

Commuting Patterns

2010 Update

Northern Tier Workforce Investment Area



Bradford, Sullivan, Susquehanna,
Tioga, and Wyoming Counties

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Introduction

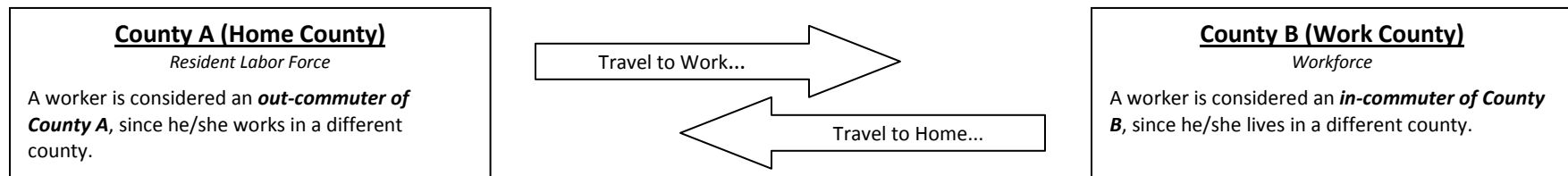
The Commuting Patterns report was prepared by the Central Pennsylvania Workforce Development Corporation (CPWDC) for the Northern Tier Workforce Investment Board, which serves Bradford, Sullivan, Susquehanna, Tioga, and Wyoming Counties. All data is provided by the U.S. Census Bureau's OnTheMap Application for the 2008-2010 time period. Workers' commuting patterns are derived from "Unemployment Insurance Wage Records reported by employers and maintained by each state for the purpose of administering its unemployment insurance system. The states assign employer locations, while workers' residence locations are assigned by the U.S. Census Bureau using data from multiple federal agencies. Age, earnings, and industry profiles are compiled by the Census Bureau from a state's records and are supplemented with other Census Bureau source data. Final compilations and confidentiality protection are performed by the Census Bureau." (U.S. Census Bureau)

One potential limitation of this data is when employers host jobs in one area but are located in another. ***This may skew the results to make it appear that more people are commuting, when in fact they are working where they live.*** Most of the results are presented as an average for 2008, 2009, and 2010. Annual changes between 2009 and 2010 are used in some cases.

Background

The main objective of this report is to examine the flow of workers between where they live and where they work. For every area (city, county, region, etc.), there is a fixed number of jobs. Some of these jobs are filled by individuals who live in the same area, while the remaining jobs are filled by workers who live in another area. Since not all residents of the area hold employment locally, some commute to other areas. These are the basic concepts associated with commuting patterns which show the flow of workers for employment.

The area of focus for this report is at the **county-level**. Typically, **non-commuters**, or individuals who live and work in the same county, hold the majority of jobs and represent the largest portion of the local labor force. In addition to non-commuters, the **workforce** (jobs held in the county) is also comprised of in-commuters who live in other counties, while the **resident labor force** (workers living in the county) is also composed of out-commuters who work in other counties. For both the workforce and labor force, non-commuters represent the same group of people. ***In summary, a county's workforce = non-commuters + in-commuters and a county's resident labor force = non-commuters + out-commuters.*** To understand in- and out-commuting, consider a scenario with only Counties A and B, where workers do not live and work in the same county. Individuals that live in County A but work in County B are known as **in-commuters** of County B, and **out-commuters** of County A.



Net flow is a comparison of in-commuters to out-commuters. Net flow basically shows if there are more workers in-commuting to a county or if there are more workers out-commuting to other counties for employment. **For this report, net flow is calculated as the number of in-commuters minus the number of out-commuters. Positive net flow indicates more in-commuters, and negative net flow indicates more out-commuters.** A higher level of in-commuting indicates that the resident labor force is unable to support the demands of local employers. A county with a higher level of out-commuting acts as bedroom community, where workers live in that particular county but work in a different one.

The U.S. Census Bureau's OnTheMap Application provides two (2) reports to analyze how workers flow between counties for employment:

- **Home Destination Report** – this report identifies where workers live who work in the selected county, thus identifying in-commuters
- **Work Destination Report** – this report identifies where workers are employed who work in the selected county, thus identifying out-commuters

Additionally, the U.S. Census Bureau's **inflow-outflow report** provides information on the ages of workers, job earnings, and types of jobs for workers who are coming to (in-commuting) or leaving (out-commuting) a county for employment. Although the inflow-outflow report does not identify a worker's home or destination county, it is an indication of what makes a county attractive to in-commuters by types of jobs or earnings potential, or why workers travel to other counties for employment.

All commuting information is based on **primary jobs** held by workers. A primary job is the highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers. Analyzing **primary jobs** essentially shows one job per worker, whereas analyzing **all jobs** shows all possible employment.

Interpreting Results

Commuting patterns reveal the tendencies of workers as they travel from their home counties to their work counties. While the reasons for commuting in or out of a county are unknown, several implications can be made when reviewing the results. Even though they may be assumptions, they can be validated by referencing other data or using local knowledge of the area.

- **Job Opportunities** – Workers may not be able to find employment locally and thus commute to other locations for their jobs (out-commuting). The local demand for employment is supported by workers living in different counties (in-commuting).
- **Quality of Living/Cost of Living** – Workers may prefer living in one county and working in another one. A worker's home county may be more appealing for raising families, or it may offer more attractions in terms of culture or entertainment. Also, the home county may simply be an inexpensive place to live, thus providing more disposable income to workers.

Economic developers can use the information presented in this report to seize employer-recruitment opportunities. If a large portion of the population is leaving the county for employment, then it is possible that those workers would be willing to stay local if a new business came to the area that required their skills. Workforce professionals can create training programs to address the reasons why workers may be leaving the area if there is a mismatch between the workers' skills and job openings. As a reminder, all information is based on commuting patterns from 2008 through 2010 for workers' primary jobs.

Results-Summary using 2008-2010 Averages

The following table summarizes the average number of non-commuters, in-commuters, out-commuters, and net flow for the Northern Tier Region during the 2008-2010 time period:

AVERAGE Commuting Patterns (2008-2010)				
County/Region	Non-Commuters	In-Commuters	Out-Commuters	Net Flow
Bradford County, PA	12,700	6,500	10,600	-4,100
Sullivan County, PA	600	600	1,200	-600
Susquehanna County, PA	4,400	2,500	10,900	-8,400
Tioga County, PA	7,600	3,400	7,100	-3,600
Wyoming County, PA	3,700	5,100	7,100	-2,000
Northern Tier	33,700	13,400	32,200	-18,800

Note: regional commuting patterns are based on the entire 5-county region; non-commuters may live and work in any of the counties; therefore the regional data does not equal the sum of the county-level data (except for net flow); totals may not add due to rounding
Workforce = non + in; Resident labor force = non +out

Net flow calculated as in-commuters minus out-commuters; positive values indicate more workers are coming to the area for employment (highlighted in green), and negative values indicate more workers are leaving the area for employment (highlighted in red).

On average, Northern Tier's workforce is 47,100 and resident labor force is 65,600. Overall, more workers leave the Northern Tier Region for employment. Even though 13,400 workers commute to the region for employment, 32,200 travel outside of the region, resulting in a net flow of -18,800 which is approximately 29% of the resident labor force. For results on which county in the region that in-commuters live and out-commuters work, please view the detailed results shown in a later section.

The following table summarizes the change in non-commuters, in-commuters, out-commuters, and net flow for the Northern Tier Region during the 2008-2010 time period compared to the 2007-2009 time period:

Change in AVERAGE Commuting Patterns				
County/Region	Non-Commuters	In-Commuters	Out-Commuters	Net Flow
Bradford County, PA	-100	0	500	-400
Sullivan County, PA	100	-100	200	-300
Susquehanna County, PA	0	-100	800	-900
Tioga County, PA	0	100	400	-300
Wyoming County, PA	100	-100	400	-500
Northern Tier	0	-200	2,300	-2,500

Note: regional commuting patterns are based on the entire 5-county region; non-commuters may live and work in any of the counties; therefore the regional data does not equal the sum of the county-level data (except for net flow); totals may not add due to rounding
Based on changes according to the average 2008-2010 and 2007-2009 time periods

Workforce = non + in; Resident labor force = non +out

Net flow calculated as in-commuters minus out-commuters; positive values indicate more workers are coming to the area for employment (highlighted in **green**), and negative values indicate more workers are leaving the area for employment (highlighted in **red**).

Compared to the average 2007-2009 results, regional **non**-commuting did not change while regional **in**-commuting decreased slightly, meaning **the workforce (local jobs) decreased in the Northern Tier relative to the figures presented in the original report**. In other words, 200 fewer jobs were physically located in the region. In fact, only Tioga County experienced an increase in its workforce/the number of local jobs, since the net change for non-commuters and in-commuters was positive (100). This may seem contradictory to the putative economic and job impacts of the natural gas industry (Marcellus Shale) in the Northern Tier. **There may have been an increase in the number of jobs located in the region, but if the employers of record were located or headquartered in another county, then those jobs would not have been counted in the local workforce and workers who held those jobs would have been counted as out-commuters.**

Looking solely at the numbers, based on the average 2008-2010 values, **out**-commuting increased for each county by at least 200 (Sullivan County) and as much as 800 (Susquehanna County), and overall by 2,300 for the region. **This means there were 2,300 more workers living in the Northern Tier who commuted to other areas for employment.** Increasing out-commuting patterns, by definition, mean more people who lived in the Northern Tier worked in jobs that were located outside of the Northern Tier. However, **it is possible that these out-commuters held employment in jobs located within the region but for companies that were located outside of the Northern Tier.** In cases like this, while these workers were counted as out-commuters, technically they were non-commuters since they lived and worked in the same place. Without knowledge of the booming natural gas industry, one may have concluded that new residents entering the labor force and jobseekers relocating

to the region were forced to find employment outside the region due to a lack of local job opportunities. No matter the situation, the bottom-line is the commuting patterns show an increasing resident labor force, which in itself is a positive for the economy. Even though it appears more workers held jobs outside of the region due to an increase in the out-commuting patterns, it is likely a large portion of the jobs were physically held in the region but for companies located elsewhere.

Results-Summary using 2009 and 2010 Annual Values

The following tables identify the non-commuters, in-commuters, out-commuters, and net flow for the Northern Tier Region during the 2009 and 2010 time periods:

ANNUAL Commuting Patterns (2009)				
County/Region	Non-Commuters	In-Commuters	Out-Commuters	Net Flow
Bradford County, PA	12,300	6,100	9,900	-3,800
Sullivan County, PA	600	600	900	-300
Susquehanna County, PA	4,400	2,400	10,300	-7,900
Tioga County, PA	7,400	3,200	6,600	-3,400
Wyoming County, PA	3,900	5,200	7,000	-1,800
Northern Tier	33,100	13,000	30,300	-17,300

ANNUAL Commuting Patterns (2010)				
County/Region	Non-Commuters	In-Commuters	Out-Commuters	Net Flow
Bradford County, PA	13,500	6,600	11,500	-4,900
Sullivan County, PA	700	500	1,600	-1,100
Susquehanna County, PA	4,600	2,300	12,400	-10,100
Tioga County, PA	7,700	3,700	7,800	-4,100
Wyoming County, PA	3,900	5,400	7,500	-2,100
Northern Tier	35,500	13,400	35,600	-22,200

Note: regional commuting patterns are based on the entire 5-county region; non-commuters may live and work in any of the counties; therefore the regional data does not equal the sum of the county-level data (except for net flow); totals may not add due to rounding
Workforce = non + in; Resident labor force = non +out

Net flow calculated as in-commuters minus out-commuters; positive values indicate more workers are coming to the area for employment (highlighted in **green**), and negative values indicate more workers are leaving the area for employment (highlighted in **red**).

Currently (2010), Northern Tier's workforce is 48,900 and resident labor force is 71,100. Overall, more workers leave the Northern Tier Region for employment. Even though 13,400 workers commute to the region for employment, 35,600 travel outside of the region, resulting in a net flow of -22,200 which is approximately 31% of the resident labor force. **Again, it is likely that Northern Tier workers hold jobs located in the region for employers located outside of the region, thus being counted as out-commuters.**

The following table summarizes the change in non-commuters, in-commuters, out-commuters, and net flow for the Northern Tier Region between the 2009 and 2010 time periods:

Change in ANNUAL Commuting Patterns				
County/Region	Non-Commuters	In-Commuters	Out-Commuters	Net Flow
Bradford County, PA	1,200	500	1,600	-1,100
Sullivan County, PA	100	-100	700	-800
Susquehanna County, PA	200	-100	2,100	-2,200
Tioga County, PA	300	500	1,200	-700
Wyoming County, PA	0	200	500	-300
Northern Tier	2,400	400	5,300	-4,900

Note: regional commuting patterns are based on the entire 5-county region; non-commuters may live and work in any of the counties; therefore the regional data does not equal the sum of the county-level data (except for net flow); totals may not add due to rounding
Based on changes between the 2009 and 2010 time periods

Workforce = non + in; Resident labor force = non +out

Net flow calculated as in-commuters minus out-commuters; positive values indicate more workers are coming to the area for employment (highlighted in **green**), and negative values indicate more workers are leaving the area for employment (highlighted in **red**).

Regardless if annual data or averages are presented, the **resident labor force is increasing in the Northern Tier**. Similar to the average changes presented earlier, the resident labor force increased by 7,700 over the past year, which is supported by local labor market data. According to the Center for Workforce Information and Analysis, the employed population living in the Northern Tier increased by 3,300 between 2009 and 2010. Both sets of data refer to workers who live in the Northern Tier but can be employed anywhere. While the numbers are not exactly the same due to different methodologies, both indicate an increase. Furthermore, both the annual and average changes indicate an increasing level of out-commuting, as indicated by larger negative net flows.

Considering the nature of the natural gas industry, higher out-commuting patterns may be a result of employers who are located outside of the region but host jobs within the region. It is possible that workers hold jobs in the Northern Tier but are counted as out-commuters since the employer has an outside location. The following are the top 5 destination counties with the greatest increase in out-commuters leaving the Northern Tier for employment:

- Lycoming County, PA
- Luzerne County, PA
- Lackawanna County, PA
- Broome County, NY
- Montgomery County, PA

Each of these counties may represent the home base of employers who have jobs in the Northern Tier, especially Montgomery County, since it is unlikely that individuals travel to the Southeast corner of the Commonwealth for employment on a daily basis.

The impacts of the natural gas industry are more apparent by looking at annual changes in the workforce. Compared to the 2009 data, regional **non**-commuting increased by 2,400 and in-commuters increased by 400, meaning the **workforce (local jobs) increased in the Northern Tier**. In other words, 2,800 more jobs were physically located in the region. The largest increases are evident in Bradford and Tioga Counties.

The question remains about why the average commuting patterns showed a decrease in the number of jobs located in the region. When averages were utilized, a lower level of average in-commuting was identified because the 2010 workforce was still lower than the 2007 value used in the original report for each county except Tioga County. As a result, in-commuting appeared to be down. **Annual changes, however, reveal that Natural Gas is having an impact on the region in terms of jobs.** This is corroborated by Economic Modeling Specialists, Incorporated, whose data shows an increase of nearly 3,000 jobs in the Northern Tier from 2009 to 2010, half of which came from the *Mining, Quarrying, and Oil and Gas Extraction* and *Transportation and Warehousing* industry sectors.

Please note that the most recent commuting pattern information is based on 2010 estimates. Local labor market information for the Northern Tier has mostly been positive during 2011 and early 2012, especially with an increasing employed population. It will be interesting to investigate any changes in commuting patterns for 2011 as data becomes available, especially if employers have physically located in the Northern Tier. **As natural gas employers establish operations in the Northern Tier, workers who were previously counted as out-commuters would be counted as non-commuters, since the employer address would be within the region.**

Results – Bradford County Annual Changes

As of 2010, Bradford County has a workforce (local jobs) of 20,100, and a resident labor force of 25,000, resulting in a negative net flow of 4,900 which means about 20% of the labor force leaves the county for employment. Similar to the regional changes, both the workforce (local jobs) and resident labor force increased in Bradford County over the past year. Based on the annual changes presented earlier, the workforce increased by 1,700 (1,200 non-commuters and 500 in-commuters), and the resident labor force increased by 2,800 (1,200 non-commuters and 1,600 out-commuters). The larger increase for out-commuting may be attributable to residents working in local jobs for employers that are located in another county. The following are the top 5 destination counties with the greatest increase in out-commuters leaving Bradford County for employment:

- Tioga County, PA
- Montgomery County, PA
- Luzerne County, PA
- Wyoming County, PA
- Lycoming County, PA

The presence of Montgomery County supports the notion that local residents are working in jobs that are held locally but for employers whose home base is outside the area.

Jobs in Bradford County increased by 1,700, of which over 70% (1,200 non-commuters) were filled by residents of Bradford County. The following are the top 5 origination counties who had the largest increase of in-commuters coming to Bradford County:

- Sullivan County, PA: 190
- Susquehanna County, PA: 110
- Lycoming County, PA: 80
- Tioga County, NY: 50
- Wyoming County, PA: 40

Results – Sullivan County Annual Changes

As of 2010, Sullivan County has a workforce (local jobs) of 1,200, and a resident labor force of 2,300, resulting in a negative net flow of 1,100 which means about 48% of the labor force leaves the county for employment. The workforce (local jobs) did not change over the past year, but the resident labor force increased. Based on the annual changes presented earlier, the resident labor force increased by 800 (100 non-commuters and 700 out-commuters). The larger increase for out-commuting may be attributable to residents working in local jobs for employers that are located in another county. The following are the top 5 destination counties with the greatest increase in out-commuters leaving Sullivan County for employment:

- Lycoming County, PA
- Bradford County, PA
- Luzerne County, PA

- Tioga County, PA
- Lackawanna County, PA

These counties are geographically in proximity to Sullivan County, so it is not unlikely the increasing out-commuting for Sullivan County is truly for workers who travel to other counties for employment.

The level of in-commuting actually decreased by 100, offsetting the increase in non-commuting. It is possible that those who were previously in-commuting moved to Sullivan County and became non-commuters.

Results – Susquehanna County Annual Changes

As of 2010, Susquehanna County has a workforce (local jobs) of 6,900, and a resident labor force of 17,000, resulting in a negative net flow of 10,100 which means about 59% of the labor force leaves the county for employment. Similar to the regional changes, both the workforce (local jobs) and resident labor force increased in Susquehanna County over the past year. Based on the annual changes presented earlier, the workforce increased by 100 (200 non-commuters and a decrease of 100 in-commuters), and the resident labor force increased by 2,300 (200 non-commuters and 2,100 out-commuters). Increasing out-commuting patterns may be attributable to residents working in local jobs for employers that are located in another county. The following are the top 5 destination counties with the greatest increase in out-commuters leaving Susquehanna County for employment:

- Broome County, NY
- Lackawanna County, PA
- Luzerne County, PA
- Susquehanna County, PA
- Bradford County, PA

Each of these counties, including Broome County in New York State, surrounds Susquehanna County, indicating that the out-commuters were most likely working in other counties.

Local jobs increased by only 100, but this was completely a result of increased non-commuters (+200). In-commuting actually decreased by 100. It is possible that those who were previously in-commuting moved to Susquehanna County and became non-commuters.

Results – Tioga County Annual Changes

As of 2010, Tioga County has a workforce (local jobs) of 11,400, and a resident labor force of 15,500, resulting in a negative net flow of 4,100 which means about 26% of the labor force leaves the county for employment. Similar to the regional changes, both the workforce (local jobs) and resident labor force increased in Tioga County over the past year. Based on the annual changes presented earlier, the workforce increased by 800 (300 non-commuters and 500 in-commuters), and the resident labor force increased by 1,500 (300 non-commuters and 1,200 out-commuters). The larger increase for out-commuting may be attributable to residents working in local jobs for employers that are located in another county. The following are the top 5 destination counties with the greatest increase in out-commuters leaving Tioga County for employment:

- Lycoming County, PA
- Chemung County, NY
- Steuben County, NY
- Luzerne County, PA
- Montgomery County, PA

Similar to Bradford County, ***the presence of Montgomery County supports the notion that local residents are working in jobs that are held locally but for employers whose home base is outside the area.*** Luzerne County is not necessarily a close county either. Since Luzerne County has shown up for each county as a top destination county for increases in out-commuting, perhaps Luzerne County is home to natural gas related employers who have positions locally in Tioga and other Northern Tier Counties.

Local jobs increased by 800, of which about 38% (300 non-commuters) were filled by residents of Tioga County. The following are the top 5 origination counties who had the largest increase of in-commuters for Tioga County:

- Bradford County, PA: 140
- Steuben County, NY: 60
- Lycoming County, PA: 30
- Chemung County, NY: 30
- Sullivan County, PA: 30

Results – Wyoming County Annual Changes

As of 2010, Wyoming County has a workforce (local jobs) of 9,300, and a resident labor force of 11,400, resulting in a negative net flow of 2,100 which means about 18% of the labor force leaves the county for employment. Similar to the regional changes, both the workforce (local jobs) and resident labor force increased in Wyoming County over the past year. Based on the annual changes presented earlier, the workforce increased by 200 (200 in-commuters), and the resident labor force increased by 500 (500 out-commuters). The level of non-commuting did not

change. The larger increase for out-commuting may be attributable to residents working in local jobs for employers that are located in another county. The following are the top 5 destination counties with the greatest increase in out-commuters leaving Wyoming County for employment:

- Lackawanna County, PA
- Luzerne County, PA
- Bradford County, PA
- Philadelphia County, PA
- Lehigh County, PA

The presence of Philadelphia County supports the notion that local residents are working in jobs that are held locally but for employers whose home base is outside the area.

Local jobs increased by 200, none of which were filled by residents of Tioga County. The following are the top 5 origination counties who had the largest increase of in-commuters for Wyoming County:

- Bradford County, PA
- Susquehanna County, PA
- Wyoming County, PA
- Wayne County, PA
- Tioga County, PA

Knowing that more workers are leaving each county for employment, it would be ideal to understand why those workers are leaving. Are there jobs available in other counties that simply are not available locally? Do the local residents' skill sets not match the jobs that are available? What could be done to attract more workers from outside counties? Because the source data used to answer these questions does not provide the home county for in-commuters or work county for out-commuters, it could be possible that commuters are simply traveling between the counties within the region. Nonetheless, this information will show which counties are able to attract younger workers, workers for jobs that are higher paying, or jobs that are goods-producing. This is the type of information economic developers and workforce professionals could use in attracting new businesses or creating training programs.

Results – Demographics, Earnings, and Industry Commuting Patterns

The following table compares the number of non-commuters and net flow for each county by age of workers, job earnings, and type of job in the Northern Tier Region based on 2008-2010 averages:

Average Commuting Patterns (2008-2010)										
Worker/Job Characteristics	Bradford County, PA		Sullivan County, PA		Susquehanna County, PA		Tioga County, PA		Wyoming County, PA	
	Non-Commuters	Net Flow	Non-Commuters	Net Flow	Non-Commuters	Net Flow	Non-Commuters	Net Flow	Non-Commuters	Net Flow
TOTAL	12,700	-4,100	600	-600	4,400	-8,400	7,600	-3,600	3,700	-2,000
Aged 29 or younger	2,600	-900	100	-200	1,100	-1,700	1,600	-800	800	-600
Aged 30 to 54	7,400	-2,400	300	-400	2,300	-5,000	4,400	-2,200	2,200	-900
Aged 55 or older	2,700	-700	200	-80	1,000	-1,700	1,600	-600	800	-500
Earning \$1,250 per month or less	3,300	-700	200	-60	1,600	-1,400	2,100	-700	1,000	-800
Earning \$1,251 to \$3,333 per month	5,700	-1,300	300	-200	1,900	-3,600	3,800	-1,200	1,400	-1,400
Earning More than \$3,333 per month	3,800	-2,000	80	-300	900	-3,400	1,700	-1,700	1,300	200
"Goods Producing" Industry Class	3,700	-1,000	100	-300	800	-2,200	2,100	-800	1,200	1,000
"Trade, Transportation, and Utilities" Industry Class	2,000	-1,000	100	-200	900	-2,200	1,300	-800	700	-600
"All Other Services" Industry Class	7,100	-2,000	400	-200	2,700	-4,000	4,200	-2,100	1,900	-2,400

Note: source data does not allow for analysis of regional commuting patterns by worker and job characteristics, and it does not identify the home or work counties; totals may not add due to rounding

Net flow calculated as in-commuters minus out-commuters; positive values indicate more workers are coming to the area for employment (highlighted in **green**), and negative values indicate more workers are leaving the area for employment (highlighted in **red**).

Additional information on the number of in- and out-commuters is available upon request.

While each category is independent, the dependency amongst them should not be ignored. For example, older workers may have higher earnings levels simply because of their longevity with a company, and certain industry sectors are generally higher paying than others. This simply shows how commuting patterns by age, earnings, and industry class are all related. Obviously, you can't have net inflow for one category and then net outflow for another. Depending on the situation, economic developers or workforce professionals can base their efforts in business attraction or workforce policy on any of these categories. This information is fairly consistent with the trends presented in the original report.

Where are individuals who live in the Northern Tier Region working? Are local employer demands filled by local residents (non-commuters) or by individuals living in other areas (in-commuters)? Are local workers attracted to other counties for employment (out-commuters)? Answers to these questions are presented on the following pages. A single page summary is presented first for the region and then by county.

The overall regional analysis, which is presented first, shows how many people live and work within the region and identifies the top “home” counties for in-commuters and top “work” counties for out-commuters. For the county results, only the counties within the 5-county Northern Tier region are shown. This intra-county regional approach identifies the relationships between counties as workers travel from their home and work counties. Additional information is provided in the appendix. (**Note:** for each summary table, the “jobs located in the region” is made up of non-commuters and in-commuters; the “workers living in the region” includes non-commuters and out-commuters. The percentage shown for in-commuters refers to the proportion of the local jobs held by in-commuters, and the percentage for out-commuters shows the proportion of the labor force that is out-commuters.)

Many assumptions have been made in this report, mainly the idea that workers who are counted as out-commuters may actually be working in jobs located within the region or county. This is based on the theory that natural gas companies are physically located in another region, but they host jobs locally. By definition, workers who hold these jobs would be considered out-commuters, but in reality they are staying at home for work. This notion will have to be confirmed by Northern Tier professionals, but it should be something to consider as the following tables are reviewed.

The information presented in the following tables is based on average commuting patterns from 2008 to 2010.

Northern Tier Commuting Patterns

5-County Region

SUMMARY

- **Non-Commuters:** 33,700
- **Jobs Located in Region:** 47,100
- **In-Commuters:** 13,400 (28%)
- **Workers Living in Region:** 65,900
- **Out-Commuters:** 32,200 (49%)
- **Net Flow:** -18,800

IN-COMMUTERS

13,400

Home County

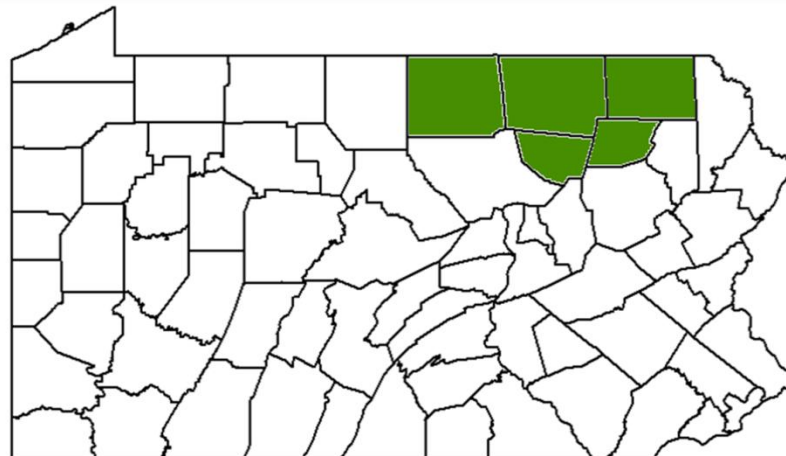
- **Lackawanna County, PA:** 2,000 (15%)
- **Luzerne County, PA:** 1,800 (13%)
- **Tioga County, NY:** 1,500 (11%)
- **Lycoming County, PA:** 1,000 (7%)
- **Chemung County, NY:** 800 (6%)
- **Other Counties:** 6,400 (48%)

OUT-COMMUTERS

32,200

Work County

- **Lackawanna County, PA:** 5,200 (16%)
- **Broome County, NY:** 3,200 (10%)
- **Luzerne County, PA:** 2,700 (9%)
- **Chemung County, NY:** 2,300 (7%)
- **Lycoming County, PA:** 1,300 (4%)
- **Other Counties:** 17,400 (54%)



Regional commuting patterns are based on the entire 5-county region; non-commuters may live and work in any of the counties

Technical Notes

Source: U.S. Census Bureau. 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who **works and lives in the same area**

In-Commuter: an individual who **works in the area** but **lives in a different location**

Out-Commuter: an individual who **lives in the area** but **works in a different location**

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Northern Tier Commuting Patterns

Bradford County

SUMMARY

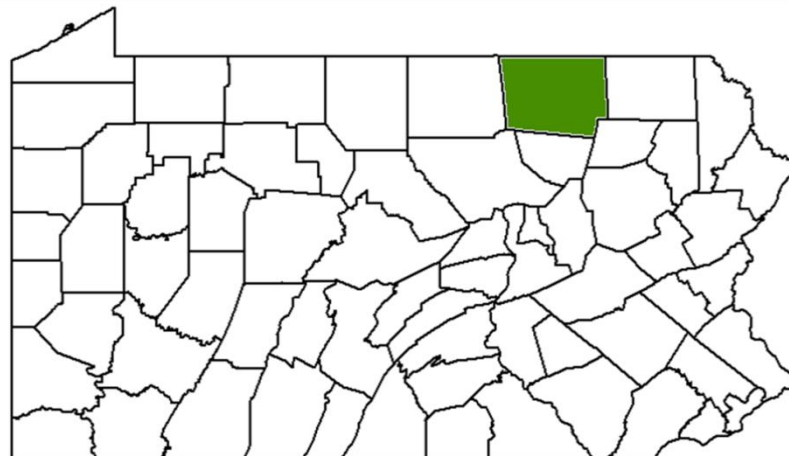
- **Non-Commuters:** 12,700
- **Jobs Located in Region:** 19,200
- **In-Commuters:** 6,500 (34%)
- **Workers Living in Region:** 23,300
- **Out-Commuters:** 10,600 (45%)
- **Net Flow:** -4,100

IN-COMMUTERS

6,500

Home County

- **Sullivan County, PA:** 200 (3%)
- **Susquehanna County, PA:** 200 (2%)
- **Tioga County, PA:** 800 (12%)
- **Wyoming County, PA:** 200 (3%)
- **Other Counties:** 5,100 (79%)



OUT-COMMUTERS

10,600

Work County

- **Sullivan County, PA:** 200 (1%)
- **Susquehanna County, PA:** 100 (1%)
- **Tioga County, PA:** 600 (6%)
- **Wyoming County, PA:** 700 (7%)
- **Other Counties:** 9,000 (85%)

Technical Notes

Source: U.S. Census Bureau, 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who **works and lives in the same area**

In-Commuter: an individual who **works in the area** but **lives in a different location**

Out-Commuter: an individual who **lives in the area** but **works in a different location**

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Northern Tier Commuting Patterns

Sullivan County

SUMMARY

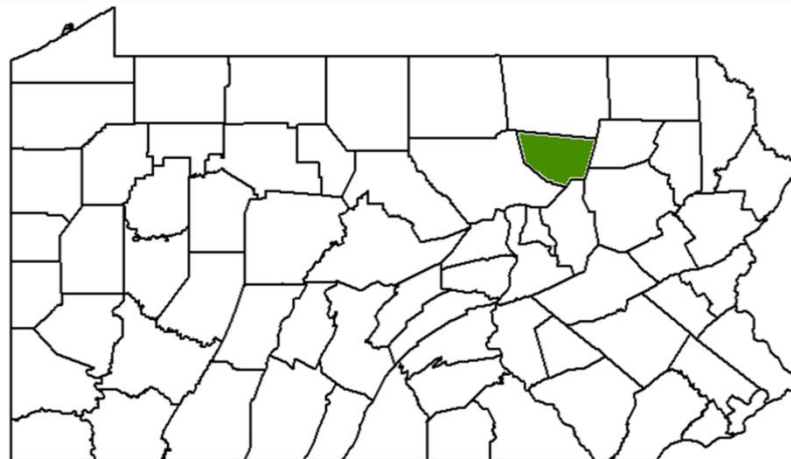
- Non-Commuters: 600
- Jobs Located in Region: 1,200
- In-Commuters: 600 (50%)
- Workers Living in Region: 1,800
- Out-Commuters: 1,200 (67%)
- Net Flow: -600

IN-COMMUTERS

600

Home County

- Bradford County, PA: 200 (26%)
- Susquehanna County, PA: 10 (1%)
- Tioga County, PA: 20 (4%)
- Wyoming County, PA: 20 (4%)
- Other Counties: 400 (65%)



OUT-COMMUTERS

1,200

Work County

- Bradford County, PA: 200 (18%)
- Susquehanna County, PA: 10 (1%)
- Tioga County, PA: 30 (2%)
- Wyoming County, PA: 100 (12%)
- Other Counties: 800 (67%)

Technical Notes

Source: U.S. Census Bureau, 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who **works and lives in the same area**

In-Commuter: an individual who **works in the area** but **lives in a different location**

Out-Commuter: an individual who **lives in the area** but **works in a different location**

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Northern Tier Commuting Patterns

Susquehanna County

SUMMARY

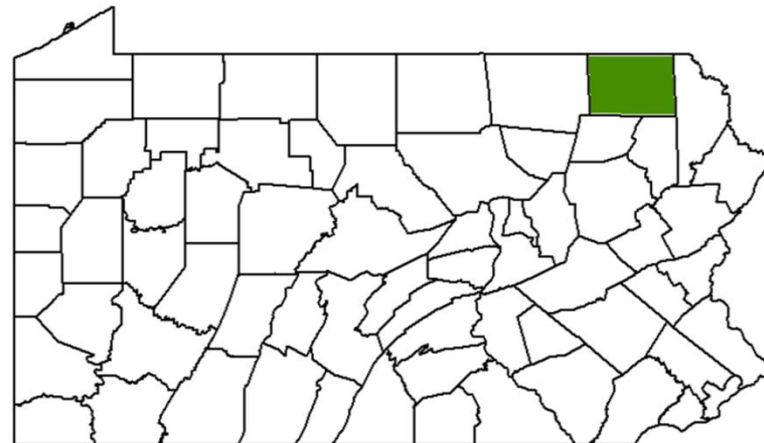
- **Non-Commuters:** 4,400
- **Jobs Located in Region:** 6,900
- **In-Commuters:** 2,500 (36%)
- **Workers Living in Region:** 15,300
- **Out-Commuters:** 10,900 (71%)
- **Net Flow:** -8,400

IN-COMMUTERS

2,500

Home County

- **Bradford County, PA:** 100 (6%)
- **Sullivan County, PA:** 10 (1%)
- **Tioga County, PA:** 60 (3%)
- **Wyoming County, PA:** 200 (10%)
- **Other Counties:** 2,000 (82%)



OUT-COMMUTERS

10,900

Work County

- **Bradford County, PA:** 200 (1%)
- **Sullivan County, PA:** 10 (<1%)
- **Tioga County, PA:** 20 (<1%)
- **Wyoming County, PA:** 1,200 (11%)
- **Other Counties:** 9,600 (88%)

Technical Notes

Source: U.S. Census Bureau, 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who **works and lives in the same area**

In-Commuter: an individual who **works in the area** but **lives in a different location**

Out-Commuter: an individual who **lives in the area** but **works in a different location**

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Northern Tier Commuting Patterns

Tioga County

SUMMARY

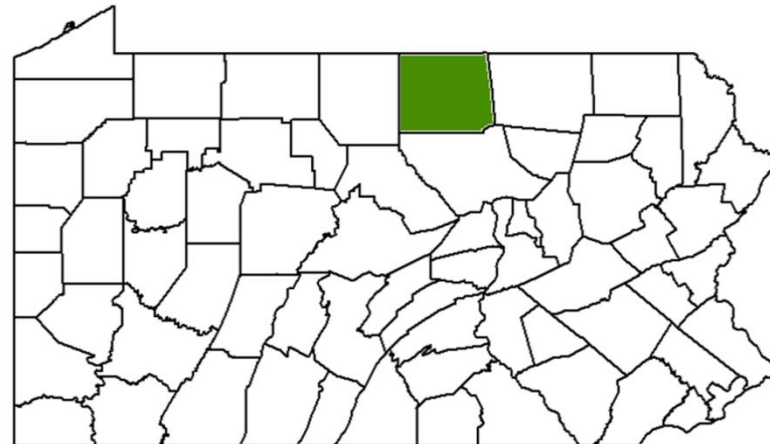
- **Non-Commuters:** 7,600
- **Jobs Located in Region:** 11,000
- **In-Commuters:** 3,400 (31%)
- **Workers Living in Region:** 14,600
- **Out-Commuters:** 7,100 (48%)
- **Net Flow:** -3,600

IN-COMMUTERS

3,400

Home County

- **Bradford County, PA:** 600 (17%)
- **Sullivan County, PA:** 30 (1%)
- **Susquehanna County, PA:** 20 (<1%)
- **Wyoming County, PA:** 10 (<1%)
- **Other Counties:** 2,800 (82%)



OUT-COMMUTERS

7,100

Work County

- **Bradford County, PA:** 800 (11%)
- **Sullivan County, PA:** 20 (<1%)
- **Susquehanna County, PA:** 60 (1%)
- **Wyoming County, PA:** 50 (1%)
- **Other Counties:** 6,200 (87%)

Technical Notes

Source: U.S. Census Bureau, 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who *works and lives in the same area*

In-Commuter: an individual who *works in the area* but *lives in a different location*

Out-Commuter: an individual who *lives in the area* but *works in a different location*

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Northern Tier Commuting Patterns

Wyoming County

SUMMARY

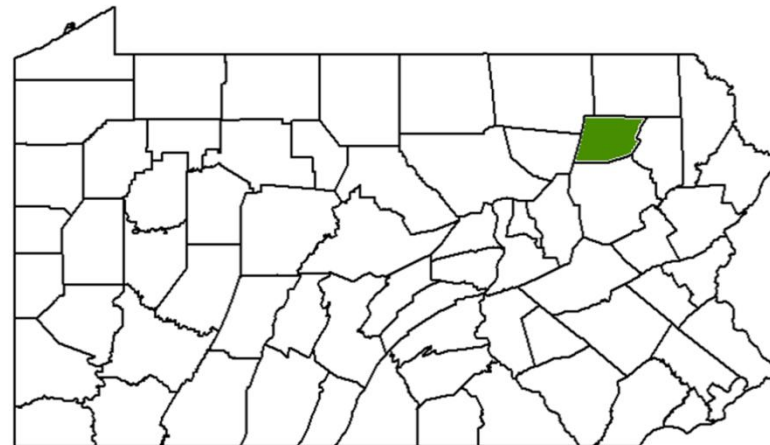
- Non-Commuters: 3,700
- Jobs Located in Region: 8,800
- In-Commuters: 5,100 (58%)
- Workers Living in Region: 10,900
- Out-Commuters: 7,100 (66%)
- Net Flow: -2,000

IN-COMMUTERS

5,100

Home County

- Bradford County, PA: 700 (14%)
- Sullivan County, PA: 100 (3%)
- Susquehanna County, PA: 1,200 (23%)
- Tioga County, PA: 50 (1%)
- Other Counties: 3,100 (60%)



OUT-COMMUTERS

7,100

Work County

- Bradford County, PA: 200 (3%)
- Sullivan County, PA: 20 (<1%)
- Susquehanna County, PA: 200 (3%)
- Tioga County, PA: 10 (<1%)
- Other Counties: 6,600 (93%)

Technical Notes

Source: U.S. Census Bureau. 2012. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. <http://lehdmap.did.census.gov/>

Based on the **average number of primary jobs between 2008-2010**; totals may not add due to rounding

Primary Job: highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Non-Commuter: an individual who *works and lives in the same area*

In-Commuter: an individual who *works in the area* but *lives in a different location*

Out-Commuter: an individual who *lives in the area* but *works in a different location*

Net Flow: calculated as in-commuters minus out-commuters; a positive value indicates more in-commuters; a negative value indicates more out-commuters.

Appendix

Annual data sorted by 2010 results; based on average commuting patterns between 2008 and 2010

Bradford County (PA) Commuting Patterns					
Home County	In-Commuters	Percent of In-Commuters	Work County	Out-Commuters	Percent of Out-Commuters
NON-COMMUTERS	12,733	--	NON-COMMUTERS	12,733	--
Tioga County, NY	1,410	21.7%	Chemung County, NY	1,461	13.8%
Tioga County, PA	767	11.8%	Tioga County, NY	974	9.2%
Chemung County, NY	702	10.8%	Wyoming County, PA	709	6.7%
Lycoming County, PA	293	4.5%	Broome County, NY	620	5.9%
Sullivan County, PA	212	3.3%	Tioga County, PA	583	5.5%
Luzerne County, PA	310	4.8%	Lycoming County, PA	412	3.9%
Wyoming County, PA	226	3.5%	New York County, NY	361	3.4%
Lackawanna County, PA	239	3.7%	Montgomery County, PA	217	2.0%
Susquehanna County, PA	158	2.4%	Steuben County, NY	270	2.5%
Broome County, NY	171	2.6%	Lackawanna County, PA	285	2.7%
Columbia County, PA	79	1.2%	Luzerne County, PA	209	2.0%
Berks County, PA	101	1.6%	Philadelphia County, PA	214	2.0%
Steuben County, NY	75	1.2%	Cumberland County, PA	154	1.5%
Philadelphia County, PA	69	1.1%	Tompkins County, NY	177	1.7%
Chester County, PA	62	1.0%	Dauphin County, PA	163	1.5%
Wayne County, PA	60	0.9%	Sullivan County, PA	153	1.4%
Pike County, PA	50	0.8%	Bucks County, PA	137	1.3%
Schuylkill County, PA	47	0.7%	Lehigh County, PA	116	1.1%
York County, PA	46	0.7%	Susquehanna County, PA	135	1.3%
Other Counties	1,408	21.7%	Other Counties	3,235	30.6%
Total In-Commuters	6,485	100.0%	Total Out-Commuters	10,585	100.0%
Total Jobs Held in County	19,218	--	Total Workers Living in County	23,318	--

Appendix

Annual data sorted by 2010 results; based on average commuting patterns between 2008 and 2010

Sullivan County (PA) Commuting Patterns					
Home County	In-Commuters	Percent of In-Commuters	Work County	Out-Commuters	Percent of Out-Commuters
NON-COMMUTERS	579	--	NON-COMMUTERS	579	--
Bradford County, PA	153	26.0%	Bradford County, PA	212	17.8%
Lycoming County, PA	129	21.8%	Lycoming County, PA	154	12.9%
Luzerne County, PA	86	14.6%	Wyoming County, PA	139	11.7%
Tioga County, PA	23	3.8%	New York County, NY	53	4.4%
Wyoming County, PA	25	4.2%	Luzerne County, PA	31	2.6%
Columbia County, PA	27	4.5%	Lackawanna County, PA	28	2.3%
Lackawanna County, PA	13	2.1%	Tioga County, PA	26	2.2%
Berks County, PA	5	0.8%	Philadelphia County, PA	27	2.3%
Dauphin County, PA	6	1.1%	Cumberland County, PA	18	1.5%
Susquehanna County, PA	8	1.4%	Montgomery County, PA	23	1.9%
Montgomery County, PA	6	1.0%	Broome County, NY	13	1.1%
Northumberland County, PA	8	1.4%	Susquehanna County, PA	14	1.2%
Snyder County, PA	6	1.0%	Kings County, NY	17	1.4%
Allegheny County, PA	3	0.5%	Dauphin County, PA	17	1.4%
Bucks County, PA	3	0.6%	Tompkins County, NY	11	1.0%
Delaware County, PA	4	0.7%	Lancaster County, PA	9	0.8%
Montour County, PA	3	0.5%	Schuylkill County, PA	15	1.3%
Union County, PA	5	0.9%	Columbia County, PA	20	1.7%
Wayne County, PA	2	0.3%	Bucks County, PA	16	1.4%
Other Counties	75	12.7%	Other Counties	349	29.2%
Total In-Commuters	590	100.0%	Total Out-Commuters	1,193	100.0%
Total Jobs Held in County	1,169	--	Total Workers Living in County	1,772	--

Appendix

Annual data sorted by 2010 results; based on average commuting patterns between 2008 and 2010

Susquehanna County (PA) Commuting Patterns					
Home County	In-Commuters	Percent of In-Commuters	Work County	Out-Commuters	Percent of Out-Commuters
NON-COMMUTERS	4,411	--	NON-COMMUTERS	4,411	--
Lackawanna County, PA	672	27.4%	Broome County, NY	2,457	22.6%
Wayne County, PA	291	11.8%	Lackawanna County, PA	2,156	19.8%
Broome County, NY	295	12.0%	Wyoming County, PA	1,155	10.6%
Wyoming County, PA	240	9.8%	Luzerne County, PA	519	4.8%
Bradford County, PA	135	5.5%	Wayne County, PA	273	2.5%
Luzerne County, PA	121	4.9%	Montgomery County, PA	200	1.8%
Tioga County, PA	62	2.5%	New York County, NY	244	2.2%
Tioga County, NY	60	2.5%	Morris County, NJ	206	1.9%
Pike County, PA	40	1.6%	Bradford County, PA	158	1.5%
Berks County, PA	26	1.1%	Monroe County, PA	176	1.6%
Monroe County, PA	32	1.3%	Orange County, NY	151	1.4%
Sullivan County, PA	14	0.6%	Tioga County, NY	135	1.2%
Lycoming County, PA	22	0.9%	Cumberland County, PA	149	1.4%
Bucks County, PA	23	0.9%	Lehigh County, PA	131	1.2%
Philadelphia County, PA	22	0.9%	Philadelphia County, PA	138	1.3%
Northampton County, PA	14	0.6%	Bucks County, PA	131	1.2%
Cortland County, NY	8	0.3%	Northampton County, PA	104	1.0%
Centre County, PA	12	0.5%	Dauphin County, PA	84	0.8%
Lancaster County, PA	13	0.5%	Bergen County, NJ	93	0.9%
Other Counties	356	14.5%	Other Counties	2,225	20.4%
Total In-Commuters	2,458	100.0%	Total Out-Commuters	10,887	100.0%
Total Jobs Held in County	6,869	--	Total Workers Living in County	15,298	--

Appendix

Annual data sorted by 2010 results; based on average commuting patterns between 2008 and 2010

Tioga County (PA) Commuting Patterns					
Home County	In-Commuters	Percent of In-Commuters	Work County	Out-Commuters	Percent of Out-Commuters
NON-COMMUTERS	7,564	--	NON-COMMUTERS	7,564	--
Bradford County, PA	583	17.0%	Steuben County, NY	934	13.2%
Lycoming County, PA	470	13.7%	Chemung County, NY	802	11.3%
Steuben County, NY	320	9.3%	Bradford County, PA	767	10.9%
Potter County, PA	253	7.4%	Lycoming County, PA	605	8.6%
Chemung County, NY	106	3.1%	New York County, NY	238	3.4%
McKean County, PA	119	3.5%	Potter County, PA	232	3.3%
Elk County, PA	83	2.4%	Lackawanna County, PA	199	2.8%
Luzerne County, PA	73	2.1%	Luzerne County, PA	139	2.0%
Berks County, PA	60	1.7%	Cumberland County, PA	108	1.5%
Lehigh County, PA	42	1.2%	Montgomery County, PA	134	1.9%
Clinton County, PA	39	1.1%	Broome County, NY	136	1.9%
Union County, PA	35	1.0%	Clinton County, PA	98	1.4%
Erie County, PA	42	1.2%	Philadelphia County, PA	135	1.9%
Lancaster County, PA	33	1.0%	Bucks County, PA	99	1.4%
Allegheny County, PA	43	1.3%	Dauphin County, PA	102	1.4%
Centre County, PA	39	1.1%	Schuylkill County, PA	88	1.3%
Lackawanna County, PA	46	1.3%	Kings County, NY	80	1.1%
Mifflin County, PA	36	1.0%	Lehigh County, PA	77	1.1%
Sullivan County, PA	26	0.7%	Tompkins County, NY	68	1.0%
Other Counties	989	28.8%	Other Counties	2,024	28.6%
Total In-Commuters	3,437	100.0%	Total Out-Commuters	7,067	100.0%
Total Jobs Held in County	11,001	--	Total Workers Living in County	14,631	--

Appendix

Annual data sorted by 2010 results; based on average commuting patterns between 2008 and 2010

Wyoming County (PA) Commuting Patterns					
Home County	In-Commuters	Percent of In-Commuters	Work County	Out-Commuters	Percent of Out-Commuters
NON-COMMUTERS	3,736	--	NON-COMMUTERS	3,736	--
Susquehanna County, PA	1,155	22.6%	Lackawanna County, PA	2,556	35.9%
Luzerne County, PA	1,169	22.9%	Luzerne County, PA	1,840	25.8%
Lackawanna County, PA	1,003	19.6%	Bradford County, PA	226	3.2%
Bradford County, PA	709	13.9%	Susquehanna County, PA	240	3.4%
Sullivan County, PA	139	2.7%	Montgomery County, PA	204	2.9%
Wayne County, PA	64	1.3%	Lehigh County, PA	147	2.1%
Columbia County, PA	57	1.1%	Philadelphia County, PA	136	1.9%
Tioga County, PA	49	1.0%	Monroe County, PA	168	2.4%
Monroe County, PA	47	0.9%	Dauphin County, PA	142	2.0%
Lycoming County, PA	37	0.7%	Wayne County, PA	106	1.5%
Schuylkill County, PA	41	0.8%	Bucks County, PA	93	1.3%
Lehigh County, PA	33	0.6%	Cumberland County, PA	97	1.4%
Northumberland County, PA	28	0.5%	Berks County, PA	83	1.2%
Broome County, NY	32	0.6%	Northampton County, PA	78	1.1%
Berks County, PA	38	0.7%	Chester County, PA	69	1.0%
Tioga County, NY	27	0.5%	Lancaster County, PA	72	1.0%
Lancaster County, PA	31	0.6%	Schuylkill County, PA	49	0.7%
Northampton County, PA	27	0.5%	York County, PA	56	0.8%
Bucks County, PA	19	0.4%	Lycoming County, PA	43	0.6%
Other Counties	404	7.9%	Other Counties	718	10.1%
Total In-Commuters	5,109	100.0%	Total Out-Commuters	7,125	100.0%
Total Jobs Held in County	8,845	--	Total Workers Living in County	10,861	--

For additional information, please contact:

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