Indicators of Smart Growth in Maryland

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January 2011

About the Indicator Project

- Started 2005.
- Primarily funded by the Abell Foundation.
- Gathered data and calculated approximately 120 measures.
- Launched beta website in 2008.
- Initial report released 2011.

Organization of this Project

- Six categories of indicators:
  - Population
  - The economy
  - Transportation and other infrastructure
  - Development patterns
  - Housing
  - Natural areas and the environment
- Reported data at the state, regional and county levels.

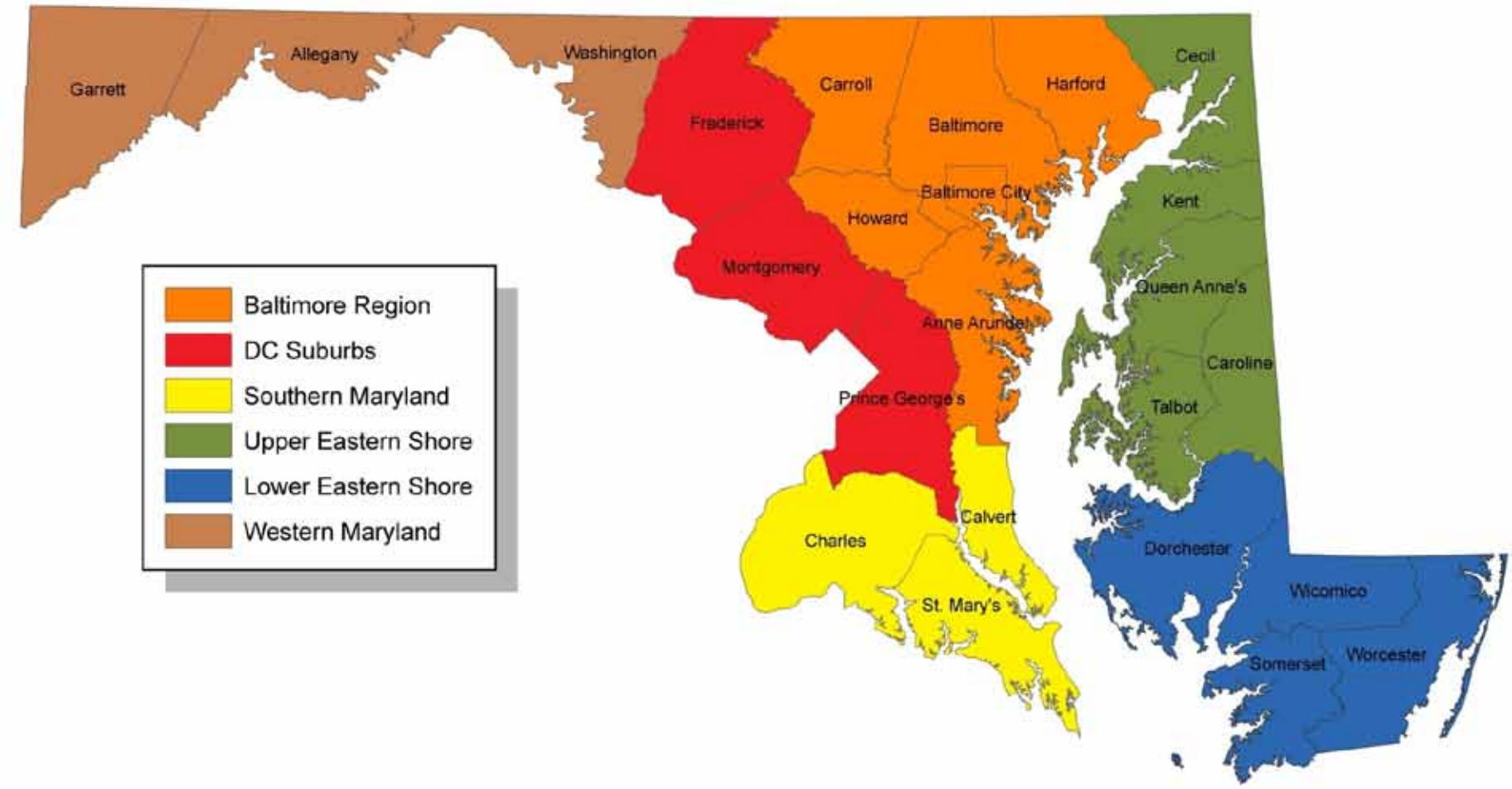
Conceptual and Technical Issues

- Common to any indicator effort:
  - Number of possible indicators.
  - Measurement of indicators.
  - Interpretation of indicators.
  - Aggregation of indicators.
  - Simplicity becomes complexity.
  - Causality not determined.

Conceptual and Technical Issues

- Specific to this indicator effort:
  - No goals to measure against.
  - Lack of time series data for many variables.
  - The built environment is slow to change.
  - No perfect set of smart growth measures.

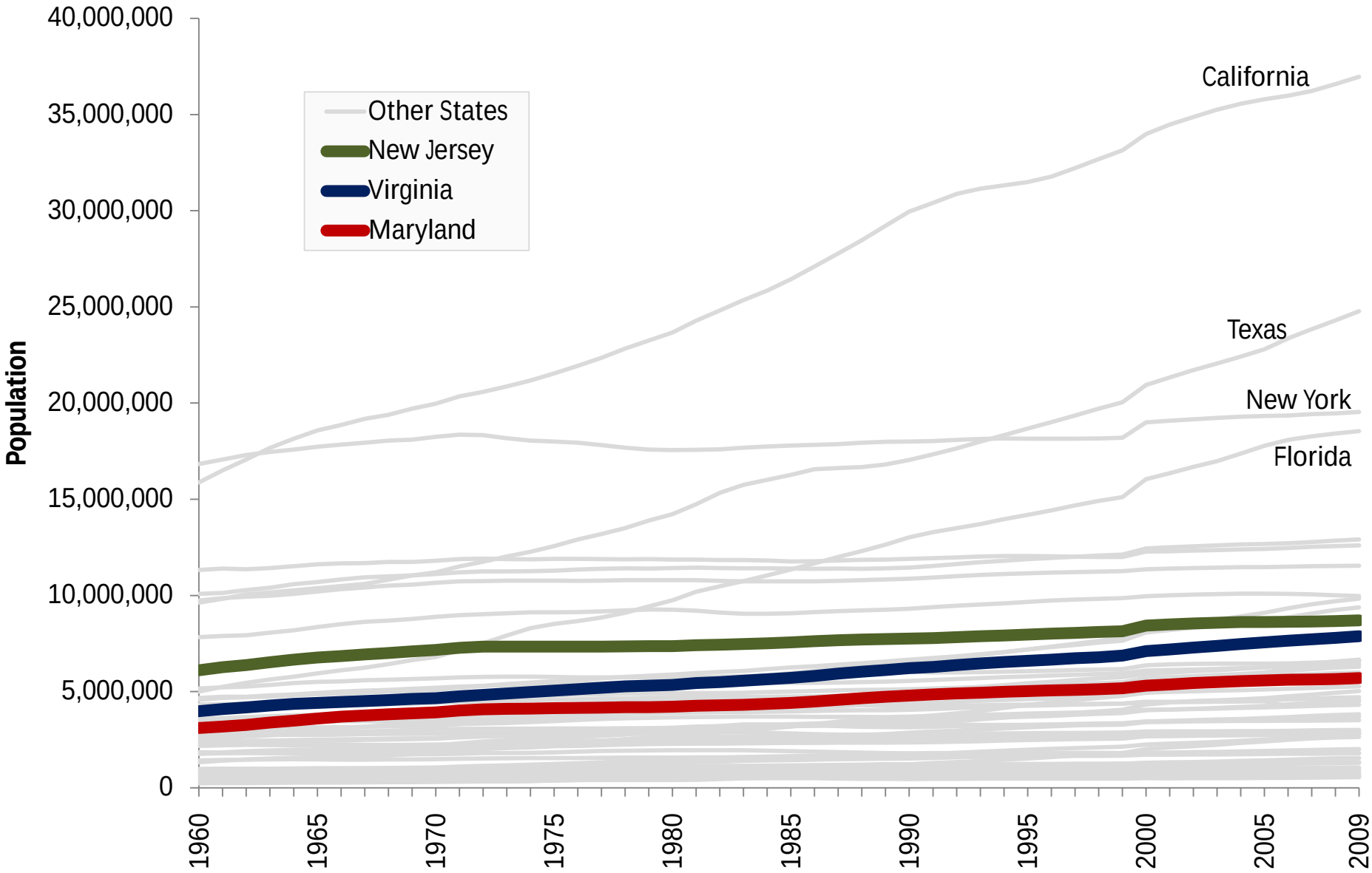
Maryland Regions



Population

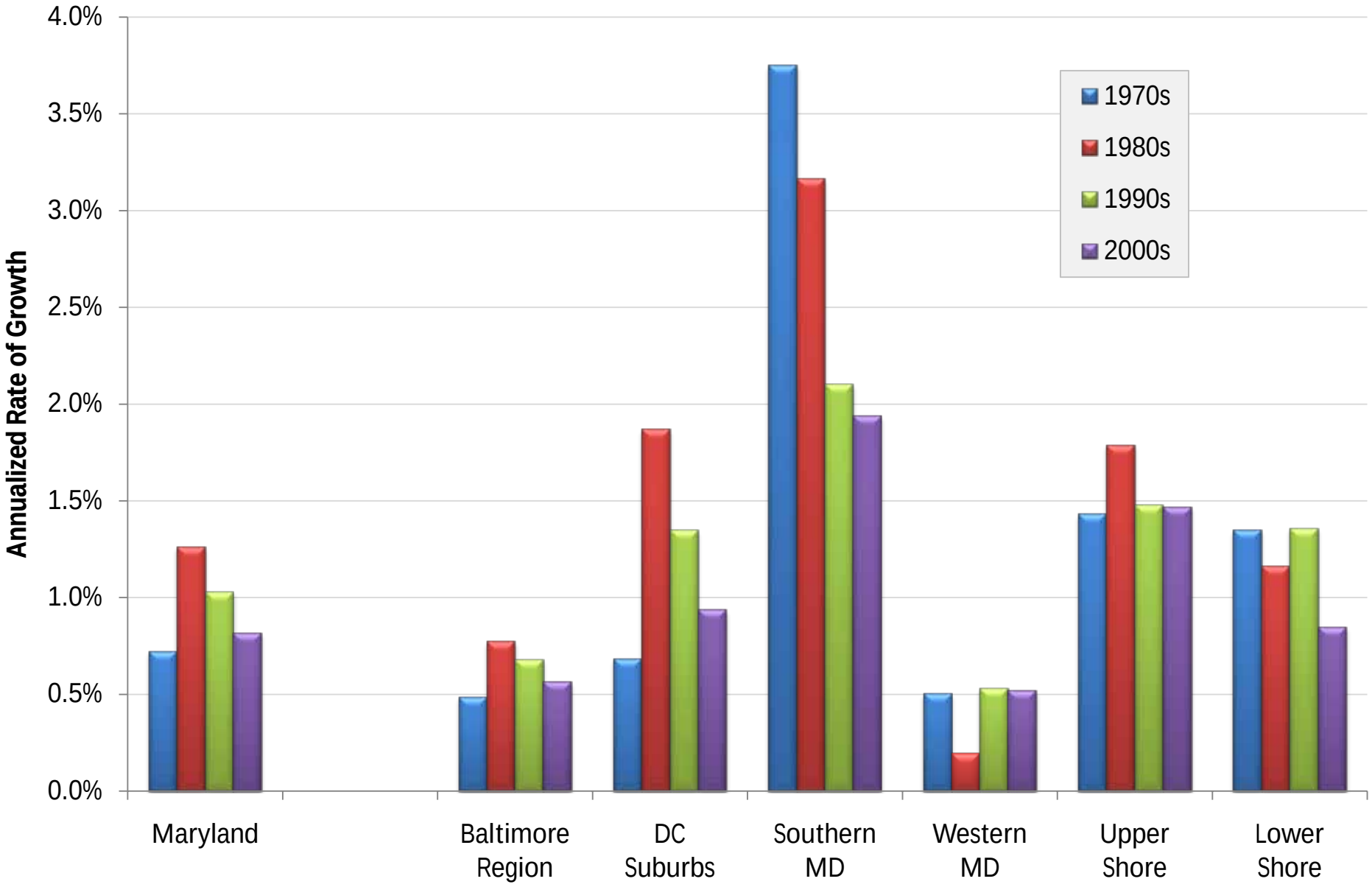
- Population growth rate approximately equals the national average.
- The indicators give no direct, rigorous, or even casual evidence that the Smart Growth Program either increased or decreased the *amount* or *composition* of population growth statewide.

Mid-Year Population Estimates, 1960-2009



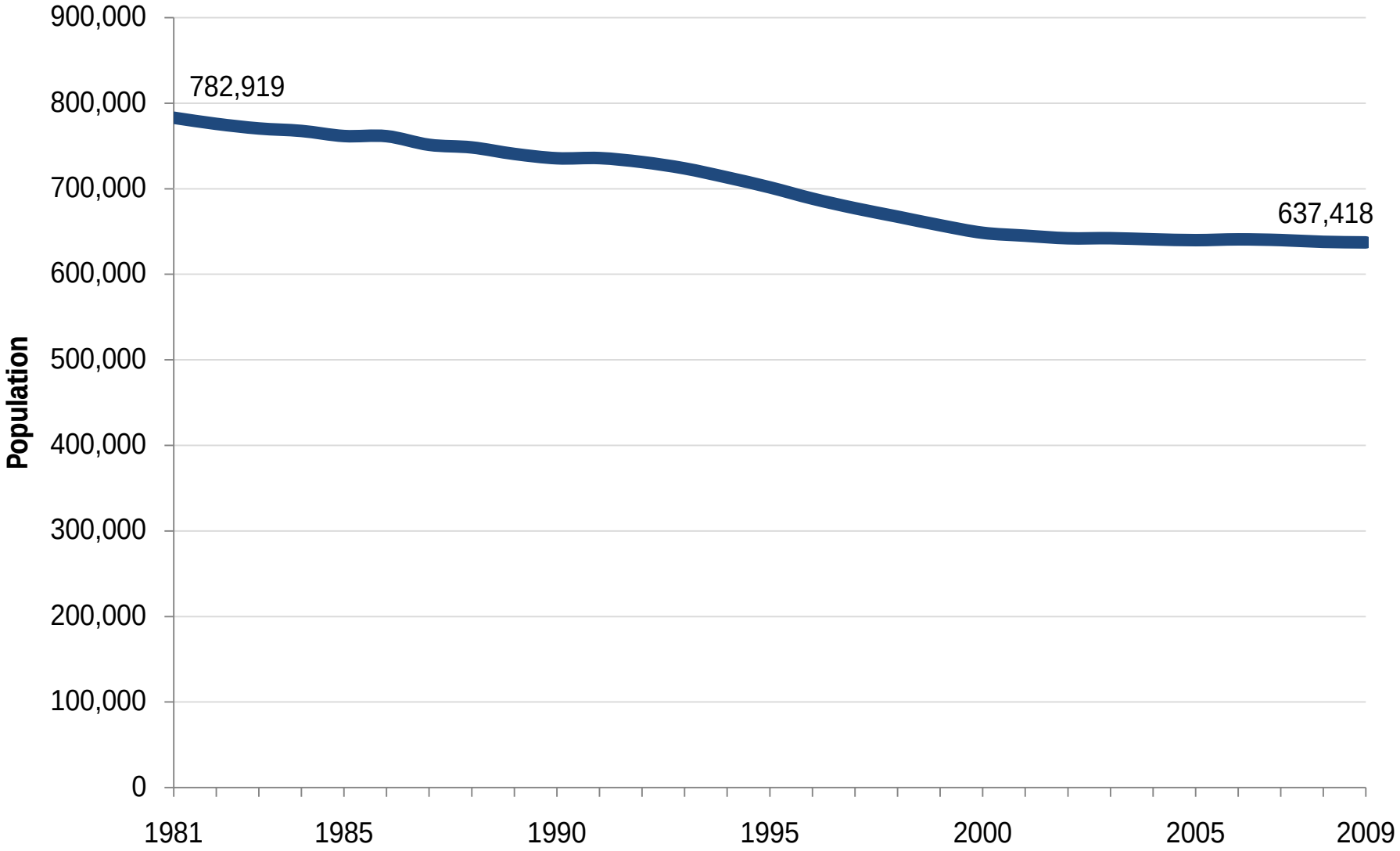
Source: U.S. Census Bureau, Population Division

Annualized Growth in Population, by Decade and Region



Source: U.S. Census Bureau

Baltimore City Mid-Year Population Estimates, 1981-2009



Source: U.S. Census Bureau, Population Division

Impact of Minority Population

- Minorities are driving Maryland's population growth.
- In 2009, Maryland had the 6th highest minority population share at 43.4%.

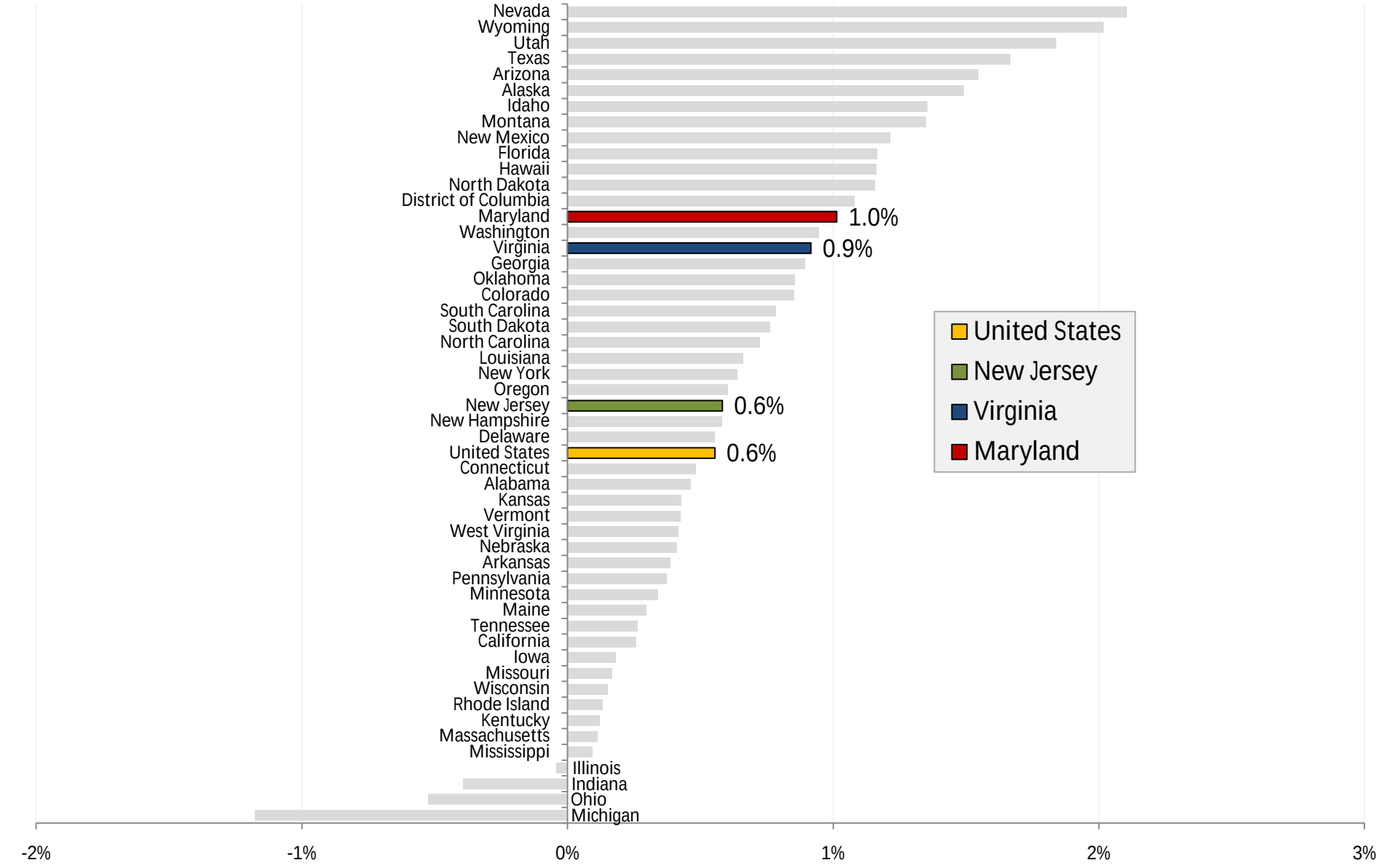
	1990s		2000s	
	Change in White Population	Change in Minority Population	Change in White Population	Change in Minority Population
United States	3.2%	44.2%	2.6%	20.3%
Virginia	5.6%	42.4%	4.8%	21.4%
New Jersey	-3.1%	43.3%	-3.6%	16.4%
Maryland	-1.3%	38.4%	-1.1%	18.5%

Source: U.S. Census Bureau

The Economy

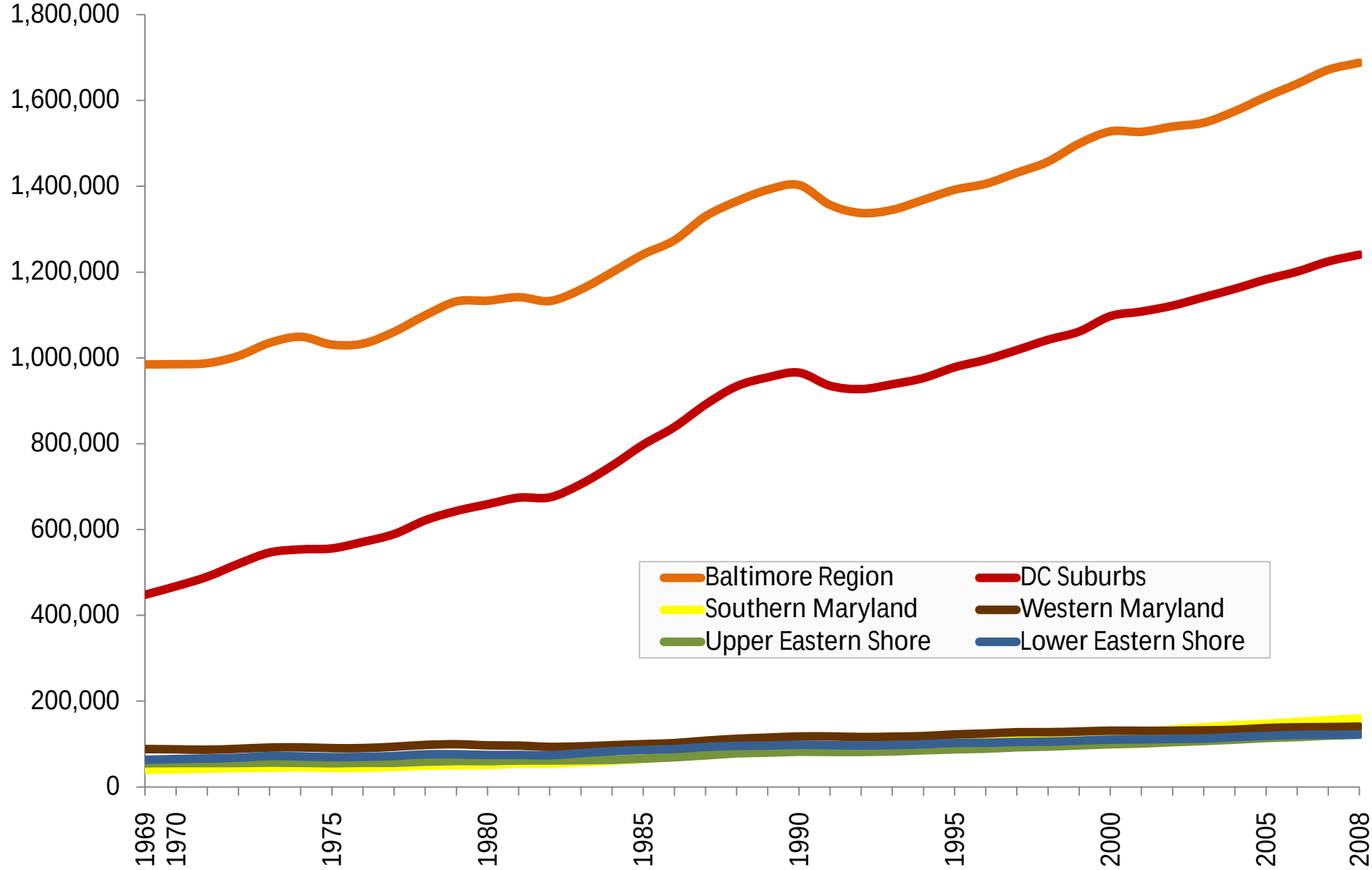
- Employment and other measures of economic activity have consistently grown over the last two decades in Maryland and all its regions.
- From 2000 to 2009, Maryland had the 13th highest annualized rate of job growth (1.0%) among the 50 states.
- Indicator data allow the conclusion that Smart Growth has not stopped economic growth.

Annual Job Growth, 2000s



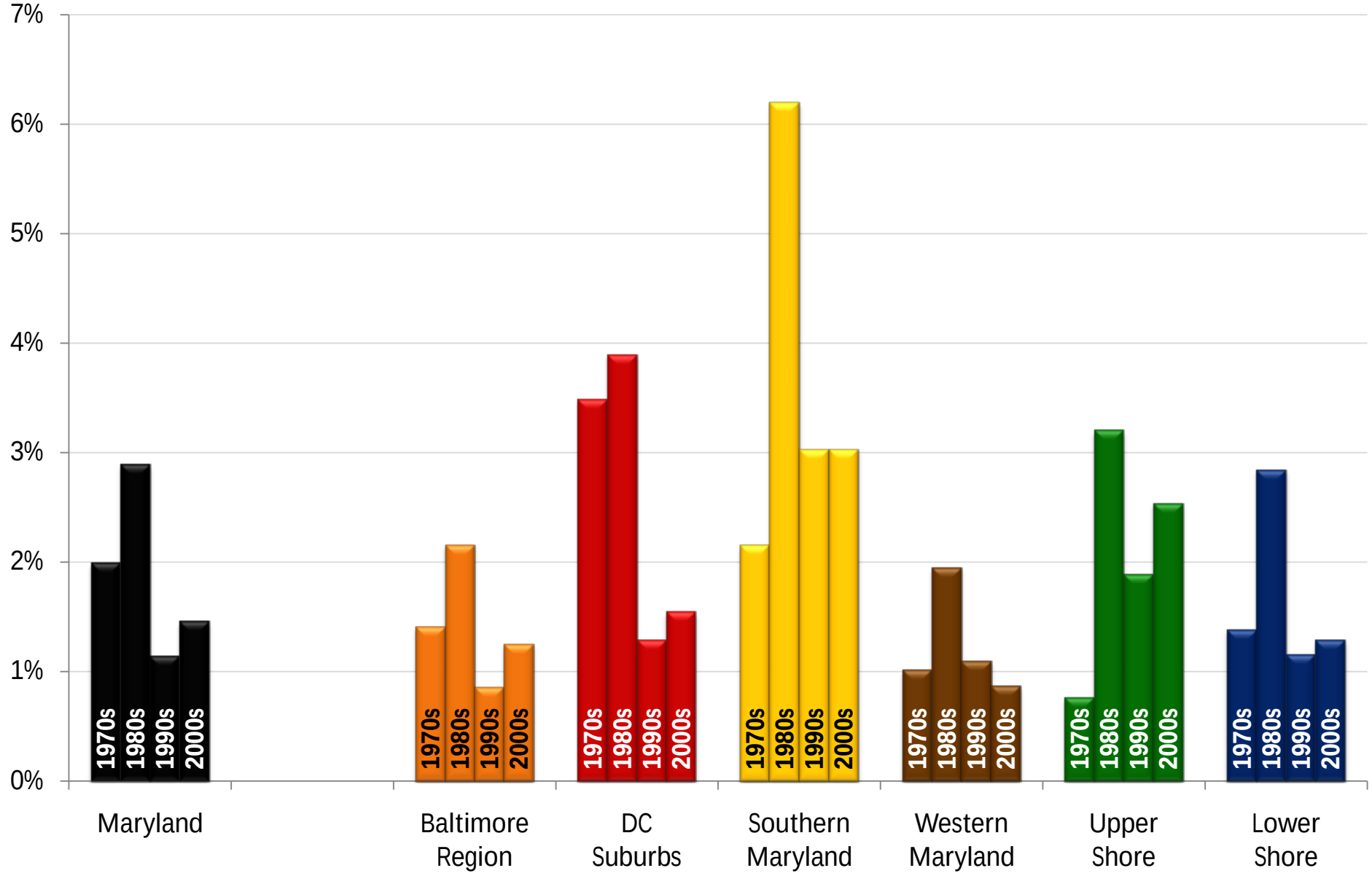
Source: Regional Economic Information System, U.S. Bureau of Economic Analysis

Total Jobs in Maryland by Region



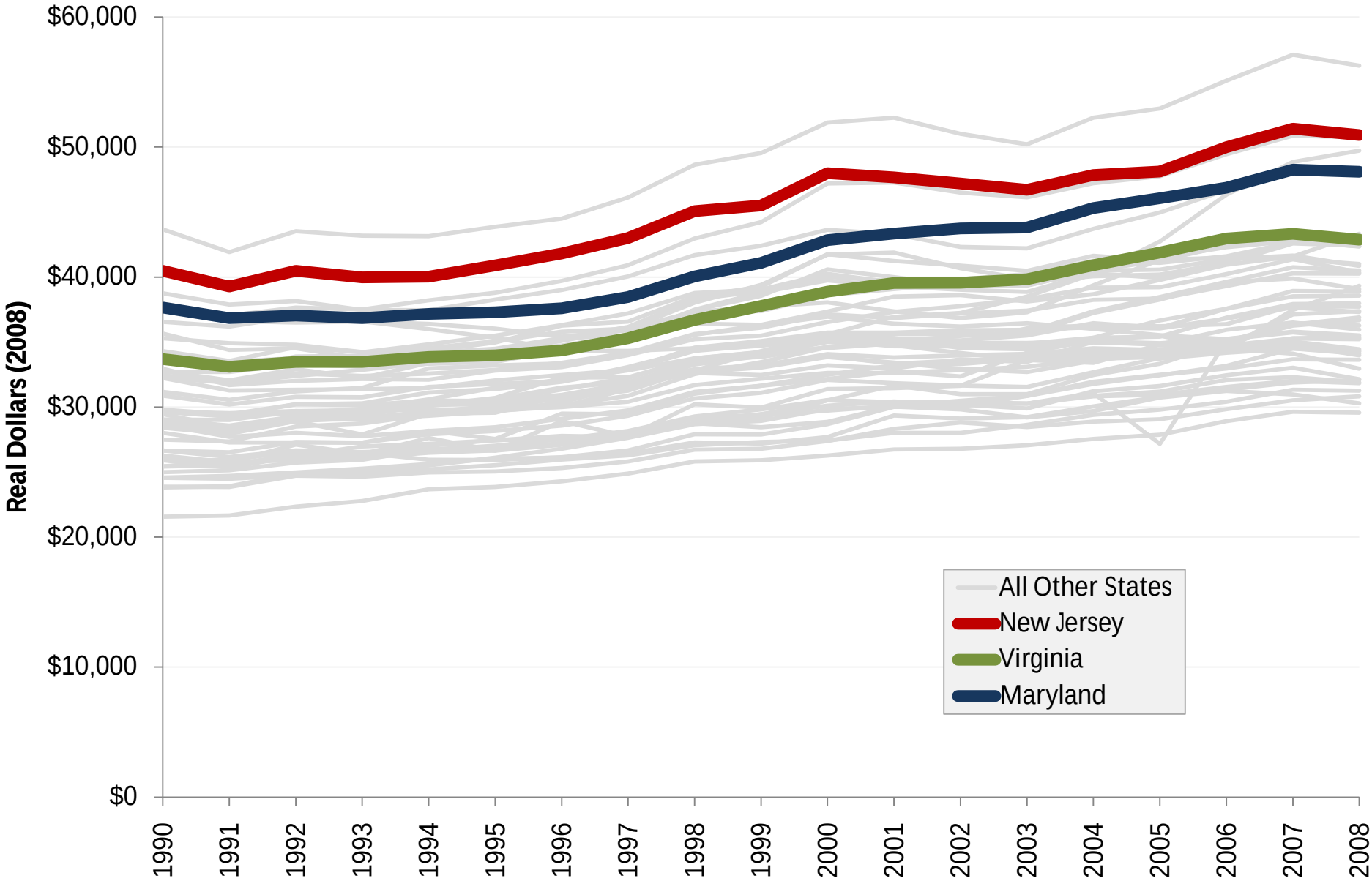
Source: Regional Economic Information System, U.S. Bureau of Economic Analysis

Annualized Job Growth by Region and Decade



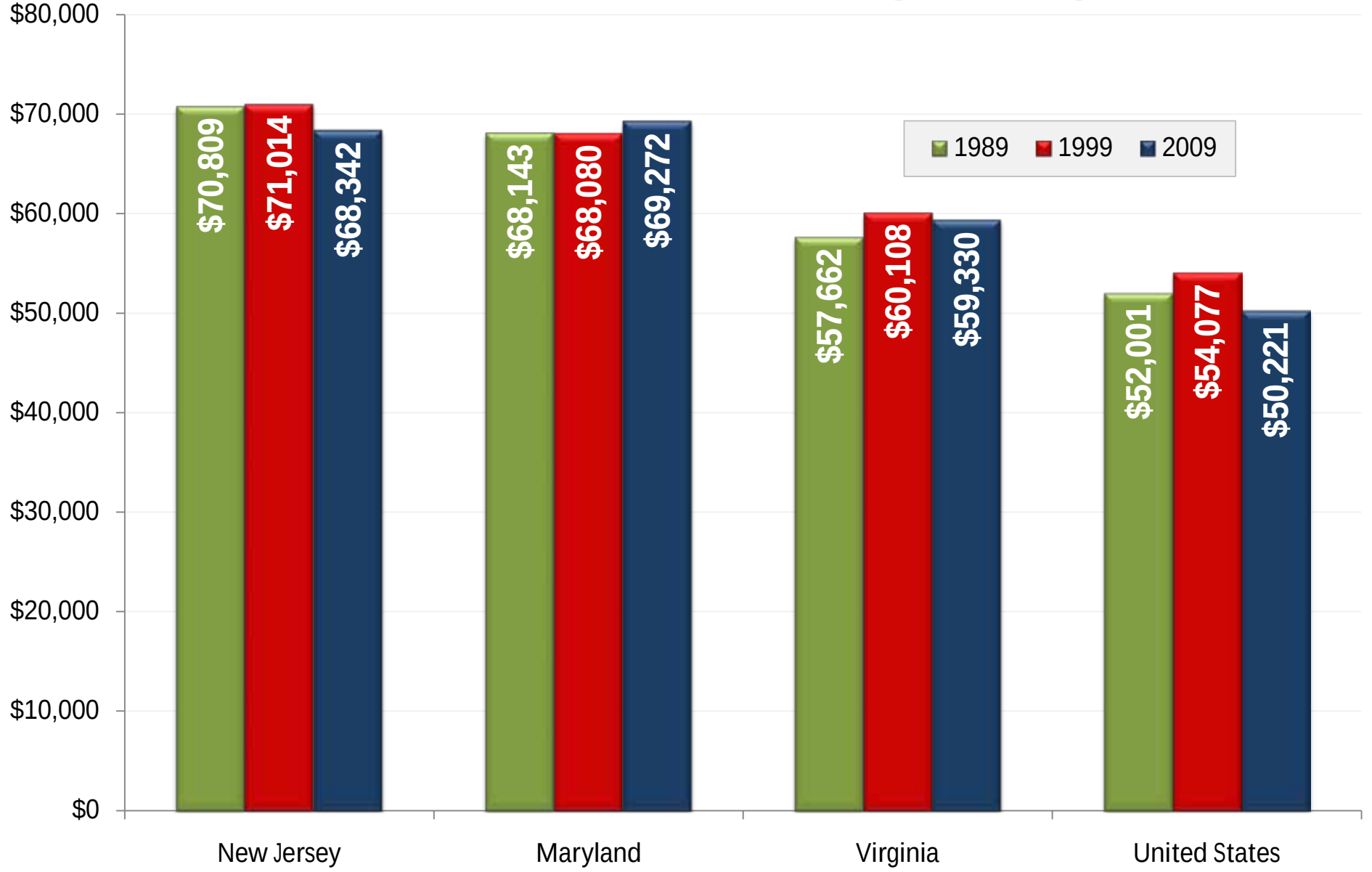
Source: Regional Economic Information System, U.S. Bureau of Economic Analysis

Total Personal Income per Capita by State, 1990-2008



Source: U.S. Census Bureau

Median Household Income (in 2009 $)

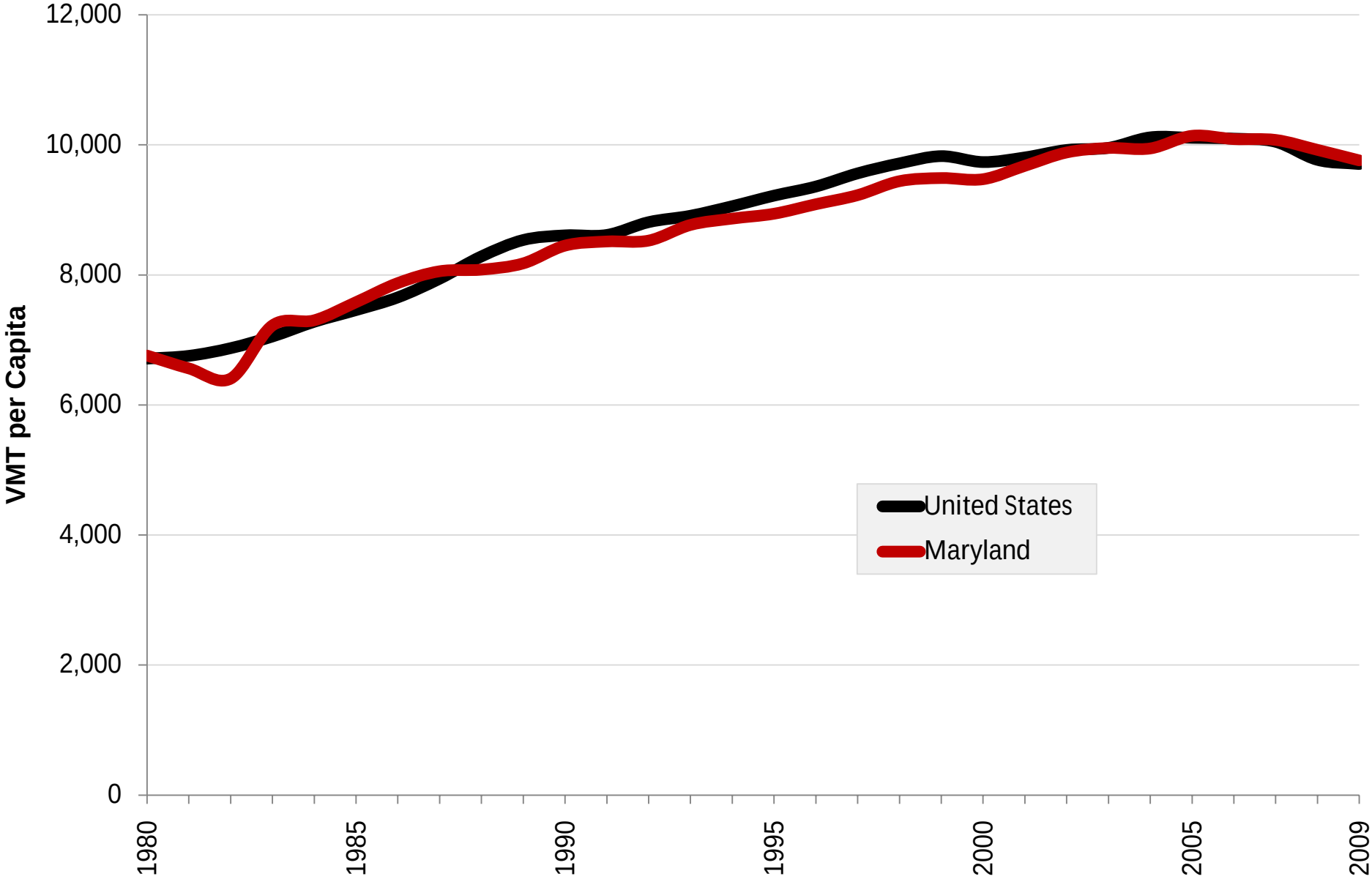


Source: U.S. Census Bureau

Transportation/Infrastructure

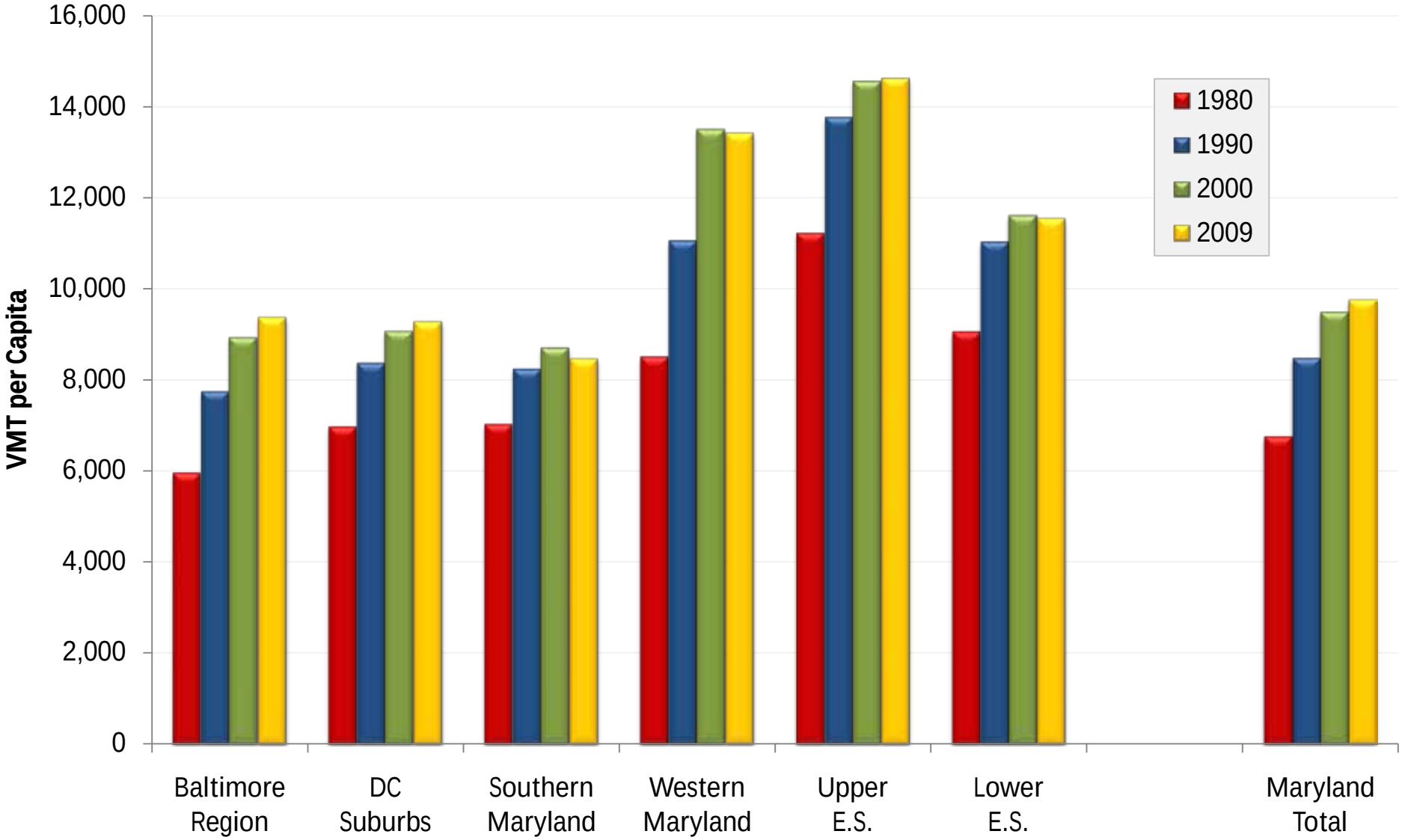
- Like other states, VMT, congestion, and car ownership have risen consistently over time, until the gas price spike.
- Maryland has higher transit ridership than most states, which is attributable to Maryland's proximity to Washington, D.C. and its own historical investments in transit that pre-date the Program.

Vehicles Miles Traveled per Capita Annually, 1980-2009



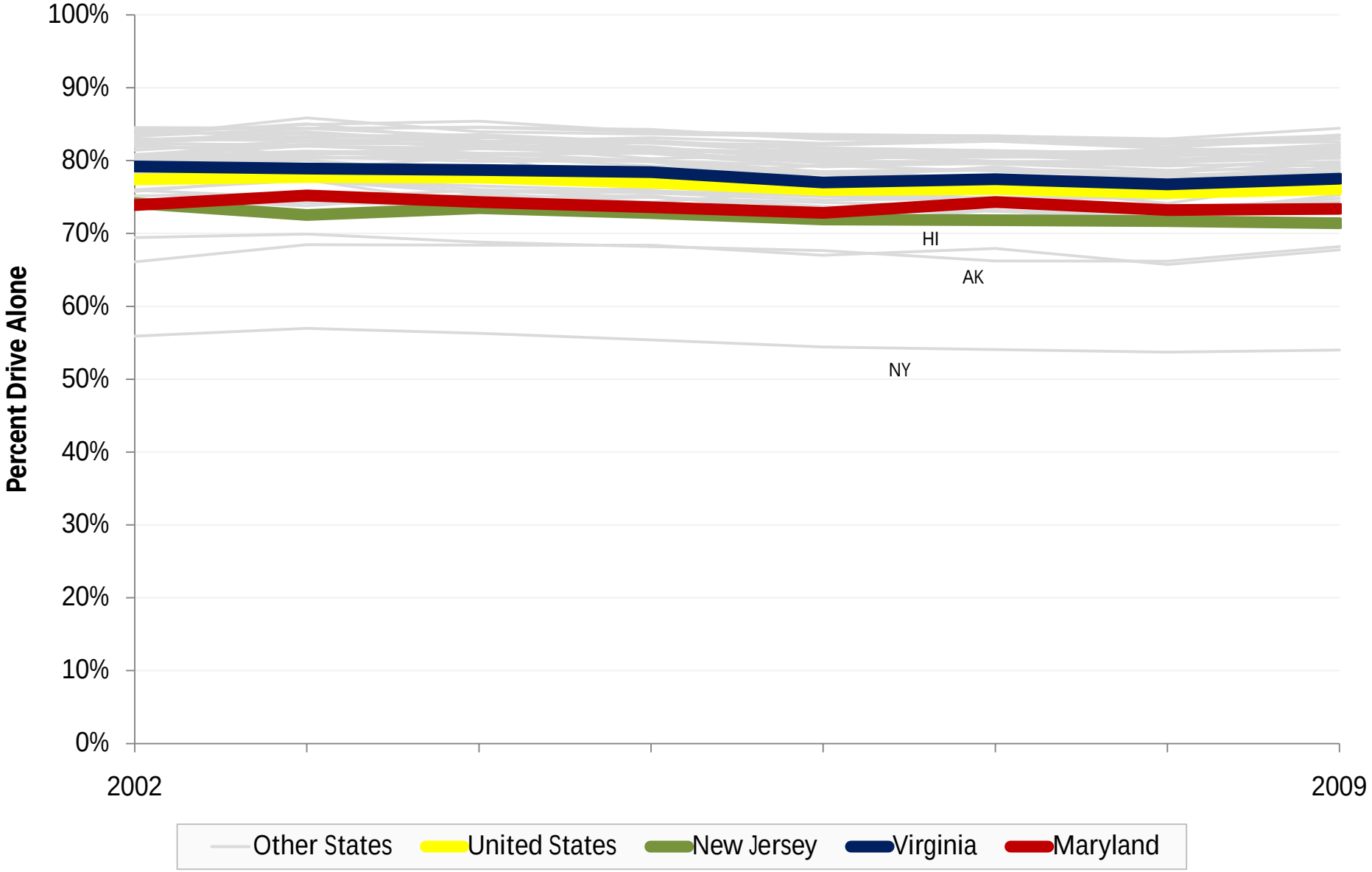
Sources: U.S. Census Bureau; MDOT, State Highway Administration; U.S. DOT, Federal Highway Administration.

Vehicle Miles Traveled per Capita by Region



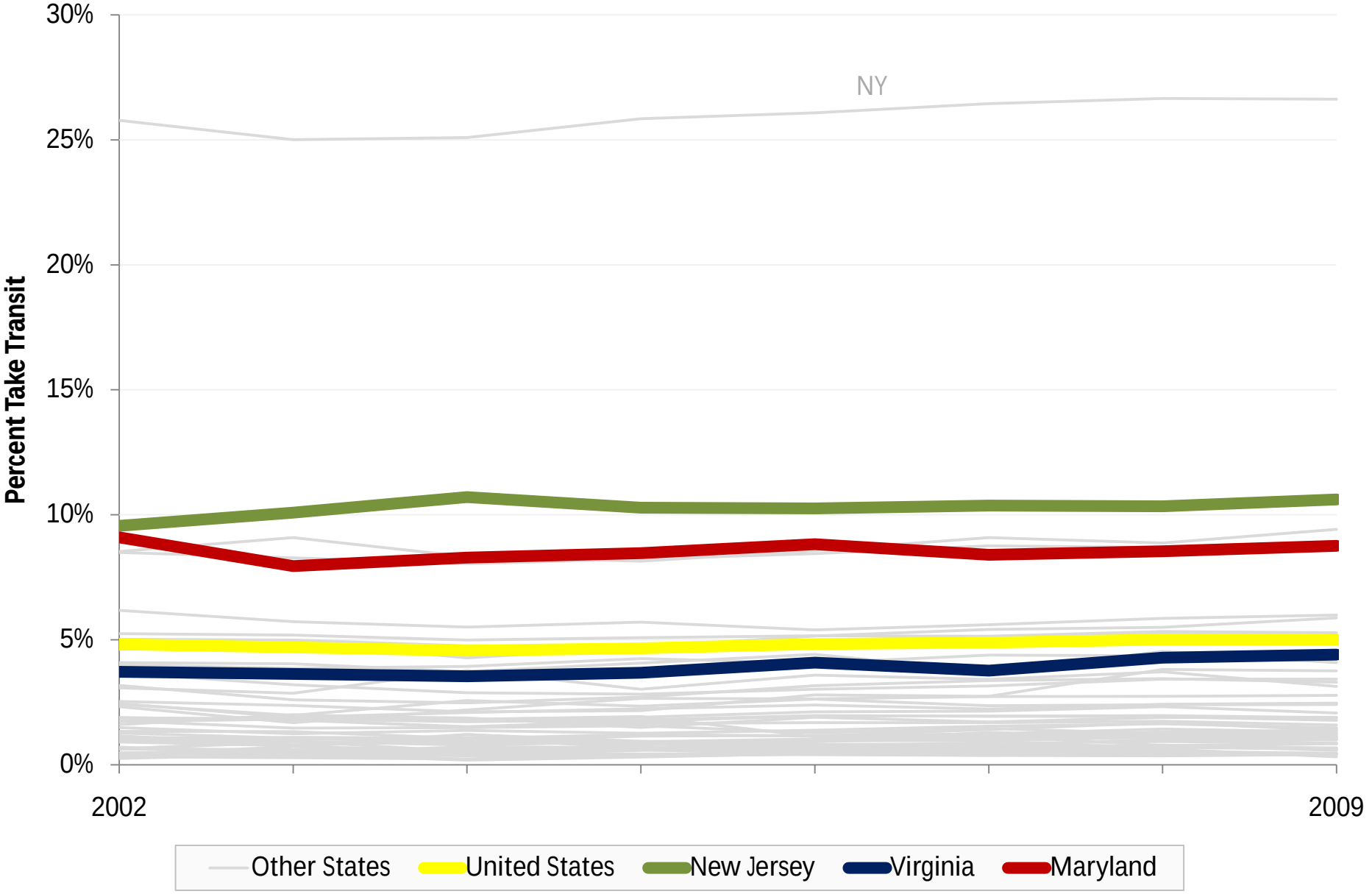
Sources: Maryland State Highway Administration and U.S. Census Bureau

Commute Mode, Drive Alone, 2002-09



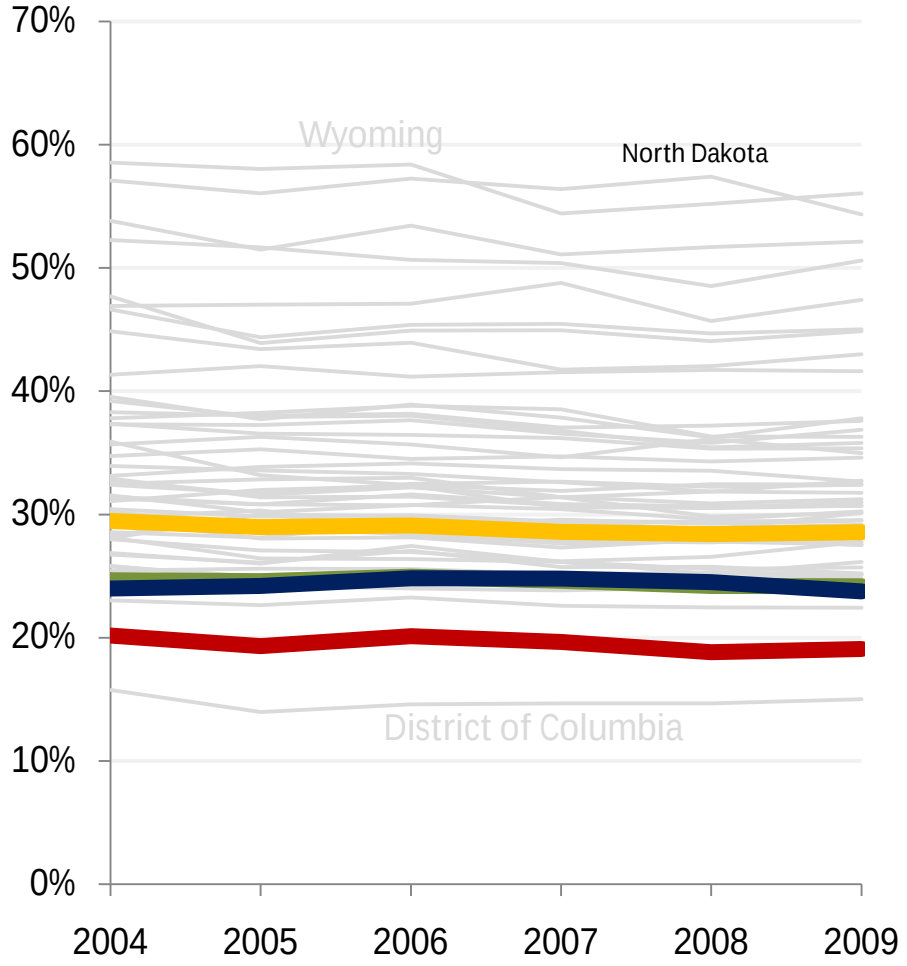
Source: U.S. Census Bureau

Commute Mode, Transit, 2002-09

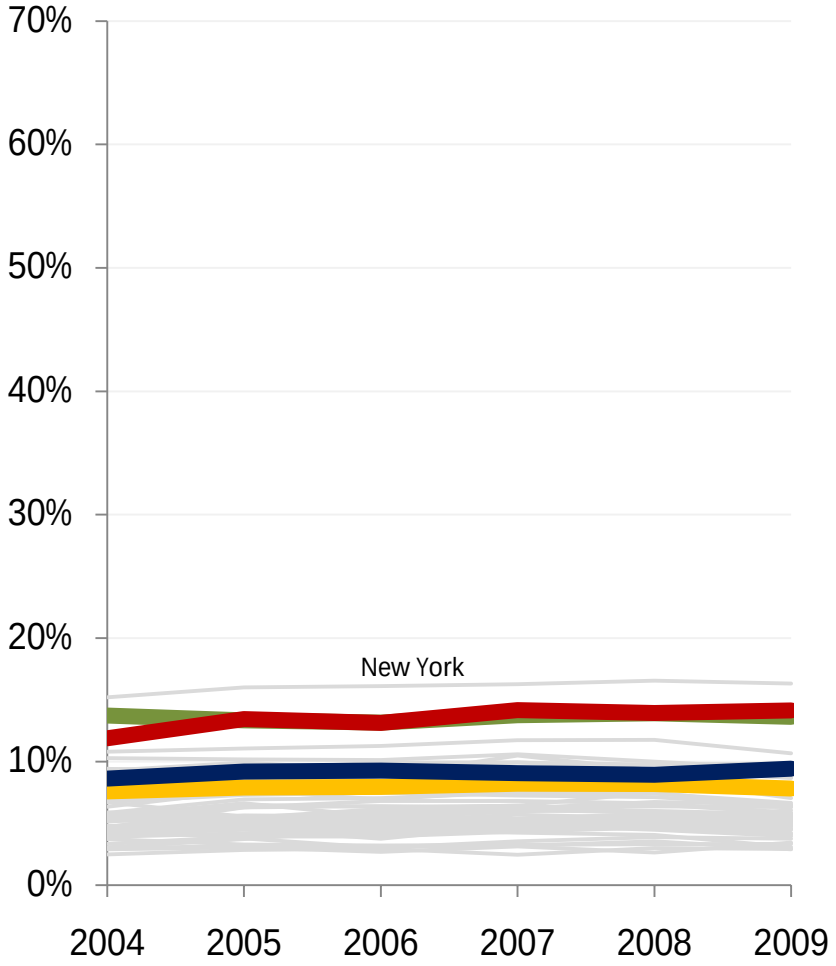


Source: U.S. Census Bureau

Commute Length, <15 Minutes, 2004-09



Commute Length, 60+ Minutes, 2004-09



Source: U.S. Census Bureau

Percent of Workers that Work in their County of Residence, by county and region, 1990, 2000 and 2009

	1990	2000	2009
Baltimore Region	**55.2%**	**53.2%**	**52.2%**
Anne Arundel	60.6%	56.3%	56.0%
Baltimore City	66.1%	61.9%	59.5%
Baltimore	50.5%	52.7%	50.3%
Carroll	45.5%	44.9%	46.1%
Harford	53.3%	51.9%	52.8%
Howard	35.8%	38.0%	40.1%
DC Suburbs	**50.6%**	**50.6%**	**52.3%**
Frederick	60.2%	58.9%	59.9%
Montgomery	58.6%	58.7%	60.4%
Prince George's	40.3%	39.2%	40.7%
Southern Maryland	**52.2%**	**50.3%**	**48.5%**
Calvert	42.7%	39.4%	40.9%
Charles	42.1%	40.2%	35.5%
St. Mary's	72.7%	74.3%	72.8%
Western Maryland	**79.3%**	**76.4%**	**73.4%**
Allegany	86.2%	85.1%	87.4%
Garrett*	78.9%	72.8%	78.6%
Washington	75.8%	73.0%	65.8%
Upper Eastern Shore	**55.4%**	**50.7%**	**51.8%**
Caroline*	48.5%	44.1%	40.7%
Cecil	48.8%	43.9%	48.4%
Kent*	73.5%	72.0%	71.8%
Queen Anne's*	42.4%	40.2%	43.4%
Talbot*	80.2%	76.1%	72.2%
Lower Eastern Shore	**76.9%**	**73.0%**	**71.5%**
Dorchester*	76.6%	67.2%	64.6%
Somerset*	62.4%	57.8%	55.3%
Wicomico	81.1%	78.3%	77.8%
Worcester*	75.6%	73.0%	70.3%
Maryland	**54.9%**	**53.5%**	**53.4%**
United States	**76.1%**	**73.3%**	**72.7%**

* The 2009 estimates for these counties actually come from the 2007-09 American Community Survey 3-year estimates data set. All other 2009 estimates are from the 2009 America Community Survey 1-year estimates data set.

Source: U.S. Census Bureau

Roadway Capacity Utilization for Arterial Roads, 2000

	Overall	Morning	Midday	Afternoon	Nighttime
BALTIMORE REGION	**25.6%**	**28.2%**	**26.4%**	**35.8%**	**16.4%**
Anne Arundel	27.7%	32.5%	26.7%	40.2%	17.9%
Baltimore	23.2%	27.1%	22.9%	33.6%	14.6%
Baltimore City	26.4%	25.2%	30.2%	34.5%	17.4%
Carroll	30.7%	40.0%	27.1%	46.7%	18.9%
Harford	24.8%	33.3%	22.3%	35.2%	15.8%
Howard	25.2%	33.0%	22.3%	39.3%	14.5%
DC SUBURBS	**29.3%**	**35.9%**	**27.4%**	**44.1%**	**17.6%**
Frederick	23.9%	29.8%	22.3%	32.6%	15.1%
Montgomery	30.5%	37.2%	28.7%	46.3%	18.2%
Prince George's	29.3%	36.0%	27.3%	44.9%	17.5%
SOUTHERN MARYLAND	**19.5%**	**24.0%**	**18.5%**	**28.6%**	**12.0%**
Calvert	21.4%	25.9%	20.6%	31.2%	13.3%
Charles	20.3%	25.4%	19.0%	29.9%	12.6%
St. Mary's	16.3%	20.0%	15.5%	24.0%	10.0%
WESTERN MARYLAND	**14.8%**	**17.4%**	**15.0%**	**20.7%**	**9.3%**
Allegany	10.2%	10.8%	10.9%	13.8%	6.7%
Garrett	7.0%	8.7%	6.5%	10.1%	4.5%
Washington	19.3%	23.2%	19.4%	27.0%	11.9%
UPPER EASTERN SHORE	**18.2%**	**24.0%**	**16.5%**	**26.2%**	**11.4%**
Caroline	11.0%	13.8%	10.4%	15.5%	7.3%
Cecil	21.8%	29.7%	19.1%	32.1%	13.5%
Kent	7.7%	9.5%	7.3%	10.9%	4.9%
Queen Anne's	16.5%	21.8%	15.6%	23.2%	10.2%
Talbot	24.2%	28.4%	24.0%	34.2%	15.6%
LOWER EASTERN SHORE	**13.7%**	**16.0%**	**13.7%**	**18.9%**	**9.1%**
Dorchester	12.0%	14.5%	11.4%	17.1%	7.7%
Somerset	9.7%	11.6%	9.5%	13.2%	6.5%
Wicomico	18.5%	20.5%	19.0%	24.7%	12.5%
Worcester	9.1%	11.5%	8.5%	13.2%	5.8%
MARYLAND TOTAL	**25.7%**	**29.6%**	**25.6%**	**36.9%**	**16.1%**

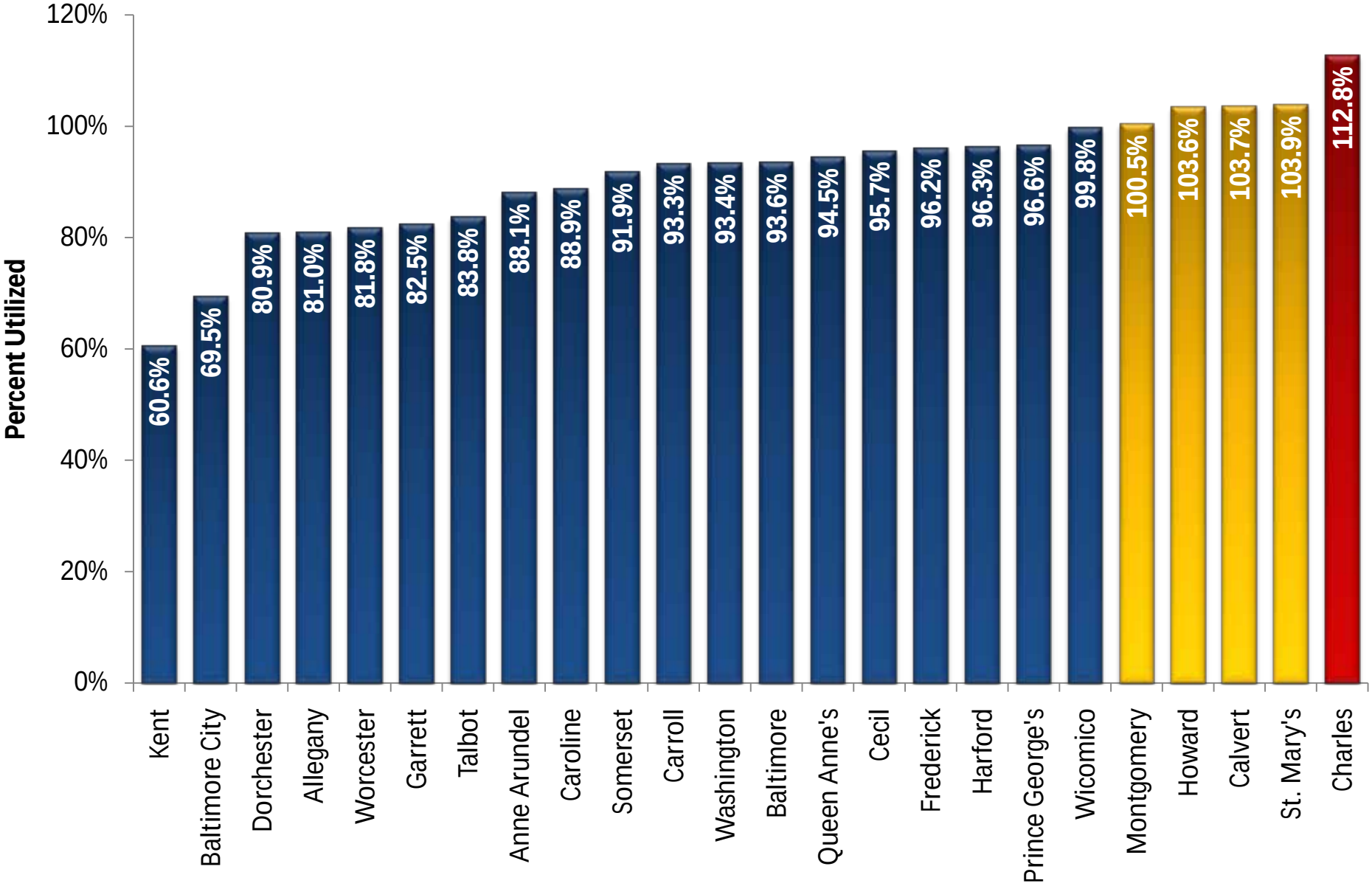
Source: NCSGRE

Roadway Capacity Utilization for Highways, 2000

	Overall	Morning	Midday	Afternoon	Nighttime
BALTIMORE REGION	**45.6%**	**57.9%**	**41.8%**	**64.1%**	**30.6%**
Anne Arundel	41.9%	52.9%	38.8%	59.3%	27.7%
Baltimore	49.7%	62.2%	46.0%	69.6%	33.5%
Baltimore City	40.2%	50.8%	37.7%	56.6%	26.4%
Carroll	27.1%	40.7%	21.0%	42.2%	16.0%
Harford	50.9%	67.3%	43.0%	66.7%	39.6%
Howard	47.1%	61.6%	41.4%	67.3%	31.7%
DC SUBURBS	**54.3%**	**67.2%**	**50.9%**	**73.9%**	**37.9%**
Frederick	42.9%	55.9%	38.7%	60.1%	28.8%
Montgomery	57.9%	70.2%	54.6%	77.2%	42.1%
Prince George's	55.0%	68.6%	51.8%	75.9%	37.0%
SOUTHERN MARYLAND	**21.1%**	**30.1%**	**23.1%**	**26.0%**	**18.0%**
Calvert	8.4%	32.2%	41.0%	24.4%	28.7%
Charles	42.1%	25.4%	19.0%	29.9%	12.6%
St. Mary's	16.3%	20.0%	15.5%	24.0%	10.0%
WESTERN MARYLAND	**14.8%**	**17.4%**	**15.0%**	**20.7%**	**9.3%**
Allegany	10.2%	10.8%	10.9%	13.8%	6.7%
Garrett	7.0%	8.7%	6.5%	10.1%	4.5%
Washington	19.3%	23.2%	19.4%	27.0%	11.9%
UPPER EASTERN SHORE	**18.2%**	**24.0%**	**16.5%**	**26.2%**	**11.4%**
Caroline	11.0%	13.8%	10.4%	15.5%	7.3%
Cecil	21.8%	29.7%	19.1%	32.1%	13.5%
Kent	7.7%	9.5%	7.3%	10.9%	4.9%
Queen Anne's	16.5%	21.8%	15.6%	23.2%	10.2%
Talbot	24.2%	28.4%	24.0%	34.2%	15.6%
LOWER EASTERN SHORE	**27.1%**	**26.1%**	**17.2%**	**18.8%**	**20.6%**
Dorchester	16.7%	20.7%	15.7%	24.3%	10.3%
Somerset	37.0%	37.0%	51.8%	31.8%	29.0%
Wicomico	45.3%	24.6%	19.3%	17.7%	24.0%
Worcester	14.4%	25.3%	7.1%	6.1%	9.0%
MARYLAND TOTAL	**44.0%**	**46.4%**	**39.0%**	**57.7%**	**29.5%**

Source: NCSGRE

Total School Capacity Utilization by County, 2009

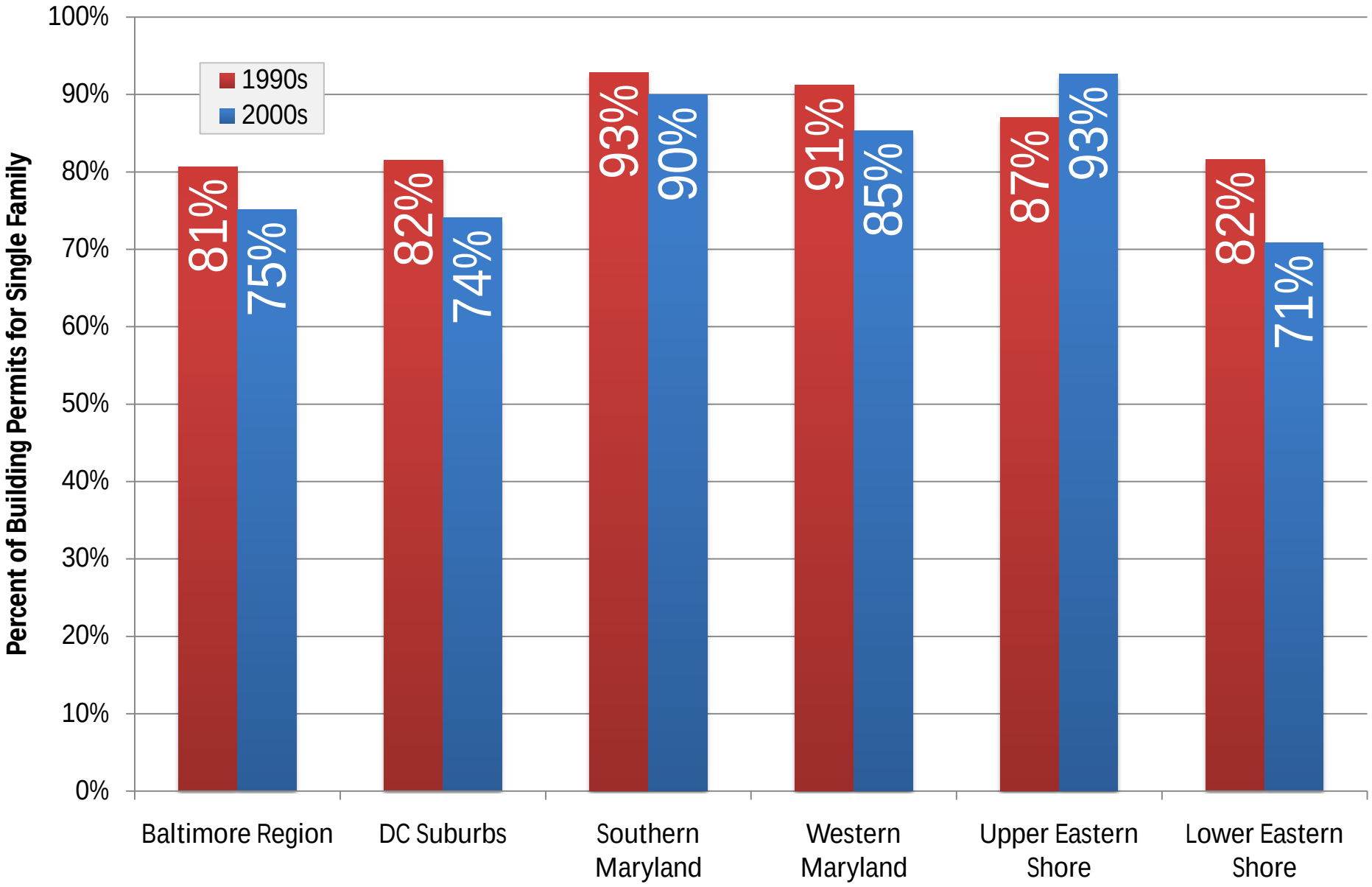


Sources: Maryland Department of Planning; Maryland State Department of Education

Housing

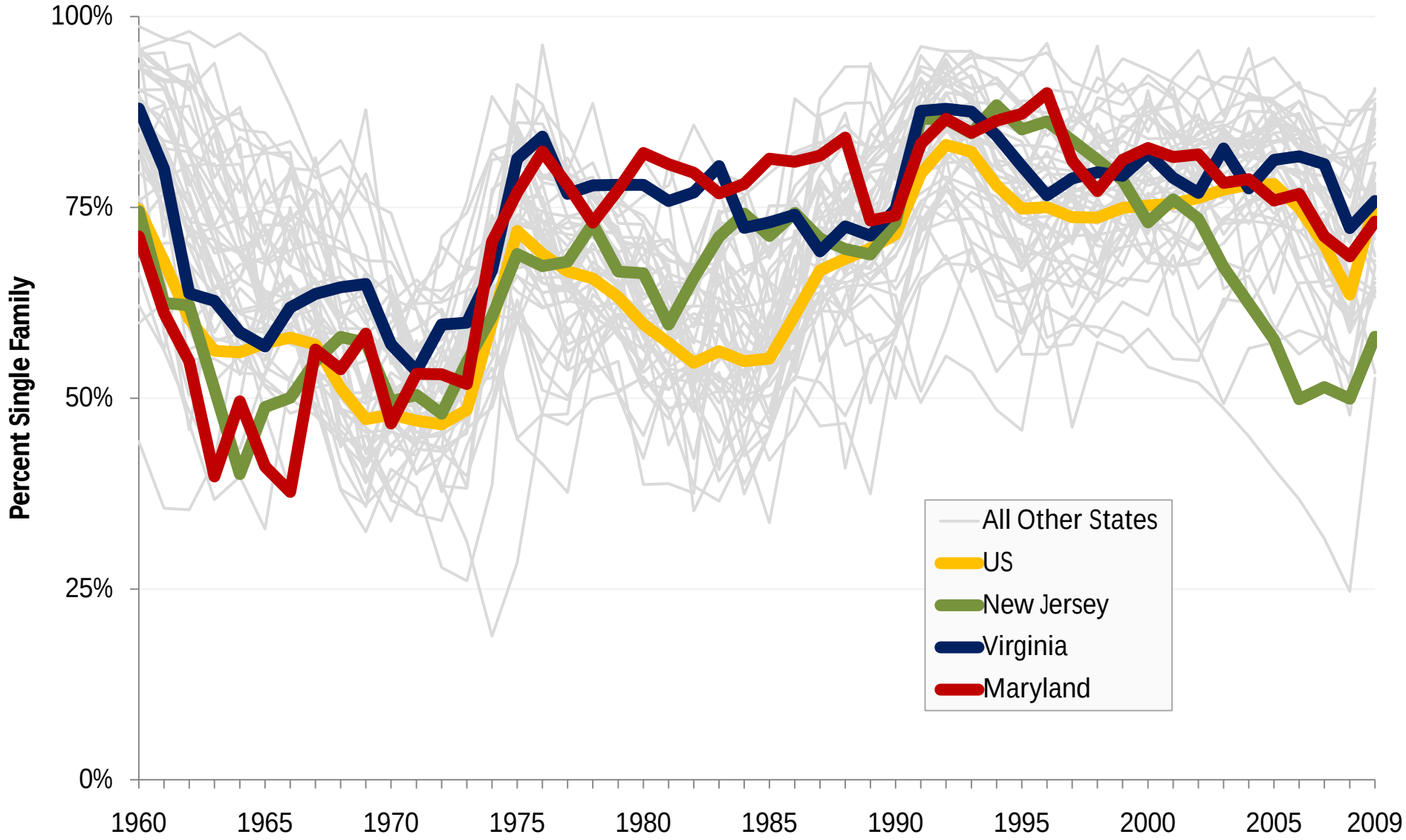
- Although the single-family share of new housing construction has fallen recently, the single-family share of housing in Maryland is high for a highly urbanized state.
- Housing prices have inflated faster in Maryland than most other states the last few decades.
- Affordability varies across the state.

Housing Mix by Region and Decade



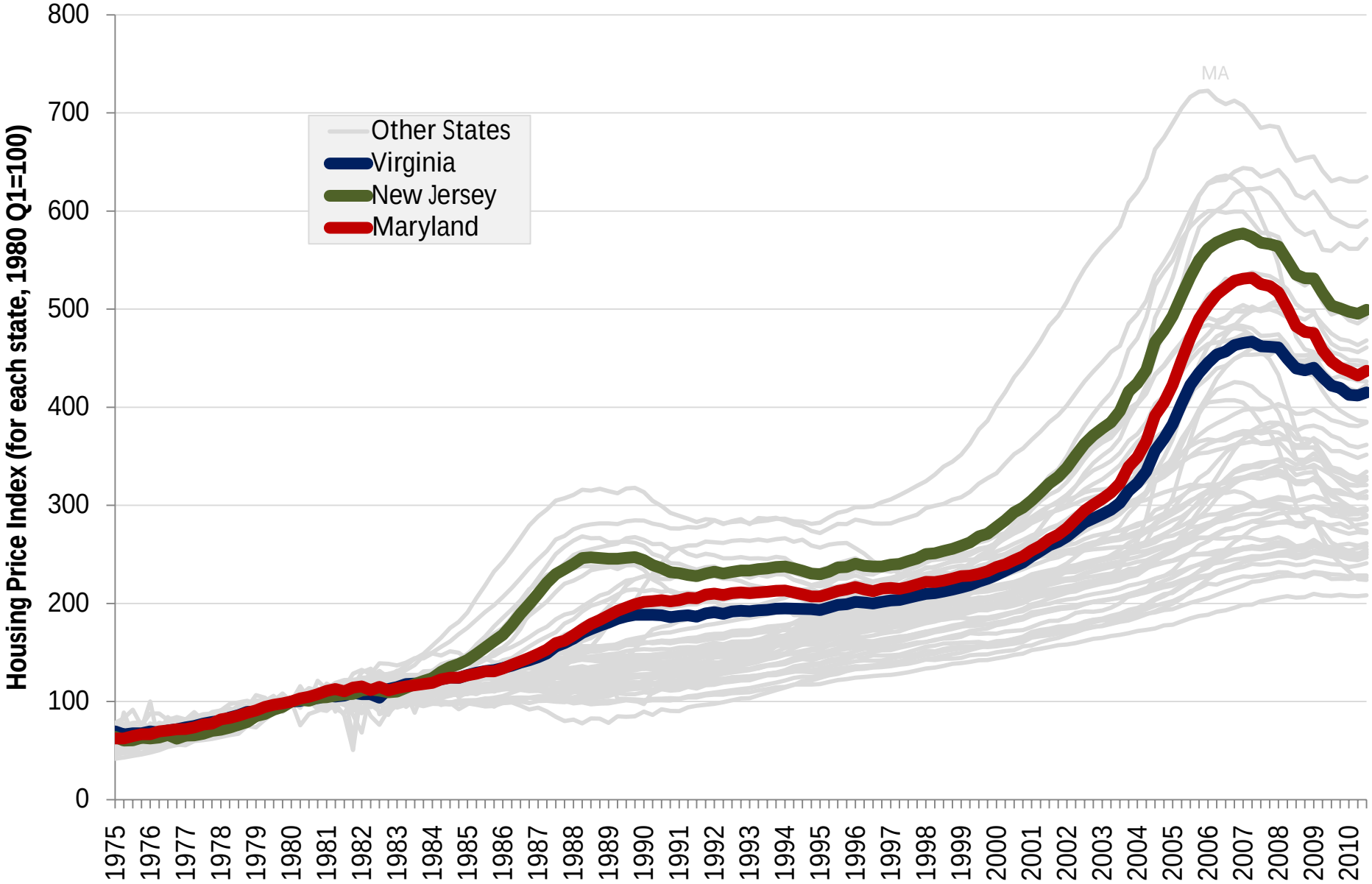
Source: U.S. Census Bureau

Housing Mix by State, 1960-2009



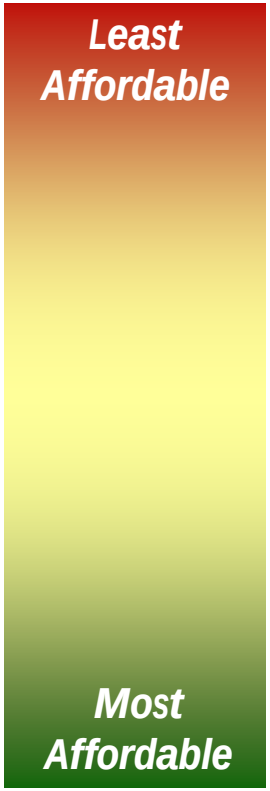
Source: U.S. Census Bureau

Housing Price Index by State, 1975-2010



Source: Federal Housing Finance Agency

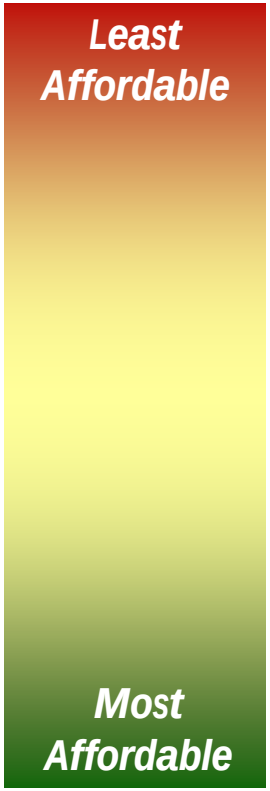
Housing Affordability, State Index, 2001-09



	2001	2002	2003	2004	2005	2006	2007	2008	2009
Baltimore Region									
Anne Arundel	3.07	3.52	4.07	4.73	5.28	5.29	5.00	4.57	4.26
Baltimore	2.35	2.51	2.85	3.28	3.82	3.89	3.82	3.45	3.25
Baltimore City	1.17	1.24	1.38	1.58	1.95	2.16	2.25	2.17	1.95
Carroll	3.35	3.71	4.24	4.82	5.36	5.07	4.93	4.25	3.90
Harford	2.62	2.64	3.12	3.51	3.96	3.97	3.82	3.62	3.41
Howard	3.58	4.18	4.65	5.52	6.09	5.92	5.74	5.32	4.91
DC Suburbs									
Frederick	3.01	3.37	3.78	4.39	5.04	4.96	4.56	3.83	3.40
Montgomery	4.05	4.74	5.44	6.23	6.91	6.75	6.53	5.60	4.91
Prince George's	2.64	2.93	3.38	3.98	4.81	5.07	4.71	3.90	3.18
Southern Maryland									
Calvert	3.25	3.53	4.27	4.56	5.28	5.23	5.22	4.40	4.18
Charles	2.92	3.15	3.61	4.38	5.12	5.15	4.85	4.24	3.76
Saint Mary's	2.92	3.16	3.63	4.17	4.79	4.90	4.84	4.26	4.00
Western Maryland									
Allegany	1.18	1.19	1.22	1.17	1.34	1.37	1.51	1.28	1.63
Garrett	2.77	3.34	4.26	4.55	5.02	4.96	4.74	3.89	3.61
Washington	2.31	2.36	2.76	3.09	3.66	3.57	3.24	2.77	2.43
Upper Eastern Shore									
Caroline	1.85	2.19	2.49	2.81	3.17	3.55	3.06	2.70	2.53
Cecil	2.54	2.78	3.08	3.49	3.83	3.87	3.75	3.33	3.25
Kent	2.54	2.62	2.95	3.86	3.98	4.31	3.96	3.47	3.03
Queen Anne's	3.45	3.94	4.60	5.35	5.74	5.61	5.44	4.61	4.12
Talbot	3.31	3.71	4.54	5.26	5.69	5.53	5.37	4.75	4.76
Lower Eastern Shore									
Dorchester	1.73	1.76	2.24	2.61	3.17	3.15	2.64	2.48	2.17
Somerset	1.38	1.11	1.52	1.92	2.05	2.71	2.26	2.07	2.29
Wicomico	2.07	2.15	2.38	2.62	2.78	2.98	2.84	2.76	2.48
Worcester	2.78	3.90	4.19	5.41	5.17	5.42	5.15	4.50	4.62

Source: Maryland Association of Realtors; U.S. Census Bureau SAIPE

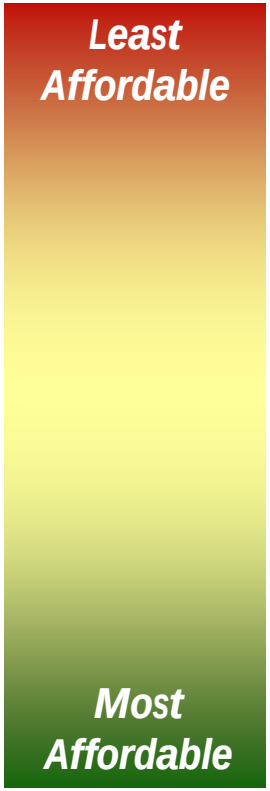
Housing Affordability, County Index, 2001-09



	2001	2002	2003	2004	2005	2006	2007	2008	2009
Baltimore Region									
Anne Arundel	2.64	3.00	3.43	4.08	4.54	4.39	4.24	3.90	3.69
Baltimore	2.57	2.75	3.08	3.57	4.18	4.23	4.27	3.85	3.48
Baltimore City	2.17	2.38	2.57	3.02	3.70	3.92	4.15	3.81	3.51
Carroll	2.89	3.10	3.45	3.99	4.45	4.47	4.20	3.82	3.44
Harford	2.34	2.33	2.74	3.12	3.73	3.73	3.61	3.33	3.13
Howard	2.43	2.82	3.17	3.89	4.15	4.12	3.87	3.68	3.35
DC Suburbs									
Frederick	2.57	2.78	3.08	3.62	4.29	4.37	4.04	3.44	2.85
Montgomery	2.85	3.37	3.85	4.61	5.19	5.04	4.86	4.21	3.63
Prince George's	2.62	3.01	3.42	4.12	4.70	5.03	4.73	3.84	3.16
Southern Maryland									
Calvert	2.59	2.74	3.24	3.48	3.97	4.09	3.98	3.78	3.36
Charles	2.51	2.66	2.97	3.63	4.51	4.27	4.05	3.51	3.03
Saint Mary's	2.81	2.98	3.35	3.88	4.70	4.54	4.54	3.86	3.88
Western Maryland									
Allegany	2.06	2.04	2.03	1.99	2.45	2.59	2.76	2.30	3.03
Garrett	4.48	5.37	6.68	7.19	7.91	8.15	7.67	6.31	5.91
Washington	2.97	2.99	3.41	3.88	4.79	4.54	4.38	3.78	3.44
Upper Eastern Shore									
Caroline	2.58	3.09	3.44	3.87	4.31	5.05	4.30	3.46	3.57
Cecil	2.69	2.92	3.16	3.61	4.04	4.42	4.08	3.55	3.72
Kent	3.40	3.49	3.84	5.14	5.60	6.03	5.76	4.61	4.15
Queen Anne's	3.14	3.55	4.09	4.77	5.36	5.22	4.87	4.18	3.79
Talbot	3.89	4.29	5.13	6.05	6.78	6.60	6.46	5.39	5.53
Lower Eastern Shore									
Dorchester	2.78	2.84	3.50	4.09	5.09	5.24	4.26	4.04	3.43
Somerset	2.56	2.12	2.80	3.61	3.86	5.07	4.33	3.70	4.45
Wicomico	2.90	3.03	3.22	3.63	3.91	4.21	3.87	4.00	3.70
Worcester	3.72	5.18	5.40	7.08	6.81	7.37	7.13	6.30	6.69

Source: Maryland Association of Realtors; U.S. Census Bureau SAIPE

Average Housing Affordability, 2001-09



County Index Average 2001-09	
Garrett	6.63
Worcester	6.18
Talbot	5.57
Kent	4.67
Queen Anne's	4.33
Montgomery	4.18
Dorchester	3.92
Prince George's	3.85
Saint Mary's	3.84
Washington	3.80
Anne Arundel	3.77
Carroll	3.76
Caroline	3.74
Somerset	3.61
Wicomico	3.61
Cecil	3.58
Baltimore	3.55
Howard	3.50
Calvert	3.47
Charles	3.46
Frederick	3.45
Baltimore City	3.25
Harford	3.12
Allegany	2.36

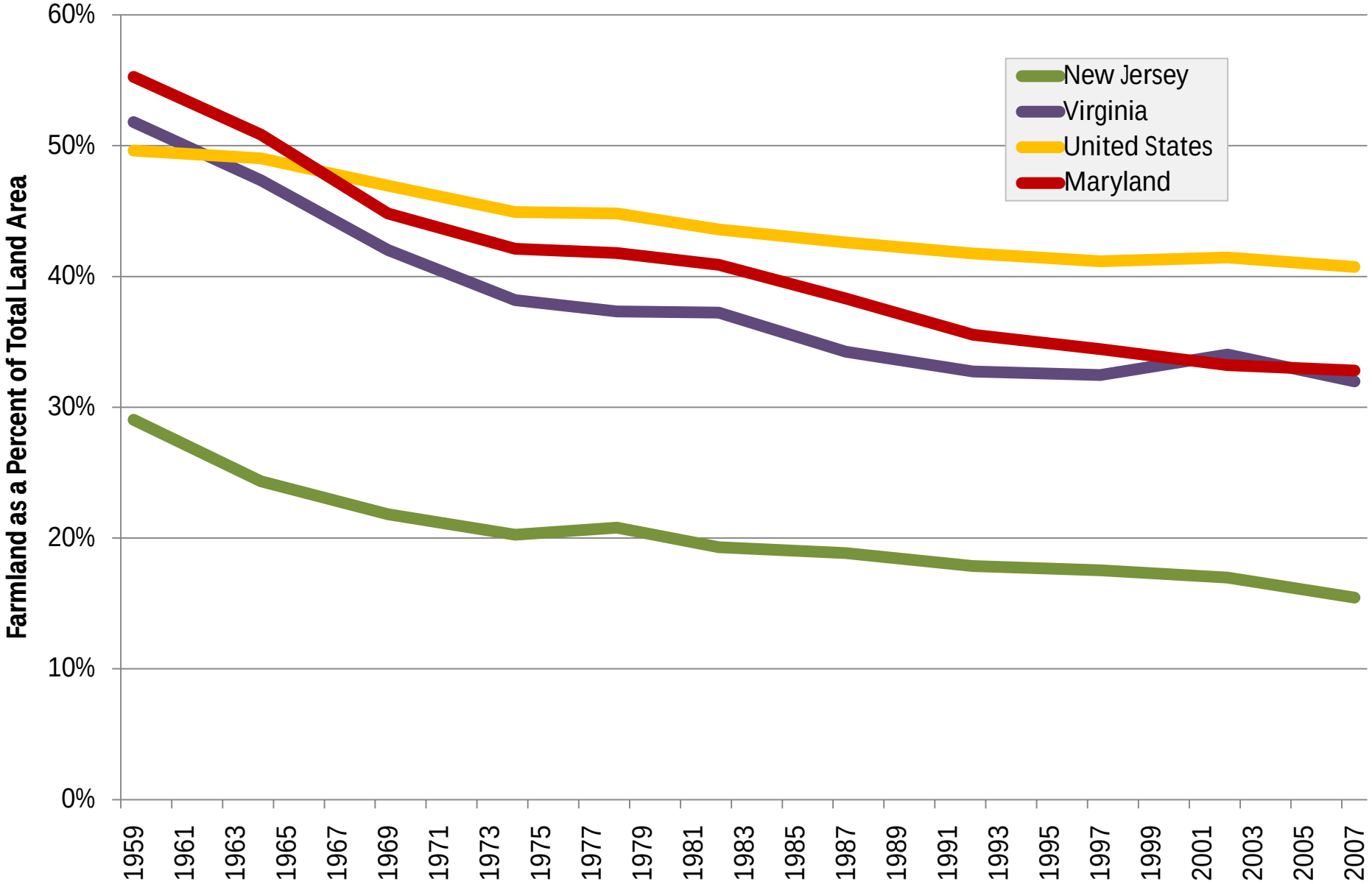
State Index Average 2001-09	
Montgomery	5.68
Howard	5.10
Talbot	4.77
Queen Anne's	4.76
Worcester	4.57
Calvert	4.44
Anne Arundel	4.42
Carroll	4.40
Charles	4.13
Garrett	4.13
Saint Mary's	4.07
Frederick	4.04
Prince George's	3.84
Kent	3.41
Harford	3.41
Cecil	3.33
Baltimore	3.25
Washington	2.91
Caroline	2.70
Wicomico	2.56
Dorchester	2.44
Somerset	1.92
Baltimore City	1.76
Allegany	1.32

Source: Maryland Association of Realtors; U.S. Census Bureau SAIPE

Natural Areas and Environment

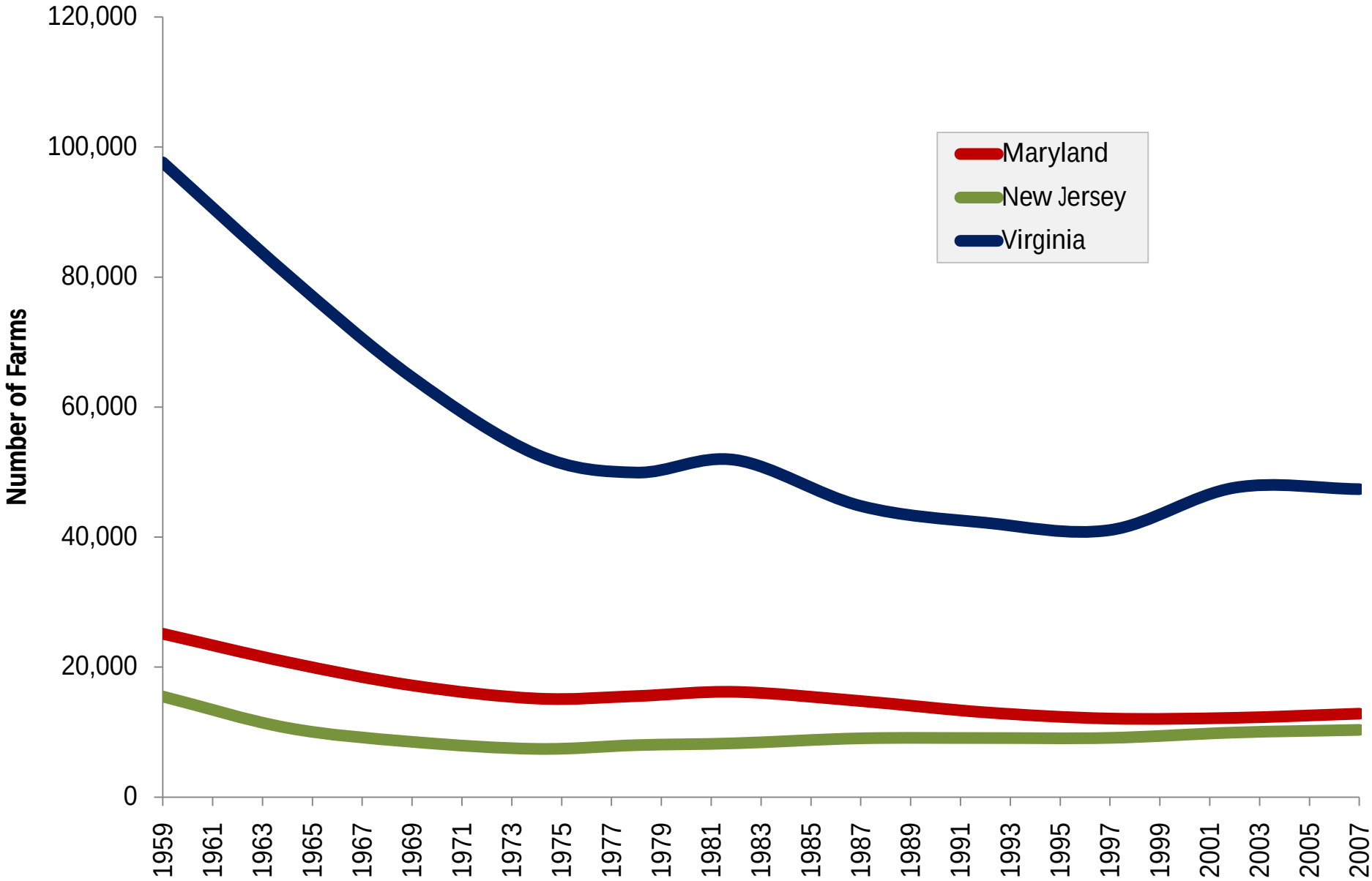
- Acres of farm and forest land have been steadily fallen in Maryland and the U.S., but the rate of decline is decreasing.
- Maryland and its counties have protected well over 1.3 million acres of land.
- There is still a substantial amount and percent of critical land that is not protected.
- Measures of air quality are mainly stable or improving.
- Measures of water quality demonstrate poor conditions in watersheds across the state.

Farmland by State, 1959-2007



Source: U.S. Department of Agriculture

Number of Farms by State, 1959-2007



Source: U.S. Department of Agriculture

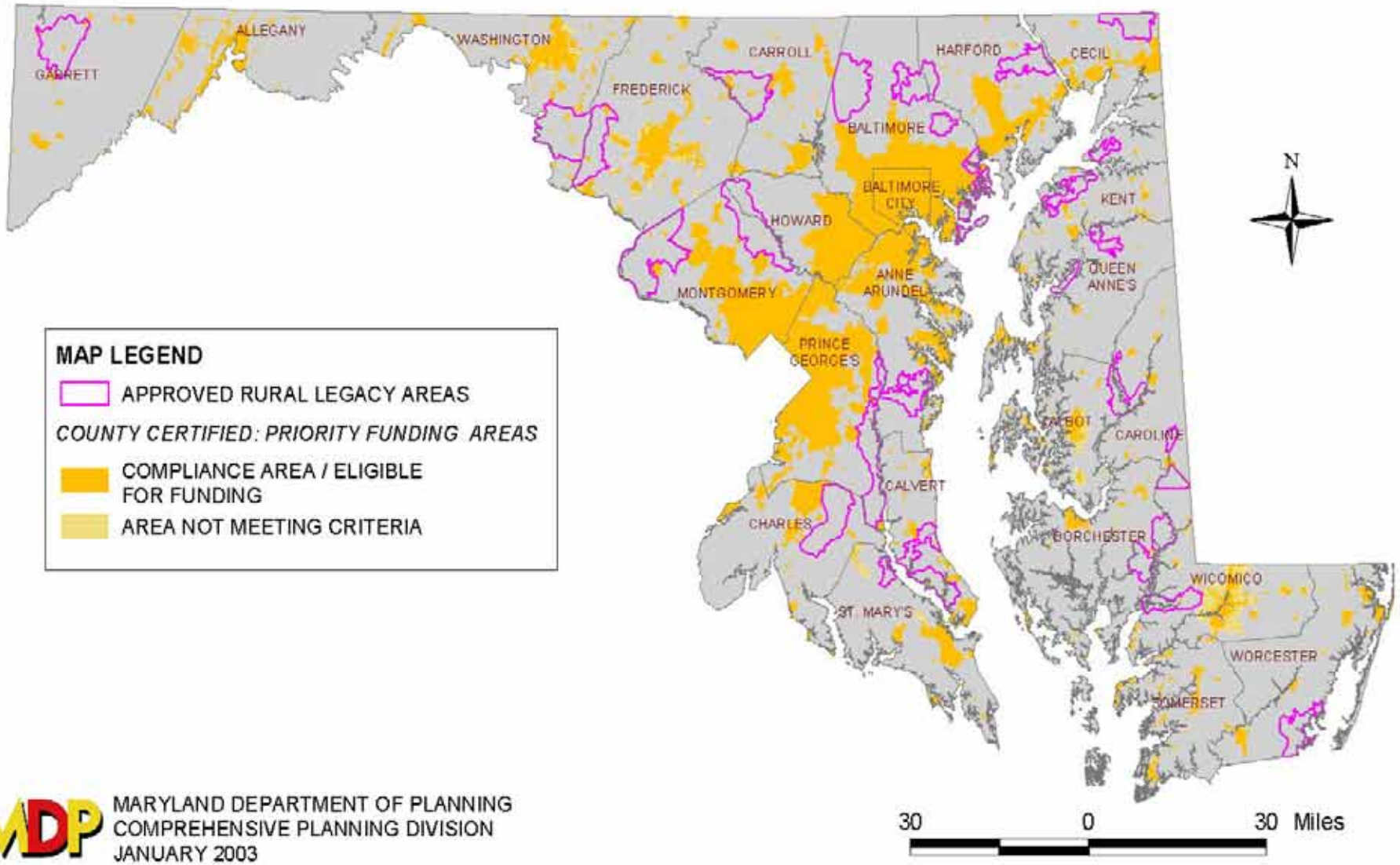
Development Patterns

- The predominant form of urban development in Maryland remains suburban.
- Since 1997, 75% of the new single-family *acres* developed have been outside PFAs.
- The share of *parcels* developed outside PFAs continues to demonstrate an increase over time.
- Some of the highest growth rates are occurring in the exurban areas of the state.
- The share of population that lives within a half-mile of rail transit stations has generally risen over time.

1997 Smart Growth Legislation

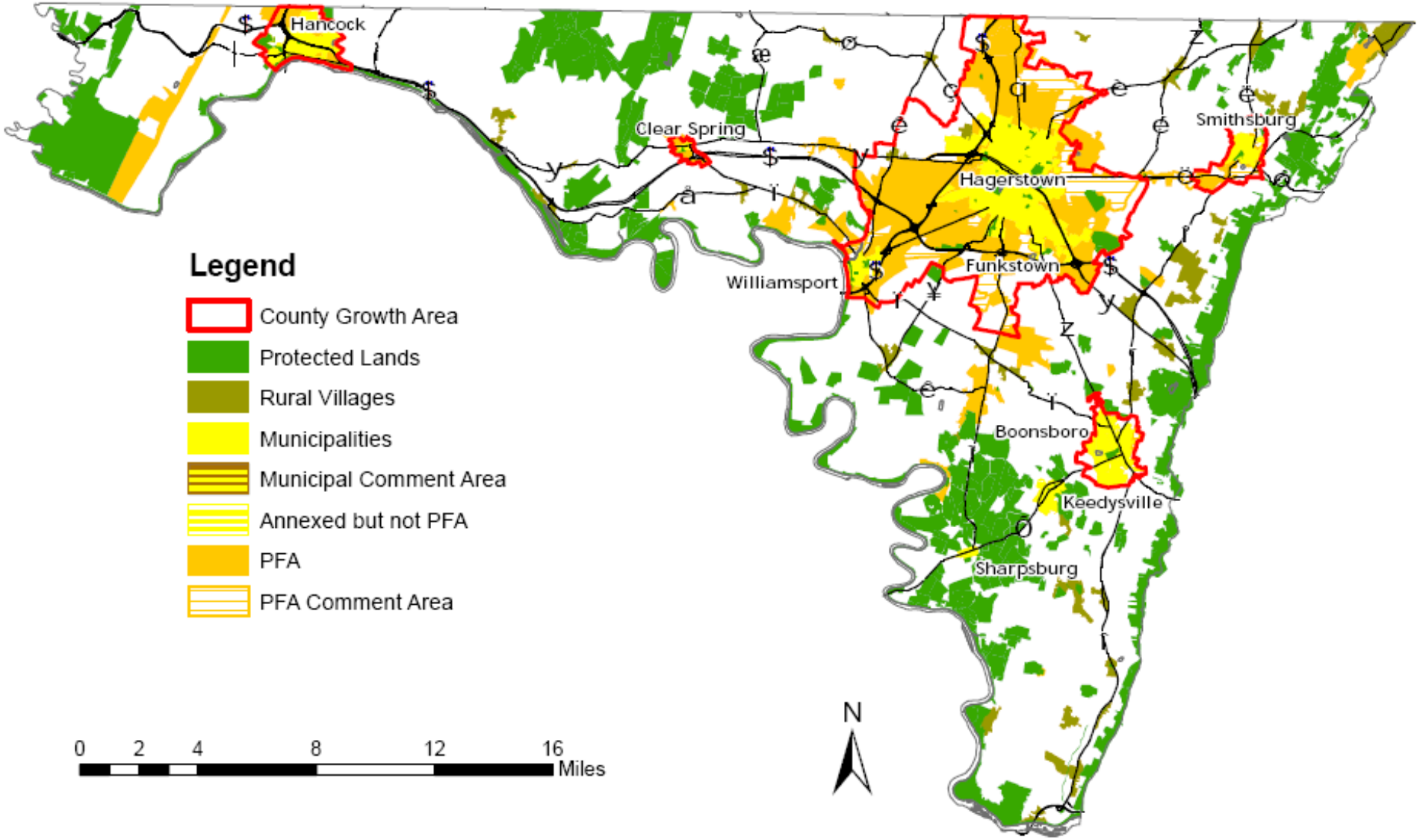
- Priority Funding Areas
- Rural Legacy
- Brownfields Cleanup
- Job Creation Tax Credit
- Live Near Your Work
- Right-to-Farm

Statewide Priority Funding and Rural Legacy Areas, 2003



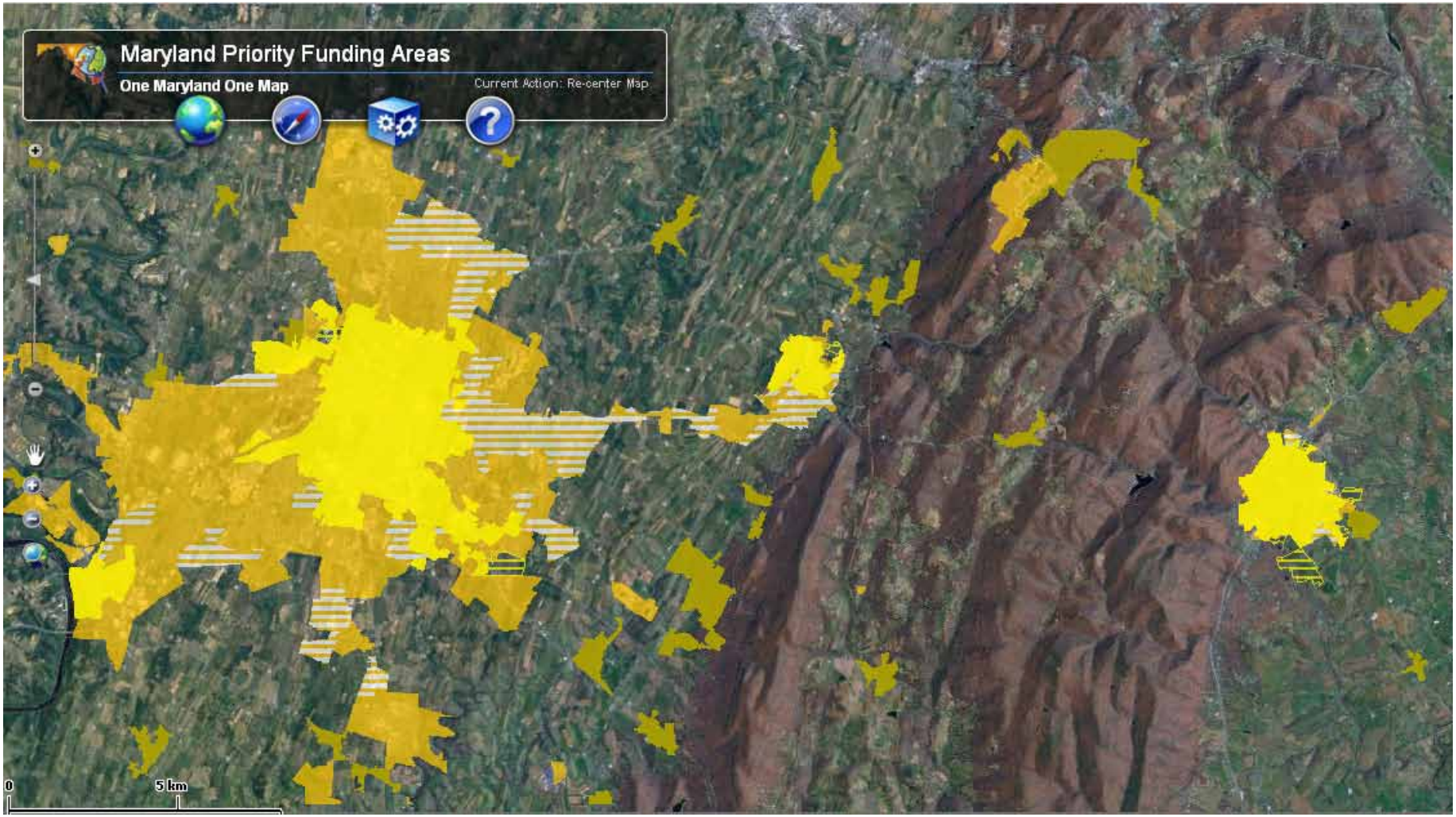
MARYLAND DEPARTMENT OF PLANNING
COMPREHENSIVE PLANNING DIVISION
JANUARY 2003

A County View of PFAs: Washington County



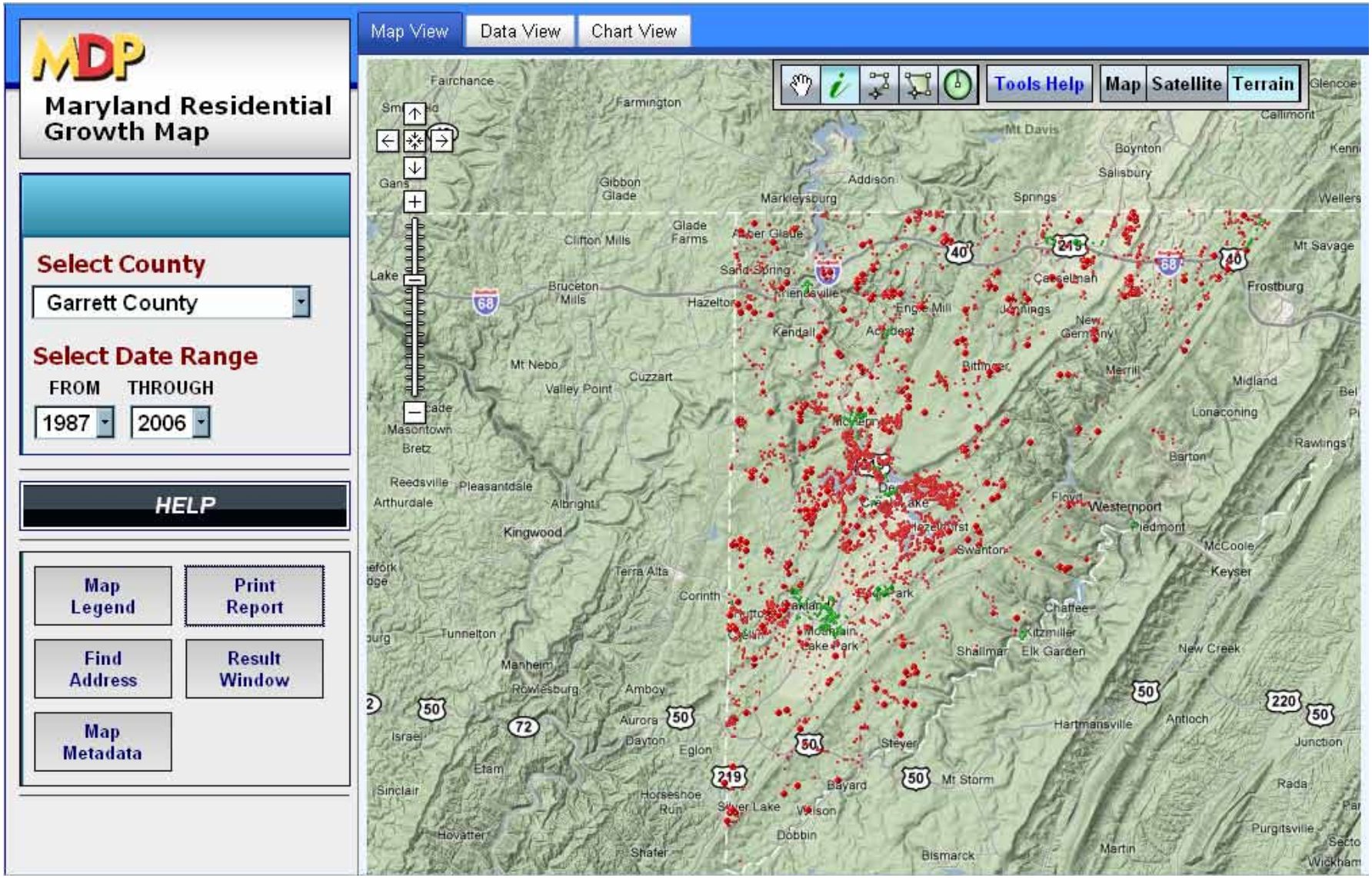
Prepared by the Maryland Department of Planning, 2009

A Detailed View of PFAs



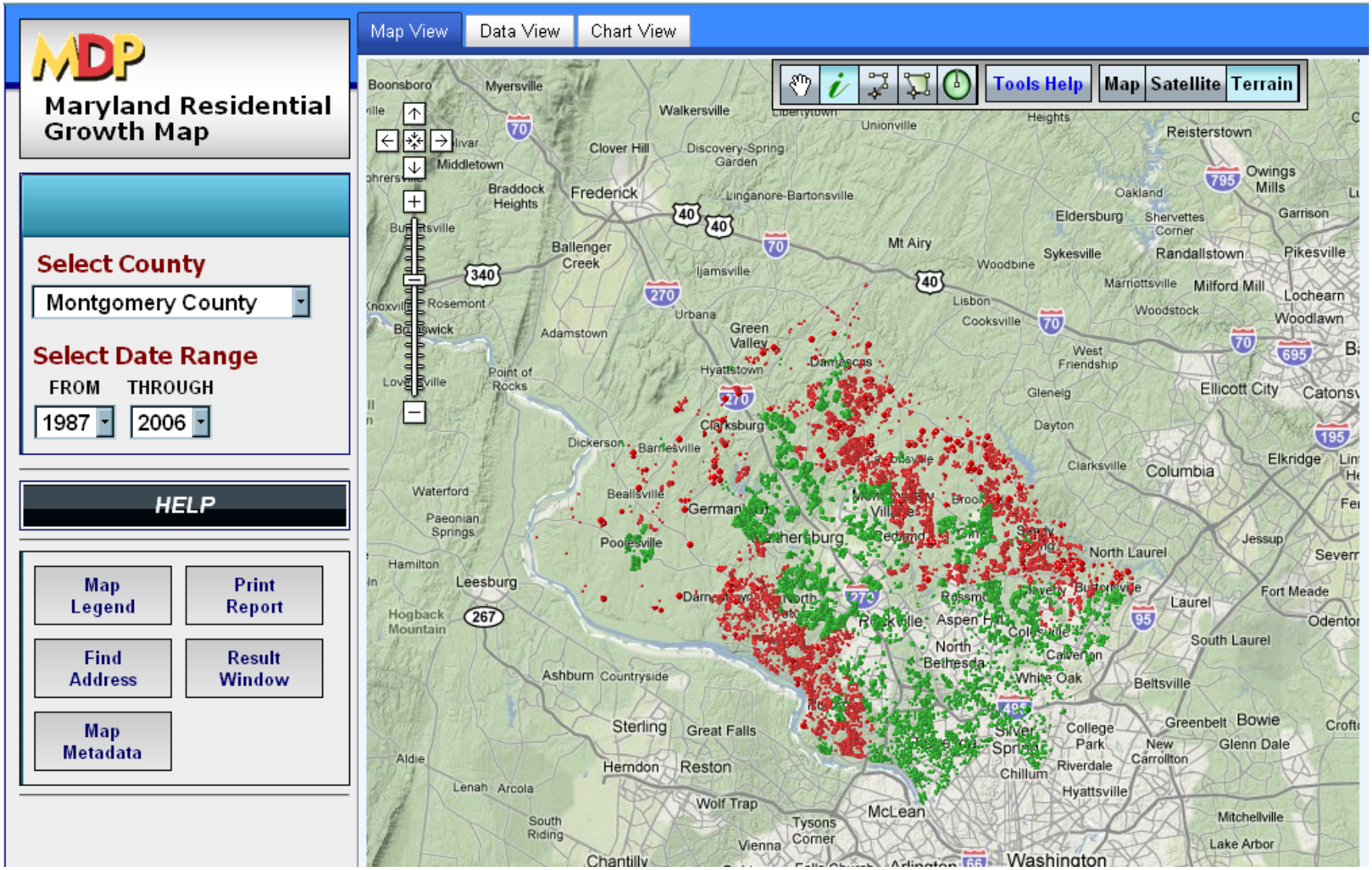
Source: Maryland Department of Planning (http://mdpgis.mdp.state.md.us/pfa/pfa.htm)

Single Family Development in Garrett County



Source: Maryland Department of Planning (http://sustain.mdp.state.md.us/parcelgrowth/growthmap.aspx)

Single Family Development in Montgomery County



Source: Maryland Department of Planning (http://sustain.mdp.state.md.us/parcelgrowth/growthmap.aspx)

Finnegan Farm in Germantown, MD

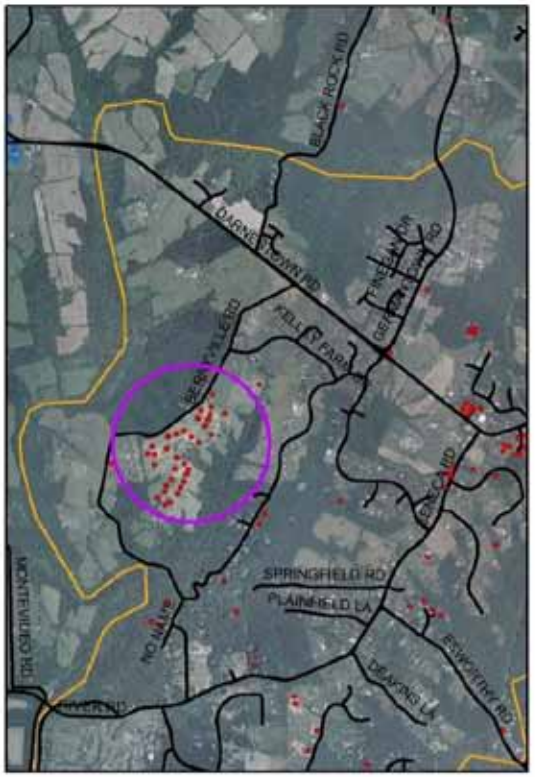
APPROVAL in 2003: http://www.montgomeryplanningboard.org/meetings_archive/02_meeting_archive/agenda_121902/agenda_12-19-02.htm

PLAT APPROVAL: http://plato.mdarchives.state.md.us/msa/stagser/s1500/s1529/cfm/dsp_unit.cfm?county=mo&qualifier=S&series=12408unit=28366
COUNCIL MINUTES APPROVAL: http://www.montgomeryplanningboard.org/meetings_archive/02_meeting_archive/agenda_121902/blueagenda_121902.pdf
http://www.montgomeryplanningboard.org/meetings_archive/02_meeting_archive/agenda_021402/blueagenda_021402.pdf

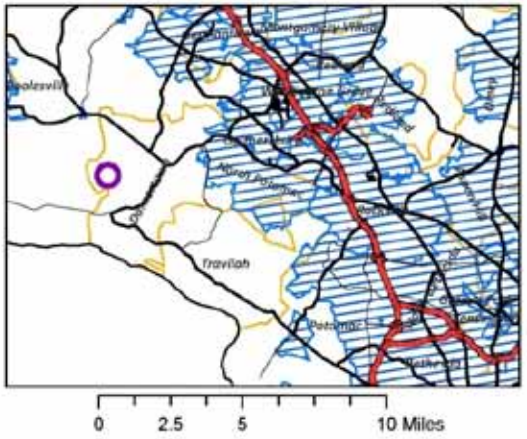
In 2000, was a 220 acre parcel owned by Paula Prahinksi who bought the parcel in 1996. Received approval for 32 unitswith easements by Planning Board in 2002. Approximately 30 homes on lots ranging from 2 to 4 acres in size valued between $1-1.7 million were developed by Finnegan Farm LLC between 2003 and 2005.

14000-14965 Finegan Farm Dr. Germantown, MD.

On private well and private septic.
Received approval for 32 units (approvals 2/02 and 12/02)
Some currently in foreclosure.

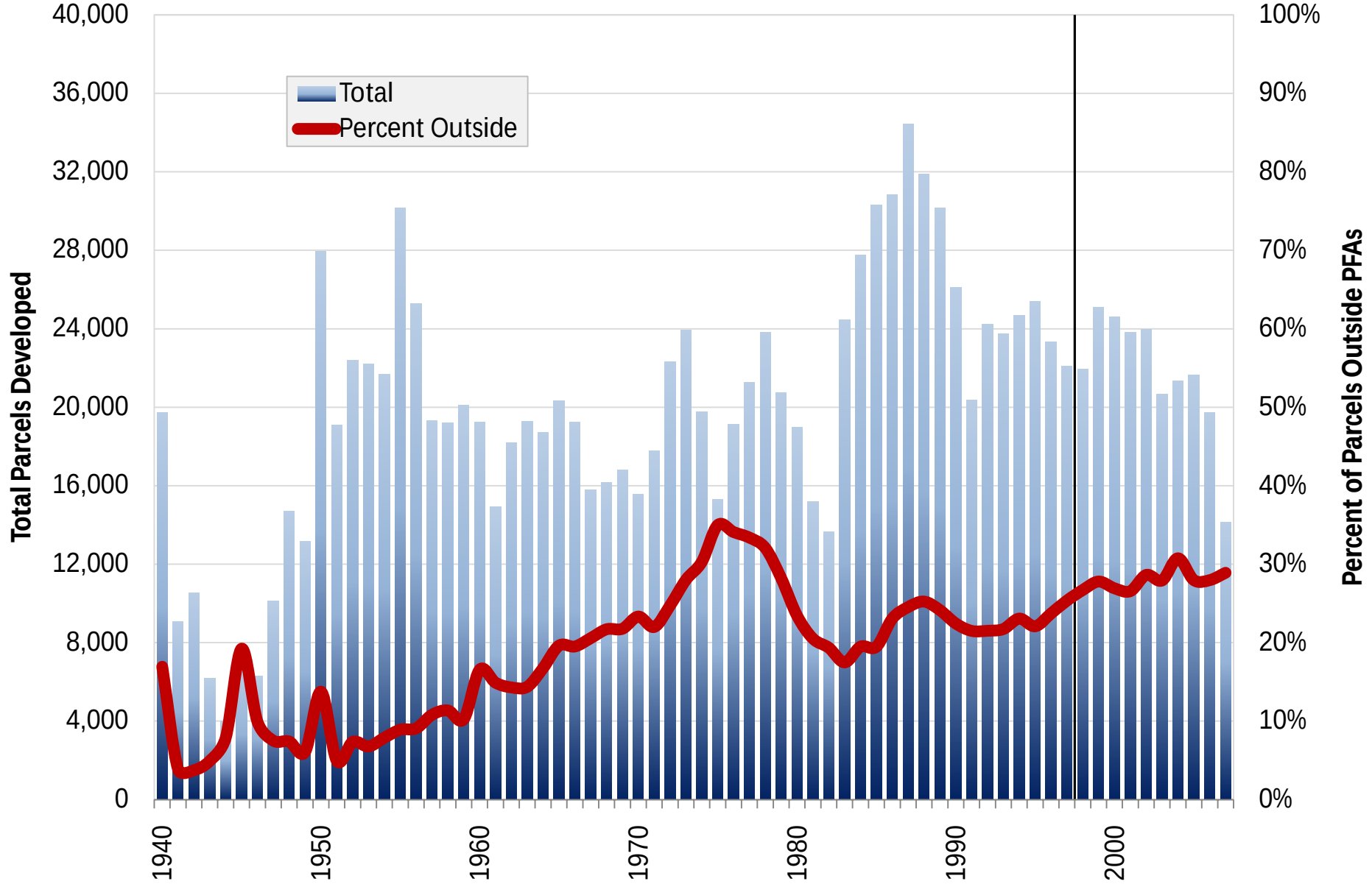


- Units Built After 2000 Outside the PFA
- Interstate
- Major County Rodas
- Other State Roads
- State Primary Highways
- Minor Roads
- Census Designated Places
- PFA



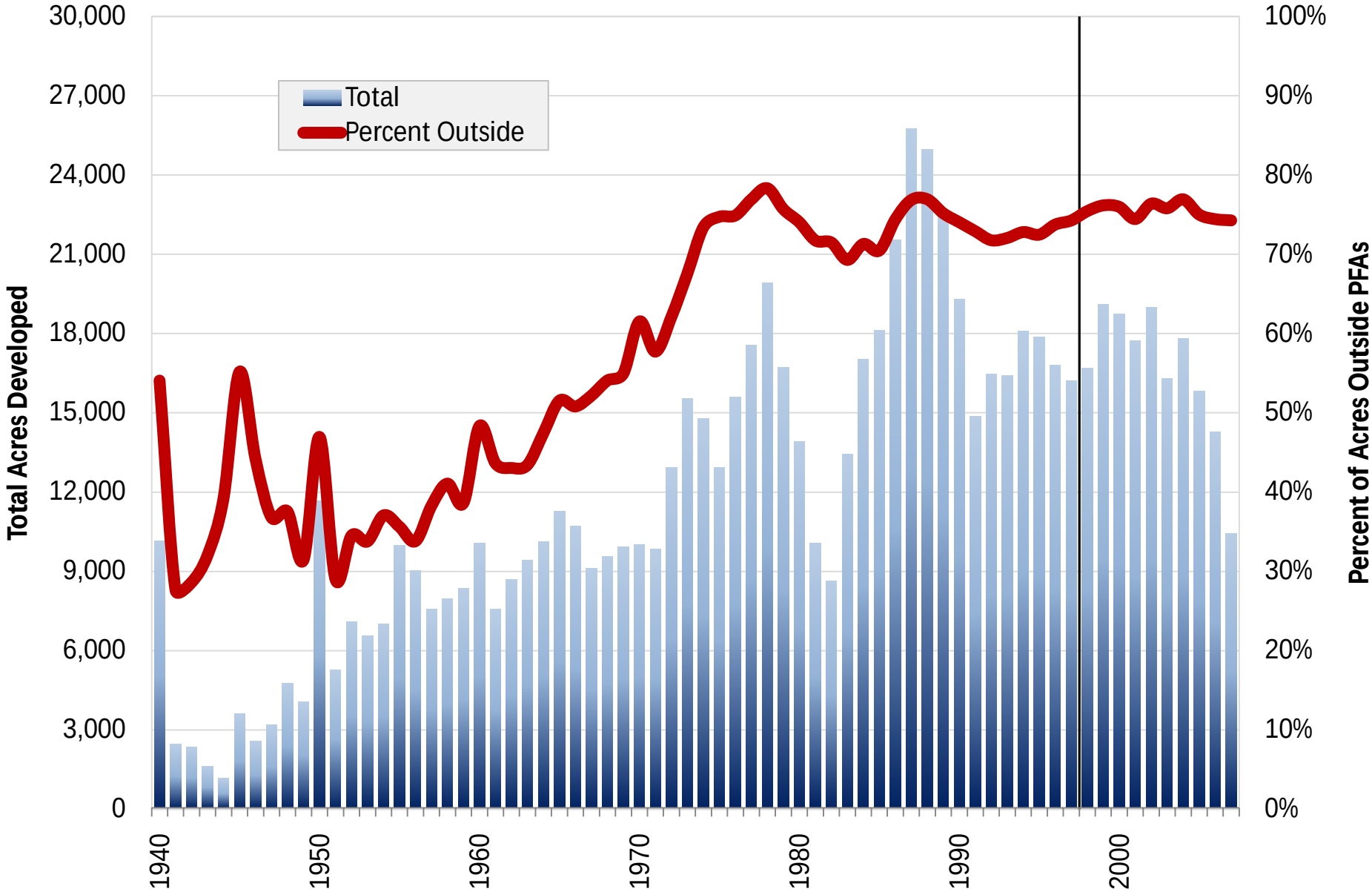
Map created by National Center for Smart Growth Research and Education using data from the Maryland Property View Database, Maryland State Highway Administration, U.S. Census, Maryland Department of Planning, and NAIP.

Improved Single Family *Parcels*, 1940-2007



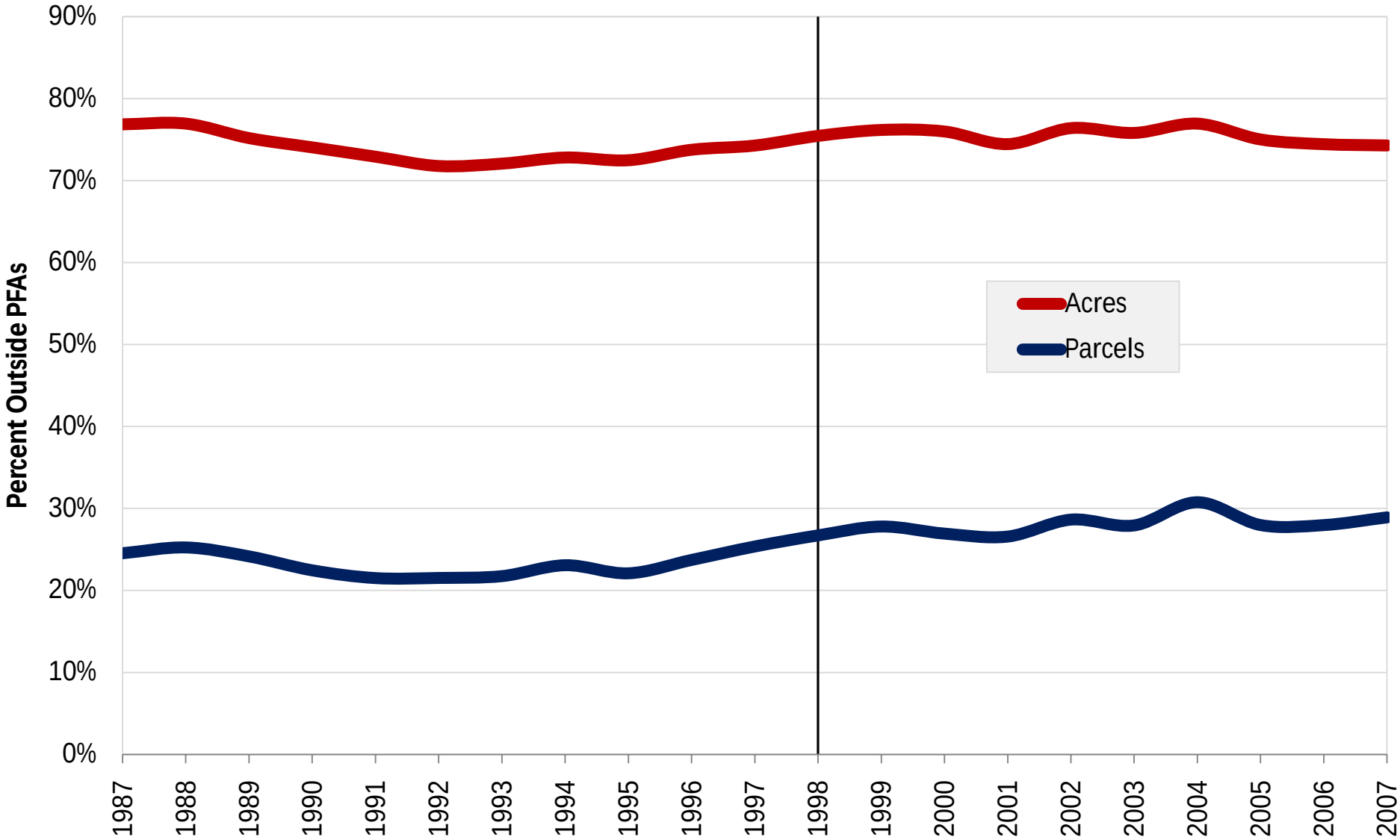
Source: Maryland Department of Planning

Improved Single Family *Acres*, 1940-2007



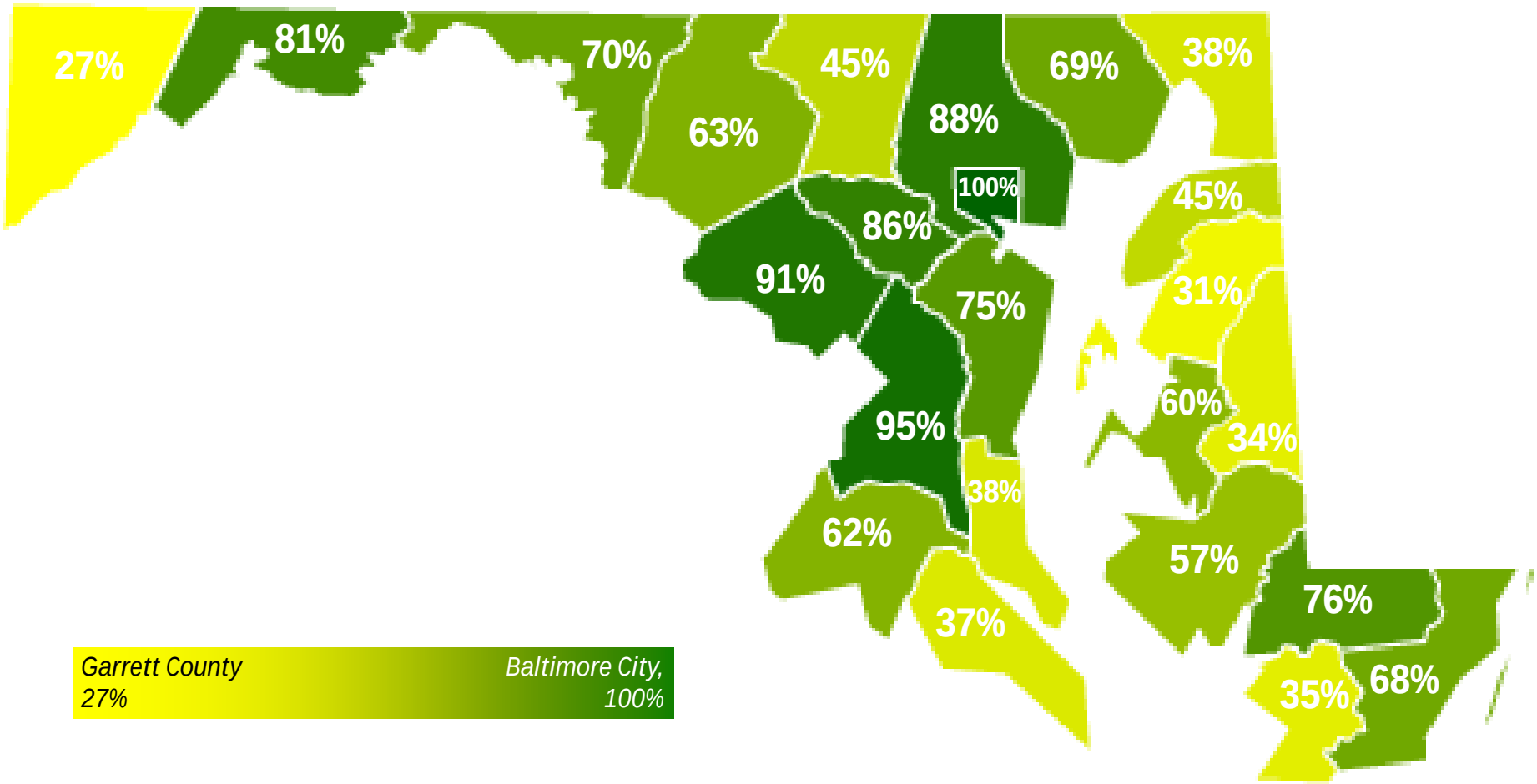
Source: Maryland Department of Planning

Share of Development Occurring Outside PFAs, 1987-2007



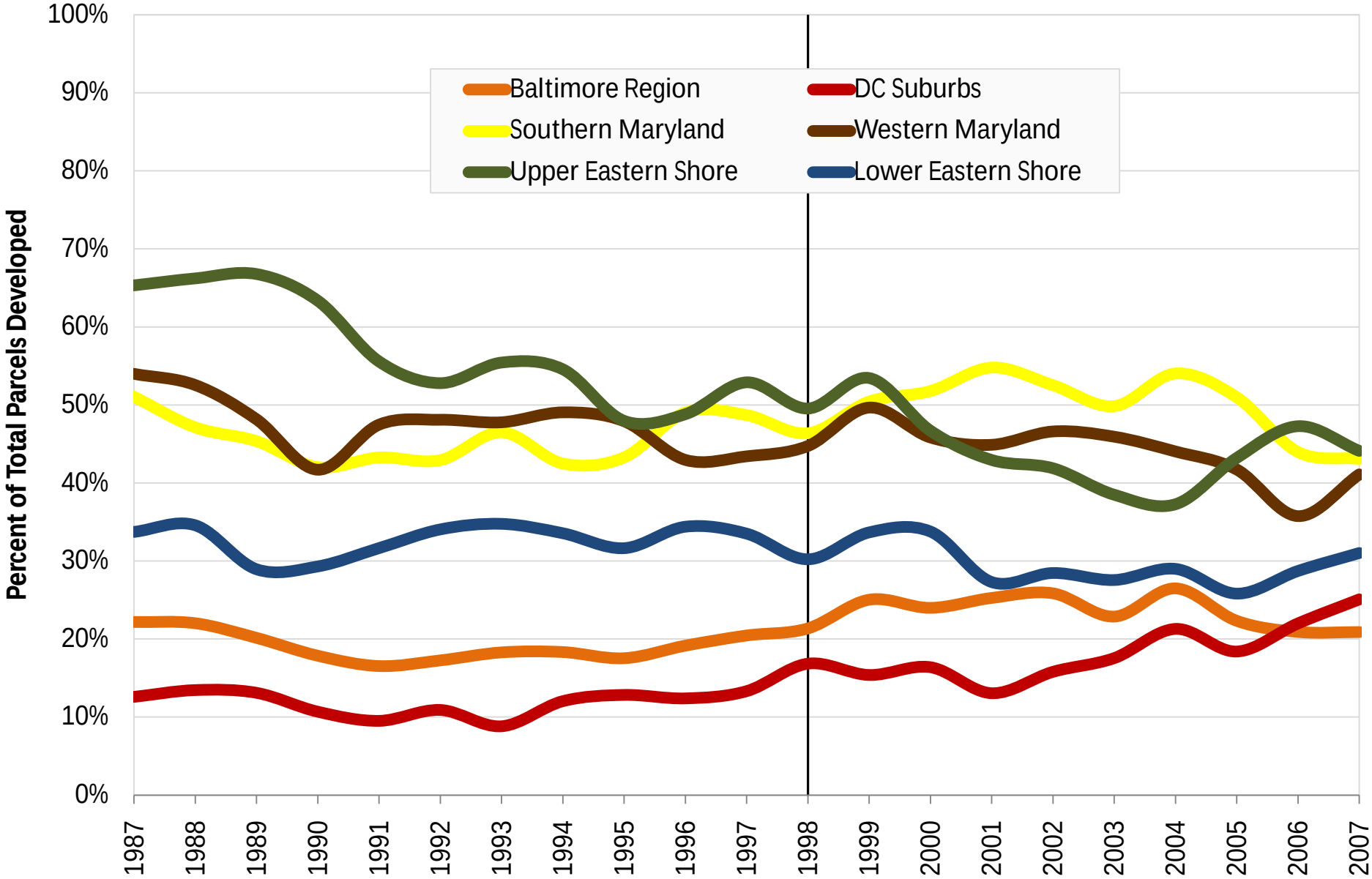
Source: Maryland Department of Planning

Relative Share of County Population within PFAs, 2000



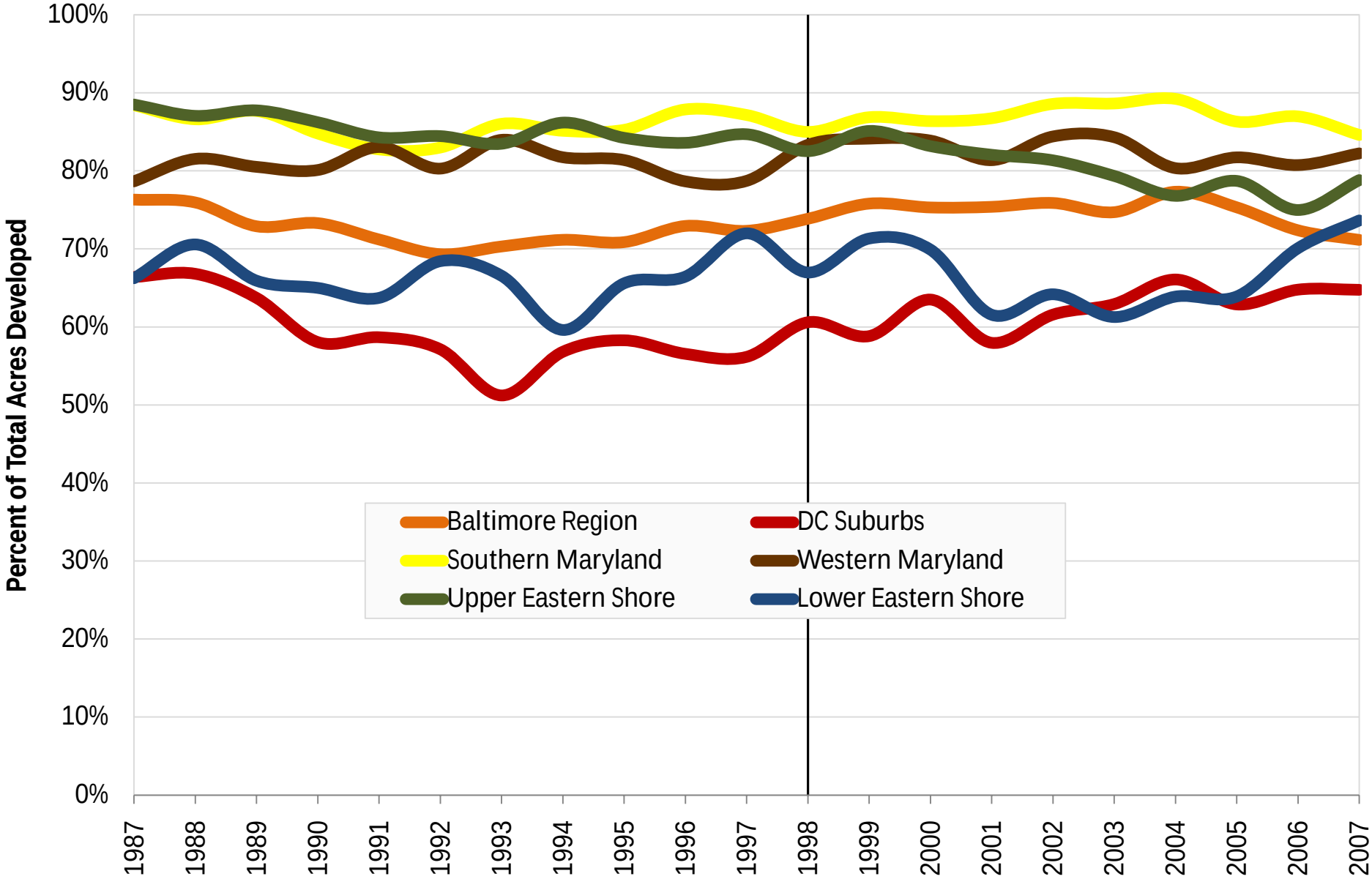
Source: Maryland Department of Planning; U.S. Census Bureau

Parcels Developed Outside PFAs by Region, 1987-2007



Source: Maryland Department of Planning

Acres Developed Outside PFAs by Region, 1987-2007



Source: Maryland Department of Planning

Ratio of Jobs to Housing Units for Maryland Counties, 2000-08

Lowest Jobs-Housing Ratio (0.63) — *Highest Jobs-Housing Ratio (1.83)*

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Baltimore Region									
Anne Arundel	1.58	1.60	1.64	1.65	1.69	1.73	1.75	1.79	1.81
Baltimore	1.44	1.47	1.47	1.46	1.49	1.53	1.55	1.57	1.59
Baltimore City	1.50	1.43	1.42	1.40	1.37	1.35	1.36	1.36	1.36
Carroll	1.26	1.26	1.29	1.26	1.29	1.33	1.35	1.37	1.39
Harford	1.17	1.12	1.16	1.15	1.18	1.21	1.22	1.23	1.23
Howard	1.72	1.73	1.76	1.72	1.74	1.76	1.81	1.82	1.83
DC Suburbs									
Frederick	1.42	1.41	1.47	1.46	1.48	1.50	1.49	1.52	1.51
Montgomery	1.78	1.76	1.77	1.76	1.76	1.79	1.80	1.81	1.83
Prince George's	1.30	1.31	1.33	1.32	1.34	1.34	1.34	1.37	1.38
Southern Maryland									
Calvert	0.94	0.95	1.01	0.99	1.01	1.01	1.03	1.06	1.07
Charles	1.13	1.14	1.17	1.13	1.14	1.16	1.16	1.16	1.16
St. Mary's	1.44	1.41	1.47	1.48	1.48	1.45	1.46	1.49	1.50
Western Maryland									
Allegany	1.16	1.13	1.13	1.13	1.15	1.17	1.17	1.16	1.17
Garrett	1.05	1.03	1.08	1.07	1.08	1.11	1.11	1.11	1.13
Washington	1.42	1.41	1.41	1.36	1.34	1.35	1.33	1.32	1.32
Upper Eastern Shore									
Caroline	1.08	1.02	1.06	1.04	1.04	1.06	1.04	1.05	1.05
Cecil	0.92	0.93	0.98	0.96	0.98	0.98	0.99	1.01	1.02
Kent	1.24	1.22	1.23	1.19	1.22	1.24	1.24	1.26	1.23
Queen Anne's	1.03	1.05	1.09	1.08	1.11	1.12	1.14	1.17	1.17
Talbot	1.53	1.52	1.55	1.51	1.50	1.49	1.47	1.46	1.46
Lower Eastern Shore									
Dorchester	1.11	1.09	1.08	1.09	1.10	1.09	1.05	1.03	1.02
Somerset	1.05	1.07	1.08	1.08	1.06	1.04	1.04	1.03	1.03
Wicomico	1.50	1.48	1.50	1.44	1.47	1.50	1.50	1.47	1.46
Worcester	0.66	0.66	0.68	0.65	0.65	0.64	0.64	0.63	0.63
Maryland	**1.44**	**1.43**	**1.44**	**1.43**	**1.44**	**1.46**	**1.46**	**1.48**	**1.49**

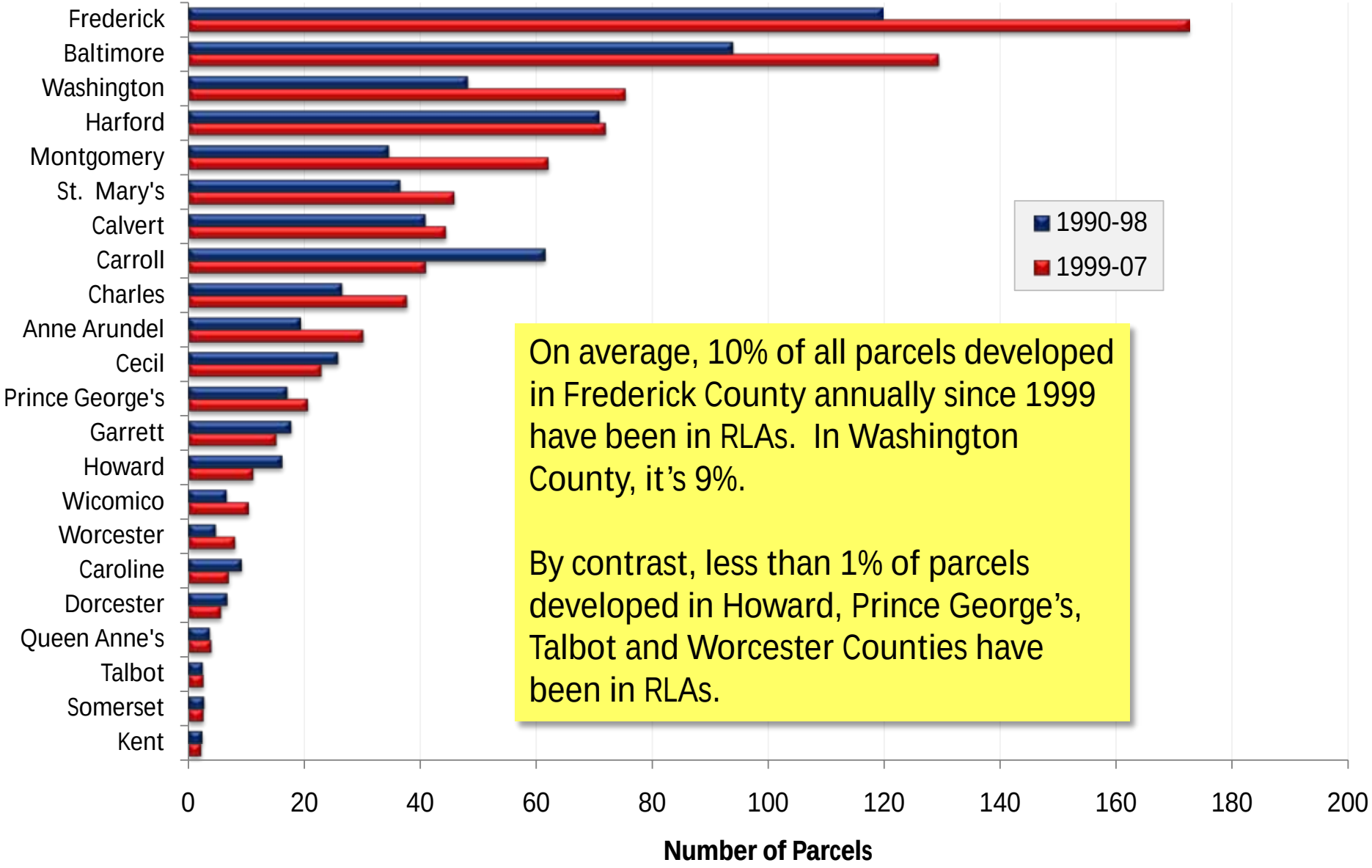
Sources: U.S. Bureau of Economic Analysis; U.S. Census Bureau

Population within Rail Transit Shed (half mile of rail transit station)

	Population Density within Transit Shed (people per square mile)			Share of Population within Transit Shed	
	1990	2000	% Change	1990	2000
Anne Arundel	959	1,702	77.5%	0.58%	2.76%
Baltimore	2,718	2,102	-22.7%	1.56%	3.08%
Baltimore City	13,539	9,933	-26.6%	13.89%	19.00%
Cecil	N/A	486	N/A	N/A	0.32%
Frederick	232	258	11.2%	0.19%	0.16%
Harford	N/A	1,845	N/A	N/A	1.33%
Howard	1,160	1,702	46.7%	0.96%	1.20%
Montgomery	4,242	4,753	12.0%	8.63%	8.81%
Prince George's	3,985	4,184	5.0%	4.41%	5.43%

Sources: Washington Metropolitan Area Transit Authority, Maryland Transit Administration, U.S. Census Bureau

Average *Parcels* Developed Annually in RLAs

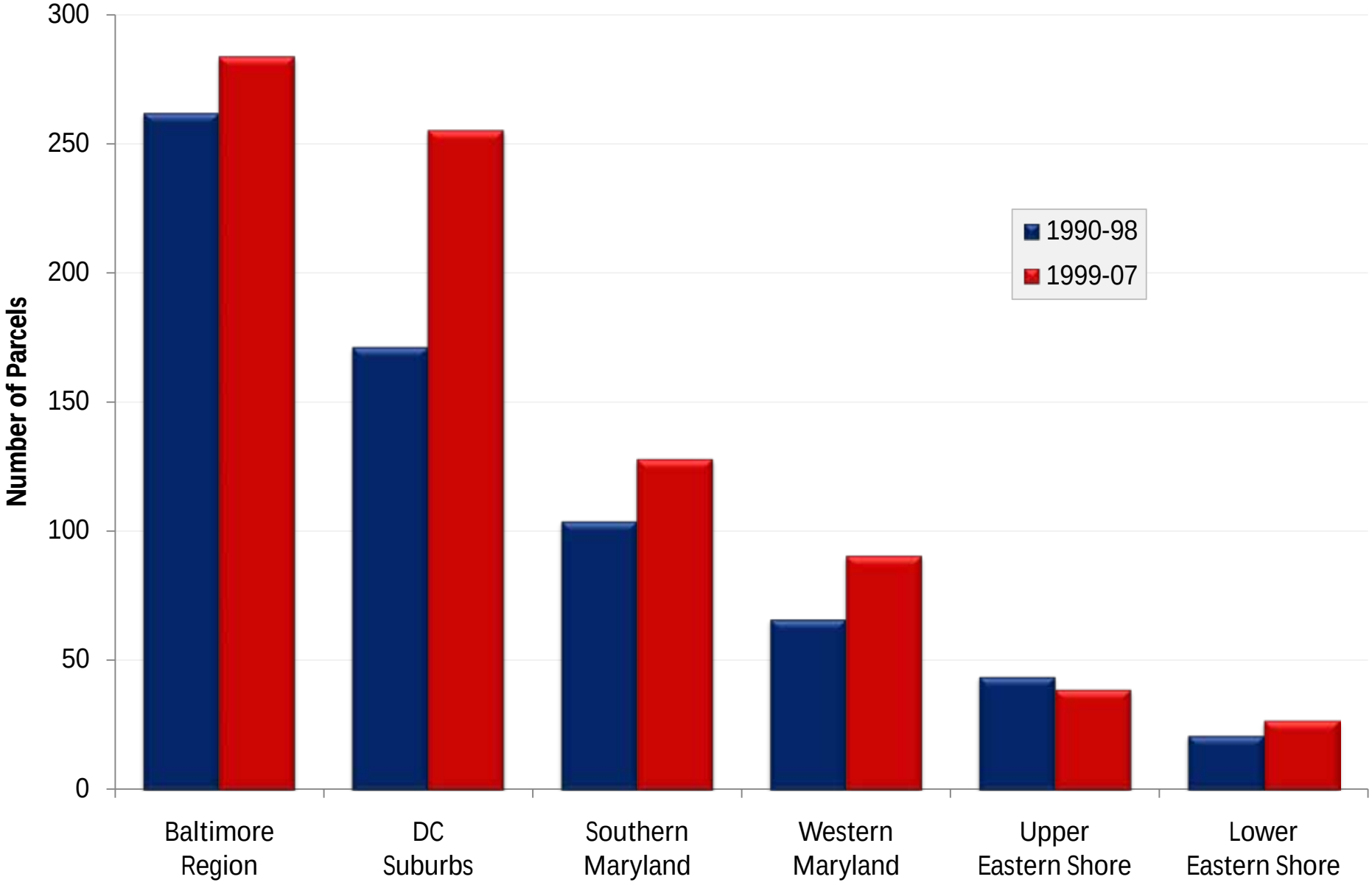


On average, 10% of all parcels developed in Frederick County annually since 1999 have been in RLAs. In Washington County, it's 9%.

By contrast, less than 1% of parcels developed in Howard, Prince George's, Talbot and Worcester Counties have been in RLAs.

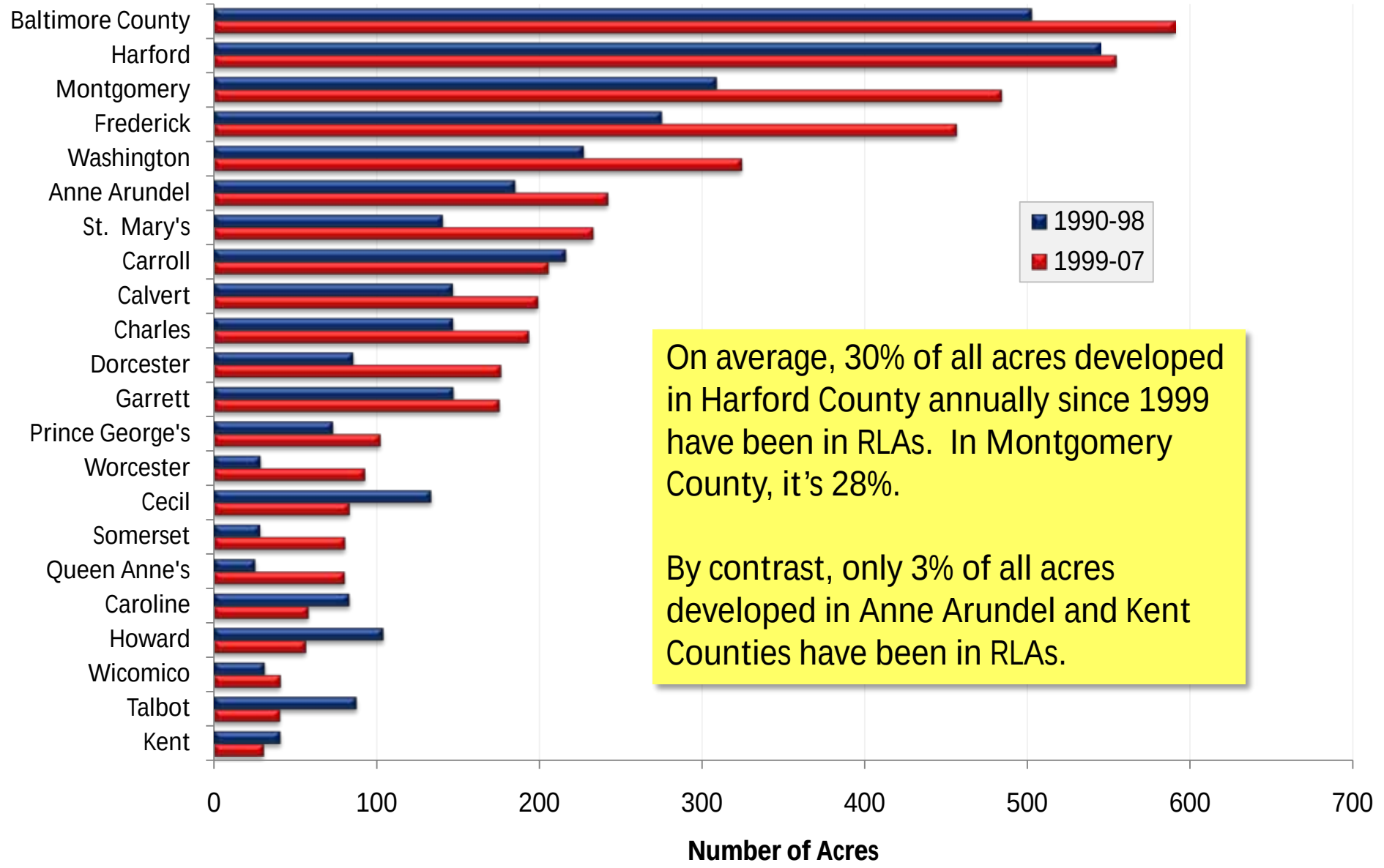
Source: Maryland Department of Planning, Maryland Property View Database

Average *Parcels* Developed Annually in RLAs by Region



Source: Maryland Department of Planning, Maryland Property View Database

Average *Acres* Developed Annually in RLAs

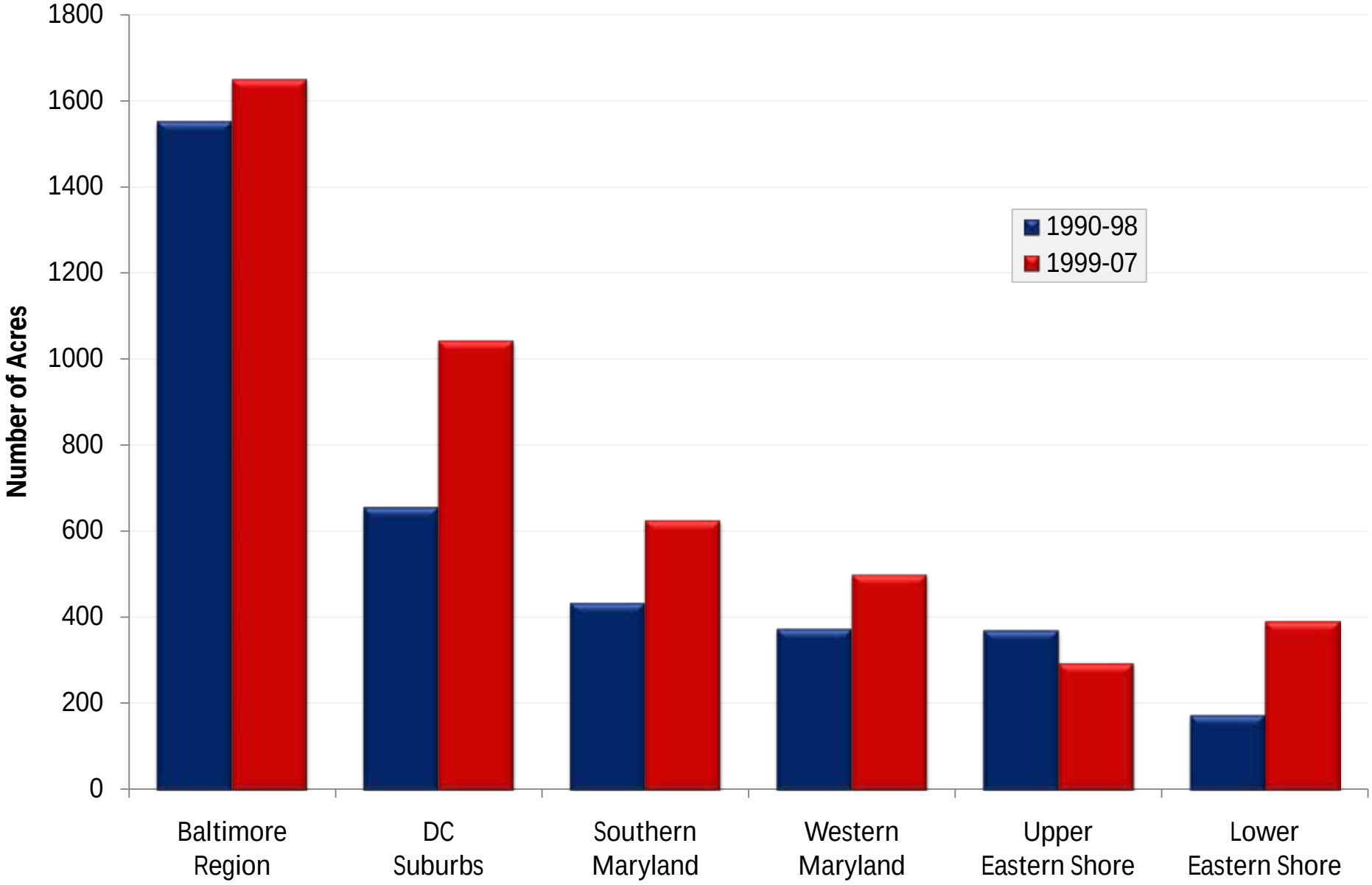


On average, 30% of all acres developed in Harford County annually since 1999 have been in RLAs. In Montgomery County, it's 28%.

By contrast, only 3% of all acres developed in Anne Arundel and Kent Counties have been in RLAs.

Source: Maryland Department of Planning, Maryland Property View Database

Average *Acres* Developed Annually in RLAs by Region



Source: Maryland Department of Planning, Maryland Property View Database

What New Indicators are Needed?

- More complete measures of development patterns—e.g., development in PFAs, PPFAs, RLAs, SDAs, TODs.
- Better measures of capacity utilization.
- Better measures of urban form.

Better Measures of Capacity Utilization

Residential Development Capacity =

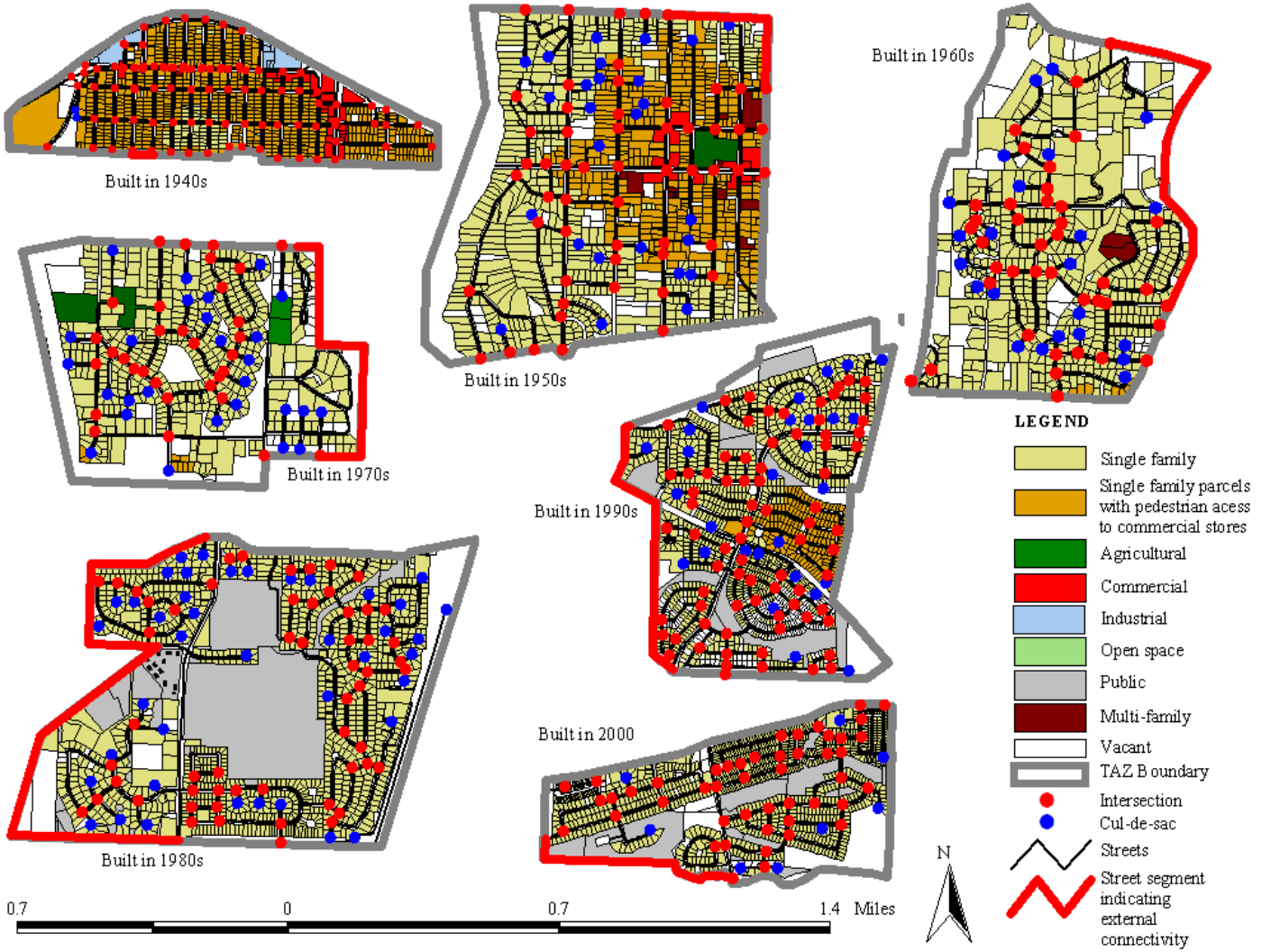
(acres zoned R1) * (units per acre in R1) +
(acres zoned R2) * (units per acre in R2) +
(acres zoned R3) * (units per acre in R3) +
……

Better Measures of Capacity Utilization

Employment Development Capacity =

(acres zoned C1) * (jobs per acre in C1) +
(acres zoned C2) * (jobs per acre in C2) +
(acres zoned I) * (jobs per acre in I) +
……

Measures of Urban Form



Conclusions

- People can examine the same data and come to different conclusion; ours are these…
  - Indicators alone cannot ascertain whether trends would have been worse in the absence of Maryland's Smart Growth Program;
  - Changes in development patterns take a long time;

Conclusions

- People can examine the same data and come to different conclusion; ours are these…
  - Currently available indicators are highly imperfect measures of environmental quality or quality of life;
  - If the success of Maryland's Smart Growth Program was measured only on currently available indicators, however, the indicators generally suggest that substantial progress has not been made.