



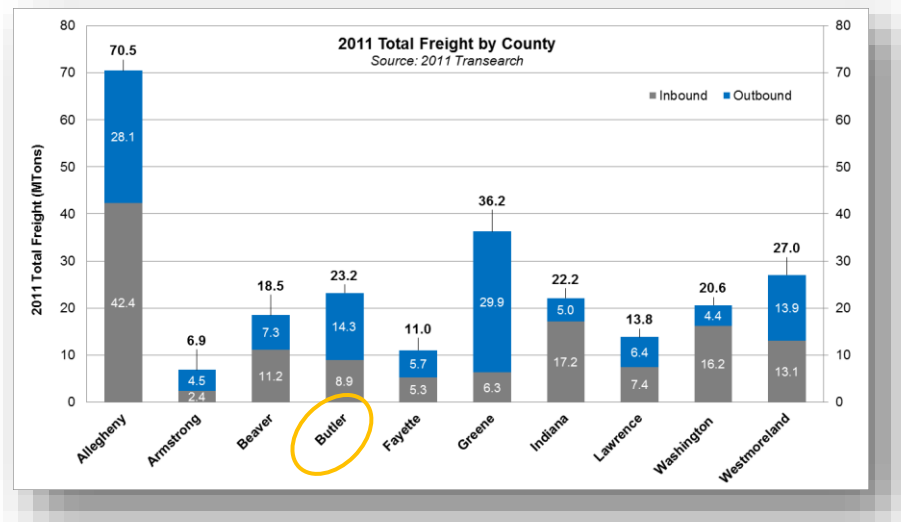
Butler County Freight Profile

SOUTHWESTERN PENNSYLVANIA REGIONAL FREIGHT PLAN

Butler County Freight Profile

Butler County Freight At-a-Glance

County Size:	788.6 square miles with 57 municipalities
Population (2014):	185,943
Total Freight (2011):	23.2 MTons
Total Freight (2040):	35.1 MTons (51% increase vs. 2011)
Key Industries:	Manufacturing, Retail Trade



Over 93% of total freight in Butler County is estimated to move by truck – one of the highest truck proportions in the SPC region, and only a slight second to nearby Lawrence County. While this estimate may partially reflect a potential underestimation of the county's rail tonnage (due to data reporting limitations), it otherwise appears to be consistent with the roadway-oriented freight demands that would be expected given many of the key freight sites across the county. Examples include truck traffic related to the shale gas industry, remote quarry or extraction sites, and many other localized freight activity sites that may only be accessible via the roadway network. Trucks would similarly dominate many of the distribution-type facilities that link with key highway corridors such as I-79 or US 422, as well as regional retail influences centered in Cranberry Township.

Existing Freight Activity Areas (Profile 4a)

Freight activity areas are spread widely across many localized sites and smaller clusters throughout Butler County. Northern portions of the county include relatively rural aggregate quarries, construction industries, and smaller trucking operators in areas such as Harrisville, Murrinsville, or Eau Claire. The Petrolia and Karns City area is home to a large refinery and specialty petroleum products industry. Surrounding the City of Butler are a variety of smaller manufacturers and material suppliers, as well as the 1,300 acre AK Steel Butler Works site. Southern portions of the county span industrial, distribution, or retail sites in Zelienople, Cranberry Township, or along the US 19 corridor; plus several industrial and business park operations around Mars, Saxonburg, or other areas along the PA 228 or PA 8 corridors.

Existing Transportation Systems (Profile 4b)

The major east-west highway corridor for Butler County includes US 422 with connections to the west to New Castle, Ohio, and I-80; or to the east through Armstrong and Indiana Counties. At a more localized level, PA 228 and PA 58 support east-west travel in the southern and northern portions of the county. Major north-south highway corridors include I-79, US 19, and PA 8, each running the length of the county and providing important connections to Allegheny County and the Pittsburgh region to the south, as well as I-80 to the north. PA Routes 528, 68, 268, 356, and a number of other roadway corridors provide additional access for freight activity sites located throughout the county.

Class I rail service and key industry connections are provided by Canadian National (CN) running north-south through the county and including heavy industry connections around the City of Butler. Regional Class II service via Buffalo & Pittsburgh Railroad (BPRR) runs east-west through Zelienople and Butler, provides links south into Allegheny County through Mars, and north into the Karns City and Petrolia area to provide critical rail access for the area's refinery and petroleum products industry.

System & Commodity Details (Profile 4c)

Highway Freight Network: Currently, only the Interstates (I-76 and I-79) through Butler County are included on the federally-designated National Highway Freight Network (NHFN), and no intermodal connector or similar designated routes exist. With freight development spread widely across localized sites throughout Butler County, numerous state and other roadway corridors are critical for truck access, including key routes such as US 19 and PA Routes 8, 58, 228, 58, 68, 268, and 356.

Multimodal Connections: With no river access in the county, multimodal transfer facilities focus on movements between truck and rail. Key sites include MHF trucking, warehousing, and distribution services in Zelienople and the City of Butler (sites 31-33), as well as transloading services via the Butler TRANSFLO Terminal (site 36). Additionally, general aviation access (though not related to a heavy freight emphasis) is available just across the southwestern county border at the Zelienople Municipal Airport.

Commodity Details and Influences: Butler County ranks fourth in overall tonnage within the SPC region and is one of the few counties that generates more outbound freight than inbound freight. Outbound products are largely tied to the county's production of petroleum or coal products and nonmetallic minerals, which together amount to 75% of all outbound freight.

Over half of the county's total inbound freight consists of nonmetallic minerals (43%) or secondary traffic (12%). Portions of the secondary traffic are likely related to servicing regional retail sites and a fairly concentrated population base where just 5 municipalities encompass almost half (43%) of the county's overall population – centered primarily around Cranberry and Adams Townships, and around Butler Township and the City of Butler.

System Data and Analyses (Profile 4d)

Trade Partners: In reviewing the intercounty highway freight flows for the SPC region, Butler County's leading trade partners include Allegheny, Lawrence, Washington, and Westmoreland Counties. Beyond the SPC

region, key partners span west to the Cleveland, Ohio, area, and farther east in Pennsylvania (e.g., Blair and Warren Counties).

Highway Freight Operations: Highway truck volumes within Butler County are highest along the Interstates (I-76 and I-79), though much of that travel likely consists of through-traffic. Notable truck volumes also occur along US 422, US 19, PA 8, PA 228, and other key state routes. Countywide, potential highway infrastructure restrictions include:

- 283 miles (12% of county total) of weight-restricted roadway including, for example, SR 58, 138, 488, and 528
- 2 restricted vertical clearance locations beneath railroad bridges
- 51 bridges with posted weight limits

Truck delays in the county are generally concentrated in the more populated crossroads areas including along PA 8 and US 422 in the Butler area, sections of US 19 in Jackson and Cranberry Townships, and PA 356 near Freeport Transport Industries north of Freeport.

Growth Potential: Based on existing land use, the southern half of the county is mainly residential, agriculture, and undeveloped land, minus key developed areas centered around Cranberry Township or along the PA 8 corridor. The northern half of the county (north of US 422) is more dominated by large tracts of forest, wetlands, and undeveloped land, with the exception of localized extraction and industry areas around Slippery Rock, Harrisville, Karns City and Petrolia. Future growth areas are mainly concentrated in the southwest portions of the county, including Cranberry Township, which in recent years has seen substantial corporate, industrial, and research growth with access to key transportation corridors including I-76, I-79, US 19, PA 228, and PA 528.

Future Freight Focus Areas (Profile 4e)












Regional Freight Network Considerations: As mapped on County Freight Profile 4e and in order to link multimodal freight activity areas and focus areas within Butler County and across the region, freight-significant roadways (beyond the federally-designated NHFN routes) proposed for inclusion on the Southwestern Pennsylvania Regional Highway Freight Network are:

- Regional Routes: US 422
- Intercounty Routes: US 19, PA 8, PA 28
- Connector Routes: PA 58, PA 38 (from PA 58 to I-80), PA 68, PA 108, PA 528, PA 228, PA 356, and PA 268

Focus Areas and Potential Planning Actions: Key focus areas within Butler County mainly entail freight cluster access and connectivity interests, particularly in developing locations such as Cranberry Township, Jackson Township, and southern Butler County.

The summary table on the following page and the corresponding map on County Freight Profile 4e highlight relevant freight focus areas and potential future planning actions specific to the county. A brief list of sample projects (extracted from other planning sources) that may also influence freight and goods movement on a broader regional level is also included for reference.

Butler County Freight Focus Areas, Potential Planning Actions, and Sample Projects

Freight Focus Area				Focal Points					Potential Planning Actions	
Map Key	Category	Location	Description	Freight Activity	Future Development	Infrastructure	Operations	Access & Connectivity	Stage	Actions
BU-1		Muddy Creek Township	US 422 truck travel and access, and local trucking companies	x			x	x	(1)	Monitor operations and access
BU-2		Butler	PA 8, PA 68, and PA 356 truck travel; rail yard and localized freight access	x		x	x	x	(2)-(4)	Coordinate with ongoing City of Butler Truck Study
BU-3		Zelienople	Truck/rail freight activity with corridor access to I-79 or US 19 via PA 68, 588 and 288	x			x	x	(2)	Zelienople Area Freight Route, Access, and Connectivity Assessment
BU-4		Jackson Township	Freight activity with US 19 and PA 528 freight access, and I-79 incident influences	x	x	x	x	x	(2)	Jackson Township and Cranberry Township Freight Route, Access, and Connectivity Assessment
BU-5		Cranberry Township	Freight activity clusters with high truck tonnage, US 19 access, I-79 incident influence	x	x		x	x	(2)	
BU-6		Cranberry Township	I-76 PA Turnpike Infrastructure upgrades (near Freedom Rd and Rochester Rd)			x			(2)	
BU-7		Cranberry Township and Adams Township	PA 228 upgrades (Cranberry Twp and east to PA 8)		x	x	x	x	(2)	PA 228 Corridor and Southern Butler County Freight Route, Access, and Connectivity Assessment
BU-8		Adams Township	Truck/rail freight access and manufacturing clusters along Mars-Valencia Rd	x	x		x		(2)	
BU-9		Middlesex Township	Freight cluster with PA 228 access, high truck tonnage area	x	x	x		x	(2)	
BU-10		Clinton Township	Freight cluster and high tonnage area, Victory Road Business Park						(2)	
BU-11		Buffalo Township	Freight activity and access via PA 356 and PA 28	x			x	x	(2)	

Sample Projects with Regionally-Relevant Freight Influence Potential

Future Development Opportunities

- FedEx Ground Facility (Jackson Township)

Highway Candidates (TIP, TYP, SPC LRTP, PA Turnpike Commission)

- I-76: Cranberry Interchange to Pine Twp Mile Post 28-31 \$80M (2020)
- US 19 Hwy Restoration (PA 68 to PA 488) \$2.5M (MT)
- PA 228 Mars West Expansion \$0.5 Million (ST), \$74M (MT)
- PA 356 Corridor Upgrades \$9M (MT)
- PA 528 Bridge Reconstruction \$21.5M (MT)
- PA 3020 Freedom Rd Improvements \$17.7M (MT)
- PA 68 Safety Improvements \$5 Million (MT), \$20M (LT)
- I-79 Widening: SR 228 to SR 528 (4 to 6 lanes) \$65M (LT)

Rail Candidates (RTAP, RFAP, PA State Rail Plan)

- Buffalo & Pittsburgh Railroad, Northern Subdivision \$3.6M (2015)
 - Improve Butler Yard and restore crossover connection
 - Repair eight bridge structures on its northern subdivision

Other Candidates and Visionary Projects






- As identified by the City of Butler Dynamic Truck Routing and Circulation Study (estimated study completion date of mid-late 2016)
- I-79: Reconstruction Butler County - \$158 Million (SPC LRTP)
- US 19: 6 Lanes from Rochester Rd to PA 528 (SPC LRTP)
- US 422 West Lane Expansion (SPC LRTP)

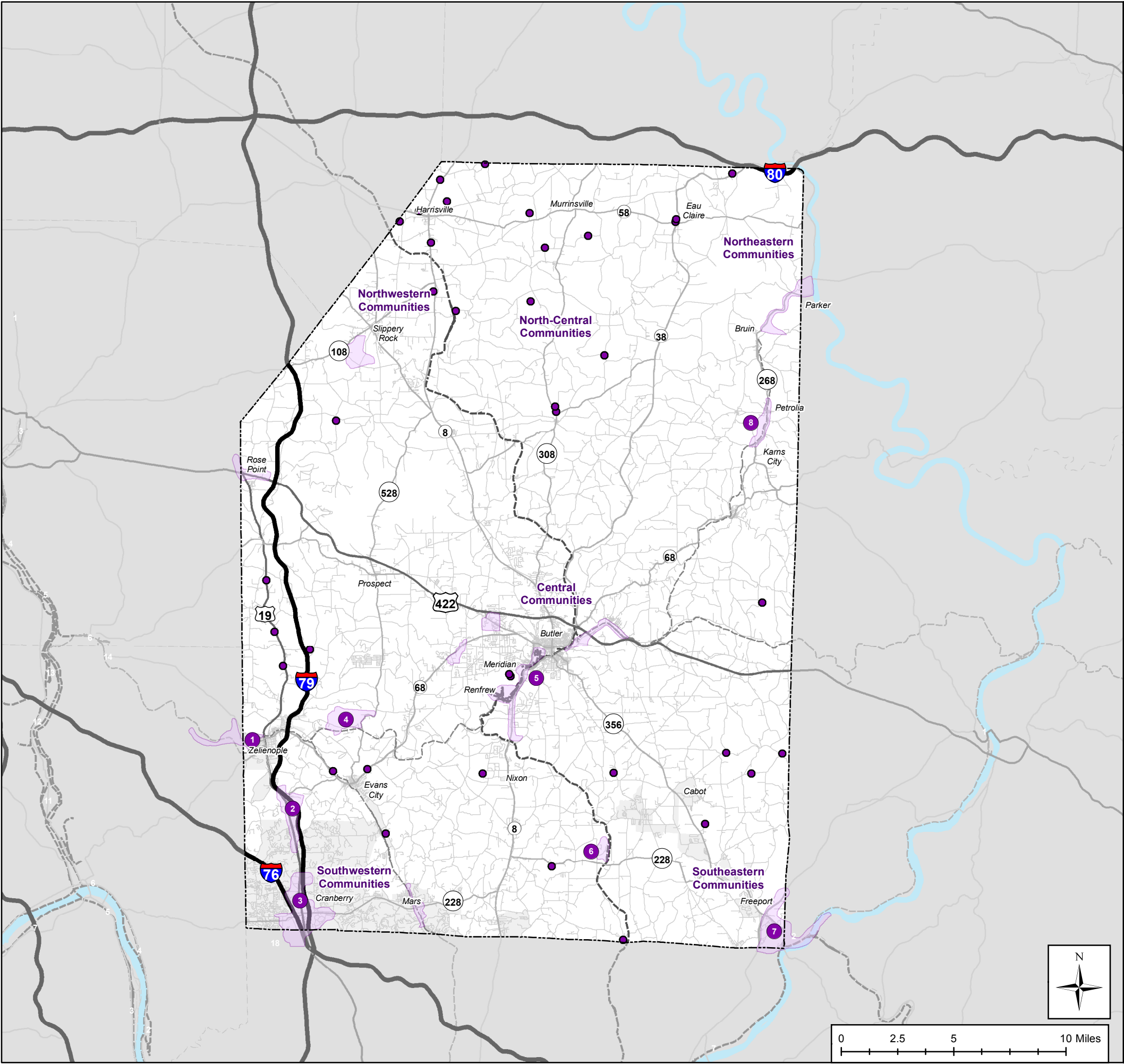
Note: Project samples were extracted from other planning sources and shown here for reference only; they do not necessarily reflect current project details, priorities, or funding commitments for any specific program.

Legend: Planning Actions Stage

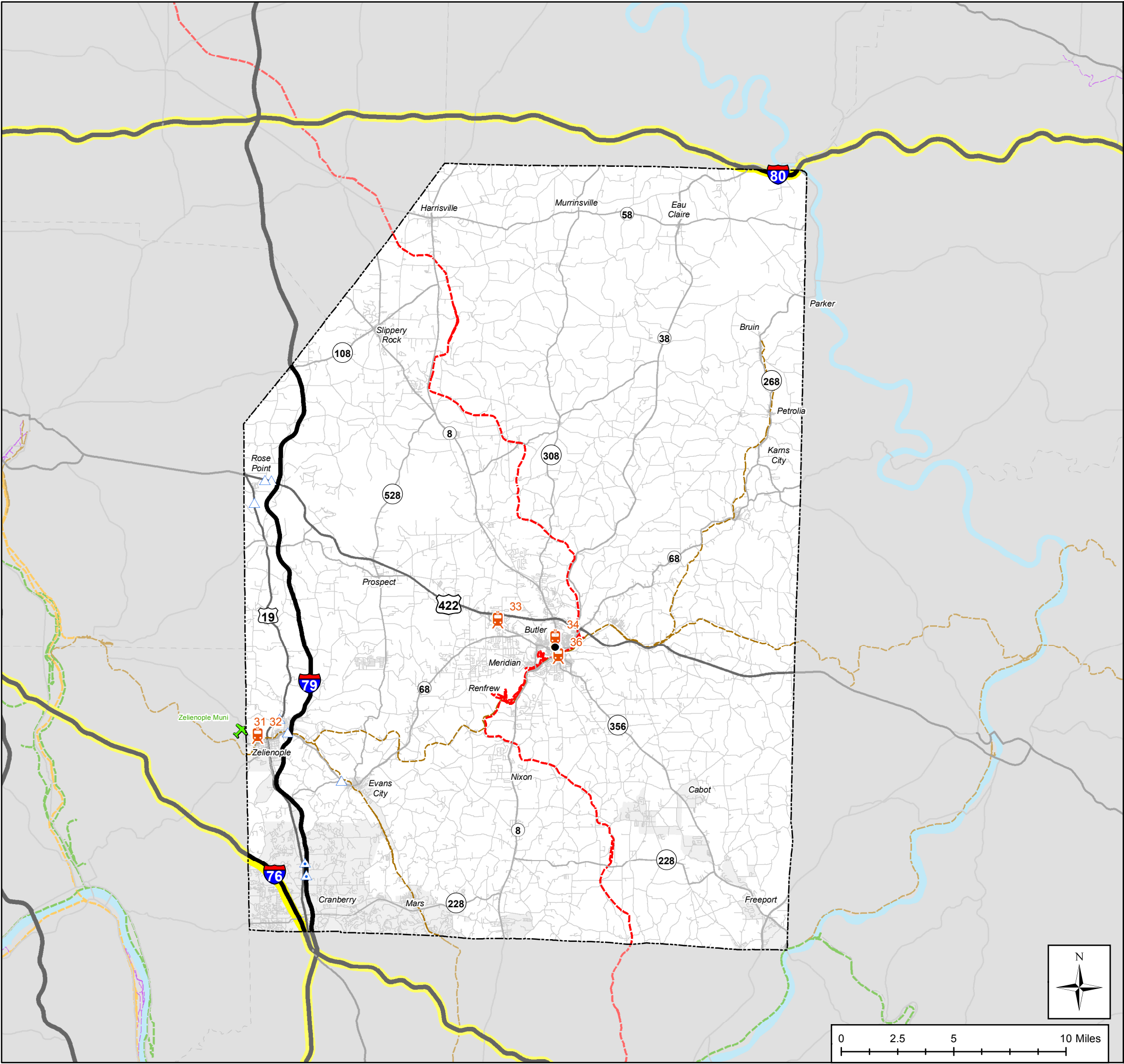
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|----------------------------|----------------------------|-----------------------------------|
| (1) Outreach and Screening | (3) Study Phase | (5) Programming and Funding |
| (2) Concept Development | (4) Engineering and Design | (6) Implementation and Monitoring |

Legend: Freight Focus Area Categories

- | | | | | |
|---|---|---|---|---|
| Corridor Travel | Economic Development | Freight Clusters | Localized Freight Sites | Multimodal Activity |
|  |  |  |  |  |



- Legend**
- Freight Activity**
- Localized Freight Activity
 - Freight Activity Cluster
- Roadways**
- Interstates
 - U.S. Highways
 - State Highways
 - Secondary Roads
- Railroads**
- Class I
 - Class II
 - Class III
- Other**
- Major Rivers
 - Urbanized Areas
 - County Boundary
 - State Boundary
- Key Freight Cluster Areas**
- 1 Zelenople
 - 2 Jackson Township - Cranberry Township
 - 3 Cranberry Township
 - 4 Wahlville
 - 5 Butler
 - 6 Victory Road Business Park
 - 7 Buffalo Township
 - 8 Petrolia - Karns City



Legend

Roadways

- Interstates
- U.S. Highways
- State Highways
- Secondary Roads
- Primary Highway Freight System

Truck Facilities

- Rest Area/Service Center - Public
- Travel Plaza/Truck Stop - Private
- Truck Parking/Weigh Station (no facilities)
- Truck Idle Air/Electrification
- Runaway Truck Ramp

Intermodal Facilities

- Air & Truck
- Port & Truck
- Rail & Truck
- Truck & Truck
- Truck - Port - Rail
- Intermodal Connector (Freight Related)

Railroads

- Class I: CSX Transportation
- Class I: Norfolk Southern
- Class I: Canadian National Railway
- Class II: Buffalo & Pittsburgh Railroad
- Class II: Wheeling & Lake Erie Railway
- Class III Railroads

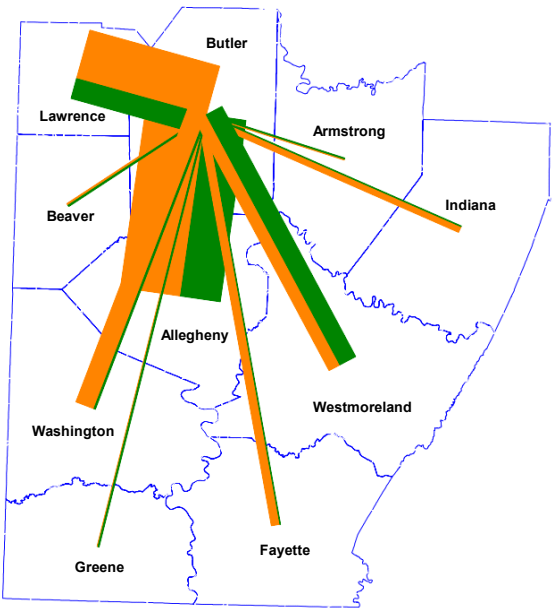
Other

- Commercial Aviation Airport
- General Aviation Airport
- Tunnels with Hazmat Restrictions
- Lock/Dam
- Fleeting Area
- Major Rivers
- Urbanized Areas
- County Boundary
- State Boundary
- County Seat



Butler County Freight Profile
(System Data & Analyses)

Intercounty Highway Freight Flows

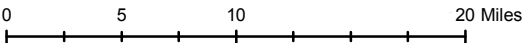
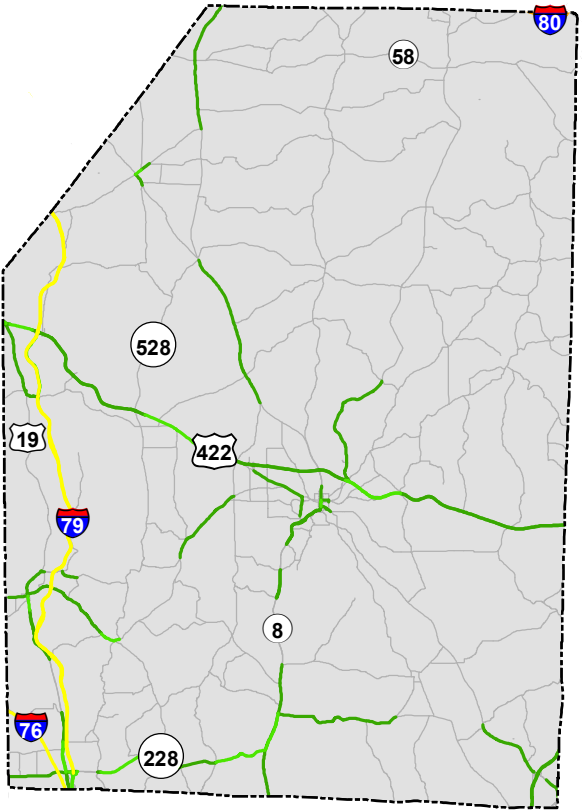
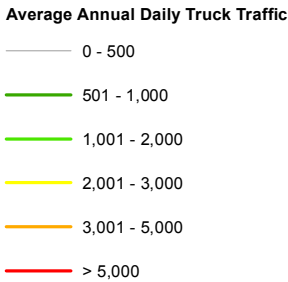


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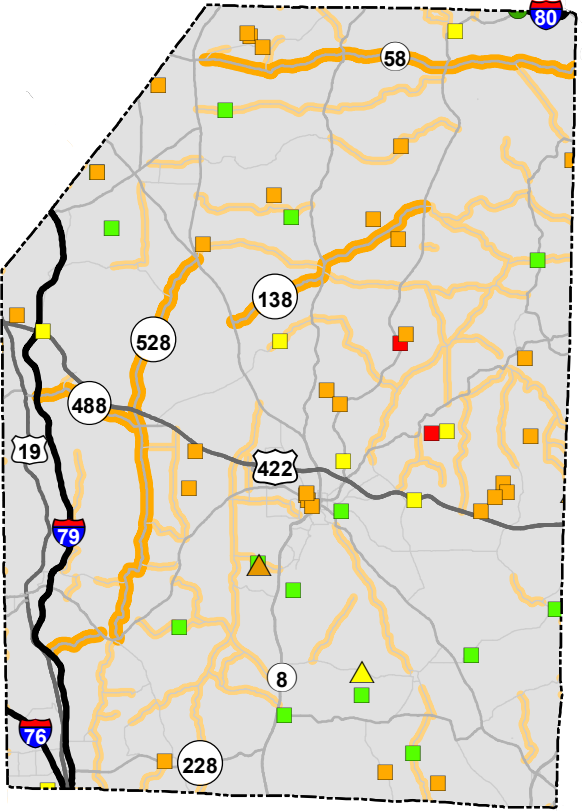
- Outbound
- Inbound
- Scale = 10,000 tons

Notes: Desire Lines represent tonnages on highway network only.

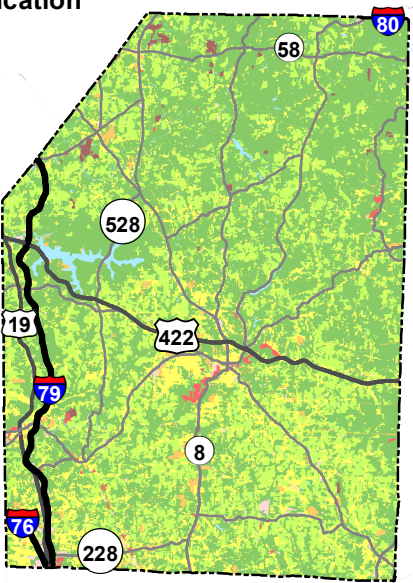
HPMS Truck Counts



Bridge and Roadway
Weight and Vertical Clearance
Restrictions



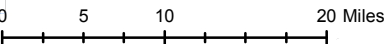
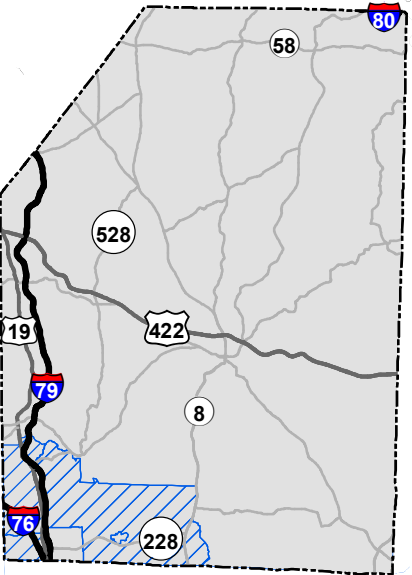
Land Use
Classification



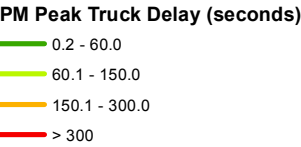
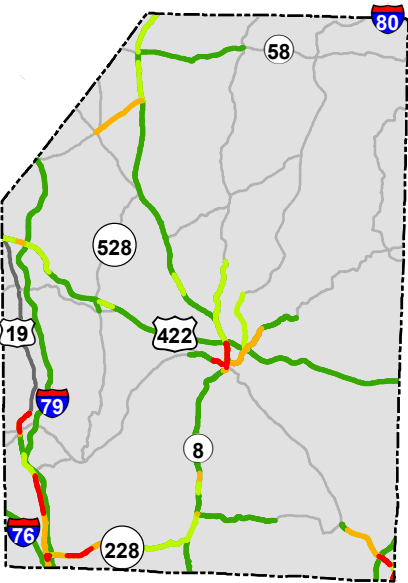
Land Use (2010)

- Commercial Services
- Industrial and Commercial
- Extraction
- Agriculture
- Forest, Wetlands, Other Undeveloped
- Rivers and Lakes
- Residential
- Mixed Urban, Transportation, Utilities

Identified Freight
Growth Locations



PM Peak Truck Delay



Legend for Restrictions Map (above)

Vertical Clearance Below Highway Bridge

- 10 - 11.49 Feet
- 11.5 to 12.49 Feet
- 12.5 to 13.49 Feet
- 13.5 to 14 Feet

Vertical Clearance Below Railroad Bridge

- 10 - 11.49 Feet
- 11.5 - 12.49 Feet
- 12.5 - 13.49 Feet
- 13.5 - 14 Feet

Bridges with Posted Weight Limit

- Bridge Limited to One Truck
- 2 - 5 Tons
- 6 - 15 Tons
- 16 - 25 Tons
- 26 - 35 Tons
- 36 - 38 Tons

Roadways with Posted Weight Limits

- State Routes
- Secondary Roads

Butler County Freight Profile (Future Freight Focus Areas)

Legend

Regional Freight Network Candidates

- Regional Routes
- Intercounty Routes
- Connector Routes

National Highway Freight Network

- National Highway Freight Network
- PHFS Intermodal Connectors (Freight Related)

Roadways

- Interstates
- U.S. Highways
- State Highways
- Secondary Roads

Railroads

- Class I
- Class II
- Class III

Other

- Major Rivers
- County Boundary
- State Boundary

Freight Focus Areas

- Corridor Travel
- Economic Development
- Freight Clusters
- Localized Freight Sites
- Multimodal Activity

NOTE: Refer to table and Map Key on page BU-3 for freight focus area details.

