

## **MSM Working Paper**

### **“Land Consumption Patterns in Central New Jersey”**

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*In April of 1999, MSM Regional Council completed an analysis of land consumption trends for the twenty year period from 1976 to 1996. The analysis was based on digital aerial photography taken in 1995/97 and conducted through a geographic information system (GIS) analysis to classify and quantify land development patterns in MSM’s study area. In addition, the analysis measured land conservation rates using state and county data records and digital geographic information system data provided by Middlesex, Somerset and Mercer Counties. Finally, per capita and per job land consumption rates were calculated and compared with State agency population and employment projections for our region.*

*The 1999 Land Consumption Analysis was undertaken as part of MSM’s on-going Sustainable Region initiatives – FORUM 2020 and the MSM Sustainable Development Project. The following is a summary of preliminary findings from an analysis of land consumption trends recently completed by MSM Regional Council.*

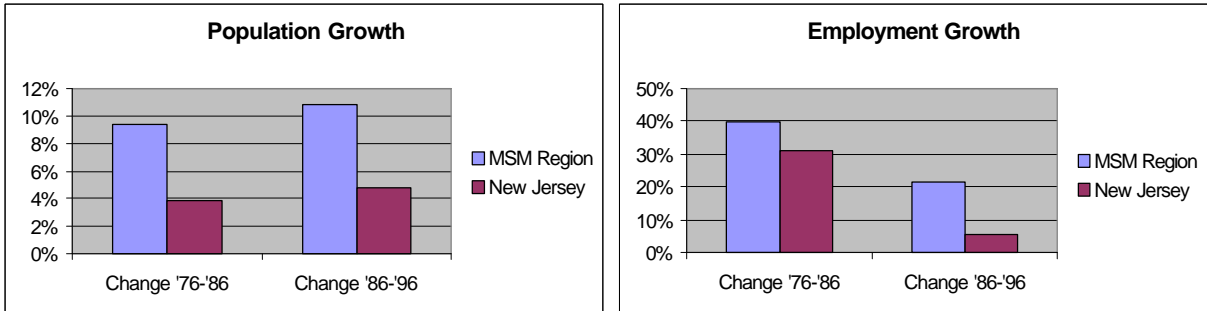
#### **INTRODUCTION**

MSM Regional Council is a non-profit, non-partisan land use planning and public policy organization based in Plainsboro, New Jersey. The organization was founded in 1968 to keep a watchful eye on land use decision-making and for more than 30 years has been an independent voice for sensible development in central New Jersey. MSM’s core study region is comprised of thirty-two municipalities and includes the southern portions of Middlesex and Somerset Counties and all of Mercer County. The study region has been attractive for development for the most of the past three decades for many reasons, including Princeton’s worldwide reputation and excellent access to transportation infrastructure including the Northeast Corridor rail line, proximity to major deep water ports in Philadelphia and Newark/Elizabeth, several international and regional airports, as well as major highway corridors such as the New Jersey Turnpike, I-95/295 and Route 1.

Perhaps most important reason, however, is the fact that the region is one of the last areas in the prosperous Boston/Washington Corridor with open land resources.

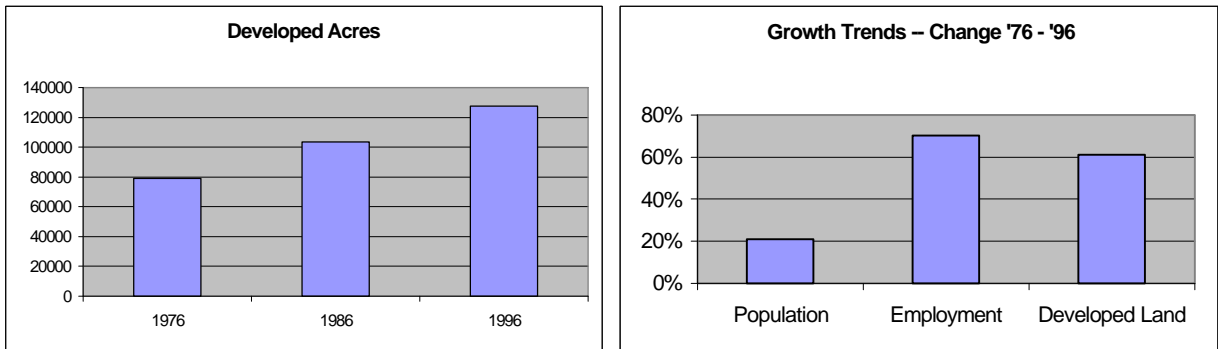
**PAST TRENDS**

**Population and Employment:** In 1976, the study region had a population of 551,495 people and an employment base of 177,461 jobs. By 1996, population had grown to 668,877 and employment had increased to 301,147. This represents an increase of 21% and 70% respectively. The region’s population and employment grew more than two times faster than the state as a whole.



Source: US Census Bureau, NJ Department of Labor

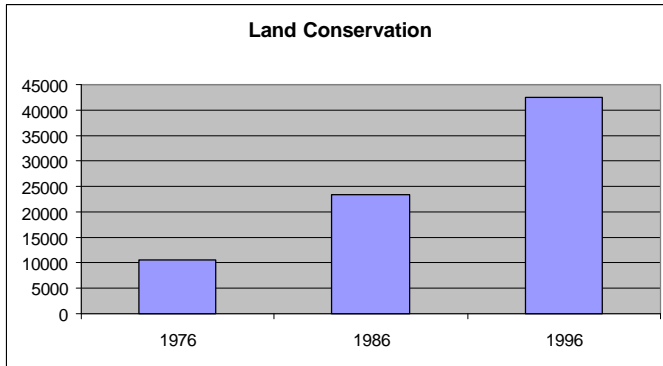
**Land Consumption:** From 1976 to 1996, more than 48,000 acres of undeveloped land in the study region was converted to development. That represents an 61% increase in developed land over a twenty year period. More than 127,000 acres or 38% of the region’s total land area is now developed. The region’s population grew by 21%, however, developed land grew by 61% – a rate three times that of population growth. By way of contrast, Portland, Oregon, America’s “Promised Land” of growth management and compact development, population grew by 50% while the amount of developed land grew by only 2%.



Source: US Census Bureau, NJ Department of Labor, NJ Department of Environmental Protection, MSM Regional Council

Consuming land faster than we grow means that we are building at lower densities on land that was formerly undeveloped and open. The Regional Plan Association, a Manhattan-based group, estimates that population in the metropolitan area of New York City grew only by 6% in the last 30 years, but developed land grew by 60%. We are spreading ourselves more thinly on the landscape.

**Land Conservation:** In 1976, the study region had 10,531 acres of land permanently preserved as farmland, parks, and/or open space. By 1998, the region had 42,507 acres, an increase of 304%. We have made great strides in the area of open space preservation, however, permanently preserved lands still only represent 13% of the region's total land area.



Source: State and County records/digital data provided  
Middlesex, Somerset & Mercer Counties

## Future Choices

The region's future can play out in a number of ways based on a wide variety of variables including, macro-economic trends, changes in state, county and local policy toward land development, and personal lifestyle choices just to name a few. The analysis compared two alternative scenarios that forecast the region's land use future based on contrasting land use policy frameworks. The first is based on a continuation of the land conservation and consumption rates experienced over the 1976 to 1996 period projected to the planning year of 2020. The second scenario is based on the Vision 2050 Land Use Plan developed as part of MSM's FORUM 2020 initiative and which is based on the NJ State Development and Redevelopment Plan.

### *Alternative Scenario I – The year 2020 based on a continuation of trend land use patterns*

**Land Conservation** – Given the recent passage of the State, County and many municipal open space funding initiatives, there is some indication that we may be able to sustain a pace of land conservation equal to the aggressive acquisition performance of the past two decades. If we do, we may be able to save an additional 32,000 acres of land by the year 2020. Add to that regulated environmental resource areas such as wetlands, streams and steep slopes, which amount to approximately 52,000 acres regionwide, and the region could potentially protect a total of 126,507 acres of land for conservation purposes. This would represent 38% of the region's total land area.

**Population & Employment** – Based on current State agency projections, by the year 2020, population and employment in our region will grow by approximately 213,000 new people and by 268,000 new jobs. This represents an increase of 40% and 89% respectively for the period, 1996 to 2020.

Land Consumption – Assuming current land consumption patterns remain unchanged – mostly “greenfield” development with little redevelopment. Approximately 85,500 acres of land will be needed to accommodate projected growth. That is approximately 3,800 acres more land than will be available in the region by the year 2020 if we are successful in achieving the aggressive open space goal of adding another 32,000 acres of open space, parks and farmland. That would represent a 64% increase in developed land by the year 2020 – a rate that is still faster than population growth. . In short, the next twenty years will be a “race for space,” with the end result theoretically being build out with no open land left.

***Alternative II – Based on MSM’s Vision 2050 Land Use Plan***

Land Conservation – In 1986, MSM Regional Forum set as a goal for the region, the conservation of 40% of the region’s land resources. That goal remains a solid target for our future. In addition to the State, County and many municipal open space funding initiatives that past voter muster this past November, the region could use other land use planning tools such as transfer of development credits to permanently protect a total of 40,000 acres (8,000 more than we did in the past twenty years) of land by the year 2020. Add to that regulated environmental resource areas such as wetlands, streams and steep slopes, which amount to approximately 52,000 acres regionwide, and the region could potentially protect a total of 134,346 acres of land for conservation purposes. This would meet the 40% conservation goal established in 1986.

Population & Employment – Based on current State agency projections, by the year 2020, population and employment in our region will grow by approximately 213,000 new people and by 268,000 new jobs. This represents an increase of 40% and 89% respectively for the period, 1996 to 2020.

Land Consumption – Projected growth could be accommodated by a different, less land consumptive land use pattern, that is consistent with the State Plan. MSM’s Vision 2050 Land Use Plan requires the development of an additional 16,221 acres of currently open land as the region transitions to a “redevelopment economy.” The projected growth is accommodated with approximately 57,000 acres of open land remaining for future conservation and/or development.

## **CONCLUSIONS**

The “doomsday” picture painted by Alternative I does not have to and should not lead land use decision-makers to take a NO-growth, “roll up the drawbridge” approach to the future. What it should do is give us reason to pause and take some time to consider the impact of current development patterns. The next job is to evaluate these trends on the region, and to develop strategies to emphasize the benefits and minimize the liabilities of growth.

One of the factors that will shape the region’s future is whether or not local governments and State agencies will follow the goals and policies of the State Development and

Redevelopment Plan. The State Plan's goals were established by the Legislature in 1985 in the State Planning Act. The goals are to revitalize our cities and downtowns, to conserve our natural and cultural resources, to protect our environment, to foster beneficial economic growth, to provide affordable housing, and to develop in such a way as to find efficiencies in infrastructure investments. The Plan must also foster the coordination of local, county and state plans. Right now, by Executive Order, the Governor has directed many State agencies to follow the State Development and Redevelopment Plan.

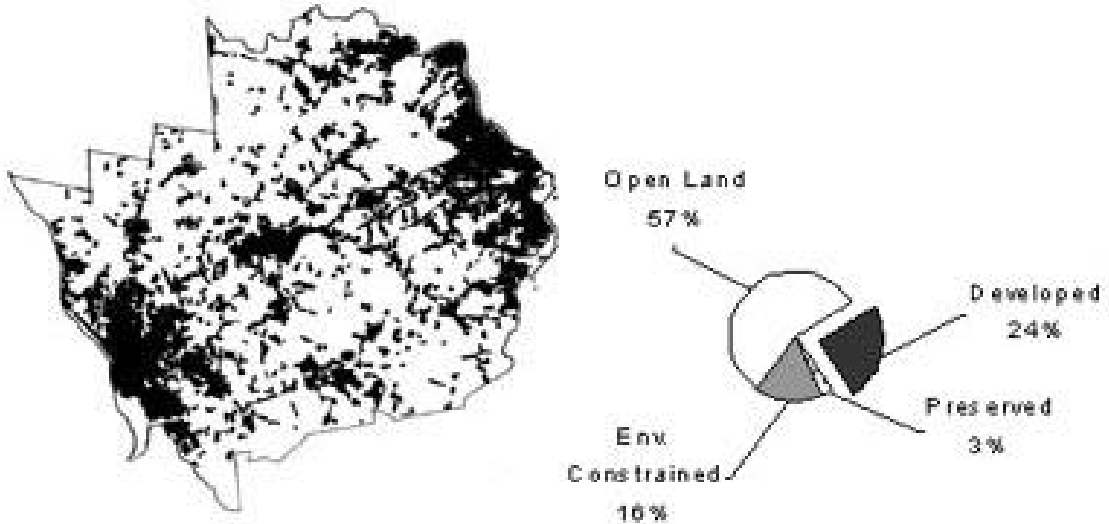
The goals and policies that are in the State Plan have been reviewed and (for the most part) supported by all of New Jersey's 566 municipalities, including the 32 towns in the MSM study region. They did this review in a process called cross-acceptance. Some municipalities in the region have taken deliberate steps and have engaged in a planning process designed to be consistent with the State Plan. Princeton Borough and Township have been designated as a Regional Center by the State Planning Commission. Hopewell Borough and Cranbury have been designated Village Centers, and Hightstown Borough and Washington Township have been designated as Town Centers.

The State Plan presents an alternative vision of how New Jersey can and should develop in order to achieve these goals. It developed this vision in part based on the work of MSM's Regional Forum Project in the 1980s. This vision is for future development to be encouraged in areas where there is already infrastructure, and only accommodated in the rural and environmentally sensitive lands in New Jersey. Whenever possible, the State Plan intends for new development to occur in a compact, mixed use development pattern that conserves natural resources, provides travel choices beyond the automobile, and provides opportunities for beneficial economic growth.

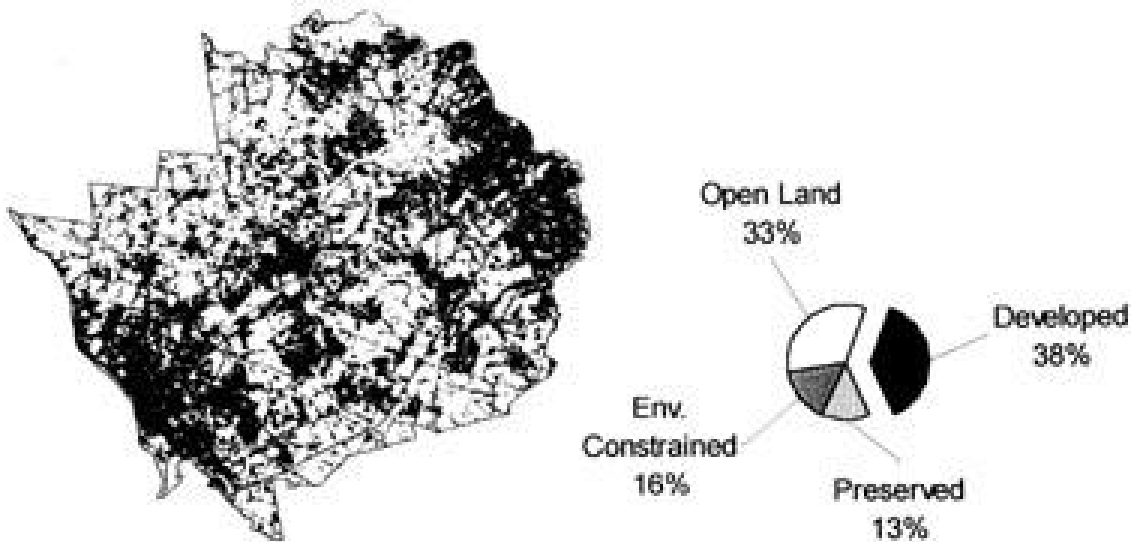
Our ability to ensure a sustainable region will depend, in large part, on how we decide the region should grow over the next decade. How much land should be purchased for preservation? Where should we encourage development to occur? What land use form should new development take? What transportation investments should we make to support new growth? What changes in public policy toward land use do we need to make in order to sustain the high quality of life this region presently enjoys? We face many choices as we approach the 21<sup>st</sup> Century. The path we choose to the future will shape central New Jersey's landscape long into the future.

<b>REGIONAL GROWTH TRENDS</b>					
				Absolute Change	Percent Change
	<u>1976</u>	<u>1986</u>	<u>1996</u>	<u>'76 - '96</u>	<u>'76 - '96</u>
<b>Population</b>					
Region <sup>1</sup>	551,495	603,519	668,877	117,382	21%
New Jersey	7,344,000	7,625,000	7,987,933	643,933	9%
Trenton	97,798	91,383	85,437	(12,361)	-13%
New Brunswick	44,013	39,953	41,534	(2,479)	-6%
Suburbs	409,684	472,183	541,906	132,222	32%
% Population in Cities	26%	22%	19%		
<b>Employment</b>					
Region	177,461	248,092	301,147	123,686	70%
New Jersey	2,217,132	2,905,719	3,068,200	851,068	38%
Trenton	30,123	24,009	27,736	(2,387)	-8%
New Brunswick	24,641	23,588	29,034	4,393	18%
Suburbs	122,697	200,495	244,377	121,680	99%
% Employment in Cities	31%	19%	19%		
<b>Land Use</b>					
Total Land Area (acres)	336,118				
Developed Land (acres) <sup>2</sup>	79,386	103,092	127,773	48,387	61%
Preserved Open Space (acres) <sup>3</sup>	10,531	23,391	42,507	31,976	304%
% Developed	24%	31%	38%		
% Permanently Preserved	3%	7%	13%		

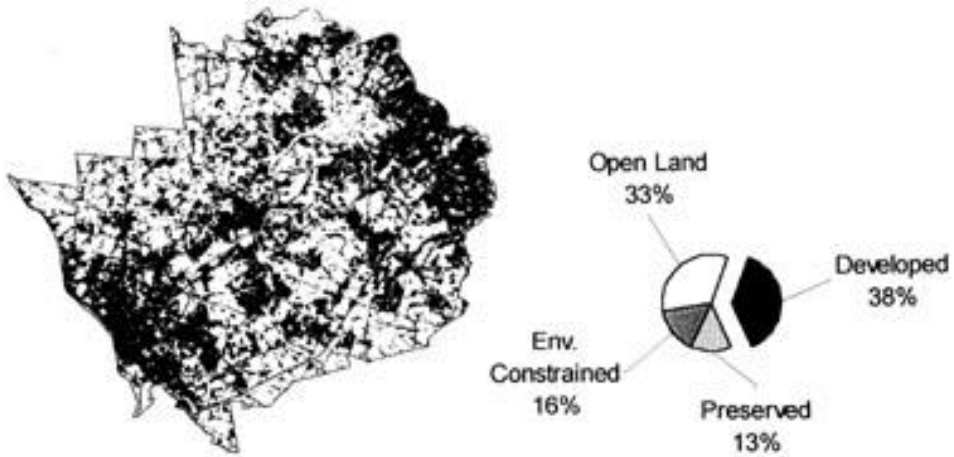
## LAND USE PATTERNS – 1976



## LAND USE PATTERNS – 1996

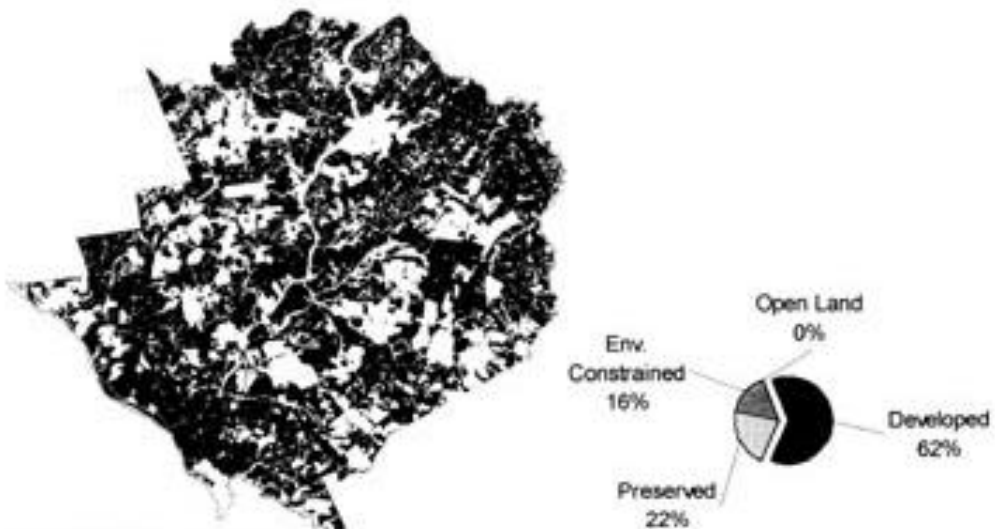


## LAND USE PATTERNS -- 1996



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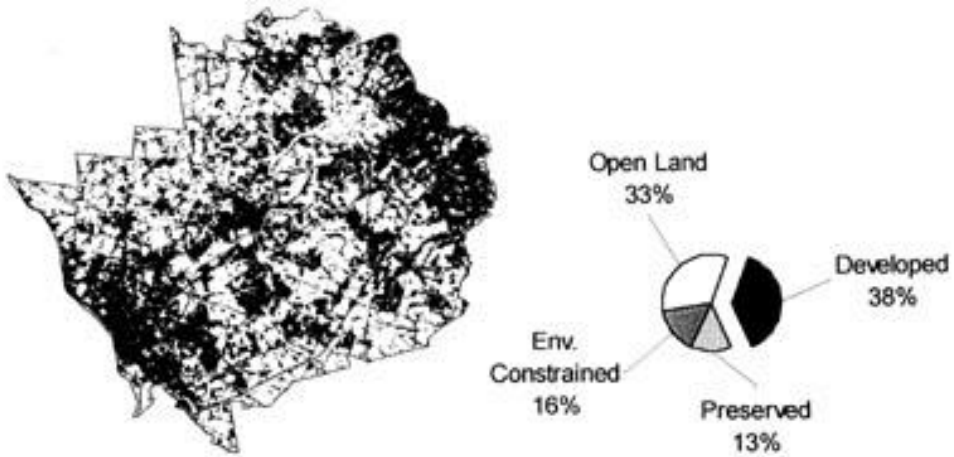
## LAND USE PATTERNS -- 2020 Alternative Scenario I (Trend)



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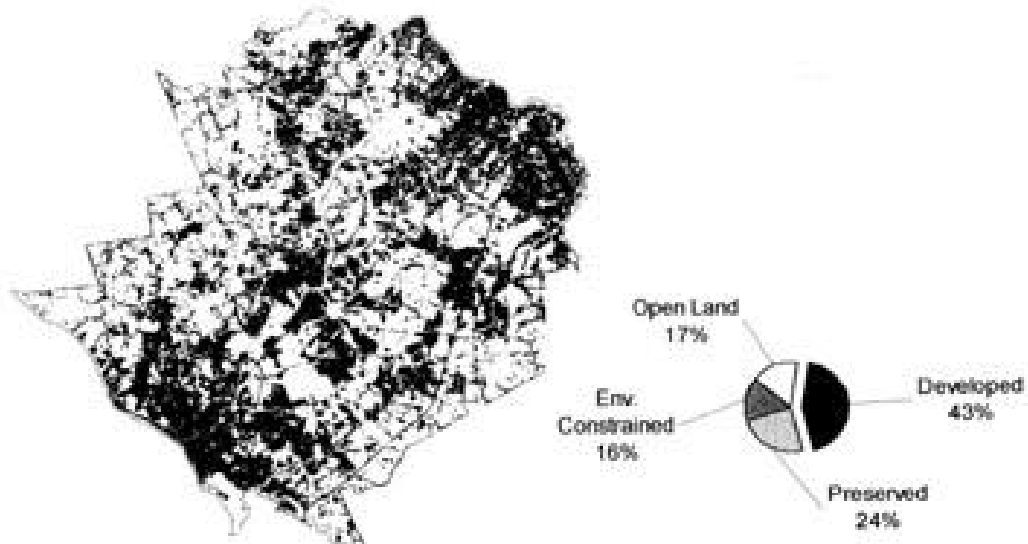


## LAND USE PATTERNS -- 1996



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## LAND USE PATTERNS -- 2020 Alternative Scenario II (MSM Vision)



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