

SETTING THE STAGE

ECONOMICS OF THE REGION

A primary goal of the infrastructure charrette was to identify infrastructure investments that would make Philadelphia more competitive in the national and global economies. To give context to the work of the charrette, Ryan Sweet, a senior economist at Moody's Economy.com, presented an overview of the economic geography of Greater Philadelphia.

Sweet began by noting that, while the current recession was damaging, Greater Philadelphia had survived comparable setbacks in 1980-'81, 1990 and 2001. On an encouraging note, the region had shown gains over the past 10 years in financial and business services, as well as in the education and healthcare industries; in fact, the number of jobs in "eds and meds" industries increased by almost 200 percent.

In comparison with the top 100 metropolitan areas between 1999 and 2008, Greater Philadelphia lagged behind in employment (ranked 32nd) and population growth (45th), both well behind national averages, but proved competitive in real per capita income (17th) and output per worker (15th).

In discussing the state of Philadelphia's economy, Sweet noted that while growth in certain industries has helped the city offset the economic consequences of population loss, high crime and poverty continue to negatively affect the city's economic health. Washington, D.C., Boston and the nation as a whole witnessed significant decline in violent crime over the past 10 years; though it decreased this year, Philadelphia's crime rate has remained relatively constant. Since 2000, Philadelphia's poverty rate

BELOW: Charts from Ryan Sweet's presentation show industry location quotients as well as how Greater Philadelphia compares to other regions in terms of population, employment and income.

Philadelphia Successfully Reinvents Itself...

Industry	Location quotient average 1999 to 2008	Employment growth average annualized growth, 1999-2008	Multiplier*
Financial activities	1.32	0.22	
Insurance Carriers and Related Activities	1.37	-0.40	2.5
Credit Intermediation and Related Activities	1.41	-0.49	2.2
Professional and business services	1.16	1.33	
Legal services	1.59	1.44	1.9
Education and healthcare	1.41	1.97	
Hospitals	1.46	0.74	1.8
Colleges, Universities, and Professional Schools	2.42	1.26	1.5
Manufacturing	0.80	-3.10	3.2
IT using	1.26	0.47	
Pharmaceutical and Medicine Manufacturing	3.33	-0.53	5.4

*Change in employment due to a change in industry employment
Sources: BLS, IMPLAN, Moody's Economy.com

...But Struggles to Keep Up

Average annualized growth, 1999 to 2008 Top 100 metro areas determined by population Source: Moody's Economy.com																					
Rank		Metro area		Employment	Rank		Metro area		Population	Rank		Metro area		Real per capita income	Rank		Metro area		Output per worker, the \$		
1	Las Vegas, NV	4.10	1	Las Vegas, NV	4.03	1	New Orleans, LA	7.46	1	New York, NY	112.09	1	New York, NY	112.09	1	New York, NY	112.09	1	New York, NY	112.09	
2	Riverside, CA	3.36	2	Raleigh, NC	3.79	2	Oklahoma City, OK	3.41	2	Hartford, CT	111.82	2	Hartford, CT	111.82	2	Hartford, CT	111.82	2	Hartford, CT	111.82	
3	Austin, TX	2.65	3	Austin, TX	3.62	3	San Jose, CA	2.59	3	San Francisco, CA	111.07	3	San Francisco, CA	111.07	3	San Francisco, CA	111.07	3	San Francisco, CA	111.07	
4	Phoenix, AZ	2.55	4	Phoenix, AZ	3.24	4	San Diego, CA	2.56	4	San Jose, CA	107.22	4	San Jose, CA	107.22	4	San Jose, CA	107.22	4	San Jose, CA	107.22	
5	Orlando, FL	2.50	5	Charlotte, NC	2.98	5	Houston, TX	2.45	5	San Diego, CA	107.20	5	San Diego, CA	107.20	5	San Diego, CA	107.20	5	San Diego, CA	107.20	
6	Raleigh, NC	2.46	6	Atlanta, GA	2.97	6	San Francisco, CA	2.45	6	Los Angeles, CA	105.71	6	Los Angeles, CA	105.71	6	Los Angeles, CA	105.71	6	Los Angeles, CA	105.71	
7	Washington, DC	2.00	7	Riverside, CA	2.83	7	Baltimore, MD	2.41	7	Houston, TX	105.21	7	Houston, TX	105.21	7	Houston, TX	105.21	7	Houston, TX	105.21	
8	Charlotte, NC	1.94	8	Orlando, FL	2.72	8	Virginia Beach, VA	2.26	8	Washington, DC	100.59	8	Washington, DC	100.59	8	Washington, DC	100.59	8	Washington, DC	100.59	
9	San Antonio, TX	1.93	9	Dallas, TX	2.50	9	Washington, DC	2.24	9	Sacramento, CA	97.43	9	Sacramento, CA	97.43	9	Sacramento, CA	97.43	9	Sacramento, CA	97.43	
10	Sacramento, CA	1.91	10	Houston, TX	2.35	10	Boston, MA	2.19	10	Seattle, WA	97.25	10	Seattle, WA	97.25	10	Seattle, WA	97.25	10	Seattle, WA	97.25	
11	Salt Lake City, UT	1.88	11	Tucson, AZ	2.24	11	Birmingham, AL	2.17	11	Boston, MA	97.21	11	Boston, MA	97.21	11	Boston, MA	97.21	11	Boston, MA	97.21	
12	Houston, TX	1.86	12	San Antonio, TX	2.05	12	Pittsburgh, PA	2.09	12	Denver, CO	93.42	12	Denver, CO	93.42	12	Denver, CO	93.42	12	Denver, CO	93.42	
13	Tucson, AZ	1.75	13	Nashville, TN	2.01	13	Miami, FL	2.04	13	Buffalo, NY	93.12	13	Buffalo, NY	93.12	13	Buffalo, NY	93.12	13	Buffalo, NY	93.12	
14	San Diego, CA	1.64	14	Sacramento, CA	1.99	14	Providence, RI	2.03	14	Dallas, TX	92.60	14	Dallas, TX	92.60	14	Dallas, TX	92.60	14	Dallas, TX	92.60	
15	Jacksonville, FL	1.60	15	Denver, CO	1.85	15	New York, NY	1.91	15	Philadelphia, PA	91.73	15	Philadelphia, PA	91.73	15	Philadelphia, PA	91.73	15	Philadelphia, PA	91.73	
16	Dallas, TX	1.54	16	Jacksonville, FL	1.83	16	Seattle, WA	1.89	16	Rochester, NY	91.51	16	Rochester, NY	91.51	16	Rochester, NY	91.51	16	Rochester, NY	91.51	
17	Miami, FL	1.46	17	Salt Lake City, UT	1.67	17	Philadelphia, PA	1.88	17	New Orleans, LA	91.27	17	New Orleans, LA	91.27	17	New Orleans, LA	91.27	17	New Orleans, LA	91.27	
18	Atlanta, GA	1.34	18	Portland, OR	1.64	18	Los Angeles, CA	1.81	18	Riverside, CA	91.21	18	Riverside, CA	91.21	18	Riverside, CA	91.21	18	Riverside, CA	91.21	
19	Nashville, TN	1.28	19	Tampa, FL	1.57	19	San Antonio, TX	1.80	19	Chicago, IL	90.51	19	Chicago, IL	90.51	19	Chicago, IL	90.51	19	Chicago, IL	90.51	
20	Indianapolis, IN	1.27	20	Indianapolis, IN	1.47	20	Hartford, CT	1.70	20	Charlotte, NC	89.23	20	Charlotte, NC	89.23	20	Charlotte, NC	89.23	20	Charlotte, NC	89.23	
21	Oklahoma City, OK	1.23	21	Washington, DC	1.46	21	Jacksonville, FL	1.68	21	Virginia Beach, VA	89.12	21	Virginia Beach, VA	89.12	21	Virginia Beach, VA	89.12	21	Virginia Beach, VA	89.12	
22	Seattle, WA	1.19	22	Richmond, VA	1.36	22	Salt Lake City, UT	1.67	22	Atlanta, GA	88.49	22	Atlanta, GA	88.49	22	Atlanta, GA	88.49	22	Atlanta, GA	88.49	
23	Tampa, FL	1.19	23	Columbus, OH	1.18	23	Richmond, VA	1.65	23	Richmond, VA	86.76	23	Richmond, VA	86.76	23	Richmond, VA	86.76	23	Richmond, VA	86.76	
24	Richmond, VA	1.17	24	Seattle, WA	1.17	24	Denver, CO	1.64	24	Portland, OR	85.43	24	Portland, OR	85.43	24	Portland, OR	85.43	24	Portland, OR	85.43	
25	Denver, CO	1.13	25	Oklahoma City, OK	1.15	25	Tucson, AZ	1.53	25	Detroit, MI	85.27	25	Detroit, MI	85.27	25	Detroit, MI	85.27	25	Detroit, MI	85.27	
32	Philadelphia, PA	0.61	45	Philadelphia, PA	0.34	U.S. average	1.57	U.S. average	86.38	U.S. average	86.38	U.S. average	86.38	U.S. average	86.38	U.S. average	86.38	U.S. average	86.38	U.S. average	86.38
		0.86			0.98																

jumped from 18 percent to 25 percent, while the national average stayed between 11 and 14 percent.

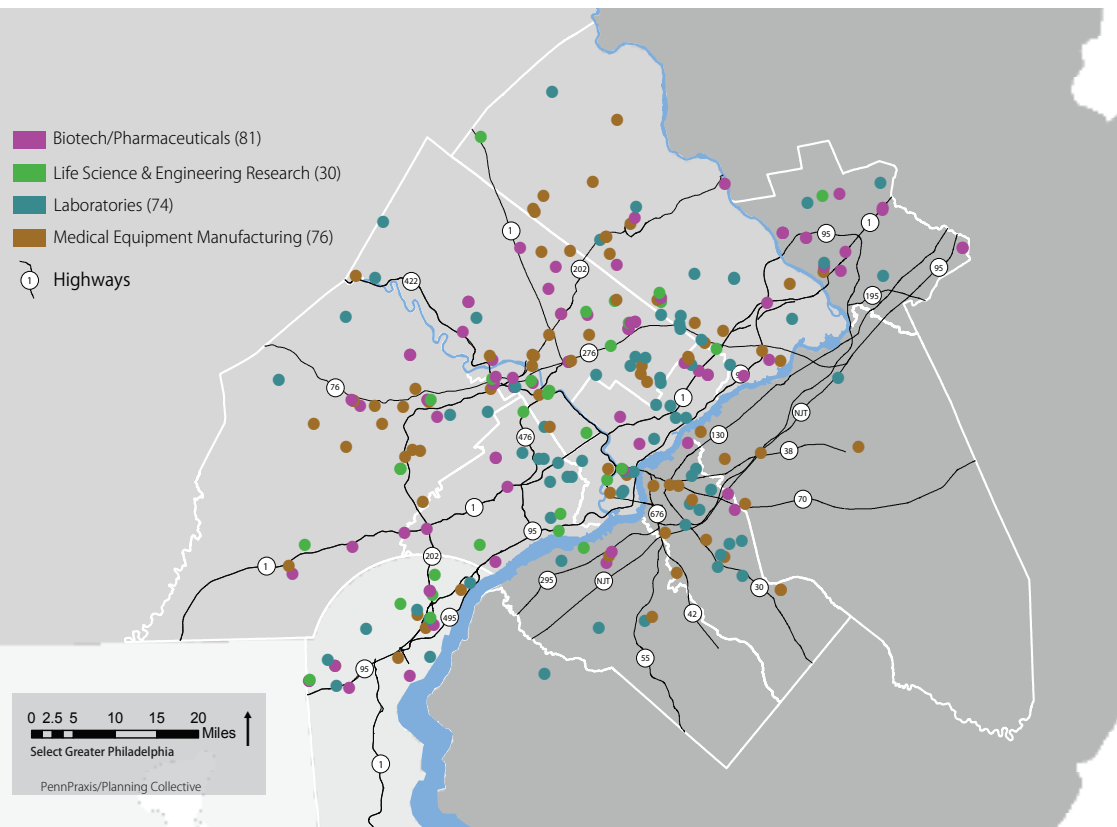
Over the last century, settlement and employment patterns in the region have changed dramatically. Commuting patterns have shifted as the number of people living in Philadelphia but working outside city limits has more than doubled since 1960. Annual population loss in Philadelphia County averaged between -0.2 and -1.3 percent between 1999 and 2008, while surrounding counties experienced population changes from as little as -0.2 percent to as high as 3.5 percent annual growth. Sweet cited the high cost of doing business in the region as a hindrance to the region's economy.

Sweet also highlighted two areas that show promise in keeping Greater Philadelphia competitive

with peer East Coast cities. Philadelphia's share of port activity as a percentage of all U.S. trade was 11.6 percent this year, exceeding Boston, Baltimore and New York City. Furthermore, Philadelphia International Airport served more passengers than Logan International, Newark Liberty, JFK and BWI in both 2005 and 2009 (year-ending in April).

Following the presentation, Susan Wachter, professor of real estate at the Wharton School of Business and co-director of the Penn Institute for Urban Research, moderated a panel discussion with Barry Seymour, executive director of the Delaware Valley Regional Planning Commission; Steve Wray, executive director of the Economy League of Greater Philadelphia; and Tom Morr, president and CEO of Select Greater Philadelphia.

BELOW: This map shows the extent of the life sciences and pharmaceutical industries in Greater Philadelphia, which consist of 261 companies with more than 20 employees.



Throughout the discussion, audience members and respondents identified several concepts and frameworks for strengthening the economy of the region, including:

- Recognizing the region as a diffuse array of centers and thinking of ways to connect them meaningfully.
- Looking beyond county and municipal boundaries to see Greater Philadelphia as a region, and thinking about its assets as collective assets.
- Capturing the competitive advantage of an educated labor force by identifying the jobs of the future and training residents in related skills.
- Anticipating possible changes in the region's leading economic drivers—higher education and the life sciences.
- More aggressively leveraging Philadelphia's central location on the Northeast Corridor, which

places it at an advantage to tap financial and regulatory opportunities in New York and Washington.

- Thinking and acting regionally. The Metropolitan Caucus is a first step in breaking down political barriers that inhibit the region's economic growth.
- Leveraging natural systems, which, like other forms of infrastructure, play a role in improving quality of life and providing economic benefits.
- Examining the symbiosis of creating places that attract and retain a mobile workforce. If people want to be here, so will businesses.
- Examining multiple alternatives, as there is no single solution, but a pattern of strategic decisions that span education, taxes and regional cooperation that will make the Philadelphia region competitive in the 21st century.

OVERVIEW OF THE REGION

For the charrette, Greater Philadelphia was defined as 10 counties, drawn to extend from Wilmington, Del., to Trenton, N.J., to show the full extent of population and employment centers that are connected (with the Philadelphia core in the middle) by existing transit and open space systems.

Pennsylvania: Bucks, Chester, Delaware, Montgomery, Philadelphia

New Jersey: Burlington, Camden, Gloucester, Mercer

Delaware: New Castle

This region connects to other cities and regions; in fact, Trenton is its own Metropolitan Statistical Area (MSA) and is not within Philadelphia's MSA. Other definitions of the Philadelphia region include:

- *Delaware Valley Regional Planning Commission:*

nine counties (does not include New Castle County, Del.)

- *Select Greater Philadelphia:* 11 counties (includes Salem County, N.J.)
- *Philadelphia City Planning Commission:* as it begins its comprehensive planning process, PCPC is examining the region as 12 counties (DVRPC + Salem County, N.J., and Cecil County, Md.) with an area of influence that extends as far as the Lehigh Valley, Atlantic City and into Northern New Jersey.

Before the charrette group work began, two speakers, Paul Levy and Mark Alan Hughes, elaborated on the region's strengths and weaknesses, many of which were discussed by the panel the night before. Levy, executive director of Center City District,

BELOW: Former sustainability director and current PennDesign Distinguished Senior Fellow Mark Alan Hughes discusses Greater Philadelphia's role in the green economy.



said that finding ways to prioritize infrastructure investments is critical to seeing investments achieve their highest return for the city. Despite assets like having the third largest downtown residential population in the country, being centrally positioned along the Northeast Corridor, having an airport that is only a 22-minute rail connection to Center City, and access to three interstate highways, Philadelphia has continually lost population over the past several decades. “This is a set of stairs,” said Levy, “that is leading to oblivion, and until we change this pattern we are not going to change the success of the city and the region.” Levy argues that high taxes force firms to move out of the city and to locate jobs beyond the reach of transit, which is a “continual undermining of the stability of residential neighborhoods—a continual path toward poverty for many people.” Making Philadelphia more competitive will require reducing taxes, but also new infrastructure investments. Levy concluded by submitting five criteria for prioritizing those investments. According to Levy, investments should (1) achieve sustainability objectives, (2) advance the 21st-century economy, (3) go where passengers are located, (4) focus on leftover areas from the industrial age, and (5) yield the highest tax return to the city.

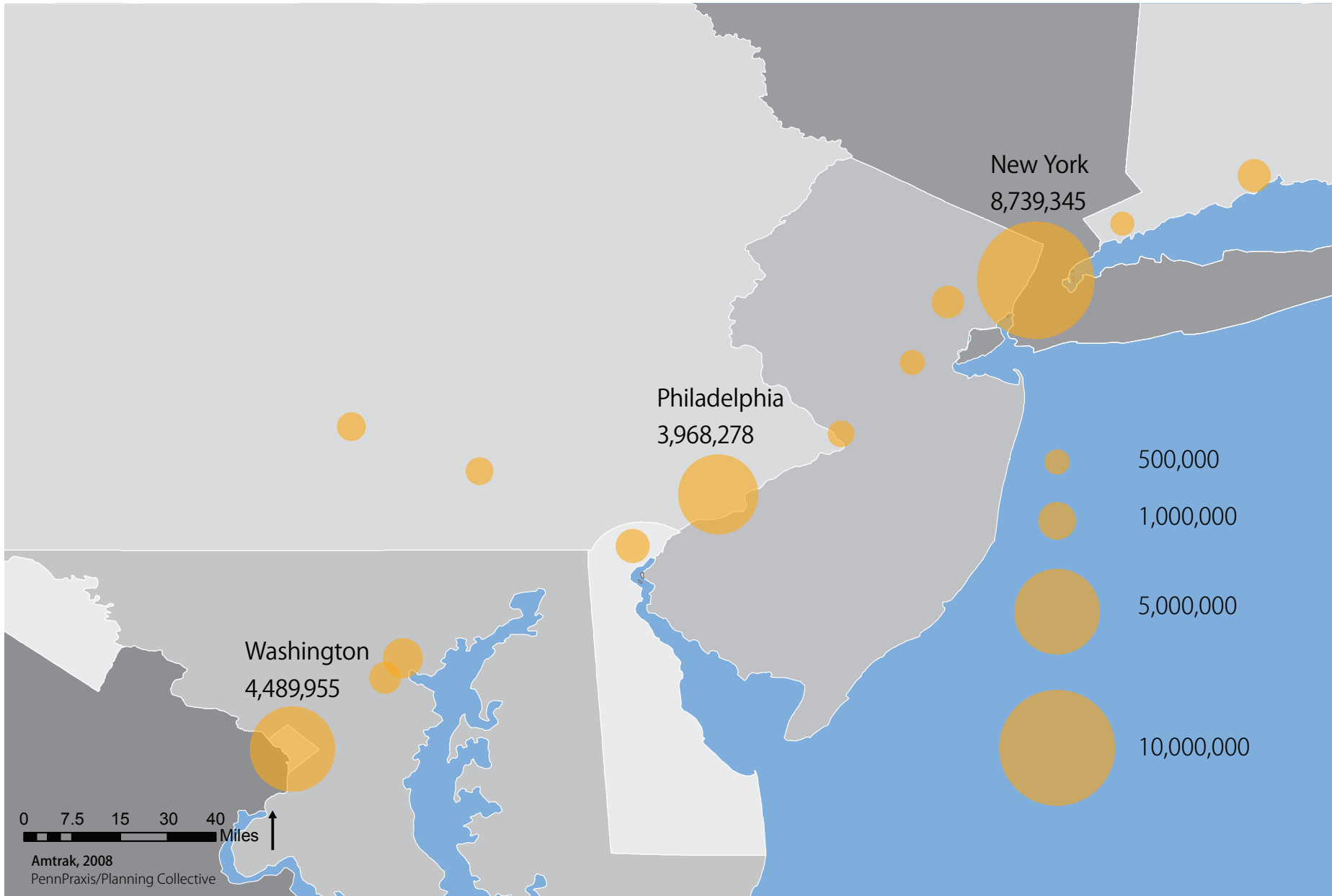
On the subject of infrastructure investments, rising energy prices may be a blessing in disguise for cities, according to former director of the Mayor’s Office of Sustainability, Mark Alan Hughes. Hughes asserts that as the demand for energy conservation increases, Philadelphia’s “inherited liabilities” will be transformed into “appreciating assets.” A dense urban form, in other words, will gain value as consumers and utility providers seek out the most cost-effective way

of reducing their energy consumption. Additionally, value will be created by thinking of new forms of sustainable infrastructure investments. Sustainable (or green) infrastructure could take the form of simply planting more trees, a cost-effective investment when factoring in a wider set of benefits: everything from the shade they provide to lower air conditioning demand and stormwater runoff reduction. This holistic way of thinking ties into Hughes’ idea of the “energy-shed,” which involves seeing how planning for energy efficiency affects other systems as well. Hughes concluded by saying that if the federal government starts to regulate carbon emissions, then dense cities like Philadelphia stand to prosper.

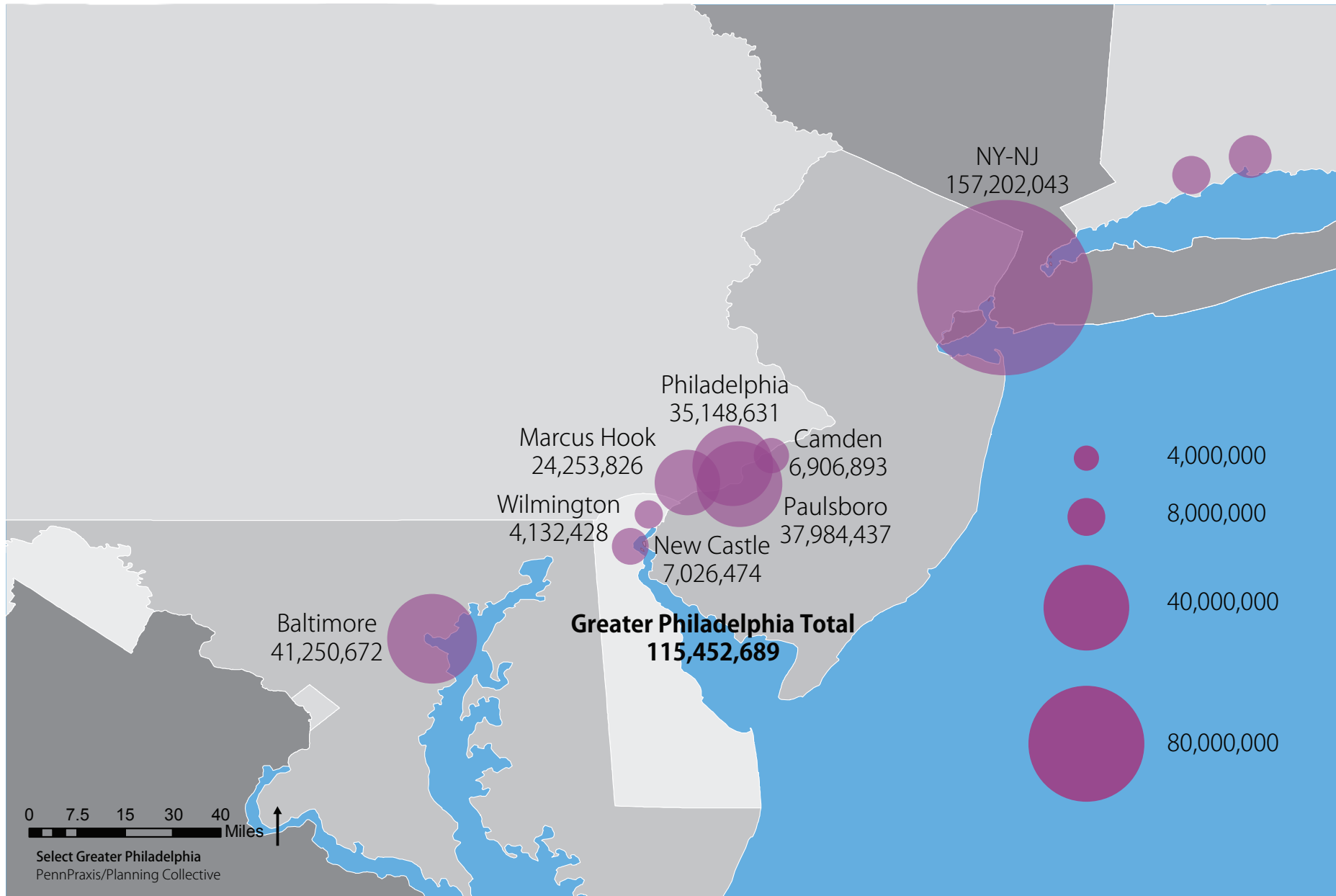
The maps on the following pages were prepared as background for the charrette group work. They give an overview of the region through such lenses as employment, population and transportation systems. For more maps, see the companion document *Philadelphia: A Mapbook of the Metropolitan Area*, which should be released before the end of 2009.



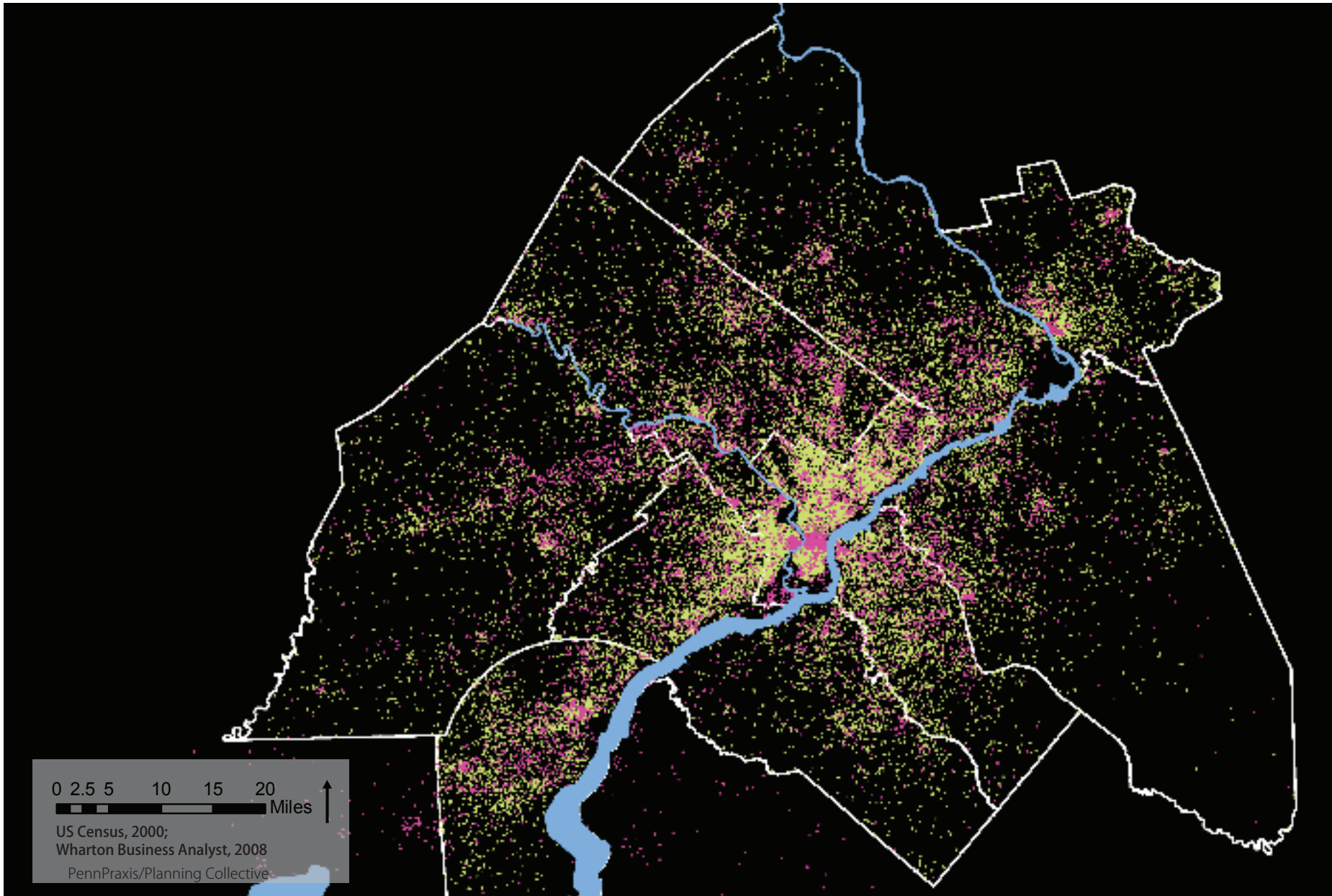
ABOVE: This map shows the tristate, 10-county area defined as “Greater Philadelphia” for the charrette.



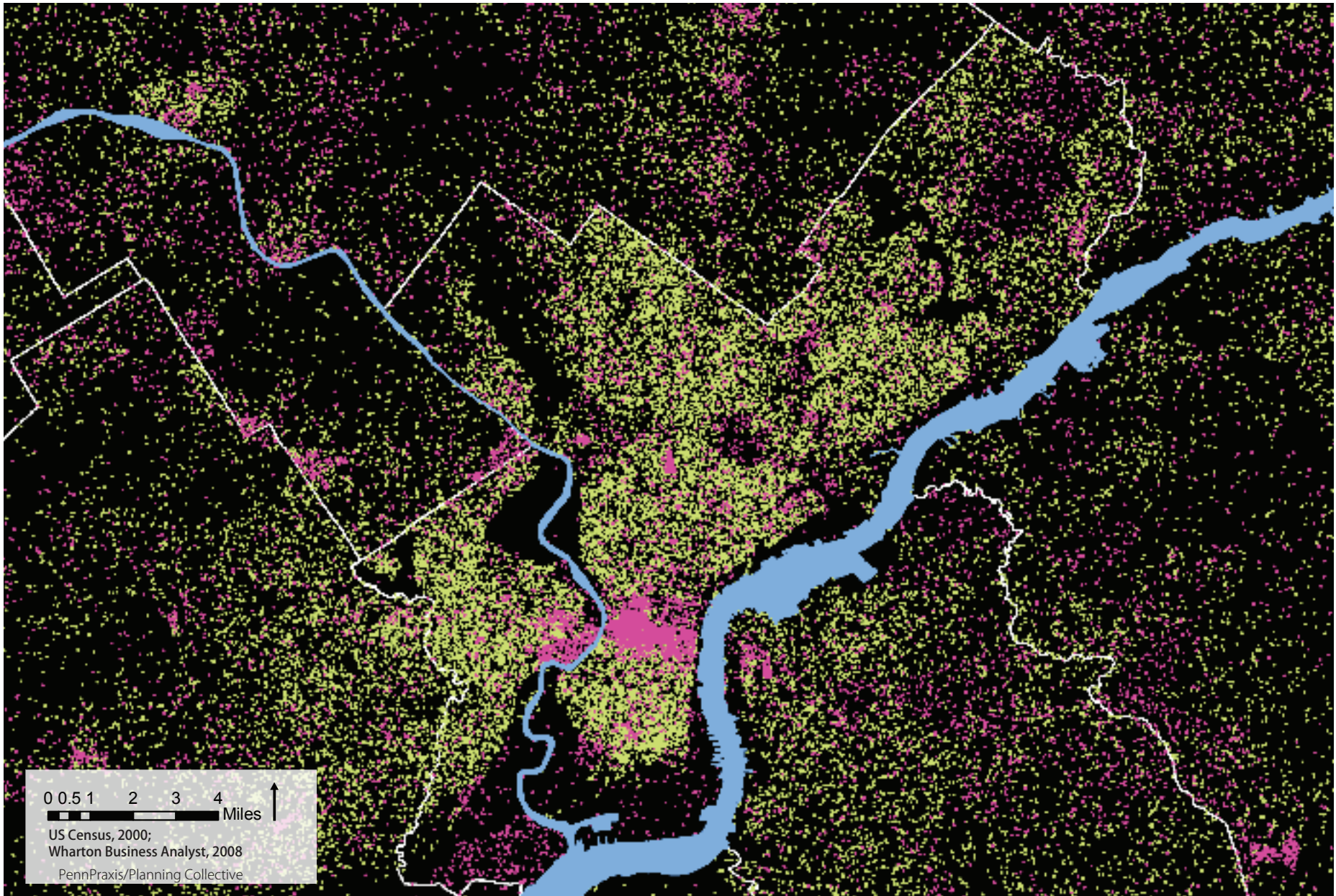
ABOVE: This map shows the relative number of passenger boardings and landings at each major Amtrak station along the Northeast Corridor. Philadelphia's 30th Street Station is the third-largest passenger hub, topped only by the nation's economic (New York) and political (Washington, D.C.) capitals.



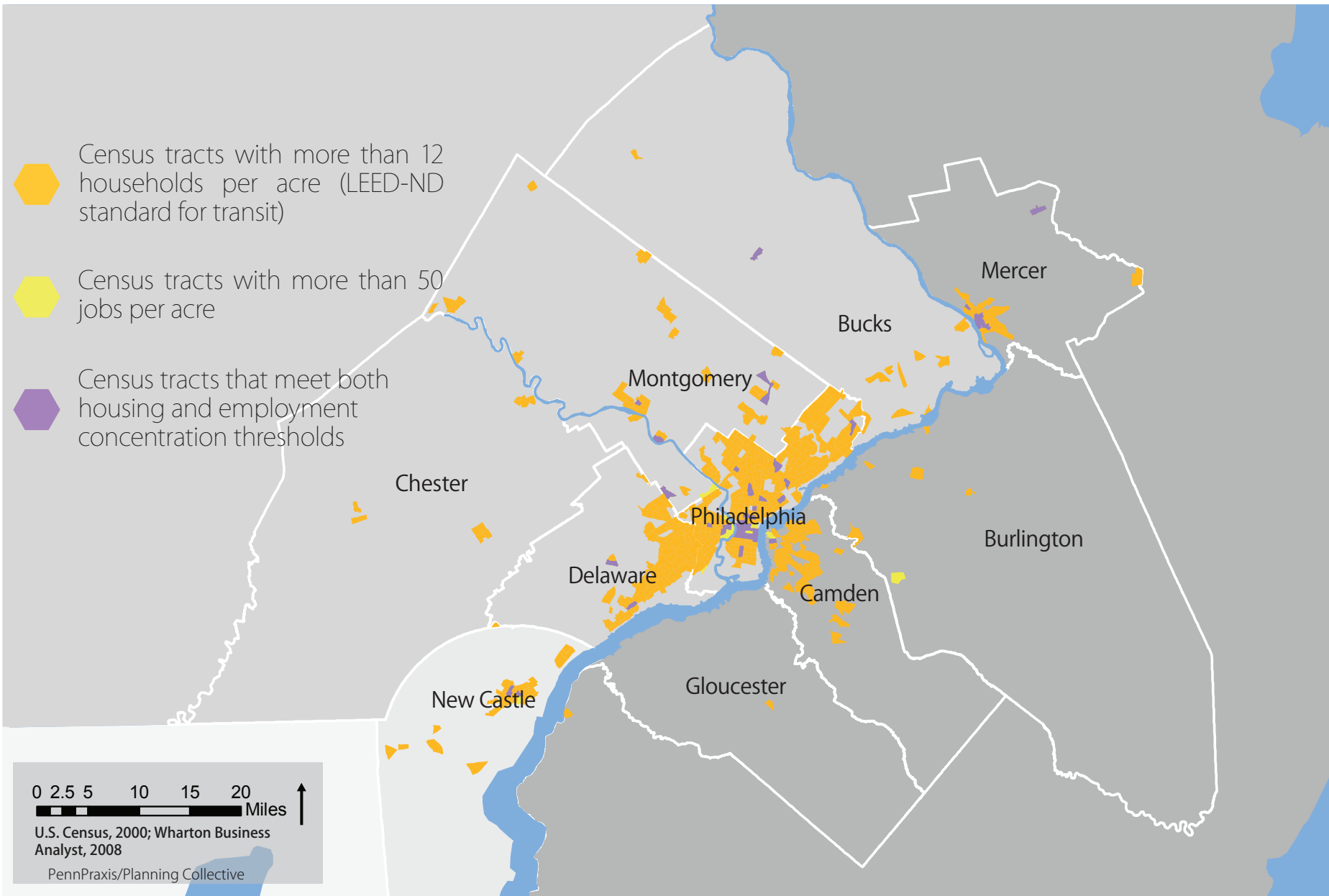
ABOVE: This map shows the relative tonnage of the various port authorities along the Northeast Corridor. Though much has been said about the decline of the Port of Philadelphia, the region's ports combine to process more than 115 million tons of materials each year. While the Port Authority of New York and New Jersey is a single entity, Greater Philadelphia includes multiple port authorities that oversee separate operations along the Delaware River.



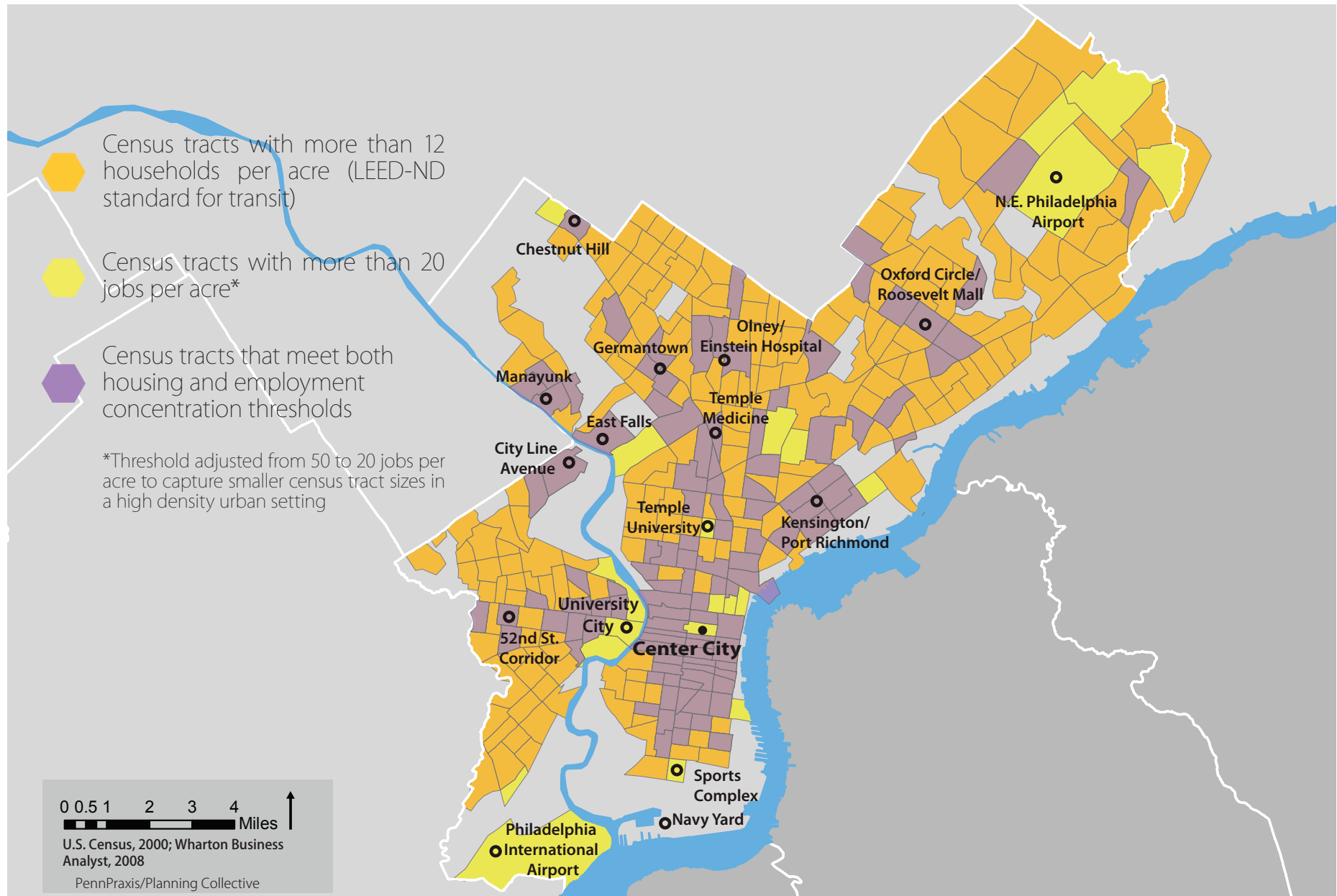
ABOVE: This map shows the relative density of population and employment across the region by using colored dots to signify concentration. Each green dot represents 300 residents and each purple dot represents 300 jobs. Those geographic areas with the most overlapping dots represent the densest centers in the region. While we see the strongest concentration of jobs and residents in Philadelphia, the remaining population and employment is widely dispersed across the region, typically running along highway corridors. Other traditional cities like Wilmington, Del., and Trenton, N.J., are exceptions.



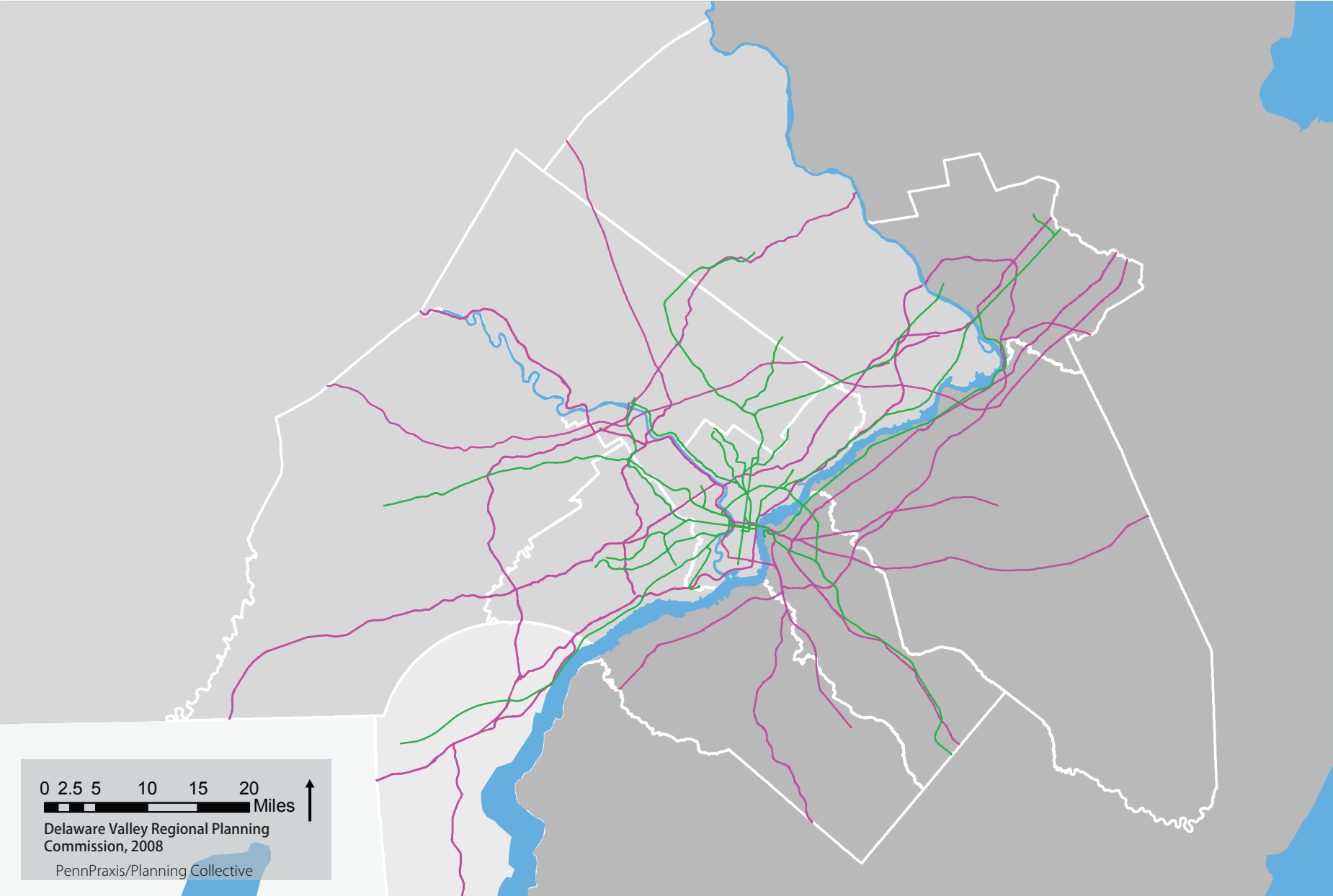
ABOVE: This map uses “dot density” to show the relative concentrations of population and employment within Philadelphia itself. Each green dot represents 100 residents and each purple dot represents 100 jobs. Center City and University City are the two main areas with dense population and employment, while most other parts of the city are either predominantly residential or job centers.



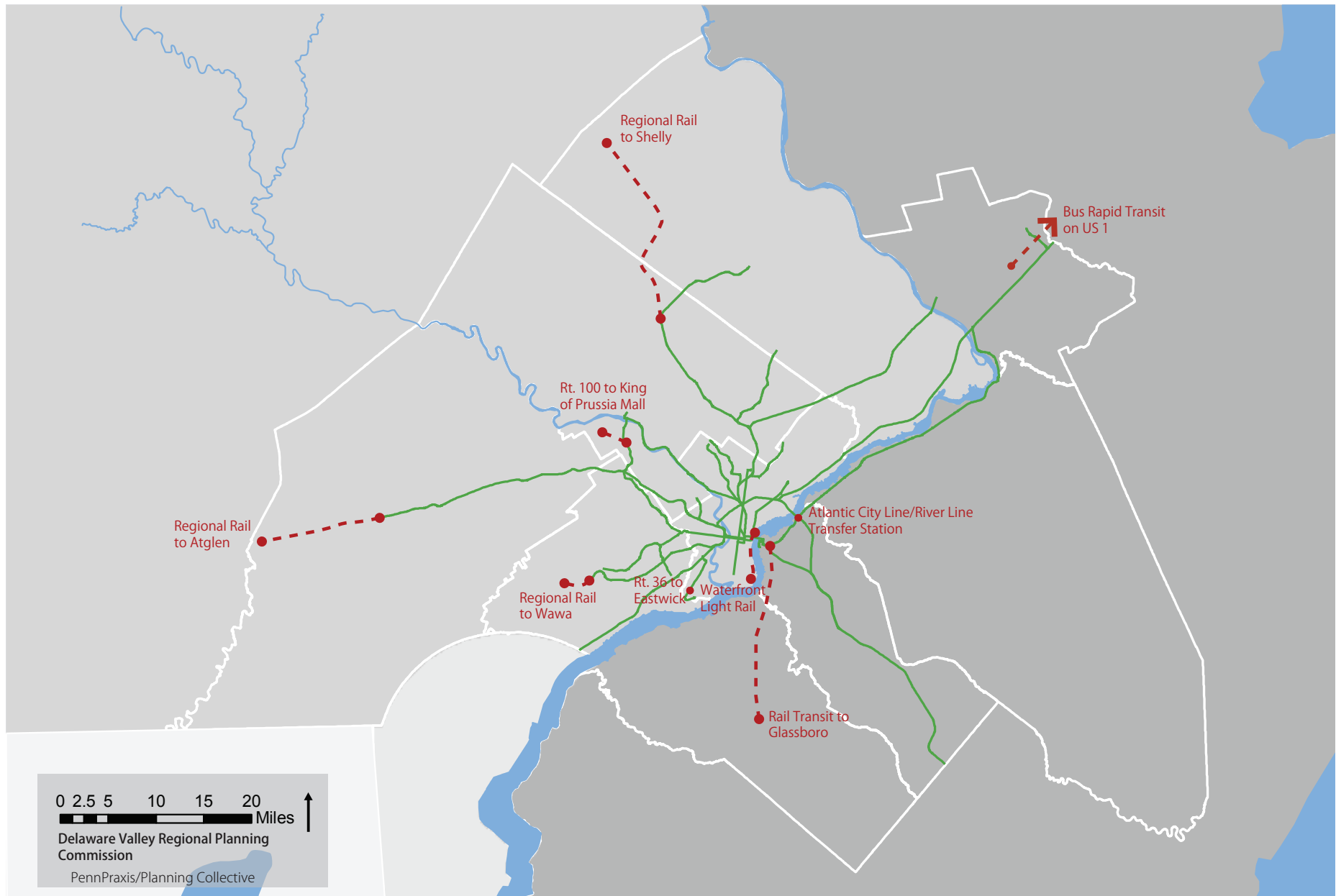
ABOVE: This map shows areas of population and employment density by highlighting census tracts that meet certain concentration thresholds. In this case, 12 households per acre and 50 jobs per acre are the marks the Transportation Research Board recommends for justifying light rail transit. The purple tracts meet both thresholds, and are largely focused in Center City Philadelphia.



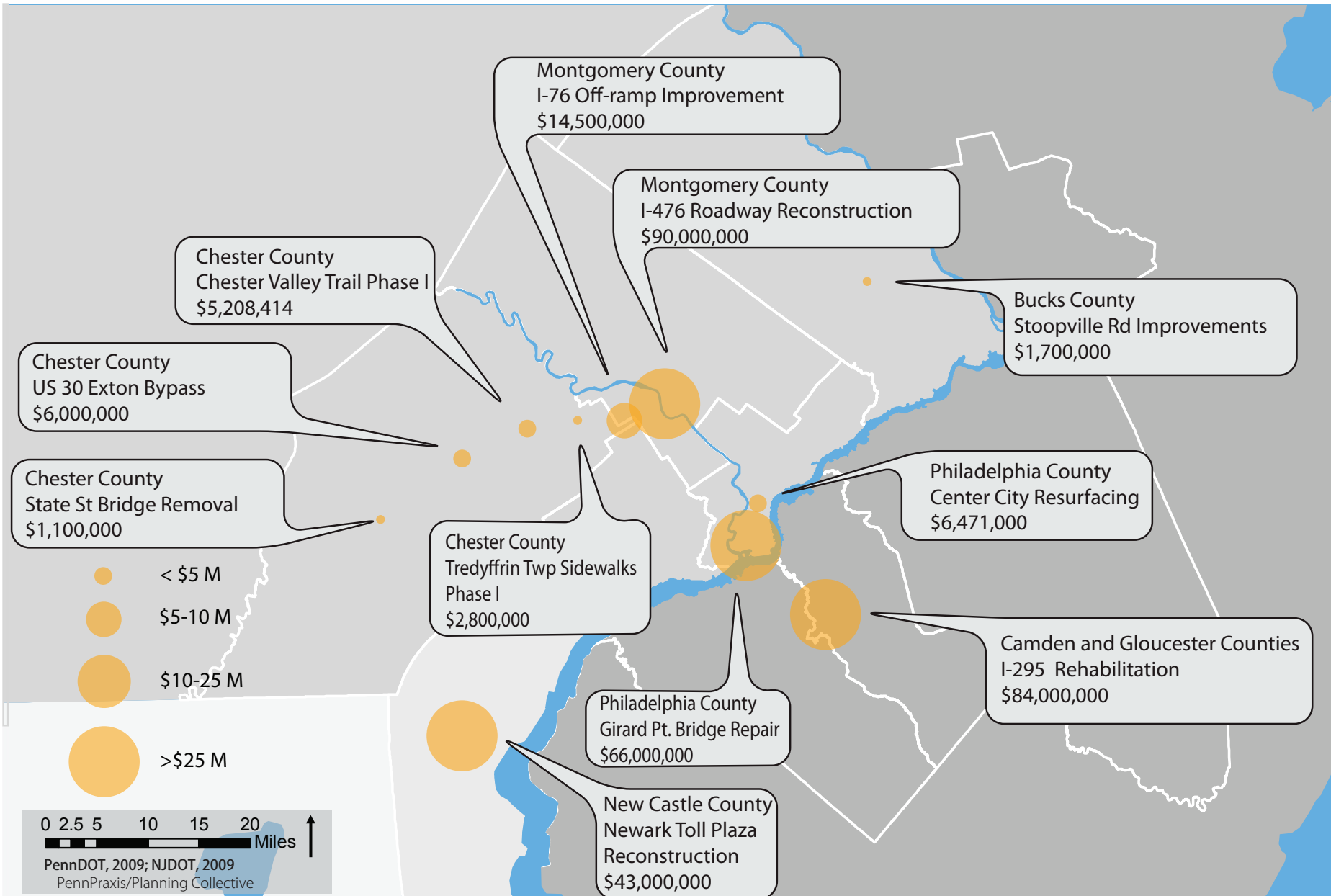
ABOVE: This map uses the same population and employment concentration thresholds to show centers of density within Philadelphia itself. Most areas identified benefit from existing rail transit infrastructure, though some census tracts do not. City centers of density include Center City, University City, the Temple University corridor and pockets of Northeast Philadelphia.



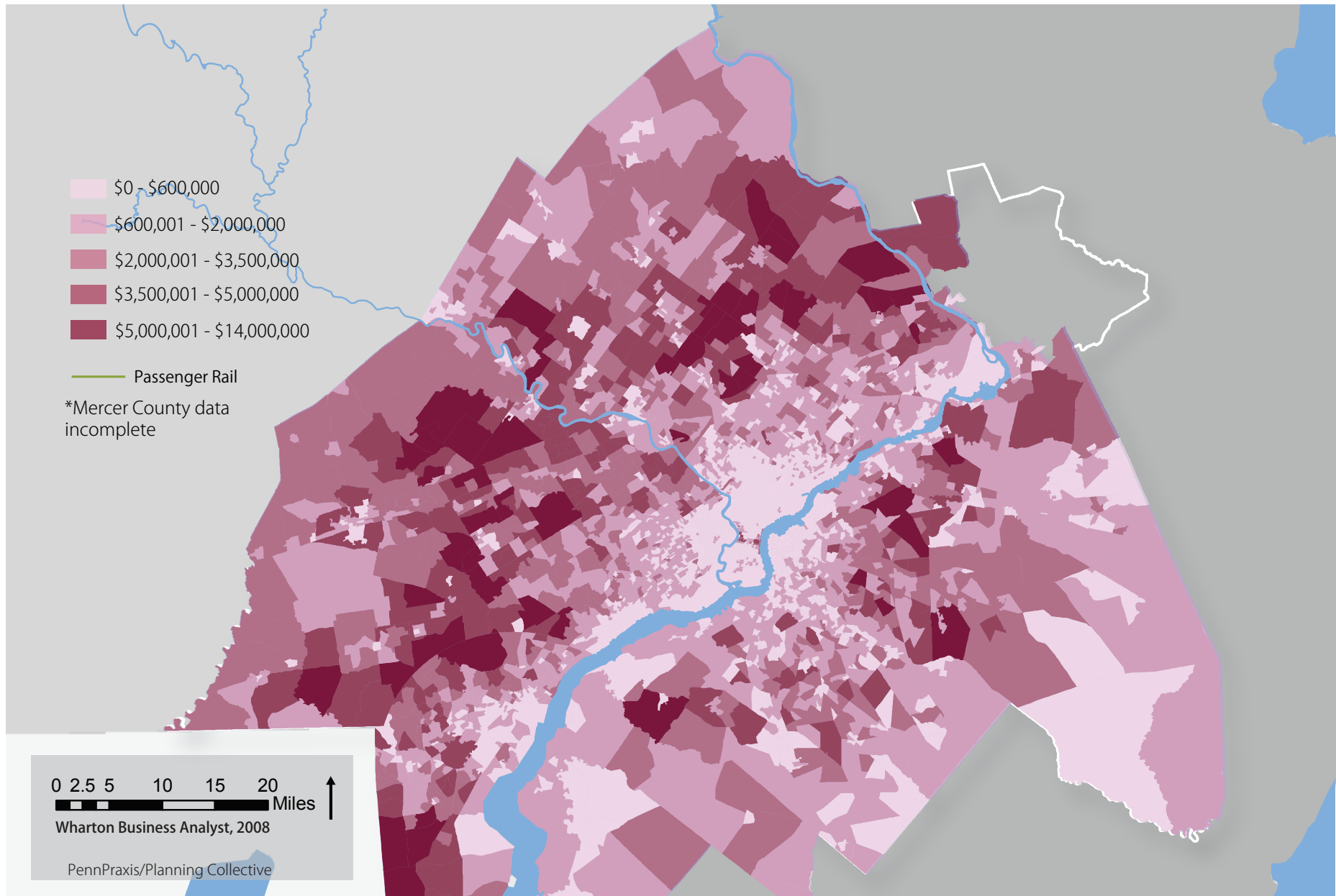
ABOVE: This map shows the regional transportation network of passenger rail (excluding trolleys) in green and highways in purple. This vantage point shows the dense local and regional rail networks in Philadelphia and its inner suburbs, while outlying towns rely more heavily on auto-oriented infrastructure.



ABOVE: This map shows the transit improvement projects proposed by the Delaware Valley Regional Planning Commission as part of its 2035 long-range plan. Most are extensions of existing regional rail lines into the suburbs and outlying towns as opposed to links between regional centers of population and employment density.



ABOVE: This map presents the most recent data from state transportation departments on the allocation of funds from the American Recovery and Reinvestment Act of 2009 (ARRA) toward regional highway improvements. This shows the significant amount of federal recovery money going toward roadway projects versus transit projects (by comparison, the largest ARRA transit investment in the region is \$25 million). Also, it is worth noting that most projects are for deferred highway maintenance and rebuilds as opposed to creating new infrastructure.



ABOVE: This map shows how much money is collectively spent on gasoline each year by census tract. Despite the fact that the number of residents in each census tract varies dramatically, this map clearly shows that people drive more and spend more on gas the further they live from centers of density or an integrated public transit network.