where we stand: comunity indicators for metropolitan philadelphia

metropolitan philadelphia indicators project supported by the william penn foundation and temple university

An Invitation to MetroPhilaMapper

Dear Reader,

In our annual reports, we at MPIP present only a small fraction of the more than 300 indicators of the quality of life in the Philadelphia metropolitan region we collect. To put the power of our data in your hands, we and Avencia Inc., invite you to try MetroPhilaMapper, our new browser-based software application, that allows you to create maps, graphs, tables, and reports from all of our indicators. We believe it sets a new standard of combining ease of use with powerful analytic capabilities, and it is free for all users.

MetroPhilaMapper provides geographically-based data for:

Municipalities Philadelphia Planning Analysis Sections Zip codes High school districts Elementary school districts Census tracts

You may choose to look at the entire region or any part of it. You may choose to define an area by clicking on places, drawing a radius around a specific place, or drawing a boundary around the places you want. You can map and create graphs, tables, and reports about any of these places, and you may download all of the maps, graphs, tables, and reports you produce. You can also download the original data on which your work has been based should you wish to use the data in other ways. To help you get started, we offer video tutorials on MetroPhilaMapper's major functions.

Did we mention that MetroPhilaMapper is free? Try it at www.metrophilamapper.org

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Introduction and Acknowledgments

In the current economic downturn that touches the lives of many households in greater Philadelphia, we are more conscious than ever that the citizens of this region share a common future. No matter where we live or work, all of us depend on a job market, a quality workforce, a transportation system, a housing market, a wealth of cultural and educational resources, and air and water sheds that are regional in scope. To strengthen those shared assets, we must connect local issues and concerns to the larger regional picture.

This annual report monitors eleven dimensions of community life, selecting a few critical indicators to tell us where we stand on those dimensions as a region and within individual local communities. Each section of this report shows you how greater Philadelphia ranks in comparison with eight other metropolitan areas, four of which are flourishing regions that serve as models (Boston, Chicago, Minneapolis, and Phoenix), two of which are older industrial areas similar to ours (Detroit and Cleveland), and two of which are regional competitors (Baltimore and Pittsburgh). Each section also portrays patterns within our region, which we define as the central cities of Philadelphia and Camden plus the suburban counties of Bucks, Chester, Delaware, and Montgomery in Pennsylvania, along with Burlington, Camden, Gloucester, and Salem in New Jersey. We provide annual updates for the indicators contained in this publication in order to track changes in our communities, identify strengths, and focus attention on problem areas.

Since the publication of our 2008 edition, we have upgraded our project website (http://mpip.temple.edu) by adding MetroPhilaMapper, a new web resource that allows users to easily find data about all communities in the region, to view the information displayed in charts, tables, and maps, and to compare data that used to be scattered across multiple sources. MetroPhilaMapper provides over 300 local and regional indicators, including land use patterns, population characteristics, school district spending and performance, income and wage data, and crime patterns for the two-state, nine-county region.

This project was made possible with support from the William Penn Foundation.



The Philadelphia region consists of more than five million residents, living in more than 350 separate cities, towns, townships, and boroughs. The region continues to exhibit an uneven growth pattern, with some communities growing in population and others declining. Increases in residential construction permits suggest that the region is likely to continue its spatial expansion at the periphery of the region.







3.2

1.7

MAP 1.1: Percentage change in population, 2000 to 2007



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Regional Growth

The Philadelphia region's population grew from 5.6 to 5.8 million residents between 2005 and 2007. MPIP focuses on the nine counties at the heart of the Philadelphia metropolitan area.¹ As indicated in **Map 1.1**, a large number of communities have lost population since the Census of 2000, especially in the city of Philadelphia and in the suburban communities immediately adjacent to it. This continues a long term process within the region, in which the communities at the periphery of the region exhibit the strongest growth patterns, while the older, denser communities that comprised the area's core prior to World War II are shrinking.

This growth pattern concerns many civic leaders and policy makers, who recognize that the ebbing of population in established communities is a warning sign of decreased tax bases and a potential reduction in the quality of life. However, this is not simply a pattern of older communities losing population while newer ones grow. Smaller communities, with limited residential development options, often show less robust growth and more extensive declines than their surrounding communities. Comparatively affluent suburbs, including Lower Merion, Upper Merion, and Narberth have also lost population over this time period, as have many of the communities in Camden County, New Jersey.

"the region has become the unit of measure and focus, rather than a municipality or even a county..." —Steve Wray, Economy League of

–Steve Wray, Economy League of Greater Philadelphia

Philadelphia's regional growth rate compares favorably to most of its comparison metropolitan areas (**Figure 1.1**), growing at

Philadelphia

Phoenix

0%

Pittsburgh

the same rate as Baltimore (3.2%) and at a slightly lower rate than Boston (4.7%) and Minneapolis (4.1%). Phoenix, with its explosive population increases, has the largest increase (9.0%) among these metropolitan areas.

Building permit data for the Philadelphia region (Map 1.2) indicate that the planned construction of residential units anticipates a continuation of this growth. The highest level of permits per 1,000 residential units is found in the communities that are experiencing the highest levels of population growth, or are immediately adjacent to them. This has the effect of reinforcing the expansion of the region to include many communities that had relatively low population size. This push into areas of green space—a major element of the region's quality of life—has significant implications for the region's housing, employment, environment, and transportation networks.

Comparing permit activity across our group of metropolitan areas, **Figure 1.2** shows some differences from the data on population growth. While Phoenix outstrips the remaining eight regions, Chicago, which had a somewhat limited rate of population growth, evidences a more robust rate of new residential activity than the remaining metropolitan areas, with Minneapolis and Philadelphia slightly trailing. Baltimore and Boston rank slightly behind this group, with Cleveland and Pittsburgh still further behind, and Detroit, not surprisingly, showing the lowest rate of permitting activity (4.5 permits per 1,000 units).





FIGURE 1.2: Building permits per 1000 residential units, 2006 and 2007 Source: U.S. Census, Housing Permit Data, 2006 and 2007.

Additional Regional Growth Indicators Available at

Endnotes Regional Growth

¹ The Census Bureau now considers the Philadelphia metropolitan area to include the nine counties MPIP defines as the region plus New Castle County, Delaware and Cecil County, Maryland.

Population Density per Square Mile Number of Households Average Household Size Hispanic/Latino Population Non-Hispanic, Asian Population Non-Hispanic, Black/African American Population Non-Hispanic, Caucasian/White Population Non-Hispanic, Other Population Non-Hispanic, Other Population Multiracial Population Population Aged 4 and Under Population Aged 5 to 17 Population Aged 18 to 24 Population Aged 25 to 39 Population Aged 40 to 64 Population Aged 65 and Older



The current economic recession raises regional concerns about where jobs are, where jobs are being lost, where jobs are increasing, and the future of the local economy. These issues are central to individual and family wellbeing and municipal and regional vitality. The region historically has not experienced the extremes of economic cycles, typically suffering less job loss than the nation during downturns and less robust job gains during periods of economic growth. The current recession follows this pattern: from March 2008 to March 2009, the Philadelphia Federal Reserve reported that the region saw jobs drop by 2.7 percent while the U.S. declined by 3.5.¹







MAP 2.2: Percentage change in number of jobs, 2006 to 2007

Regional Economy

As shown in last year's report, the region's employment is widely decentralized, chiefly organized around its major roadways (**Map 2.1**). The communities with higher job concentrations lie along either an arc shaped by the interstates I-76, I-276, I-476, and I-676 or an arc carved by I-95. The 25 communities with at least 20,000 jobs account for 48 percent of the region's employment, and almost 10 percent of all jobs are in Center City Philadelphia.

Although the recession officially began in December 2007, many parts of the country felt the downturn earlier. The most recent available data for the region's communities allow us to examine changes from the fourth quarter of 2006 through the fourth quarter of 2007. For present purposes, we define substantial job change as change of more than three percent among communi-

ties with 100 or more jobs and where gains or losses amounted to 100 or more jobs. **Map 2.2** shows the percentage changes. Although there were places with large job losses such as Bridgeport and Downingtown, which lost more than 40 percent of their 2006 bases, the map reveals just 32 communities with significant losses while 163 saw gains. Over all, the region gained more than 111,000 jobs, indicating that the region had yet to see the downturn.

As public policies seek to stimulate economic growth through investments in the green economy, we need to understand where the region and its communities stand. Two problems make this task difficult. First, there is no commonly accepted definition of the green economy. For present purposes, we define it as categories of work that involve increasing the efficiency of energy production and use, reducing the environmental impact of energy production and use, and increasing the use of renewable sources of energy. Second, because available data are based on firms in the green economy (as defined by other researchers or by our own prior research), we are counting all employees of green firms as holding green jobs.² Regardless of the definition of the green economy, all existing efforts to enumerate green jobs rely on such industry counts. Such counts overestimate the number of green jobs in some industries and underestimate them in others.

Compared to its metropolitan peers, the Philadelphia region ranks squarely in the middle in terms of the percentage of jobs in the green economy (**Figure 2.1**). Detroit is well above all others, largely because of its substantial number of jobs in engineering services. At this point—even with the generous definition of green jobs the data require—it is clear that they represent a small part of economic activity everywhere.

"companies that commit to green business can save money in the long run..." –Patrick Starr, PA Environmental Council

Within the region, **Map 2.3** shows that jobs in the green economy are more broadly dispersed and tend to be further from the region's core than the distribution of all jobs shown in **Map 2.1**.







MAP 2.3: Percentage of jobs in green economy, 2007 Sources: NJ Department of Labor and PA Department of Labor & Industry, 2007. 11

Additional Regional Economy Indicators Available at

Number of Establishments, All Industries All Employees, All Industries Average Annual Pay, All Industries Number of Establishments, All Employees, and Average Annual Pay for these Sectors: Accommodation and Food Service Administrative, Support, Waste Management, and Remediation Services Agriculture, Forestry, Fishing, and Hunting Arts, Entertainment, and Recreation Construction **Educational Services** Finance and Insurance Healthcare and Social Assistance Information Management of Companies and Enterprises Manufacturing Other (Unclassified) Other Services (not including Public Administration) Professional, Scientific, and Technical Service Public Administration Real Estate and Rental and Leasing **Retail Trade** Transportation and Warehousing Utilities Wholesale Trade

Endnotes Regional Economy

¹ Computed from data at www.philadelphiafed.org/research-anddata/regional-economy/historical-data, accessed on May 1, 2009. The data are for the 11 county metropolitan area rather than the nine county metropolitan region that MPIP uses.

² The list of North American Industrial Classification System (NAICS) codes used to define the green economy is available at www.temple.edu/mpip/greeneconomy. We thank Philip R. Hopkins, Vice President for Research at Select Greater Philadelphia, for his assistance with this project.



The current recession means that incomes stagnate or decline in real terms, and concerns about quality of life increase. But the meaning of these changes depends upon where one lives.





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MAP 3.2: Average adjusted gross income by municipality, 2006

Family Income

The most recent year for which municipal level data are available is 2006, pre-dating the onset of the national recession. Until 2010, when the U.S. Census will begin annual publication of income statistics, the most current data on community incomes within the Philadelphia metropolitan region derive from 2006 Internal Revenue Service files on adjusted gross income (AGI). However, interpretation of these data requires some caution. They reflect income from tax returns, not families, and more than one return may be filed from a family—as when a teenager has a part-time job. We focus on the low end of the AGI income distribution where adjustments to gross income such as for contributions to IRAs or for self-employment taxes are likely to be fewest. Map 3.1 displays the percentage of returns with AGI incomes below \$25,000, and the results largely reproduce those in our 2008 Where We Stand report. As we have seen in other income data, low AGI incomes are both concentrated in older industrial communities on both sides of the Delaware River and found in areas quite distant from the city in all parts of the region. However, the income picture improved relative to 2005: just 41 of the region's 354 communities had at least 40 percent of AGI incomes under \$25,000 in 2006, while 51 did in 2005.

"all over this city and region working people, often working more than one job, cannot close the gap between expenses and income..."

-Jean Hunt, Campaign for Working Families/ Greater Philadelphia Urban Affairs Coalition

Map 3.2 portrays the distribution of average AGI incomes and, resonating with earlier *Where We Stand* reports on incomes, it documents the concentration of higher incomes in the communities bordering I-276, I-76, U.S. 202, and U.S. 30 in Pennsylvania. As in Map 3.1, the concentration of lower incomes along the Delaware River. Here again local incomes improved: the number of the region's communities with average adjusted gross incomes above \$100,000 rose from 36 in 2005 to 46 in 2006, and the number with incomes below \$40,000 fell from 36 to 21.

Comparable data for our comparison metropolitan areas are not yet available, and we therefore substitute the percentage of families with incomes under \$25,000 and median family incomes from the U.S. Census in 2006. The data are adjusted for cost of living differences among the regions.¹ Table 3.1 reveals substantial variation in the percentages: Minneapolis has the lowest percentage at 9.8, substantially below the figures for the other metropolitan areas. Minneapolis, unusually, combines a high median family income with a cost of living lower than that of the nation as a whole. At the opposite end of the distribution, Chicago has the highest percentage and

combines both a moderate median family income and an average cost of living. At 16.8 percent, Philadelphia falls just behind Chicago and has a slightly higher cost of living.

Significant variation also appears in median family incomes, ranging from a high of \$82,488 to a low of \$60,000. After the adjustment for price differences, Philadelphia ranks next to lowest with a median income of \$63,129. This represents a significant drop relative to last year and may reflect the beginning of the decline in housing prices—more prominent in places outside of the region which, relatively speaking, raised the cost of living here.

Both within the region and among the comparison metropolitan areas, there is substantial variation in all of our measures of income, reinforcing the common impression that quality of life is substantially tied to place.

TABLE 3.1: Families with price-adjusted family incomes under \$25,000, price-adjusted median family incomes, and metropolian price levels relative to U.S., selected metropolitan areas, 2007

	Adjusted % less than \$25,000	Adjusted Median Family Income	Cost of Living Relative to U.S.
Baltimore	15.0	\$72,277	1.01
Boston	16.5	\$74,561	1.14
Chicago	17.0	\$67,370	1.00
Cleveland	14.5	\$70,191	.85
Detroit	14.4	\$72,511	.90
Minneapolis	9.8	\$82,488	.95
Philadelphia	16.8	\$63,129	1.03
Phoenix	16.2	\$60,000	.95
Pittsburgh	12.9	\$78,441	.82

Sources: U.S. Census, Current Population Survey, March, 2008; Bettina H. Aten and Roger J. D'Souza, "Regional Price Parities: Comparing Price Level Differences Across Geographic Areas," Survey of Current Business, Research Spotlight, pp. 64-74, November, 2008.

Additional Family Income Indicators Available at

Households with Incomes Below the Poverty Line

Persons Receiving Food Stamps

Persons Receiving Temporary Assistance for Needy Families (TANF)

Tax Returns Receiving the Child Tax Credit

Tax Returns Receiving the Earned Income Tax Credit (EITC)

Males Aged 25 to 64 Not In the Labor Force

Population Working Outside the Home

Ratio of Median Household Income of African Americans Compared to Whites Ratio of Median Household Income of Asians Compared to Whites Ratio of Median Household Income of Latinos Compared to Non-Latino Whites Average Adjusted Gross Income

Tax Returns with Adjusted Gross Income Less than \$5,000 Tax Returns with Adjusted Gross Income Between \$5,000 and \$10,000 Tax Returns with Adjusted Gross Income Between \$10,000 and \$20,000 Tax Returns with Adjusted Gross Income Between \$20,000 and \$20,000 Tax Returns with Adjusted Gross Income Between \$20,000 and \$25,000 Tax Returns with Adjusted Gross Income Between \$25,000 and \$30,000 Tax Returns with Adjusted Gross Income Between \$30,000 and \$35,000 Tax Returns with Adjusted Gross Income Between \$30,000 and \$35,000 Tax Returns with Adjusted Gross Income Between \$35,000 and \$40,000 Tax Returns with Adjusted Gross Income Between \$40,000 and \$50,000 Tax Returns with Adjusted Gross Income Between \$50,000 and \$60,000 Tax Returns with Adjusted Gross Income Between \$50,000 and \$75,000 Tax Returns with Adjusted Gross Income Between \$75,000 and \$100,000 Tax Returns with Adjusted Gross Income Between \$75,000 and \$100,000

Endnotes Family Income

¹The adjustments are based on Bettina H. Aten and Roger J. D'Souza, "Regional Price Parities: Comparing Price Level Differences Across Geographic Areas," *Survey of Current Business*, Research Spotlight, pp. 64-74, November, 2008.



The rise and sudden collapse of the housing market is reflected in the striking variations in average mortgage amounts across the region as well as in the risks of potential foreclosure that many communities face. Average home prices appear to be rising faster than income levels in the region, raising concern for housing affordability, especially when Philadelphia is compared to other metropolitan areas.





\$85,000 or less \$\\$5,001 to 180,000 \$\\$180,001 to 280,000 \$\\$280,000 to 564,000 \$\\$

MAP 4.1: Average mortgage, home purchases, 2007 Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act, Raw Data, 2007.



FIGURE 4.1: Average mortgage amount, home purchases, 2006 and 2007 Source: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act, Raw Data, 2006 and 2007.

Housing

The housing price bubble of the past several years has produced significant changes in the cost of housing in the Philadelphia area and across the country. Within the Philadelphia region, the distribution of higher priced homes in Center City Philadelphia and in the more affluent suburbs of the region (**Map 4.1**) is evident in the latest available mortgage data (2007). While some pockets of high mortgage values can be found in New Jersey, the bulk of the higher mortgage values can be found in Chester, Bucks, and Montgomery counties, mirroring the patterns found in the past several years.

The rapid rise of home prices that peaked in 2007 is reflected in the comparison of average mortgage amounts across our comparison metropolitan areas (**Figure 4.1**). From 2006 to 2007, excepting Detroit—which actually declined in average mortgage value—all regions saw striking increases in average mortgage values. In percentage terms, the largest increases were in Philadelphia and Pittsburgh which each had an increase of more than 30 percent.

Significant increases in housing prices may not negatively affect affordability in all metropolitan areas, providing that the incomes in a region keep pace with the cost of housing. The ratio of home prices to median income is one measure of housing affordability that we use to examine this trend (**Figure 4.2**). Over the same two years (2006 and 2007), the ratio of price to income actually declined in as many areas as it increased, despite the rise in mortgage values over the same time period.

This apparent incongruity speaks to the rapidity of price declines in most metropolitan area housing markets, especially in the last half of 2007.¹ Boston's traditionally high cost

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of housing continues to create a strain on household incomes in that area, increasing the ratio of median house price to median income from 5.4 to 5.9. Thus the average housing price in that region was nearly six times the median income. Housing affordability guidelines suggest a sustainable market is present when the ratio falls between 3.0 and 3.5.

"increased foreclosures lead to decreased housing values for those homes in the communities affected..."

-Ira Goldstein, The Reinvestment Fund

Philadelphia's increase from 3.5 to 4.0 suggests that the price of housing is outstripping incomes in the region. In a recent report, we note the expansion of subprime lending into more affluent suburban communities.² As incomes experience downward pressures from the economic downturn, we expect increased foreclosure rates. Data provided by the United States Department of Housing and Urban Development (HUD) demonstrate the potential effects of foreclosure are evident across the region, especially in many of the communities in the suburbs—particularly in South Jersey (**Map 4.2**). Increased foreclosure rates threaten the values of homes in the communities where these foreclosures occur, as well as shrinking the real estate property tax base for local governments.



MAP 4.2: Percentage of owner-occupied homes entering foreclosure, 2008 Source: Housing and Urban Development Neighborhood Stabilization Program, 2008.



FIGURE 4.2: Ratio of house price to income, 2006 and 2007 Source: Harvard Joint Center for Housing Studies, State of the Nation's Housing, 2006 and 2007.

Additional Housing Indicators Available at

Occupied Housing Units Home Ownership Renter Occupied Housing Units Home Values Mortgages per 1,000 Owner-Occupied Housing Units Average Purchase Mortgage Purchase Loans Home Improvement Loans

Subprime Loans Loans from Subprime Lenders

Housing

¹*The State of the Nation's Housing 2008.* Joint Center for Housing Studies, Harvard University, accessed at www.jchs.harvard.edu/publications/markets/son2008/son2008.pdf.

²Subprime Lending in the Philadelphia Region, available at www.temple.edu/mpip.



In the current economic downturn, local officials throughout the region are struggling to maintain public service levels despite declines in housing values and accompanying declines in tax revenues. Across the region, local governments expect tax revenues to shrink, both because individual properties have lost value and because the downturn in house sales yields less revenue in real estate transfer taxes. Moreover, declines in household income affect the wage and income taxes levied by many municipalities. Taken together, these trends call for painful cuts in services, or increases in taxes, or both.





FIGURE 5.1: Estimated tax burden for a family of three at different income levels, 2007 Source: District of Columbia, Department of Finance, Tax Rates and Tax Burdens in the District of Columbia: A Nationwide Comparison, 2007. ¹ Data are missing for Cleveland and Pittsburgh because only the largest city in each state is reported. ² See Technical Appendix for quidance about interpreting the dollar amounts in this graph.

Taxes

Among the local governments in the region, the largest budget deficits are faced by Philadelphia, whose options for raising additional revenues are limited since, as **Figure 5.1** shows, the city is already taxed at a high rate relative to comparison cities. (Note: the dollar amounts in **Figure 5.1** do not reflect tax abatements such as those affecting new property owners in Philadelphia, nor other special exemptions.) That figure identifies Philadelphia, Baltimore, and Detroit as the cities imposing the heaviest combination of property and income taxes on households at all three income levels— \$50,000, \$75,000, and \$100,000.

In March 2009, Philadelphia Mayor Michael Nutter proposed to close the city's massive deficit with temporary hikes in sales taxes and property taxes, combined with measures to tighten expenditures. The mayor's proposal to increase property taxes, if only temporarily, placed renewed emphasis on the need to accomplish the long-delayed reassessment of property values across Philadelphia. In many parts of the city, poor neighborhoods suffer from assessments that are higher than they should be while more affluent neighborhoods are underassessed. These inequities have helped shape the prevailing view that property taxes are less fair than wage taxes (reported in MPIP annual reports for 2004 and 2005). Any increase in the city's most unpopular tax makes correcting the city's inequitable assessments all the more urgent.

"city leaders must ask: will the extra revenues pay for services whose benefits exceed the burden of the tax increase?"

-Robert Inman, The Wharton School

In the context of the entire metropolitan area, Philadelphians are among the most heavily taxed, although by no means the only highly-taxed jurisdiction. Maps 5.1 and 5.2 display the combined state and local tax burden imposed by different municipalities on a hypothetical household earning the median income for the region and owning a house priced at the average market value for the region. The difference between the two maps is that in the suburbs, Map 5.1 assumes the wage earners are employed outside Philadelphia, whereas Map 5.2 assumes those same suburban earners are employed in the city and therefore subject to Philadelphia's wage tax. For most suburban communities in Pennsylvania, the average tax burden remains under \$7,000, provided residents do not work in Philadelphia (**Map 5.1**). When we assume suburban workers are employed in Philadelphia (Map **5.2**), only the taxpayers in Chester County

communities and a handful of New Jersey suburbs pay tax bills under \$7,000.

Recent state legislation in both Pennsylvania and New Jersey may help slow local tax increases in the short run. In the summer of 2008, Pennsylvania's legislature increased the state's share of school funding, distributing new state aid to favor districts serving the largest number of students in poverty. Then in December 2008, New Jersey's legislature revised its state school funding formula to standardize the per-pupil amount for all districts and to add extra dollars to each district's allocation based on the number of children in poverty and children who speak English as a second language. In each state, the intent was to relieve pressure on property taxes in local districts.



MAP 5.1: Combined state and local taxes paid by a hypothetical household if suburban earners work outside of Philadelphia, 2008



MAP 5.2: Combined state and local taxes paid by a hypothetical household if suburban earners work in Philadelphia, 2008



Local Tax Revenue per Household Sum of All Tax Refunds Received Sum of Child Tax Credits Received Sum of Earned Income Tax Credit (EITC) Received Average Per Capita Municipal Debt Change in Municipal Revenue



To succeed as citizens and productive contributors to their communities, children need quality education not only in early grades, but in higher education as well. We start with pre-school because it provides crucial preparation for success in later school years. Since a high school diploma is a basic requirement for virtually all employment, we also track high school attrition rates, followed by further indicators of students' readiness for college and the proportion of the region's citizens who ultimately earn college degrees. Taking this annual snapshot of the educational pipeline allows us to gauge whether greater Philadelphia is fulfilling its commitment to the region's youth and securing a stronger regional future for all.









Source: U.S. Census, American Community Survey, 2006 and 2007.

Education

Recognizing the benefits of preschool education, state governments across the nation increased their funding for this service from 2006 to 2007. Pennsylvania demonstrated some of the largest percentage increases in the number of children enrolled. Yet even with that improvement, Pennsylvania continued to lag well behind New Jersey in the number of dollars spent and the number of children served. In 2007, Pennsylvania's government spent \$5,519 per child enrolled in preschool, compared to New Jersey's expenditure of \$10,494.¹

Figure 6.1 compares metropolitan areas on the percentage of three to four year old children enrolled in pre-school of some kind, although not necessarily full-day. From 2006 to 2007, almost all of the regions in **Figure 6.1** increased the proportion of pre-school children being served, with the largest percentage increases registered in Cleveland and Pittsburgh. However, in Cleveland the increasing percentage is explainable by a shrinking number of three to four year old children counted in the region, rather than by an expanding number of slots in pre-school programs. Philadelphia followed the national trend with a slight gain in the services provided to its growing pre-school population.

"high quality early education pays dividends by improving school readiness and performance..."

-Christie Balka, Public Citizens for Children & Youth

At the other end of the K-12 spectrum, some school districts also face a problem serving all teenagers because many students stop

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attending high schools. Particularly in the current period of recession, local officials worry that high school dropouts represent what some have called "our next class of non-performing assets"—citizens whose economic opportunities will be limited, whose needs will increase the cost of social programs and prisons, and whose contributions to the economy and tax revenues will be meager. For the Philadelphia region as a whole, Figure 6.2 shows that about 15 percent of young adults aged 18 to 24 have failed to complete a high school diploma or the equivalent GED ("general education development" certificate which many high school dropouts eventually obtain). On this measure, Philadelphia falls in the middle of the comparison group.

Looking below the regional level, we see substantial disparities in the scale of the

dropout problem in different school districts. **Map 6.1** shows that attrition rates in each high school grade level exceed three percent not just in the region's more "urban" districts like Philadelphia, Camden, and Chester, but also in some suburban districts like Bensalem and Bristol (Bucks County) or Lindenwold and Pine Hill (Camden County). When more than three percent of students leave school at each grade level of high school, the cumulative dropout rate by graduation may range from 10 percent to almost 50 percent.



Source: NJ and PA Departments of Education, 2007.



At or below national average
Above national average
High school students attend other districts
Data unavailable

MAP 6.2: Average combined SAT score, 2007–2008¹ Sources: NJ and PA Departments of Education, 2008. ¹ The national average combined SAT score in 2007–2008 for public high schools is 1007.

Education

For the vast majority of college-bound high school students, the SAT Reasoning Test is an important determinant of access to college. The SAT is used by admissions offices across the nation to compare the academic skills of applicants from high schools with widely differing resources, educational programs, and grading practices. Map 6.2 shows that many school districts in this region score above the national average for public high schools. The districts that fall below that national benchmark are located either in the urban core of the region, arrayed along both banks of the Delaware River, or they sit at the outer edges of the region. Readers who compare Map 6.2 to Map 3.2 in an earlier section of this report will see strongly similar patterns. Communities with above-average incomes are likely to produce SAT scores above the national average.2

In greater Philadelphia, some governmental and civic leaders have made significant in-

vestments to improve the city's and region's competitiveness by targeting two specific population groups. One desired group is young professionals in their twenties and thirties with college degrees and lifestyle preferences that favor urban centers. That group is sought by cities around the country, in the hope that they will remain beyond their mid-30s, contributing their talent and resources to regional development. Figure 6.3 shows the percentage of residents aged 18 to 34 who either hold a college degree or are currently enrolled in college. In every region, the change from year to year was positive. Boston, Chicago and Cleveland did especially well, showing gains of around six percentage points. The Philadelphia metropolitan area held onto its fourth place position among the nine metropolitan areas by expanding its young educated population. Locally this effort is led by Campus Philly, a nonprofit organization established to attract applicants to the region's colleges, engage

them as students in community activities and internships, and keep them in the area when they graduate.

The second target group for civic action is the population of working-age adults who have earned some college credits but never completed a degree. Figure 6.4, which shows the percentage of residents between the ages of 25 and 64 who left college without a diploma, registers virtually no change from year to year. Neither Philadelphia nor any of the other eight metropolitan areas shifted as much as a single percentage point up or down. Looking more closely at the population in this region with postsecondary education, MPIP has found substantial gender differences with respect to how likely high school graduates are to seek and complete postsecondary education.³ Women outpace men in educational attainment, a disparity that is increasing because men appear less and less inclined to pursue postsecondary education. We found that

when compared to older men in the region (those 55-64), younger men (aged 25-34) are less likely to have postsecondary education of any kind. It is not clear if younger men do not see the utility or if they are less able to afford postsecondary education than their older counterparts. Whatever the explanation, as growing proportions of women acquire postsecondary education, the gender gap is widening.

"increasing the number of individuals with college degrees returns signifi-cant economic and social benefits to the region..."

-Hadass Sheffer, Graduate! Philadelphia







FIGURE 6.4: Percentage of 25 to 64 year olds with some college but no degree, 2006 and 2007 Source: U.S. Census, American Community Survey, 2006 and 2007.

Additional Education Indicators Available at METROPHILA

Total Students Enrolled in SchoolTotal Students Enrolled in Private SchoolStudent/Teacher Ratio in Primary SchoolsExpenditures per PupilStudents Eligible for Free or Reduced Price LunchStudents Scoring Below Basic/Partially Proficient on 8th Grade Math TestStudents Scoring Below Basic/Partially Proficient on 8th Grade Reading TestAverage SAT Math ScoreHigh School Graduates Attending College

Education

¹National Institute for Early Education Research, *The State of Preschool 2007*. New Brunswick, NJ, Rutgers University, 2008.

²Since different proportions of the student body in different districts take the SAT test, the average scores are not completely comparable.

³Stepping off the education elevator: the gender gap in post-high school education, MPIP Focus Report, 2008: available at

 $www.temple.edu/mpip/Reports/genderDifference/genderGap_Education_MPIP.pdf$



Establishing Philadelphia's Office of Arts, Culture, and the Creative Economy in 2008 within city government conveyed the importance that the city attaches to its cultural institutions, many of which have histories extending far back into previous centuries. Arts in the suburbs represent a more recent trend and a much smaller sector than in the city, yet suburban arts organizations have actually been growing at a faster rate than Philadelphia organizations during the past decade.¹ In this section, we look at the state of the region's nonprofit arts organizations, relying on data compiled by the Greater Philadelphia Cultural Alliance.²





FIGURE 7.1: Arts and culture organizations per 100,000 residents, 2006 Source: National Center for Charitable Statistics, compiled by the Greater Philadelphia Cultural Alliance, 2008.



Museums, visual arts, historic, and scientific
 Community arts and education
 Performing arts
 Other, support, and non-disclosed

MAP 7.1: Location of arts and culture nonprofits by organization type, 2008 Source: The Greater Philadelphia Cultural Alliance, 2008.

Arts and Culture

Relative to the other eight comparison regions, Philadelphia ranks in the top half with respect to the number of nonprofit arts and cultural organizations serving residents and visitors. Figure 7.1 shows that greater Philadelphia falls behind only Boston and Cleveland. (To take into account the significantly different sizes of the nine metropolitan areas, we adjusted the figures reported in this section to reflect the population differences from region to region.) The distribution of that rich array of cultural assets is truly regional, as can be seen in **Map 7.1**. Although they are undoubtedly most abundant within the city limits of Philadelphia, they spread quite far outward into the surrounding counties. We might

expect such a dispersed pattern for community arts and education programs, but **Map 7.1** shows that other types of organizations in the performing and visual arts are broadly distributed as well.

Recognized traditionally for enhancing the quality of our lives, arts organizations are increasingly appreciated for their economic contributions as well.³ We see in **Figure 7.2** that dollar expenditures by cultural organizations in Philadelphia fall in the middle among the comparison group. Here again, Boston is far ahead of all other metropolitan areas in expenditures per resident, while Detroit and Phoenix trail significantly behind the rest. "this region's diversity of arts and culture is among its strongest community assets, especially in times of stress and change..." –Peggy Amsterdam, Greater Philadelphia Cultural Alliance

Like all nonprofit organizations these days, cultural groups must raise a substantial portion of their budgets by charging their patrons for services—for example, selling tickets and merchandise in gift shops, renting out space to other groups, serving as consultants to related organizations, and a variety of other enterprises. The other major source of their funding is from contributions, gifts and grants, including individual donations, corporate, foundation and government grants. **Figure 7.3** shows that as of 2006, before the current economic downturn, contributions covered fully twothirds of the expenses for nonprofit cultural organizations in greater Philadelphia. Unfortunately, there is reason to suspect that contributions have diminished as a source of revenue in the more recent period, as donors' wealth has declined.⁴ That decline forces arts organizations to rely more heavily on charging for their services.



FIGURE 7.2: Expenditures by cultural organizations per resident, 2006 Source: National Center for Charitable Statistics, compiled by the Greater Philadelphia Cultural Alliance, 2008.



FIGURE 7.3: Contributions per resident to cultural organizations and contributions per resident as a percentage of expenditures, 2006 Source: National Center for Charitable Statistics, compiled by the Greater Philadelphia Cultural Alliance, 2008.

Additional Arts and Culture Indicators Available at

Creative Class Jobs

Total Expenses Arts and Culture Nonprofits Total Payroll Paid for Arts and Culture Nonprofits Total Revenue for Arts and Culture Nonprofits End of Year Assets for Arts and Culture Nonprofits End of Year Liabilities for Arts and Culture Nonprofits Balance of Assets to Liabilities in Arts and Culture Organizations Federal and State Funding for Arts and Culture

Endnotes Arts and Culture

¹ Greater Philadelphia Cultural Alliance, *2008 Portfolio*. Philadelphia, 2008, p. 54.

² Readers who compare this report with last year's report from MPIP will notice that the number of nonprofit arts and culture organizations counted in the nine regions rose substantially since our last report. This increase is due to several changes, including a change in the way that the National Center for Charitable Statistics is now classifying organizations according to their purpose. Another change is the inclusion for the first time of libraries, zoos and gardens in this year's numbers. We compiled this year's report in consultation with the Greater Philadelphia Cultural Alliance, whose methods we believe produce the most accurate picture of the region's cultural sector. As a result of these changes, we caution against comparing this year's numbers with those in previous MPIP reports.

³ Americans for the Arts, Arts and Economic Prosperity III: The Economic Impact of Nonprofit Arts and Culture Organizations and their Audiences in the State of Pennsylvania. New York, 2007.

⁴ Greater Philadelphia Cultural Alliance, *TempCheck Quarterly Survey*. January 30, 2009.



Nationally and regionally, the recession has sharpened the long term decline in employer-sponsored health insurance. But as unemployment has risen, the population without any health insurance has fallen from 2006 to 2007, as people have turned to the Medicaid and Medicare programs.¹





FIGURE 8.1: Percentage of persons without health insurance and on Medicaid, 2006/2007 Sources: U.S. Census, Current Population Survey, March, 2007 and 2008.



MAP 8.1: Percentage of population on Medicaid, 2007 Sources: NJ Department of Health and Human Services, 2008; PA Department of Public Welfare, 2008.

Health

Last year, the medically uninsured population among our metropolitan peers ranged from eight to 22 percent; this year, the range is from seven to 20.5 percent, with Philadelphia in the middle of the range at 10.7 (**Figure 8.1**). After Massachusetts' 2006 enactment of a comprehensive health insurance plan, Boston lowered its percentage uninsured from 11.0 to 8.3 percent in 2006/2007, although enrollment in the Massachusetts plan did not begin until mid-2007.²

About 13 percent of the nation's population reported being on Medicaid in 2007. However, the U.S. Census's Current Population Survey, the basis for the national data and our figures for the comparison regions, undercounts those on Medicaid. Its estimate for the region's 2006-2007 percentage is 12.9—four percent lower than New Jersey and Pennsylvania records actually reveal. Nonetheless variation in Medicaid percentages for the comparison metropolitan areas is substantial, ranging from 8.6 percent for Minneapolis to 13.5 percent for Boston and Cleveland; and 13.6 percent for Phoenix. Philadelphia with 12.9 percent is next highest; these differences reflect several factors such as differences in state eligibility requirements, percentages of eligibles enrolled, regional incomes, and regional age distributions.

As mentioned in our 2006 annual report, no data allow estimates of the percentage without health insurance within the region's communities. However, the percentage of the population on Medicaid tends to track the percentage uninsured within a state—in part because the growing reluctance of many physicians to accept Medicaid means that coverage may be more apparent than real.³ **Map 8.1** displays the percentage on

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Medicaid in each municipality in November, 2007. Aside from Philadelphia, the highest proportions on Medicaid are in eastern and southern Delaware, southern Bucks, and Salem counties. The rate of receiving Medicaid is notably higher in New Jersey than in Pennsylvania.

"in this region women face higher risks than others for health related problems..."

-Lynne Kotranski, Public Health Management Corporation

Lack of insurance, delays in seeking and qualifying for Medicaid, and provider resistance are likely to lead to a lack of or poor prenatal care—compromising the health of expectant mothers. Poor maternal health is an important cause of low birth weight births (births under 2,500 grams), and low birth weight children face higher risks of adult ill health. **Map 8.2** shows that communities with significant proportions of low birth weight births are widely distributed and the distribution is very similar to that found last year. The population without health insurance, more broadly distributed than the population on Medicaid, may partially explain the dispersion of communities with high levels of low birth weights.

Relative to its peers, the Philadelphia area fared less well with regard to low birth weight as it has the third highest rate (**Figure 8.2**). Comparison of these figures to those we reported last year, when Philadelphia was second lowest, suggests there is a significant amount of volatility in the data.



MAP 8.2: Percentage of babies born low birth weight, 2005 Sources: NJ Department of Health and Senior Services, 2008; PA Department of Health, Bureau of Health Statistics and Research, 2008.



FIGURE 8.2: Percentage of babies born at low birth weight, 2004 and 2005 Source: U.S. National Center for Health Statistics, 2004 and 2005.

Additional Heath Indicators Available at

Health and Human Services Organizations per 10,000 Population Primary Medical Practitioners per 10,000 Population Medical Specialists per 10,000 Population Live Births Babies Born to Mothers Age 17 and Under

Population Aged 21 to 64 with an Employment Limiting Disability

Population Aged 21 to 64 with a Disability that Limits Leaving the Home

Endnotes Health

¹ Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith, U.S. Census, Current Population Reports P60-235, *Income, Poverty, and Health Insurance in the United States: 2007*, Washington, D.C. U.S. Government Printing Office, August, 2008.

² To improve the statistical reliability of the estimates, we have combined the metropolitan area data for 2006 and 2007.

³ Available at www.temple.edu/mpip; each state determines Medicaid eligibility, although New Jersey's and Pennsylvania's policies are sufficiently alike to combine their data for analysis.



While media attention typically focuses on urban crime, we choose to examine crime rates for entire metropolitan areas. Crime is usually perceived as a local problem, but its impacts are rarely confined within local boundaries. MPIP reports on the metropolitan picture because residents travel long distances daily and weekly to many different parts of the region as they pursue work, education, recreation, and shopping. Their paths cross many communities, and their safety depends on conditions in each of those places.





FIGURE 9.1: Violent crimes per 100,000 residents, 2006 and 2007 Source: Federal Bureau of Investigation, Uniform Crime Report, 2006 and 2007.

² Either less than 75% of the agencies within the MSA reported data to the UCR Program and/or principal cities submitted less than 12 months of data.

³ The Minnesota state UCR Program does not comply with national UCR guidelines.

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MAP 9.1: Violent crimes per 1,000 residents, 2007

Sources: NJ Division of State Police Uniform Crime Reporting Unit, Uniform Crime Report on NJ, 2007; PA Uniform Crime Reporting Union, Bureau of Research and Development, PA Uniform Crime Reporting System, 2007.

Safety

According to a recent attitude survey, Philadelphians overwhelmingly answer "crime" when asked what they like least about living in the city.¹ That is not surprising. Between 2004 and 2006, the city experienced a spike in violent crime, the kind of crime that prompts dramatic headlines and disturbs both residents and visitors. For example, in 2006 Philadelphia witnessed over 400 homicides, a number far worse than in other major U.S. cities. The vast majority of those homicides involved firearms. Public consciousness was sufficiently aroused to make crime a main theme of the 2007 campaign for mayor, and to convince the winning candidate Michael Nutter to make crime fighting an early priority of his new administration.

When we compare Philadelphia to the other metropolitan areas in Figure 9.1, we see that it fares better than Baltimore and Detroit in its rate of violent crime (a category that includes murders, rapes, robberies, and aggravated assaults), but exceeds the rates in the other regions. Figure 9.1 shows slight declines in violent crime rates from 2006 to 2007 in four of the metropolitan areas, including Philadelphia, mirroring a national dip in violent crime during that period. Map 9.1 displays the pattern for this region, showing that although violent crime is far more prevalent within the core cities of Philadelphia, Camden and Chester, it also plagues a number of other older communities like Pottstown, Norristown, Coatesville, and Salem City.

Figures are not comparable to last year's data.

"it's been said that all politics is local. So is all death. Gun violence brings injury and death to too many communities..." –Phil Goldsmith, CeaseFire PA

We also track rates of property crime (a category that includes burglary, larceny, auto theft and arson), even though such crimes tend not to receive as much attention from the news media. Property crimes are important because they are so much more common, occurring five or six times more often than violent crimes. Furthermore, property crime erodes the quality

of community life over time and can even drive residents to move (for example, after the third or fourth time someone breaks into their car). Property crime rates have improved somewhat both nationally and in this region, as shown in **Figure 9.2**. Across the metropolitan areas, property crime rates were stable or declined slightly from 2006 to 2007. In 2007, metropolitan Philadelphia suffered less from property crime than all the comparison regions except Boston and Pittsburgh. When we consider how property crimes are distributed across the region (Map 9.2), we see that property crime plagues a much broader segment of the region's population than does violent crime.



FIGURE 9.2: Property crimes per 100,000 residents, 2006 and 2007 Source: Federal Bureau of Investigation, Uniform Crime Report, 2006 and 2007.

¹ Figures are not comparable to last year's data.

² Either less than 75% of the agencies within the MSA reported data to the UCR Program and/or principal cities submitted less than 12 months of data.



Sources: NJ Division of State Police Uniform Crime Reporting Unit, Uniform Crime Report on NJ, 2007; PA Uniform Crime Reporting Union, Bureau of Research and Development, PA Uniform Crime Reporting System, 2007.

Additional Safety Indicators Available at METROPHILA

Law Enforcement Employees Full time officers Part time officers Part I Offenses Homicide Non-negligent Manslaughter Robbery Forcible Rape Aggravated Assault Burglary Larceny Motor Vehicle Theft Arson Part II Offenses Fraud Vandalism Weapons Narcotic Drug laws Driving Under the Influence **Disorderly Conduct** Misdemeanor Assaults Adult Arrests, by Age, by Crime, by Race, by Sex Adult Victims, by Age, by Crime, by Race, by Sex Juvenile Arrests, by Age, by Crime, by Race, by Sex Juvenile Victims, by Age, by Crime, by Race, by Sex

Endnotes Safety

¹ Tom Ferrick Jr., *Philadelphia 2009:The State of the City*. Pew Charitable Trusts, Philadelphia, 2009, p. 17.



The transportation system—the road and rail network—directly affects many important regional patterns, especially the commute to work and the physical development and shifting population centers of the Delaware Valley. A hidden cost of our reliance on automobiles as the primary mode of transportation is seen in the challenges to the network of bridges that are key aspects of the road system, with many being structurally deficient.





MAP 10.1: Commuter rails, local shuttles, interstates, and major routes, 2007 Source: Delaware Valley Regional Planning Commission, 2007.



FIGURE 10.1: Percentage using private vehicle for commute, 2006 and 2007 Source: U.S. Census, American Community Survey, 2006 and 2007.

Transportation

In earlier reports we have documented the extensive multi-modal transportation network of roads and rail lines in Greater Philadelphia (Map 10.1). Like most other metropolitan areas, more than four of every five Philadelphia commuters use an automobile (either their own or in a shared ride arrangement, Figure 10.1). While there have been no major shifts from 2006 to 2007, commuters slightly decreased their automobile use in most of our nine comparison regions; only Baltimore and Pittsburgh experienced an increase in automobile usage over the same period. Even as the Brookings Institution documented widespread "job sprawl" between 1998 and 2006,¹ the average length of a public transit commute is relatively short in these nine metropolitan areas, with only Boston, Minneapolis, Cleveland, and Pittsburgh indicating increased mileage between 2005 and 2006 (the latest years for which data are available; **Figure 10.2**).

"our region's multimodal transit network is a tremendous asset as we plan for a more sustainable future..." –Barry Seymour, Delaware Valley Regional Planning Commission

The transportation system depends on a network of bridges and overpasses that make it particularly vulnerable to sudden failure. The deadly collapse of the bridge carrying I-35W in Minneapolis, the failure of Philadelphia's I-95 elevated roadway supports (March, 2008), and the on-going replacement of the South Street Bridge have drawn public attention to the problems faced by many of the region's bridges. Inspections of bridges and elevated highways in the months after the Minneapolis bridge collapse have forced both New Jersey and Pennsylvania to recognize the need for extensive repairs and increased maintenance of these key elements of the road and rail network.

The National Bridge Inventory, maintained by the Federal Highway Administration (FHWA), provides a rating system that can be used to assess the extent of the challenges facing the region. Using an eight point rating scale, the FHWA, through state highway departments, assesses the condition of the substructure, the superstructure, and the deck of all bridges in the nation's highway system. Any rating that falls below a score of four is regarded as deficient. We used a combination of substructure and superstructure ratings, identifying all bridges that had a substandard score for both their substructure and superstructure.

The locations of these bridges are indicated by location points on the map of the region (Map 10.2; a complete listing is available at www.mpip.temple.edu/mpip). There were 239 bridges that met the substandard criterion we set; 80, or roughly one in three bridges fall within Montgomery County; Bucks and Philadelphia counties each have 52, slightly more than one in five of the region's substandard bridges. While public awareness of bridge decay is heightened when the interstate or major arteries require emergency attention, most of the deficient bridges in this region are on secondary roads. However, the proximity of many of these bridges to major highway arteries may be contributing to their diminished condition.



FIGURE 10.2: Average miles per trip on public transit, 2005 and 2006¹ Source: Federal Transit Administration's National Transit Database, 2006 and 2007. ¹Data for 2005 and 2006 come from the 2006 and 2007 reports, respectively. Data are for urbanized areas which do not coincide exactly with MSAs.



Deficient superstructure and substructure
MAP 10.2: Bridge superstructure and substructure inventory, 2008
 Source: National Bridge Inventory, 2008.

Additional Transportation Indicators Available at

Households Owning No Car Population Driving to Work Alone Ratio of Road Miles to Square Miles Distance From Center of Community to the Nearest Train Station

Endnotes Transportation

¹ Elizabeth Kneebone. "Job Sprawl Revisited: The Changing Geography of Metropolitan Employment." Washington, DC: Brookings Institution, 2009, accessed at www.brookings.edu/reports/2009/0406_job_sprawl_kneebone.aspx.



The region continues to maintain an abundance of green space, and to value its preservation. Air and water quality are central elements of a viable environment, put at risk by the environmental stress produced by pollutants, and by the conversion of green space in pursuit of regional growth (residential and economic). One visible result is the reduction of the amount of open land that would otherwise contribute to storm water absorption. This section presents indicators of water and air quality, as well as the distribution of impervious surfaces across the region.







FIGURE 11.1: Percentage "good" air quality days, 2007 and 2008 Source: Environmental Protection Agency, Air Quality Index, 2007 and 2008.

Environment

The most recent available data on the region's environmental footprint are from 2001 (**Map 11.1**). Densely developed communities at the region's core are surrounded by waterways, forests, farmland and less intensively used land. This map suggests the effects of centuries of physical development, reflecting the expansion of the region along its transportation network of roads and railways. This graphic display also serves to remind us that the environment is a shared regional asset that goes beyond political boundaries.

The development affects the ability of the natural environment to filter both water and air, as impervious surfaces—buildings, roads, transportation, and parking—cause rain water to runoff too quickly into the region's waterways. The region's core communities have high concentrations of these impervious surfaces (**Map 11.2**), which has been suggested as one of the major contributing causes of flooding in the region.¹

"water does not respect political boundaries; effective management of water resources should use geographic watershed boundaries that incorporate multiple political subdivisions..."

-Carol Collier, Delaware River Basin Commission

A recent report released by the Philadelphia Parks Alliance suggests that the strength of a community's environmental assets can be expressed in terms of public health as well as economic benefits.² Two of the major economic contributions of parks and green spaces are their vital role in maintaining air quality and the ways that they contribute to storm water management by limiting concentrated runoffs.

Philadelphia is among a majority of metropolitan areas we examined in which the percentage of good air quality days declined between 2007 and 2008 (**Figure 11.1**). Only Baltimore and Boston improved from 2007 to 2008; Philadelphia falls in the bottom third of this group, as its 57.2 percentage of good air quality days placed it slightly above Pittsburgh's (53.6%), and far ahead of Phoenix' 15.7% levels.

In last year's report, we indicated that the city of Philadelphia, with the highest single municipal concentration of water users, also had the dubious distinction of having the highest proportion of trihalomethane, a suspected carcinogen that is a byproduct of refrigerants or the use of chlorine or bromine in the treatment of water supplies. This year, we examine the relative presence of 11 additional public health concerns within the water supply of the central cities of our comparison metropolitan areas.³ In this comparison, Philadelphia ranks third best among city water supplies, having three of the eleven possible contaminants. Boston and Pittsburgh fare better, but the remaining five areas have either five or six varieties of health threats within their water supply (**Figure 11.2**).



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FIGURE 11. 2: Water quality: number of contaminents of concern in tap water, 2005^{1, 2} Source: Environmental Working Group, National Tap Water Quality Database, 2005

¹ Health based limits iinclude enforceable drinking water limits (called Maximum Contaminant Limits, or MCLs) as well as governmental, non-enforceable health guidelines, such as Maximum Contaminant Limit Goals (MCLGs), lifetime health advisory levels, one-day and ten-day advisory levels to protect children from non-cancer health endpoints, and other government-established health guidelines for tap water contaminants.

² Data for Baltimore are unavailable.

Additional Environment Indicators Available at

Total Area Square Miles

Superfund and Hazardous Waste Sites Within a Five Mile Radius Total Livable Area

Land Area that is Wooded

Land Area that is Vacant

Land Area that is Agricultural

Land Area that is Commercial

Land Area that is Manufacturing

Land Area that is Recreational

Land Area that is Residential

Land Area that is Covered by Impervious Surface

Land Area that Lies in 100-year Flood Zone

Risk Screening Environmental Indicator (RSEI)

Endnotes Environment

¹ "The State of the Delaware River Basin Report 2008." West Trenton: Delaware River Basin Commission, 2008; M. Meenar, "Pennypack Creek Watershed Study." Ambler: Temple University Center for Sustainable Communities, 2006, accessed at www.temple.edu/ambler/csc/pennypack/final_report/PP_FullReport_lowRes.pdf

² "How Much Value Does the City of Philadelphia Receive from its Park and Recreation System." Philadelphia: Philadelphia Parks Alliance, 2008.

³ These include: arsenic, bromodichloromethanes, chloroform, copper, dicholoromethanes, halocetic acid, lead, nitrate, thallium, trihalomethanes, and vinyl chloride. Specific sources and further health threat information can be found at www.ewg.org/tapwater/findings.php.



Technical Appendix

NOTE: When we refer to two different years in our maps and figures, we use the following notations: "2008 and 2009" means two separate years; "2008 to 2009" means change between the two years; "2008-2009" means the academic year; and "2008/2009" means the average of two years of data.

Map 1.2 and Figure 1.2. The total number of housing permits issued in 2007 divided by the number of occupied housing units (in thousands) in 2000.

Map 2.1, Map 2.2, Map 2.3. We obtained data from the New Jersey and Pennsylvania Departments of Labor on every taxpaying establishment in both states. These data include a monthly accounting of the number of employees, the total wages for each quarter, an address for each establishment and a North American Industry Code System (NAICS) code classifying their industry. We mapped each establishment to a municipality.

Figure 2.1 and Map 2.3. We used the U.S. Census' County Business Patterns data to determine the levels of green economy employment in our comparison metros. The list of North American Industrial Classification System (NAICS) codes used to define the green economy is available at http://mpip.temple.edu/greeneconomy.

Map 3.1 and Map 3.2. The Internal Revenue Service provides data on adjusted gross income by zip code. We converted these data from zip code to municipality using the University of Missouri's Missouri Census Data Center's Geographic Correspondence Engine.

Map 4.1 and Figure 4.1. We calculated the average home mortgage amount by aggregating the total amount of conventional owner-occupied housing mortgages to the municipal or metropolitan level and divided that dollar amount by the number of conventional owner-occupied housing mortgages in the municipality or metro from the Home Mortgage Disclosure Act (HMDA) data.

Maps 5.1 and 5.2. The model household tax burden was computed by adding together the average effective property tax rate for the municipality (the percentage of overall market value that is paid in real estate taxes), county tax rates, local wage tax rate and state tax rates. We then multiplied these tax rates by the median home value for the region (\$240,300) and the median income for the region (\$58,309). Because of the size of the Philadelphia wage tax for people who work but do not live in Philadelphia, we also calculated a value if the model householder works in Philadelphia.

Map 6.1. The number of secondary students who left school during the 2006-2007 year and did not return the following year, divided by the total number of enrolled secondary students.

Figure 6.2. The total number of 18 to 24 year olds who lack a high school diploma or GED divided by the total number of 18 to 24 year olds in the metropolitan statistical area.

Figure 6.3. The total number of 18 to 34 year olds who are currently enrolled in higher education institutions or have already completed at least a Bachelor's degree, divided by the total number of 18 to 34 year olds in the metropolitan statistical area.

Figure 6.4. The total number of 25 to 64 year olds who have some college education, but received no degree, divided by the total number of 25 to 64 year olds in the metropolitan statistical area.

Figure 7.3. Contributions to cultural organizations per resident were calculated by dividing the total contributions to cultural organizations by the total population in the metropolitan statistical area. Contributions per resident as a percentage of expenditures were calculated by dividing the total amount contributed by the total expenditures.

Figure 8.1. This figure shows the population receiving health insurance through Medicaid divided by the total population in the metropolitan statistical area, and the number without health insurance divided by the total population in the metropolitan statistical area.

Figure 8.2. The number of babies born below 2,500 grams divided by the total number of live births in the metropolitan statistical area.

Map 8.2. The number of babies born below 2,500 grams divided by the total number of live births for each municipality. We only calculated this figure for municipalities in which there were at least 10 live births.

Figure 10.2. Total number of miles traveled on public transit lines divided by the number of trips within the metropolitan statistical area.

Map 11.1. The original data from the USGS had 30 different classification catego-

ries. This map shows only 13: Open Water, Developed-Open Space, Developed-Low Intensity, Developed–Medium Intensity, Developed-High Intensity, Barren Land, Deciduous Forest, Evergreen Forest, Mixed Forest, Pasture-Hay, Cultivated Crops, Wooded Wetlands, and Emergent Wetlands. Other classifications either were not represented in the region or were so small as to be insignificant on the map.

Map of community types. We created a typology of five kinds of communities where communities were defined differently for the city and suburbs. To define communities in the city, we used the twelve Planning Analysis Sections devised by the Philadelphia City Planning Commission. In the suburbs, the communities are the MCDs (minor civil divisions). A statistical procedure (cluster analysis) divided the communities into relatively homogeneous groups, using variables from the 2000 Census. Thirteen variables were used: five housing, six socioeconomic, and two household characteristics. The housing variables were: percent of units built before 1940, percent of units built after 1955, percent vacant, percent detached single units, and percent owner-occupied. The socio-economic variables were percent African American, percent with less than high school education, percent with a bachelor's degree or better, percent of families earning less than 150% of the poverty line, percent working outside the community of residence, and percent 18, and percent of families that were female-headed.

