs	1,383	1,481	7.1%
Swanville	1,130	1,357	20.1%
Thorndike	702	712	1.4%
Troy	802	963	20.1%
Unity	1,817	1,889	4.0%
Waldo	626	733	17.1%
Winterport	3,175	3,602	13.4%
<b>County</b>	<b>33,018</b>	<b>36,280</b>	<b>9.8%</b>

Source: US Census Data, 1990-2000

In Waldo County we see much of the same occurring. The primary service centers are either losing population or experiencing a very slow rate of growth compared to the outlying towns. It is interesting to compare the primary service centers to their neighboring towns' rates of growth. Outlying towns in Waldo County are indisputably outpacing their service center neighbors.

# Population

The following towns have experienced a rate of growth over 15% between 1990 and 2000. This rate of growth exceeds most county averages.

Prospect	18.5%
Phippsburg	16%
Bowdoinham	19.2%
Bowdoin	23.6%
Warren	18.9%
Vinalhaven	15.2%
S. Thomaston	15.4%
Cushing	33.8%
Bremen	16%
Alna	18.2%
Dresden	22.0%
Whitefield	17.7%
Appleton	18.9%
Hope	28.8%
Belmont	25.9%
Burnham	18.8%
Jackson	21.9%
Liberty	17.3%
Morrill	20.2%
Searsmont	25.2%
Swanville	20.1%
Troy	20.1%
Waldo	17.1%

Within the towns listed above there are no service centers mentioned. The most rapid population growth occurs in the towns that surround our classified service centers. This is evidence of populations spreading out. This also gives insight in the midcoast’s current development pattern.

*“Our population isn’t so much on the rise as it is on the spread,”*

*Evan Richert  
SPO Director,  
“The Cost of Sprawl”,  
1997*

# Population Density

## Population Density (Persons Per Square Mile)

Population density is total population divided by land area. The data below is based upon the land area of the specified town and the change in persons per square mile between 1990 to 2000.

The idea of populations spreading out is further evidenced by recent data that shows a declining density (persons per square mile) in the service center (village) areas, and an increasing density in their neighboring towns.

County Subdivision	Land Area (Square Miles)	Persons/ Sq. Mile 1990	Persons/ Sq. Mile 2000	Percent Change
<b>Sagadahoc County</b>				
Arrowsic	7.8	64.0	61.3	-4.2%
Bath city	9.1	1072.1	1013.8	-5.4%
Bowdoin town	43.5	50.7	62.6	23.5%
Bowdoinham town	34.4	63.7	75.9	19.2%
Georgetown town	18.7	48.8	54.5	11.6%
Phippsburg town	28.9	62.9	73.0	16.0%
Richmond	31.5	97.6	104.8	7.6%
Topsham town	32.0	273.1	284.2	4.0%
West Bath town	11.8	145.2	152.1	4.8%
Woolwich town	35.0	73.3	80.2	9.3%
	<b>245.0</b>			<b>8.6%</b>

*Source: US Census Data, 1990-2000*

There is a dramatic shift in the Bath vicinity where the percent change in density in this 10 year period was a negative 5%. This negative number signifies the out migration from this service center (village), to the outlying towns, which still rely on this service center for basic needs. In this case the immediate towns near Bath, which had major changes in persons per square mile include Bowdoin, Bowdoinham and Phippsburg.

# Population Density

County Subdivision	Land Area (Square Miles)	Persons/ Sq. Mile 1990	Persons/ Sq. Mile 2000	Percent Change
Brunswick town	46.8	446.9	452.6	1.3%
<b>Lincoln County</b>				
Alna town	20.9	27.3	32.3	18.2%
Boothbay town	22.1	119.9	134.0	11.8%
Boothbay Harbor	5.8	406.8	404.5	-0.6%
Bremen town	18.1	37.3	43.3	16.0%
Bristol town	33.9	68.7	78.1	13.7%
Damariscotta town	12.4	145.9	164.5	12.7%
Dresden town	30.1	44.2	54.0	22.0%
Edgecomb town	18.1	55.0	60.3	9.8%
Jefferson town	52.7	40.1	45.3	13.1%
Monhegan plantation	0.9	102.3	87.2	-14.8%
Newcastle town	29.0	53.1	60.3	13.7%
Nobleboro town	19.0	76.4	85.4	11.8%
Somerville town	21.9	21.0	23.3	11.1%
South Bristol town	13.2	62.5	68.0	8.7%
Southport town	5.4	119.7	126.9	6.1%
Waldoboro town	71.3	64.5	69.0	6.8%
Westport town	8.7	75.9	85.3	12.4%
Whitefield town	46.8	41.2	48.5	17.7%
Wiscasset town	24.6	135.8	146.6	7.9%
	<b>454.7</b>			<b>10.0%</b>

Source: US Census Data, 1990-2000

Lincoln County service centers have all seen a slight increase in person per square mile. Highlighted above are the towns that serve as service centers in this region. In each case except for Boothbay Harbor, each service center has maintained steady growth. There has been no significant out migration from service centers, but it should be noted that the service centers are increasing density at an average rate of 7% while the outlying more rural communities are increasing density at an average 11%.

# Population Density

County Subdivision	Land Area (Square Miles)	Persons/ Sq. Mile 1990	Persons/ Sq. Mile 2000	Percent Change
<b>Knox County</b>				
Appleton town	32.7	32.7	38.9	18.9%
Camden town	17.8	284.4	295.3	3.8%
Cushing town	19.4	51.0	68.2	33.8%
Friendship town	14.0	78.4	85.9	9.6%
Hope town	21.9	46.5	59.9	28.8%
Isle au Haut town	12.7	3.6	6.2	71.6%
North Haven town	11.6	28.5	32.7	14.8%
Owls Head town	8.9	177.3	180.3	1.7%
Rockland city	12.9	617.5	589.4	-4.6%
Rockport town	22.2	128.6	144.5	12.4%
St. George town	25.1	90.1	102.8	14.1%
South Thomaston	11.4	107.5	124.1	15.4%
Thomaston town	10.9	302.5	342.9	13.4%
Union town	32.1	62.0	68.8	11.1%
Vinalhaven town	25.3	42.4	48.8	15.2%
Warren town	46.3	69.0	82.0	18.9%
Washington town	38.0	31.2	35.4	13.5%
	<b>363.2</b>			<b>17.2%</b>

*Source: US Census Data, 1990-2000*

The effects of sprawl are evident in Knox County as well. Here we see the obvious shift from the city of Rockland to its outlying neighbors of Cushing and St. George. We also see Camden, although growing at a steady rate, is being outpaced by Rockport. In Knox County the average increase in density of the service centers is 4% compared to that of 20% in the outlying towns. This trend paints a very “suburbia” picture surrounding these New England Villages, which is now rural countryside.



# Population Density

Waldo County	Land Area (Square Miles)	Persons/ Sq. Mile 1990	Persons/ Sq. Mile 2000	Percent Change
Belfast city	34.0	186.7	187.5	0.4%
Belmont town	13.6	47.9	60.3	25.9%
Brooks town	24.4	36.8	41.8	13.6%
Burnham town	38.9	24.7	29.3	18.8%
Frankfort town	24.6	41.4	42.3	2.1%
Freedom town	21.5	27.6	30.0	8.8%
Islesboro town	14.3	40.6	42.3	4.1%
Jackson town	25.2	16.5	20.1	21.9%
Knox town	29.1	23.4	25.6	9.7%
Liberty town	25.9	30.5	35.8	17.3%
Lincolnton town	37.4	48.4	54.7	12.9%
Monroe town	38.8	20.7	22.7	10.0%
Montville town	42.6	20.6	23.5	14.2%
Morrill town	16.6	38.9	46.7	20.2%
Northport town	23.7	50.8	56.3	10.8%
Palermo town	40.5	25.2	30.1	19.5%
Prospect town	18.1	29.9	35.5	18.5%
Searsmont town	37.8	24.8	31.1	25.2%
Searsport town	28.6	91.0	92.4	1.5%
Stockton Springs	19.6	70.6	75.6	7.1%
Swanville town	19.8	57.2	68.7	20.1%
Thorndike town	25.3	27.8	28.2	1.4%
Troy town	34.8	23.0	27.6	20.1%
Unity town	39.5	46.0	47.8	4.0%
Waldo town	19.4	32.3	37.8	17.1%
Winterport town	35.6	89.2	101.2	13.5%
	<b>729.6</b>			<b>13.0%</b>

*Source: US Census Data, 1990-2000*

The same is true for Waldo County. The service centers have no significant change in terms of the persons per square mile numbers, while their outlying neighbors are changing rapidly. In fact, Waldo County service centers increased density by 2% while all other towns averaged a 14% increase in density. This is a clear indicator of sprawl in Waldo County.

This evident change in population densities in the midcoast directly correlates to a change in the midcoast landscape, as well as the community atmosphere of our service centers. The increase in persons per square mile in the towns that surround our service centers supports the evidence of populations spreading out. These numbers also represent a shift in land use patterns. As the persons per square mile increase in once rural communities, it becomes exponentially difficult to retain their rural character with this increasing density trend.

# Housing

## HOUSING

A look at the housing data for the four counties shows an interesting pattern of growth. Between 1990-2000, the number of housing units in the midcoast area has increased, ranging from modest 2% to a 36% increase. County by county, the largest increases have been in the smaller, coastal communities, with the exception of the housing growth in Thomaston.

		Housing Units		
		1990	2000	% change
<b>Sagadahoc County</b>		<b>14633</b>	<b>16489</b>	<b>13%</b>
	Arrowsic	234	238	2%
	Bath	4233	4383	4%
	Bowdoin	785	1035	32%
	Bowdoinham	884	1107	25%
	Georgetown	803	931	16%
	Phippsburg	1224	1554	27%
	Richmond	1322	1475	12%
	Topsham	3237	3573	10%
	West Bath	894	983	10%
	Woolwich	1017	1210	19%
<b>Lincoln County</b>		<b>17538</b>	<b>20846</b>	<b>19%</b>
	Alna	264	315	19%
	Boothbay	1714	2046	19%
	Boothbay Hbr	1891	1993	5%
	Bremen	441	598	36%
	Bristol	1800	2290	27%
	Damariscotta	1010	1151	14%
	Dresden	552	739	34%
	Edgcomb	518	572	10%
	Jefferson	1219	1427	17%
	Monhegan	145	177	22%
	Newcastle	723	880	22%
	Nobleboro	892	1092	22%
	Somerville	237	286	21%
	South Bristol	790	932	18%
	Southport	781	912	17%
	Waldoboro	2039	2360	16%
	Westport	411	510	24%
	Whitefield	737	954	29%
	Wiscasset	1374	1612	17%



# Housing

<b>Knox County</b>	<b>18982</b>	<b>21566</b>	<b>14%</b>
Appleton	450	547	22%
Camden	2663	2883	8%
Cushing	602	778	29%
Friendship	818	849	4%
Hope	542	687	27%
Isle Au Haut	140	164	17%
Matinicus Isle	102	135	32%
North Haven	436	488	12%
Owls Head	909	992	9%
Rockland	3719	3752	1%
Rockport	1409	1667	18%
Saint George	1567	1777	13%
So. Thomaston	697	804	15%
Thomaston	1183	1535	30%
Union	878	1052	20%
Vinalhaven	1029	1228	19%
Warren	1306	1534	17%
Washington	532	694	30%
<b>Waldo County</b>	<b>16181</b>	<b>18904</b>	<b>17%</b>
Belfast	2898	3121	8%
Belmont	277	393	42%
Brooks	432	522	21%
Burnham	539	649	20%
Frankfort	376	469	25%
Freedom	259	321	24%
Isleboro	632	741	17%
Jackson	167	241	44%
Knox	278	324	17%
Liberty	580	674	16%
Lincolnton	1142	1272	11%
Monroe	358	421	18%
Montville	383	483	26%
Morrill	227	331	46%
Northport	893	943	6%
Palermo	644	789	23%
Prospect	237	286	21%
Searsmont	483	617	28%
Searsport	1237	1370	11%
Stockton Sps	669	750	12%
Swanville	622	730	17%
Thorndike	276	337	22%
Troy	360	420	17%
Unity	783	926	18%
Waldo	249	313	26%
Winterport	1180	1461	24%

Source: US Census Data, 1990-2000

# Housing

The following thirty-three towns have experienced an increase in housing units of 20% or greater from 1990-2000.

Morrill	46%	Frankfort	25%
Jackson	44%	Bowdoinham	25%
Belmont	42%	Freedom	24%
Bowdoin	32%	Westport	24%
Bremen	36%	Winterport	24%
Dresden	34%	Palermo	23%
Matinicus	32%	Thorndike	22%
Thomaston	30%	Appleton	22%
Washington	30%	Nobleboro	22%
Cushing	29%	Monhegan	22%
Searsmont	28%	Whitefield	29%
Phippsburg	27%	Brooks	21%
Bristol	27%	Somerville	21%
Hope	27%	Newcastle	22%
Waldo	26%	Prospect	21%
Montville	26%	Burnham	20%
		Union	20%

None of these towns are service centers, except for Thomaston. The remainder are all smaller towns, outside the service centers. Interestingly, in five to ten years from now, these will very possibly be the towns that experience a need for additional capacity in schools, roads, and public safety to accommodate the demands created by this increased growth. Are these towns prepared for the increased costs? Costs will increase by constructing housing in the outlying areas, and scattering housing throughout these towns, rather than in a growth area of each town.

**This is sprawl....**



# School Enrollments

## SCHOOL ENROLLMENT

Another indicator of growth patterns is the school enrollment numbers. When we compare these figures to school construction costs by county and town and the locations of new school construction, it is clear that the new schools are being built to accommodate a shifting, sprawling population and not an increasing population of school children. In fact, school enrollment numbers have *decreased* in all four counties in the midcoast area.

### Public School Enrollment

County	1993	2002 (October)	Percent Change
Sagadahoc	6928	6720	-3.00%
Lincoln	7065	6891	-2.46%
Knox	4773	4481	-6.12%
Waldo	5525	5231	-5.32%

*Source: Maine Department of Education  
Public School Resident Enrollments by County*

Despite the State's site selection process that encourages renovation or expansion in a central location and the use of existing facilities, a disproportionate amount of money has been spent outside the central core areas. This may be due to lack of land, the expense of new land, and accessibility issues. Between 1975 and 1995, the State Department of Education has spent a 68% of the funding for school construction and renovation in these four counties in non-service area towns and only 32% of the funds in service area towns. Again, this demonstrates a shifting population to non-service areas and the increasing need to build, expand and repair dilapidated or outmoded facilities. This costs those towns and taxpayers more. And even when school facilities are built within service area towns, one can point to several examples of new school construction in a more remote area of that town with little regard for providing pedestrian accessibility that would help tie the school back into the community.

# School Construction Costs

## Public School Construction Costs

County	Service Area Towns	Non-Service Area Towns	% Service Area	% Non Service Area Towns
Sagadahoc	\$ 7,961,307	\$ 9,137,450	47%	53%
Lincoln	\$ 1,179,000	\$ 8,132,836	13%	87%
Knox	\$ 9,645,000	\$10,429,845	48%	52%
Waldo	\$11,516,400	\$23,990,983	32%	68%
Total	\$30,301,707	\$51,691,114	37%	63%

*Source: Maine State Planning Office  
Public School Construction and Renovation Funding, 1975-1995*

These figures show that although school populations have decreased in all four counties, school construction money must be spent to renovate deteriorating downtown schools and build new schools in the outlying areas where the children and their families have moved. In the four county study area towns, more funds have been spent in non-service center towns, than in service center towns during the 1975-1995 time period. And, we all know that new, improved school facilities may actually encourage the movement of people to the outlying, non-service center towns. This encourages costly sprawl.



# Commuting Times

## COMMUTING TIMES

One clear indicator of a changing pattern of growth is the amount of time people spend in their cars to get to and from work. This change in time is usually caused by 1) people's choices to live further away from their work places; 2) lack of (affordable) homes near where they work; and 3) sprawl, which pushes development away from work centers. This pattern is very clear in our four counties.

**Commute to Work Times (round trip)**

<b>County</b>	<b>1990</b>	<b>2000</b>	<b>Change in minutes</b>
Sagadahoc	39 minutes	45 minutes	+ 6 minutes
Lincoln	43 minutes	47 minutes	+ 4 minutes
Knox	34 minutes	38 minutes	+ 4 minutes
Waldo	47 minutes	53 minutes	+ 6 minutes

*Source: US Census Bureau*

While four or six minutes may not seem like much, over the course of a year a worker is spending *25 additional hours* in his or her car commuting to work, away from his or her family, neighborhood and community.

An increased commuting time means that people are living further from their work places. If housing is built away from the service centers (where the jobs and services are located), commuting times and the time we spend in our cars for every day errands, increase. This time will only increase more as population increases in the outlying areas over the next decade.

**This is sprawl.....**

# Farmland

## LOSS of FARM LAND

Looking at recent agricultural data in Midcoast Maine, we see a decline in total land area and numbers of farms. This recent trend indicates the incremental loss of farmland and farms in this area, which overtime may contribute to eroding the critical mass needed to sustain this livelihood.

## County Agricultural Profiles

### Land in Farms

County	1992 Acres	1997 Acres	% Change in Acreage
Sagadahoc	18,793	17,853	-5%
Lincoln	24,350	25,920	6%
Knox	27,622	25,183	-9%
Waldo	71,890	68,569	-5%

*Source: New England Agricultural Statistics Service*

With the exception of Lincoln County, the midcoast has seen a declining trend in acres of land in working farm status.

### Average Size of Farms

County	1992 Acres	1997 Acres	Percent Change
Sagadahoc	157	151	-4%
Lincoln	121	123	2%
Knox	127	130	2%
Waldo	212	218	3%

*Source: New England Agricultural Statistics Service*

The numbers above show the average size (acreage) of farms in their respective counties. Although there has been a decline in the total land in farms (stated earlier), we find that the average size of individual farms has increased minimally.



# Farmland

## Number of Full Time Farms

County	1992	1997	Percent Change
Sagadahoc	56	55	-2%
Lincoln	91	103	13%
Knox	97	90	-7%
Waldo	186	173	-7%

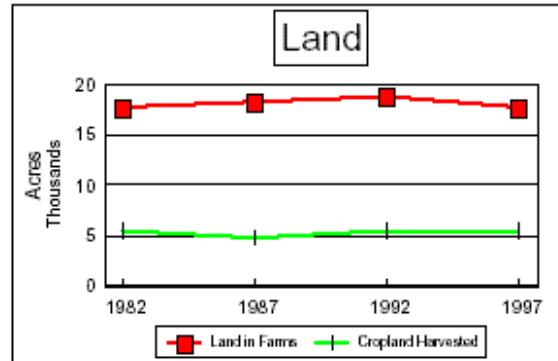
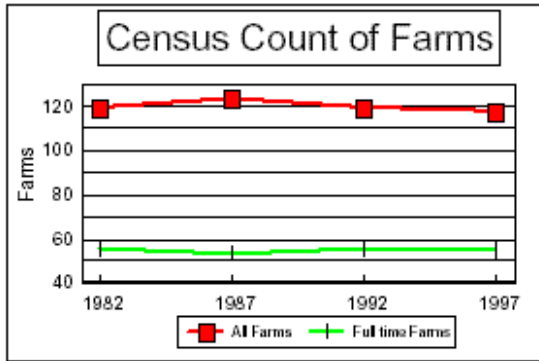
*Source: New England Agricultural Statistics Service*

The number of full time farms has declined in recent years with the exception of Lincoln County. Viewed in its entirety, we see that the land in farms is declining in the midcoast, individual farms are retaining their acreage, and the number of full time farms is decreasing. The following graphs give a clear insight to the declining trend of agricultural acreage and number of farms in the midcoast area. Land that was once in agricultural production are being converted to new uses or abandoning their agricultural past. As we view more data, we find that the pressures of sprawl are real threats in retaining productive agricultural lands.

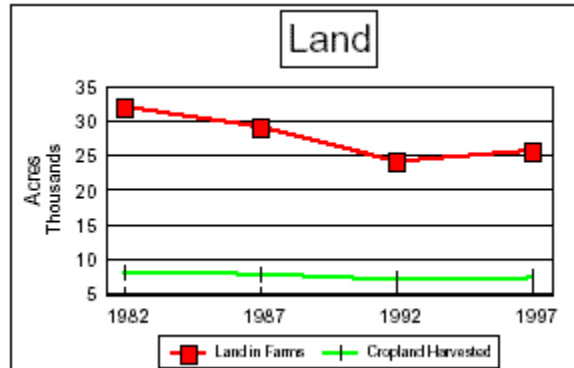
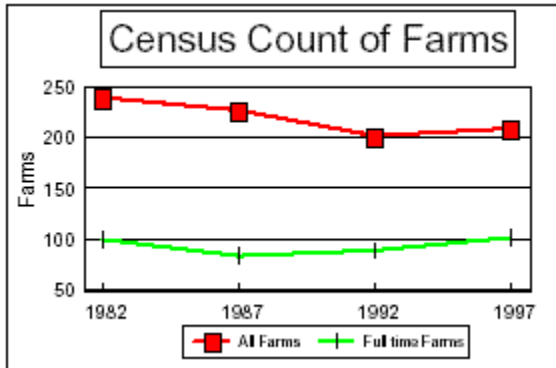
*The implications of sprawl for working agriculture are several. The most obvious one is that sprawl, over time, erodes critical mass...sprawl represents, if you will, the piecemeal development of the countryside, and a mixed pattern of intensive and extensive land-uses which develops over time...It nickel and dimes places to death...As a farm is sold here, a farm is converted there, it reduces the critical mass necessary to keep a working, viable agricultural economy in that region, in that locale. –*  
Mark Lapping, Provost – USM – Paradox of Sprawl Conference 1997

# Farmland

## Sagadahoc County

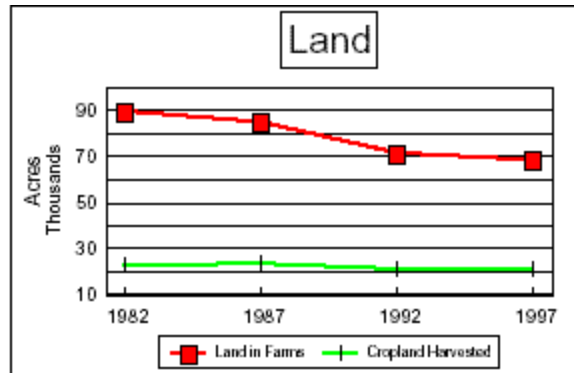
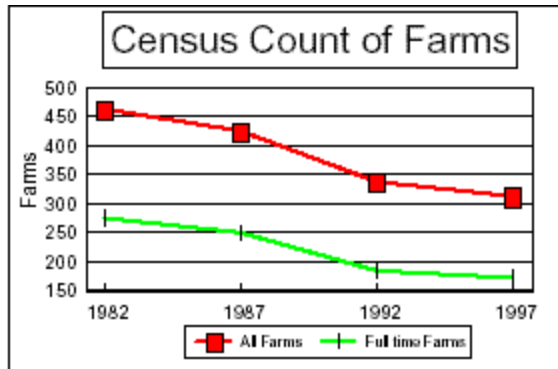


## Lincoln County

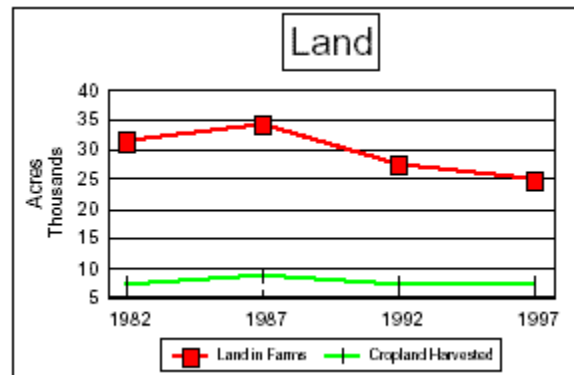
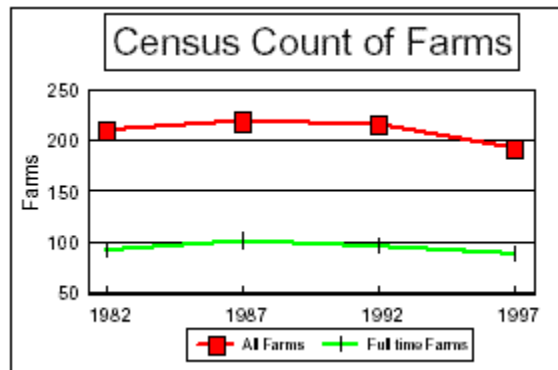


# Farmland

## Knox County



## Waldo County



Source: New England Agricultural Statistics Service

## Income

The distribution of income is a good indicator of the health of a community. After reviewing the median household income of all four counties in midcoast Maine, each county is in the same dilemma: the service center's household income is less than the regional average. Compared to the county as a whole, the household income of the coastal and outlying towns is much higher than the service center of that county.

## SAGADAHOC

	1999 Per Capita Income	1999 Median Household Income
<b>Sagadahoc County</b>	<b>\$20,378</b>	<b>\$41,908</b>
Arrowsic	\$29,597	\$53,250
Georgetown	\$24,709	\$47,813
Topsham	\$21,135	\$47,682
Phippsburg	\$22,205	\$46,739
West Bath	\$23,022	\$45,326
Bowdoinham	\$21,118	\$44,779
Bowdoin	\$17,260	\$42,687
Woolwich	\$21,097	\$41,741
*Brunswick	<b>\$20,322</b>	<b>\$40,402</b>
Richmond	\$17,896	\$36,654
Bath	<b>\$19,112</b>	<b>\$36,372</b>

2000 U.S. Census Data

# Income

LINCOLN	<i>1999 Per Capita Income</i>	<i>1999 Median Household Income</i>
<b>Lincoln County</b>	<b>\$20,760</b>	<b>\$38,686</b>
Edgecomb	\$23,788	\$43,833
Newcastle	\$24,289	\$43,000
Alna	\$17,340	\$43,125
Jefferson	\$20,298	\$42,311
Dresden	\$18,886	\$41,719
Boothbay	\$22,036	\$41,406
Nobleboro	\$21,373	\$39,805
Westport	\$21,623	\$39,010
South Bristol	\$28,233	\$38,636
Whitefield	\$16,456	\$38,477
Bristol	\$21,821	\$38,400
Southport	\$33,481	\$38,125
<b>Wiscasset</b>	<b>\$18,233</b>	<b>\$37,378</b>
Somerville	\$15,906	\$37,125
<b>Damariscotta</b>	<b>\$23,146</b>	<b>\$36,187</b>
Bremen	\$29,869	\$36,167
<b>Boothbay Harbor</b>	<b>\$21,146</b>	<b>\$35,000</b>
Waldoboro	\$17,117	\$34,830
Monhegan	\$20,568	\$25,250

2000 U.S. Census Data

# Income

<i><b>KNOX</b></i>	<i><b>1999 Per Capita Income</b></i>	<i><b>1999 Median Household Income</b></i>
<b>Knox County</b>	<b>\$19,981</b>	<b>\$36,774</b>
Rockport	\$25,498	\$47,155
South Thomaston	\$21,303	\$43,594
Hope	\$24,385	\$42,273
St. George	\$23,272	\$41,211
Cushing	\$20,264	\$40,598
North Haven	\$17,112	\$40,446
Owls Head	\$22,660	\$40,107
Camden	\$26,126	\$39,877
Friendship	\$20,409	\$39,348
Union	\$16,240	\$37,679
Appleton	\$16,484	\$36,615
Warren	\$15,655	\$35,662
Washington	\$15,488	\$35,492
Vinalhaven	\$21,287	\$34,087
Thomaston	<b>\$17,199</b>	<b>\$33,306</b>
Matinicus Isle	\$15,537	\$32,500
Rockland	<b>\$16,659</b>	<b>\$30,209</b>
Isle au Haut	\$11,723	\$25,000

2000 U.S. Census Data

# Income

<i>WALDO</i>	<i>1999 Per Capita Income</i>	<i>1999 Median Household Income</i>
<b>Waldo County</b>	<b>\$17,438</b>	<b>\$33,986</b>
Lincolnton	\$21,621	\$42,273
Winterport	\$18,235	\$40,776
Islesboro	\$25,653	\$39,643
Northport	\$21,438	\$39,435
Stockton Springs	\$18,370	\$37,050
Searsmont	\$18,119	\$36,708
Prospect	\$20,243	\$36,607
Liberty	\$16,201	\$34,583
Morrill	\$15,596	\$34,583
Palermo	\$17,827	\$34,375
Knox	\$14,468	\$33,333
Frankfort	\$14,524	\$33,333
Freedom	\$15,492	\$33,125
Montville	\$14,112	\$32,434
Belfast	<b>\$19,276</b>	<b>\$32,400</b>
Monroe	\$15,200	\$32,250
Swanville	\$14,483	\$31,417
Searsport	\$18,883	\$31,288
Burnham	\$14,030	\$31,071
Brooks	\$14,446	\$30,104
Troy	\$14,027	\$30,052
Waldo	\$14,030	\$29,063
Belmont	\$14,942	\$29,013
Unity	<b>\$15,086</b>	<b>\$26,927</b>
Thorndike	\$13,090	\$26,786
Jackson	\$15,525	\$26,705

2000 U.S. Census Data

# Taxes

Local property taxes are levied on our homes and property, to pay for the costs of local government and the services it provides, such as public education, road maintenance, snow removal and emergency services. These taxes are determined by the assessed value of the property, and are calculated by a multiplier, or mil rate.

In the tables below, the list of towns per county are in the same order as the tables above; the towns with the higher household incomes are at the top of the table. Analysis shows that not only do the service center towns have the lowest median household income, they also have some of the highest tax rates. The trend of middle to upper- income households moving or building new houses in the more affordable and outlying towns contributes to the sprawling pattern of development.

<b>Sagadahoc County</b>	<b>1990 mil rate</b>	<b>2001 mil rate</b>	<b>Percent change</b>
Arrowsic	9.7	10.16	4.7%
Georgetown	10.6	16.50	55.7%
Topsham	16.0	19.54	22.1%
Phippsburg	9.15	15.60	70.5%
West Bath	14.5	15.25	5.2%
Bowdoinham	22.1	18.90	14.5%
Bowdoin	16.1	18.90	17.4%
Woolwich	13.9	13.80	0.7%
Richmond	14.0	15.70	12.1%
<b>Bath</b>	<b>19.3</b>	<b>22.00</b>	<b>14.0%</b>

*Maine Revenue Services data*

Bath, the service center for Sagadahoc County, has the highest mil rate for that county. Bath also has the lowest median household income. The mil rate of Bath was already high in 1990, when compared to the surrounding towns (with the exception of Bowdoinham).

It is interesting to see that the highest percent change between 1990 and 2001 are in the outlying rural towns of Sagadahoc County. Although the tax rates are still considerably lower than Bath's, this trend may represent an increase demand on those towns for services from the new residents moving there.



# Taxes

## Lincoln County

	1990 mil rate	2001 mil rate	Percent change
Edgecomb	19.55	18.10	-7.4%
Newcastle	12.65	17.70	39.9%
Alna	11.0	14.20	29.1%
Jefferson	5.5	10.30	87.3%
Dresden	11.25	18.90	68%
Boothbay	12.5	11.17	-10.6%
Nobleboro	8.1	13.80	70.4%
Westport	5.4	10.85	100.9%
South Bristol	8.6	6.35	-26.2%
Whitefield	12.67	16.25	28.3%
Bristol	10.6	9.35	-11.8%
Southport	5.8	7.25	25%
Wiscasset	30.5	17.90	41.3%
Somerville	12.7	16	26%
<b>Damariscotta</b>	<b>8.0</b>	<b>19.30</b>	<b>141.3%</b>
Bremen	5.97	11.00	84.3%
Boothbay Hbr	12.5	13.85	10.8%
Waldoboro	11.3	16.10	42.5%
Monhegan	3.1	6.40	4.9%

*Maine Revenue Services data*

Damariscotta, Lincoln County's service center, had the highest tax rate in the county in 2001, and also showed the largest percent change between 1990 and 2001.

# Taxes

The two service center towns of Knox County, Thomaston and Rockland, have the highest tax rates in the county.

<b>Knox County</b>	<b>1990 mil rate</b>	<b>2001 mil rate</b>	<b>Percent change</b>
Rockport	10.26	15.95	55.5%
South Thomaston	9.0	16.65	85%
Hope	11.25	17.00	51.1%
St. George	8.6	11.20	30.2%
Cushing	8.3	14.00	68.7%
North Haven	19.5	11.80	39.5%
Owls Head	9.25	16.00	73%
Camden	11.5	17.85	55.2%
Friendship	7.9	11.40	44.3%
Union	13.9	14.80	6.5%
Appleton	13.0	19.25	48.1%
Warren	15.6	16.20	3.8%
Washington	10.63	14.95	40.6%
Vinalhaven	13.2	12.89	2.3%
<b>Thomaston</b>	<b>21.5</b>	<b>25.30</b>	<b>17.7%</b>
Matinicus Isle	7.28	5.57	-23.5%
<b>Rockland</b>	<b>21.5</b>	<b>23.70</b>	<b>10.2%</b>
Isle au Haut	11.2	10.70	4.5%

*Maine Revenue Services data*

# Taxes

<b>Waldo County</b>	<b>1990 mil rate</b>	<b>2001 mil rate</b>	<b>Percent change</b>
Lincolntonville	22.41	14.55	-35.1%
Winterport	15.5	16.60	7.1%
Islesboro	8.38	10.94	30.5%
Northport	10.3	15.20	47.6%
<b>Stockton Springs</b>	<b>25.3</b>	<b>23.60</b>	<b>6.7%</b>
Searsmont	17.5	17.40	.6%
Prospect	10.3	16.90	64.1%
Liberty	10.8	15	38.9%
Morrill	15.0	17	13.3%
Palermo	7.1	13.50	90.1%
Knox	12.9	16	24%
Frankfort	21	17.50	16.7%
Freedom	10.9	17.80	63.3%
Montville	16.2	20.30	25.3%
<b>Belfast</b>	<b>17.6</b>	<b>21.30</b>	<b>21%</b>
Monroe	12.2	20.50	68%
Swanville	15.2	15.80	3.9%
<b>Searsport</b>	<b>22.5</b>	<b>25.80</b>	<b>14.7%</b>
Burnham	18	18.65	3.6%
Brooks	8.5	20.75	144.1%
Troy	11.6	15.20	31%
Waldo	17.5	11	37.1%
Belmont	13.3	21.25	59.8%
Unity	12.5	19	52%
Thorndike	12.4	14.38	16%
Jackson	9.8	17.50	78.6%

*Maine Revenue Services data*

Waldo County, along with the other three counties in the midcoast, follows the same pattern: The service center towns, which provide the majority of services for the surrounding area, have the highest tax rates in their respective counties.

## CONCLUSIONS

### **Shifting Midcoast Patterns of Growth**

Like many communities nationwide, we are now facing a critical turning point where the face of the country side is changing. Our towns and villages are no longer the places they once were. The outlying farm land is disappearing to make way for stores, malls, developments, or single house lots that, over time, eat up open space. Mainers are spending more time in their cars commuting to workplaces. Towns are feeling increasing pressures to provide services (schools, roads and police/fire) to areas where they never once had to while still maintaining the older villages. Tax rates are increasing in small towns at a greater rate than in the larger towns. School, police and fire costs are increasing. In many places, incomes will be decreasing in service centers and increasing in smaller towns since those moving out are likely to be middle income families, leaving poorer people in the centers. In some coastal Maine towns, incomes will be increasing due to the pressures out-of -state buyers put on land costs forcing lower income people out of coastal communities.

Yes, the midcoast is experiencing sprawl. It may be gradual and unnoticeable over short periods of time. But the cumulative effect of personal and institutional decisions is changing our countryside, wasting land and water resources and above all, costing more money. This report shows the proof of our changing midcoast landscape and suggests that we must do something to change these Sprawling Patterns of Growth.