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2017

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Comprehensive Economic Development Strategy for Southwestern Pennsylvania

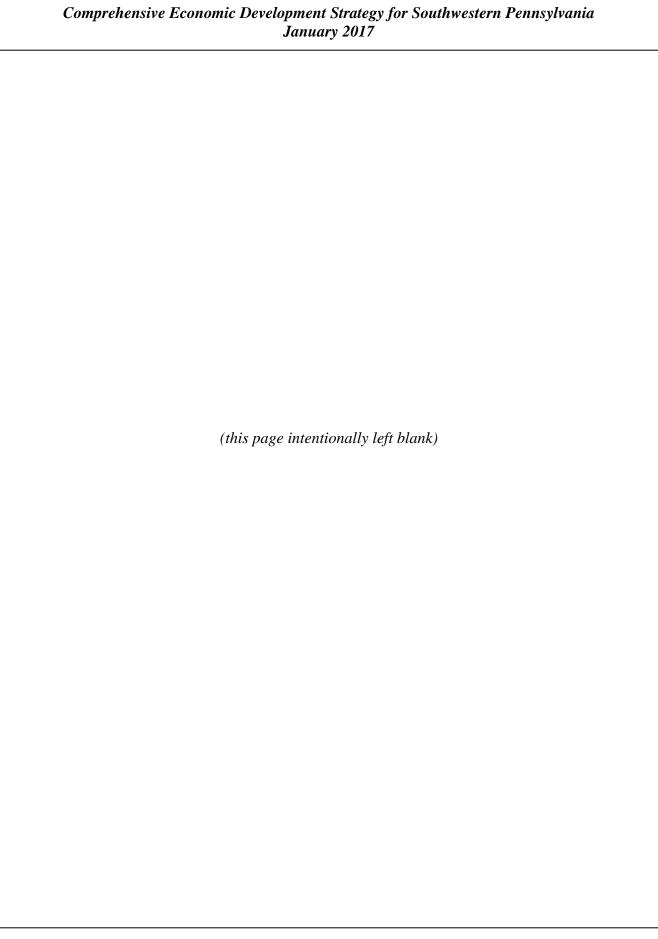


January 2017

Southwestern Pennsylvania Commission

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Section 1: Introduction

1.1: Summary Background

The Southwestern Pennsylvania Commission (SPC) is the designated Metropolitan Planning Organization (MPO), Local Development District (LDD), and Economic Development District (EDD) for Southwestern Pennsylvania. In these roles, SPC is the leader in regional planning for Southwestern Pennsylvania and is charged with developing both the regional long range transportation plan and the comprehensive economic development strategy (CEDS). SPC integrates these two plans into a coordinated regional program of projects and actions that are guided by the principle that the relationship between economic development and the region's transportation system is fundamental.

SPC established a Regional Vision providing strategic direction for the region through a nationally recognized process (Project Region). This extensive scenario planning process evaluated trends and alternative scenarios for regional development with policy level goals and strategies to achieve the **Regional Vision for Transportation and land use that supports and enhances the regional economy and the communities within it.**

Mapping the Future: The Southwestern PA Plan builds upon the Regional Vision developed during the Project Region process. The Project Region process culminated in adoption of the regional long range plan that includes a development scenario built upon well-defined strategies and policy goals for the region that emphasize cost-effective management and reuse of our existing assets while pursuing sustainable development that is responsive to new opportunities. They are the foundation for Mapping the Future.

Mapping the Future: The Southwestern PA Plan prioritizes programs and projects that have been developed to address the region's pressing needs to maintain and preserve our existing transportation assets for the sustainability of the region's economic competitiveness and the vitality of our communities. This plan projects fiscal resources considered reasonably available to us under guidelines established by federal law. It allocates the anticipated fiscal resources within the federally constrained projections. The plan provides a new set of enhanced performance metrics that allow us to better track changes on items identified as important by respondents to detailed presentation of trend data and investment priority preference surveys.

This document, the Comprehensive Economic Development Strategy (CEDS), is an integral part of *Mapping the Future* and its companion reports. Please refer to these documents for in-depth discussions of existing conditions, transportation and public transit issues, environmental justice and air quality.

Public engagement throughout the development of the *Mapping the Future* provided important opportunities for the public, planning partners and interested parties to share information, ideas, needs and priorities as we work together to build our region's future. SPC's Public Participation Program offers a variety of opportunities for the public to participate in the planning process. SPC brings planning directly to our member counties through Public Participation Panels (Panels). Panels are comprised of more than 300 individuals reflecting the demographic diversity, needs, and concerns of communities throughout our 10-county region. The Panels help to conduct outreach, identify needs and resources, suggest alternatives, and assist in the evaluation of implementation strategies in the planning process.

The CEDS incorporates elements of *Mapping the Future* and builds upon or provides additional information where appropriate. *Mapping the Future* includes policy goals; a detailed discussion of demographics and socioeconomic analysis of the region; discussions on the environment and the region's economic relationship to the larger region; and, a detailed discussion of the region's infrastructure. Finally, *Mapping the Future* and the plan development process include performance measures that incorporate economic, transportation and community measures reflecting the nature of *Mapping the Future* as the base for future planning implementation efforts such as the CEDS.

This CEDS supplements the information referenced above with discussion on emerging and declining clusters and sectors, and identifies those that are key to the region's economic future, specifically advanced manufacturing, healthcare and life sciences, energy, information technology, and financial and business services. It also identifies the key declining cluster of coal mining. It includes a discussion of workforce and a region-wide Strength, Weakness,

Opportunity and Threat (SWOT) analysis that identifies key challenges and an action plan for SPC as the EDD to address those challenges.

Included in these key challenges are the continued slowdowns in the metals industry leading to job losses; the continued evolution of manufacturing; the collapse of the coal industry; and, the change in the region's demographics and its impact on workforce.

1.2: Population and Employment

As Southwestern Pennsylvania was being settled, transportation systems were developed in a radial pattern,

Southwestern
Pennsylvania
is larger in
area than the
states of
Connecticut,
Delaware, and
Rhode Island.

emanating outward from the City of Pittsburgh. Due to this radial system, 20^{th} century population and housing growth within the region largely occurred in the region's post World

War II communities. This growth, however, is constrained differently throughout the region due to significant differences in topography and the varying degrees of accessibility to major transportation systems.

At the time of the last decennial count, the region had a population of 2,574,959, making it the largest metropolitan area in the 13-state Appalachian Region. In terms of population, the SPC region would be the 36th largest state in the country. In terms of area, the region is larger than the states of Connecticut, Delaware, and Rhode Island. Year 2014 estimates from the Census Bureau (Figure 1.1), however, continue to show some population decline at the regional level for Southwestern Pennsylvania and most close regional neighbors such as Youngstown, Johnstown, Steubenville and Wheeling. The lingering effect of the massive population decline related to steel industry reductions in the region remains a factor in current population statistics. The distribution of population varies around the region with the bulk of population decline in the older urbanized industrial centers corresponding to economic shifts in the last several decades (see Figure 1.2).

Figure 1.1 Regional Population

County	1990	2000	2010	% Change 2000 to 2010	2014 Estimate
Allegheny	1,336,449	1,281,666	1,223,348	-4.55%	1,231,255
Armstrong	73,478	72,392	68,941	-4.77%	67,785
Beaver	186,093	181,412	170,539	-5.99%	169,392
Butler	152,013	174,083	183,862	5.62%	185,943
Fayette	145,351	148,644	136,606	-8.10%	134,086
Greene	39,550	40,672	38,686	-4.88%	37,843
Indiana	89,994	89,605	88,880	-0.81%	87,706
Lawrence	96,246	94,643	91,108	-3.74%	88,771
Washington	204,584	202,897	207,820	2.43%	208,187
Westmoreland	370,321	369,993	365,169	-1.30%	359,320
Total	2,694,079	2,656,007	2,574,959	-3.05%	2,570,288

Source: U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2014

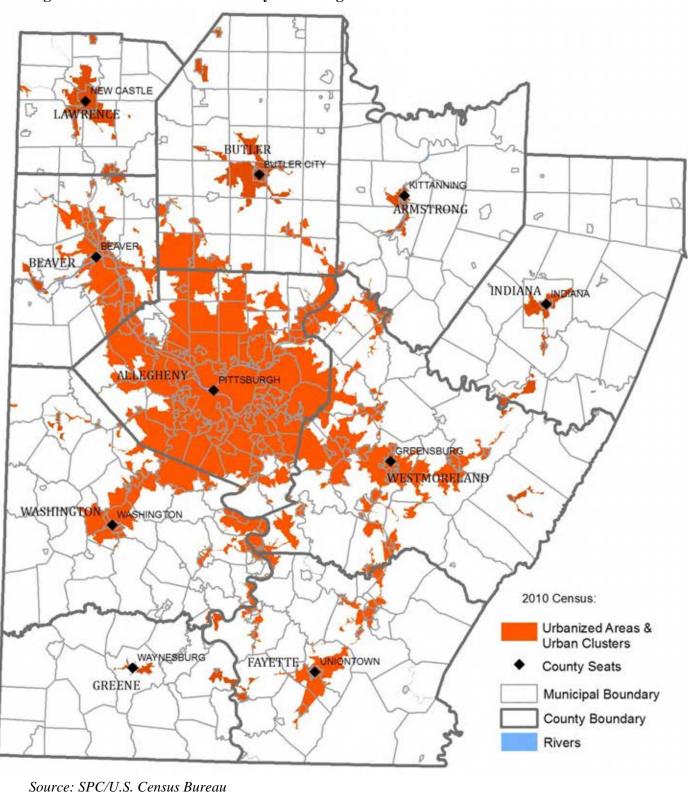


Figure 1.2 Southwestern Pennsylvania Region Urbanized Areas & Urban Clusters

Household sizes in the region continue to get smaller, as they have in the rest of the country. Reduction in average household size in the region from 3.52 persons per household in 1950 to 2.30 persons per household in 2010 mirrored a national trend of decreasing household size. Decreasing household size can create continued demand for housing units even in the face of overall population decline as the composition of households change.

While population continued to decrease slightly in the region, employment levels continued to improve. At the 2007 adoption of the 2035 Plan, the region had seen unemployment rates at their lowest in three decades. With the economic downturn that, of course, changed. However, unemployment rates from the Department of Labor and Industry show that through the recession Pennsylvania continued to fare better than the nation, and the Pittsburgh Metro Area continued to fare better than Pennsylvania (Figure 1.3).

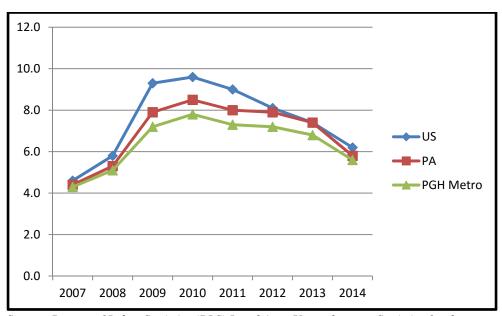


Figure 1.3 Unemployment Rates

Source: Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics for the civilian non-institutional population by resident geography, data not seasonally adjusted

Manufacturing still employs a large portion of the regional labor force, but large shares of the region's jobs and growth are now within the services sector, including education and healthcare services. Financial services, education, government enterprise, retail trade, and transportation/warehousing are also important industries. The region's economy benefits from its wealth of colleges and universities, which also support employment growth in high–skilled and high-technology occupations. Today, the region has nearly three dozen colleges and universities within its borders and, as recently as 2011, an enrollment of about 172,000 students.



Today, there are approximately 113,000 individual business establishments of all sizes in all industries in Southwestern Pennsylvania, including large national companies such as Alcoa, Inc., H.J. Heinz Co., BNY Mellon Financial Corporation, PPG Industries, Inc., U.S. Steel, Consol Energy and WESCO International, Inc. Sectors cited by workforce and economic development agencies as key growth opportunities include advanced manufacturing, financial and back office services, information technology and life sciences. Energy will remain an important part of the regional economy as well due to continuing shale gas exploration and, mid and downstream utilization.

Along with its urban base, Southwestern Pennsylvania has significant agricultural resources. The agricultural industry remains a vital aspect of the region's economy, way of life and cultural heritage. The region has approximately 9,700 working farms. Growing interest and support of development of alternative fuels could advantage farm operations supplying agricultural materials in this sector.



The three predominant employment sectors for all 3 years 2001, 2007, and 2013 were retail trade, healthcare and social assistance, and government and government enterprises. The largest percentage increase between 2001 and 2013 was management of companies and enterprises at 147.5%. The second largest percentage increase was mining at 87.3% (Figure 1.4).

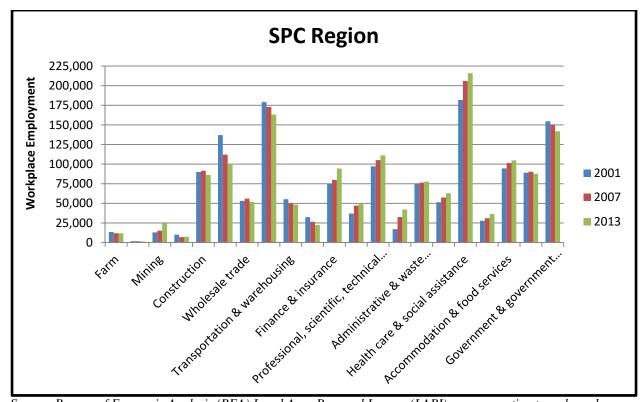


Figure 1.4 Workplace Employment: 2001, 2007, and 2013

Source: Bureau of Economic Analysis (BEA) Local Area Personal Income (LAPI) program estimates released November 20, 2014

Future Population and Employment

With each Plan update, SPC prepares new projections of regional population, employment and households. These projections represent the best available portrayal of Southwestern Pennsylvania's growth and development trends through 2040 based on information available today about current and recent trends. This plan update cycle represents the tenth update to SPC's forecasts. SPC's new forecast, the Cycle 10 forecast, indicates that the region will see modest growth in population over the long term.

SPC's projections are developed with a two-step process. First, new population and employment projections are produced for the region as a whole. These forecasts are then disaggregated to municipalities and traffic analysis zones (TAZs). The first step in the forecasting process (development of regional projections) is produced by the REMI (Regional Economic Models, Inc.) PolicyInsight model, a widely used policy analysis model that computes regional population and employment totals for future years.

SPC's MERLAM model (Mature Economic Region Land Allocation Model) is used to allocate the REMI regional population and employment projection to municipalities and traffic zones. The allocation is based on local data for relative tax rates, accessibility to transportation facilities, proximity to jobs, existing development density, and other factors that measure each area's relative capacity to attract and retain people and jobs. The MERLAM model also develops the projection of households based on the population forecast and the region's reported 40-year Census trend in household size.



The overall regional population growth is estimated at approximately 337,000 by 2040, which is well under 1% per year. Each county's population is projected to grow somewhat over this 25-year period. The rate of growth in households is determined by both the change in population and the change in household

size. With a projected decline in household size and growth in population, the number of households in the region is projected to grow faster than population. Approximately 183,000 new households are projected by 2040. Regional employment is projected to grow by approximately 300,000 jobs, with growth in retail trade, services and other sectors offsetting the anticipated decline in the manufacturing sector.

Figure 1.5 depicts the estimated growth in population, employment and households from the Cycle 10 forecast.

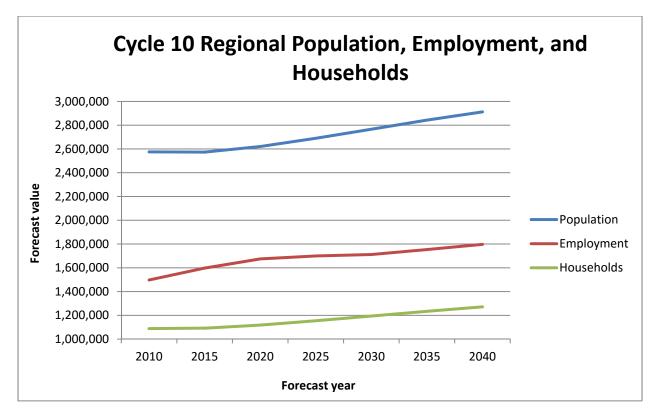


Figure 1.5 Cycle 10 Regional Population, Employment and Households

Source: SPC Cycle 10 Forecast

1.3: Geography and Environment

Southwestern Pennsylvania is quite diverse – including higher density urban development in downtown Pittsburgh and other regional cities, suburban areas, as well as very rural places. In fact, Southwestern Pennsylvania is really a microcosm of the Commonwealth in terms of the diversity of our people and our communities.

Southwestern Pennsylvania has experienced decades of challenges, but it is becoming recognized around the world as a place that can adapt and renew itself through concerted action. It also has unique assets that will help bring it through significant new challenges being experienced nationally.

Historically, it is well known that the region's economy relied heavily on the steel manufacturing industry, which sustained nearly 100,000 workers and their families throughout the Monongahela and Beaver River valleys until the mid-1970s. The sharp contraction of the steel

Nearly 78% of the region's population lives in the 15% of the land area that is classified as urban

industry in this region directly contributed to the significant population losses and decline of its urban centers. Hardest hit were the historic industrial centers where the proportion of residents living in the region's boroughs and cities began to decrease after 1960, and the percentage of urban dwellers in 2000 had declined to the levels in the 1930s.

The region spans ten counties—Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence,

Washington, and Westmoreland—and 548 municipal governments, many of which were formed around the local factories to provide services to the plants and workers. Geographically, the region covers 7,112 square miles and is situated in the southwestern portion of the state.

Physical Features

Physically, the Allegheny Plateaus section of the Appalachian Mountains defined the region's terrain and strongly influenced its development. This geography, rugged and heavily dissected by surface waters producing deep valleys and steep hillsides, included abundant assets that greatly contributed to the region's historic and existing land use patterns (Figure 1.6).

Beneath the rolling surface of Southwestern Pennsylvania lie vast energy resources, including coal, natural gas and shale oils. Extractive industries have long been vital elements of the regional economy. With recent advances in techniques to access gas and liquids in the Marcellus and Utica shale deposits throughout much of Pennsylvania, new centers of economic activity have grown across parts of the region.



Figure 1.6 The Physiographic Region

Due in large measure to steep slopes and rolling topography, the majority of the region's population is concentrated throughout the river valley communities. The high concentration of population stemming outward from highly urbanized Allegheny County has contributed to relatively high population density levels found in Beaver County. In contrast, the population density levels of the remaining eight counties are lower relative to the region. When examining

the U.S. Census designations of urban and rural areas, nearly 78% of the region's population lives in the 15% of the land area that is classified as urban.

Water

The surface waters of Southwestern Pennsylvania are a critical natural resource to the region, which is located in the Ohio River Watershed (with the exception of a small area of approximately 65 square miles in northeastern Indiana County draining to the Susquehanna River).

The region's water resources include over 15,000 miles of rivers and streams, 240 named



lakes and reservoirs, hundreds of unnamed ponds, and wetland systems. Major river systems of the Allegheny, Monongahela, Beaver, Conemaugh, Kiskiminetas, Mahoning, Shenango, Youghiogheny, and their tributaries provide aquatic habitat, ecological benefits, recreational opportunities, drinking water supply, and transportation and economic benefits to the region.

Compared to other regions in the country, Southwestern Pennsylvania has a relative abundance of water. Precipitation at Pittsburgh, as recorded by the National Weather Service, has averaged 38.19 inches a year since 1837. Maximum annual precipitation was 57.41 inches in 2004, and minimum annual precipitation was 22.65 inches in 1930.¹

Lack of precipitation in other parts of the country can lead to water shortages and low hydrological (lake, reservoir, and stream) levels, which can create a great deal of stress on their water supplies. Southwestern Pennsylvania's major water supply systems depend on the large rivers rather than on local precipitation. In addition to annual precipitation in the region, dams and reservoirs on the Allegheny, Youghiogheny, and Monongahela Rivers provide water storage that can offset below-normal flow during years that may have low precipitation.

Changing weather patterns may also bring more frequent and severe storm events to the region than have been experienced historically. Intensified storms that deliver higher amounts of precipitation in short periods of time can cause an increase in localized flooding. Managing

¹ Source: National Weather Service Pittsburgh Climate Data http://www.erh.noaa.gov/pbz/tprec.htm (4/27/2015)

stormwater runoff through the use of Best Management Practices (BMPs) will work towards mitigating the effect of flash runoff, which can cause additional flooding, pollution, and stream bank erosion.

Shale Gas Formations



The exploration and extraction of natural gas from the shale gas formations, primarily the Marcellus Formation, continues to play an ever-increasing role in the region. According the Pennsylvania Department of Environmental Protection there are over 42,000 active and operating oil and gas wells in our region already, and an increasing percentage of them are associated with the Marcellus Shale industry.

The Marcellus Shale, also referred to as the Marcellus Formation, is a Middle Devonian-age black, low density, carbonaceous (organic rich) shale that occurs in the subsurface beneath much of Ohio, West Virginia, Pennsylvania and New York. Small areas of Maryland, Kentucky, Tennessee, and Virginia are also underlain by the Marcellus Shale.

Due to the depth of the Marcellus Shale, horizontal drilling and hydraulic fracturing methods that were first proven successful in other shale plays across the country are used to extract the gas and associated liquids to the surface. Since the first successful production from Marcellus wells in 2005, activity of shale gas exploration has continued to increase across the region. The Pennsylvania Department of Environmental Protection (PA DEP) reports that only 75 Marcellus Shale wells permits were issued in the region in 2007. Current reports show that the PA DEP has issued over 6,000 permits for Marcellus Shale wells in the region in recent years through 2014 (Figure 1.7).

A few thousand feet below the Marcellus is the Utica Shale, which also has the potential to become an enormous natural gas resource. The Utica Shale is thicker than the Marcellus, is more geographically extensive, and has already proven its ability to support commercial production.

While the full story of the shale gas formations exploration may not be written for years to come, it is apparent that it will be a significant chapter of this region's future. Large international energy firms, high volume production wells, drilling pads, roadways, pipelines, gathering

systems, surveying work, permit preparation data and landowner relationships are now part of the development context in Southwestern Pennsylvania and adjacent regions.

Figure 1.7 Marcellus Gas Permit Activity

County	2007	2008	2009	2010	2011	2012	2013	2014	Total
Allegheny	0	2	5	2	9	28	25	50	121
Armstrong	4	11	44	49	90	48	62	37	345
Beaver	0	0	6	5	21	49	41	43	165
Butler	15	12	42	79	146	105	160	187	746
Fayette	0	37	90	77	68	61	47	49	429
Greene	4	55	182	179	219	149	259	458	1,505
Indiana	2	12	19	27	15	10	23	6	114
Lawrence	0	0	0	1	8	39	27	89	164
Washington	48	106	209	249	264	332	414	411	2,033
Westmoreland	2	28	89	87	114	90	49	21	480
Total	75	263	686	755	954	883	1,107	1,351	6,074

Source: PA Department of Environmental Protection

1.4: Transportation and Transportation Infrastructure

Roadways and Bridges

The Pennsylvania Department of Transportation (PennDOT) owns and maintains over 120,000 linear miles of roadway, carrying vehicles more than 300,000,000 miles per day. In Southwestern Pennsylvania, state-owned highway and bridge infrastructure is divided into three PennDOT engineering districts. District 10-0, headquartered in Indiana, encompasses the counties of Armstrong, Butler, and Indiana in the SPC region as well as Jefferson and Clarion Counties outside the SPC planning region. District 11-0, located in Bridgeville, covers

Allegheny, Beaver, and Lawrence Counties. District 12-0, headquartered in Uniontown, includes Fayette, Greene, Washington, and Westmoreland Counties.

A summary of the roadway and bridge assets in each of these areas is included in Figures 1.8 and 1.9. These figures also illustrate that while state-owned roadways make up a considerable amount of the infrastructure in Southwestern Pennsylvania, and many of the higher order systems, counties and local municipalities still own and maintain significant roadway and bridge assets.

Figure 1.8 Southwestern Pennsylvania Roadway Infrastructure

County	PennDOT Linear Miles	Local Municipal Linear Miles	Other Agency Linear Miles	Total Linear Miles
Armstrong	655.03	1,151.30	14.10	1,820.43
Butler	653.70	1,611.07	42.99	2,307.76
Indiana	797.19	1,271.97	30.83	2,099.99
District 10-0	2,105.92	4,034.34	87.92	6,228.18
Allegheny	1,177.84	4,627.65	39.25	5,844.74
Beaver	603.45	1,039.88	46.37	1,689.70
Lawrence	384.56	794.48	18.08	1,197.12
District 11-0	2,165.85	6,462.01	103.70	8,731.56
Fayette	758.77	1,302.13	40.35	2,101.25
Greene	573.87	931.73	4.92	1,510.52
Washington	1,090.79	1,758.07	25.79	2,874.65
Westmoreland	1,185.10	2,409.75	80.03	3,674.88
District 12-0	3,608.53	6,401.68	151.09	10,161.30
SPC Region	7,880.30	16,898.03	342.71	25,121.04

Source: PennDOT, 2013 Highway Statistics

Figure 1.9 Southwestern Pennsylvania Bridge Infrastructure*

PennDOT District	State-Owned Bridges	Bridge Deck Area (million square ft)	County & Local Bridges	Bridge Deck Area (million square ft)
District 10-0	1,154	4.150	323	0.432
District 11-0	1,803	15.098	522	3.365
District 12-0	2,343	6.872	546	0.738
SPC Region	5,300	26.120	1,391	4.535

Source: PennDOT, 2013

Included in the Other Agency Linear Miles in Figure 1.8 are the highways of the Pennsylvania Turnpike Commission, which play a vital role in regional travel within and through the SPC region. These facilities include the Pennsylvania Turnpike (I-76) mainline, the Mon-Fayette Expressway (S.R. 43), a portion of the Beaver Valley Expressway (I-376), Toll 66 in Westmoreland County, and the Findlay Connector (I-576).



The 25,000+ miles of roadways in the 10-county SPC region come with significant maintenance requirements in order to keep these roads and bridges in good repair. Decades of federal and state underinvestment in Pennsylvania's highway system has resulted in a backlog of \$5.8 billion in deficient state-owned roads and bridges in the region (does not include locally-owned roads). Since 2012, federal revenues have been focused on the National Highway System (NHS), the

most heavily traveled highways, including the Interstate network. Expanded state revenues through PA Act 89 will supplant the federal program by stabilizing and helping to prevent further deterioration in the remaining state-owned highway network. Additional federal or state funding will be needed to bring the complete network - federal, state and local - into a state of good repair.

^{*}Includes all state bridges greater than 8 feet in length and generally includes county and local bridges over 20 feet in length.

In addition to ongoing maintenance activities to keep the region's roads and bridges in good condition,
Southwestern Pennsylvania has significant resources and assets devoted to transportation operations. While state highway departments have traditionally been focused on designing, building, and maintaining infrastructure, there has been increased recognition in recent years that transportation systems



must be integrated across modes and actively operated to ensure that they function safely and efficiently and return the most benefit on public investment. The increasing cost of new infrastructure, coupled with advances in modern technology, has caused operations efficiency and improvements to take on added importance.

Public Transportation

There is a long history of mass transportation services for residents of Southwestern Pennsylvania. Through the mid-20th century, privately owned and operated services such as streetcars, commuter rail and local bus companies dominated the region. Mass transportation became less profitable in the mid-20th century, and in 1954, Port



Authority Transit was created to continue transit service in Allegheny County by combining 33 private bus companies and the Pittsburgh Railways Company into a consolidated system. The Port Authority of Allegheny County was created by legislation enacted by the Pennsylvania General Assembly in 1956. Originally created to enable development of ports, the Port Authority's enabling legislation was amended to permit them to acquire privately owned transit facilities and to own and operate a public system of mass transit in 1959. A decade and more later, and with the advent of public subsidy programs, public transit systems were formed in other areas of the region to replace unprofitable privately-provided service.



In FY 2012, public transit providers in the region provided over 67 million rides on fixed-route buses and rail vehicles, moving people to jobs and other life activities. Other types of alternative mobility providers – county-sponsored shared ride programs, human services transportation programs, the region's volunteer ridesharing vanpools and carpools (CommuteInfo) – provided an

estimated 4 to 6 million additional rides. Altogether, these transit services accounted for approximately 1.5% of all trips taken throughout the region, but as much as 50% of all commuter trips into downtown Pittsburgh. The Port Authority of Allegheny County provides approximately 95 percent of all the daily fixed route transit rides currently taken in the region.

The Port Authority of Allegheny County operates 37.7 miles of light rail, 19.5 miles of busway and two inclines. Six regional transit agencies provide weekday commuter service into the urban core, with three of them utilizing the Port Authority's busways. Connections between the Port Authority and other transit operators are also provided at locations such as Robinson Town Centre, the South Hills Village Light Rail Station and downtown Pittsburgh.



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The transit agencies serving the region differ in size, staffing, funding and service delivery methods. Southwestern
Pennsylvania relies on its 10 public agencies that provide fixed route bus service (Figure 1.10), and other coordinated programs and services such as Transportation
Management Associations

(TMAs)—the Pittsburgh Downtown Partnership, Oakland Transportation Management Association and Airport Corridor Transportation Association—access to work programs, shared ride services and medical transportation.

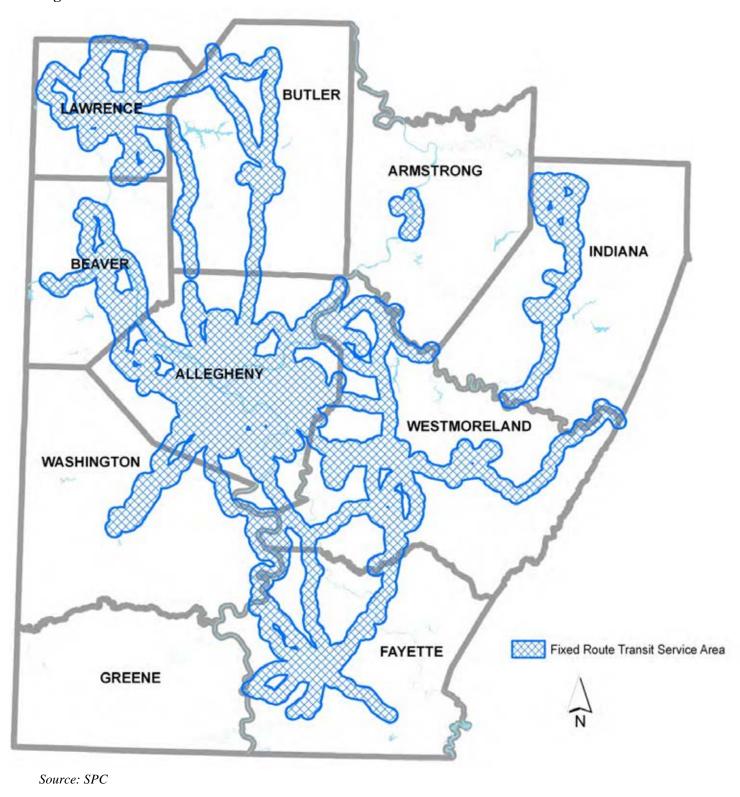


Figure 1.10 Fixed Route Transit Service Area

Carpooling, Vanpooling, Ridesharing & Other Alternatives

SPC's CommuteInfo Program is designed to increase the number of people who travel to work or school by transit, vanpool, carpool, or bikepool. CommuteInfo operates the regional vanpool and carpool program for Southwestern Pennsylvania. The goal is for commuters living, working, or attending school within the 10-county SPC region to choose ridesharing at least twice a week. Every year, thousands of commuters from SPC's member



counties ride in a CommuteInfo van or registered carpool (Figure 1.11).

To support the regional carpool and vanpool program, CommuteInfo offers ridematching and emergency ride home services; provides information for commuters and employers about the benefits of ridesharing, transit, biking, and walking options; and, maintains the regional park-n-ride inventory on its website: www.CommuteInfo.org. The CommuteInfo Program is coordinated in partnership with the Transportation Management Associations—the Pittsburgh

Every year, thousands of commuters in the SPC region ride in a CommuteInfo van or registered carpool Downtown Partnership, Oakland Transportation
Management Association and Airport Corridor
Transportation Association—transportation providers,
businesses, and non-profit service organizations throughout
Southwestern Pennsylvania.

Other emerging alternatives such as ridesharing services like Uber and Lyft have also begun to appear in Southwestern Pennsylvania. The impacts of these new

alternatives are just starting to be seen, and for the mobile app-based services in particular, their ultimate impact will depend in large part upon the regulatory framework that is still being developed to address these new business models.

There are currently 104 designated Park-and-Ride facilities in the 10-county region with parking for more than 16,000 vehicles; 87 of the lots have some form of transit service.



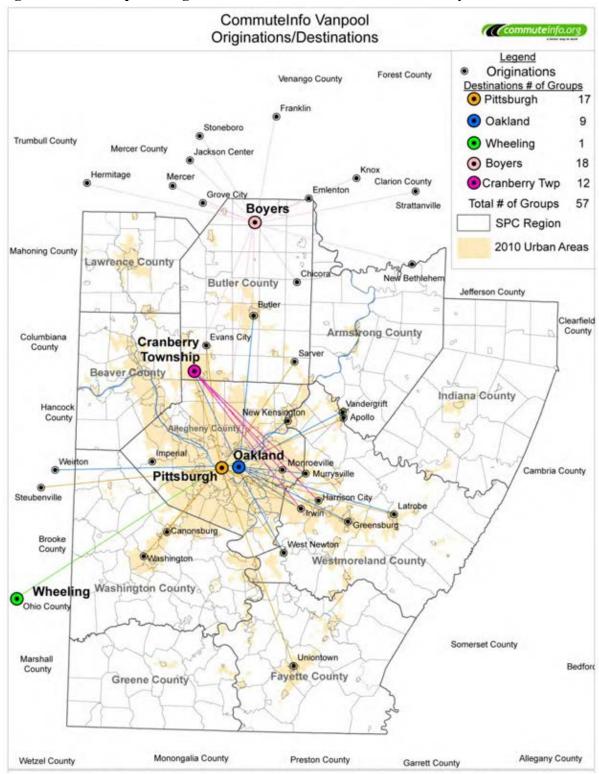


Figure 1.11 Vanpool Origins/Destinations in Southwestern Pennsylvania

Transit Oriented Development/TRID

Several communities are currently pursuing Transit Oriented Development (TOD) related projects, including Transit Revitalization Investment District (TRID) studies and neighborhood TOD planning and transit infrastructure improvements. Such projects seek to integrate land use planning, development activities and transit accessibility to create mixed-use, sustainable communities in the vicinity of transit nodes. The recent development boom in the vicinity of Pittsburgh's East Liberty busway station suggests that TOD strategies can leverage transit service to help revitalize a neighborhood. In other locations, project-based TOD is being built, such as adjacent to the T station at South Hills Village.

Rail

Pennsylvania has an extensive system of freight railroads with more than 5,000 miles of rail line in active service. Southwestern Pennsylvania is served by all three major eastern railroad systems - Norfolk Southern Railway (NS), CSX Transportation (CSXT) and Canadian National Railway (CN). The ability to be served by these railroads helps keep local businesses competitive in the national and global marketplace.

Shortline and regional railroads connect with the Class I railroads, and they are one of the most important elements of the transportation system. They provide access to many commercial and industrial properties and function as an economic development advantage for many communities and businesses. Pennsylvania is also served by 70 regional and shortline railroads, more than any other state in the U.S. These railroads range from shortlines that operate on a few miles of track within



a single county, to major regional systems that extend into adjoining states. The regional and shortline railroads are an integral part of the Pennsylvania transportation network and they provide a competitive edge for Pennsylvania businesses by providing access from commercial and industrial facilities to the suppliers and customers they serve.

The 10-county SPC region is served by twenty railroads, with direct service by the three major Class I railroads – Norfolk Southern, CSXT and Canadian National. These Class I railroads

connect Southwestern Pennsylvania with a freight rail network that extends from Florida to Maine, and west beyond the Mississippi River. Norfolk Southern's main east-west line between Chicago and Baltimore runs through downtown Pittsburgh, and provides a vital intermodal transfer location at the Pitcairn Intermodal Facility in Allegheny County, as well as links to multiple shortline and regional railroads throughout the region. The CSXT main line between Chicago, Baltimore and Philadelphia also passes through downtown Pittsburgh and provides multiple intermodal transfer locations throughout the region. CSXT recently received \$98 million in federal Transportation Investment Generating Economic Recovery II Discretionary Grants (FY 2010 Appropriations Act) to increase the over track vertical clearance in Ohio, Pennsylvania and West Virginia to provide double stack access from a new intermodal facility in northwest Ohio to the East Coast.

The SPC region offers industrial users unparalleled access to rail service. Although an estimated 86 percent of all communities in Pennsylvania must rely on trucks for the delivery of freight and packages because they lack local rail, water or air delivery options, rail remains a valuable transportation asset for the movement of bulk goods and containerized freight. It has been estimated that one jumbo rail hopper car carries the equivalent of 3.8 large truck containers, providing efficiency and cost savings to local industries and reducing congestion on local roadways². Railroad service is available in all ten counties in southwestern Pennsylvania.

Other significant rail facilities located in the region include the Conway Classification Yard in Conway, Beaver County, where Norfolk Southern uses a gravity hump to assemble trains according to their final destination. Norfolk Southern also maintains an intermodal facility at Pitcairn, Allegheny County, where



containers are transferred from rail to truck (and vice versa) for conveyance to their final destination. Another intermodal facility, the Westmoreland Intermodal Facility, is located near the former Sony Plant in Westmoreland County. In addition, Norfolk Southern operates an

² Port of Pittsburgh Commission, Cargo Capacity Comparison, http://www.port.pittsburgh.pa.us/home/index.asp?page=181

Operations Center in Green Tree, Allegheny County, and CSXT operates yards in Connellsville, McKeesport, and New Castle. CSXT also maintains a locomotive servicing (fueling) facility in New Castle, and rail car repair shops in Connellsville, Pittsburgh, and New Castle. Intermodal transfer from rail to truck (TRANSFLO) facilities are located in Pittsburgh and in Butler. A new intermodal terminal currently under development in McKees Rocks will provide enhanced local and regional rail/truck delivery capabilities in the region.

In addition to freight rail, the region also has intercity rail service via Amtrak. Amtrak operates approximately 120 daily trains through Pennsylvania, including the following trains through Pittsburgh:

- The Capitol Limited (daily Washington-Pittsburgh-Chicago)
- *The Pennsylvanian* (daily New York-Philadelphia-Harrisburg-Pittsburgh)

From the period of 2006 - 2014, the Amtrak stations in Southwestern Pennsylvania saw significant increases in passenger activity. While Amtrak reported that total Pennsylvania station usage declined 3.8% between federal fiscal years 2013 and 2014, the stations in this region showed more use by travelers (Figure 1.12).

Figure 1.12 Amtrak - Boardings & Alightings

City	Federal FY 2006	Federal FY 2008	Federal FY 2013	Federal FY 2014	% Change FY 2006 to 2014
Greensburg	10,942	12,828	14,248	15,023	+ 37.3%
Latrobe	3,427	4,253	4,447	4,631	+ 35.1%
Pittsburgh	118,708	159,909	135,137	149,224	+ 25.7%

Source: Amtrak

Since 2008, Amtrak has completed the P.R.I.I.A Section 224 Pennsylvania Rail Feasibility Report, which includes an examination of the potential for expanded passenger rail service between Pittsburgh and Harrisburg, Pennsylvania. The report concluded that the expansion of conventional rail service between the two cities faced considerable hurdles based on right-of-way ownership; use of the corridor by an estimated 40 freight trains each day; and, regional topography. A 2014 report produced by the Pittsburgh Downtown Partnership and Western Pennsylvanians for Passenger Rail, *On Track to Accessibility*, suggested that service on the Pennsylvanian route could be tripled primarily with investment in train equipment and more frequent service as compared to the cost of investment in track.

Waterways and Ports

The Port of Pittsburgh encompasses the 10-county SPC region as well as Clarion County to the northeast. An estimated 200 miles of commercially navigable water along the Ohio, Monongahela and Allegheny Rivers provide a valuable inland navigation system for raw materials, as well as bulk and manufactured goods into and through the region. With more than 200 river terminal operators in the region, the Port of Pittsburgh is one of the busiest inland ports, and one of the 20 busiest ports of any kind in the nation, according to Port of Pittsburgh Commission records.

River transport is an extremely economical method of transporting bulk goods and materials. The 30-40 million tons of cargo the Port of Pittsburgh ships and receives each year provides a significant annual benefit to the region. While the primary cargo on the region's rivers is coal, millions of tons of raw products including sand, gravel and iron ore; manufactured goods; petroleum and petroleum products; and, chemicals and related products traverse our waterways.

Across all modes, it is estimated that about 250 million tons of cargo, valued at approximately \$133 billion, go in or out of the region annually. Twenty percent of the tonnage (50 million) or seven percent of the value (\$9 billion) travels by barge.

Transporting bulk goods by water is also environmentally beneficial to the region, as a single



barge can carry the equivalent of 70 large semi trucks or 15 jumbo hopper rail cars. Recognizing the cost and environmental savings presented by inland navigation, in 2010 the U.S. Maritime Administration (MARAD) announced the creation of the U.S. Marine Highway System. Marine Highway 70 (M-70), begins at Pittsburgh, and extends the entire length of the Ohio River, where it meets Marine Highway 55, (the Mississippi River System) near St. Louis, MO. In designating marine corridors, MARAD noted that river transport has the potential to help alleviate congestion from existing land routes, while at the same time reducing emissions, conserving energy, improving safety, and reducing highway maintenance costs. Marine Highway 70 also

Comprehensive Economic Development Strategy for Southwestern Pennsylvania January 2017

contributes to increased economic and commercial activity in the region by removing barriers to efficient freight transportation.

Commercial navigation of the region's three major rivers is made possible through the region's 17 locks and dams that maintain river water levels and make commercial navigation possible (Figure 1.13). The locks and dams are owned, maintained and operated by the U.S. Army Corps of Engineers (USACE).

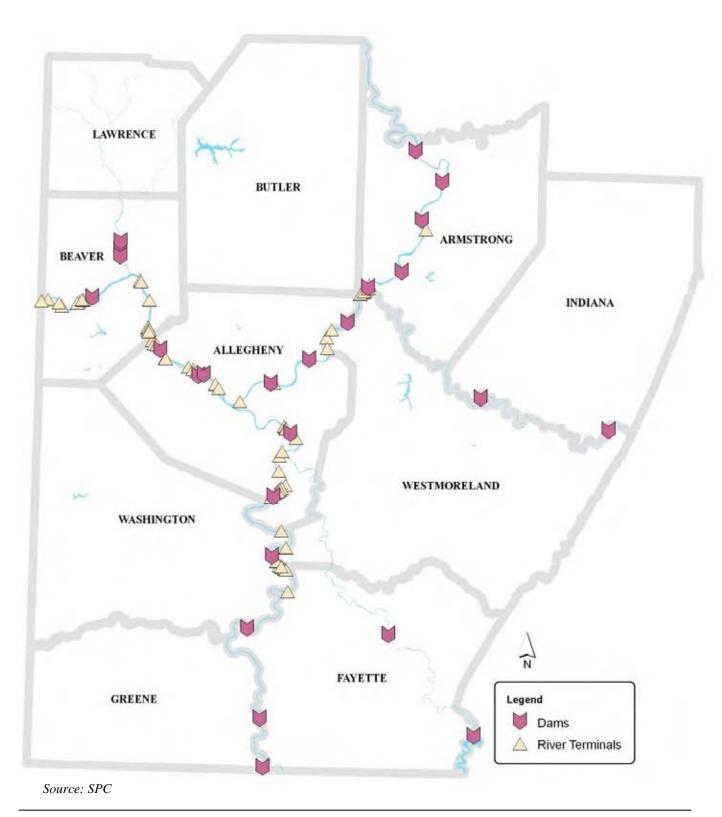


Figure 1.13 Dams and River Terminals

The eight locks and dams on the Allegheny River permit commercial navigation as far north as East Brady, PA, 72 miles from the Point in downtown Pittsburgh. Key commodities carried on the Allegheny River include bulk aggregate materials such as sand and gravel. The locks and dams on the Allegheny River were all built between 1927 and 1938. The lack of funding for lock and dam maintenance and repair has reduced lock operations on the Upper Allegheny River for commercial operators to "by appointment only" status. Lock operations for recreational boaters is no longer supported by the USACE in the Upper Allegheny River.

The six locks and dams on the Monongahela River permit commercial navigation as far south as Fairmont, WV, more than 128 miles from the Point in downtown Pittsburgh. Coal is by far the largest commodity hauled on the Monongahela River, and barge transportation is essential to the

cost-effective movement of coal within the region. The oldest lock and dam on the Monongahela River was constructed at Elizabeth, PA in 1905, making it more than 100 years old.

The Ohio River begins at the confluence of the Allegheny and Monongahela Rivers at the Point in downtown Pittsburgh and flows 981 miles to join the Mississippi at Cairo, IL. There



are three locks and dams on the Ohio River in Pennsylvania. The locks and dams on the Ohio River are passing 80 years of age and are in need of major reconstruction and rehabilitation. The USACE conducted the Upper Ohio River Navigation Study to determine the total costs of maintaining the operability of the three locks and dams on the Ohio River. The Draft Feasibility Report and Integrated Environmental Impact Statement released in 2014 placed a cost of slightly more than \$2 billion for planning, design and construction related to these three locks and dams.

The USACE, which constructs and manages inland water transport infrastructure, has a \$66 billion backlog of projects across the U.S. In 2014, a significant step forward for sources of funding for inland waterways infrastructure projects was achieved with the passing of the Water Resources, Reform and Development Act (WRRDA), which included several provisions to address the funding needs of inland waterways infrastructure.

Airports

Scheduled airline service is available within the SPC region at Pittsburgh International Airport in western Allegheny County, and the Arnold Palmer Regional Airport in Latrobe, Westmoreland County. Corporate flight operations, recreational flights and student training occur at more than two dozen general aviation airports in the ten-county region (Figure 1.14). Most of these airports are publicly owned, and are operated by a local or county government or airport authority. A few airports are privately owned, but are open for use by the general public. There are also several private airports in the region at which use is limited to the airport owner and guests.



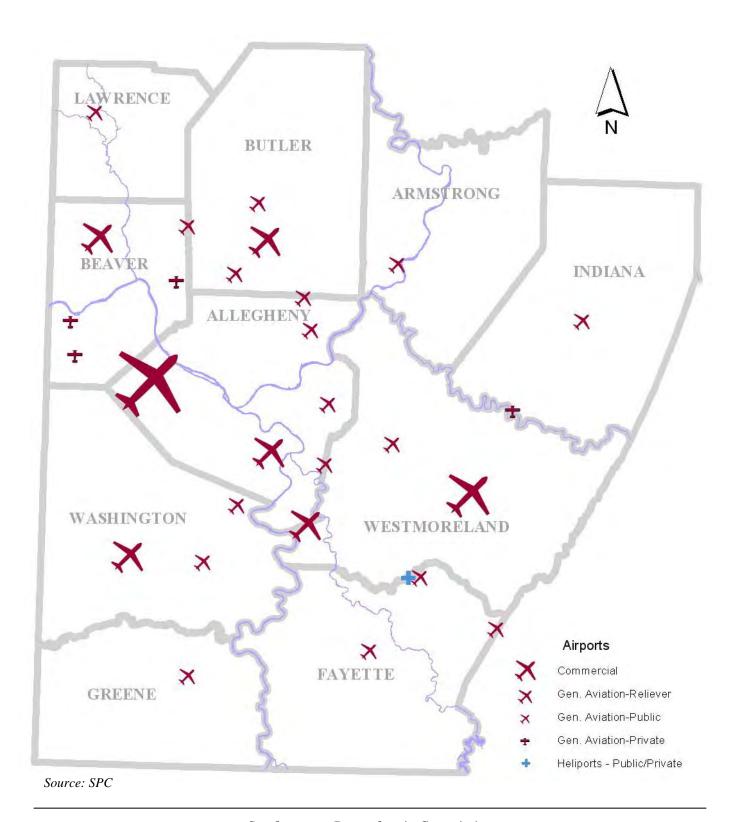
Pittsburgh International Airport is a world-class facility that has been frequently recognized by national and international organizations for its high quality of traveler services.

The Official Airline Guide (OAG) Worldwide has rated Pittsburgh International Airport in its short list of the world's best airports for four consecutive years. In two recent customer satisfaction

surveys conducted by market research leader JD Powers and Associates, the flying public rated Pittsburgh International Airport among the five best airports. The airport was listed as one of the Top 100 World Airport Awards by Skytrax, a website that surveys airline and airport quality worldwide, one of only three U.S.-based airports on the list in 2013. The airport was also recognized as one of the top 10 regional airports in North America.

Eight airlines currently provide passenger service to and from Pittsburgh International Airport with more than 160 daily flights to 45 non-stop destinations. In addition to Pittsburgh International Airport, commercial passenger service is offered by Spirit Airlines at Arnold Palmer Regional Airport in Latrobe, Westmoreland County. This airport also offers scheduled charter service to several popular tourist destinations and corporate flight facilities.

Figure 1.14 Airport Systems



Pedestrian and Bicycle Network

Southwestern Pennsylvania has an extensive network of pedestrian and bicycle facilities, including sidewalks, crosswalks, rail trails, and designated on-road bike routes. Upgrading sidewalk curb ramps to meet current Americans with Disability Act (ADA) standards has been a priority throughout the region in recent years. The City of Pittsburgh has begun implementing exclusive on-street protected bike lanes in several locations. In places where narrow rights-of-way restrict implementation of exclusive bike lanes, wide shoulders or wider outside travel lanes are also used. These are often supplemented by Share the Road signs or shared lane markings or "sharrows" in many places.







SPC's ongoing web-based Bicycle Suitability Map project (http://spcregion.org/trans pedbike maps2.shtml) identifies existing trails and streets throughout the region where a transportation link by bicycle is rated as "Above Average for Cycling, Average for Cycling, or Below Average for Cycling" based on multiple criteria. Ratings shown on these maps are determined using a combination of traffic volumes, roadway geometry and field observations. The ratings apply to cyclists experienced in operating in an urban environment. The maps identify traffic signal locations, transit stations with bike facilities, steep hills that present obstacles, and areas of flatter terrain. These informational resources, as well as

those provided by local governments and advocacy groups, are very helpful in promoting the use of non-motorized transportation modes.

Another innovative program that is taking off around the country is BikeShare. These programs encourage active transportation as an element of public transit by allowing people to rent bicycles in one location and return them to another location. Many operate on a subscription basis and make the first 30 minutes to an hour inexpensive in order to encourage use for short point-to-point trips, thereby reducing the need to make these trips via automobile.

HealthyRide

Pittsburgh's BikeShare program
launch in Spring 2015 has 500
bicycles in 50 locations around the
City. This public-private partnership
was assisted with \$1.9 million from
SPC's regional Transportation
Improvement Program and includes
support from Highmark and the
Allegheny Health Network. The result
is a unique project that provides both
transportation and health benefits for
users of the program, as well as air
quality benefits.





The region's trail system continues to develop and expand as smaller local trails are linked together to form larger networks. The region's premier trail corridor is the Great Allegheny Passage, a 150-mile system of biking and walking trails connecting Pittsburgh with the 184.5-mile C&O Canal Towpath at Cumberland, MD, creating a continuous non-motorized 334.5-mile corridor between Pittsburgh and Washington, DC.

The success of the Great Allegheny Passage, not only from a transportation and recreation standpoint but also in terms of community and economic development, continues to spur activity in establishing additional long distance intercity connections such as a proposed Erie-to-Pittsburgh Trail and connections to Cleveland and elsewhere.

1.5: Appalachian Regional Context

Regions can be defined at many levels from multi-municipal to multi-state. Much of western and central Pennsylvania is in the multi-state Appalachian Region which has similarities in geography, economic conditions and natural environment. In addition to its neighboring counties in Pennsylvania, the SPC region is bordered by Maryland, West Virginia and Ohio. In general, within this four-state area, those counties falling within the Appalachian Region have experienced greater population loss than most of the other counties in these states that are not in Appalachia. Of the five largest cities in this four-state area, Baltimore, Cincinnati, Cleveland, Pittsburgh and Philadelphia, all but Philadelphia have experienced population loss over the last decade. Pittsburgh is the only one of these major cities that is also located within the Appalachian Region. As such, it has the population loss experienced by the other urban cores combined with the population loss and slow growth associated with the Appalachian Region context, while also experiencing the nationwide effects of a long term decline in manufacturing in a region that had a higher than average concentration of manufacturing (Figure 1.15).

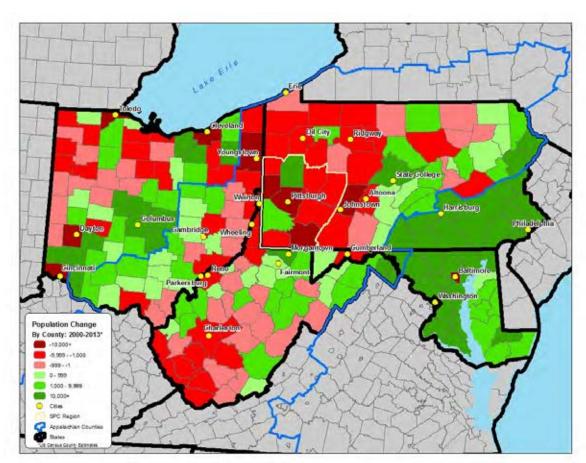


Figure 1.15 Population Change by County, 2000-2013

Source: SPC

By examining our neighboring regions, we gain further insight into the larger geographic and socioeconomic context that influences Southwestern Pennsylvania (Figure 1.16).

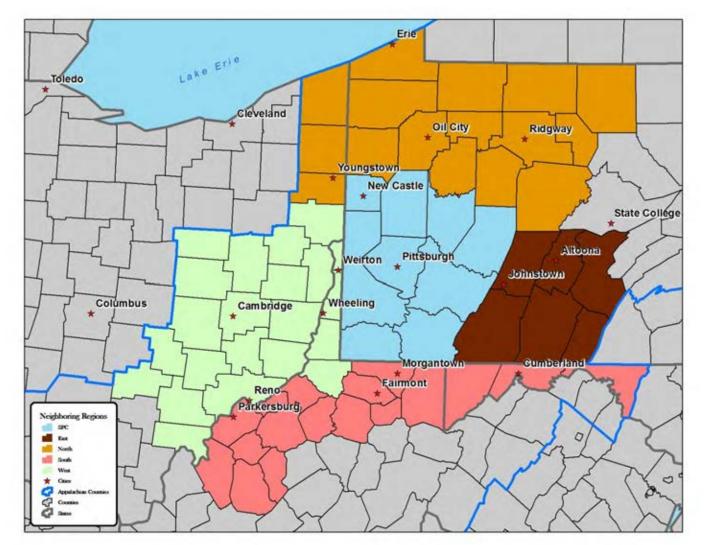


Figure 1.16 Neighboring Regions

Source: SPC

Northern Neighbors

SPC's northern neighbors consist of Ashtabula, Mahoning, and Trumbull Counties in Ohio; and Cameron, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, McKean, Mercer, Potter, Venango and Warren Counties in Pennsylvania. These counties experienced a combined population loss of 71,945 or -4.93% from 2000 to 2013. Change in workplace employment for our neighbors to the north shows that between 2001 and 2013 their major employment sectors were manufacturing, retail trade, healthcare and social assistance, and government and government enterprises. Of those four major sectors, only healthcare and social assistance saw growth during that period and overtook manufacturing as the leading employment sector for the

first time. The mining sector showed the largest percentage increase (153.6%), most likely due to the shale gas industry.

According to the Census Transportation Planning Products (CTPP) 2006-2010 Census 2000 Journey-to-Work data, 13,629 residents of the northern counties worked in the SPC region and, conversely, 13,619 residents of the SPC region worked in the northern counties. Major transportation facilities to the north include shipping on the Great Lakes, interstates and railroads. Of key importance are iron ore and limestone shipped from Minnesota's Mesabi Range, Michigan's Upper Peninsula and eastern Canada to the SPC region; coal from our region is often a "backhaul" cargo (via rail) to the Great Lakes for shipping. The community of East Brady in Clarion County, PA represents the northernmost reach of the Ohio River navigation system. Each year the system (Allegheny, Ohio and Monongahela Rivers) carries more than 40 million tons of coal, aggregates, petroleum products and other goods through the SPC region. In terms of highways, Interstate 79 connects our region to I-80 in Mercer County and to I-90 in Erie, which provide east-west connections to the Northeast and Midwest. Interstate 76 turns from the Pennsylvania Turnpike to the Ohio Turnpike, connecting our region to Cleveland and to I-80 in Youngstown. These interstates, I-76, I-79 and I-80 are major national transportation corridors.

There are major rail corridor connections through these northern counties, which are served by three Class I (national) freight rail lines. Amtrak operates passenger service through this corridor between Cleveland and Pittsburgh, including a stop in Alliance, OH. There are also five commercial service airports including Youngstown-Warren Regional Airport in Trumbull County, OH; Venango Regional Airport in Venango County, PA; Bradford Regional Airport in Jefferson County, PA; Erie International Airport in Erie County, PA; and, DuBois Regional Airport in Jefferson County, PA.

Three development districts comprise this general area: the Eastgate Regional Council of Governments in Ohio, and the Northwest Pennsylvania Regional Planning and Development Commission and the North Central Pennsylvania Regional Planning and Development Commission in Pennsylvania. A closer look at information from these regional organizations provides insight into the smaller economies of our northern neighbors.

The Northwest Pennsylvania Planning and Development Commission serves as the Rural Planning Organization, Local Development District, and Economic Development District for its member counties. This region in the northwest corner of Pennsylvania is highly diversified in terms of urban and rural. It includes the City of Erie, the state's fourth most populous city, as well as Forest County, the state's second least populous county.

The North Central Pennsylvania Regional Planning and Development Commission serves as the Rural Planning Organization, the Local Development District and Economic Development

District for its member counties. This region, located in the north central region of Pennsylvania along the New York border, is rural, non-farm, and small-town in character. Manufacturing (especially powdered metals and metal fabrication), forest products, limited oil and gas extraction, tourism, and transportation/distribution services are the major employments sectors.

The Eastgate Regional Council of Governments is the designated Metropolitan Planning Organization, Economic Development District and Local Development District for its member counties. This region comprises the easternmost counties of Ohio along the Pennsylvania border up to Lake Erie.

Southern Neighbors

SPC's southern neighbors consist of Allegany, Garrett, and Washington Counties in Maryland; and Calhoun, Doddridge, Harrison, Jackson, Marion, Monongalia, Pleasants, Preston, Ritchie, Roane, Taylor, Tyler, Wirt, and Wood Counties in West Virginia. This was our only neighboring region to see a population increase. These counties have shown a combined population gain of 41,962 or 6.27% from 2000 to 2013. The majority of this growth occurred in those counties in eastern Maryland and in the general area of West Virginia University. Change in workplace employment in our neighbors to the south shows that between 2001 and 2013, their major employment sectors were manufacturing, retail trade, healthcare and social assistance, and government and government enterprises. Of those four major sectors, only manufacturing saw a significant loss during that period (-31.5%), while government and government enterprises is the leading employment sector. Management of companies and enterprises showed the largest percentage gain (93.7%).

According to the Census Transportation Planning Products (CTPP) 2006-2010 2000 Journey-to-Work data, 3,142 residents of the southern counties work in the SPC region, and conversely, 5,074 residents of the SPC region work in the southern counties. With regard to transportation, the Monongahela River carries freight traffic (mainly coal) from the south to our region, while locks and dams on both the Monongahela and Ohio Rivers have significant impacts on the larger region. Interstate 79 connects our region to I-68 in Morgantown, West Virginia (which provides connections to Maryland and the East Coast), and to I-77 in Charleston (which provides connections to the South). The Mon-Fayette Expressway will provide an additional connection between our region and Morgantown. There are major rail corridor connections along the Monongahela River as far south as Morgantown, with Class I rail service by Norfolk Southern and CSXT. Amtrak operates passenger rail service from Pittsburgh through Connellsville to Cumberland, Maryland. There are also three commercial airports, including the North Central West Virginia Airport in Clarksburg, WV; Morgantown Municipal Airport in Morgantown; and Mid-Ohio Valley Regional Airport in Wood County near Parkersburg, WV.

Three development districts comprise this general area: the Tri County Council for Western Maryland, Region 5 Mid-Ohio Valley Regional Council, and the Region 6 Planning and Development Council in West Virginia. The Tri-County Council for Western Maryland, Inc. is designated as the Local Development District and the Economic Development District for Western Maryland. The Mid-Ohio Valley Regional Council serves as the Local Development District for Midwest portion of West Virginia. The Region 6-Planning and Development Council serves as the Local Development District for the northwest portion of West Virginia bordering Southwestern Pennsylvania.

Eastern Neighbors

SPC's eastern neighbors consist of Bedford, Blair, Cambria, Fulton, Huntingdon, and Somerset Counties in Pennsylvania. These counties have experienced a combined population loss of 18,717 or -3.97% from 2000 to 2013. Change in workplace employment in our neighbors to the east shows that between 2001 and 2013, their major employment sectors were manufacturing, retail trade, healthcare and social assistance, and government and government enterprises. Of those four major sectors, again only manufacturing saw a significant loss during that period (-33.6%), while healthcare and social assistance was the leading employment sector. Mining showed the largest percentage increase at 50.9%.

According to the Census Transportation Planning Products (CTPP) 2006-2010 Census 2000 Journey-to-Work data, 6,112 residents of the eastern counties work in the SPC region and, conversely, 4,690 residents of the SPC region work in the eastern counties. Interstate 70 and the PA Turnpike (I-76) connect the east to our region, while U.S. 22, U.S. 30, and U.S. 422 also provide significant connections. Norfolk Southern, Canadian National and CXST maintain Class I freight rail service through the region. The Norfolk Southern rail corridor also carries Amtrak passenger service from Pittsburgh to Philadelphia and New York City with stops in Greensburg, Latrobe, Johnstown, Altoona, Tyrone, Huntingdon, Lewistown and Harrisburg. Connections to Washington, D.C. are also available. There are also two commercial airports, the Altoona-Blair County Airport and the Johnstown-Cambria County Airport.

The counties to the east of our region are covered by one regional planning organization, the Southern Alleghenies Planning and Development Commission (SAP&DC). SAP&DC serves as the Local Development District (LDD) and Economic Development District (EDD) for all of its member counties in South Central Pennsylvania, and as the rural planning organization (RPO) for transportation planning in four of the six counties in this area. The Blair and Cambria metropolitan planning organizations (MPOs) are responsible for transportation planning in their respective counties.

Western Neighbors

SPC's western neighbors consist of Athens, Belmont, Carroll, Columbiana, Coshocton, Guernsey, Harrison, Hocking, Holmes, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Tuscarawas, and Washington Counties in Ohio, and Brooke, Hancock, Marshall, Ohio, and Wetzel Counties in West Virginia. These counties have experienced a combined population loss of 16,563 or -1.65% from 2000 to 2013, with those counties in western Ohio experiencing moderate growth. Change in workplace employment in our neighbors to the west shows that between 2001 and 2013 their major employment sectors were manufacturing, retail trade, healthcare and social assistance, and government and government enterprises. Of those four major sectors, only manufacturing saw a significant loss during that period (-34.7%), with the government and government enterprises sector passing manufacturing as the leading employment sector in the west. The largest percentage increase was in the mining sector (92.6%).

According to the Census Transportation Planning Products (CTPP) 2006-2010 Census 2000 Journey-to-Work data, 14,156 residents of the western counties work in the SPC region and, conversely, 3,284 residents of the SPC region work in the western counties. As for transportation, the Ohio River plays a critical role for industry to the west. Interstate 70 connects our region to Ohio and the Northern Panhandle of West Virginia and provides a major east-west connection between the midwest and the east. The completion of the Findlay Connector provides improved access for Northern Panhandle (WV) and northern Ohio Valley communities to Pittsburgh International Airport and to I-79. On November 20th, 2014, the Federal Highway Administration released a Finding of No Significant Impact (FONSI) for the New Ohio River Bridge between Brilliant, OH, and Wellsburg, WV. The projected cost of the New Ohio River Bridge is \$120 million. Class I freight rail service between Ohio and Southwestern Pennsylvania is provided by CXST and Norfolk Southern. The Ohio River bisects these eastern neighbors, and provides a crucial freight transportation corridor for power generation plants and heavy industry located along the Ohio River.

Four development districts comprise this general area: the Buckeye Hills-Hocking Valley Regional Development District and Ohio Mid-Eastern Governments Association in Ohio; and the Region 11-Brooke-Hancock Regional Planning and Development Council and Region 10 Bel-O-Mar Regional Council and Planning Commission in West Virginia.

The Buckeye Hills-Hocking Valley Regional Development District is designated as both the Local Development District and the Economic Development District. The region is bordered to the south and east across the Ohio River by the state of West Virginia. There are four major highways serving the area: Interstate 77, U.S. Routes 33 and 50, and Ohio Route 7. As it passes through the area, Route 50 follows the Appalachian Highway Corridor D. These highways

network the area internally and connect it to the Ohio metropolitan areas of Columbus, Cleveland and Cincinnati.

Regional Context Summary

The greater region, of which SPC is a part, shares many qualities, issues and challenges. The region located in Appalachia is experiencing population loss or slow growth overall with a continued erosion of manufacturing employment.



Exceptions are found in areas dominated by a state's largest university campus, federal government investments and health facilities, and areas with shale gas development. The larger region as a whole is experiencing an increase in health care and social service employment. While the general employment shifts are similar to that of the nation, they are more pronounced in the Appalachian Region.

The Journey-to-Work data suggests that the regions bordering Southwestern Pennsylvania play an important role in each other's economies with the overall workforce crossing jurisdictions to their jobs. SPC will continue to reach out and communicate with its neighbors in the context of its own planning responsibilities for the region's plan, and in the context of cross-state initiatives with our neighbors as we all work to address common issues.

1.6: Business Environment

After the decline of the steel industry in the region, officials, chambers of commerce and universities worked to diversify the regional economy, generating sustainable growth. While manufacturing is an important sector, major growth has occurred in the services sector, including education and healthcare services. Financial services, education, government enterprise, retail trade, and transportation/warehousing are also important industries. The region's economy benefits from its wealth of colleges and universities, which also support employment growth in

high-skilled and high-tech occupations. Today, the region has nearly three dozen colleges and universities within its borders and, as recently as 2011, an enrollment of about 172,000 students.

There are approximately 113,000 individual business establishments of all sizes in all industries in Southwestern Pennsylvania, including large national companies such as Alcoa, Inc., H.J. Heinz Co., BNY Mellon Financial Corporation, PPG Industries, Inc., U.S. Steel, Consol Energy and WESCO International, Inc.

However, reports from surveys of small businesses indicate that the region draws low marks on lists for many metrics of small business friendliness and formation.³ In the 2015 Kaufman Index Business Start-ups, Pittsburgh ranked last out of forty metro areas.⁴ Factors in the rating were: Rate of New

Forbes Lists

Pittsburgh Ranks

- #58 <u>Best Places for</u>
 Business and Careers
- #124 in Cost of Doing Business

Source:

http://www.forbes.com/places/pa/pittsburgh/ 2015

Entrepreneurs, Opportunity Share of New Entrepreneurs, and Startup Density.

Information on business dynamics from the U.S. Census reflects the slowdown in business startups, job creation, and number of firms in the MSA between 2007 and 2013 (see Figure 1.17). The data indicate the trend of declining number of firms and lower number of new firms being created between 2007 and 2013.⁵

The region offers numerous amenities for businesses and people, though the lackluster showing regarding business start-ups is a concern. Numerous programs throughout the region focus on helping small businesses; however, additional effort is needed. Segments of the business environment are improving; 2014 "saw more investment pouring into Pittsburgh's technology companies than any year since the tech heyday of 2001. Pittsburgh again proved itself as a startup contender, ranking 11th in venture capital investment dollars per capita and 5th in deals

³ Pennsylvania, Pittsburgh receive poor marks for friendliness to small business, Idrees Kahloon / Pittsburgh Post-Gazette, August 8, 2014

⁴ The Kauffman Index | Startup Activity | Metropolitan Area And City Trends, Arnobio Morelix Robert W. Fairlie Joshua Russell E.J. Reedy, 2015.

⁵ U.S. Census Business Dynamic Statistics 2015

per million residents."⁶ New business development, growth and support is an important regional concern and presents a challenge to policy makers to provide support.⁷ The County Business Patterns data shown in Figure 1.18 include data for just the firms/establishments with paid employees.

Figure 1.18

		Allegheny	Armstrong	Beaver	Butler	Fayette	Greene	Indiana	Lawernce	Washington	Westmoreland
IAICS	NAICS code description					Total Est	ablishment	is			
11	Agriculture, Forestry, Fishing, & Hunting Mining,	7		2	6	5		4	4	5	10
21	Quarrying, & Oil and Natural Gas Extraction	78	44	В	23	25	29	80	8	52	26
22	Utilities	59	10	11	17	18	8	17	13	26	23
23	Construction	2,600	107	336	527	243	59	172	198	588	894
31	Manufacturing	1,084	70	168	259	107	21	84	136	234	543
42	Wholesale Trade	1,840	37	130	288	113	26	79	101	273	405
14	Retail Trade	4,425	221	529	588	482	143	308	292	581	1,250
48	Transportation & Warehousing	596	54	132	135	118	40	65	56	109	233
51	Information	727	18	37	62	33	18	23	22	74	99
52	Finance & Insurance	2,141	81	168	267	108	38	95	104	261	499
53	Real Estate & Rental & Leasing	1,286	25	82	148	70	15	48	46	153	251
54	Professional, Scientific, & Technical Services	3,898	79	245	422	143	39	130	139	412	698
55	Management of Companies & Enterprises	406	9	20	38	11	6	13	8	44	53
56	Administrative & Support & Waste Management & Remediation Services	1,781	45	168	228	84	26	69	89	268	435
61	Educational Services	482	7	58	40	18	4	15	20	46	66
62	Health Care & Social Assistance	4,543	182	477	511	418	100	250	267	709	1,174
71	Arts, Entertainment, & Recreational	541	.23	54	72	41	6	20	33	82	162
72	Accomodation & Food Services Other Services	3,225	107	313	369	269	63	175	158	397	762
81	(except Public Administration)	3,831	210	491	561	372	114	254	280	621	1,077
9	Industries not classified	33		1	5	1	1	1	1	2	9

⁶ Lunak, Rich, President & CEO of Innovation Works, Accelerating Growth-Investing in Pittsburgh's technology sector,3/20/2015 (https://www.innovationworks.org/Blog/Article/9/Accelerating-Growth-Investing-in-Pittsburghs-technology-sector)

⁷ Index: Pittsburgh's startup scene ranks dead last among large cities, Will Hager Posted: 06/05/2015

The Keystone Opportunity Zone Program

Keystone Opportunity Zones (KOZs) are commercial, industrial and residential sites where most state and local taxes have been eliminated. The region has over 4 million acres in KOZ sites.

The program offers the business community new tools and incentives to attract and grow revenues, profits and employment opportunities. SPC serves as the regional coordinator of the Commonwealth's KOZ program. This innovative economic development program encourages development in underutilized land and buildings by providing tax benefits to business and property owners who locate within the designated areas. Businesses must apply annually to receive the tax abatement benefits under the KOZ program and must be in compliance with all state and local tax laws and building code provisions.

Key 2015 KOZ Highlights from the SPC region: 10 new businesses located in regional KOZ sites; more than 3,356 jobs were created or retained; 144 applications were processed; and, over \$458.9 million in public and private capital was invested in KOZ sites in the region.

National Economic Rankings

The region compares favorably with national rankings of regional economic strength. Policom, an independent economic research firm, ranked the region as 24th in the country in 2015. The same firm ranked the region 58th in the country in 2011. The criteria for the ranking include overall growth, quality of growth and money flow to businesses.

In 2015, the region was ranked 23rd out of the top 100 metropolitan areas for Gross Metropolitan Product by Statista, an independent research company. This compares with Columbus, Ohio, ranked 30th and Cincinnati, Ohio ranked 28th. The GMP for Cleveland was ranked 29th.

Industrial Sites

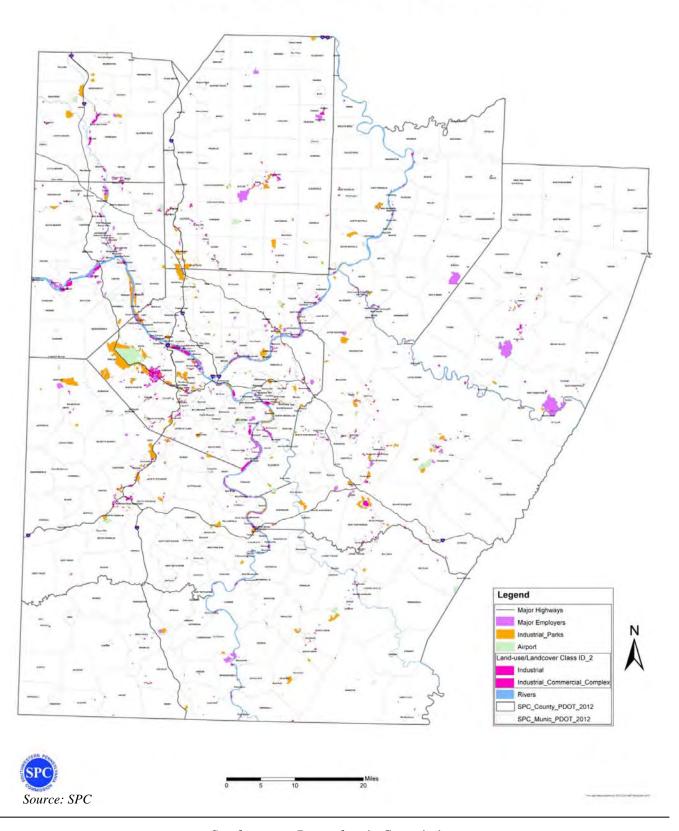
A map of industrial sites showing industrial sites and locations of major employers is shown in Figure 1.19. Information on available sites and facilities is available through county agencies.

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⁸ http://www.policom.com/2014%20MetroRank.htm

⁹ http://www.statista.com/statistics/183808/gmp-of-the-20-biggest-metro-areas/, 2015

Figure 1.19 Industrial Land Use and Major Employers



Regional Exports

The U.S. Department of Commerce, International Trade Administration, ranks the region as the 32nd largest export market in the United States with \$10 billion in total merchandise exported (2014). Over 2,600 companies exported products from the region. Of the companies exporting goods, 2,232 were small or medium-sized exporters (SMEs) with fewer than 500 employees, according to the U.S. Department of Commerce.

Top export markets for companies in the region were: Canada, Mexico, Japan, China, and Germany. Top exporting sectors are shown in Figure 1.20.

Figure 1.20 Top Export Markets & Sectors

Тор	Sectors		Top Countries					
Sector	Value	Share	Sector	Value	Share			
Primary Metal Manufactures	\$1.9 billion	19.4%	Canada	\$3.0 billion	29.5%			
Mining (Except Oil & Gas)	\$1.8 billion	18.2%	Mexico	\$941 million	9.4%			
Chemicals	\$1.1 billion	10.8%	Japan	\$644 million	6.4%			
Machinery, Except Electrical	\$1.0 billion	10.4%	China	\$614 million	6.1%			
Computer & Electronic Products	\$826 million	8.3%	Germany	\$473 million	4.7%			

Note: Where data are suppressed, the order in which counties, sectors, and countries are displayed does not necessarily reflect the true rank ordering. The suppressed data may, in fact, be rightfully anywhere in the ranking.

Data year: 2014 Last updated: July 2015

Source: Department of Commerce, International Trade Administration, updated July 2015.

Export figures for neighboring areas: Cleveland was ranked 29th in the United States with \$10.7 billion in exports; Cincinnati was ranked 14th with \$22.3 billion in exports and Columbus was ranked 48th with \$6.2 billion in exported merchandise. The region should take advantage of the growth opportunities offered by exporting.¹²

12 Ibid.

¹⁰ Department of Commerce, International Trade Administration, updated July 2015.

¹¹ Ibid.

Business Diversity

Figure 1.21 shows minority ownership of firms in the ten-county region. Information for individual counties is available in Section 1.10. Nationally, minorities are driving the formation of small businesses, providing growth and opportunities in local economies.

Business ownership among minorities has been on the rise in recent years. Between 2002 and 2007, minority-owned businesses increased 46 percent, while nonminority-owned businesses grew 10 percent during that same period, according to Minority Business Development Agency.¹³

¹³ "Minorities: The force fueling small-business growth" <u>Silvana Ordoñez</u> | <u>@SilvanaCNBC</u> 12 May 2014

Figure 1.21

SPC TEN-COUNTY REGION

2012 Survey of Business Owners

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status for the SPC 10-county Region

2041		GENDER	ETHNICITY		FIRMC	FIRM OWNERS BY RACE	RACE		VETERAN STATUS
NAICS	Meaning of 2012 NAICS code	Female- owned	Hispanic- owned	American Indian and Alaska Native	Asian	Black or African American	White	Some other race	Veteran-owned
00	Total	59,336	1,510	426	4,384	7,835	173,234	295	20,136
21	Mining, quarrying, and oil and gas extraction	156	0	0	0	0	1,864	0	333
22	Utilities	0	0	0	0	0	177	0	0
23	Construction	1,630	177	103	52	445	21,991	62	3,320
42	Wholesale trade	1,159	28	0	123	64	5,324	0	677
51	Information	802	26	0	37	106	2,229	0	254
53	Real estate and rental and leasing	4,088	47	58	251	232	16,113	0	1,617
54	Professional, scientific, and technical services	8,816	273	45	1,083	029	26,496	920	3,411
22	Management of companies and enterprises	0	0	0	0	0	84	0	0
26	Administrative and support and waste management and remediation services	5,333	129	0	96	799	11,830	0	1,393
61	Educational services	2,587	92	29	188	284	4,397	0	242
62	Health care and social assistance	8,632	129	45	610	2,132	12,398	38	944
71	Arts, entertainment, and recreation	3,248	164	53	163	481	8,777	45	665
72	Accommodation and food services	1,803	67	0	445	201	5,498	0	489
11 (606)	Agriculture, forestry, fishing and hunting (606)	110	0	0	0	0	802	0	0
31-33	Manufacturing	875	31	0	46	06	4,439	0	480
44-45	Retail trade	8,777	178	0	479	430	19,170	0	1,819
48-49	Transportation and warehousing (607)	893	28	0	30	286	5,381	28	1,053
52 (608)	Finance and insurance (608)	1,282	0	0	96	96	7,107	0	1,315
81 (609)	Other services (except public administration) (609)	9,142	127	93	686	1,539	19,157	50	2,124

Footnotes:

Grop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners.

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609) (609) (609)

Source: Census Bureau's 2012 Survey of Business Owners: http://www.census.gov/econ/sbo/getdata.html. Compiled by SPC

Workforce Participation

According to the Bureau of Labor Statistics, nationally, approximately 62.4% of working age adults participate in the workforce, a figure that has dropped from 66% in 2005. Higher rates of labor force participation are seen within the Hispanic and Asian adult populations. Some 67 percent of the region's Asian adult population is engaged in the labor force, which is the highest participation rate of any racial and ethnic group. Asians make up 2 percent of the general population.¹⁴

Hispanic residents account for 1.5 percent of the general population of the region. Nearly 65 percent of Hispanic adults are in the workforce. African Americans are the largest minority group in the region, making up 8.2 percent of the general population. An estimated 59 percent of African American adults are in the regional labor force. ¹⁵

Workforce participation projections: During the 2012–2022 period, the growth of the labor force is anticipated to be due entirely to population growth, as the overall labor force participation rate is expected to decrease from 63.7 percent in 2012 to 61.6 percent in 2022, according to a report from the Bureau of Labor Statistics.¹⁶

On a single day in March 2016, there were over 27,000 jobs available in Pittsburgh.¹⁷ As nationally many businesses struggle to find a suitable workforce, the projections present another challenge to local businesses.¹⁸

Food Processing and Manufacturing

Along with its urban base, Southwestern Pennsylvania has agricultural resources that also contribute to the regional economy. With approximately 9,700 working farms, the agricultural industry remains an important aspect of the region's economy, way of life and cultural heritage. For more information, see *Local Food Supply Chain Initiative*, SPC, 2015, www.spcregion.org/plan food.shtml.

¹⁴ Labor Force Projections, 12/2013, http://www.bls.gov/opub/mlr/2013/article/labor-force-projections-to-2022-the-labor-force-participation-rate-continues-to-fall-1.htm

¹⁵ Minority Workforce Participation, Jeffery Fraser & Julia Fraser, Key Indicators for Understanding Our Region, the Pittsburgh Today project, March, 2015, file://K:/Econdev/laura/EDA%20CEDS%202015/workforce/Minority%20Workforce%20Participation.html

¹⁶ Labor Force Projections, 12/2013, http://www.bls.gov/opub/mlr/2013/article/labor-force-projections-to-2022-the-labor-force-participation-rate-continues-to-fall-1.htm

¹⁷ Imaginepittsburgh.com, 3/10/2016, http://imaginepittsburgh.com/work

¹⁸ Where are the workers?, Catherine Rampell, The Washington Post, 2/10/2016 https://www.washingtonpost.com/news/rampage/wp/2016/02/10/where-are-the-workers/

The economic impact of the agriculture sector in the region is growing. According to data from the U.S. Department of Agriculture, Census of Agriculture, 2012, the average market value of agricultural products in Southwestern Pennsylvania has increased. Average farm size in acres has declined and the number of farms has declined in the ten counties. Allegheny County has the fewest number of farms, Washington County has the largest number of farms, and Indiana County has the largest farm size.

U.S. Bureau of Labor Statistics in a 2012 report had consumers in the region spending approximately \$6.2 billion dollars annually on food. Initial research shows there are 414 food manufacturers employing 6,478 workers in the region. Growth in the local food supply would have ripple



effects across many economic sectors and all of the region's ten counties. An analysis using Implan modeling software reveals that 30,000 more jobs could be created in the region if activity in the food supply chain in the region was expanded by 10 percent.¹⁹

A 2015-2016 cluster analysis completed by the Commonwealth ranked Agriculture and Food Processing in the top ten industries as a targeted industry cluster.²⁰

Challenging Environment for the Metals Industry in the Region

Imported steel, slowing growth in China and a slowdown in the shale gas industry have caused a worldwide slowdown in the steel industry.

In April 2015, U.S. Steel, headquartered in Pittsburgh, announced plans to lay off 9,000 workers nationwide. At that time, 165 steel workers in West Mifflin were temporality laid off according to published reports. In June 2014, 260 employees in McKeesport were laid off.²¹

Alcoa announced 50 job cuts in March 2015 at its research facility outside of Pittsburgh.²² In October 2015, ATI Technologies laid off an unknown number of employees from its operations

²⁰ Center for Workforce Information & Analysis, <u>www.paworkstats.pa.go</u>, Winter 2015-2016

¹⁹ Local Food Supply Chain Initiative, SPC, 2015, www.spcregion.org/plan_food.shtml

²¹ http://www.bizjournals.com/pittsburgh/news/2015/04/20/u-s-steel-warns-additional-employees-of-layoff.html, April 2015

²² https://agmetalminer.com/2015/03/20/alcoa-inc-announces-layoffs-ak-steel-to-report-q1-loss-copper-rallies-to-3-week-lme-high/

in the region.²³ The industry also faces depressed demand from the slowdown in the gas shale activities.²⁴

The region is taking steps to counteract the downtrend in metals manufacturing. As a participant in the "Investing in Manufacturing Communities Partnership through the U.S. Department of Commerce, the area expects to add 8,000 jobs with existing firms, attracting 100 new companies.",25

Impact of the Collapse of the Coal Industry

During the 1800s and till the mid 1900s, coal mining and the making of coke for the Pittsburgh steel mills was the largest industry, next to farming, in Southwestern Pennsylvania. Coal mines, large company-owned, and small private mines, abounded in this region.²⁶

Employment in mining has declined in the region during the past decades and the decline in employment and the industry has been exacerbated by changes in regulation governing air quality. Regulations from the U.S. Environmental Protection agency designed to improve air quality standards have begun to affect the operations of coal businesses in the region.

According to the Pennsylvania Department of Community and Economic Development four coal fired power plants in Southwestern Pennsylvania have been closed and an additional one has been closed and had natural gas conversion deployed.

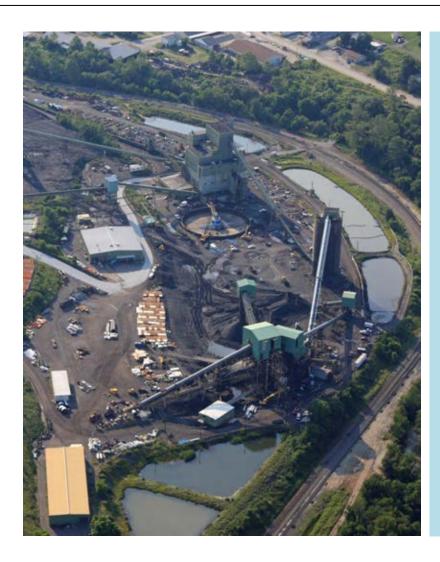
The overall impact on these businesses and their supply chains has not been calculated region wide. However, a study completed in 2015 reports that the employment and total value added impact of the industry in two counties, Greene and Washington, was \$1,944,092,608 in 2013.²⁷ The changes affecting the coal industry and the supply chains it supports will adversely impact the regional economy, especially the more rural counties.

²³ http://www.bizjournals.com/pittsburgh/news/2015/10/16/five-things-to-know-today-and-ati-cuts-specialty.html

²⁴ https://www.wsws.org/en/articles/2015/01/07/stee-j07.html

http://www.catalystconnection.org/about/news.php?106, 2015
 Fayette County Genealogy Project: Fayette County and Surrounding County Coal Mines, By Ken O'Neal

²⁷ The Economic Impact of Longwall Mining in Greene and Washington Counties, February, 2015, Pennsylvania Economy League, February,



"We do coal here"

According to the Pennsylvania Coal Alliance, which represents the industry and its supply chain, there are 7,350 men and women in Greene and Washington counties who are employed by the coal industry, with an average annual salary of \$79,127, far above the average per capita income of \$49,399 in Washington County and \$41,820 in Greene.

The alliance's statistics show that the coal industry's total economic impact to the two counties is \$1.94 billion annually.
Source: Observer-Reporter,
Washington County, Michael
Bradwell, 9/6/15

1.7: Industry Clusters and Sectors

An industry cluster is a geographically concentrated group of interconnected companies and associated institutions in a particular field. ²⁸

What is Cluster Analysis?

In the past decade, economic developers have focused on the regional context of industry groups, called clusters, as a means of strengthening the regional economy and encouraging economic growth. The methodology recognizes that many factors play a role in the growth and success of

^{28 &}quot;Pennsylvania Competitiveness: Creating a State Economic Strategy", Professor Michael E. Porter, Harvard Business School, March 28, 2012

regional businesses. Clusters and sub-clusters of industries generally represent a piece of a supply chain.

Industry clusters are compared to each other based on the location quotient, which quantifies how "concentrated" an industry is in a region compared to a larger geographic area, such as the state or nation.²⁹

The World Bank cites the benefits of using cluster analysis because it is:³⁰

- Market-driven -- focusing on bringing the demand and supply side of the economy together to work more effectively.
- **Inclusive** -- reaching out to companies large and small as well as suppliers and supporting economic institutions.
- Collaborative -- placing great emphasis on collaborative solutions to regional issues by participants, motivated by self-interest.
- **Strategic** -- helping stakeholders create a strategic vision of their region's next generation economy shared by many different constituencies and providing motivation and commitment to action.
- Value-creating -- improving depth (more suppliers) and breadth (attracting more industries) to increase regional income (excerpted from *Doing Cluster Analysis*, The World Bank, 2011).

Professor Michael Porter from Harvard University developed the methodology as a means of analyzing the competitiveness of industries and later applied the concept to nations and regions. Figure 1.22 shows how regional businesses and the public sector interact to create a competitive regional environment.

²⁹ Understanding Location Quotient, EMSI, 2015, http://www.economicmodeling.com/2011/10/14/understanding-location-quotient-2/https://www.wsws.org/en/articles/2015/01/07/stee-j07.html

³⁰ Doing Cluster Analysis, The World Bank, 2011, http://go.worldbank.org/88CZ3T18S1

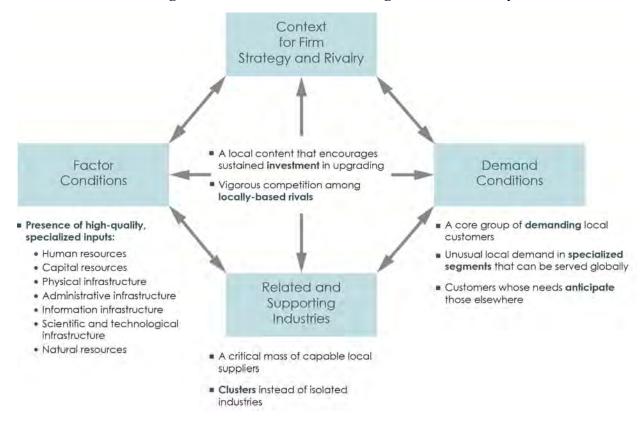


Figure 1.22 Determinants of Regional Productivity

Source: "Pennsylvania Competitiveness: Creating a State Economic Strategy", Professor Michael E. Porter, Harvard Business School, March 28, 2012

Industry Clusters in Pennsylvania

In a 2013 report, Pennsylvania defined industry clusters to serve as the basis for data-driven workforce development policies. An industry cluster includes industries closely linked by common products, labor pools, technologies, supplier chains and training needs. Additionally, the clusters take on strategic importance for long-term economic planning. Industry clusters are comprised of specific six-digit North American Industry Classification System, or NAICS, codes. They are mutually exclusive, so that no two clusters contain the same NAICS code. Currently, there are 12 clusters identified, along with several critical sub-clusters. Combined, these 12 industry clusters account for nearly 82 percent of all employment in the Commonwealth.³¹

³¹ Pennsylvania's Industry Clusters Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

The Commonwealth identified the following twelve clusters important to the state:

- 1. Advanced Manufacturing
- 2. Agriculture and food production
- 3. Biomedical
- 4. Building and Construction
- 5. Business Services
- 6. Education
- 7. Energy
- 8. Healthcare
- 9. Hospitality, Leisure, and Entertainment
- 10. Logistics and Transportation
- 11. Real Estate, Finance, and Insurance
- 12. Wood, Wood Products and Publishing³²



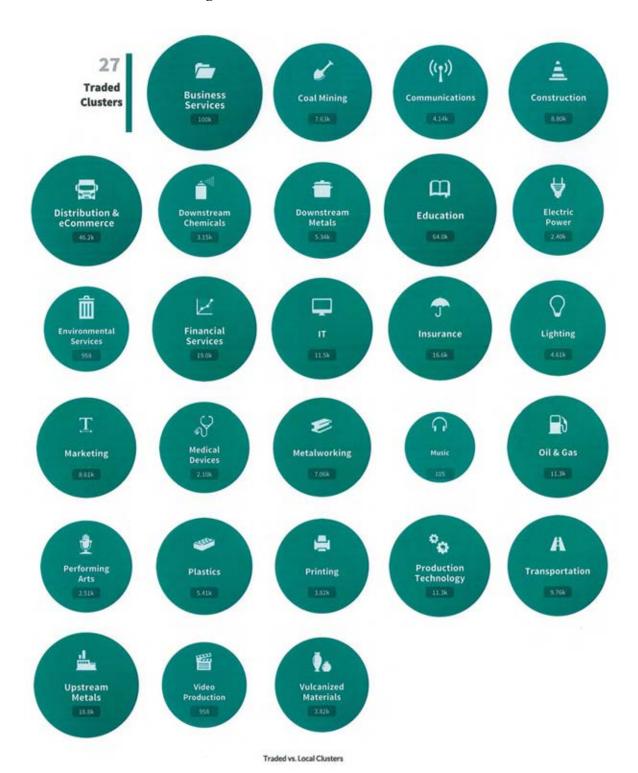
Clusters and Key Industries in Southwestern Pennsylvania

Several agencies have compiled lists of clusters in Southwestern Pennsylvania, using employment data and covering varying timeframes. The compilation shown in Figure 1.23 offers a view into the large, diverse regional economy. Figure 1.23, from the years 1998-2013, is excerpted from the U.S. Cluster Mapping website developed by Michael Porter for the U.S. EDA, giving a historical trend of industry clusters in the region.³³

³²Pennsylvania Industry Clusters, Fall 2013, Department of Labor and Industry

³³ http://clustermapping.us/

Figure 1.23 Trade vs. Local Clusters



Source: http://clustermapping.us/

Both workforce development boards and economic development agencies in the region have developed lists of important industry sectors. The sectors reflect stable industries with growth potential. Most are included on the list identified by the Commonwealth, but some are unique to the region. In 2016, key sectors in the region were identified by the Pittsburgh Regional Alliance as Advanced Manufacturing; Energy; Financial and Business Services; Healthcare and Life Sciences; and Information Technology.³⁴

Advanced Manufacturing

The Commonwealth identifies the Advanced Manufacturing (AM) cluster as mostly durable goods manufacturing but also includes wholesalers, and some retailers such as car dealers. Other industry clusters contain segments of manufacturing within them, while the AM cluster is focused around its four sub-clusters: Chemicals, Rubber & Plastics; Electronics; Metals; and, Vehicles & Vehicle Parts. Five counties in the region display strong clusters: Armstrong, Butler, Fayette, Indiana and Westmoreland.³⁵

The Allegheny Conference describes a manufacturing culture in the region with 3,000 advanced manufacturing firms employing nearly 95,000 people; 120 corporate and federal R&D centers and a century-long tradition as a center of excellence in manufacturing R&D; and, a skilled workforce with more than 1,600 engineering grads per year from the region's colleges and universities—nearby Penn State University produces more than 1,500 per year.³⁶

Energy

The Commonwealth report defines the energy cluster as industries associated with the production and distribution of energy, as well as the waste disposal industries associated with the remediation and environmental cleanup related to energy production. In the cluster you will find a wide variety of industries, from petroleum refineries to battery manufacturing to generator manufacturing.³⁷

Southwestern Pennsylvania has a diversified energy economy comprised of over 800 firms and approximately 50,000 direct energy jobs, supporting seven strategic sectors.³⁸ While the energy sector has historically been important to the region due to the metals industry, the growth of the

³⁴ http://www.alleghenyconference.org/PittsburghRegionalAlliance/KeySectors.php

³⁵ Pennsylvania's Industry Clusters, Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

³⁶ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorAdvanced Manufacturing.pdf

³⁷ Pennsylvania's Industry Clusters, Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

³⁸ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorEnergy.pdf

shale gas sector has propelled economic growth and increased the demand for technical workers. The majority of the workforce will need only a high school degree coupled with specialized training or experience, according to a 2014 report on the industry from the Rand Corporation.³⁹

The Rand report further describes four areas where the energy industry is:

- 1. Improving efficiency in energy extraction;
- 2. Mitigating environmental damage;
- 3. Integrating renewable energy into the grid; and,
- 4. Improving energy efficiency.⁴⁰

Counties with a strong presence in the energy sector as defined by the Commonwealth are Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington and Westmoreland.

Financial and Business Services

The targeted cluster report for Pennsylvania describes the Real Estate, Finance and Insurance (REFI) cluster as containing "all industries related to the purchase and sale of tangible and non-tangible assets. Included in the cluster are consumer lending, commodity contracts brokerage, direct property and casualty insurers, residential property managers and credit bureaus." Business services are services like radio stations, payroll services, public relations agencies, graphic design services and janitorial services. Generally these businesses help businesses market their products; help in day-to-day operations; and/or offer consulting services.

The REFI sector is described by the Allegheny Conference as the region's leading industry sector with the necessary supply chain components to support the industry: attorneys, accounting firms, and large financial institutions. ⁴³ Allegheny County has the largest cluster concentration in the region. The financial and business services sector employs 230,000 people at some 15,000 firms in Southwestern Pennsylvania. ⁴⁴

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³⁹ Energy Sector Workforce Development in Southwestern Pennsylvania, Gonzalez, Gabriella C., Reema Singh, Rita Karam, David S. Ott, the Rand Corporation, 2014

⁴⁰ Ibid, P. 18

⁴¹ Pennsylvania's Industry Clusters, Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

⁴² Ibid

⁴³ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorFinancialBizServices.pdf

⁴⁴ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorFinancialBizServices.pdf

Healthcare and Life Sciences

Using the Commonwealth's definition, the Healthcare and Life Sciences cluster includes industries that develop and use technology to enhance life from a health perspective. Industries in this cluster include research laboratories, pharmaceutical manufacturing, surgical and medical equipment manufacturing, and imaging centers. This cluster largely represents industries that employ advanced technology and serve as a foundation for enhanced medical services. 45

Additionally, the Pennsylvania report defines the Healthcare cluster as including industries that provide for the health and well-being of Pennsylvania residents. Direct patient care forms the cornerstone of this cluster. Also included are industries that support direct patient care, such as ambulance services, health insurance carriers and public agencies that oversee health programs. In addition, social assistance such as continuing care retirement communities, and assisted living facilities for the elderly are included within Healthcare. Six counties in the region have strong Healthcare and Life Sciences clusters: Allegheny, Armstrong, Butler, Fayette, Indiana, and Westmoreland.

Information and Communication Technology

This sector was defined and described by the Pittsburgh Regional Alliance as having the following characteristics:⁴⁷

• The region's robotics industry has 30 companies, 2,000 employees, \$160 million in revenues, an annual growth rate of 20 percent, and is attracting outside firms such as Foster-Miller, Caterpillar, Intel and Google. 48 *

The Pittsburgh Regional Alliance cites that the Carnegie Mellon University Robotics Institute (CMRI) is the North American epicenter of multi disciplinary, next-generation robotics research; the largest robotics research facility of its kind in the nation:

- Offers the country's only Ph.D. program in robotics.
- Performed \$53.4 million in government and corporate funded research and received 55 grants from the National Science Foundation (NSF) in 2006. **
- Won the DARPA 2007 Urban Challenge and the RoboCup 2006 World Championship.

⁴⁵ Pennsylvania's Industry Clusters, Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

⁴⁶ Pennsylvania's Industry Clusters, Fall 2013, Department of Labor and Industry, Center for Workforce Information & Analysis

⁴⁷ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorRobotics.pdf

⁴⁸ Ibid.

• Robot City brings robots from the laboratory to life in a diverse field environment where they handle day-to-day activities like grounds-keeping, security and cleaning. The National Robotics Engineering Consortium, a CMRI technology transfer organization, designs, develops and tests robotic systems and vehicles for industrial and government clients.



Photo: Copyright Bechtel website

- An NSF Engineering Research
 Center, the Quality of Life Technology Center is a partnership by Carnegie Mellon and
 the University of Pittsburgh to apply innovations such as "Nursebot" to improve
 eldercare and rehabilitation practices. The National Center for Defense Robotics, housed
 at The Technology Collaborative (TTC), provides federal funding access to companies
 conducting defense robotics research for military applications.
- Awarded 14 sub-contracts (\$4.3 million) in 2006** and works closely with universities and members of The Technology Collaborative Agile Robotics Alliance.
- Adding a \$13 million industrial facility where small, start-up robotics companies can develop and manufacture their products.⁴⁹

(Notes: * Carnegie Mellon University Robotics Institute; ** Pittsburgh Technology Council, State of the Industry Report 2007)

⁴⁹ http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorRobotics.pdf

Defense and Security

The Pittsburgh Regional Alliance reports that the regional strengths of the Defense and Security sector include:

- *Talent pipeline includes some 4,000 technology and engineering graduates annually.*
- A safe, strategic location with low risk of natural disasters and redundant business and utility services, located within 500 miles of nearly half the U.S. and Canadian populations.
- Just 200 miles from Washington, DC, the Pittsburgh region, with a century long tradition as a center of manufacturing excellence, is a cost-effective alternative location for companies in the defense and security supply chain.
- Carnegie Mellon University's CERT Coordination Center is a U.S. Dept. of Defense (DOD)-sponsored R&D institution at the frontline of computer security.
- Bechtel Marine Propulsion Corporation (BMPC) operates the Bettis Atomic Power Laboratory for the Department of Energy, advising the navy on nuclear propulsion technology.⁵⁰

 $^{^{50}\} http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorDefense.pdf$

1.8: Workforce

During the past five years, employment in the manufacturing sector has declined slightly while employment numbers have increased in leisure/hospitality, accommodations/food service, and health care. In the goods producing sector, construction employment numbers have also grown as well as employment in mining, oil and gas. The largest decline in employment during the past five years has been employment numbers in the government sector (see Figure 1.24).⁵¹

Figure 1.24 Pittsburgh MSA Employment by Industry Sector

		Pittsburgh	MSA				
		_	nt by Indust	ry Sector			
			Employment	•	Employment	Employment	
NAICS	Industry	2011	2012	2013	2014	2015 (August	Change
AII	Non-farm	1,144,900	1,157,400	1,157,800	1,157,700	1,184,300	39,400
Goods P	ods Producing		153,700	153,200	159,600	163,400	14,700
	21 Mining, oil&gas	8,600	9,900	10,500	12,200	13,300	4,700
	23 Construction	51,200	54,000	53,400	58,100	61,700	10,500
31-3	33 Manufacturing	88,900	89,800	89,300	89,300	88,400	-500
	Producing			F 600		F 000	400
	22 Utilities	5,900	•	•	•		-100
	42 Wholesale Trade	47,000			•		400
	45 Retail Trade	127,300	•	-	•		1,300
	19 Transportaion	42,600	•	•	•		900
	51 Information	18,400	•	•	•		-100
	52 Financial Activities	69,500			•		2,700
	Finance/Insurance	56,100	•	•	•	•	600
	Credit Intermediation	29,200			,		-1,500
	Insurance	20,400	•	•	•	•	2,400
	54 Professional&Technica	165,600	171,900	175,000	178,500	179,500	13,900
	Services						
	55 Management of Co.	36,900	-	-			2,800
	56 Adm& Waste Services	57,300			•		-1,800
	Adminstrative suppo	•		-			-2,600
(61 Educational Services	239,800					1,400
(62 Health Care&	181,100	187,700	188,100	190,000	194,900	13,800
	Social Assistance						
7	71 Leisure/Hospitality	109,900	111,700	114,200	122,100	130,000	20,100
7	72 Accommodation&						
	Food Service	89,900	91,600	93,100	96,500	102,600	12,700
	81 Other	51,400	51,700	51,200	52,300	51,700	300
9	99 Government	124,600	121,000	119,500	108,700	108,500	-16,100

Source: BLS

⁵¹ Bureau of Labor Statistics (BLS), http://www.bls.gov/bls/newsrels.htm#OEUS

Current Employment

According to the American Community Survey (2010-2014) the size of the regional civilian workforce was 1,324,848 people (Figure 1.25).⁵² Workforce participation rates for the region are slightly lower than similar figures for the United States.

Figure 1.25 Regional Employment, 2010-2014

SPC 10-County Re	egion - Years 20	10 to 2014	
	Ag	es 16 Years and O	ver
	Males	Females	Total
Population	1,023,864	1,108,050	2,131,914
In Labor Force	689,695	635,153	1,324,848
In Armed Forces	714	164	878
Civilian Labor Force	688,981	634,989	1,323,970
Employed	633,934	592,192	1,226,126
Unemployed	55,047	42,797	97,844
Percent of Civilian Labor Force	8.0 %	6.7 %	7.4 %

Source: U.S. Census, 2010-2014 American Community Survey

Regionally, educational attainment is above the state average with 91.5% of residents having graduated from high school and 29.1% having completed a bachelor's degree or higher. Similar figures for Pennsylvania are 88.7% for high school graduates and 27.5% for graduates with bachelor's degrees.⁵³

Generally, the workforce is employed across diverse industry sectors with healthcare employing the largest number, which has proven to be a sustainable model for economic growth (see Figure 1.26).

⁵² U.S. Census, 2010-2014 American Community Survey

⁵³ U.S. Census, 2009-2013 American Community Survey, estimates from 12/14.

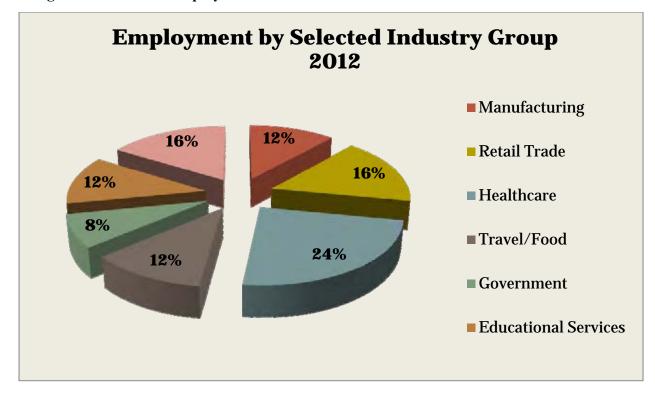


Figure 1.26 MSA Employment 2012

Source: Pennsylvania Department of Labor and Industry, Center for Workforce Analysis October 2015

The number of jobs in the region grew slightly over the twelve months from January 2015 to January 2016.⁵⁴ The recent jobs data has yielded some good news, according to *Pittsburgh Today and Tomorrow:*

In Southwestern Pennsylvania, a diverse economy led by medicine, technology, research and education that emerged in the wake of steel's collapse is a key reason why more people are moving in than moving out. The fields attracting the most are the life, physical and social sciences, computer and mathematical, architecture and engineering and healthcare, according to an UCSUR analysis of 2006-2010 American Community Survey data.

Moreover, the new arrivals filling those jobs are largely young workers. Some 70 percent of workers new to the region are under the age of 35 and more than 55 percent are between the ages of 22 and 34. 55

⁵⁴ PA Department of Labor and Industry, Workforce Information News Release, March 15, 2016

⁵⁵ Pittsburgh Today and Tomorrow, a report by the University Center for Social and Urban Research of the University of Pittsburgh, *Getting Younger*, Growing young adult population transforms region they once fled, Jeffery Fraser, 2015.

Employment Projections

The Center for Workforce Information and Analysis in the Pennsylvania Department of Labor and Industry projects labor force needs in the state. The analysis completed for the region, noted in Figure 1.27, indicates a large loss of government jobs, growth in the goods producing sector and significant job growth in healthcare and social assistance sectors.

Figure 1.27 2012-2022 Employment Projections

		Pittsburgh N	MSA		
		Industry Em	ployment		
	2012-2022	Long-Term l	Projections		
			_		
NAICS	Industry	Employmen		Change	Change
	to to a time To a time	2012		Percent	05 500
All	Industries Total	1,180,120	1,266,620	7.30%	86,500
Goods P	roducing	156,560	164,820	5.30%	8,260
1	11 Agriculture, Forestry,	8,140	8,120	-0.20%	-20
:	21 Mining, oil& gas	8,910	9,370	5.20%	460
	23 Construction	49,900	58,520	17.30%	8,620
31-	33 Manufacturing	89,600	88,800	-0.90%	-800
F		000 330	1.045.600	90/	77 270
	Providing 22 Utilities	5,860	1,045,600 5,670		
	22 Othities 42 Wholesale Trade	39,740	41,740		
	+2 wholesale Trade IS Retail Trade	127,970			•
	9 Transportaion	37,190	•		•
	51 Information	17,520			-
	52 Finance&Insurance	55,400			
	53 Real Estate	13,580	15,100		-,
	54 Professional&Technica		13,100	11.20%	1,520
	Services	69,640	79,360	14.00%	9,720
	55 Management of Co.	37,010	41,520		,
	56 Adm& Waste Services		61,380		•
	51 Educational Services	93,180	95,560		•
	52 Health Care&	55,100	33,300	2.00%	2,500
	Social Assistance	186,150	220,480	18.40%	34,330
-	71 Arts, Entertainment	19,970	21,860		•
	72 Accommodation&	25,570	22,000	5.50%	2,050
	Food Service	91,250	97,390	6.70%	6,140
1	81 Other	56,900	59,940		,
	99 Government	62,850	60,790		•
		52,556	55,.50	2.20%	2,550
	Self-employed	54,150	55,080	1.70%	930

Source: PA Department of Labor and Industry, Center for Workforce Information and Analysis

Unemployment Rates

The unemployment rate for September 2016 in the Pittsburgh MSA was 6.0% compared to a 5.8% rate for Pennsylvania and a national rate of 5.0%. ⁵⁶ Unemployment rates within the region varied by county. The PA Department of Labor and Industry reported that Butler County had the lowest rate at 5.3% while Fayette County held the highest rate at 8.6. ⁵⁷

Unemployment and employment trends in the region are shown in Figure 1.28 below. Indiana County, Beaver County and Fayette County show the largest employment losses between 2007 and 2015.

Figure 1.28 Regional Unemployment Trends 2007-2015

Pennsylvania Local Area Unemployment Statistics by County September 2015 to December 2007 Comparison - Seasonally Adjusted Center for Workforce Information and Analysis 10/27/2015

	4	Employ	yment	3	ce - v	Unempl	oyment			Unemploy	ment Rate	
Area	September 2015	December 2007	Net Change	Percent Change	September 2015	December 2007	Net Change	Percent Change	September 2015	December 2007	Net Change	Percent Change
Pennsylvania	6,070,675	6,085,500	-14,825	-0.2%	338,668	305,019	33,649	11.0%	5.3	4.8	0.5	10.49
Allegheny County	619,461	609,069	10,392	1.7%	31,816	28,580	3,236	11.3%	4.9	4.5	0.4	8.99
Armstrong County	31,419	31,333	86	0.3%	2,432	1,765	667	37.8%	7.2	5.3	1.9	35.89
Beaver County	81,596	85,062	-3,466	-4.1%	5,179	4,411	768	17.4%	6.0	4.9	1.1	22.49
Butler County	93,244	93,686	-442	-0.5%	4,633	4,210	423	10.0%	4.7	4.3	0.4	9.39
Fayette County	54,749	62,135	-7,386	-11.9%	4,395	4,037	358	8.9%	7.4	6.1	1.3	21.39
Greene County	17,593	17,320	273	1.6%	1,104	1,028	.76	7.4%	5.9	5.6	0.3	5.49
Indiana County	40,698	43,763	-3,065	-7.0%	2,684	2,313	371	16.0%	6.2	5.0	1.2	24.05
Lawrence County	40,227	41,436	-1,209	-2.9%	2,678	2,497	181	7.2%	6.2	5.7	0.5	8.89
Washington County	101,134	99,703	1,431	1.4%	6,153	5,160	993	19.2%	5.7	4.9	0.8	16.39
Westmoreland County	175,918	177,925	-2,007	-1.1%	10,076	9,184	892	9.7%	5.4	4.9	0.5	10.25

It is important to note that Employment' is NOT interchangeable with Tobs' when referencing these data. Based on these data, it would be accurate to say, The number of people working has changed by _from 12:07.

Workforce Training Programs

The Southwestern Pennsylvania region is home to four Workforce Investment Boards or WIBs (Figure 1.29), which serve as one-stop shops to provide workforce development assistance through employment, education and training programs. The WIBs establish partnerships and supply funding to partners who offer training for targeted occupational clusters. CareerLink also provides job-seeking services and training to individuals, as well as employee-seeking services to employers. On-the-job training is also offered through the WIBs for designated "High Growth Industry" jobs to assist with instructional costs, supplies, contracted services and a percentage of employee wages which then provides a hands-on training approach for unskilled laborers and the necessary training funding for the employers.

⁵⁷ PA Department of Labor and Industry, Workforce Information 10/2016

⁵⁶ PA Department of Labor and Industry, Workforce Information 10/2016

BUTLER **ARMSTRONG** Career Link Career Career Link BEAVER INDIANA Job Training ALLEGHENY CareerLink **3 RIVERS** Career Link WESTMORELAND Career Lin WASHINGTON CareerLink CareerLink FAYETTE Legend CareerLink WIBs and Title 1 Providers 3-Rivers WIB region Tri-County WIB region GREENE Southwest Corner WIB region Westmoreland/Fayette WIB region

Figure 1.29 Workforce Investment Boards

Source: SPC

High Priority Occupations (HPOs)

High Priority Occupations (HPOs) are job categories that are in demand by employers; have higher skill needs; and, provide family sustaining wages.⁵⁸

According to the Center for Workforce Information and Analysis, occupations are classified as HPOs through an analysis of the Pennsylvania Targeted Industry Clusters. A sample of designated high priority occupations for the Tri-County Workforce Investment Board is shown in Figure 1.30 below. Complete lists for all the counties in the region can be found at http://www.portal.state.pa.us/portal/server.pt?open=514&objID=814812&mode=2

Figu	are 1.30 2015 High Priority Occupations for T	ri-County	Workf	orce In	vestm	ent Area	а		
			w	ages (201	4)		Employ	yment	
SOC Code	SOC Title	Educational Attainment		Entry Level	Exper. Level	Estimated 2012	Projected 2022		Annual Openings
11-2022	Sales Managers	BD+	\$115,870	\$62,810	\$142,400	260	270	3.8%	7
11-9013	Farmers, Ranchers & Other Agricultural Managers	WK EXP	N/A	N/A	N/A	1,400	1,280	-8.6%	23
11-9151	Social & Community Service Managers	BD+	\$62,990	\$37,100	\$75,930	130	140	7.7%	4
13-1023	Purchasing Agents	LT OJT	\$59,330	\$39,360	\$69,320	450	470	4.4%	10
13-1031	Claims Adjusters, Examiners & Investigators	LT OJT	\$53,410	\$28,290	\$65,970	160	150	-6.3%	4
13-1051	Cost Estimators	BD	\$65,710	\$48,250	\$74,440	360	410	13.9%	18
13-1081	Logisticians	BD	\$63,120	\$43,150	\$73,110	130	150	15.4%	5
13-1151	Training & Development Specialists	BD+	\$50,720	\$27,470	\$62,350	230	260	13.0%	7
13-1161	Market Research Analysts & Marketing Specialists	BD	\$64,630	\$37,650	\$78,110	390	480	23.1%	14
13-2011	Accountants & Auditors	BD	\$66,700	\$40,570	\$79,760	1,380	1,500	8.7%	53
13-2051	Financial Analysts	BD	\$63,590	\$45,010	\$72,880	210	220	4.8%	6
15-1121	Computer Systems Analysts	BD	\$69,210	\$49,370	\$79,130	220	250	13.6%	7
15-1131	Computer Programmers	BD	\$64,520	\$42,420	\$75,570	170	170	0.0%	4
15-1132	Software Developers, Applications	BD	\$90,090	\$59,770	\$105,240	330	370	12.1%	8
15-1133	Software Developers, Systems Software	BD	\$88,540	\$61,360	\$102,140	270	330	22.2%	9
15-1142	Network & Computer Systems Administrators	BD	\$68,780	\$44,570	\$80,880	300	310	3.3%	7
15-1151	Computer User Support Specialists	PS+	\$43,360	\$31,410	\$49,340	590	680	15.3%	18
15-1152	Computer Network Support Specialists	AD	\$66,270	\$47,350	\$75,730	90	100	11.1%	2
17-2051	Civil Engineers	BD	\$81,720	\$55,740	\$94,710	220	240	9.1%	7
17-2072	Electronics Engineers	BD	\$80,240	\$63,400	\$88,660	90	90	0.0%	2
17-2112	Industrial Engineers	BD	\$78,920	\$57,410	\$89,680	320	360	12.5%	14
17-2141	Mechanical Engineers	BD	\$84,110	\$54,120	\$99,100	410	440	7.3%	17
19-4021	Biological Technicians	BD	N/A	N/A	N/A	20	20	0.0%	1
21-1011	Substance Abuse & Behavioral Disorder Counselors	MT OJT	\$42,140	\$33,840	\$46,300	90	100	11.1%	3
21-1012	Educational, Guidance, School & Vocational Counselors	MD	\$62,060	\$48,000	\$69,100	290	290	0.0%	7
21-1015	Rehabilitation Counselors	MD	\$38,070	\$17,380	\$48,420	180	210	16.7%	8
21-1021	Child, Family & School Social Workers	BD	\$36,950	\$27,250	\$41,810	250	270	8.0%	7
21-1022	Healthcare Social Workers	MD	\$52,220	\$38,350	\$59,150	290	380	31.0%	14
21-1023	Mental Health & Substance Abuse Social Workers	BD	\$31,150	\$22,980	\$35,240	340	400	17.6%	13

Source: PA Center for Workforce Information and Analysis

⁵⁸ http://www.portal.state.pa.us/portal/server.pt?open=514&objID=814812&mode=2

1.9: Housing

There are 1,197,719 total housing units in the region.⁵⁹ The vacancy rate of 9.1% with 109,237 with vacant housing units is lower than the national vacancy average of 11.4%. Figure 1.31 below gives a broad picture of housing within the region.

The median value of owner-occupied housing units in the region is \$122,503 compared with \$176,700 for the comparable national figure. 60 Sixty-five percent of the units were built before 1970 compared to 41% for the U.S. 61

Housing Characteristics Figure 1.31

COMPARI	SON OF SELECTED DATA ITEMS FO	R DIFFERENT AREAS	
DATA ITEM	SPC 10-COUNTY REGION	PENNSYLVANIA	UNITED STATES
% of total housing units that are single-family units (Sing	79.6% le-family units include 1 unit, attached; 1 ur	79.5% nit, detached; mobile home; a	74.0% nd boat, RV, van, etc.)
% of total housing units that were built before 1970	65.4%	59.6%	41.0%
% of occupied housing units with no vehicles available	11.0%	11.5%	9.1%
Median value of owner-occupied housing units	\$122,503	\$164,700	\$176,700
Median gross rent for renter-occupied housing units paying cash rent	\$700	\$813	\$904
% of owner-occupied housing units where the selected monthly owner costs are 30% or more of household income in the past 12 months	20.7%	25.8%	28.5%
% of renter-occupied housing units where the gross rent is 30% or more of household income in the past 12 months	42.5%	46.0%	48.3%

60 US Census, QuickFacts, American Community Survey 2015

⁵⁹ U.S. Census, 2009-2013 American Community Survey

⁶¹ Data from the Municipal Profile: Selected Housing Characteristics 2009-2013, SPC 10-county Region, compiled by SPC.

Comprehensive Economic Development Strategy for Southwestern Pennsylvania January 2017

Generally, the region has a high rate of homeownership (69.8% of households live in owner-occupied units versus 64.9% nationally) with stable neighborhoods as reflected in the stable occupancy figures; 88.7% of the households in the region resided in the same house one year ago versus 84.9% nationwide.

Anecdotal information from more rural counties notes a changing preference in younger workers. While previous generations preferred homeownership, younger workers look for upscale rental communities with recreational amenities. These housing preferences are difficult to find in rural areas and making it more difficult for rural areas to attract and retain a younger workforce. 62

Pittsburgh has often been recognized for its livability standards and housing affordability for residents. The area has a high rate of homeownership with stable neighborhoods and lower vacancy rates.

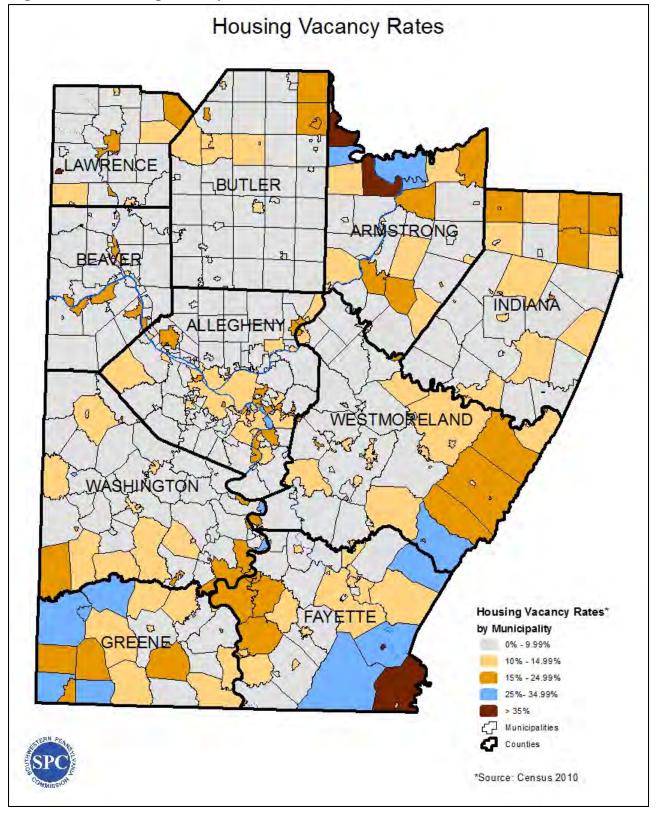
Blighted and Abandoned Properties

The region does well in many housing aspects, but issues of blighted and abandoned properties still exist. Information on the extent or regional cost of blighted housing is not available. Visits to affected neighborhoods confirm that blighted properties financially affect the vitality of the Southwestern Pennsylvania communities (see Figure 1.32).

Few communities are beset by a concentration of vacant properties as severe as that found in Homewood, where nearly 44 percent of the land parcels in the neighborhood and 30 percent of the houses are vacant, according to a study by the University of Pittsburgh Center for Urban and Social Research. But dense pockets of vacant property can be found throughout southwestern Pennsylvania and government efforts to reclaim those lots and structures fall short of solving the problem.⁶³

⁶² 15 ECONOMIC FACTS ABOUT MILLENNIALS The Council of Economic Advisers October 2014, Office of the President
⁶³ "The Cost of Blight: Vacant and Abandoned Properties," Pittsburgh Quarterly, Jeffery Frazier, Fall, 2011

Figure 1.32 Housing Vacancy Rates



Pennsylvania Land Bank Legislation

In 2012, the Pennsylvania legislature passed legislation that would allow Pennsylvania municipalities to create land banks. Land banks have previously been common in other states, such as Michigan and Ohio, to stabilize blight in their municipalities.

According to the Housing Alliance of Pennsylvania:

The PA Land Bank Bill authorizes counties and municipalities with populations of 10,000 or more to establish land banks, a flexible and optional tool meant to help strengthen our cities and towns by enabling them to systematically remove problem properties from an endless cycle of vacancy, abandonment, and tax foreclosure, and return them to productive use. Land banks can engage in bulk quiet-title proceedings so that title insurance could be obtained and title would be marketable. They also address a vast inventory of problem properties that need to be cleared of debts, maintained, made available for private purchase, and managed where real estate markets are weak or distressed. 64

Westmoreland County was the first county to approve a land bank in the Southwestern Pennsylvania region in December 2013. In April 2014, the City of Pittsburgh passed a Land Bank Bill. The Tri-COG Collaborative in Allegheny County, a joint effort of three COGs, hopes to establish a land bank for their municipalities and began the process by completing a vacant property analysis and a business plan.

Affordable Housing

While housing in the region is more affordable than the nation as a whole, the need for affordable housing for low income families presents an issue in Southwestern Pennsylvania that many organizations are working to address. In the region, 42.5% of households pay more than 30% of household income for rent compared with 48.3% nationwide. For homeowners, 20.7% have mortgage payments in excess of the 30% of monthly income versus 28.5% in the U.S. (see Figure 1.33).65

The Housing Alliance of Pennsylvania reports there is a total deficit of 281,952 rental units in Pennsylvania so that very low income families, seniors and those with disabilities may have a difficult time finding a home that they can afford.⁶⁶

 ⁶⁴ Land Banking 101: Pennsylvania Land Bank Act. Housing Alliance of Pennsylvania. http://www.housingalliancepa.org/node/1054
 ⁶⁵ Data from the Municipal Profile: Selected Housing Characteristics 2009-2013, SPC 10-county Region, compiled by SPC.

Land Banking 101: Pennsylvania Land Bank Act. Housing Alliance of Pennsylvania. http://www.housingalliancepa.org/node/1054

Figure 1.33 Southwestern Pennsylvania Housing Characteristics

	% of owner-occupied housing units where the selected monthly owner costs are 30% or more of household income in the past 12 months	% of renter-occupied housing units where the gross rent is 30% or more of household income in the past 12 months
Allegheny	21.5%	43,9%
Armstrong	18.8%	37.9%
Beaver	21.0%	41.9%
Butler	20.6%	43.4%
Fayette	20.1%	37.3%
Greene	16.7%	45.1%
Indiana	17.9%	46.3%
Lawrence	22.4%	45.2%
Washington	18.9%	40.3%
Westmoreland	20.3%	37.8%
SPC 10-County Region	20.7%	42.5%
Pennsylvania	25.8%	46,0%
United States	28.5%	48.3%

Source: SPC

1.10: County Business Diversity

This section shows minority ownership of firms in each of the ten counties of Southwestern Pennsylvania.

DEFINITION OF COMMON TERMS

This is an edited version of the Census Bureau's webpage Definition of Common Terms

GENDER

Gender is based on self-identification; respondents are asked to report the sex they consider the business owner to be. Businesses could be categorized either as:

Women-owned or female-owned. Women own 51 percent or more of the equity, interest, or stock of the business.

THNICITY

Ethnicity and race are treated as separate concepts in the federal statistical system. The SBO asks both an ethnicity and a race question. Based on self-identification, the question on ethnicity asks the respondents if the business owner(s) is Spanish, Hispanic, or Latino.

The ethnicity categories are:

Hispanic or Latino. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race

Businesses could be categorized either as:

Hispanic-owned. Hispanics own 51 percent or more of the equity, interest, or stock of the business.

Detail may not add to total for all businesses because a Hispanic or Latino firm may be of any race. Moreover, each owner had the option of selecting more than one race and therefore is included in each race selected.

ACE

Race and ethnicity are treated as separate concepts in the federal statistical system. The SBO asks both a race and an ethnicity question. Based on self-identification, the question on race asks respondents to report the race or races they consider the business

The **race** categories a

Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Black or African American. A person having origins in any of the black racial groups of Africa, including those who consider themselves to be "Haitian." Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Some other race. This category includes all other responses not included in the "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or Other Pacific Islander," and "White" race categories described above. White. A person having origins in any of the original peoples of Europe, North Africa, or the Middle East

Businesses could be categorized either as:

American Indian- and Alaska Native-owned. American Indians and Alaska Natives own 51 percent or more of the equity, interest, or stock of the business.

Asian-owned. Asians own 51 percent or more of the equity, interest, or stock of the business.

Black-owned. Blacks or African Americans own 51 percent or more of the equity, interest, or stock of the business.

Native Hawaiian- and Other Pacific Islander-owned. Native Hawaiians and Other Pacific Islanders own 51 percent or more of the equity, interest, or stock of the business.

White-owned. Whites own 51 percent or more of the equity, interest, or stock of the business

Detail may not add to total for all businesses because a Hispanic or Latino firm may be of any race. Moreover, each owner had the option of selecting more than one race and therefore is included in each race selected.

VETERAN STATUS

Veteran status is based on self-identification; respondents are asked to report if a business owner is a veteran of the U.S. military service including the Coast Guard Veteran-owned. U.S. military service veterans own 51 percent or more of the equity, interest, or stock of the business.

COMPANY OR FIRM

A firm is a business organization or entity consisting of one domestic establishment (location) or more under common ownership or control. All establishments of subsidiary firms are included as part of the owning or controlling firm. For the economic census, the terms "firm" and "company" are synonymous.

ALLEGHENY COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		GENDER	ETHNICITY	Ħ	RM OWI	FIRM OWNERS BY RACE	YRACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian	Black or African American	White	Some other race	Veteran- owned
00	Total	30,665	1,158	256	3,602	686'9	82,112	262	9,905
21	Mining, quarrying, and oil and gas extraction	89	0	0	0	0	532	0	67
22	Utilities	0	0	0	0	0	104	0	0
23	Construction	619	91	0	52	388	8,379	40	1,327
42	Wholesale trade	534	0	0	52	64	2,646	0	368
51	Information	525	26	0	37	106	1,499	0	254
53	Real estate and rental and leasing	1,940	47	58	251	204	8,520	0	926
1 -	Professional, scientific, and technical services	5,102	227	45	937	029	15,197	20	1,946
- 75	Management of companies and enterprises	0	0	0	0	0	84	0	0
26	Administrative and support and waste management and remediation services	2,572	104	0	89	672	5,341	0	969
61	Educational services	1,767	92	29	188	284	2,746	0	242
62	Health care and social assistance	4,941	78	45	458	1,817	5,987	38	439
71	Arts, entertainment, and recreation	1,903	135	27	136	411	5,226	47	403
72	Accommodation and food services	968	67	0	296	201	2,758	0	290
11 (606)	Agriculture, forestry, fishing and hunting (606)	36	0	0	0	0	163	0	0
31-33	Manufacturing	311	31	0	46	06	1,622	0	185
44-45	Retail trade	3,683	119	0	401	386	7,744	0	655
48-49 (607)	Transportation and warehousing (607)	360	58	0	30	286	1,632	37	367
52 (608)	Finance and insurance (608)	711	0	0	95	96	3,618	0	617
81 (609)	Other services (except public administration) (609)	4,697	66	52	555	1,334	8,314	50	1,074

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (609) (609)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners.

Source: Census Bureau's 2012 Survey of Business Owners: http://www.census.gov/econ/sbo/getdata.html. Compiled by SPC.

ARMSTRONG COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		GENDER	ETHNICITY	E	RM OW	NERS	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	code Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian /	Black or African American	White	Some other race	Veteran- owned
00	Total	1,273	0	0	0	0	4,546	0	535
21	Mining, quarrying, and oil and gas extraction	29	0	0	0	0	162	0	0
22	Utilities	0	0	0	0	0	36	0	0
23	Construction	28	0	0	0	0	767	0	181
42	Wholesale trade	29	0	0	0	0	80	0	43
51	Information	0	0	0	0	0	0	0	0
53	Real estate and rental and leasing	109	0	0	0	0	272	0	0
1 -	Professional, scientific, and technical services	100	0	0	0	0	375	0	29
-76	Management of companies and enterprises	0	0	0	0	0	0	0	0
56	Administrative and support and waste management and remediation services	117	0	0	0	0	187	0	26
61	Educational services	0	0	0	0	0	0	0	0
62	Health care and social assistance	20	0	0	0	0	183	0	25
7.1	Arts, entertainment, and recreation	134	0	0	0	0	251	0	0
72	Accommodation and food services	32	0	0	0	0	75	0	0
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	32	0	0
31-33	Manufacturing	40	0	0	0	0	212	0	0
44-45	Retail trade	399	0	0	0	0	818	0	133
48-49 (607)	Transportation and warehousing (607)	49	0	0	0	0	424	0	36
52 (608)	Finance and insurance (608)	0	0	0	0	0	48	0	0
81 (609)	Other services (except public administration) (609)	157	0	0	0	0	621	0	32

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (909)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. (609) (209)

Source: Census Bureau's 2012 Survey of Business Owners: http://www.census.gov/econ/sbo/getdata.html. Compiled by SPC.

BEAVER COUNTY

2012 Survey of Business Owners

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status

		GENDER	ETHNICITY	Ë	₹M OW	/NERS F	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian /	Black or African American	White	Some other race	Veteran- owned
00	Total	3,371	0	26	34	206	11,111	0	1,262
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	46	0	0
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	96	0	0	0	0	1,856	0	219
42	Wholesale trade	62	0	0	0	0	290	0	74
51	Information	38	0	0	0	0	134	0	0
53	Real estate and rental and leasing	426	0	0	0	0	086	0	82
54	Professional, scientific, and technical services	405	0	0	0	0	1,471	0	232
22	Management of companies and enterprises	0	0	0	0	0	0	0	0
26	Administrative and support and was te management and remediation services	290	0	0	0	42	890	0	127
61	Educational services	144	0	0	0	0	152	0	0
62	Health care and social assistance	410	0	0	0	87	867	0	78
71	Arts, entertainment, and recreation	6	0	26	0	31	290	0	32
72	Accommodation and food services	134	0	0	0	0	239	0	0
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	73	0	0
31-33	Manufacturing	76	0	0	0	0	374	0	0
44-45	Retail trade	422	0	0	0	0	1,290	0	220
48-49 (607)	Transportation and warehousing (607)	29	0	0	0	0	401	0	81
52 (608)	Finance and insurance (608)	49	0	0	0	0	436	0	36
81 (609)	Other services (except public administration) (609)	979	0	0	34	46	1,322	0	81

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Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (909)(209)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. (809)

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609)

BUTLER COUNTY

2012 Survey of Business Owners

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status

		GENDER	ETHNICITY	H	RM OV	VNERS E	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian	Black or African American	White	Some other race	Veteran- owned
00	Total	4,177	100	0	164	28	13,273	0	1,509
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	153	0	30
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	195	0	0	0	0	2,001	0	159
42	Wholesale trade	149	28	0	38	0	512	0	54
51	Information	74	0	0	0	0	179	0	0
53	Real estate and rental and leasing	196	0	0	0	28	1,015	0	0
54	Professional, scientific, and technical services	909	46	0	39	0	1,825	0	162
22	Management of companies and enterprises	0	0	0	0	0	0	0	0
99	Administrative and support and waste management and remediation services	482	0	0	0	0	1,082	0	198
61	Educational services	132	0	0	0	0	318	0	0
62	Health care and social assistance	537	26	0	0	0	874	0	108
71	Arts, entertainment, and recreation	221	0	0	27	0	299	0	20
72	Accommodation and food services	91	0	0	29	0	293	0	49
11 (606)	Agriculture, forestry, fishing and hunting (606)	28	0	0	0	0	62	0	0
31-33	Manufacturing	0	0	0	0	0	386	0	75
44-45	Retail trade	791	0	0	0	0	1,648	0	79
48-49 (607)	Transportation and warehousing (607)	43	0	0	0	0	455	0	136
52 (608)	Finance and insurance (608)	88	0	0	0	0	258	0	205
81 (609)	Other services (except public administration) (609)	544	0	0	31	0	1,313	0	184

Footnotes:

(209) (909)

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners.

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. (809)

FAYETTE COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		GENDER	ETHNICITY	H	RM OV	VNERS	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian	Black or African American	White	Some other race	Veteran- owned
00	Total	2,306	0	0	84	159	7,505	0	772
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	66	0	0
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	72	0	0	0	25	1,091	0	177
42	Wholesale trade	0	0	0	0	0	145	0	0
51	Information	0	0	0	0	0	22	0	0
53	Real estate and rental and leasing	115	0	0	0	0	484	0	0
54	Professional, scientific, and technical services	204	0	0	0	0	724	0	122
22	Management of companies and enterprises	0	0	0	0	0	0	0	0
26	Administrative and support and waste management and remediation services	255	0	0	0	0	584	0	0
61	Educational services	106	0	0	0	0	126	0	0
62	Health care and social assistance	318	0	0	49	83	451	0	73
71	Arts, entertainment, and recreation	48	0	0	0	0	109	0	0
72	Accommodation and food services	98	0	0	32	0	347	0	0
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	64	0	0
31-33	Manufacturing	37	0	0	0	0	173	0	0
44-45	Retail trade	458	0	0	0	0	1,261	0	211
48-49 (607)	Transportation and warehousing (607)	46	0	0	0	0	421	0	68
52 (608)	Finance and insurance (608)	29	0	0	0	0	186	0	26
81 (609)	Other services (except public administration) (609)	202	0	0	0	51	1,185	0	74

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (909) (209)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609)

Source: Census Bureau's 2012 Survey of Business Owners: http://www.census.gov/econ/sbo/getdata.html. Compiled by SPC.

GREENE COUNTY

2012 Survey of Business Owners

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status

		GENDER	ETHNICITY	FIR	RM OW	NERSE	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NACS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian A	Black or African American	White	Some other race	Veteran- owned
00	Total	466	0	0	0	0	1,911	0	199
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	09	0	0
22	Utilities	0	0	0	0	0	37	0	0
23	Construction	0	0	0	0	0	170	0	53
42	Wholesale trade	0	0	0	0	0	38	0	0
51	Information	0	0	0	0	0	0	0	0
53	Real estate and rental and leasing	31	0	0	0	0	105	0	0
54	Professional, scientific, and technical services	96	0	0	0	0	318	0	20
55	Management of companies and enterprises	0	0	0	0	0	0	0	0
56	Administrative and support and waste management and remediation services	06	0	0	0	0	192	0	0
61	Educational services	0	0	0	0	0	0	0	0
62	Health care and social assistance	87	0	0	0	0	184	0	0
71	Arts, entertainment, and recreation	0	0	0	0	0	29	0	0
72	Accommodation and food services	29	0	0	0	0	98	0	0
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	0	0	0
31-33	Manufacturing	0	0	0	0	0	0	0	0
44-45	Retail trade	48	0	0	0	0	151	0	0
48-49 (607)	Transportation and warehousing (607)	0	0	0	0	0	132	0	0
52 (608)	Finance and insurance (608)	0	0	0	0	0	117	0	0
81 (609)	Other services (except public administration) (609)	98	0	0	0	0	254	0	76

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (909)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. (609) (609)

Source: Census Bureau's 2012 Survey of Business Owners: http://www.census.gov/econ/sbo/getdata.html. Compiled by SPC.

INDIANA COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		GENDER	ETHNICITY		RM OV	VNERSE	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian	Black or African American	White	Some other race	Veteran- owned
00	Total	2,014	25	0	0	31	6,646	0	830
21	Mining, quarrying, and oil and gas extraction	34	0	0	0	0	381	0	71
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	09	0	0	0	0	942	0	126
42	Wholesale trade	26	0	0	0	0	109	0	27
51	Information	0	0	0	0	0	26	0	0
53	Real estate and rental and leasing	112	0	0	0	0	367	0	0
1 54	Professional, scientific, and technical services	234	0	0	0	0	771	0	148
- 8]	Management of companies and enterprises	0	0	0	0	0	0	0	0
99	Administrative and support and waste management and remediation services	109	0	0	0	0	368	0	46
61	Educational services	41	0	0	0	0	118	0	0
62	Health care and social assistance	354	25	0	0	0	522	0	0
71	Arts, entertainment, and recreation	52	0	0	0	0	285	0	82
72	Accommodation and food services	94	0	0	0	0	236	0	32
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	145	0	0
31-33	Manufacturing	0	0	0	0	0	119	0	41
44-45	Retail trade	299	0	0	0	0	1,094	0	20
48-49 (607)	Transportation and warehousing (607)	20	0	0	0	0	179	0	31
52 (608)	Finance and insurance (608)	80	0	0	0	0	176	0	88
81 (609)	Other services (except public administration) (609)	211	0	0	0	31	802	0	89

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (909)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. (608) (609)

LAWRENCE COUNTY

2012 Survey of Business Owners

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status

		GENDER	ETHNICITY	H	NO M	NERSE	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian /	Black or African American	White	Some other race	Veteran- owned
00	Total	1,930	0	0	75	40	5,721	0	552
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	0	0	0
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	101	0	0	0	0	1,004	0	122
42	Wholesale trade	26	0	0	0	0	174	0	32
51	Information	0	0	0	0	0	0	0	0
53	Real estate and rental and leasing	232	0	0	0	0	029	0	80
54	Professional, scientific, and technical services	225	0	0	0	0	999	0	77
. 55	Management of companies and enterprises	0	0	0	0	0	0	0	0
56	Administrative and support and waste management and remediation services	230	0	0	0	0	448	0	0
61	Educational services	0	0	0	0	0	66	0	0
62	Health care and social assistance	231	0	0	43	40	383	0	0
71	Arts, entertainment, and recreation	99	0	0	0	0	152	0	0
72	Accommodation and food services	78	0	0	32	0	213	0	0
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	30	0	0
31-33	Manufacturing	34	0	0	0	0	191	0	0
44-45	Retail trade	338	0	0	0	0	616	0	52
48-49 (607)	Transportation and warehousing (607)	80	0	0	0	0	210	0	54
52 (608)	Finance and insurance (608)	34	0	0	0	0	278	0	36
81 (609)	Other services (except public administration) (609)	255	0	0	0	0	707	0	96

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners. (e06) (607)

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners. Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609)

WASHINGTON COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		•	•					•	
		GENDER	ETHNICITY	FIR	M OW	NERS E	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian A	Black or African American	White	Some other race	Veteran- owned
00	Total	4,690	168	103	170	09	14,079	33	1,547
21	Mining, quarrying, and oil and gas extraction	0	0	0	0	0	231	0	91
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	265	98	103	0	0	2,221	33	238
42	Wholesale trade	199	0	0	0	0	534	0	0
51	Information	09	0	0	0	0	132	0	0
53	Real estate and rental and leasing	346	0	0	0	0	1,222	0	261
54	Professional, scientific, and technical services	718	0	0	39	0	1,915	0	184
22	Management of companies and enterprises	0	0	0	0	0	0	0	0
26	Administrative and support and waste management and remediation services	312	25	0	0	35	898	0	63
61	Educational services	115	0	0	0	0	215	0	0
62	Health care and social assistance	494	0	0	0	25	803	0	57
71	Arts, entertainment, and recreation	380	29	0	0	0	784	0	0
72	Accommodation and food services	73	0	0	23	0	292	0	56
11 (606)	Agriculture, forestry, fishing and hunting (606)	0	0	0	0	0	98	0	0
31-33	Manufacturing	128	0	0	0	0	451	0	72
44-45	Retail trade	746	0	0	44	0	1,377	0	86
48-49 (607)	Transportation and warehousing (607)	73	0	0	0	0	521	0	114
52 (608)	Finance and insurance (608)	69	0	0	0	0	617	0	94
81 (609)	Other services (except public administration) (609)	722	28	0	34	0	1,810	0	219

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners.

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609) (609)

WESTMORELAND COUNTY

Number of Firms With or Without Paid Employees by Industry, Gender, Ethnicity, Race, and Veteran Status 2012 Survey of Business Owners

		GENDER	ETHNICITY	FIR	MOM	NERSE	FIRM OWNERS BY RACE		VETERAN STATUS
2011 NAICS code	Meaning of 2012 NAICS code	Female- owned	Hispanic-owned	American Indian and Alaska Native	Asian /	Black or African American	White	Some other race	Veteran- owned
00	Total	8,444	69	41	255	322	26,330	0	3,025
21	Mining, quarrying, and oil and gas extraction	25	0	0	0	0	200	0	74
22	Utilities	0	0	0	0	0	0	0	0
23	Construction	195	0	0	0	32	3,557	0	718
42	Wholesale trade	117	0	0	33	0	962	0	92
51	Information	108	0	0	0	0	204	0	0
53	Real estate and rental and leasing	581	0	0	0	0	2,498	0	218
54	Professional, scientific, and technical services	1,126	0	0	89	0	3,334	0	411
22	Management of companies and enterprises	0	0	0	0	0	0	0	0
26	Administrative and support and waste management and remediation services	876	0	0	28	20	1,870	0	238
61	Educational services	282	0	0	0	0	623	0	0
62	Health care and social assistance	1,210	0	0	09	80	2,144	0	164
71	Arts, entertainment, and recreation	350	0	0	0	39	1,014	0	78
72	Accommodation and food services	291	0	0	0	0	626	0	62
11 (606)	Agriculture, forestry, fishing and hunting (606)	46	0	0	0	0	144	0	0
31-33	Manufacturing	233	0	0	0	0	911	0	107
44-45	Retail trade	1,335	59	0	34	44	3,171	0	301
48-49 (607)	Transportation and warehousing (607)	125	0	0	0	0	1,006	0	145
52 (608)	Finance and insurance (608)	204	0	0	0	0	1,073	0	213
81 (609)	Other services (except public administration) (609)	1,340	0	41	32	77	2,826	0	220

Footnotes:

Crop and Animal Production (NAICS 111 and 112) are out of scope of the 2012 Survey of Business Owners.

Rail Transportation (NAICS 482) and the Postal Service (NAICS 491) are out of scope of the 2012 Survey of Business Owners.

Monetary Authorities-Central Banks (NAICS 521) and Funds, Trusts, and Other Financial Vehicles (NAICS 525) are out of scope of the 2012 Survey of Business Owners.

Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813) and Private Households (NAICS 814) are out of scope of the 2012 Survey of Business Owners. (609) (609)

Section 2: Public Participation

2.1: Introduction

As the cooperative forum for regional collaboration, planning, and public decision-making, and as the designated Metropolitan Planning Organization (MPO) and Local Development District, SPC is charged with developing both the regional long range transportation plan and the Regional Comprehensive Economic Development Strategy for Southwestern Pennsylvania. While mandated by different federal regulations and requirements, SPC integrates these two plans into a coordinated regional program of projects and actions that are guided by the principle that the relationship between economic development and the region's transportation system is fundamental.

2.2: Public Input, Review and Comment

Public engagement throughout the development of *Mapping the Future* provided important opportunities for the public, planning partners and interested parties to share information, ideas, needs and priorities as we work together to build our region's future. SPC's Public Participation Program offers a variety of opportunities for the public to



participate in the planning process. SPC brings planning directly to our member counties through Public Participation Panels (Panels). Panels are comprised of more than 300 individuals reflecting the demographic diversity, needs, and concerns of communities throughout our 10-county region. The Panels help to conduct outreach, identify needs and resources, suggest alternatives, and assist in the evaluation of implementation strategies in the planning process.

For initial input, SPC hosted four regional forums to review available data and discuss potential performance measures related to transportation and economic development. The forums were attended by SPC's Public Participation Panel members and their invitees in order to gain input on the initial draft performance measures. Those in attendance were asked to assist SPC in the selection and focus of draft performance measures for possible inclusion in the plan. From a selection group of 90 measures in transportation and economic development categories, SPC utilized an electronic voting system in which participants could prioritize their individual

Comprehensive Economic Development Strategy for Southwestern Pennsylvania January 2017

selections, and also ask questions of SPC staff and planning partners who attended the events. Nearly 100 participants turned out for these events, and their questions and feedback were vital to the next step in the process.

Based on this feedback from the regional meetings, SPC then developed an online Performance Measures Survey to obtain broader input from the region to develop a draft set of performance measures for inclusion in *Mapping the Future: The Southwestern PA Plan*. The survey was organized into three sections: Communities; People, Jobs & Economy; and, Mobility & Infrastructure. SPC released a follow-up community survey in February 2015 on Investment Priorities. The survey asked respondents for their priorities on strategies and how they would spend money on transportation in the region. For example, would they focus on fixing and maintaining what we already have? Would they focus on building onto what we already have? Would they do both? In addition to their priorities, participants were also asked about projects that are important to them. For example, did they have a project in mind or know of one that reflected their investment priorities that would help to implement the Regional Vision. More than 1,000 surveys were completed throughout the SPC region. More details about public input and the online surveys are presented in later sections.

In addition to the public outreach discussed above, SPC provided numerous opportunities for the private sector, regional elected officials and the regional economic development community to participate in several SWOT exercises. They were also offered the opportunity to prioritize the policy goals and strategies the Economic Development District (EDD) should pursue.

Review and comment on the draft CEDS will be solicited in a 30-day public review process, in accordance with federal requirements. During this review process from December 14, 2016 through January 17, 2017, public comment will be accepted via mail, email or fax at any time during the public comment period. More detail is provided in the Public Notice below in Figure 2.1.

Figure 2.1 NOTICE OF PUBLIC COMMENT AND REVIEW PERIOD

SOUTHWESTERN PENNSYLVANIA COMMISSION COMPREHENSIVE ECONOMIC DEVLOPMENT STRATEGY FOR SOUTHWESTERN PENNSYLVANIA (CEDS)

The Southwestern Pennsylvania Commission (SPC) is seeking your input and will open a 30-day public comment period for the region's Comprehensive Economic Development Strategy (CEDS). The public comment period will open Wednesday, December 14, 2016 and close Tuesday, January 17, 2017, at 4:00 p.m.

SPC is the designated Metropolitan Planning Organization (MPO) and Economic Development District (EDD) for Southwestern Pennsylvania and is responsible for regional transportation planning and economic development activities.

The Comprehensive Economic Development Strategy (CEDS) is an implementation element of *Mapping the Future:* The Southwestern PA Plan. The CEDS is a public-sector plan prepared by SPC and approved by the Economic Development Administration (EDA) of the U.S. Department of Commerce. The CEDS provides a strategy action plan for SPC as the Economic Development District.

Interested parties may view the CEDS online at www.spcregion.org. Copies of the document are also available for review at the offices of the Southwestern Pennsylvania Commission; at the Pittsburgh Department of City Planning; at County Planning Department Offices in SPC member counties; and, at many public libraries in Southwestern Pennsylvania.

Written comments regarding the CEDS can also be submitted by email to comments@spcregion.org, by mail to SPC Comments (RE: CEDS), at Two Chatham Center, 112 Washington Place, Suite 500, Pittsburgh, PA 15219, or by fax to SPC Comments at (412) 391-9160.

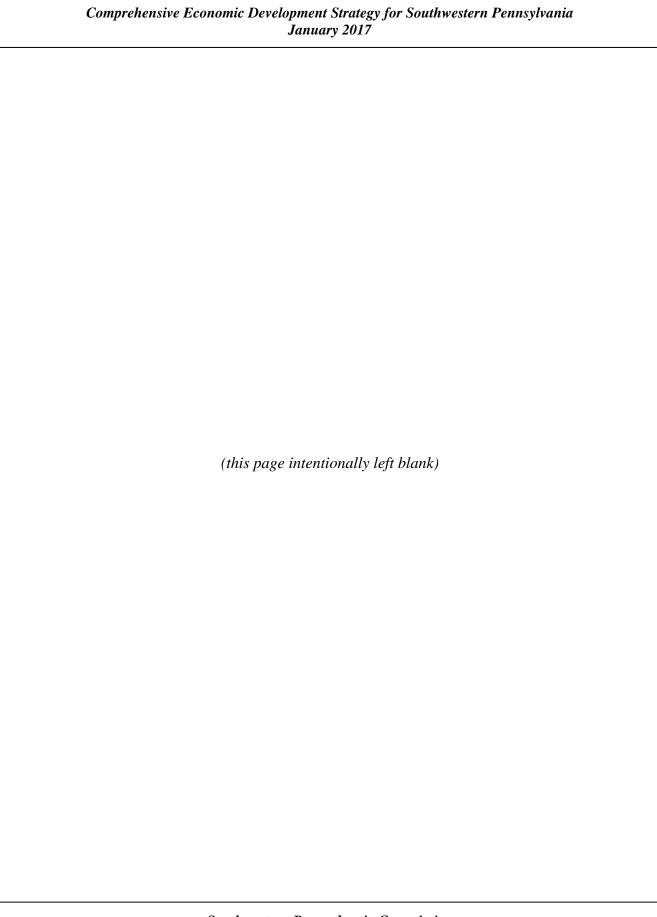
All comments must be received by 4:00 p.m. on Tuesday, January 17, 2017.

Upon consideration of the public comments received, the Southwestern Pennsylvania Commission will consider approving the CEDS for submission to the Economic Development Administration at its meeting at 4:30 p.m. on January 30, 2017. This meeting will be held at Two Chatham Center, 112 Washington Place, Suite 400, Pittsburgh, PA 15219. This meeting is open to the public, and those requiring transit options or special needs can be assisted using the information below.

The Southwestern Pennsylvania Commission (SPC) is committed to compliance with nondiscrimination requirements of civil rights statutes, executive orders, regulations and policies applicable to the programs and activities it administers. Accordingly, SPC is committed to ensuring that program beneficiaries receive public participation opportunities without regard to race, color, national origin, sex, age, disability or economic status. Meeting facilities are accessible to persons with disabilities and the location is reachable by public transit. SPC will provide auxiliary services for individuals with language, speech, sight or hearing needs, provided the request for assistance is made 3 days prior to the meeting. SPC will attempt to satisfy requests made with less than 3 days notice as resources allow. Please make your request for auxiliary services to Matt Pavlosky at (412) 391-5590, Ext. 361, or mpavlosky@spcregion.org. If you believe you have been denied participation opportunities, or otherwise discriminated against in relation to the programs or activities administered by SPC, you may file a complaint using the procedures provided in our complaint process document or by contacting SPC's Title VI Coordinator by calling (412) 391-5590. For more information, or to obtain a Title VI Discrimination Complaint Form, please see our website at: www.spcregion.org or call 412-391-5590.

TRANSIT SERVICE INFORMATION

For information regarding transit services in Allegheny County, please call Port Authority Customer Service at 412-442-2000. For transit information in other counties, please visit: www.commuteinfo.org/comm_trans.shtml or call 1-888-819-6110.



Section 3: Regional Strengths, Weaknesses, Opportunities and Threats (SWOT)

3.1: Overview

A regional Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is an analytical tool used to help identify risks and rewards by examining internal and external threats and weaknesses. The process of developing the SWOT helps to shape the conversation about the future economic development efforts in the region.

The Economic Development Administration (EDA) calls SWOT "a strategic planning tool used by organizations to ensure that there is a clear objective informed by a comprehensive understanding of a region's capabilities and capacity." ¹

The process calls for an analysis of the following factors:

- Strengths are a region's relative competitive advantages and often are internal in nature;
- Weaknesses are a region's relative competitive disadvantages also often internal in nature;
- **Opportunities** are chances or occasions for regional improvement or progress often external in nature; and,
- **Threats** are chances or occasions for negative impacts on the region or regional decline also often are external in nature.²

3.2: Past SWOT Reports for the Region

As part of the SWOT process, SPC examined SWOT research and reports completed for the Pittsburgh region during the past decade.

In 2006, the Milken Institute issued a report called the *Pittsburgh Technology Strategy*, which included a SWOT analysis completed for the high-tech base in Pittsburgh. The authors analyzed qualitative and quantitative factors to examine the technology base in the area.

Excerpts from the summary of the 2006 SWOT analysis identified the following:

¹ http://www.eda.gov/ceds/content/swot-analysis.htm, 2016

² Ibid.

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"Strengths: Strong, university-based knowledge assets; active grassroots political leadership; active incubators; the presence of established high-tech firms; low personal state and local tax burdens.

Weaknesses: High risk aversion; negative migration dynamics; no real policy for high-tech development...; unfavorable corporate tax structure.

Opportunities: Scholarship programs in Pennsylvania; proximity to high-tech talent; university collaborations.

Threats: Pittsburgh's financial deficit; competition from more economically favorable regions; drain of the knowledge base; aging population."³

3.3: Regional SWOT

Regional meetings conducted by SPC in 2015 emphasized similar topics, shown in Figure 3.1.

Strengths

The meetings identified regional strengths as: strong regional partnerships for economic development, a strong transportation network, a strong location in the Northeast, abundant water

supply, and natural resources. Additional strengths included cultural and recreational amenities with professional sports, home to major healthcare companies, research institutions and training facilities, educational opportunities, a diverse economy, work ethic, a surplus of industrial properties, and a small but growing engaged, new generation of leadership in civic, entrepreneurship and local food initiatives.



³ Pittsburgh Technology Strategy, Perry Wong, Benjamin Yeo and Ross DeVol, Milken Institute, November 2006, pp.1-2.

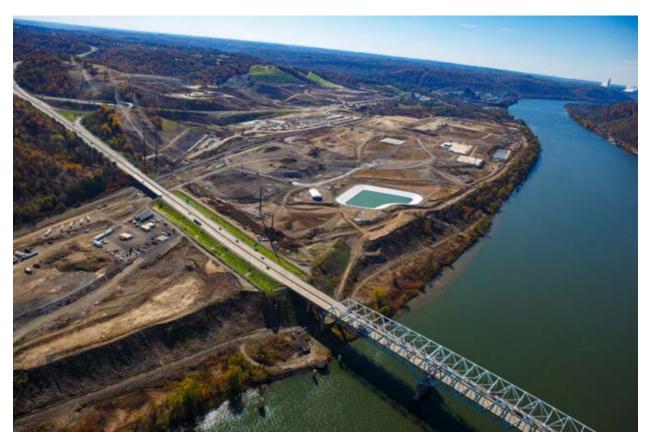
Figure 3.1 Regional SWOT Input Summary

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Strong regional and state partnerships for economic development Small but growing engaged new generation of leadership in civic, entrepreneurship and food The region is home to major healthcare companies, research institutions, and training facilities Abundant water supply Rural nature Education opportunities Work ethic 1-376 Location in the Northeast Surplus of industrial properties Strong transportation network; Good river access, rail access, airport access region wide Cultural amenities Professional sports/venues Diverse economy Changing the face of the energy sactor in the region Vibrant urban/regional environment Region is diverse WATER Geographic location Natural resources Existing manufacturing infrastructure SWPA culture Environmental assets Environmental assets Educational assets Educational assets Good word of mouth Affordable housing	Condition of roads and bridges Lock of rural broadband Lack of avaiability of rail served industrial property Number of Act 47 communities No cohesive economic development/workforce development system Aging population Too many taxing egencies over organized and under funded and under funded Too many taxing egencies over organized and under funded Too many school districts Pension threat to all evels of government Aging existing infrastructure including existing communities Sewer and water infrastructure old and crumbling International and direct flights Regional transit Lack of demographic diversity Sprawl Government fragmentation/land use/ too many governments Infrastructure maintenance needs \$\$\$\$\$\$\$\$\$\$ Access to global ports	Construction of the Shell cracker plant Marcellus shale and downstream opporturities for industrial development Strong presence in medicine field, education, and research Possibility for brownfield development especially using rail access Potential for petro-chemical development Redevelopment of existing communities Potential for technology development Engage more young people Develop more smart leadership in local offices, proactive/be the nexus and transfer agent for successful and innovative projects WATER People and rail	EPA Air Quality regulations and the impact on the coal industry Condition of river network locks and dams impact on economy and recreation Marcellus Shale Industry slow down Water Quality Challenges/acid minerunoff/degradation from insufficient infrastructure State/DEP regulations Lack of diversity of the industrial base Expanding and creating more tax bodies Aging infrastructure including existing communities Reeping housing affordable

Weaknesses

Several components of regional infrastructure were listed as weakness: condition of roads, bridges, lack of broadband in rural areas, lack of rail-served industrial sites, and sewer/water. Lack of recognition for the resources offered by existing communities was viewed as a weakness. Other weaknesses identified included too many units of government, under-funded government pension programs, lack of cohesion between the economic development/workforce development system, and an aging population and lack of demographic diversity and low national rankings for entrepreneurship and start-up businesses.

Opportunities



Shale gas development led the list of opportunities, the construction of the Shell cracker plant as well as downstream opportunities for industrial development, potential for petro-chemical development, and the development of brownfields using their existing rail access. Regional opportunities include the strong regional presence in medicine, education, research and the potential for technology development. Other opportunities mentioned were the need to engage more young people, and develop more smart leadership and innovative projects.

Threats

The collapse of the coal industry and its impact on local communities is a threat to the region. Conditions on the river network's locks and dams impact the economy and recreation. A slowdown in the Marcellus Shale industry and environmental regulations from DEP and EPA were cited as threatening the region. Water quality degradation and acid mine run-off are also threats, along with the lack of diversity in the industrial base.

A regional SWOT analysis conducted by Moody's Analytics, published January 2016, affirmed the results of the regional meetings, citing the weakness in infrastructure and workforce/population growth and the strengths in the regional research institutions, geographic location, and strong positions in finance and healthcare industries. Additional comments from national consultants are shown below in Figure 3.2.

Figure 3.2 Comments from National Economic Analysts

Comments From National Economic Analysts						
Forecast	Strong Points	Weaknesses	Long-term Challenges/risks	Current		
Moody's Analytics 9/15/2*105 https://www.economy.com/precis-enapshot?g=LUSA_MPTT		weak population growth aging infrastructure	gas pipelines weak demographics below national rate of economic growth	economy in expansion phase		
PNC 1st Quarter 2015	affordable costs good universities and healthcare expansion of high tech employers			steady pace of growth, job creation, income gains		
Wells Fargo Economics Group (PA and PIT) 8/12/2015	natural resources	demographics impediment to growth decline in oil prices slowdown in housing construction	"The largest impediment to growth remains the public sector."	potential for cracker plant		
IHS Global Insights Jun-15	ranked Pit 23 out of 381 us metro areas if ranked as a country, would be 82 in world		some older, Mdwestern cities suffer from job losses, aging population and infrastructure 'a concentrated public effort to bring infrastructure investment to these communities would serve the dual purpose of creating local jobs now and improving the local business cities the future."			
Slow population growth not only weighs on demand for local goods and services, but also limits home sales, residential construction and tax revenues.* Wells Fargo Economics 8/12/2015 Growth itself is enabled by the intellectual and physical power of an expanding workforce.* HIS Global Insights June 2015						

3.4: Discussion of Opportunities and Challenges

SWOT Identified Opportunities

The SWOT identified strong sectors driving growth in the regional economy as providing the greatest opportunities. Programs to leverage these assets within growing clusters should be supported, such as the examples below.

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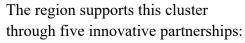
Advanced Manufacturing Example: As part of the advanced manufacturing cluster, the Greater Pittsburgh Metals Manufacturing Community (GPMMC) has historic strengths in metals, strong supplier networks, world-class research universities, abundant energy and water, and available brownfields sites. The partnership's 20-county area, spanning Pennsylvania and West Virginia, includes 1,636 metal manufacturing establishments that employ over 63,000 people and contributes \$2.1 billion in exports each year. In addition to the standard private sector, academic, and non-profit partners, this community includes support from the United Steel Workers and SMART Labor Unions, which have committed to partner with industry to train workers and engage with minority and underserved populations.⁴

Businesses are adding jobs in the energy sector as new energy sources and renewable energy become increasingly important as coal investments and jobs decline. The region can use the opportunity to leverage the growth by supporting new markets.

<u>Energy Example:</u> The Pittsburgh Region Clean Cities Program, an organization with a mission to "build and support the infrastructure needed for a strong alternative fuel and alternative vehicle market in Western Pennsylvania."⁵

Healthcare Example: The Pittsburgh Regional Alliance noted that healthcare and life science is

"a leading regional industry sector; nearly 10% of the gross regional product; employs some 133,000 people." In support of the cluster, seventeen publicly-supported schools and colleges in Southwestern Pennsylvania offer different levels of nursing degrees. Annually, across the region, 7,500 health-related degrees are awarded.





Pittsburgh Life Sciences Greenhouse, the McGowan Center for Regenerative Medicine, the Quality of Life Technology Center and Innovation Works, and Pittsburgh Technology Council.

⁴ https://www.eda.gov/challenges/imcp/files/2nd-round/IMCP-2-Pager-Handout-pittsburgh.pdf

⁵Pittsburgh Regional Clean Cities, 2016, http://pgh-cleancities.org/

⁶ Pittsburgh Regional Alliance, Key Sectors, March 11, 2016,

http://www.alleghenyconference.org/PittsburghRegionalAlliance/PDFs/KeySectors/KeySectorHealthCareLifeSciences.pdf ⁷ Ibid.

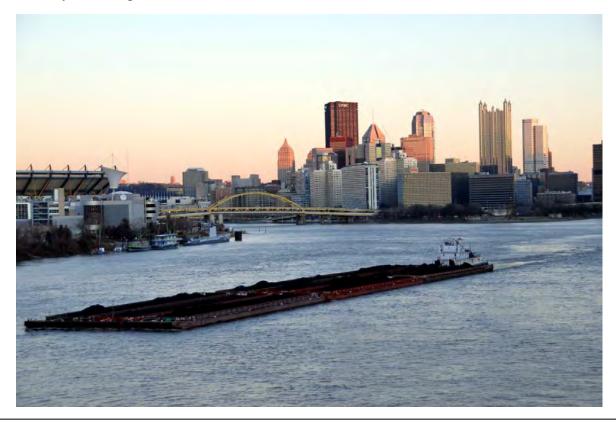
<u>Information Technology Example</u>: The region has a strong and growing sector in information technology, one of the key sectors for the region. Initiatives such as the Electro-Optics Center (EOC), located in Northpointe in Armstrong County, is Penn State University's national resource for electro-optics-related technologies, workforce development and partnerships. Other examples include the Pittsburgh Supercomputing Center (PSC), a joint effort of Carnegie Mellon University, the University of Pittsburgh and Westinghouse Electric Company, and the Collaborative Innovation Center (CIC), a dry-lab research facility providing space for tech innovators wishing to collaborate with Carnegie Mellon University.

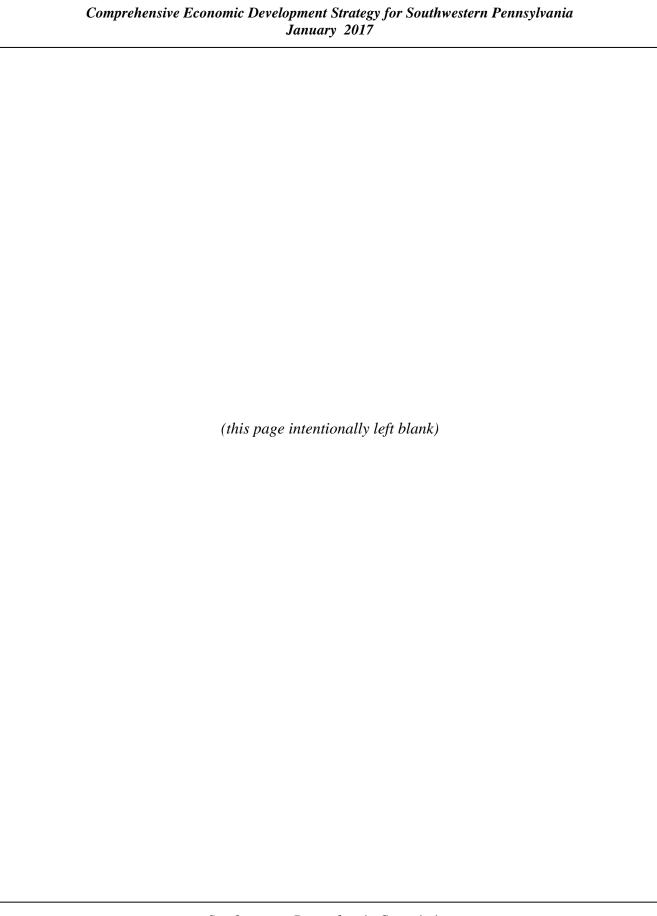
SWOT Identified Challenges

The SWOT highlighted several key challenges that need to be addressed that suggest that the region needs to focus on programs that support the opportunities and address the challenges.

These challenges include low business formation rates and small businesses and entrepreneurs; slowdown in the metals industry leading to job losses; the evolution of manufacturing; the collapse of the coal industry; and, workforce and demographic challenges.

The last two, the collapse of the coal industry and its downstream impacts, and workforce and demographic challenges, are among the region's most difficult challenges and addressing these will be key to the region's economic resilience.





Section 4: Regional Vision, Policy Goals & Action Plan

4.1: Background

The Southwestern Pennsylvania Commission (SPC) is the designated Metropolitan Planning Organization (MPO), Local Development District (LDD), and Economic Development District (EDD) for Southwestern Pennsylvania. In these roles, SPC is the leader in regional planning for Southwestern Pennsylvania and is charged with developing both the regional long range transportation plan and the comprehensive economic development strategy (CEDS). SPC integrates these two plans into a coordinated regional program of projects and actions that are guided by the principle that the relationship between economic development and the region's transportation system is fundamental.

SPC established a Regional Vision providing strategic direction for the region through a nationally recognized process (Project Region). This extensive scenario planning process evaluated trends and alternative scenarios for regional development with policy level goals and strategies to achieve the **Regional Vision for Transportation and land use that supports and enhances the regional economy and the communities within it.**

Mapping the Future: The Southwestern PA Plan builds upon the Regional Vision developed during the Project Region process. The Project Region process culminated in adoption of the regional long range plan that includes a development scenario built upon well-defined strategies and policy goals for the region that emphasize cost-effective management and reuse of our existing assets while pursuing sustainable development that is responsive to new opportunities. They are the foundation for Mapping the Future (see Figure 4.1).

Mapping the Future: The Southwestern PA Plan prioritizes programs and projects that have been developed to address the region's pressing needs to maintain and preserve our existing transportation assets for the sustainability of the region's economic competitiveness and the vitality of our communities. This plan projects fiscal resources considered reasonably available to us under guidelines established by federal law. It allocates the anticipated fiscal resources within the federally constrained projections. The plan provides a new set of enhanced performance metrics that allow us to better track changes on items identified as important by respondents to detailed presentation of trend data and investment priority preference surveys.

This document, the Comprehensive Economic Development Strategy (CEDS), is an integral part of *Mapping the Future* and its companion reports. Please refer to these documents for in-depth discussions of existing conditions, transportation and public transit issues, environmental justice and air quality.

The Foundation of Mapping the Future: The Regional Vision, Policy Goals and Strategies

process was a regional development scenario of transportation and land use that supports and enhances the regional economy and The consensus view that emerged from SPC's extensive analysis, region-wide public engagement, partner meetings, work group meetings, electronic town meetings, scenario development and comparison of key policies through the Project Region outreach the communities within it: The Regional Vision.

The Regional Vision:

Transportation and land use that supports and enhances the regional economy and the communities within it.

Project Region process culminated in adoption of the regional long range plan that includes a development scenario built upon well-Mapping the Future: The Southwestern PA Plan, builds upon the Regional Vision developed during the Project Region process. The defined strategies and plan policy goals for the region that emphasize cost-effective management and reuse of our existing assets while pursuing sustainable development that is responsive to new opportunities. They are the foundation for Mapping the Future.

supportive regional activities, places, and the connections among them. It includes the following high-level regional strategies: The development scenario supporting the Regional Vision is characterized by regional policy goals that emphasize mutually

- Promote high to medium density development in centers and clusters with a value placed on a mix of uses
- Target infrastructure improvements within centers and clusters of development and corridors that connect them
 - Emphasize infill development with reinvestment in existing business districts
 - Emphasize brownfield rehabilitation throughout the region
- Preserve open space
- Support agriculture in rural areas
- Emphasize a strong multimodal focus including highways, transit, railways and waterways
- Emphasize connecting centers and clusters and promoting excellent access to the urban core
- Promote improved transportation operations
- Promote improved transportation safety
- Emphasize upgrading existing water and sewer systems
- Promote limited water and sewer expansion primarily to historically underserved communities

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4.2: The Foundation of *Mapping the Future*

The Regional Vision, Policy Goals and Strategies

THE REGIONAL VISION:

Transportation and land use that supports and enhances the regional economy and the communities within it.

The Regional Vision forms the foundation of *Mapping*the Future. It was developed during the Project

Region outreach process used to develop the 2035

Transportation and Development Plan for
Southwestern Pennsylvania, which was among
the most aggressive, inclusive, and expansive
public participation efforts ever to be
undertaken by a regional planning agency.
The process led to the most successful, most
diverse, discussion of regional values and
strategies ever to take place in Southwestern
Pennsylvania. Thousands of people participated
in the Project Region outreach process through the
various meetings, workshops and other participation
opportunities.

Scenario planning techniques were used to evaluate alternative transportation and development options to determine which option best helped achieve the vision. The consensus view that emerged from SPC's extensive analysis, region-wide public engagement, partner meetings, work group meetings, electronic town meetings, scenario development and comparison of key policies through the Project Region outreach process was a regional development scenario of transportation and land use that supports and enhances the regional economy and the communities within it: The Regional Vision.

SPC utilized a scenario planning process that focused on four key variables: 1) the location of development, 2) the density of development, 3) the mix of development, and 4) transportation system elements. Using these four variables the region considered four different scenarios: a Trend Scenario; a Dispersed/Fringe Scenario; a Compact/Infill/Transit-Oriented Scenario; and a Corridor/Cluster Scenario.

Using the INDEX[©] scenario planning tool to augment its extensive GIS system, SPC modeled and analyzed each scenario for how well it advanced the key variables. The **Trend Scenario** depicted a continuation of current development patterns with investment taking place scattered throughout the region with no strong tie between population growth and employment growth. The **Dispersed Fringe** scenario had a lower density development pattern with development

outside of the urban cores and was primarily highway-oriented with transit and transit accessibility playing little to no role. The **Compact/Infill/Transit-Oriented Scenario** had high-density development with a mix of uses and development targeted within or adjacent to core communities and with strong active transportation elements and a reliance on public transportation. The **Corridor/Cluster Scenario** had medium to high density development in centers, clusters, and transportation corridors with a strong multimodal focus including highways, transit, railways, and waterways.

The scenario had excellent access to the urban core with improved transportation operations.

SPC then hosted the nation's first-ever live webcast Regional Town Meeting to present the draft scenarios. This was the first time that residents and communities throughout a region had come together via linked web meetings to talk and work together on what they wanted their region to look like in the future and how to make the most effective use of public investments throughout the region. The results of the Regional Town Meeting showed that the Compact/Infill/Transit-Oriented Scenario and the Corridor/Cluster Scenario were favored by a majority of the respondents for all of the indicators. In response to this public input, SPC drafted the Regional Development Scenario that reflected the positive elements of those two scenarios.

Mapping the Future: The Southwestern PA Plan

builds upon the Regional Vision developed during the Project Region process. The Project Region process culminated in adoption of the regional long range plan that includes a development scenario built upon well-defined strategies and policy goals for the region that emphasize cost-effective management and reuse of our existing assets while pursuing sustainable development that is responsive to new opportunities. They are the foundation

The Regional Development Scenario (Figure 4.2) illustrates high to medium density development in centers and clusters with value placed on a mix of uses. Infrastructure improvements would be targeted within the centers and clusters of development and corridors that connect them. There is an emphasis on infill development with reinvestment in existing business districts and brownfield rehabilitation throughout the region. Open space preservation and support for agriculture are key emphases in the more rural areas of Southwestern Pennsylvania. There is a strong multimodal focus including highways, transit, railways, waterways, and active transportation with an increasing emphasis on connecting the centers and clusters and promoting excellent access to the urban core. This scenario also promotes improved transportation operations and safety. The scenario emphasizes upgrading existing water and sewer infrastructure, with limited expansion primarily to historically underserved communities.

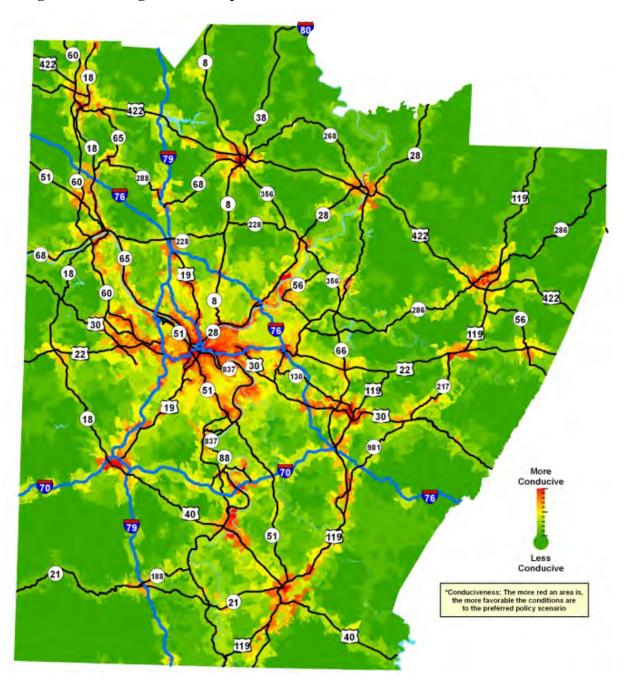


Figure 4.2 Regional Development Scenario

The development scenario supporting the Regional Vision is characterized by regional policy goals that emphasize mutually supportive regional activities, places, and the connections among them, as well as high-level regional strategies.

Regional Places

- Revitalization and redevelopment of the region's existing communities is a priority.
- Investment in infrastructure improvements will be coordinated and targeted at the corridor level to optimize the impact of the investment.
- The region will focus on the identification and development of industrial sites with special attention given to well-situated brownfield locations.

Regional Connections

- Maintenance of the existing transportation system will be a regional priority.
- Transportation and development choices will reflect a priority on safe and secure multimodal and intermodal networks for both people and goods.
- The region's transportation system will be actively managed and operated to allow the system to function at its full potential.
- The region's transit system will connect people with resources throughout the entire region.
- The entire region will have access to broadband communications infrastructure.
- The region's infrastructure system will be designed to protect and enhance public health and the environment.



Regional Activities

- The region will place a priority on business development with a focus on existing business retention and expansion.
- The region will support initiatives designed to improve both the quality and quantity of the region's workforce to meet emerging industry demands.
- The region will support identified strategic industry clusters.
- The region will place a priority on programs and services to attract and retain a diverse population with a particular focus on young adults and immigrants.
- The region will proactively support the emerging role of colleges and universities in economic development.
- The region will preserve, promote and develop the tourism and hospitality industries by capitalizing on historic, cultural, recreational and ecological assets.
- The region will preserve and develop its agricultural industry.



Regional Strategies

- Promote high to medium density development in centers and clusters with a value placed on a mix of uses
- Target infrastructure improvements within centers and clusters of development and corridors that connect them
- Emphasize infill development with reinvestment in existing business districts
- Emphasize brownfield rehabilitation throughout the region
- Preserve open space
- Support agriculture in rural areas





















Regional Strategies, cont.

- Emphasize a strong multimodal focus including transit, bicycle & pedestrian facilities, trails, roadways, active transportation elements, railways & waterways
- Emphasize connecting centers and clusters and promoting excellent access to the urban core
- Promote improved transportation operations
- Promote improved transportation safety
- Emphasize upgrading existing water and sewer systems
- Promote limited water and sewer expansion primarily to historically underserved communities





















Comprehensive Economic Development Strategy for Southwestern Pennsylvania January 2017

Throughout the Regional Vision, the core development values have been expressed through various means, including adopted county, regional or state plans and strategies, and through a public dialogue with citizens and professionals. The basics of those values, though stated many ways, are simple. Preserve, enhance and build upon our existing assets to maintain the region's infrastructure, make it safer and more reliable, and utilize it to grow our regional economy and develop sustainable active communities.

Pursuing the Regional Vision means taking advantage of diverse resources and opportunities throughout the region over the course of the coming decades. This approach may include redeveloping and revitalizing our existing communities and small towns, and capitalizing on previous infrastructure investment. It may include preserving our open space and nurturing our agricultural industry, or it may include investing in a well-maintained multimodal transportation system that provides safe, secure, efficient transportation options through efforts such as complete streets. It may include making the most productive use of our thriving academic community, or it may include capitalizing on historic, cultural, recreational and ecological assets. In fact, it includes all these things, and more.

This is the foundation on which *Mapping the Future* was built. It is these core development values, policy goals, and high level strategies that *Mapping the Future* seeks to implement and measure. It is from these that all discussion on performance measures and investment strategies for *Mapping the Future* is based. And it is by putting these core values into action that the region will achieve *Transportation and land use that supports and enhances the regional economy and the communities within it.*

SPC's CEDS Committee conducted several prioritization exercises on the policy goals to develop their top five policy goals and strategies related to economic development for the region.

The top priorities are:

- Revitalization and redevelopment of the region's existing communities is a priority.
- The region will place a priority on business development with a focus on existing business retention and expansion.
- The region will support initiatives designed to improve both the quality and quantity of the region's workforce to meet emerging industry demands.
- The region will place a priority on programs and services to attract and retain a diverse population with a particular focus on young adults and immigrants.
- The region will support identified strategic industry clusters.

These priority policy goals relate directly to the opportunities and challenges that were identified in the regional SWOT analysis and are the basis for the Action Plan that follows in Section 4.3.

4.3 Action Plan

Key Priorities and Actions for the Comprehensive Economic Development Strategy

Prioritized Policy Goal: Revitalization and redevelopment of the region's existing communities is a priority.

Economic Development District (EDD) Actions:

• Community Assistance Program (CAP)

The CAP encompasses several community development initiatives that provide training and technical assistance to businesses, local governments and individuals.

• Local Technical Assistance Program (LTAP)

This program helps municipal employees do their jobs more safely and efficiently by transportation education, improving road maintenance and safety skills, and putting research and new technology into practice at the local level through free training and technical assistance. Training is offered either as half-day or full-day courses, scheduled at sites throughout the region on a regular basis, and include such topics as Winter Maintenance, Roadside Vegetation and many others.

• Keystone Opportunity Zone (KOZ) Assistance

This program focuses on creating new jobs and increasing capital investment in specific underdeveloped and underutilized areas in the region by reducing state and local taxes in those targeted areas. SPC participates through PA DCED and is the regional coordinator for the KOZ program in Southwestern Pennsylvania.

• Water Resource Center

This program provides technical assistance to municipalities. The goal of SPC's Water Resource Center is to promote regional collaboration on water topics; lead in facilitating coordination and education; and provide technical assistance to local governments.

• CommuteInfo

This program supports environmentally conscious communities. It is a coordinated effort in partnership with transportation management associations, transportation providers, businesses, and non-profit service organizations throughout the region, is designed to increase the number of people who travel to work or school by riding transit, carpooling, vanpooling, or bike-pooling.



THE

REGIONAL VISION:

Transportation and land use

that supports and

enhances the regional

economy and the communities within it.

• Alliance for Transportation Working in Communities (ATWIC)

This is a special program within SPC to cultivate and support regional collaboration efforts to improve transportation access in urban, suburban, and rural communities in <u>Southwestern Pennsylvania</u> for <u>the region</u>'s most vulnerable populations offering reliable and affordable access to jobs and services.

• Sustainable Transportation

SPC provides funding to sustainable modes of transportation such as bicycle and pedestrian infrastructure, public transportation, and transportation demand management programs through various funding mechanisms including:

- o Transportation Alternatives Program (TAP)
- o Congestion Mitigation and Air Quality Program (CMAQ)
- Livability through Smart Transportation Program (SMART)

The EDD will also seek to actively support partners and regional efforts targeted at revitalization and redevelopment of existing communities. Examples include, but are not limited to, programs and efforts such as land banking, blight removal, urban redevelopment, community sustainability efforts and Complete Streets initiatives.



Prioritized Policy Goal: The region will place a priority on business development with a focus on existing business retention and expansion.

Economic Development District (EDD) Actions

• Partnership for Regional Economic Performance (PREP)

The PREP program is designed to coordinate regional services offered by Commonwealth business service providers, such as Industrial Resource Centers (IRCs), Industrial Development Organizations (IDOs), Local Development Districts (LDDs), and Small Business Development Centers (SBDCs). As the region's LDD, SPC is a core partner in the Southwestern Pennsylvania Partnership for Regional Economic Performance.

• Business Finance Assistance Program

SPC's Business Finance Assistance Program helps small businesses grow and create full time jobs for people in the region. SPC also has the ability to make loans and provide assistance to both agricultural and tourism focused businesses. SPC has been authorized as an Area Loan Organization by the PA DCED and is an authorized economic development lender for both the ARC and EDA. SPC provides education on access to

capital in the region and technical assistance; participates in the CMU Project Advisory Board; attends continuing education through SBA, PEDA and other regional providers; and, maintains active membership in SMC and RMA.

• Export Development Program

SPC's Export **Development Program** offers a wide range of services designed to help small and mid-sized businesses develop their international sales to compete successfully in the global economy. SPC's professionally trained staff provides one-on-one export counseling in exportreadiness assessment: market identification and access strategies; market and industry research;



trade show and event assistance; export documentation and technical assistance. This SPC program is funded through ARC and PA DCED.

- As designated coordinator of Regional Export Network of PA state international business development program, SPC's Export Program staff is globally connected via PA Authorized Trade Representatives to cover over 50 markets.
- o SPC is the one-stop shop for information on all available export assistance and grants offered by PA DCED for SWPA region.
- o SPC's Export Program staff provides assistance for qualified companies in the region to receive market access grant when the GAP or MAG programs are offered by SBA or by PA DCED. SPC staff follows grant guidelines to review all the applications before submitting them to grant administrator for approval. SPC staff also operates the payment procedures for those grant awardees.
- O SPC's Export Program collaborates with various partners in the region to offer educational seminars for new-to-export companies as well as in depth training for export documentation and compliance for exporting companies. Our partners include U.S. Commercial Service Pittsburgh Office, SBDCs, manufacturing associations, and private sectors as well.
- SPC's Export Program also offers referral services to our partners and private service providers to ensure that our clients receive the most effective help.

• Government Procurement Assistance

This SPC program, more commonly known as a Procurement Technical Assistance Center (PTAC), helps companies with marketing and contracts with federal, state and local government agencies. Staff provides one-on-one counseling and training with an emphasis on small businesses with minority, female or service-disabled veteran owners. Staff also provides immediate alerts on solicitations that are issued for their particular products or services. This SPC program is funded through PA DCED and the Defense Logistics Agency, a division of the U.S. Department of Defense.

- o SPC's PTAC staff is certified by the federal department of Veterans Affairs as Veteran Verification Assistance Counselors and work directly with VOSB and SDVOSB companies to assist them with the VA certification process and their government contracting goals.
- SPC's PTAC staff provides one-on-one counseling with all new client companies assess their government contracting potential and to help them determine their best



- course of action to navigate government markets.
- o In addition to one-on-one counseling, PTAC staff participates in approximately 20 outreach and training programs each year to inform new companies about our free procurement and veteran assistance services.
- o Supports Veteran Chamber of Commerce.
- SPC's PTAC staff does extensive work with VOSB and SDVOSB companies and would welcome the opportunity to partner with a Veteran Chamber of Commerce.
- o SPC's PTAC staff makes client referrals and participates in Veteran focused training programs with the Veteran Chamber.
- o SPC's PTAC staff has an extensive network of federal, state, and local government partners from the government contracting arena and to provide support to the Veteran Chamber in a number of ways including direct counseling assistance to veterans, referrals, and training program logistics.

• Keystone Opportunity Zone (KOZ) Assistance

This program focuses on creating new jobs and increasing capital investment in specific underdeveloped and underutilized areas in the region by reducing state and local taxes in those targeted areas. SPC participates through PA DCED and is the regional coordinator for the KOZ program in Southwestern Pennsylvania.

The EDD will also seek to actively support partners and regional efforts targeted to assist in retention and expansion of existing businesses. Examples include but are not limited to market diversification and growth both foreign and domestic, operational improvements, and access to capital.

Prioritized Policy Goal: The region will support initiatives designed to improve both the quality and quantity of the region's workforce to meet emerging industry demands.

Economic Development District (EDD) Supported Actions

- Participate with newly formed WIB partnerships to enhance coordination between local boards.
- Support regional talent attractions and retention initiatives.
- Support regional initiatives to align regional occupational supply and demand.
- The EDD will actively support efforts to work with targeted industry sectors that are significantly impacted by the collapse of the coal industry, including: **Supply Chain Diversification**

Help regional manufacturers identify new domestic and international market opportunities, as well as develop and execute strategies to penetrate new target markets in the shift away from coal-focused industry to new opportunities in metals and advanced materials manufacturing and associated spin-off manufacturing sectors.

o Research and communication on market trends that are projected to impact the region through communications that include whitepaper, social media, web, workshop and other methods.



- Outreach to regional manufacturers impacted by coal-sector declines to identify trends, options, and strategic steps for market diversification.
- O Collaboration with manufacturers to develop a clear vision and Diversification Strategy, which defines their core competencies and the characteristics of industry sectors and geographies that would be a good strategic fit for their company.
- Once the **Diversification Strategies** are developed for manufacturers, Catalyst and partner resources will assist in making the plan actionable including but not limited to Ideation, Export Assistance, Mini-grants to fund use of economic development organization (EDO) staff and third parties assisting SMEs, Communication material development such as website and social media, Product Innovation to adapt to new markets, New Technology Adoption to facilitate the **implementation** process and more.
- o **Assess** their entire business process to determine how **broadband-enabled technologies** can enhance and integrate these systems across the enterprise.
- o **To educate and make available to** individuals affected by the downturn, loan programs that assist, in starting new companies.

Prioritized Policy Goal: The region will place a priority on programs and services to attract and retain a diverse population with a particular focus on young adults and immigrants.

Economic Development District (EDD) Actions

- Support regional talent attractions and retention initiatives.
- Support regional and member efforts that are designed to address the demographic and workforce challenge.

Prioritized Policy Goal: The region will support strategic industry clusters.

Economic Development District (EDD) Actions

• Partnership for Regional Economic Performance (PREP)

The PREP program is designed to coordinate regional services delivery by the following Commonwealth business service providers: Industrial Resource Centers (IRCs), Industrial Development Organizations (IDOs), Local Development Districts (LDDs), and Small Business Development Centers (SBDCs). As the region's LDD, SPC is a core partner in the Southwestern Pennsylvania Partnership for Regional Economic Performance.

- Continued support and participation in the **Investing in Manufacturing Communities**Partnership (IMCP), an initiative designed to encourage communities to develop comprehensive economic development strategies that will strengthen their competitive edge for attracting global manufacturer and supply chain investments.
- Support regional initiatives that focus on:
 - advanced manufacturing
 - healthcare and life sciences
 - o energy
 - information technology
 - o financial and business services



Section 5: Evaluation Framework

5.1: Performance-Based Planning

Mapping the Future: The Southwestern PA Plan establishes a performance-based foundation for regional transportation investment decisions consistent with MAP-21¹ guidance. MAP-21 introduced requirements for performance-based planning, integrating performance management into many federal transportation programs. Under MAP-21, states and regions are required to establish measurable performance targets in support of national goals for Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reducing Delays in Project Delivery. National performance measures associated with these federal goals are under development via a multi-year intergovernmental process.

When federal targets and performance measures are adopted, states will report every two years on progress towards meeting their targets. Metropolitan planning organizations are to report progress every four or five years in their updated Long Range Transportation Plans.



Mapping the Future: The Southwestern PA Plan integrates performance measures specifically developed to measure the plan's performance and the region's progress over time. While not specifically a one-to-one measure for each policy goal, the measures are meant to capture the objectives of the policy goals and the Regional Vision to promote *Transportation and land use that supports and enhances the regional economy and the communities within it.* Like the plan itself, the measures should be viewed together as a whole to see how far the region has come toward advancing the Regional Vision.

Draft Performance Measures Development

SPC reviewed FHWA's August 2014 release *Model Long Range Transportation Plans: A Guide for Incorporating Performance-Based Planning* and its examples of best practices. SPC also

¹ Moving Ahead for Progress in the 21st Century, federal transportation legislation enacted in 2012

reviewed PennDOT's draft performance measures and had discussions with FHWA staff and peers from other MPOs and RPOs.

Based on that research, and corresponding discussions, SPC developed a large list of potential performance measures considering a review of the regional policy goals (see Section 4) to identify measures that might be able to represent the objectives inherent in those policy goals. Over 150 potential measures were initially identified and reviewed based on a set of criteria and data requirements developed from best practice research.

The first criterion was: Does the measure represent a key concern? Is it something we should know or just something that would be nice to know? Next: Is it clear? Can the measure be easily understood or does it need extensive explanation? Then: Is the measure something the agency and its investments can influence? Finally: Can it easily be determined if the measure is moving in a positive or negative direction?

As for the data requirements, the measure needed to be clearly defined and it needed to be from an existing secondary source data set. The measure could be the actual data or it could be derived from simple analysis, but no primary data would be collected solely for the purpose of developing a performance measure.



Second, the data source itself needed to be well established and recognized. It needed to have a demonstrated history of consistency with a reasonable expectation that it would be available in the future. It is imperative for public trust and transparency that the data source be identifiable and seen as one in which there is a reasonable expectation of public trust.

The measure needed to be available for a defined geography (e.g., municipality, county, SPC region, metropolitan statistical area, combined metropolitan statistical area, etc.). It was not necessary that all measures be available for the entire geography coterminous with SPC's geographic boundaries, but it was important that the geographic areas each measure applied to could be clearly understood.

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Finally, the measure needed to have a defined reporting period (e.g., bi-annual, annual, decennial, etc.). These criteria and data requirements reduced the number of potential measures from over 150 to 90.

SPC hosted four regional forums to review available data and discuss potential performance measures related to transportation and economic development. The forums were attended by SPC's Public Participation Panel members and their invitees in order to gain input on the draft performance measures. The four forums were held:

- Wednesday, November 12, 2014 (Murrysville)
- Thursday, November 13, 2014 (Mars)
- Friday, November 14, 2014 (Washington)
- Monday, November 24, 2014 (City of Pittsburgh)

Those in attendance were asked to assist SPC in the selection and focus of draft performance measures for possible inclusion in the plan. From a selection group of 90 measures in transportation and economic development categories, SPC utilized an electronic voting system in which participants could prioritize their individual selections, and also ask questions of SPC staff and planning partners who attended the events. Nearly 100 citizens turned out for these events, and their questions and feedback were vital to the next step in the process.

A number of changes were made based upon the information received via these meetings, both through comment and discussion as well as follow-up activities. Specific changes included the deletion of some measures as well as the addition of new measures. Changes to the performance measures based on feedback included the addition of population density change and housing density change to reflect regional development patterns. School Drop-Out Rate was also added as a measure. Originally, some of the example data were done at a scale reflective of the data

shown. Where appropriate, the scale of the example data was set back to zero to more accurately reflect the overall magnitude of any change over time.

Another performance measure discussion topic was in regard to distance relative to time in terms of travel. Travel time was kept as a measure and housing units within ½ mile of



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transit stops was added to help illustrate changes in distance. The proximity to parks measure, originally set at a distance of one mile, was changed to ½ mile and trails were added.

Means of transportation to work was incorporated into one measure so there was no need to choose between modes in terms of importance. All crash and fatality data was originally based on five-year rolling averages, which is how PennDOT presents information in statewide reports, but this data was annualized in order to make it easier to understand. Impaired streams, freight flow, broadband accessibility, and age of transit fleet were further defined. The example data sets for educational attainment and age were amended. Where appropriate, sample data was indexed with state and national averages.



Based on this feedback from the regional meetings, SPC then developed an online Performance Measures Survey to obtain broader input from the region to develop a draft set of performance measures for inclusion in *Mapping the Future: The Southwestern PA Plan*. The survey was organized into three sections: Communities;

People, Jobs & Economy; and, Mobility & Infrastructure. Example data for each performance measure was shown and respondents were asked whether they considered the measure to be "Very Important", "Important" or "Not Important". The online survey helped gauge what the respondents thought about given performance measures. A summary of the responses is shown in Figure 5.1., and an overview of the Performance Measures Survey can be found in Section 5.3.

Figure 5.1 Performance Measures Survey Responses Summary

<u>Performance Measures Survey Responses</u> Very Important or Important Performance Measures by Percent

1.	Structurally Deficient Bridge Deck	.99.23%
2.	Pavement Condition	.96.92%
3.	Number of Jobs	.95.96%
4.	Annual Unemployment Rate	.95.05%
5.	Net Job Creation Rate	.94.47%
6.	Cost of Living Index	.93.30%
7.	Means of Transportation to Work	.93.26%
8.	Median Household Income	.93.20%
9.	Population Density	
10.	Total Exports	.91.75%
11.	Peak Hour Delay	.91.73%
12.	Annual Fatality & Serious Injury Rate	.91.70%
13.	Number of Weight Posted Bridges	.90.38%
14.	Travel Time Reliability	.89.49%
	High School Dropout Rate	
16.	Educational Attainment	.88.37%
17.	Housing Unit Density	.88.32%
	Percent Change in Gross Domestic Product	
19.	Building Permits	.85.93%
	Age	
	Annual Roadway-Related Bike/Ped Fatalities & Injuries	
	Air Quality Index	
	Median Housing Value	
	Regional Transit Passenger Trips	
	Daily Vehicle Miles Traveled	
	Occupied & Vacant Housing Units	
27.	Miles of Impaired Streams	.83.16%
	Freight Flows	
	College & University Fall Enrollments	
	Housing Units Within ½ Mile of a Transit Stop	
	Tourism Industry Employment Impacts	
	Tourism Spending	
	Number of Farms	
	Proximity to Parks & Trails	
	Land in Active Farms.	
	Number of Jobs in Farming Sector	
	Broadband Accessibility	
	Minority Population	
	Age of Regional Bus Fleet	
40.	Foreign-Born Population	.59.42%

Source: SPC

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These responses are consistent with the Regional Vision and its intended efforts to preserve, enhance and build upon our existing assets; to maintain the region's infrastructure, and make it safer and more reliable; and, to utilize the transportation system to grow our regional economy and develop sustainable active communities.

The performance measures selected were based on state of the industry best practices. SPC will annually monitor and develop a summary report on the adopted performance measures. That report will help SPC, its partners, and the region to track progress in advancing the Regional Vision of *Transportation and land use that supports and enhances the regional economy and the communities within it.*

Section 5.2: Key Regional Performance Measures

Based on input received and preferences noted in the Performance Measures Survey, the measures are arranged in the key themes of Maintenance, Safety and Reliability, Community and Economy. Figure 5.2, Performance Measures At-a-Glance, is a quick reference to many of the key regional performance measures. The table gives the performance measure name and uses color coded arrows to depict each measure's trend at the time of inclusion in *Mapping the Future: The Southwestern PA Plan*. First, directionally the arrow shows if the trend is up, down or remaining relatively flat. Second, the color depicts if the trend is positive (green) or negative (red) in relation to the stated policy goals and strategies of the Regional Vision and the plan. Finally, a few of the performance measures do not lend themselves to this type of depiction and are more easily understood in tables, charts or maps. For more information on the performance measures, tables, charts and maps, please see Section 5.3.

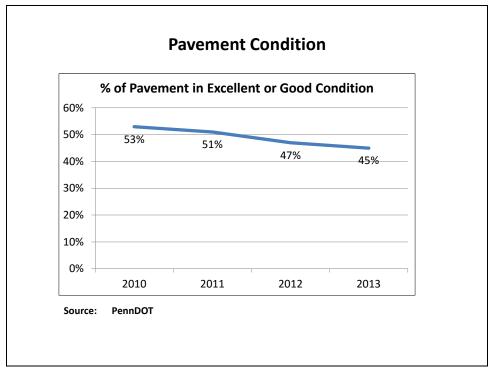
Figure 5.2 Performance Measures At-a-Glance

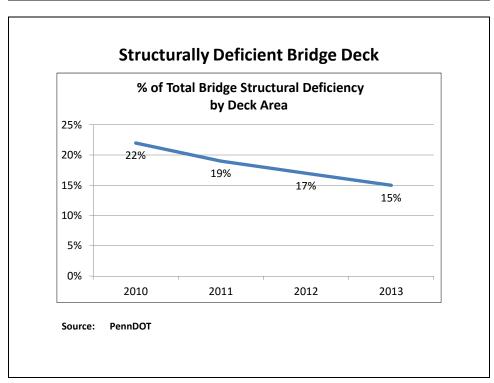
Safety & Reliability	Trend	Maintenance	Trend	Community	Trend
Annual Serious Injury Rate		Pavement in Excellent or Good Condition	4	Population	\leftrightarrow
Annual Fatality Rate	1	Square Feet of Structurally Deficient Bridge Deck	4	Minority Population	个
Roadway Related Pedestrian Major Injuries	\leftrightarrow	Weight Posted Bridges	\leftrightarrow	Foreign-Born Population	1
Roadway Related Pedestrian Fatalities	1	Average Age of Regional Bus Fleet	1	Age	Table*
Roadway Related Bike Major Injuries	1	Economy	Trend	Occupied & Vacant Housing Units	Chart*
Roadway Related Bike Major Fatalities	1	Number of Jobs	\leftrightarrow	Educational Attainment High School Graduate	1
Drove Alone to Work	\leftrightarrow	Net Job Creation	1	Educational Attainment Bachelor's Degree	1
Carpool to Work	\leftrightarrow	Annual Unemployment Rate	Chart. Indexed against State & National*	Dropout Rate	1
Public Transit to Work	\leftrightarrow	Total Exports (value)	1	Proximity to Parks and Trails	\leftrightarrow
Bike to Work	1	Tourism Spending	1	Proximity to Transit	\leftrightarrow
Work from Home	1	Tourism Industry Employment Impacts	1	Air Quality Good Days	1
Per Capita DVMT	1	Percent Change in Regional GDP	Chart. Indexed against State & National*	Air Quality Unhealthy Days	V
Transit Passenger Trips	1	Cost of Living Index	Table*	Population Density	Map*
Peak Hour Delay	Chart. Regional Data Being Collected*	Freight Tonnage to the Region	1	Housing Unit Density	Мар*
Travel Time Reliability	Chart. Regional Data Being Collected*	Freight Dollar Value to the Region	1	Miles of Impaired Stream	1
Arrow: Positive Trend, Upwar		Freight Tonnage from the Region	1	Land in Active Farms	V
Arrow: Negative Trend, Upwa	rd or Downward	Freight Dollar Value from the Region	1	Number of Farms	1

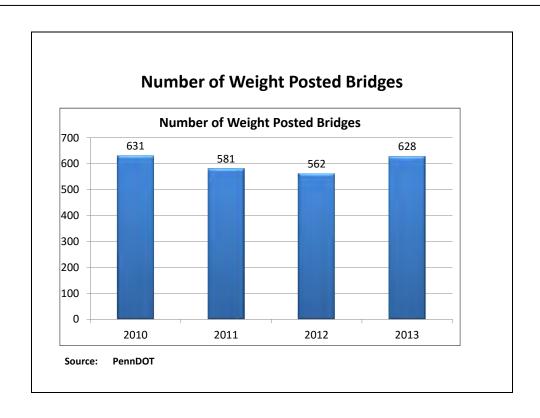
^{*} For more information on the performance measures, tables, charts and maps, please see Appendix A in Mapping the Future: The Southwestern PA Plan Report

5.3: Performance Measures Survey Overview

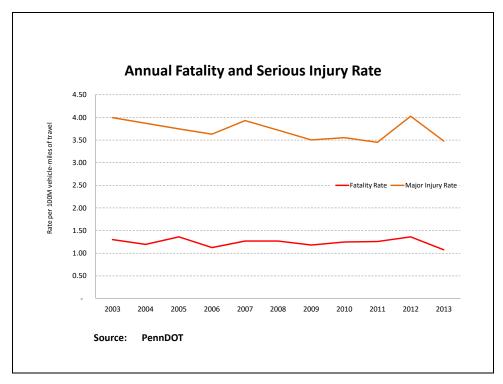
Maintenance

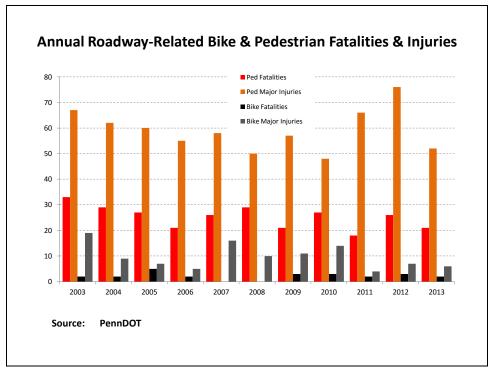






Safety & Reliability





Means of Transportation to Work

Means of Transportation to Work For Workers 16 Years and Over by Place of For 10-county Region

Means of transportation	1980	1990	2000	2008-2012
Car, truck, or van	81.8%	85.1%	87.5%	86.5%
Drove alone	61.9%	72.4%	77.8%	77.3%
Carpooled	19.9%	12.8%	9.7%	9.2%
Public transportation	9.4%	6.7%	5.5%	5.3%
Bicycle	0.1%	0.1%	0.1%	0.2%
Walked	6.7%	5.2%	3.7%	3.6%
Other means	0.6%	0.7%	0.6%	0.8%
Worked at home	1.4%	2.3%	2.5%	3.4%
Total	100.0%	100.0%	100.0%	100.0%

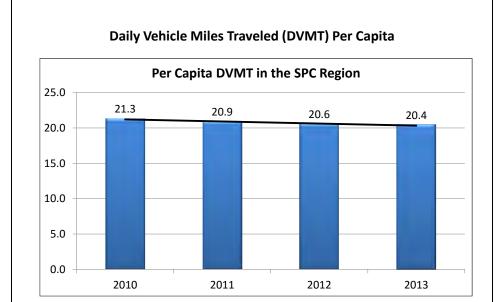
Average Commute Time

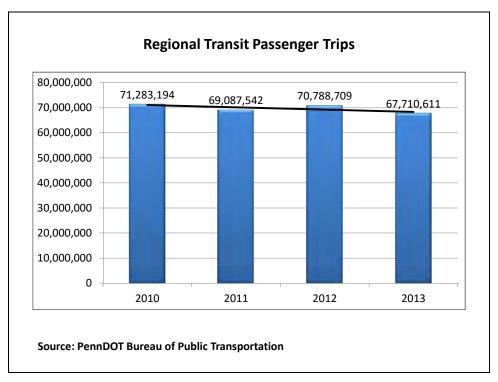
Not available

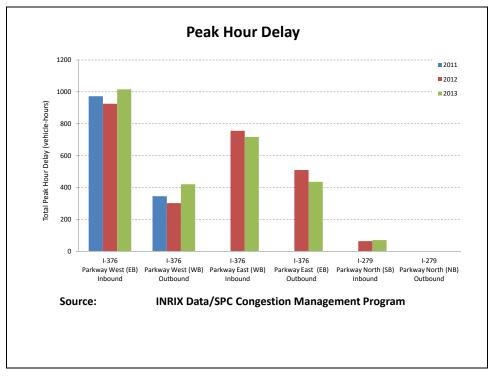
25.2

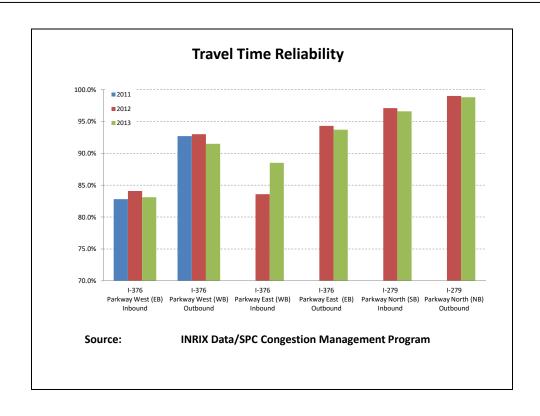
25.7

Source: U.S. Census Bureau - Decennial Census & American Community Survey (ACS)

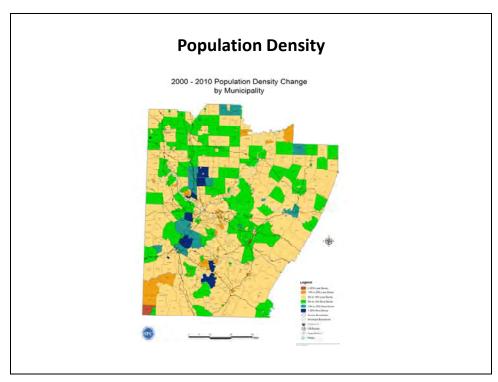


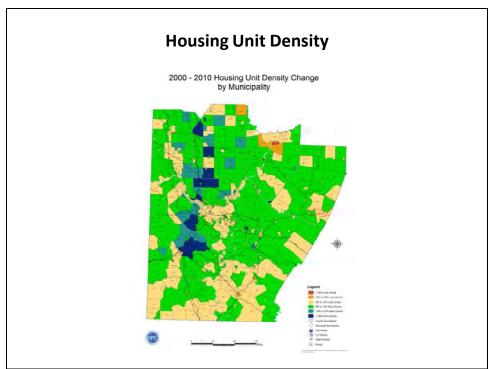


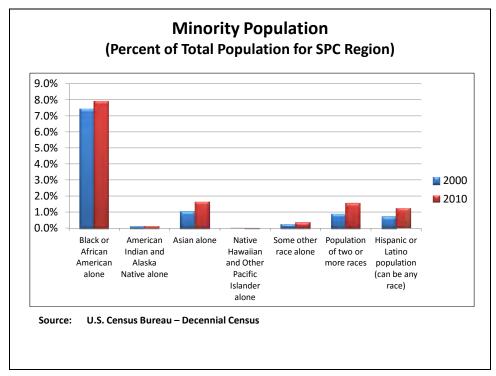


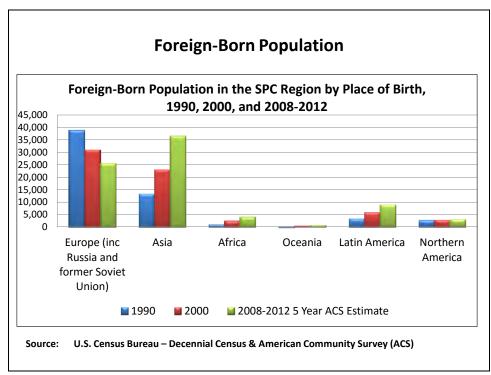


Community Development









Age

	Under 15	ears of Age	% of Total	15 to 64 y	ears of Age%	6 of Total	Over 64 years of Age % of Total			
COUNTY TOTALS	1990	2000	2010	1990	2000	2010	1990	2000	2010	
Allegheny	17.8%	18.2%	16.1%	64.8%	64.0%	67.2%	17.4%	17.8%	16.8%	
Armstrong	19.9%	18.6%	16.5%	62.6%	63.4%	65.0%	17.5%	18.0%	18.4%	
Beaver	19.5%	18.6%	16.5%	63.5%	63.0%	64.9%	16.9%	18.4%	18.6%	
Butler	20.7%	20.4%	18.2%	65.8%	65.3%	66.6%	13.5%	14.3%	15.1%	
Fayette	19.8%	18.6%	16.4%	62.3%	63.2%	65.6%	17.9%	18.1%	18.0%	
Greene	20.9%	18.0%	16.1%	62.6%	66.7%	68.5%	16.4%	15.2%	15.3%	
Indiana	19.3%	16.9%	15.5%	66.9%	68.2%	68.8%	13.8%	14.9%	15.7%	
Lawrence	19.5%	18.8%	17.2%	62.0%	61.9%	64.0%	18.5%	19.3%	18.8%	
Washington	18.5%	18.3%	16.7%	64.0%	63.8%	65.8%	17.5%	17.9%	17.5%	
Westmoreland	18.6%	18.0%	15.9%	64.3%	63.7%	65.2%	17.1%	18.3%	18.9%	
SPC region	18.6%	18.4%	16.3%	64.4%	64.0%	66.4%	17.0%	17.6%	17.2%	

Source: U.S. Census Bureau – Decennial Census

Educational Attainment

	2005-2009	2008-2012
% of population 25 and over with educational		
attainment high school graduate or higher	89.7%	91.1%
% of population 25 and over with educational		
attainment bachelor's degree or higher	26.9%	28.4%
% of population 25 and over with educational		
attainment professional degree or higher	3.0%	3.1%

Source: U.S. Census Bureau - American Community Survey (ACS)

Dropout Rate

	ı		ī
	SCHOOL YEAR 2006-2007	SCHOOL YEAR 2007-2008	SCHOOL YEAR 2012-2013
ALLEGHENY	1.30%	1.09%	0.88%
ARMSTRONG	0.98%	0.69%	1.18%
BEAVER	1.73%	1.18%	2.43%
BUTLER	0.98%	0.99%	0.82%
FAYETTE	2.65%	2.39%	1.49%
GREENE	2.17%	1.65%	1.57%
INDIANA	1.11%	0.80%	0.96%
LAWRENCE	1.43%	1.82%	1.03%
WASHINGTON	0.65%	1.10%	0.93%
WESTMORELAND	0.97%	1.18%	0.93%
SPC REGION	1.29%	1.19%	1.12%

Source: Pennsylvania Department of Education

Housing Units Within ½ Trails or Parks

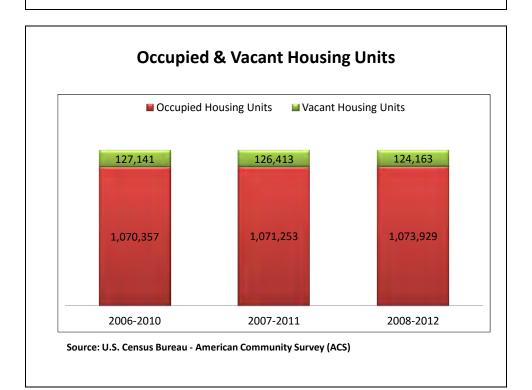
Item	Number	Percent
2010 Census Blocks in SPC Region	86,990	
Total Housing Units by 2010 Census Blocks	1,197,719	
Blocks completely within ½ mile of Trails OR Parks	61,975	
Total Housing Units in 2010 Census Blocks completely w/in 1/2mile Trail OR Park	967,461	80.77%

Source: U.S. Census Bureau & SPC GIS Data

Housing Units Within ½ of Transit Stops

Item	Number	Percent
2010 Census Blocks in SPC Region	86,990	
Total Housing Units by 2010 Census Blocks	1,197,719	
Blocks completely within ½ mile of Transit Stops	46,861	
Total Housing Units in 2010 Census Blocks completely w/in 1/2mile of Stops	768,982	64.20%

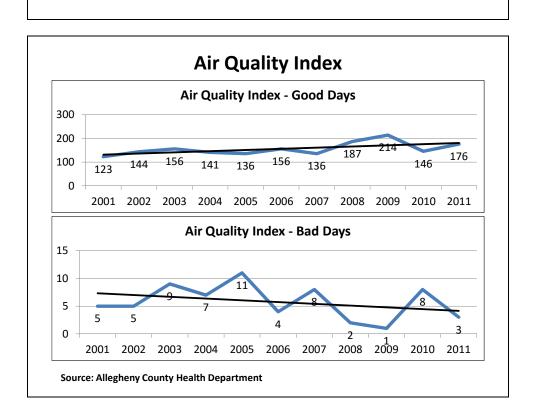
Source: U.S. Census Bureau & SPC GIS Data

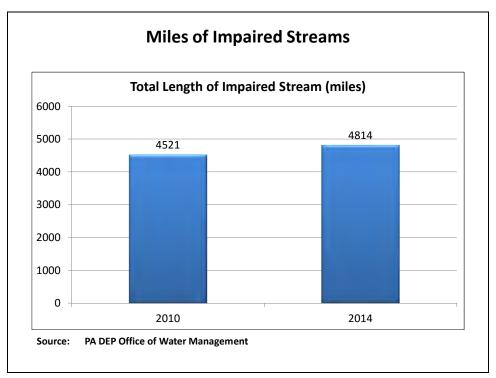


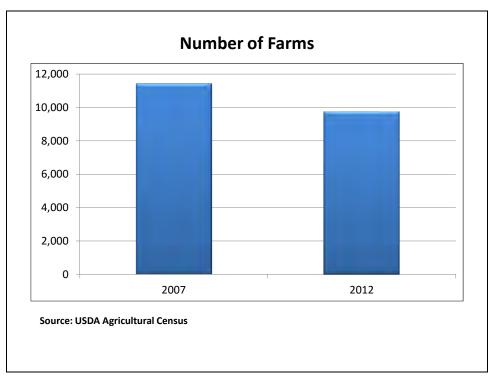
Building Permits New Privately-Owned Construction

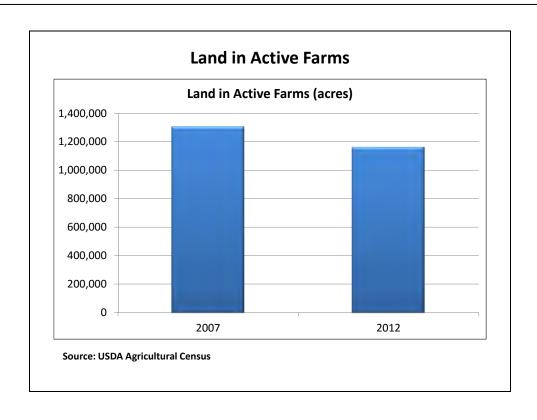
COUNTY/REGION TOTALS	Total units 2007	Total units 2008	Total units 2009	Total units 2010	Total units 2011	Total units 2012	Total units 2013
Allegheny	1,666	1,383	1,244	1,375	1,300	1,478	1,769
Armstrong	26	23	33	35	17	11	31
Beaver	275	172	149	334	164	237	230
Butler	964	590	411	514	504	586	1,318
Fayette	28	66	18	50	24	28	43
Greene	58	61	31	34	29	48	33
Indiana	122	59	73	25	67	349	210
Lawrence	85	105	102	105	35	41	43
Washington	585	523	453	411	345	453	367
Westmoreland	620	597	385	507	272	346	366
SPC region	4,429	3,579	2,899	3,390	2,757	3,577	4,410

Source: U.S. Census Bureau

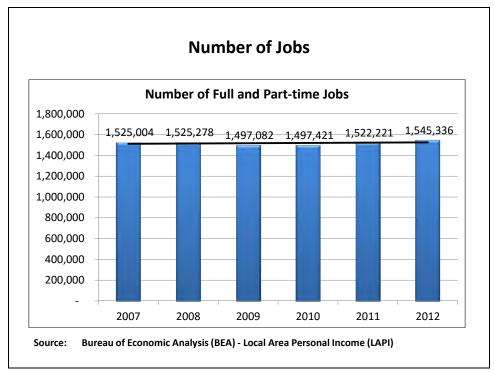


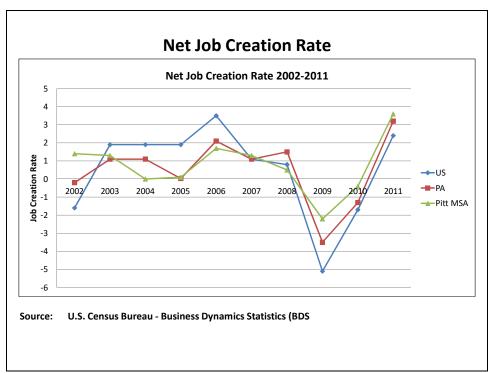


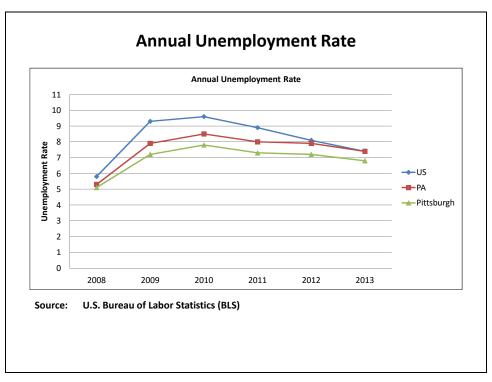


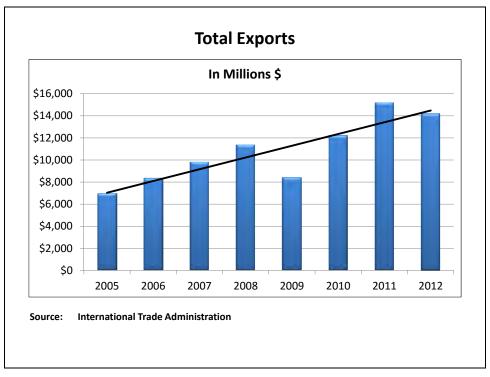


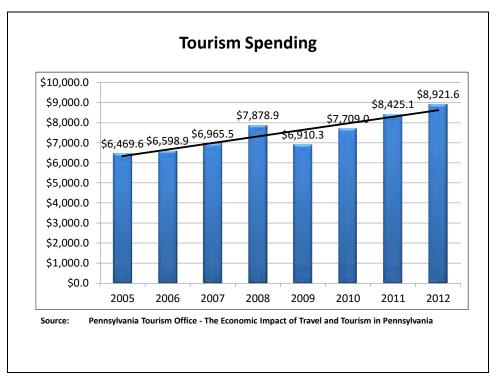
Economic Development

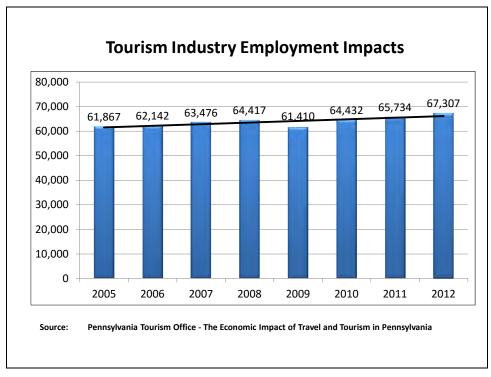


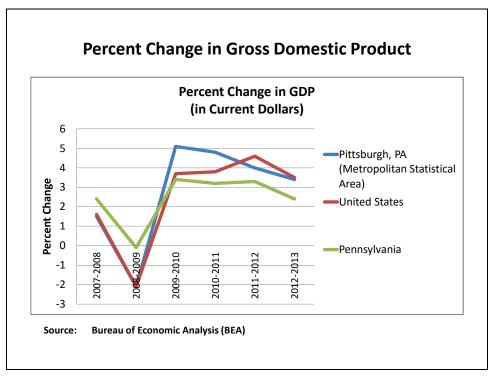












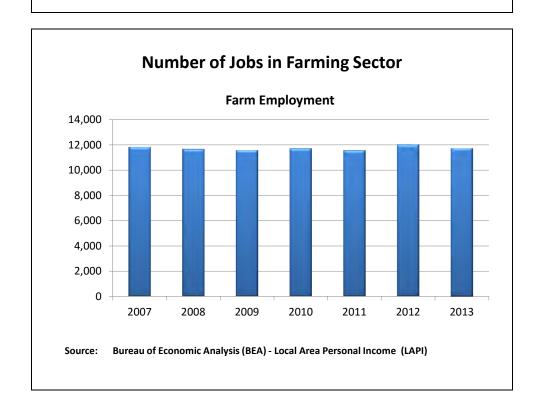


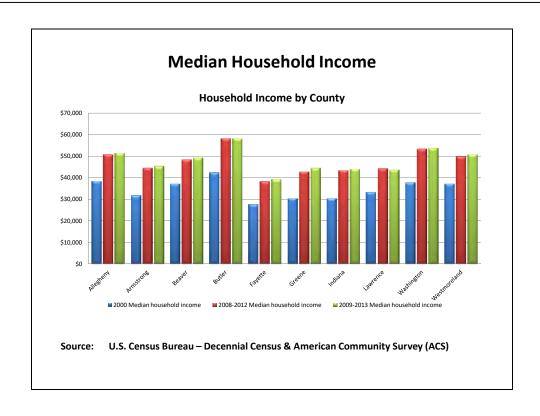
Freight Flows

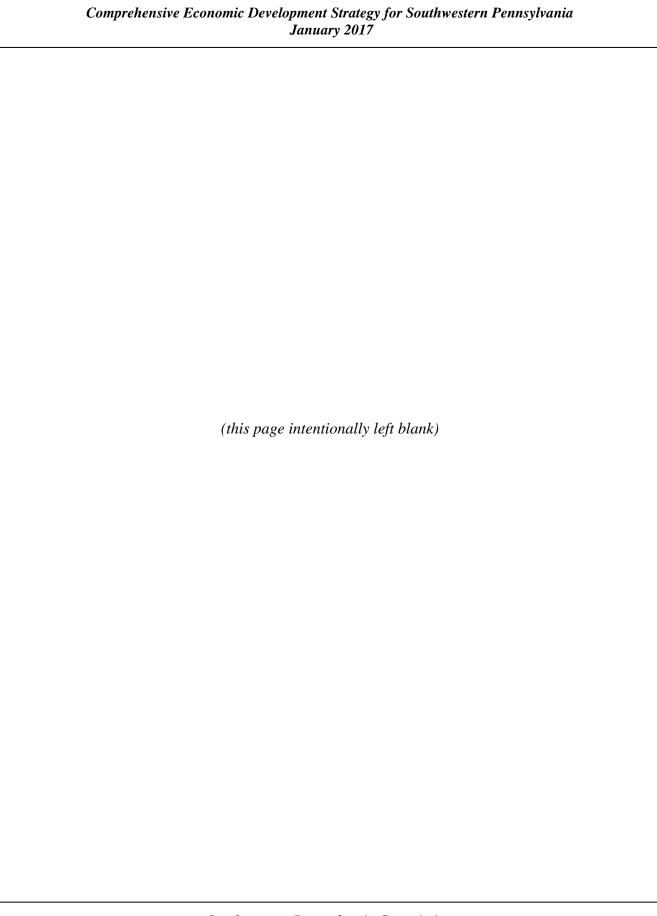
Total Flows To/From Pittsburgh, PA CSA

		20	07	20	12
		Tons	Value	Tons	Value
	Truck	92,438.37	\$97,348.27	98,542.90	\$103,488.00
	Rail	23,695.89	\$4,733.57	25,552.77	\$5,150.60
	Water	1,651.82	\$317.65	1,672.17	\$325.99
То	Air (include truck-air)	3.36	\$1,004.09	3.39	\$1,111.63
10	Multiple modes & mail	5,665.67	\$12,718.56	6,160.62	\$13,697.47
	Pipeline	3,179.50	\$1,122.48	3,565.30	\$1,260.88
	Other and unknown	458.12	\$550.62	493.09	\$582.53
	Total	127,092.73	\$117,795.24	135,990.24	\$125,617.08
	Truck	86,502.36	\$95,290.69	93,291.09	\$101,475.77
	Rail	27,662.67	\$6,407.17	31,485.65	\$7,171.93
	Water	41.80	\$18.27	46.97	\$20.83
F	Air (include truck-air)	5.60	\$346.87	6.22	\$386.01
From	Multiple modes & mail	3,113.45	\$12,643.00	3,403.31	\$13,514.33
	Pipeline	2,004.40	\$698.60	2,266.13	\$785.07
	Other and unknown	632.03	\$1,317.76	693.76	\$1,339.90
	Total	119,962.32	\$116,722.36	131,193.14	\$124,693.83

Source: FHWA, Freight Analysis Framework (current version FAF^{3.5})







Section 6: Economic Resiliency

Economic resiliency can be defined in many ways, but in its simplest form it refers to the ability of a defined area to recover from or adjust to the negative impacts of extreme internal stresses or external economic shocks. These shocks and stresses can be natural disasters, human scale disruptions or long term economic shifts.

The Southwestern Pennsylvania CEDS, developed and integrated as part of *Mapping the Future*, incorporates resiliency into to its overall development. Resilient themes can be found throughout the document and are integrated with the work elements and concepts within the plan. In short, the region seeks to consider and imbed resiliency thinking into its planning and delivery systems. As a combined official transportation plan (LRTP under U.S. DOT) and official Comprehensive Economic Development Strategy (CEDS under EDA), the plan integrates resilient themes and actions throughout as part of its program delivery in both roles.



SPC as the MPO manages modal and system operations programs in a number of areas: transit planning; human services and workforce development transportation planning; ridesharing; safety, traffic operations and congestion management planning, including traffic signal improvements and ITS; freight and intermodal planning; sustainability/resiliency analysis; and, smart transportation planning. These programs produce

useful planning documents that guide plan development and support plan implementation, including transportation resiliency planning. This continuing planning program provides SPC the opportunity to identify and work with regional partners to address potential disruption to the region's transportation system that could impact regional mobility and commerce.

With respect to economic resiliency, the CEDS incorporates policy goals, strategies and organizational actions. *Mapping the Future* contains 16 policy goals. During the CEDS development process, participants were asked to prioritize the policy goals and development actions for SPC as the Economic Development District. These actions were developed in association with the prioritized goals and concepts identified in the SWOT process. Actions that

directly impact the economic resiliency efforts of the region are identified as such in the CEDS Action Plan (see Section 4.3).

Two major shocks and stresses were identified as potential weaknesses and threats through the SWOT analysis and have been determined to be keys to the future economic resiliency of the region. These are *changing demographics and workforce* and the *volatility of the energy sector*.

In building economic resiliency, the CEDS considers steady-state and responsive initiatives that will be undertaken by SPC. It is important to note that after approval, the CEDS Committee will regularly meet to review and amend action steps as necessary to continue to address these issues. In addition, SPC, through its normal course of business, will continue to



monitor, assess and evaluate regional trends to identify any changes to the regional that should be included in the resiliency discussion and response initiatives.

Steady-state initiatives tend to be long term efforts that seek to bolster the region's ability to withstand or avoid a shock and/or stress and can be seen as proactive activities. Examples of steady-state initiatives contained in the CEDS Action Plan and that enhance the long term resiliency planning include:

- Partnership for Regional Economic Performance (PREP) The PREP program is designed to coordinate regional services delivery to promote retention, expansion and diversification, by the following Commonwealth business service providers: Industrial Resource Centers (IRCs), Industrial Development Organizations (IDOs), Local Development Districts (LDDs), and Small Business Development Centers (SBDCs). As the region's LDD, SPC is a core partner in the Southwestern Pennsylvania Partnership for Regional Economic Performance. (volatility of the energy sector)
- Investing in Manufacturing Communities Partnership (IMCP), an initiative designed to encourage communities to develop comprehensive economic

development strategies that will strengthen their competitive edge for attracting global manufacturer and supply chain investments. SPC will continue to participate and support The Greater Pittsburgh Metals Manufacturing Community IMCP. (volatility of the energy sector)

- Support regional talent attractions and retention initiatives. (changing demographics and workforce)
- Support regional and member efforts that are designed to address the demographic and workforce challenge. (changing demographics and workforce)

Responsive initiatives include establishing capabilities to be responsive to the region's recovery needs following an incident and can be seen as reactive activities. Examples of responsive initiatives are contained in the CEDS Action Plan include:

- Support efforts to work with targeted industry sectors that are significantly impacted by the collapse of the coal industry. (volatility of the energy sector)
- Supply Chain Diversification. Help regional manufacturers identify new domestic and international market opportunities, as well as develop and execute strategies

to penetrate new target markets in the shift away from coal-focused industry to new opportunities in metals and advanced materials manufacturing and associated spin-off manufacturing sectors. (volatility of the energy sector)



• Investing in Manufacturing Communities Partnership (IMCP), an initiative designed to encourage communities to develop comprehensive economic development strategies that will strengthen their competitive edge for attracting global manufacturer and supply chain investments. SPC will continue to participate and support The Greater Pittsburgh Metals Manufacturing Community IMCP. (volatility of the energy sector)

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- The EDD will actively support efforts to work with targeted industry sectors that are significantly impacted by the collapse of the coal industry. (volatility of the energy sector)
- The EDD will also seek to actively support partners and regional efforts targeted to assist in retention and expansion of existing businesses. Examples include, but are not limited to, market diversification and growth (both foreign and domestic), operational improvements, and access to capital. (volatility of the energy sector)
- Participate with newly formed WIB partnerships to enhance coordination between local boards. (changing demographics and workforce)