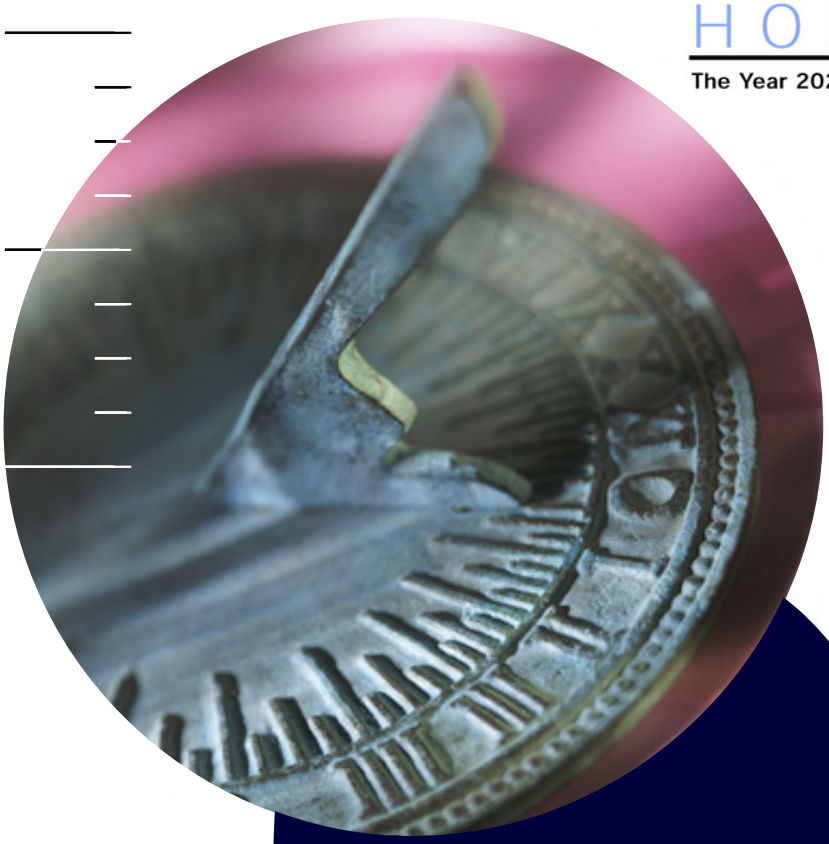
REGIONAL INDICATORS

HORIZONS

The Year 2025 Plan for the Delaware Valley



MEASURING OUR PROGRESS TO 2025

DELAWARE VALLEY
REGIONAL PLANNING
COMMISSION

OCTOBER 2000

REGIONAL INDICATORS

MEASURING OUR PROGRESS TO 2025

Delaware Valley Regional Planning Commission
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http://www.dvrpc.org

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Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions between the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Planning, and Administration. DVRPC's mission is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.

The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Publication Abstract

TITLE	Date Published: OCTOBER 2000
REGIONAL INDICATORS: MEASURING OUR PROGRESS TO 2025	Publication No. 00022

Geographic Area Covered: Nine-county Delaware Valley region, including Bucks, Chester, Delaware, Montgomery and Philadelphia counties in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey.

Key Words: Indicators, Measures, Progress, Horizons 2025, Physical Form, Traffic Congestion, Environment, Air Quality, Economic Development, Freight Movement, Mobility, Housing

ABSTRACT

This report presents 26 indicators that collectively track the region's progress toward the adopted goals of Horizons 2025, DVRPC's long range transportation and land use plan for the Delaware Valley. The indicators depict trends in eight issue areas: Physical Form, Traffic Congestion, Environment, Air Quality, Economic Development, Freight Movement, Mobility and Housing. The data provides a starting point for an ongoing assessment of regional goals and policies.

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INTRODUCTION

In 1999, the Delaware Valley Regional Planning Commission (DVRPC) began a two-year effort to prepare an updated long-range regional plan – ***Horizons, The Year 2025 Plan for the Delaware Valley.*** The 2025 Plan builds upon the extensive work undertaken in preparing ***Direction 2020***, DVRPC's Land Use and Transportation Plan for the Year 2020, which was completed and adopted in 1995. The 2020 Plan set forth a vision for the region that coupled a strong economy and seamless transportation system with a healthy environment and vibrant communities. It envisioned a more efficient, competitive and sustainable region by fostering new development in and around existing communities while easing traffic congestion and enhancing mobility through alternative travel modes and decreased reliance on the single occupancy vehicle. ***Horizons 2025*** will continue this vision and expand upon it, by reviewing and refining the goals and policies of the 2020 Plan and maintaining a 20 year planning horizon.

The 2020 Plan presented a detailed physical plan for future development and transportation facilities in conjunction with goals, policies and recommended actions in eight specific areas. ***Horizons 2025*** will augment this approach by proposing additional development and transportation facilities consistent with the 2020 Plan's established goals, policies and recommended actions in eight specific areas:

Physical Form	Economic Development
Traffic Congestion	Freight Movement
Environment	Mobility
Air Quality	Housing

This report, *Regional Indicators: Measuring Our Progress to 2025*, advances the 2020 plan and ***Horizons 2025*** by presenting 26 refined indicators that collectively track the region's progress toward the adopted goals of both plans.

Selecting Meaningful Indicators: The Process

Twenty-seven indicators were originally selected for *Regional Indicators: Measuring Our Progress to 2020.* The overriding objective at that time was to develop meaningful indicators that would reflect the region's progress toward ***Direction 2020*** goals. Through refinement, the indicators chosen for this report reflect the current goals of ***Horizons 2025.*** Each selected indicator must also meet the following criteria:

- ***Outcome-based.*** The indicators focus on the results or outcomes of policies rather than simply reporting inputs such as dollars or labor hours invested.
- ***Regional in geographic scope***. With very few exceptions, indicators report results for the entire Delaware Valley nine-county region. County or other local data are, in some cases, provided to illustrate differences within the region. Instances where Pennsylvania and New Jersey use different reporting standards or data definitions, and therefore are not directly comparable, are highlighted in the text and tables of this report.

- ***Measurable over the long range.*** In order to analyze trends, DVRPC relied on data series that have at least four or five years of historic data and have a reasonably strong likelihood of continued availability in years to come.
- ***Publicly available data sources.*** Due to the high cost of data collection and the need for consistent and continuing reporting, DVRPC relied on existing public sources for the vast majority of indicators.

In addition to these characteristics of the data, the final selection of indicators was balanced so that they would collectively represent all eight issue areas. In order to keep the report widely accessible, highly technical indicators, that would have been of interest to only specialists in a particular discipline, were not included.

Twenty-six indicators were selected through this process and are presented in this report. The document is divided into eight sections, each corresponding to a different issue area. Following a restatement of the adopted goal, each section reviews several indicators that were selected to measure progress toward the goal. A *Policy Background* section that describes the measure in the context of regional goals and objectives introduces each indicator. The *Measurement* section identifies the data source, explains how the indicator is constructed and states whether a higher or lower number indicates progress towards goals. Data limitations and other special factors that have a bearing on the interpretation of the data are also identified in this section. Finally, the *Results* section summarizes recent trends and, where appropriate, compares results in different parts of the region. A comparison of conditions between a baseline year and the latest available year helps to assess whether the region is moving toward or away from the goals.

Data Limitations and Other Caveats

The single largest challenge to developing meaningful regional indicators is that relatively little data is collected at the regional level. Federal, state, county and local governments collect data for their own geographies and often use methodologies that are not directly transferable to other parts of the region. The fact that DVRPC is a bi-state region also posed a data collection challenge. Pennsylvania and New Jersey frequently have different regulations and standards of compliance and, consequently, state level data may not be directly comparable. Data on limitations and definitional issues between Pennsylvania and New Jersey are highlighted in the text and tables, as appropriate.

Use of U.S. Census data also posed a dilemma. While the decennial Census is an extensive data set that provides consistent and detailed coverage across the region, it is taken only once every ten years. With Census 2000 in progress at this stage, Census 1990 data is relatively dated. As a result, DVRPC attempted to collect more recent data from non-Census sources wherever possible. For two indicators, "Average Trip Length" and "Percent of Home to Work Trips in Single Occupant Vehicles," no other reliable data sources were available that could be used to update Census data.

Another consideration for interpreting the indicators is that unusually large changes in the data or sudden turning points may be due to factors unrelated to established goals or regional policies. For example, one-time occurrences (a labor strike) or extraordinary events (extreme weather conditions) may be responsible for short-term changes. These events

should not be confused with changes in underlying trends. Special one-time factors are highlighted in the discussion of individual indicators, where relevant.

Finally, it is important to recognize that some goals lend themselves more easily to quantification than others. Concepts like "community character" and a "sustainable environment" may be harder to calculate than changes in traffic counts or number of building permits issued. The fact that they are harder to quantify does not mean that they are less important. Other goals such as air and water quality, while measurable, may be hard to reduce to a single easily understandable number. It must also be noted that DVRPC's land use and transportation plans are primarily physical plans that have limited coverage of other issues in the region, such as the quality of education, healthcare, or crime.

The 26 indicators contained in this report are points in an ongoing assessment of regional goals and policies. Like the eight issue areas, these measures should not be viewed in isolation, but as part of a dynamic system that shed light upon areas of relative progress and need. One indicator cannot accurately describe "how we are doing;" however, the entire series of regional measures allows for a broad region-wide assessment of progress and change.

Interpreting the Indicators

The indicators presented in this report portray a mixed picture of success toward meeting the goals of the year 2020 Plan and ***Horizons 2025.*** Of the 26 regional indicators presented here, 11 show an improving trend, 6 represent a decline in conditions, and 9 show mixed results. Highlights of the results:

Physical Form:

> *While population growth occurred in the 29 growth centers identified in the 2020 Plan, the City of Philadelphia continues to lose population and the region is still losing farmland at an alarming rate. There is also a significant need for additional parks and recreational open space in the region. Overall, the region's population grew just 0.6% between 1990 and 1995, while the amount of developed land increased an additional 5.2%*

Traffic Congestion:

> *Auto usage as well as vehicle ownership increased regionally between 1990 and 1995, with total traffic growth of 10% for the period. Despite strong growth in ridership at New Jersey Transit and SEPTA Regional Rail between 1996 and 1999, overall public transit usage declined slightly during this period.*

Environment:

> *Environmental conditions were generally positive as reflected by recycling, water quality and water withdrawal indicators, yet increasing waste generation and energy consumption reflect direct environment impacts.*

Air Quality:

Although air quality improved somewhat, increased car ownership and single occupant automobile commutes will yield increasing congestion and declining air quality. From 1990 to 1995, the number of cars in the region increased four times greater than the increase in population.

Economic Development:

Economic development factors were positive overall for the period of 1995 to 1998 as indicated by employment growth, income growth and unemployment rate indicators, yet the City of Philadelphia continued to lose total employment and experience the highest unemployment rate.

Freight:

Freight movement indicators contained mixed results. A significant increase in air cargo and general cargo through the port occurred in the region from 1996 to 1998, but the amount of bulk cargo decreased slightly for the same period.

Mobility:

Investments in roadway maintenance have significantly reduced the percent of highway miles rated in poor condition in both Pennsylvania and New Jersey. Perhaps as a result, and despite the increase in auto usage, the number of automobile crashes in the region has declined since 1988.

Housing:

Wage growth in the region surpassed the overall rate of inflation and the increase in housing costs between 1995 and 1997, creating a generally more affordable housing market. While housing is still relatively affordable through most of the region, increased housing prices in selected areas may have a direct impact on attracting or retaining homebuyers.

The trends captured by the indicators, though mixed, identify areas where the region is making progress and others that require renewed commitment. Looking across categories, the indicators can also be used to illustrate inter-relationships between variables. For example, these findings support the notion that decentralized growth results in decreased transit usage and increasing auto-usage, but may actually disperse air pollution and improve overall air quality in the short term. In a similar manner, rising income levels will support rising housing prices, but may make certain areas of the region unaffordable to large segments of the population. Considering such trends and relationships identifies those areas where policy intervention may be necessary. Finally, these indicators create the foundation for targeting specific, numerical benchmarks to gauge progress toward selected goals over time.

SUMMARY OF REGIONAL INDICATORS PROGRESS

Progress Trend	
	PHYSICAL FORM
+/-	Growth Patterns: Philadelphia continues to lose population as suburbs grow
-	Land Development: Rate of land development far exceeds rate of population growth
-	Farmland Preservation: Farmland declines despite preservation effort
+/-	Parks and Recreational Open Space: Protected open space increases, but more is needed
+	Commercial Land Use: Office occupancy rates increase across the region
	TRAFFIC CONGESTION
-	Auto Usage: Traffic grows around the region
+/-	Public Transit Usage: Transit ridership holds steady in recent years following previous losses
-	Vehicles: Vehicle growth far exceeds population growth
	ENVIRONMENT
-	Waste Generation: Per capita solid waste increases in New Jersey, remains steady in Pennsylvania
+	Recycling: Recycling rate improves throughout region
+	Water Quality: Delaware River water quality generally exceeds standards
+	Water Withdrawal: Water usage declines in region
+/-	Energy Consumption: Energy usage in PA and NJ less than national average, but increasing at a faster rate
	AIR QUALITY
+/-	Ozone Pollution: Air quality improves, but still falls below standards
-	Drive Alone: Use of single occupant vehicles increases in all counties
	ECONOMIC DEVELOPMENT
+	Employment Growth: Employment grows in all counties except Philadelphia
+	Income Growth: Regional income exceeds national average, grows at similar rate
+	Unemployment Rate: Unemployment rate declines in all counties since 1995
	FREIGHT MOVEMENT
+/-	Port: General cargo increases since 1990, bulk cargo declines slightly
+	Air: Air cargo nearly doubles since 1990
+/-	Truck: Truck traffic increases throughout region
	MOBILITY
+	Safety: Automobile crashes decline significantly since 1988, increase slightly since 1995
+	Road Condition: Roadway conditions improve since 1990
+/-	Reliability of Public Transit: On time performance of public transit varies among systems
	HOUSING
+	Housing Affordability: Earnings increases exceed rate of housing cost increases
+/-	Housing Prices: Regional average housing price now less than national average

+ = positive regional trend; - = negative regional trend; +/- = mixed regional trend

PHYSICAL FORM

Encourage land use patterns that enhance community character, provide for a mix of residential, commercial, employment and recreational opportunities; and link these activities with transportation facilities.

Physical Form
Indicator: Growth Patterns: Philadelphia continues to lose population as suburbs grow

Policy Background

The health and vitality of the region depend upon creating strong urban centers, limiting suburban sprawl and preserving the rural character of the hinterlands. The Core Cities of Philadelphia, Trenton, Camden and Chester have been losing both residents and jobs over most of the second half of this century. Conversely, the suburban counties of the region have felt the brunt of growth pressures. In order to mitigate the negative impacts of these trends, urban centers must be stabilized, while suburban growth must be concentrated in designated areas with adequate infrastructure.

Measurement

With the 1990 Census as a starting point, this indicator measures the population change in municipalities for areas identified in the 2020 Plan as growth, revitalized, regional or county centers. *Regional Centers,* such as King of Prussia, are existing centers that serve a regional population with a stable concentration of people, employment and services. *County Centers,* like Jenkintown, are existing centers of importance within the county that provide a stable concentration of housing, jobs and services. *Growth Centers,* such as Voorhees, are emerging centers forecasted for growth, which will see an increasing concentration of people, employment and services. *Revitalized Centers,* like Camden, are existing regional or county centers in need of directed action to reverse the decline in people or employment.

Population changes in these centers are compared to the total county population, excluding the population of centers. Ideally, population growth would occur more substantially in the designated centers than in the remainder of the county. Population data estimates for municipalities are collected bi-annually by the U.S. Department of Commerce's Bureau of the Census using the same methodology throughout the region. There are no bi-annual population estimates for centers located in Philadelphia, which are delineated on a neighborhood level. The Census estimates are available through 1998; the 2000 forecast is based on DVRPC analysis.

Results

Half the revitalized centers and county/regional centers lost population between 1990 and 2000, while every county, except Philadelphia, gained in population. Only the regional growth centers gained population in the same time span. Bucks, Chester, Montgomery, Burlington and Gloucester counties had the greatest county population increases. The most significant increases in center population were in the growth centers of Montgomery (e.g., Limerick, Montgomery, Upper Providence) and Burlington (e.g., Mt. Laurel, Evesham)

counties, which gained 40.1% and 13.7% respectively. Delaware County had the slowest growth center population increase at .26% (e.g., Springfield). Noteworthy population gains in revitalized centers were primarily located in Chester (e.g., Coatesville, Phoenixville) and Burlington (e.g., Burlington City, Burlington Township) counties. Population losses in revitalized centers were felt in Delaware (e.g., Chester City, Darby Borough), Camden (e.g., Camden, Gloucester City), Gloucester (e.g., Paulsboro) and Mercer (e.g., Trenton) counties. Population growth in regional and county centers was concentrated in Bucks (e.g., Doylestown Borough, Sellersville/Perkasie), Burlington (e.g., Moorestown, Medford) and Gloucester (e.g., Glassboro) counties. Regional and county center declines were witnessed in Delaware (e.g., Media, Upper Darby), Montgomery (e.g., Upper Moreland, Jenkintown), Camden (e.g., Cherry Hill, Lindenwold) and Mercer (e.g., Hightstown) counties.

GROWTH PATTERNS: Population Growth in Plan Designated Centers and Non-Center Areas, by County

	Horizons 2025 Centers (% Change 1990-2000)			Non-County Center Total	County Total
	Growth Centers	Revitalized Centers	Regional &County Centers		
Bucks	9.6	1.4	2.4	16.0	11.9
Chester	18.5	1.7	1.4	17.7	15.2
Delaware	4.9	-4.5	-0.6	1.0	0.3
Montgomery	40.1	0.9	-0.3	8.1	7.8
Philadelphia	NA	NA	NA	NA	-6.1
PA Suburban County*	**18.3%**	**-0.1%**	**0.7%**	**10.7%**	**1.6%**
Burlington	21.8	4.8	4.4	7.3	8.4
Camden	14.7	-0.7	-1.1	-1.4	1.6
Gloucester	10.6	7.9	9.5	12.4	10.2
Mercer	17.7	-1.7	-1.7	5.3	4.2
NJ Suburban County	**16.2%**	**2.5%**	**2.8%**	**5.9%**	**6.1%**
Regional*	**17.2%**	**1.2%**	**1.8%**	**8.3%**	**2.7%**

*** Does not include Philadelphia, except in total**
Source: DVRPC calculations using 1997 U.S. Census population estimates.

Physical Form
Indicator: Land Development: Rate of land development far exceeds rate of population growth

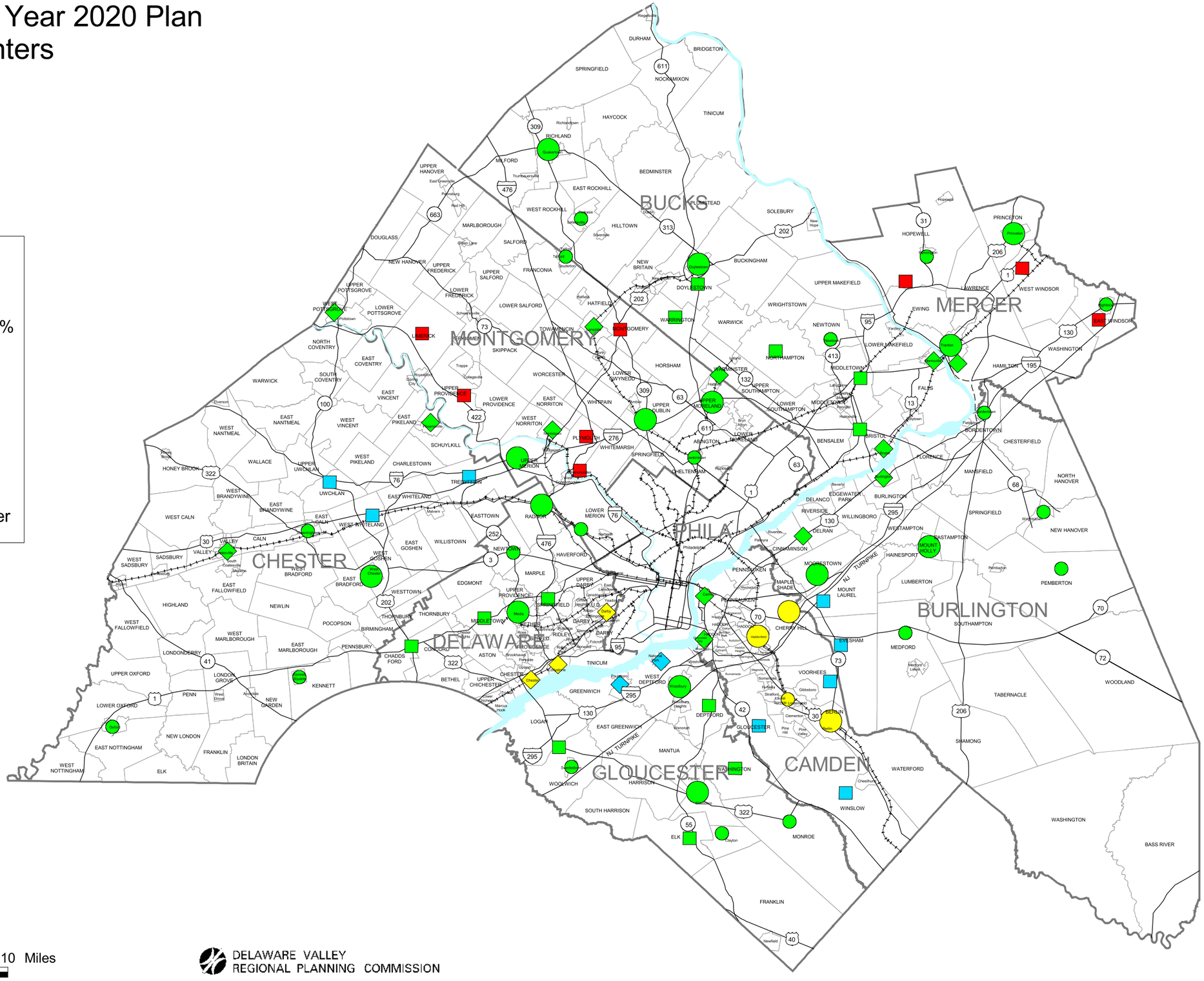
Policy Background
As the Delaware Valley looks towards 2025, it is the distribution of jobs and people together with the form of the new development, that will determine the impacts on the landscape.

Growth Trends in Year 2020 Plan
Development Centers

Center Growth

- Less than 0%
- 0 to Less than 5 %
- 5 to 10 %
- More than 10 %

- Regional Center
- County Center
- Growth Center
- Revitalized Center



Development patterns could transform many rural communities into low-density suburbs comprising single-family detached residential development, office parks and corporate centers. Additionally, the region's species, habitats and ecosystems are under considerable stress from development pressures and are becoming less resilient as a result of these development characteristics.

Measurement

This indicator measures the rates of change in population and developed land acres between 1990 and 1995. Population data were provided by the U.S. Census, and 1995 population was based upon data estimates from the U.S. Census. Developed land data was gathered from DVRPC's land use data file for 1990 (revised) and 1995, and includes acres for single-family detached, single-family attached, multi-family, manufacturing, transportation, utility, commercial, community services, military, recreation and mining land uses.

Results

Between 1990 and 1995, the region witnessed a population increase of 0.6% from 5,182,787 to 5,217,785. By contrast, acres of developed land increased 5.2% between 1990 and 1995. During the same period, significant population increases occurred in Bucks (5.9%), Chester (7.5%) and Gloucester (5.5%) counties. In these counties, acres of developed land increased at a slightly faster pace during the same five-year time period: Bucks (6.1%), Chester (8.7%) and Gloucester (6.2%).

LAND DEVELOPMENT: Developed Land v. Population, 1990-1995

County	1990 Developed Land (ac.)	1995 Developed Land (ac.)	% change 1990-1995	1990 Population	1995 Population*	% change 1990-1995
Bucks	122,031	129,489	6.1	541,174	573,130	5.9
Chester	118,287	128,556	8.7	376,396	404,911	7.5
Delaware	75,078	76,919	2.5	547,651	548,043	0.1
Montgomery	149,976	158,912	6.0	678,193	703,939	3.8
Philadelphia	75,994	75,973	0.0	1,585,577	1,499,762	-5.4
PA Total	541,366	569,849	5.3	3,728,991	3,729,785	0.0
Burlington	84,806	89,579	5.6	395,066	407,931	3.2
Camden	69,614	71,446	2.6	502,824	507,089	0.8
Gloucester	51,939	55,143	6.2	230,082	242,942	5.5
Mercer	55,196	58,889	6.7	325,824	330,038	1.3
NJ Total	261,555	275,057	5.2	1,453,796	1,488,000	2.3
REGION	**802,921**	**844,904**	**5.2%**	**5,182,787**	**5,217,785**	**0.6%**

Source: DVRPC; U.S. Census

*** 1995 Population data is an estimate by the U.S. Census.**

Physical Form
Indicator: Farmland Preservation: Farmland declines despite preservation effort

Policy Background
The agricultural heritage and rural character of the Delaware Valley are essential elements in the image, quality of life and economic stability of the entire region. Current development patterns have consumed vast amounts of farmland and continue to threaten the region's rural landscape.

Measurement
This indicator measures the change in acres of land used for agriculture. For the purposes of this indicator, agricultural land includes land devoted to crops, pastures, orchards, tree farms, or other agricultural uses. Agricultural land changes will be compared to themselves over time. Original data was collected from the United States Department of Commerce Bureau of the Census and published in the *Census of Agriculture.* However, due to a change in the definition of agricultural land, to include different land uses (i.e. parkland and open space), the data from the 1998 indicators report could not be compared. DVRPC's Delaware Valley Land Use Information Data Bulletin for 1990 and 1995 were used to provide data for this indicator.

Results
Between 1990 and 1995, the region lost 4.5%, or approximately 28,500 acres, of agricultural land. The five Pennsylvania counties lost 5% of their agricultural acreage while the four New Jersey counties lost 3.5%. The greatest acreage losses occurred in Chester and Montgomery counties. To address this issue, state and local programs, including tax incentives and open space bond initiatives have presently preserved more than 23,000 acres of agricultural land to date, including over 6,500 acres in Chester County and 8,000 acres in Burlington County.

FARMLAND PRESERVATION: Change in Acres of Agricultural Land

County	1990 Acres	1995 Acres	%Change 1990-1995	Agricultural Acres Preserved in Perpetuity as of 1/98
Bucks	128,783.72	123,455.53	-4.1	2,645
Chester	210,248.44	202,163.00	-4.0	6,566
Delaware	8,547.42	7,950.03	-7.0	198
Montgomery	76,482.87	69,370.69	-9.2	3,272
Philadelphia	446.12	437.28	-2.0	0
PA Five County	**424,528.56**	**403,376.53**	**-5.0%**	**12,681**
Burlington	95,798.54	92,863.81	-3.1	8,054
Camden	11,704.69	10,995.07	-6.1	0
Gloucester	64,777.88	62,742.55	-3.1	1,255
Mercer	38,117.50	36,445.53	-4.4	1,593
NJ Four County	**210,398.62**	**203,049.97**	**-3.5%**	**10,902**
Region	**634,927.18**	**606,426.50**	**-4.5%**	**23,583**

Source: Delaware Valley Regional Planning Commission
Pennsylvania and New Jersey Departments of Agriculture

Physical Form
Indicator: Parks and Recreational Open Space: Publicly protected open space increases, but more is needed

Policy Background
Providing adequate recreational land is essential with the growing population and as a means to counter the pressures of sprawl and decentralized growth. Recreational land not only provides aesthetic and sporting benefits, but encourages an overall sense of community. A permanent loss of park and recreational acreage can contribute to sprawl and scattered development in the region.

Measurement
This indicator measures parkland relative to the long-term needs of the region. Of the almost 2.5 million acres that comprise the Delaware Valley, 65% still remains as *"open space"*, incorporating farmlands, woodlands, vacant areas, and open water. Yet only 11% of the regional area is now protected as federal, state, county, or municipal parkland.

The DVRPC Year 2020 Plan identified the existing parks and natural resources of the region and utilized a method developed by DVRPC to assess the region's long-term needs. Protecting the critical natural resources of the region and using part of these areas to meet the future active and passive recreational needs of the growing population is a key objective of the Plan. A proposed open space network map identifies river and stream corridors, woodlands, and unique natural resource lands while providing sufficient acreage to meet the quantified targets.

Sub-Regional park requirements are based on population-based standards. The method considers the population forecasts by municipality to the year 2025 and assigns park standards based on the average population densities in each municipality, summed to the county level. Regional park requirements are based on the National Recreation and Park Association standards, modified by DVRPC for the Delaware Valley as 25 acres per 1000 population. Sub-regional surpluses in one county do not make up for deficits in others for reasons of accessibility. Therefore in totaling the deficits for the region, surpluses in individual counties or sub-areas are ignored. Philadelphia local park needs are also not included in the regional or sub-region totals. It is important to note that this methodology only considers park and recreation needs based on population growth to 2025. The long-range plan also indicated broader open space goals based on land use conditions. That analysis yielded open space deficits in almost all counties.

Results
There are 231,015 acres of county, state and federal park land in the region in 2000, as compared to 222,158 acres in 1990. At the county level, Mercer, Bucks, Chester and Philadelphia counties appear to have sufficient county parkland to serve their population needs through the year 2025. Gloucester and Montgomery counties require moderate park additions of 875 and 973 acres, respectively, over the next 25 years. Delaware, Burlington, and Camden counties would require additional county parkland of 2,000 to 3,000 acres to meet population needs in 2025. The regional net deficit of county parkland is 9,915 acres.

The Regional Park requirements show a surplus of 115,153 acres in state and federal parks within the four New Jersey counties, due to the extensive state Parks and Forestry holdings in southern Burlington County. On the other hand, the analysis shows a deficit of 72,753 acres of state and federal parkland in the five Southeastern Pennsylvania counties.

PARKS AND RECREATIONAL OPEN SPACE: Actual 1999 Acres versus 2025 Needs

County	Parkland 1990* (acres	Parkland 1999** (acres)	Sub-Regional/ Regional Park Requirements (acres)	Sub-Regional/ Regional Deficits or Surpluses (acres)
Bucks	6,051	8,163	6,075	2,088
Chester	3,658	4,950	4,506	444
Delaware	646	712	3,830	-3,118
Montgomery	5,247	5,564	6,537	-973
Philadelphia	8,900	9,186	7,219	1,604
PA County Total	24,502	28,575	28,166	-4,091
State & Fed Parks	30,584	31,508	104,261	-72,753
Burlington	247	1,211	4,201	-2,990
Camden	1,946	1,964	3,922	-1,958
Gloucester	1,612	1,805	2,680	-875
Mercer	4,622	7,292	2,819	4,473
NJ County Total	8,427	12,272	13,623	-5,824
State & Fed Parks	158,645	158,660	43,507	115,153
Region* **	**32,929/189,229**	**40,847/190,168**	**41,789/147,768**	**-9,915/-72,753**

Source: Delaware Valley Regional Planning Commission
***1990 data for federal and state parkland in Southeastern Pennsylvania, 1993 data for federal and state parkland in New Jersey**
****Federal, state, and county data was updated between 1999 and 2000**
*****County Total/State and Federal Total**

2025 Open Space Network

- Parkland 2000
- Preserved Farmland
- Proposed Open Space

BUCKS

MERCER

MONTGOMERY

PHILADELPHIA

CHESTER

DELAWARE

BURLINGTON

CAMDEN

GLOUCESTER

N

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MILES

DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
SEPTEMBER 2000

Physical Form
Indicator: Commercial Land Use: Office occupancy rates increase across the region

Policy Background
While the region's manufacturing base has shrunk in recent decades, the Delaware Valley has become a hotbed for technological advancements including bio-technical, pharmaceutical, and medical innovations. Further, business services, insurance and data processing have rapidly expanded throughout the Delaware Valley. Commercial land use patterns can be illustrated by analyzing office occupancy rates. High occupancy rates may mean that either the demand for office space is high or a shortage of office space exists. Conversely, low occupancy rates may mean that the demand for office space is low or there is an abundance of existing space.

Measurement
This indicator measures the vitality of the region's commercial real estate market. Occupancy rates are provided for the nine county region and Philadelphia's Central Business District (Center City Data is supplied by Black's Guide, Inc., Jackson-Cross Oncor International and Teleres and is updated annually). It is important to note that during the reporting time period for this indicator, Black's Guide was taken over by Dow-Jones but did not facilitate a change in their building database. This indicator will be compared over time, in addition to a comparison of city versus suburban occupancy rates.

Results
Office occupancy rates have generally increased throughout the suburban counties and Center City between 1992 and 1997. Bucks, Chester, Montgomery and Mercer counties, along with Center City, had the highest occupancy rates. Gloucester County occupancy rate data for 1997 was unavailable.

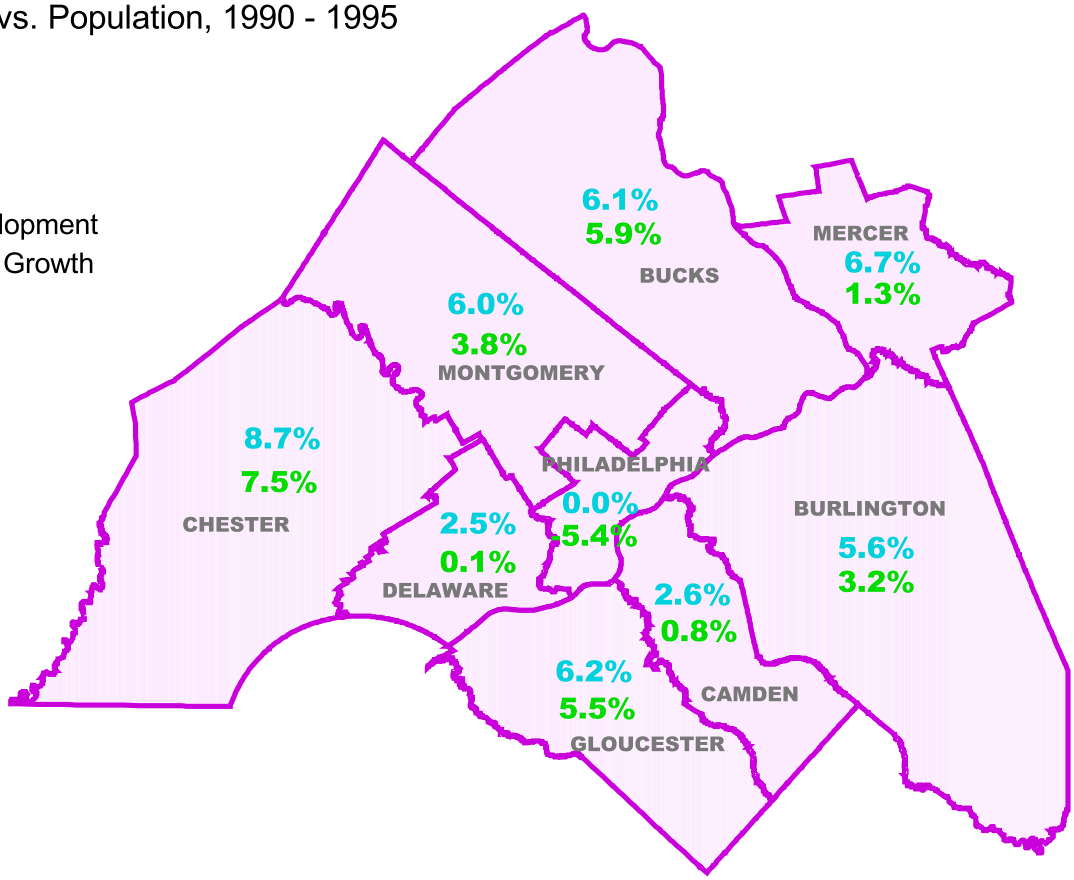
COMMERCIAL LAND USE: Office Occupancy Rates

County	1992 % Occupied	1995 % Occupied	1997 % Occupied
Bucks	75.1	84.6	85.4
Chester	85.7	83.3	87.2
Delaware	86.4	85.1	79.2
Montgomery	75.8	86.3	89.2
Philadelphia	83.1	84.3	80.0
Center City*	82.8	85.8	88.6
PA Five County	**81.6%**	**84.8%**	**84.2%**
Burlington	78.8	84.8	82.7
Camden	73.3	80.3	81.8
Gloucester	42.4	61.3	NA*
Mercer	83.7	84.8	85.6
NJ Four County*	**79.7%**	**83.4%**	**83.4%**
Region	**81.1%**	**84.5%**	**83.8%**

*** 1997 data unavailable for Gloucester County**
Source: County Data – Black's Guide/Teleres;
Center City Data – Jackson Cross Oncor International.

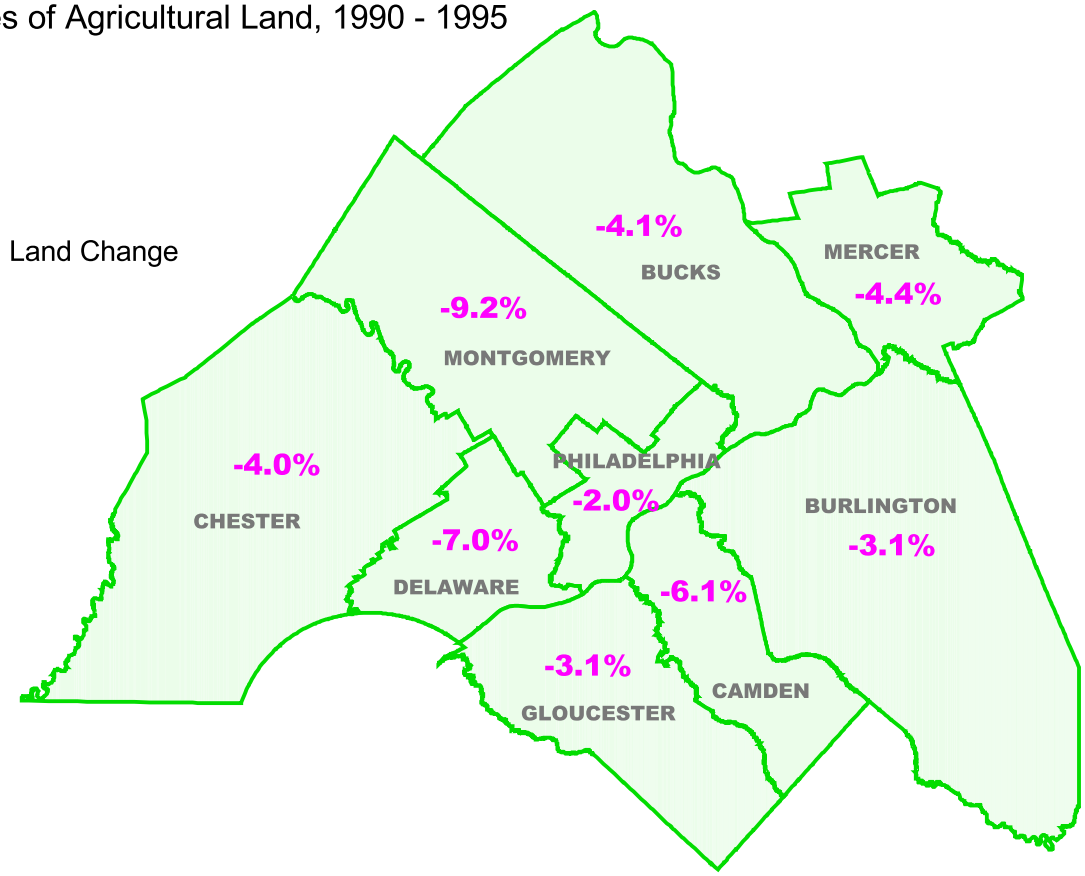
Developed Land vs. Population, 1990 - 1995

5.2 % Land Development
0.6 % Population Growth



Changes in Acres of Agricultural Land, 1990 - 1995

-4.5 % Agricultural Land Change



TRAFFIC CONGESTION

Ease traffic congestion through the reduction of single occupant vehicles by better integrating automobile, public transit, bicycle and pedestrian facilities; encouraging changes in commuters' travel habits; and improving the efficiency of existing transportation services.

Traffic Congestion
Indicator: Traffic Growth: Traffic grows around the region

Policy Background

The automobile has been an integral part of the American landscape for decades. Most households in the region have at least one car, and virtually every portion of the region is now auto accessible. However, widespread automobile use has had certain negative effects upon the region. Degraded air quality from increased auto emissions, pressure on the regional highway infrastructure and increased traffic congestion are all direct results of increasing vehicle miles.

Measurement

This indicator measures the level of traffic using DVRPC's 1995 traffic count surveys, and assesses highway travel trends by comparing 1990 and 1995 traffic volumes. Traffic counts were gathered by DVRPC along two cordons (inner and outer), the Delaware River bridges, as well as counts from turnpike interchanges. The Penn Jersey Transportation Study of 1960 (PJTS), the first large-scale travel data collection effort in the Delaware Valley, designated the region's original inner and outer cordons. The cordons represent lines that enclose portions of the region. Along the cordons, traffic counting stations are established to track the number of vehicles crossing the cordon line.

While comprising approximately one-third of the region's land area, the inner cordon contains about three-quarters of the region's total population. Considerable commercial and residential growth has occurred in many areas along the inner cordon since its original designation. Accordingly, the 1990 counting station locations were reviewed for adequacy and suitability and 46 new stations were added. This raised the total to 183 to ensure that all significant traffic was being captured. The new counting stations are either new roads, or once minor local streets that now handle increased traffic volumes.

In 1976, the DVRPC study was expanded from the 1960 PJTS original cordon to the nine-county boundary covering a territory of 3,817 square miles. Traffic counts were taken at stations along the regional boundary, and the new line was designated as the outer cordon. In 1990, the cordon was pushed outward slightly to include three municipalities in Berks County defined by the U.S. Census as part of the Pottstown Urbanized Area.

It should be noted that all 1995 traffic counts reflect the total Average Annual Daily Traffic (AADT), whereas the 1990 counts are based upon total Average Annual Weekday Traffic (AAWT). National and state transportation trends now analyze AADT, but the measures do not vary significantly. Counts obtained from toll authorities (PA and NJ turnpikes and the Delaware River bridges) are based on AADT for both years. It should also be noted that

these traffic counts are conducted on a five year basis, the next available data will be in the year 2000.

Results

Traffic has grown in the Delaware Valley by 10.5% between 1990 and 1995. DVRPC traffic counts reveal that the greatest traffic growth is occurring in the inner cordon (+15.9%), the Pennsylvania turnpike (+10.5) and the outer cordon (+7%). All sections of the region where DVRPC traffic counts occur have shown traffic increase since 1990.

TRAFFIC GROWTH: Regional Traffic Counts

Description	1990 Annual Average Daily (or weekday*) Traffic	1995 Average Annual Daily Traffic	% Change 1990-1995
Outer Cordon	1,145,606*	1,225,661	7.0
Inner Cordon	2,018,132*	2,337,901	15.9
Delaware River Bridges	492,475	513,903	4.4
PA Turnpike	495,504	547,487	10.5
NJ Turnpike	655,235	685,156	4.6
REGIONAL TOTAL	**4,806,952**	**5,310,108**	**10.5%**

*** 1990 Inner and Outer Cordons use Average Annual Weekday Traffic.**
Source: Delaware Valley Regional Planning Commission

Traffic Congestion
Indicator: Public Transit Usage: Transit ridership holds steady in recent years following previous losses

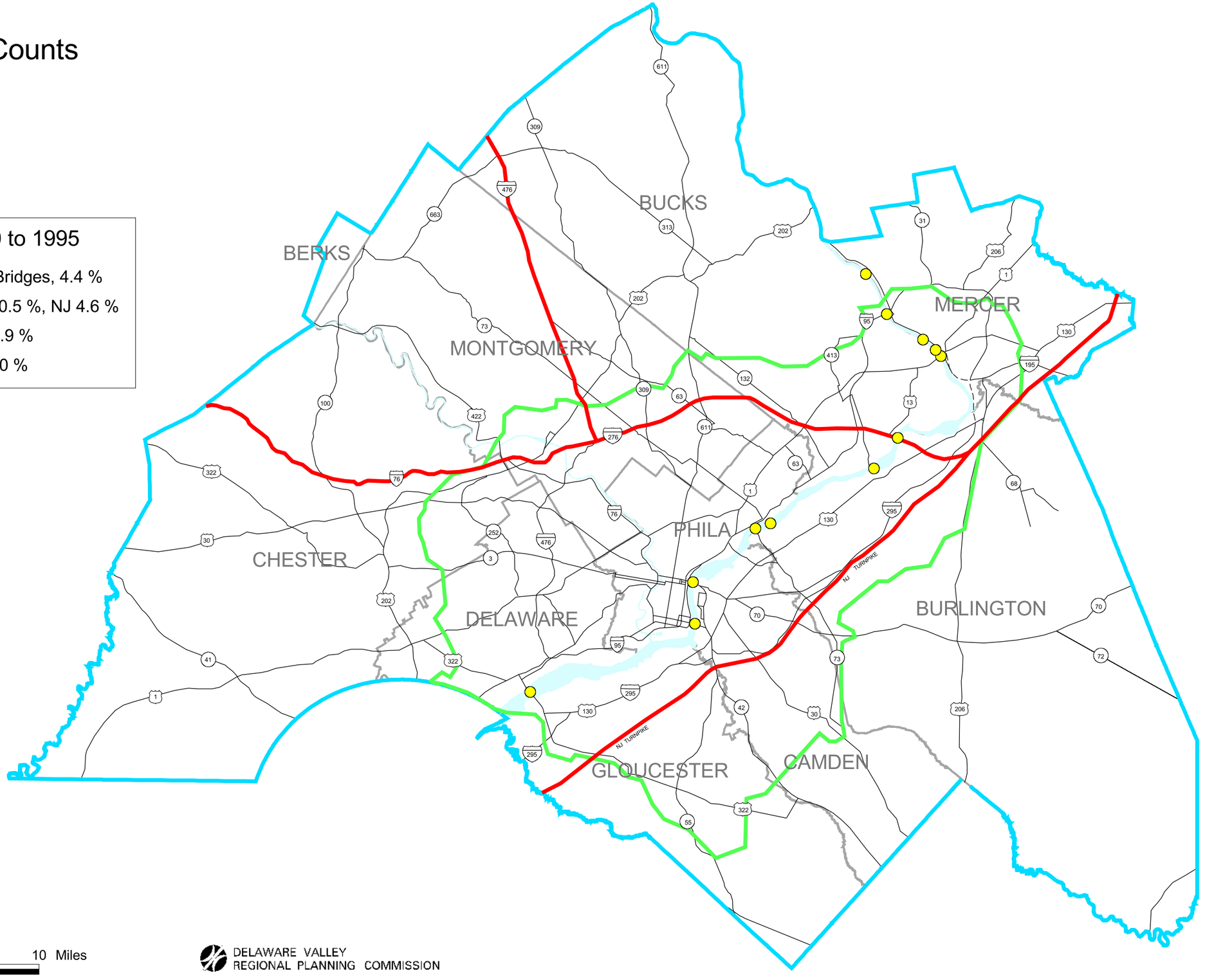
Policy Background

Public transit in the Delaware Valley developed from private rail and bus systems that over a period of time became publicly funded that together form a regional system. The early system evolved radially, enabling suburban residents to commute to core city employment centers. Decentralization eventually led to a changing regional population and employment landscape. Presently, the regional transit network, made up of the Southeastern Pennsylvania Transportation Authority (SEPTA), NJ Transit and Port Authority Transit Corporation (PATCO), consist of commuter rail, light rail, elevated rail, subway and bus systems. Decreasing ridership since the end of World War II, paralleling the growth of the suburbs and decline of the region's core cities, has contributed to the region's congested highways.

Traffic Growth
Regional Traffic Counts

Traffic Growth 1990 to 1995

- Delaware River Bridges, 4.4 %
- Turnpikes : PA 10.5 %, NJ 4.6 %
- Inner Cordon, 15.9 %
- Outer Cordon, 7.0 %



DELAWARE VALLEY
REGIONAL PLANNING COMMISSION

Measurement

This indicator illustrates the coverage and operation of public transit by measuring regional ridership. SEPTA, NJ Transit and PATCO provide statistics on an annual basis. SEPTA data is based upon unlinked ridership, which comprises all riders regardless of mode transfers. This indicator will be compared over time.

Results

Transit ridership declined in the region from 380.9 million riders in 1990 to 342.1 million riders in 1999, a decrease of 10.1%. However, ridership has remained relatively stable in the region from 342.4 million riders in 1996 to 342.1 million riders in 1999. NJ Transit and SEPTA Regional Rail saw increases in ridership of 13.2% and 15.1%, respectively, for the same period. PATCO also saw a small increase in ridership, 0.1%, between 1996 and 1999. It must also be noted that a 10-day transit strike affected SEPTA's total ridership for 1998.

PUBLIC TRANSIT USAGE: Number of Public Transit Passengers

Transit Agency	1990 Passengers (millions)	1996 Passengers (millions)	% Change 1996-1999	1999 Passengers (millions)	% Change 1990-1999
NJ Transit	38.1	41.5	13.2	47.0	23.3
Rail:					
Atlantic City Line	0.2	0.9	0	0.9	350.0
Northeast Corridor	19.8	19.9	16.5	23.2	17.1
Bus:					
Southern Division	18.2	20.7	10.6	22.9	25.8
PATCO	11.4	10.7	0.9	10.8	-5.2
SEPTA*	331.3	290.2	-2.0	284.3	-14.1
City Transit Division	290.1	251.9	-4.1	241.5	-16.7
Suburban Transit Division	16.8	15.8	6.9	16.9	0.5
Regional Rail	24.4	22.5	15.1	25.9	6.1
TOTAL	**380.9**	**342.4**	**-0.8**	**342.1**	**-10.1%**

*** unlinked trips**
Source: NJ Transit; PATCO; SEPTA

Traffic Congestion
Indicator: Vehicles: Vehicle growth far exceeds population growth

Policy Background

While the Delaware Valley region's total population has remained relatively flat, the number of motor vehicles has risen sharply. Rapid vehicle growth is problematic for two reasons. Traffic congestion worsens since the region's road network in unable to accommodate the increase in vehicle volume. Subsequently, the characteristics of congestion, such as slow travel speeds and stop and go traffic, have a detrimental effect on overall regional air quality.

Measurement

This indicator focuses on the change in the total number of vehicles available for all households relative to population change from 1990 to 1995. This includes passenger cars, vans, pick ups and panel trucks of one ton or less. Vehicles rented or leased for one month or more, company vehicles, and police and government cars are included if kept at home and used for non-business purposes. Data are based upon DVRPC calculations using U.S. Census figures on occupied housing units by vehicle availability (one-vehicle households, two vehicle households, etc.) Population change is provided by the Census. Information regarding this indicator is compiled every five-years; new data will be comparable in the year 2000. This indicator will be compared over time.

Results

Total available vehicles in the region have increased 4.8% to almost three million vehicles between 1990 and 1995, despite the fact that regional population grew by less than one percent during this time period. In absolute terms, vehicles increased by over 130,000, while population in the region only increased by 35,000. In the Pennsylvania portion of the region, Chester County had the greatest increase in vehicles at 10.2% versus a County population increase of 7.6%, while Bucks and Montgomery counties also saw significant increases in vehicle growth. Philadelphia County was the only county in the region to experience a decline in vehicle availability, due to the net population loss of the City during this time period. All four counties in the New Jersey portion of the region witnessed significant increases in vehicle availability that far exceed the rate of population growth. Gloucester County had the greatest increase at 9.8%, versus a population increase of 5.9%. Camden County vehicles increased by 5% despite growing less than 1% in population.

VEHICLES: Vehicle Growth versus Population Growth

County	1990Vehicle Availability	1995 Vehicle Availability	% Change Vehicle Availability 1990-1995	%Change Population 1990-1995
Bucks	359,451	392,845	9.3	6.0
Chester	251,320	276,963	10.2	7.6
Delaware	315,970	324,042	2.6	0.2
Montgomery	450,510	479,004	6.3	4.0
Philadelphia	533,212	516,595	-3.1	-5.5
PA Five County	**1,910,463**	**1,989,449**	**4.1%**	**0.1%**
Burlington	251,344	267,246	6.3	2.1
Camden	280,459	294,489	5.0	0.9
Gloucester	142,129	156,078	9.8	5.9
Mercer	187,505	198,637	5.9	1.4
NJ Four County	**861,437**	**916,450**	**6.4%**	**2.1%**
Region	**2,771,899**	**2,905,889**	**4.8%**	**0.7%**

Source: Vehicle Availability – DVRPC analysis using U.S. Department of Commerce data; U.S. Census

ENVIRONMENT

Assure a clean and sustainable environment for existing and future residents of the region, and integrate environmental protection objectives in all planning activities.

Environment
Indicator: Waste Generation: Per capita solid waste increases in New Jersey, remains steady in Pennsylvania

Policy Background

According to the Environmental Protection Agency (EPA), rapid population growth has caused waste production in the U.S. to double since 1960. This alarming trend is projected to continue into the next century. The EPA estimates that in 1990, 64% of garbage was disposed in landfills, 18% was recycled, and 18% incinerated. Waste reduction programs in the Delaware Valley include Pennsylvania's Act 101 and the Statewide Recycling Act in New Jersey.

Measurement

This indicator gauges the effectiveness of regional waste reduction programs by measuring the pounds of waste generated per person per day. The lower the waste generated, the closer the county is to achieving Pennsylvania and New Jersey state goals. In Pennsylvania, the Municipal Waste Planning Recycling and Waste Reduction Act (ACT 101) of 1988, set the goals of stabilizing the weight or volume of waste generated per capita in the Commonwealth to be the same or less on January 1, 1997 as it was on the effective date of the act (September 1988). Act 101 further stated that at least 25% of all municipal waste and source-separated recyclable materials generated in the Commonwealth on and after January 1, 1997, should be recycled. The New Jersey Department of Environmental Protection (NJDEP) established the goal of capping waste generation from 1990 to 1995, and intends to reduce waste generation during the following ten years.

Waste generation data for this indicator are supplied annually by the counties to the Pennsylvania Department of Environmental Protection (PADEP) and by the solid waste industry to NJDEP. In Pennsylvania, the parameters of waste generation are based upon those materials collected under Act 101 and include aluminum and tin cans, corrugated, newsprint and office paper, clear and colored glass, PET (Polyethelene Terephthalaye), HDPE (high density Polyethelene Terephthalaye) and mixed plastics, leaf and yard waste, car batteries, and co-mingled waste. The New Jersey waste generation figures contain the same elements as in Pennsylvania in addition to other waste materials such as aluminum scrap, white goods, sheet iron, junked autos, wood waste, asphalt, concrete, masonry, and tires. **Because each state defines waste generation differently, Pennsylvania and New Jersey data are not directly comparable.** Population figures are based upon the 1992 and 1996 Census estimates for the counties. This indicator will be compared over time.

Results

Pounds of waste generated per person per day increased in the New Jersey four-county region from 10.3 pounds in 1992 to 12.2 pounds in 1997. Gloucester County witnessed the largest increase at 5.3 pounds per person per day, while Burlington and Camden counties

saw more moderate increases. Mercer County, however, experienced a decrease in the pounds per person per day. The Pennsylvania five-county region saw slight increases in Bucks and Chester counties from 1992 to 1997, still above the Act 101 goals. Montgomery remained unchanged, while Delaware County and the City of Philadelphia decreased.

WASTE GENERATION: POUNDS PER PERSON PER DAY

PA County	1992 pounds per person per day	1995 pounds per person per day	1997 pounds per person per day
Bucks	5.1	4.2	4.5
Chester	4.0	4.1	4.4
Delaware	4.2	4.5	3.4
Montgomery	4.2	5.3	5.3
Philadelphia	4.4	4.6	4.4
PA Five County	**4.4%**	**4.6%**	**4.4%**

NJ County	1992 pounds per person per day	1995 pounds per person per day	1997 pounds per person per day
Burlington	9.1	10.1	12.5
Camden	9.4	9.5	11.2
Gloucester	9.3	12.3	14.6
Mercer	13.7	13.7	11.8
NJ Four County	**10.3%**	**11.1%**	**12.2%**

Source: NJDEP; PADEP

Environment
Indicator: Recycling: Recycling rate improves throughout region

Policy Background
Solid waste generation is largely determined by population and business growth. Recycling saves resources, landfill space and reduces air and water pollution.

In Pennsylvania, Act 101 required curbside recycling in larger communities, and established a statewide goal of 25% of solid waste generated to be recycled by 1997. The New Jersey counterpart is the Statewide Mandatory Source Separation and Recycling Act of 1987, which required each county to provide a system for collecting recyclables. The New Jersey Act set a statewide recycling goal of 60% recycling by 1995.

Measurement
This indicator measures the extent to which the Delaware Valley has reduced solid waste disposal through the use of recycling. A higher percent means more waste is being recycled.

Data for this indicator are collected annually by the PADEP based upon county reports and NJDEP from reports by the solid waste industry. This indicator will be compared to itself over time as well as to a defined recycling goal. For the purpose of this indicator, Pennsylvania waste recycling includes metals (aluminum and tin cans); paper (corrugated, newsprint, office paper other); glass (clear and colored); plastics (PET, HDPE and mixed); leaf and yard waste; car batteries and commingled waste. The higher recycling rates in Burlington, Camden, Gloucester and Mercer counties are due in part to the construction and industrial waste. Further, NJDEP stresses the importance of the tonnage grant program which awarded grant money to municipalities through December 31, 1996, based upon the amount of solid waste recycled. **Because each state defines recyclables differently, Pennsylvania and New Jersey data are not directly comparable.**

Results

Between 1992 and 1997, the percentage of solid waste generated that was recycled increased from 16.5% to 24.9% in the five Pennsylvania counties. In the four New Jersey counties, recycled solid waste also increased from 50.9% to 57.9% of waste generated between 1992 and 1997. Chester, Delaware and Philadelphia counties all exceeded the Act 101 goal, recycling 36%, 27% and 28% of their respective waste streams. A slight increase occurred in Bucks County during the same period. Montgomery County did not meet targeted goals for 1995 or 1997. Gloucester County recycled 62% of its solid waste generated, the highest amount of the four New Jersey counties. Burlington and Camden counties also witnessed significant increases in solid waste recycled. Mercer County saw a decrease in the amount of solid waste recycled during the same period.

RECYCLING: Percent of Solid Waste Recycled

PA County	1992 % Solid Waste Recycled	1995 % Solid Waste Recycled	1997 % Solid Waste Recycled
Bucks	8.6	18.0	19.3
Chester	15.4	21.0	36.6*
Delaware	26.2*	32.0*	27.0*
Montgomery	28.1*	22.0	15.3
Philadelphia	11.6	21.0	28.4*
PA Five County	**16.5%**	**22.3%**	**24.9%**

NJ County	1992 % Solid Waste Recycled	1995 % Solid Waste Recycled	1997 % Solid Waste Recycled
Burlington	43.2	50.5	56.6
Camden	47.4	50.4	56.1
Gloucester	46.5	60.0**	62.0**
Mercer	62.8**	66.8**	58.4
NJ Four County	**50.9%**	**56.6%**	**57.9%**

*** Meets PA 101 goals for recycling.**

**** Meets NJ Statewide Mandatory Source Separation and Recycling Act goals.**

Source: PADEP; NJDEP

Environment
Indicator: Water Quality: Delaware River water quality generally exceeds standards

Policy Background
Dissolved oxygen levels in natural and wastewater depend on the physical, chemical, and biochemical activities in the water body. Water classified for the protection and propagation of fish and wildlife, such as the Delaware River, must contain sufficient dissolved oxygen to support aquatic life. Reduced concentrations of dissolved oxygen can lead to detrimental effects such as taste and odors in waters, and limit the kinds and numbers of fish and other aquatic life present.

Measurement
This indicator measures the change in the water quality in the Delaware River. Flowing for nearly 330 miles from New York state to the Delaware Bay, the Delaware River is the primary drainage basin for the region. Large regional tributaries such as the Schuylkill River, Neshaminy Creek and Rancocas Creek drain urban, suburban and rural lands into the Delaware River carrying with them potential pollutants threatening its water quality and living resources. Dissolved oxygen (DO) is an indicator that is commonly utilized to measure the ability of a water body to sustain aquatic life. The standard measurement unit is milligrams per liter (mg/l).

Data for DO is collected annually by the Delaware River Basin Commission (DRBC) at numerous water-quality monitoring stations along the Delaware River throughout the region. The DRBC data is assembled into the U.S. Environmental Protection Agency's Storage and retrieval database for water quality (STORET). Measurements are commonly taken by DRBC between late March and late December at slack tide and three feet below the surface of the channel. A higher DO number means that there is a greater concentration of dissolved oxygen in the water at a particular monitoring station which may imply better water quality. The DRBC has established water quality objectives for DO for the STORET stations in the region. Changes in water quality will be compared to themselves and to the DRBC's water quality objectives over time. The monitoring stations are analyzed from north (Fieldsboro) to south (Marcus Hook) and illustrate changes in water quality at those stations located in the Delaware Valley.

Results
The monitoring stations at Bristol and Torresdale were the only stations to experience a measure that did not meet the DRBC water quality objectives in 1990. All stations met DRBC water quality objectives in 1995 but Bristol and Torresdale fell below the standard again in 1997. Water entering the region at Fieldsboro contained a greater DO content than water leaving the region at Marcus Hook. Decreases in minimum DO between 1990 and 1997 occurred at all monitoring stations – many of which are in heavily industrialized areas.

WATER QUALITY: Dissolved Oxygen in the Delaware River (mg/l)

Water Quality Monitoring Station	1990 Min. DO (mg/l)	1995 Min. DO (mg/l)**	1997 Min. DO (mg/l)
Zone 2 Water Quality Objective: > 5.0 mg/l minimum 24 hr. average			
Fieldsboro	4.4	6.0	5.0
Bristol	3.5*	5.1	3.9*
Torresdale	4.6*	5.8	4.2*
Zone 3 Water Quality Objective: > 3.5 mg/l minimum 24 hr. average			
Betsy Ross Bridge	4.3	5.2	4.5
Ben Franklin Bridge	4.0	4.8	4.4
Zone 4 Water Quality Objective: > 3.5 mg/l minimum 24 hr. average			
Navy Yard	3.9	4.9	3.8
Paulsboro	3.6	4.1	3.9
Eddystone	3.6	4.8	4.1
Zone 5 Water Quality Objective: > 3.5 mg/l minimum 24 hr. average			
Marcus Hook	4.5	4.7	4.0

*** Did not meet water quality objectives one time during 1990 and 1997.**
**** All stations met water quality objectives in 1995.**
Source: Delaware River Basin Commission; EPA.

Environment
Indicator: Water Withdrawal: Water usage declines in region

Policy Background
The Delaware Valley depends on its water resources for drinking water, agriculture, industry and to support its many diverse natural systems. Unfortunately, nearly all human activities may adversely affect surface and ground water quality and quantity in some way.

Measurement
Increases in water withdrawals for public supply purposes is an indicator of increasing demand for water resources. If withdrawals exceed water recharge, the potential for saltwater intrusion and low flows in surface water bodies will increase. Low flow in surface water bodies may have significant impacts on the surrounding communities. For example, competition for dissolved oxygen and habitat will increase for marine plants and animals as the water level drops. Water temperatures may shift, impacting the ability of the water to hold dissolved oxygen. As a result, the waterbody may lose species which are less tolerant to environmental changes. By contrast, decreases in public water supply withdrawals may indicate success in regional water conservation programs. Moreover, there may have been a significant reduction in the amount of water withdrawn for industrial use, as industry has either increased its water efficiency or simply left the region. New technologies and new pump stations may also result in a decrease in water withdrawn. Rainfall amounts also tend to affect water withdrawal data.

This indicator measures both surface and ground water withdrawals for public water supplies between 1990 and 1996. The data represents withdrawals reported annually by public water

suppliers in the Delaware Valley to the Delaware River Basin Commission (DRBC). Public water supply includes all uses of water supplied by public water suppliers including: residential, commercial and industrial. Withdrawals do not equate to water use within a county, since water withdrawn in a county may be transferred to another county. The data is based on the location of the water withdrawal not on the location of water consumption. The data also do not include withdrawals under 100,000 gallons per day.

Results

Public water supply withdrawals within the Delaware Valley decreased 6.6% between 1990 and 1996. The PA five county portion of the region witnessed a water withdrawal decrease of 7.7% while the four NJ counties had a withdrawal decrease of 2.4% during the same time period. Significant decreases in water withdrawals occurred in Camden, Philadelphia and Montgomery counties. The decreases in Camden and Philadelphia counties may be attributed to the decline in industrial withdrawals and the loss of residential populations. Montgomery County's decrease may be linked to the completion of the Point Pleasant Pump Station in Bucks County. Many portions of Montgomery County are now served by this station, therefore possibly reducing the amount of water withdrawn within the county. An increase in water withdrawals in Bucks County, between 1990 and 1996, may be connected to the Point Pleasant Pump Station as well. In Burlington County, a 16% increase in water withdrawals, may be related to the New Jersey-American Water Company pipeline, which withdraws water from the Delaware River in Delran Township, Burlington County.

WATER WITHDRAWAL: Estimated Public Water Supply Withdrawals, 1990-1996

County	1990 Withdrawals (million gallons)	1996 Withdrawals (million gallons)	% Change 1990-1996
Bucks	16,603.99	20,807.62	25.3
Chester	13,677.12	14,760.35	7.9
Delaware	9,028.73	8,592.75	-4.8
Montgomery	26,484.02	22,675.65	-14.3
Philadelphia	136,080.00	119,320.00	-12.3
PA Total	**201,873.86**	**186,156.37**	**-7.7**
Burlington	14,347.77	16,653.90	16.0
Camden	20,563.20	17,949.90	-12.7
Gloucester	7,113.14	7,220.02	1.5
Mercer	11,961.88	10,813.15	-9.6
NJ Total	**53,985.99**	**52,636.97**	**-2.4**
TOTAL	**255,859.85**	**238,793.34**	**-6.6%**

Source: Delaware River Basin Commission

Environment
Indicator: Energy Consumption: Energy usage in PA and NJ less than national average, but increasing at a faster rate

Policy Background
Energy consumption has major and conflicting implications for the economic health and quality of the environment of the Delaware Valley. Energy consumption tends to increase with economic activity. At the same time, higher energy use is typically associated with more impacts on the environment.

Measurement
This indicator measure the extent to which the residential, commercial, industrial, institutional, and transportation entities of Pennsylvania and New Jersey engage in energy efficient practices. The greater the number, more energy is being consumed. Data are reported annually by state through the U.S. Department of Energy. The measurement unit is the amount of energy per person used in millions of British Thermal Units (BTUs). Comprehensive regional data is not available. This indicator, including other state data, will be compared over time.

Results
Energy consumption increased in both Pennsylvania and New Jersey between 1990 and 1997, 5.3% and 7.7% respectively. Pennsylvania consumed more than 324 million BTUs per capita in 1997, while New Jersey consumed approximately 320.7 million BTUs per capita during the same time period. National energy consumption increased by 4.0% to 351.2 million BTUs in 1997.

ENERGY CONSUMPTION: State Per Capita Usage, 1990-1997

State	1990 million BTUs Per Capita	1994 million BTUs Per Capita	1997 million BTUs Per Capita	% Change 1990-1997
Pennsylvania	**308.2**	**317.6**	**324.6**	**5.3%**
New Jersey	**297.7**	**322.2**	**320.7**	**7.7%**
United States	337.5	341.0	351.2	4.0
California	258.2	240.5	240.0	-7.0
Florida	243.9	242.3	246.2	1.0
Illinois	313.5	314.2	325.2	3.7
Massachusetts	234.4	246.2	250.6	6.9
Maryland	259.7	256.6	266.8	2.7
Michigan	305.6	325.1	333.1	8.9
New York	207.0	213.0	225.3	8.8
Ohio	349.4	356.1	370.1	5.9
Texas	581.0	564.0	587.8	1.1

Source: U.S. Department of Energy.

AIR QUALITY

Improve the region's air quality by reducing the number of single occupant vehicles. Promote alternative travel modes and encourage other measures which will limit emissions from mobile sources.

Air Quality
Indicator: Ozone Pollution: Air quality improves, but still falls below standards

Policy Background

Air quality is fundamental to the health of people, the environment and the economy. Air quality is strongly affected by production, transportation and population patterns and practices. Poor air quality diminishes the attractiveness of the region as a place to work and live.

Through the Clean Air Act of 1970, as amended 1990, administered by the U.S. Environmental Protection Agency, the Delaware Valley has been classified as a severe ozone non-attainment area. Attainment of the federal ozone standards is required to be met by the year 2005. The complete ozone non-attainment area for the Philadelphia region encompasses the nine county DVRPC region, as well as Salem and Cumberland Counties, New Jersey; New Castle and Kent Counties, Delaware; and Cecil County, Maryland.

Measurement

This indicator, which gauges the effectiveness of air quality regulations from all sources, measures the number of times the Philadelphia non-attainment area exceeded the federal ozone standard for a particular year. Data is collected at ozone monitoring stations in Pennsylvania, New Jersey, Delaware, Maryland and the city of Philadelphia, and will be compared over time.

Results

While this measure can be strongly affected by public policy, it is also influenced by annual weather conditions in the summer season. In order to reach attainment status, the Philadelphia non-attainment area can record no more than three exceedances within a three-year period. After this is accomplished, the EPA can be petitioned to redesignate the region to attainment. During the most recent three-year period of 1997-1999, the region had 11, 7 and 11 exceedances, respectively. While this is an improvement over the 1994-1996 period, which saw 12,47, 9 exceedances, respectively, the region remains far from achieving compliance.

OZONE POLLUTION: Number of Exceedances in the DVRPC Region of the National Ambient Air Quality Standards (NAAQS) for Ozone

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Philadelphia	83	14	40	12	47	9	11	7	11

Source: EPA

Air Quality
Indicator: Drive Alone: Use of single occupant vehicles increases in all counties

Policy Background
This indicator measures the extent to which commuting alternatives are being used throughout the region. The increasing number of people who drive alone exacerbates motor vehicle exhaust, which is a primary catalyst for ozone. These single occupant vehicle (SOV) trips contribute significantly to the degradation of regional air quality. Alternatives to SOV trips include carpools, vanpools, public transit and biking or walking.

Measurement
The number of resident worker SOV home-to-work trips are provided by the U.S. Department of Commerce's Bureau of the Census every ten years. Resident worker data refers to where workers live as opposed to their places of employment. A lower percentage of SOV indicates a greater usage of transportation alternatives and generally correlates with improved air quality. Data analysis based upon Census information is calculated by DVRPC and is compared over time.

Results
The percentage of SOV trips increased in every county within the Delaware Valley between 1980 and 1990. The region saw the percentage of these trips increase from 59.4% in 1980 to 68.0% in 1990. Bucks and Philadelphia counties occupied the endpoints of the range in 1990, with 80.6% and 44.7% of resident worker SOV trips respectively in 1990. These findings have serious implications for the region's highway congestion levels and air quality.

DRIVE ALONE: Percent of Home-to-Work Trips in Single Occupant Vehicles (SOV)

County	1980 % SOV Trips	1990 % SOV Trips
Bucks	71.3	80.6
Chester	69.6	78.8
Delaware	60.9	78.8
Montgomery	68.9	78.9
Philadelphia	40.7	44.7
PA Five County	**56.8%**	**65.3%**
Burlington	68.2	78.0
Camden	64.7	71.8
Gloucester	70.2	79.0
Mercer	63.5	71.5
NJ Four County	**66.2%**	**74.7%**
REGION	**59.4%**	**68.0%**

Source: U.S. Census

ECONOMIC DEVELOPMENT

Ensure a diverse and competitive regional economy by supporting the retention of existing business and by encouraging new enterprise that create employment opportunities in close proximity to the labor force.

Economic Development
Indicator: Employment Growth: Employment grows in all counties except Philadelphia

Policy Background

As the number of job holding residents increases, more money enters the economic stream and the economy gains in vitality. An increase in total employment promotes a positive regional image, while enhancing the competitiveness of the Delaware Valley.

Total employment figures are based upon the number of regional residents who are currently employed. Employed persons are defined as those who work as paid employees, worked in their own business, or who worked 15 hours or more per week as unpaid workers in a family-owned business. It also includes those who did not work but had jobs from which they were temporarily absent.

Measurement

This indicator measures the growth of non-farm payroll jobs in the Delaware Valley. DVRPC measures data on a two-year basis. It is important to note that since there are a variety of employment data sources such as the U.S. Census, Bureau of Labor Statistics, and State Data Centers, DVRPC data may not be consistent with data from other sources. The important factor in this indicator is the rate of change between the measures. Information is provided for the nine-county Philadelphia region. This indicator will be compared to employment changes in Pennsylvania, New Jersey and the U.S.

Results

Between 1990 and 1995, there were gains in total employment in seven of the nine Delaware Valley counties. From 1995 to 1997, there was employment growth in all counties except Philadelphia. Since 1990 employment growth for the region as a whole increased by 2.4%. Chester and Gloucester counties had increases of 17.6% and 14.7% from 1990 to 1997, while Camden County and Philadelphia lost -0.9% and -9.6%, respectively, of their total employment. Camden County recovered much of this loss between 1995 and 1997, while Philadelphia significantly slowed its rate of loss.

EMPLOYMENT GROWTH: Percent Change in Total Employment

County	1990 Total Employment	1995 Total Employment	1997 Total Employment	% Change 1990-1997
Bucks	276,449	286,209	301,270	8.9
Chester	217,667	232,224	256,004	17.6
Delaware	262,442	264,375	277,343	5.6
Montgomery	519,679	522,242	560,489	7.8
Philadelphia	850,037	771,146	768,177	-9.6
PA Five County	**2,126,274**	**2,076,196**	**2,163,283**	**1.7**
Burlington	203,671	206,846	217,844	6.9
Camden	251,789	242,632	249,469	-0.9
Gloucester	92,856	102,294	106,525	14.7
Mercer	221,343	225,212	229,671	3.7
NJ Four County	**769,659**	**776,984**	**803,509**	**4.3**
REGION	**2,895,933**	**2,853,180**	**2,966,792**	**2.4**

Source: Delaware Valley Regional Planning Commission; U.S. Census

Economic Development
Indicator: Income Growth: Regional income exceeds national average, grows at similar rate

Policy Background
Although the number of employed residents may increase, it is also important to track the wages being earned by those working. A gain in jobs may only be indicative of an increase in low paying jobs that require little skill. Improvements in employment numbers coupled with an increase in personal income can illustrate that the Delaware Valley is employing more highly educated and skilled workers whose increased earnings and subsequent spending help to expand the regional economy.

Measurement
This indicator measures the annual income per person in the region and may be indicative of the kinds of jobs being created in the Delaware Valley. The county listings are for county residents. Data for this indicator are supplied annually by the U.S. Department of Commerce, Bureau of Economic Analysis Regional Economic Information System (REIS) data. Income data from the REIS differs from Census-based income data since the REIS income series is estimated largely on the basis of administrative records of business and governmental sources and the Census data are obtained directly from households. Moreover, the definitions of income are different. The REIS data includes some items not included in the Census income data, such as income "in kind," income received by nonprofit institutions, and Medicare payments. This measure will be compared to changes in earnings in Pennsylvania, New Jersey and the United States.

Results

Per capita personal income rose from 1990 through 1997. Regional per capita personal income in 1997 was $29,347, an increase of 34.3% in seven years. Chester County experienced a per capita personal income increase of 49.2%, and Mercer County had an increase of 41.4%. Regional income growth was slightly below the figures for Pennsylvania (35.9%), slightly above those in New Jersey (33.8%), and just below the nation as a whole (35.4%).

INCOME GROWTH: Percent Change in Per Capita Personal Income

County	1990 Per Capita Personal Income	1995 Per Capita Personal Income	1997 Per Capita Personal Income	% Change 1990-1997
Bucks	$22,482	$29,332	$30,767	36.8
Chester	$25,939	$36,834	$38,708	49.2
Delaware	$22,533	$29,192	$30,452	35.1
Montgomery	$29,468	$38,506	$40,249	36.5
Philadelphia	$17,432	$21,640	$22,785	30.7
Burlington	$21,132	$26,669	$27,849	31.7
Camden	$20,181	$25,518	$26,500	31.1
Gloucester	$18,436	$23,374	$24,340	32.0
Mercer	$25,877	$33,893	$36,598	41.4
PA	**$18,883**	**$23,268**	**$25,670**	**35.9%**
NJ	**$24,182**	**$29,568**	**$32,356**	**33.8%**
REGION	**$21,836**	**$26,505**	**$29,347**	**34.3%**
U.S.	**$18,666**	**$23,059**	**$25,288**	**35.4%**

Source: U.S. Department of Commerce, Bureau of Economic Analysis

Economic Development

Indicator: Unemployment Rate: Unemployment rate declines in all counties since 1995

Policy Background

The unemployment rate provides a consistent measure of labor force utilization in the region. It represents the number of unemployed persons as a percent of the civilian labor force. Until recently, unemployment in the Delaware Valley has generally been slightly lower than the national rate.

Measurement

This indicator measures the proportion of unemployed job seekers in the labor force. Data are supplied monthly by the U.S. Department of Labor's Bureau of Labor Statistics. This measurement will be compared to unemployment rates in Pennsylvania, New Jersey and the nation.

Results

Unemployment rates throughout the Delaware Valley tended to fluctuate significantly between 1990 and 1998 as the economy cycled through a period of economic growth, recession and economic growth again. As a whole, the region had an unemployment rate of 4.6% in 1990, 5.9% in 1995, and 4.9% in 1998. Between 1990 and 1995, every county in the region experienced an increase in their respective unemployment rates. This trend, however, was reversed and from 1995 to 1998, every county experienced a decrease in their unemployment rates, while the national unemployment rate also decreased. County unemployment levels ranged from a low of 2.7% in Chester County in 1998 to a high of 6.2% in Philadelphia during the same period. The regional unemployment rate remained below the statewide rates in 1990 and 1995, but was higher in 1998.

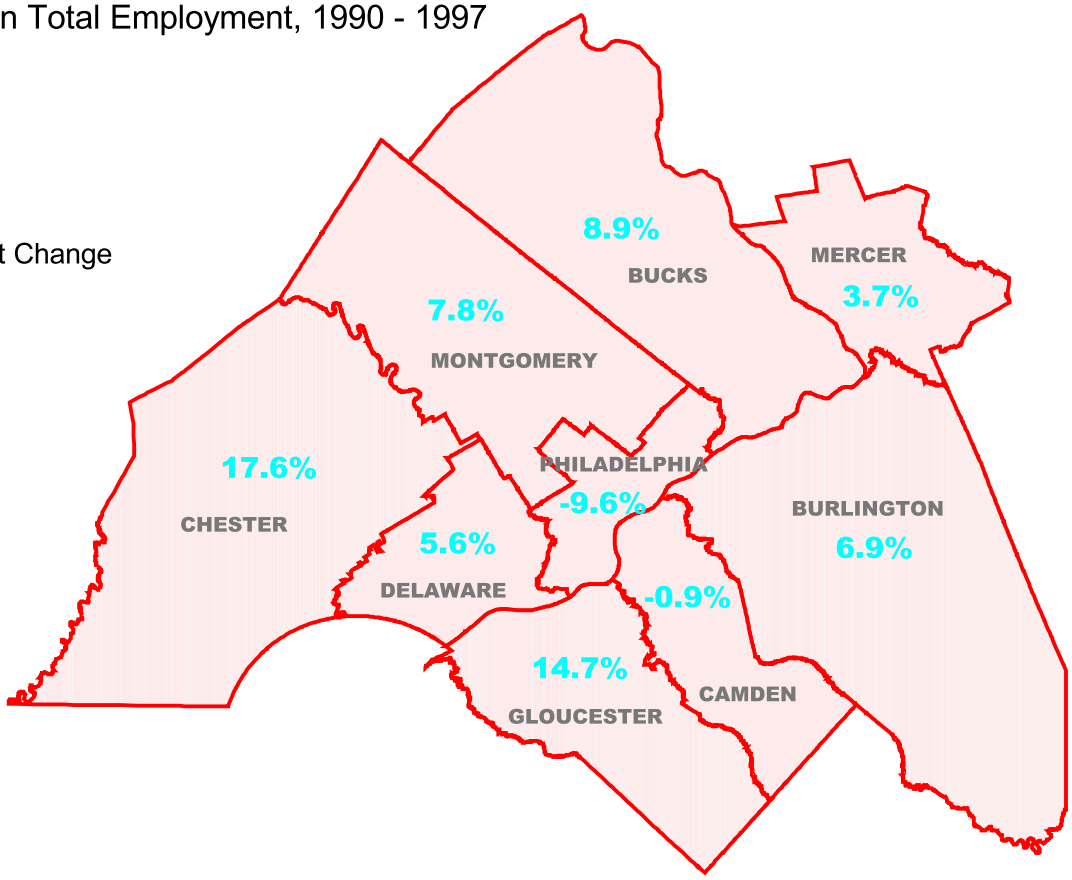
UNEMPLOYMENT RATE: Percent of Persons in the Labor Force Seeking Jobs

County	1990 Unemployment Rate (%)	1995 Unemployment Rate (%)	1998 Unemployment Rate (%)
Bucks	4.2	5.2	3.6
Chester	3.2	4.0	2.7
Delaware	3.9	5.6	3.9
Montgomery	3.7	4.5	3.2
Philadelphia	6.2	7.7	6.2
Burlington	3.9	5.1	3.4
Camden	5.0	6.5	4.5
Gloucester	4.7	6.6	4.6
Mercer	4.1	5.4	4.1
PA	**5.4%**	**5.9%**	**4.6%**
NJ	**5.1%**	**6.4%**	**4.6%**
REGION	**4.6%**	**5.9%**	**4.9%**
U.S.	**5.6%**	**5.6%**	**4.5%**

Source: U.S. Department of Labor, Bureau of Labor Statistics

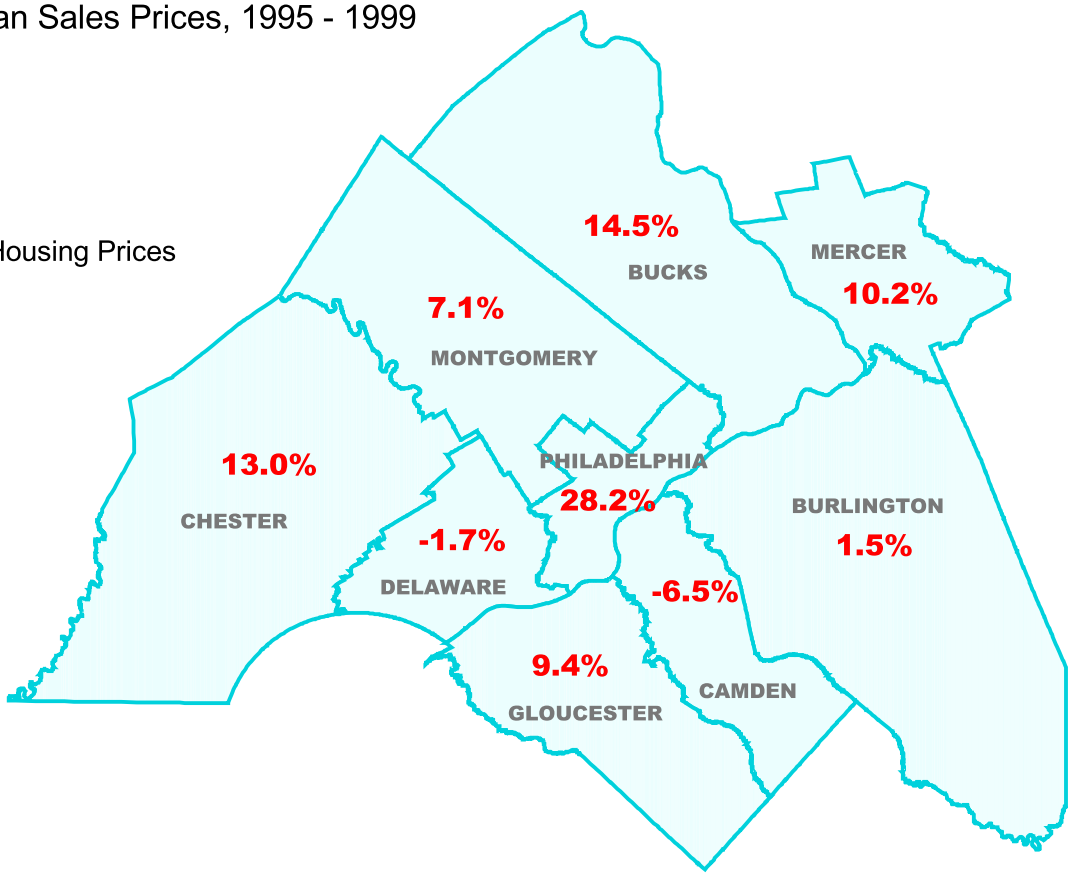
Percent Change in Total Employment, 1990 - 1997

2.4 % Employment Change



Changes in Median Sales Prices, 1995 - 1999

5.1 % Change in Housing Prices



FREIGHT MOVEMENT

Promote cooperation among freight movement interests and develop an intermodal freight movement plan with improvements to air, highway, port and rails systems.

Freight Movement
Indicator: Port: General cargo increases since 1990, bulk cargo declines slightly

Policy Background

The maritime facilities of the Delaware River comprise one of the largest freshwater shipping complexes in the world, handling the second largest volume of international tonnage on the East Coast. These facilities are strategically located in the middle of a metropolitan corridor, which extends from Boston to Norfolk, closer to more major cities that any port on the Atlantic seaboard. The Port's public and private facilities on both sides of the Delaware River provide numerous distribution options to the world's shippers. The volume of cargo imported and exported from the shipping facilities is a measure of the economic vitality of the Delaware Valley. Increased port activity is a sign of a strong economy and a healthy intermodal freight system.

Measurement

This indicator measures the amount of freight being imported and exported from the Port of Philadelphia and Camden (PPC) including both general and bulk cargo. Historically bulk cargo such as petroleum products, chemicals, coal, and other earth minerals, have comprised the majority of freight tonnage passing through the region's ports. Although still smaller in overall tonnage as compared to bulk cargo, general cargo products like iron and steel, electronic goods, and fruit command a higher value in the world marketplace. Port data is provided by PPC, updated annually, and will be compared over time.

Results

Port freight at PPC saw a slight increase of 1.8% in tonnage from 1990 to 1998. Between 1990 and 1998, bulk tonnage, such as coal, petroleum and fertilizer, decreased by just 1.5%. However, general tonnage, such as electronic equipment, fruit and automobiles increased by 36.8%.

PORT: Bulk and General Cargo at the Port of Philadelphia and Camden (million tons)

Cargo	1990 Million Tons	1995 Million Tons	1998 Million Tons	%Change 1990-1998
Bulk	59.2	56.9	58.3	**-1.5%**
General	5.7	5.8	7.8	**36.8%**
TOTAL	64.9	62.7	66.1	**1.8%**

Source: Port of Philadelphia and Camden

Freight Movement
Indicator: Air: Air cargo nearly doubles since 1990

Policy Background
Air cargo comprises a smaller percentage of regional freight than goods transported by rail or ship. The importance of Philadelphia International Airport (PHL) to the regional freight system is primarily for high-value, time-sensitive cargoes and commodities.

Measurement
This indicator measures the amount of domestic and international cargo traveling through PHL which consist of on-loaded and off-loaded cargoes. Air cargo data is supplied by PHL and is updated annually.

Results
Air tonnage at PHL has greatly increased between 1990 and 1998. PHL reports that flights are carrying 94.4% more air cargo tons in 1998 than in 1990. According to the Division of Aviation Records at PHL, this increase is primarily due to both United Parcel Service (UPS) and U.S. Airways establishing international cargo hubs at PHL within the past six years.

AIR: Tons of Air Cargo

1990 Tons	1996 Tons	1998 Tons	%Change 1990-1998
290,295	475,139	564,596	**94.4%**

Source: Philadelphia International Airport

Freight Movement
Indicator: Truck: Truck traffic increases throughout region

Policy Background
Freight movement by truck allows smaller and local shippers "door-to-door" access to the regional freight network by permitting local firms to get their products quickly to market. Trucks provide the widest freight coverage in the Delaware Valley in addition to having a significant impact on intermodal transfers. Increased truck traffic may be indicative of an enhanced regional economy, but also impacts upon congestion in the region.

Measurement
This indicator measures the change in truck movements and provides one assessment of the health of the regional on-road freight network. Data are based upon movements along the Pennsylvania and New Jersey Turnpike regional interchanges and truck crossings on the Ben Franklin, Betsy Ross, Commodore Barry, Walt Whitman, Trenton-Morrisville, New Hope-Lambertville, Tacony-Palmyra, and Burlington-Bristol bridges. Data are provided on an annual basis from the Pennsylvania Turnpike Commission, New Jersey Turnpike Authority, Delaware River Port Authority (DRPA), Delaware River Joint Toll Bridge Commission (DRJTBC) and the Burlington County Bridge Commission (BCBC). These measures will be compared overtime.

Results

Regional truck traffic increased from 14.0 million movements in 1995 to 16.4 million movements in 1998. The greatest increases during this period occurred along the DRJTBC bridges (Trenton-Morrisville and New Hope-Lambertville) and DRPA bridges (Ben Franklin, Betsy Ross, Commodore Barry and Walt Whitman). This increase follows a decline on the DRJTBC bridges between 1990 and 1995. Truck movements also increased on the New Jersey and Pennsylvania Turnpikes during this same period. BCBC bridges (Tacony-Palmyra and Burlington-Bristol) saw a decline during this same period. According to the BCBC, this was due in part to return truck traffic from New Jersey to Pennsylvania utilizing DRPA bridges located closer to their points of destination.

TRUCK: Recorded Truck Movements

Roadway/Bridges	1990 Recorded Truck Movements (ADT)*	1995 Recorded Truck Movements (ADT)*	1998 Recorded Truck Movements (ADT)*	% Change 1990-1998
PA Turnpike	4,957,435	5,618,772	6,627,303	33.6
NJ Turnpike	4,885,109	4,960,863	5,711,083	16.9
DRPA Bridges Betsy Ross Ben Franklin Walt Whitman Commodore Barry	2,207,000	2,434,000	2,829,361	28.1
DRJTBC Bridges Trenton-Morrisville New Hope-Lambertville	1,173,203	787,722	1,038,775	-11.4
BCBC Bridges Tacony-Palmyra Burlington-Bristol	700,056	246,967	179,246	-74.3
Regional Total	**13,922,803**	**14,048,324**	**16,385,768**	**17.6**

*** Average Daily Traffic**

Source: PA Turnpike, NJ Turnpike. DRPA, DRJTBC, BCBC

MOBILITY

Improve access to and efficiency of the region's transportation network, and ensure the safety and security of the system's users.

Mobility
Indicator: Safety: Automobile crashes decline significantly since 1988, increase slightly since 1995

Policy Background

Automobile crashes threaten the personal safety of motorists on the roads and highways of the Delaware Valley. Generally, roads that are congested and in poor condition tend to present a greater likelihood of crashes. This not only poses a physical hazard to the region's motorist, as well as time lost stranded in congestion, but also slows the movement of goods, which directly affects the economy.

Measurement

This indicator measures the safety of the regional highway system consisting of state, county and local roads. The number of crashes consist of fatal crashes, injury crashes and property damage only crashes (those where at least one vehicle must be towed). Data is reported on a county by county basis and is collected annually by PennDOT's Bureau of Highway Safety and Traffic Engineering and NJDOT's Accident Records Section. The data will be compared over time. **Methods of reporting and displaying accident information differ in Pennsylvania and New Jersey such that state figures are not directly comparable. Data for New Jersey is not available for 1996 through 1998. At present, NJDOT is processing this data and will make it available when it is compiled.**

Both DOTs list three crash types (fatal crashes, injury crashes and property damage only crashes) which are aggregated for the purpose of this indicator. In Pennsylvania, property damage only crashes are reported only when one or more motor vehicles incurs disabling damage as a result of the accident, requiring the vehicle to be transported away from the scene by a tow truck or other vehicle. The New Jersey State Police report only those accidents where one or more motor vehicles sustain at least $500 worth of damage. The responding officers determine this damage assessment at the time of the accident.

Results

The total number of automobile crashes in the Delaware Valley declined 17.7% between 1988 and 1995 with every county in the region experiencing a net decline. Total crashes within the five Pennsylvania counties decreased 14.3% from 47,442 in 1988 to 40,635 in 1995. The four southern New Jersey counties experienced a 21.3% decline in the total number of automobile crashes between 1988 and 1995.

Since there are more vehicles traveling the region's roads and congestion has increased, it is logical to expect an increase in vehicle crashes. Although the five counties in Pennsylvania reflect a decline from 1988 to 1995, data for 1998 shows a slight increase in all counties. According to traffic engineers in PennDOT's Bureau of Highway Safety and Traffic Engineering, better educated drivers coupled with advance vehicle engineering, such as anti-

lock brakes, may be a reason for the decline between 1988 and 1995. However, according to the New Jersey State Police, the number of crashes on state highways has historically fluctuated and is primarily dependent upon the weather. Issues such as the completion of more miles of expressways, which have lower crashes/volumes than local roads and alcohol-related reductions due to tougher enforcement may also be responsible for fewer accidents. Although no source could be pinpointed as the cause in the decline from 1988 to 1998, it appears that reporting minimums (i.e. monetary thresholds or the need for towing) may exclude the reporting of many minor fender-bender type accidents, accounting for a part of the trend observed.

SAFETY: Total Automobile Crashes in the DVRPC Region

	1988 Total Crashes	1995* Total Crashes	% Change 1988-1995	1998 Total Crashes	% Change 1995-1998
Bucks	8,452	7,041	-16.6	7,273	3.2
Chester	6,031	4,788	-20.6	5,194	8.4
Delaware	6,324	5,267	-16.7	5,468	3.8
Montgomery	10,875	9,413	-13.4	9,777	3.8
Philadelphia	15,760	14,126	-10.3	14,231	.74
PA Five County	**47,442**	**40,635**	**-14.3%**	**41,993**	**3.3%**
Burlington	11,974	8,010	-33.1	**No Data Available for New Jersey**	
Camden	14,132	13,312	-5.8		
Gloucester	6,192	4,895	-20.9		
Mercer	12,853	9,299	-27.6		
NJ Four County	**45,151**	**35,516**	**-21.3**		
Region	**92,593**	**76,151**	**-17.7%**		

*** Last year data is available for New Jersey**
Source: NJDOT; PennDOT

Mobility
Indicator: Road Condition: Roadway conditions improve since 1990
Policy Background
The physical composition of the regional highway system is an important component in the physical safety and economic health of the Delaware Valley. Highways that are rated in poor condition are hazardous to the motoring public. In addition, these highways cause numerous delays, jeopardizing the efficiency of the regional freight movement network and slowing the daily commutes of thousands of workers. Highway pavement performance is affected by two parameters: environment and traffic.

Measurement
This indicator measures the physical condition of the regional highway system. A higher percentage means that more road miles are in poor condition. In response to requirements in federal transportation legislation (TEA-21), administered by the Federal Highway

Administration, this indictor is based on pavement conditions and reported annually by PennDOT (Overall Pavement Index) and NJDOT (Surface Distress Index). Both measures include only those roadways that fall under the jurisdiction of the respective state DOTs. It is important to note that there are other agencies that oversee roadways in the region including turnpike commissions, bridge commissions, counties and individual municipalities. This data only includes State DOT reports. **Pennsylvania and New Jersey data are not directly comparable due to differences in their data collection and reporting methodologies. Pennsylvania last compiled data on this indicator in 1995. At present, PennDOT is completing an update to its Overall Pavement Index Report and data will be made available when it is released.**

Results

The percentage of southern New Jersey state highways in poor and very poor condition increased from 14% in 1990 to 22% in 1995. According to NJDOT, the severe winters and long hot summers of the early 1990s, coupled with a significant increase in truck traffic were the primary causes for the increase in poor highway miles. However, this percentage decreased significantly between 1995 and 1998 with only 5.5% of highways listed in poor or very poor condition. The percentage of southeastern Pennsylvania highways under PennDOT jurisdiction in mediocre and poor condition decreased from 58% in 1990 to 26% in 1995. Wide-scale resurfacing projects in the region are attributed to the decrease in poor highway miles in southeastern Pennsylvania during this period. Data from PennDOT was not available for the years 1996-1998.

ROAD CONDITION: Percent of Highway Miles Rated in Poor Condition

	1990 % Highway Miles	1995 % Highway Miles	1998 % Highway Miles
NJ Four County	14.0	22.0	5.5
PA Five County	58.0	26.0	NA

Source: NJDOT; PennDOT

Mobility

Indicator: Reliability of Public Transit: On time performance of public transit varies among systems

Policy Background

The Delaware Valley contains numerous rail and bus transit routes that provide alternatives to the automobile. Choices range from regional rail to elevated trains and from subway to bus. A major factor in the choice between using public transit and the automobile, is the efficiency (reliability over-time, comfort and safety) at which the transit system performs. By making reliable transit a viable option for commuters vehicular travel can be reduced, resulting in air quality improvement. A reliable public transit system can also serve to encourage more compact development patterns around transit stations.

Measurement

This indicator measures the scheduled performance of the region's three primary public transit providers (SEPTA, NJ Transit and PATCO). NJ Transit and PATCO define on-time

performance as arriving within five minutes of the scheduled time, while SEPTA defines on-time performance by mode of transportation (rail, light-rail and bus). On-time performance information is available annually from all three public transit providers.

Results

On-time performance for NJ Transit increased slightly between 1990 and 1998 on the Atlantic City Line from 93.2% to 95.6%, and the Northeast Corridor Line from 88.1% to 92.4%. PATCO's on-time performance decreased very slightly from 99.2% to 99.1% of scheduled trains on-time in 1998. SEPTA has a varied on-time record depending upon the mode analyzed. The SEPTA mode with the highest on-time performance is the Broad Street Subway. The Subway's on-time performance increased slightly from 98.9% in 1995 to 99.2% in 1998. The SEPTA mode with the lowest on-time performance is the Light Rail Division, which decreased from 94.9% in 1990 to 85.0% in 1998. Regional Rail on-time performance decreased from 93.6% on-time in 1990 to 89.5% on-time in 1998.

RELIABILITY OF PUBLIC TRANSIT:
On Time Performance of Public Transportation

Agency	1990%On-Time	1995%On-Time	1998%On-Time
NJ Transit			
Northeast Corridor	88.1	94.0	92.4
Atlantic City Line	93.2	95.5	95.6
PATCO	99.2	99.0	99.1
SEPTA			
City Division Bus	92.0	93.5	89.4
Suburban Division Bus	89.8	87.7	89.4
Regional Rail	93.6	91.3*	89.5
Subway	98.9	99.0	99.2
Light Rail	94.9	90.1	85.0
Elevated	97.6	98.5	97.3
Media/Sharon Hill	95.8	93.3	95.4
Norristown Highspeed	92.4	93.9	92.3
Trackless	97.1	95.7	92.0

*** At final destination. Prior to 1994, on-time performance was reported at Suburban Station**

Source: NJ Transit; PATCO, SEPTA

HOUSING

Develop an adequate supply of quality housing affordable to all income groups in the region, located in accordance with regional land use and transportation goals.

Housing
Indicator: Housing Affordability: Earnings increases exceed rate of housing cost increases

Policy Background

Affordable housing opportunities have become more limited across the region. Once an issue which concerned only low-income households, many moderate and median income households now have difficulty securing affordable housing.

The Consumer Price Index (CPI) is a measure of the change over time in the prices paid by urban consumers for a fixed market basket of consumer goods and services and is a U.S. City Average. The market basket's goods and services include: food, clothing, homes, automobiles, fuel, fees to doctors, lawyers and beauty shops, and rent, repair cost, public utility rates, and others. As opposed to the broadly defined CPI as a general measure of inflation, the CPI's housing component is more narrowly focused providing data for homeowners' and renters' cost, fuel, utilities, and household furnishings and operation. Many of these housing variables are higher in the Delaware Valley than in the nation.

In addition to changes in the cost of housing, regional wages must be at levels that allow a family earning the regional median income to be able to purchase a house. According to a 1990 DVRPC analysis of regional housing prices, a family earning the regional median could not afford to purchase the median priced home in 81% of the region's 353 municipalities. An affordability rule of thumb says that the proportion of a household's gross family income spent on rent or mortgage payments and other housing expenses should be less than 30%. To increase affordability, regional earnings should rise at the same rate, if not faster, than the rate of change in the cost of housing.

Measurement

This indicator measures the change in the cost of housing relative to the change in the cost of all other goods and services and the rate of wage increases. The CPI is produced by the U.S. Department of Labor's Bureau of Labor Statistics and reflects 1982-84 spending patterns, which are set as a benchmark of 100. This indicator is based upon data from the April 1990, 1995 and April of 1997 CPI. The Philadelphia Consolidated Metropolitan Statistical Area (CMSA) CPI data includes the nine-county DVRPC region and Cumberland and Salem Counties, New Jersey, New Castle County, Delaware and Cecil County, Maryland. Average annual wage data are found in the *Regional Economic Information System* maintained by the U.S. Department of Commerce's Bureau of Economic Analysis. This indicator will be compared over time and with the nation.

Results

Between 1990 and 1997, the cost of housing increased at a pace equal to the cost of goods and services in the region. The regional CPI rose 4.9% from 1995 to 1997, which was less than the national increase of 5.3%. The CPI Housing Component in the region rose 5.6%

between 1995 and 1997 versus 5.5 for the nation. Average annual wages for the region increased by 8.5% from $31,359 in 1995 to $34,034 in 1997, while wages in the U.S. increased by 8.9% from $27,359 in 1990 to $29,814.

This data suggests that wage growth in both the region and across the nation surpassed the overall rate of inflation and the increase in housing costs. Thus, the affordability gap appears to be shrinking for the typical wage earner.

HOUSING AFFORDABILITY: Increase in Housing Prices, the Consumer Price Index and Average Annual Wages

	1990 Average	% Change 1990-1995	1995 Average	% Change 1995-1997	1997 Average
CPI—All Items					
Phila. CMSA	134.3	18.1	158.7	4.9	166.5
U.S.	128.9	18.2	152.4	5.3	160.5
CPI—Housing Component					
Phila. CMSA	136.8	15.7	158.4	5.6	167.3
U.S.	126.8	17.1	148.5	5.5	156.8
Average Annual Wages					
DVRPC Region	$26,386	18.8	$31,359	8.5	$34,034
U.S.	$23,430	16.7	$27,359	8.9	$29,814

Source: CPI – U.S. Department of Labor; Wages – U.S. Department of Commerce.

Housing
Indicator: Housing Prices: Regional average housing price now less than national average

Policy Background
The lack of affordable housing is now recognized as a serious problem in the Delaware Valley. Limited affordable housing opportunities have numerous negative outcomes for residents and employers. A lack of affordable housing in proximity to the workplace may lead to difficulties in attracting and retaining a qualified workforce, and may act as a deterrent to prospective employers seeking to expand or relocate within the region. Moreover, air pollution and traffic congestion levels increase within the Delaware Valley as employees unable to secure housing close to employment centers are forced to commute long distances.

Measurement
This indicator measures how quickly housing prices are changing throughout the region. Data on county median sales prices in Pennsylvania are provided by the Bucks, Chester, and Montgomery County Planning Commissions, Delaware County Department of Housing and Community Development, Realist Company (Philadelphia County Data only), and the Philadelphia *Inquirer*. The Management Institute at Rowan University and the Philadelphia *Inquirer* provide data on county median sales prices in New Jersey. Data on the Metropolitan Statistical Area (MSA), Primary Metropolitan Statistical Area (PMSA) and national levels were

provided by the National Association of Realtors. The Trenton MSA includes Mercer County only, while the PMSA includes data for Salem County, New Jersey. Median sales prices are updated annually. This indicator will be compared over time and with the nation.

Results

Between 1995 and 1999, the median sale price in the Philadelphia PMSA increased 5.1% from $118,700 to $124,800. Between 1995 and 1999 the median sale prices for the U.S. increased 17.8% from $113,100 to $133,300. The highest gains during this period were in Philadelphia County (28.2%) and Bucks County (14.5%).

HOUSING PRICES: Changes in Median Sales Price

County	1990 Median Sale Price	1995 Median Sale Price	1999 Median Sale Price	%Change 1995-1999
Bucks	$137,400	$139,900	$160,188	14.5%
Chester	$149,999	$155,000	$175,000	13.0%
Delaware	$115,000	$117,000	$115,000	-1.7%
Montgomery	$135,000	$140,000	$150,000	7.1%
Philadelphia	$38,500	$42,900	$55,000	28.2%
Burlington	$121,600	$126,000	$128,000	1.5%
Camden	$98,500	$100,000	$93,500	-6.5%
Gloucester	$100,000	$106,000	$115,994	9.4%
Mercer	$124,000	$122,500	$135,000	10.2%
Philadelphia PMSA*	$108,700	$118,700	$124,800	5.1%
U.S.	$95,500	$113,100	$133,300	17.8%

Source: PA Sales Data – County Planning Departments, County Housing Departments; The Philadelphia Inquirer; Philadelphia Sales Data – Realist; NJ Sales Data – Rowan University; The Philadelphia *Inquirer*; PMSA/U.S. Sales Data – National Association of Realtors.

***The Philadelphia Metropolitan Statistical Area (PMSA) does not include Mercer County.**

APPENDIX:

DATA SOURCES

PHYSICAL FORM

Growth Patterns: Comparison of Population Growth in Plan Designated Centers and Non-Center Areas, by County: DVRPC calculations using 1997 U.S. Census population estimates.

Land Development: Developed Land v. Population: 1995 U.S. Census population estimates, DVRPC 1995 Land Use Information Data.

Farmland Preservation: Changes in Acres of Agricultural Land: DVRPC 1995 Land Use Information Data, Pennsylvania and New Jersey Departments of Agriculture.

Parks and Recreational Open Space: Actual 1999 Acres versus 2025 Needs: DVRPC Data, 1999; *Guiding Regional Growth*, DIRECTION 2020 Report #23, 1995.

Commercial Land Use: Office Occupancy Rates: County Data – Black's Guide/Teleres, *Black's Guide (Philadelphia & Suburbs, Southern New Jersey, Delaware)*, 1997, Center City Philadelphia Data – Jackson-Cross Oncor International.

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Public Transit Usage: Number of Public Transit Passengers (millions): NJ Transit, 1999; PATCO, *Operating Statistics,* 1999; SEPTA, *Ridership & Statistics,* 1999.

Vehicles: Vehicle Growth versus Population Growth: DVRPC; U.S. Census, *County Population Estimates,* 1995.

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ECONOMIC DEVELOPMENT

Employment Growth: Percent Change in Total Employment, 1990-1997: Bureau of Economic Analysis, August 1999.

Income Growth: Percent Change in Per Capita Personal Income, 1990-1997: Bureau of Economic Analysis, *Regional Economic Information System (REIS)*, 1998.

Unemployment Rate: Percent of Persons in the Labor Force Seeking Jobs: Bureau of Labor Statistics, 1999.

FREIGHT MOVEMENT

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Air: Tons of Air Cargo: Philadelphia International Airport, Division of Aviation Records, 1999.

Truck: Recorded Truck Movements: New Jersey Turnpike Authority, 1999; Pennsylvania Turnpike Commission, *Traffic Comparison Reports*, 1999; Delaware River Port Authority, *Monthly Traffic and Revenue by Classification*, 1999; Delaware River Joint Toll Bridge Commission, *Comparative Statement of Traffic and Revenue*, 1999; Burlington County Bridge Commission, *Daily Reports,* 1999.

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Safety: Total Automobile Crashes in the DVRPC Region: Pennsylvania Department of Transportation, *Pennsylvania Crash Facts & Statistics*, 1988, 1996 & 1999; New Jersey Department of Transportation, *Summary of Motor Vehicle Traffic Accidents*, 1988 &1996.

Road Condition: Percent of Highway Miles Rated in Poor Condition: Pennsylvania Department of Transportation, *OPI Frequency Distribution*, 1990 & 1995; New Jersey Department of Transportation, *SDI Distribution for DVRPC Counties*, 1996 & 1998.

HOUSING

Housing Affordability: Increase in Housing Prices, the Consumer Price Index and Average Annual Wages: Consumer Price Index Data – Bureau of Labor Statistics, *Philadelphia Regional Office CPI Announcement,* April 1990, 1995 & 1997; Average Annual Wage Data – Bureau of Economic Analysis, *Regional Economic Information System (REIS)*, 1997.

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