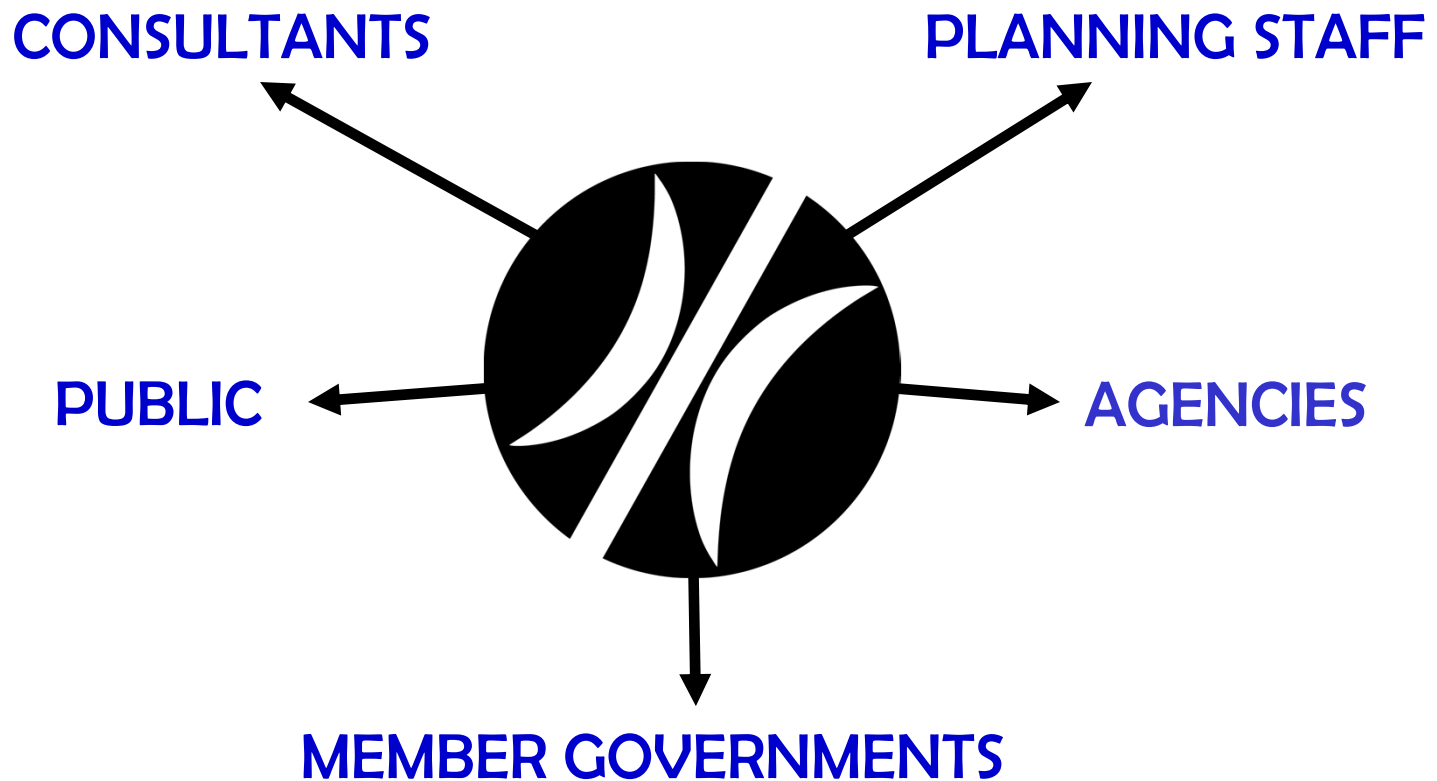


# Overview of DVRPC's Aerial Imagery Products



Information Resources Exchange Group Meeting  
June 7, 2006

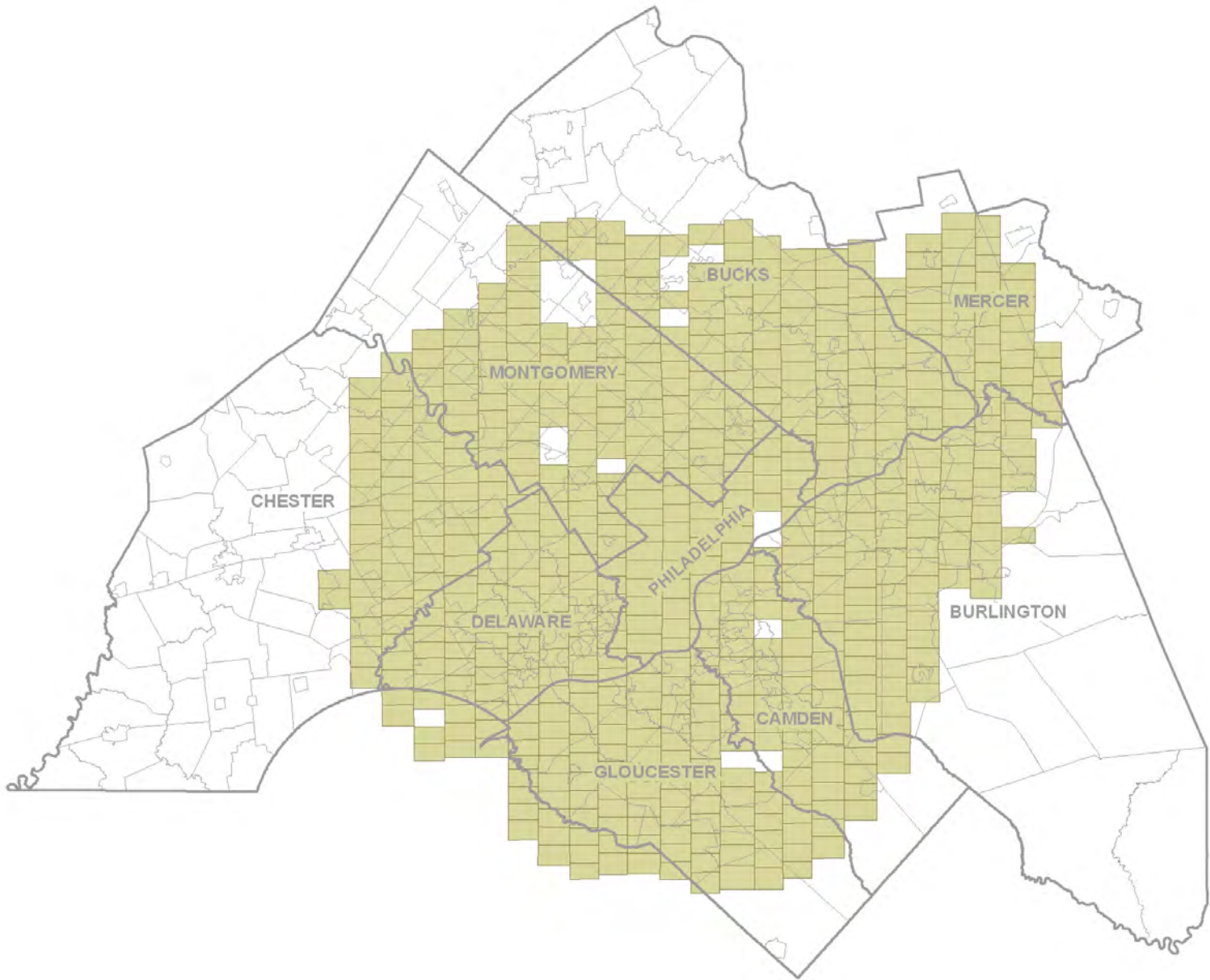
# Aerial Photography/Orthophotography Users



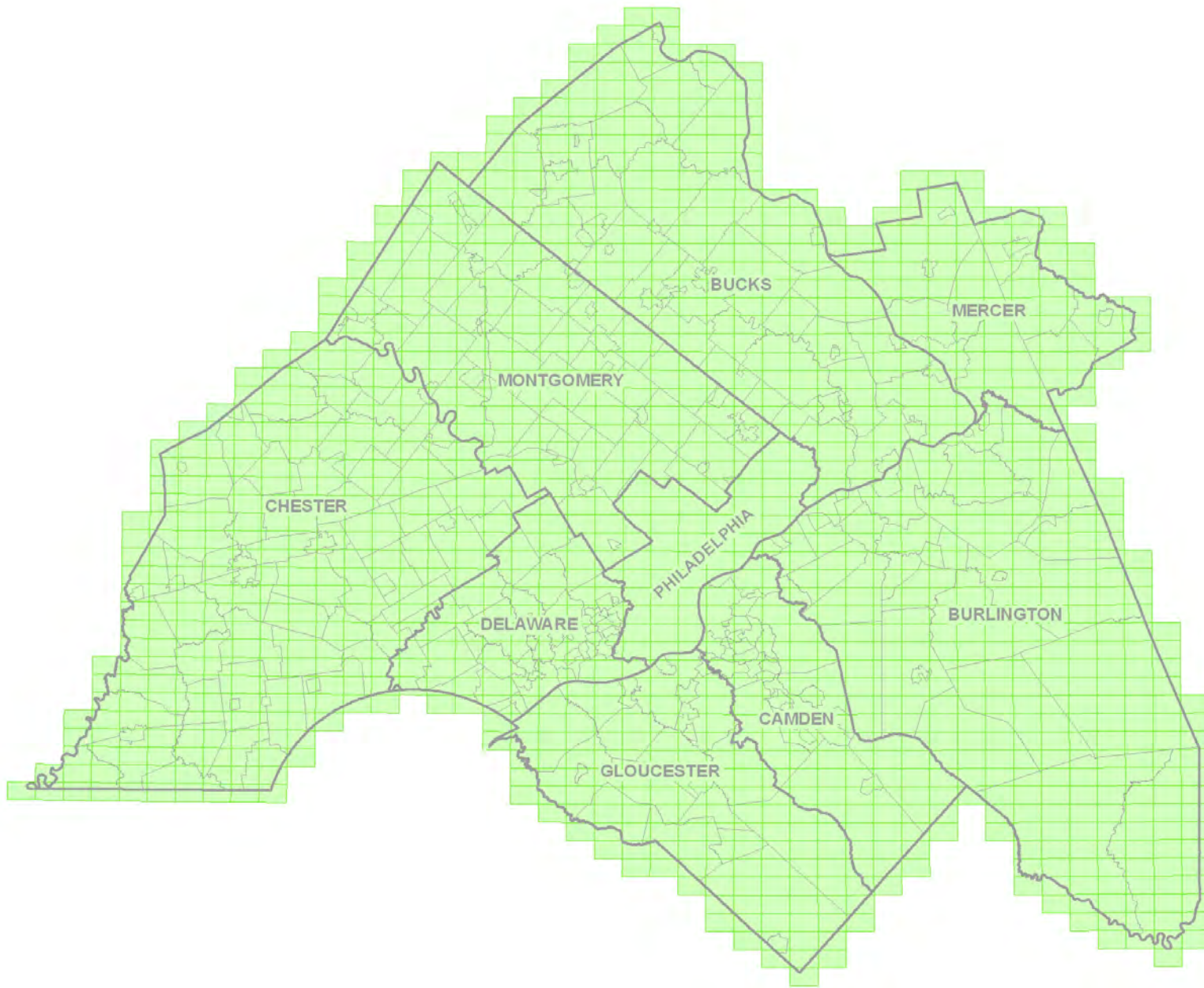
A black and white aerial photograph of a landscape. A large, dark, irregularly shaped body of water is on the right side. A road or path runs diagonally from the top left towards the bottom left. The surrounding area is a mix of light and dark patches, likely representing different types of vegetation or terrain. The text is overlaid on the top left portion of the image.

# DVRPC's Historic Aerial Photography

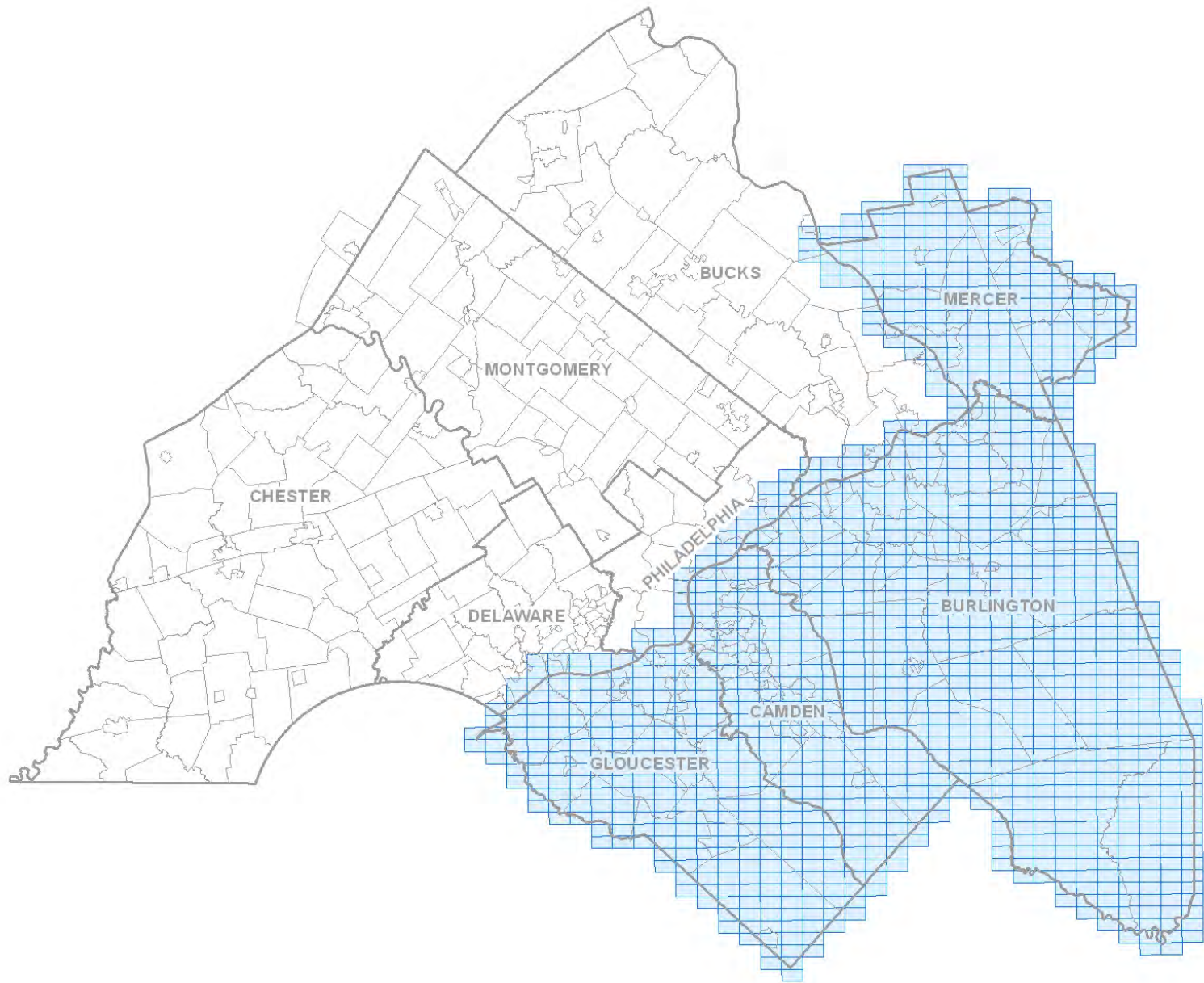
- **Available for the year 1959, then in 5 year increments from 1965 to 1995**
- **Non-orthorectified scans of mylar photo enlargements**
- **Digital – Scans (TIFFs) on CD/DVD**
- **Hardcopy – 1"=400' (approximate scale) prints of scans**



1959 Aerial Photo "Atlas Sheet" Index



1965 through 1995 Aerial Photo "Atlas Sheet" Index



2000 Orthophoto Index



# DVRPC's 2000 Imagery Characteristics

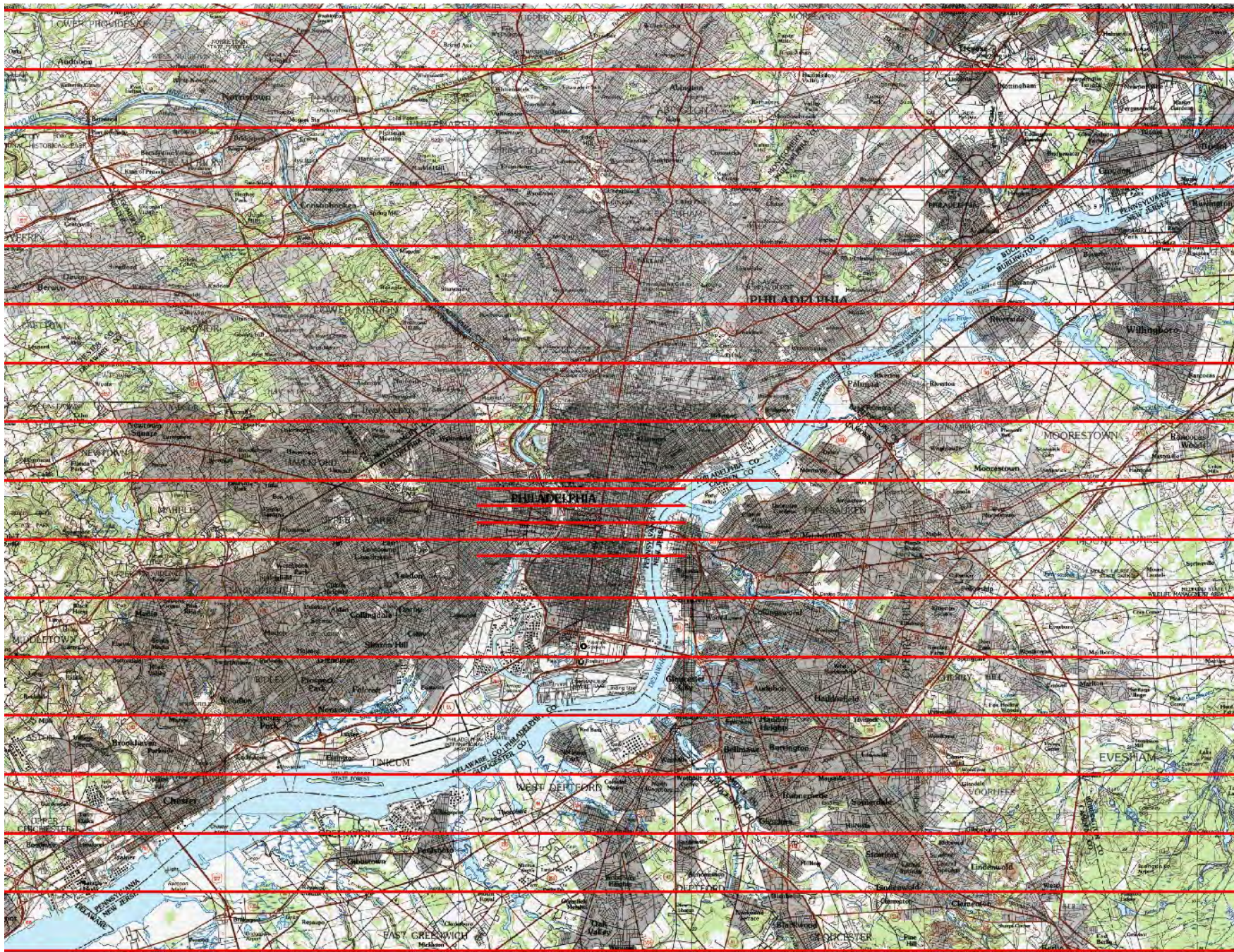
- **Aircraft-based acquisition**
- **Black & white film, scanned to create digital images**
- **1.5' pixel resolution**
- **1"=200' design scale**
- **Ortho-corrected to obtain a +/-5' positional accuracy**
- **X/Y grid format specific to 2000 orthophotos**



# DVRPC's 2005 Imagery Characteristics

- **Flown in Spring 2005**
- **Aircraft-based acquisition**
- **Leica Geosystems ADS40 Digital Sensor (pushbroom, multispectral)**
- **ISTAR software processing of raw digital imagery**
- **Orientation via ground control, IMU and ABGPS**
- **Traditional DEM compilation and contour generation**
- **X/Y grid format corresponding to 2000 orthophotos (State Plane Sata)**





Portion of 2005 Flight Line Map



# DVRPC's 2005 Imagery Deliverables

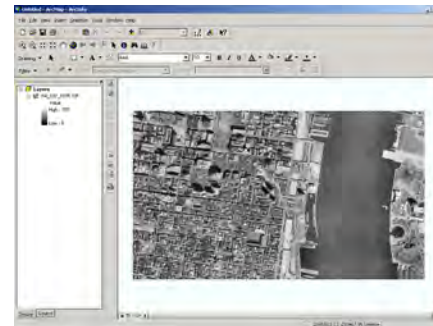
- **True color, digital orthos (1' pixel resolution, 1"=200' design scale, +/-5' horizontal accuracy, TIFF and MrSID formats in appropriate State Plane coordinate system)**
- **Digital Elevation Models (ESRI-compatible ASCII point file by county in appropriate State Plane coordinate system)**
- **Digital Elevation Models (ESRI-compatible TIN by county in appropriate State Plane coordinate system)**
- **5' contours (Index contours and spot elevations labeled in feet)**

# Viewing the Orthophotos

- Applications

- 

ArcGIS

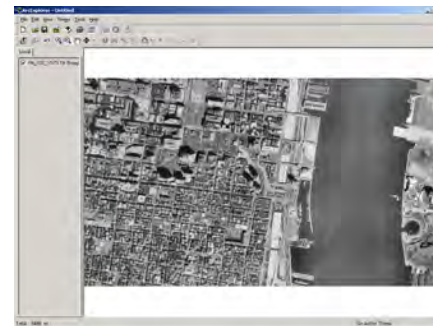


- 

Arc Explorer



- 



# Release and Disclaimer Policy

- **Each purchaser signs a disclaimer, which is also included on the CD/DVD and the jewel case**
- **DVRPC is held harmless from damages and no guarantees or updates are provided**
- **Photos may be used by the purchaser only**
- **Users may not copy, share, sell or release**
- **Users may not display on web or make available for download**

# Old Aerial Imagery Pricing Structure

## 2000 Orthophotos – Digital (TIFF):

\$10 per tile – Custom Set

\$8 per tile – Municipal Set (\$50 minimum)  
(\$50 minimum)

\$5 per tile – County Set

## 2000 Orthophotos – Digital (MrSID):

\$10 per tile – Custom Set

\$5 per tile – Municipal Set

\$3 per tile – County Set

## 2000 Orthophotos – Hardcopy:

\$25 per print (1-9 prints @ 1"=200' scale, by tile)

\$20 per print (10+ prints @ 1"=200' scale, by tile)

\$20 per print (1-9 prints @ 1"=400' scale, by tile)

\$15 per print (10+ prints @ 1"=400' scale, by tile)

## Historic Aerial Photo “Atlas Sheet” Scan – Digital (TIFF):

\$6 per sheet

## Historic Aerial Photo “Atlas Sheet” Scan – Hardcopy:

\$20 per print (1-9 prints)

\$15 per print (10+ prints)

# New Aerial Imagery Pricing Structure

## 2005/2000 Orthophotos – Digital (TIFF): Digital (MrSID):

**\$10 per tile**

**\$5 per tile – County Set**

## 2005/2000 Orthophotos –

**\$6 per tile**

**\$3 per tile – County Set**

## 2005 Orthophotos – Hardcopy:

**\$30 per print (wall size, various scales)**

**\$15 per print (report size\*, various scales)**

## 2000 Orthophotos – Hardcopy:

**\$25 per print (wall size, various scales)**

**\$10 per print (report size\*, various scales)**

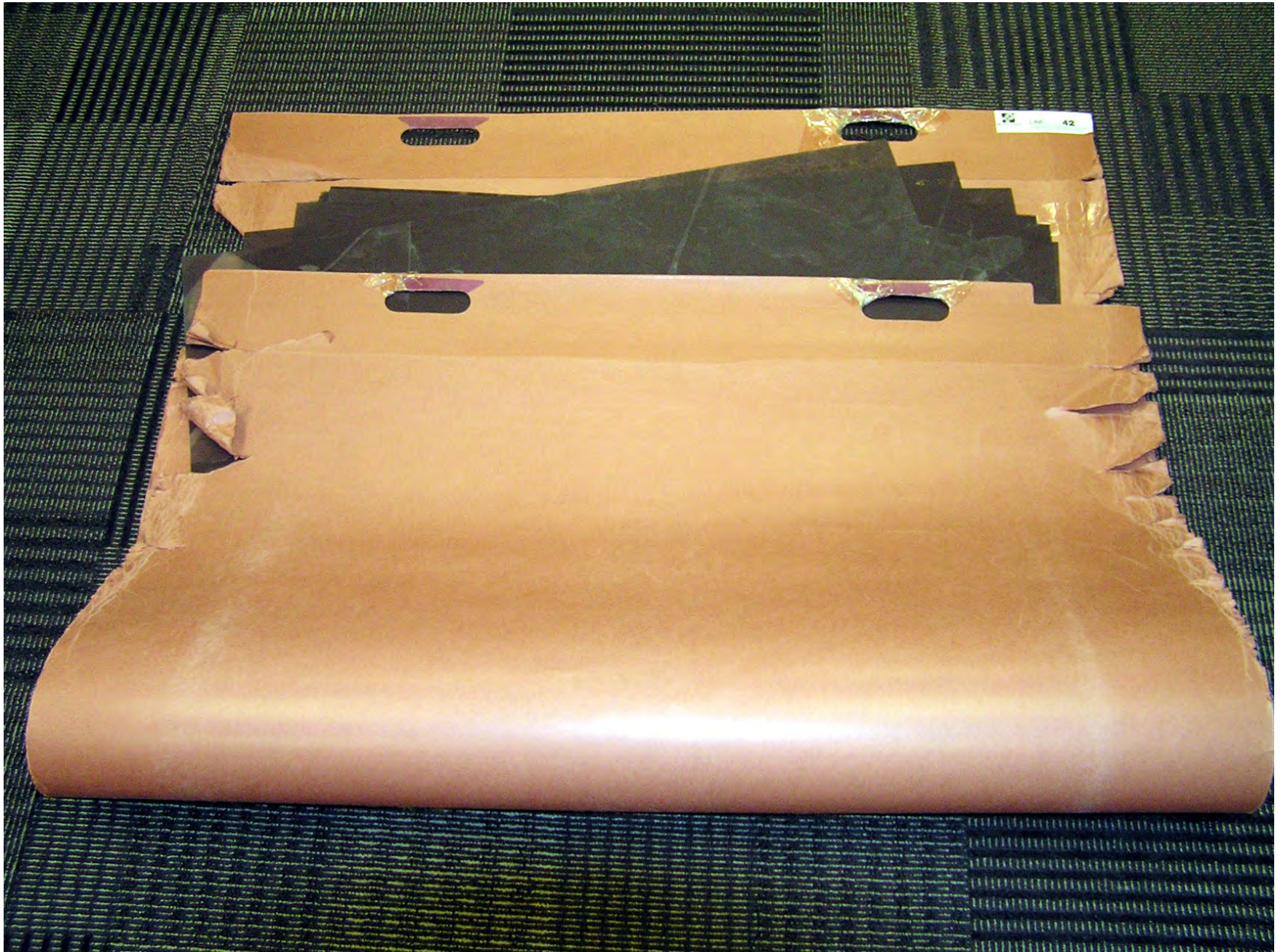
## Historic Aerial Photo “Atlas Sheet” Scan – Digital (TIFF):

**\$6 per sheet**

## Historic Aerial Photo “Atlas Sheet” Scan – Hardcopy:

**\$20 per print (wall size)**

*\* Report size prints are considered*



Typical "Atlas Sheet" Vertical File Folder



Océ CS4032 Color Scanner and TDS400 Printer





Océ CS4032 Color Scanner



Océ TDS400 Printer



Oce TCS500 Inkjet Printer

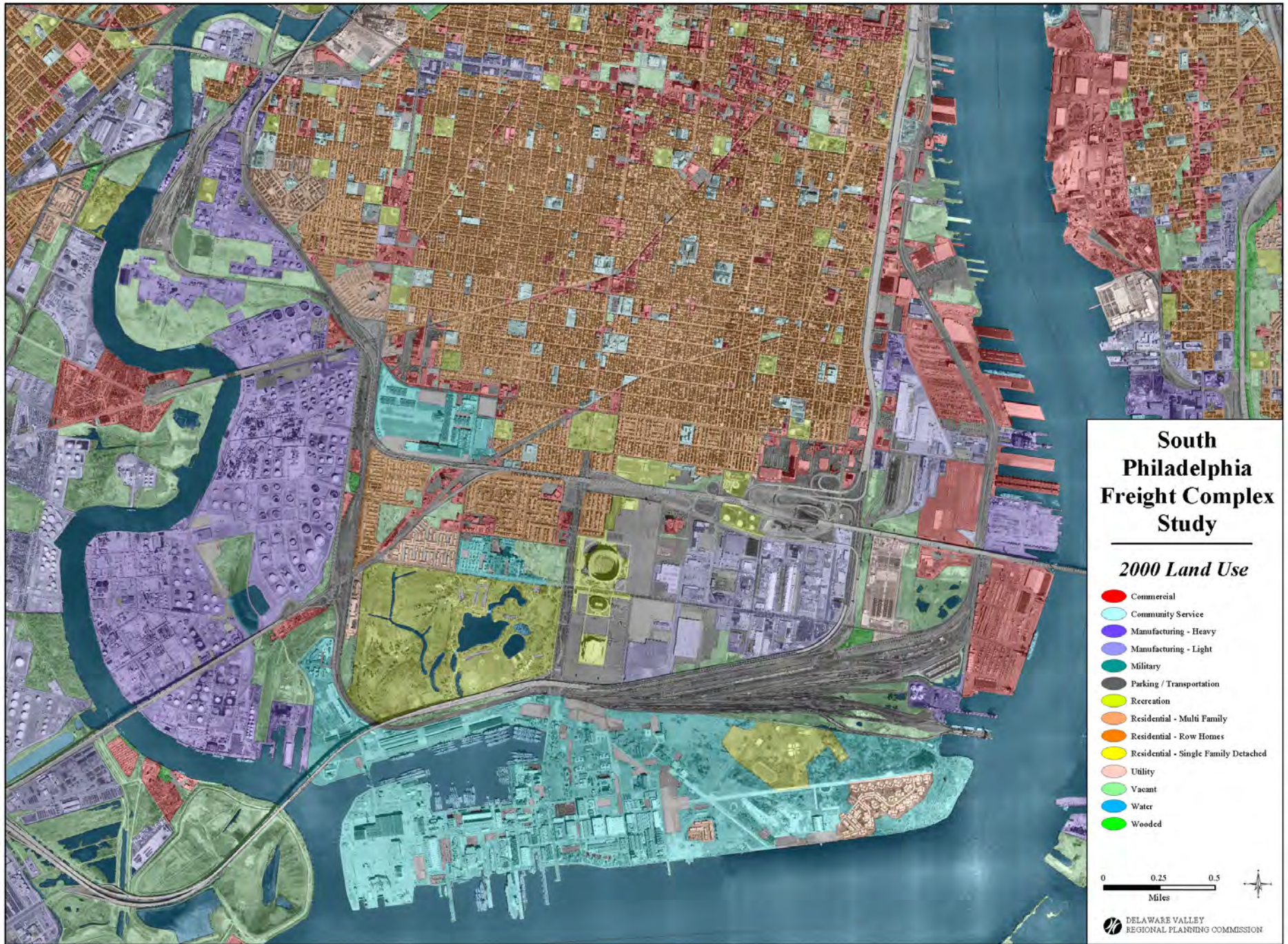


Rimage DLN5200 DVD/CD Publisher

# I-295 / NJ 42 Interchange

Ramp Designation Signs

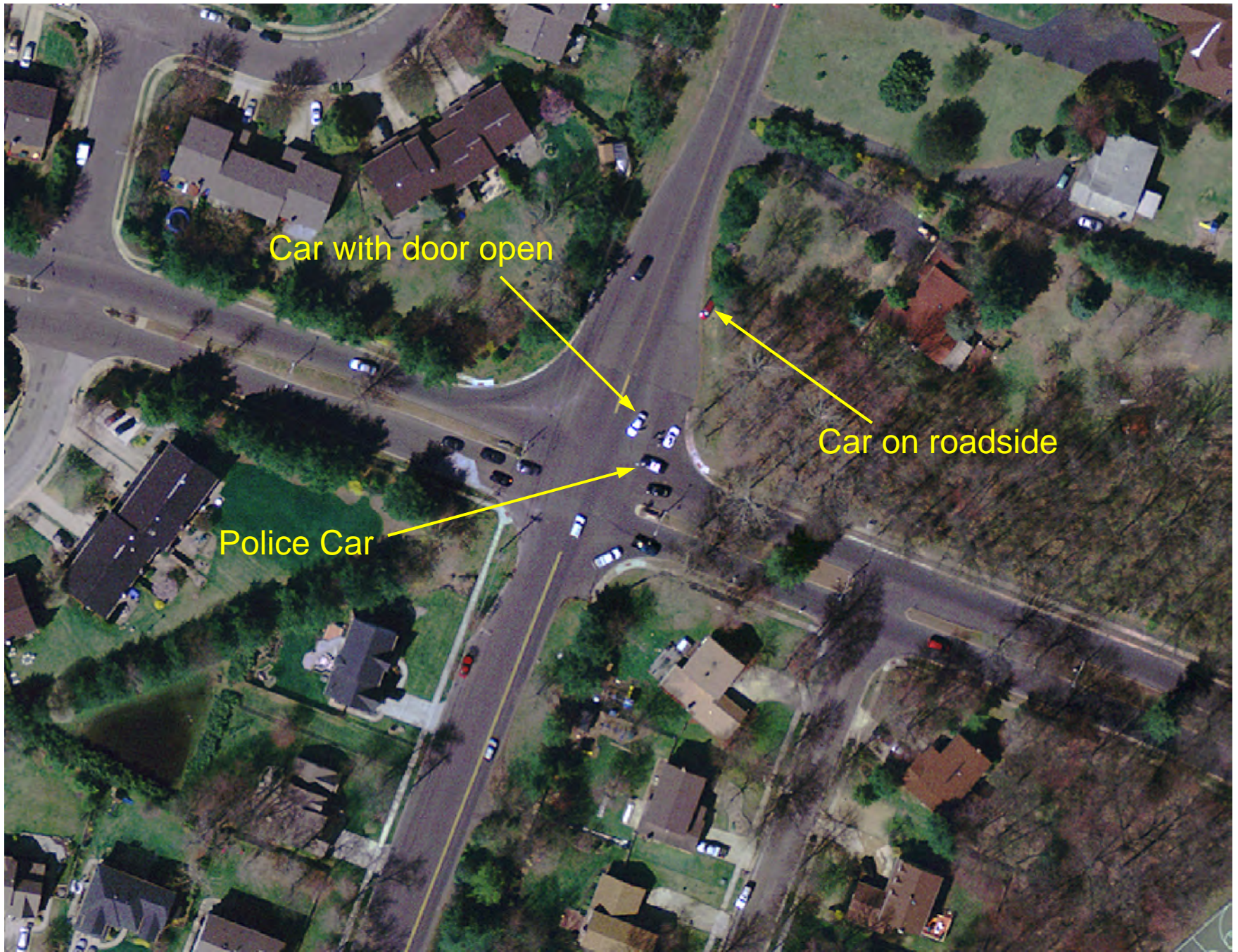




# Mercer Crossings Transportation Study

- Study Area Boundary
- Opportunity Sites
- Municipality Boundary





Car with door open

Car on roadside

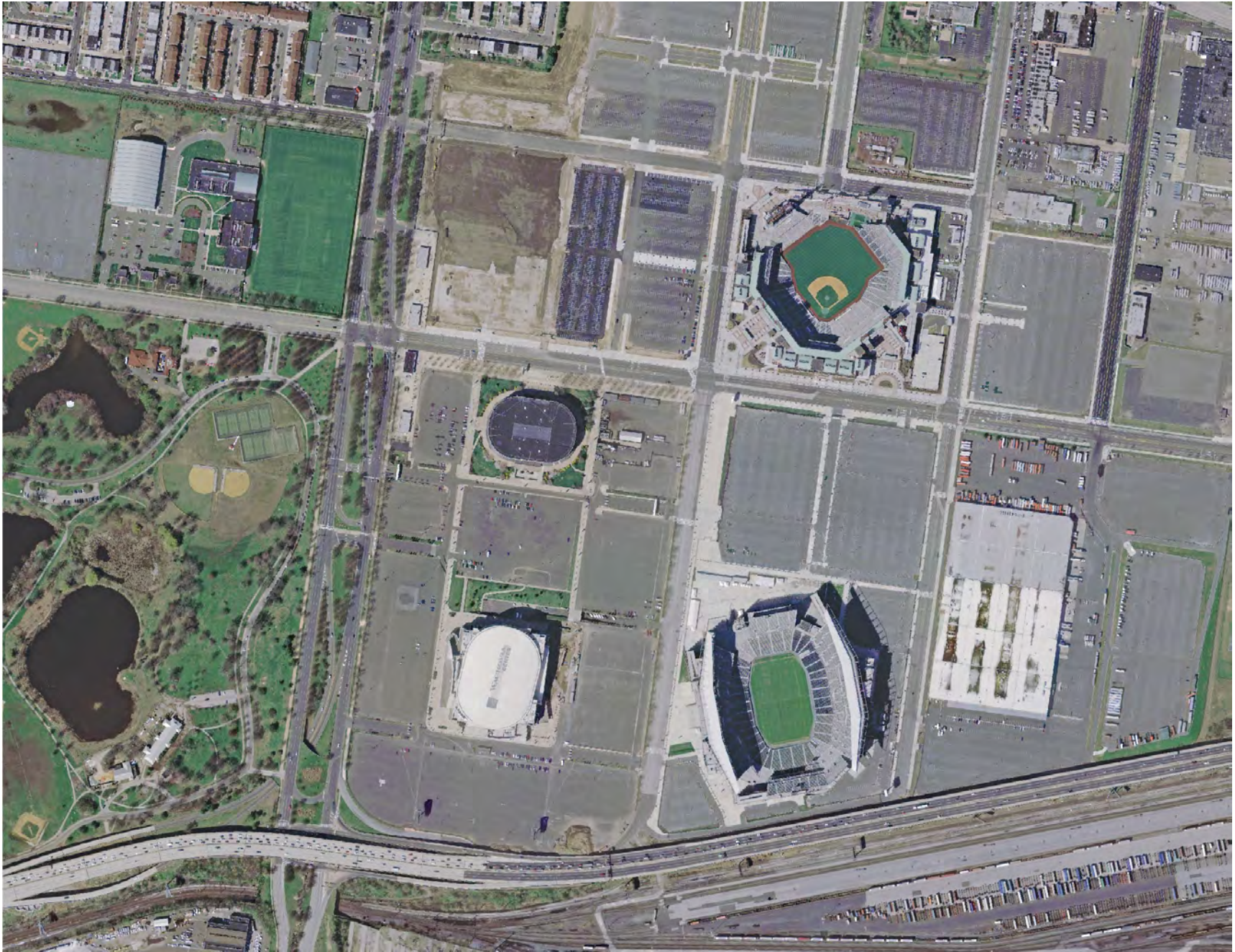
Police Car

Traffic Accident





Philadelphia & Camden Waterfronts - 2000/2005



South Philadelphia Sports Complex - 2000/2005



Chemical Road Retail Complex (Plymouth Twp., Montgomery Co., PA) - 2000/2005



Centerton Square Retail Complex (Mt. Laurel Twp., Burlington Co., NJ) - 2000/2005



Hartford Corners Shopping Center (Delran Twp., Burlington Co., NJ) - 2000/2005



Comparison of 1965, 1975, 1985, 1995, 2000 & 2005 Aerial Imagery

# For more information visit DVRPC's website:



[www.dvrpc.org](http://www.dvrpc.org)



I REG JUNE 7 , 2006



Delaware Valley  
Regional Planning  
Commission



# JOURNEY-TO-WORK



TRENDS IN THE  
DELAWARE VALLEY  
REGION

1980-2000





# Report Contents

- Regional Statistics
  - Population
  - Employment
  - Resident Workers
  - Commuting Patterns
  - Mode of Travel
- County Statistics
  - Population, Households, Employed Residents & Vehicles Owned
  - Employment Estimates
  - Employed Persons & Place of Work
  - Means of Transportation & Travel Time
- City Statistics & Philadelphia CBD
  - Population
  - Employment
  - Resident Workers
  - Commuting Patterns
  - Mode of Travel



## Data Sources

- Decennial U.S. Census
  - Long Form Sent to 17% of Households
    - Population
    - Distribution of Resident Workers
    - Commutation Patterns
    - Means of Transportation
    - Time Departing for Work
    - Travel Time to Work
    - Employment
  - Census counts single jobs and only those at work during census week. Adjusted with data from BEA, BLS, ES 202, etc.



# Regional Statistics: Population

## 1970, 1980, 1990, and 2000 Population Trends in the Delaware Valley Region

County	Census Year				Percent Change		
	1970	1980	1990	2000	'80-'90	'90-'00	'70-'00
Chester	277,746	316,660	376,396	433,512	18.9%	15.2%	56.1%
Delaware	603,456	555,023	547,651	551,989	-1.3%	0.8%	-8.5%
Philadelphia	1,949,996	1,688,210	1,585,577	1,517,549	-6.1%	-4.3%	-22.2%
<b>PA Total</b>	<b>3,872,006</b>	<b>3,682,450</b>	<b>3,728,909</b>	<b>3,849,664</b>	<b>1.3%</b>	<b>3.2%</b>	<b>-0.6%</b>
Camden	456,291	471,650	502,824	507,889	6.6%	1.0%	11.3%
Gloucester	172,681	199,917	230,082	255,719	15.1%	11.1%	48.1%
<b>NJ Total</b>	<b>1,256,220</b>	<b>1,341,972</b>	<b>1,453,796</b>	<b>1,537,757</b>	<b>8.3%</b>	<b>5.8%</b>	<b>22.4%</b>
<b>TOTAL</b>	<b>5,128,226</b>	<b>5,024,422</b>	<b>5,182,705</b>	<b>5,387,421</b>	<b>3.2%</b>	<b>3.9%</b>	<b>5.1%</b>





# Regional Statistics: Employment

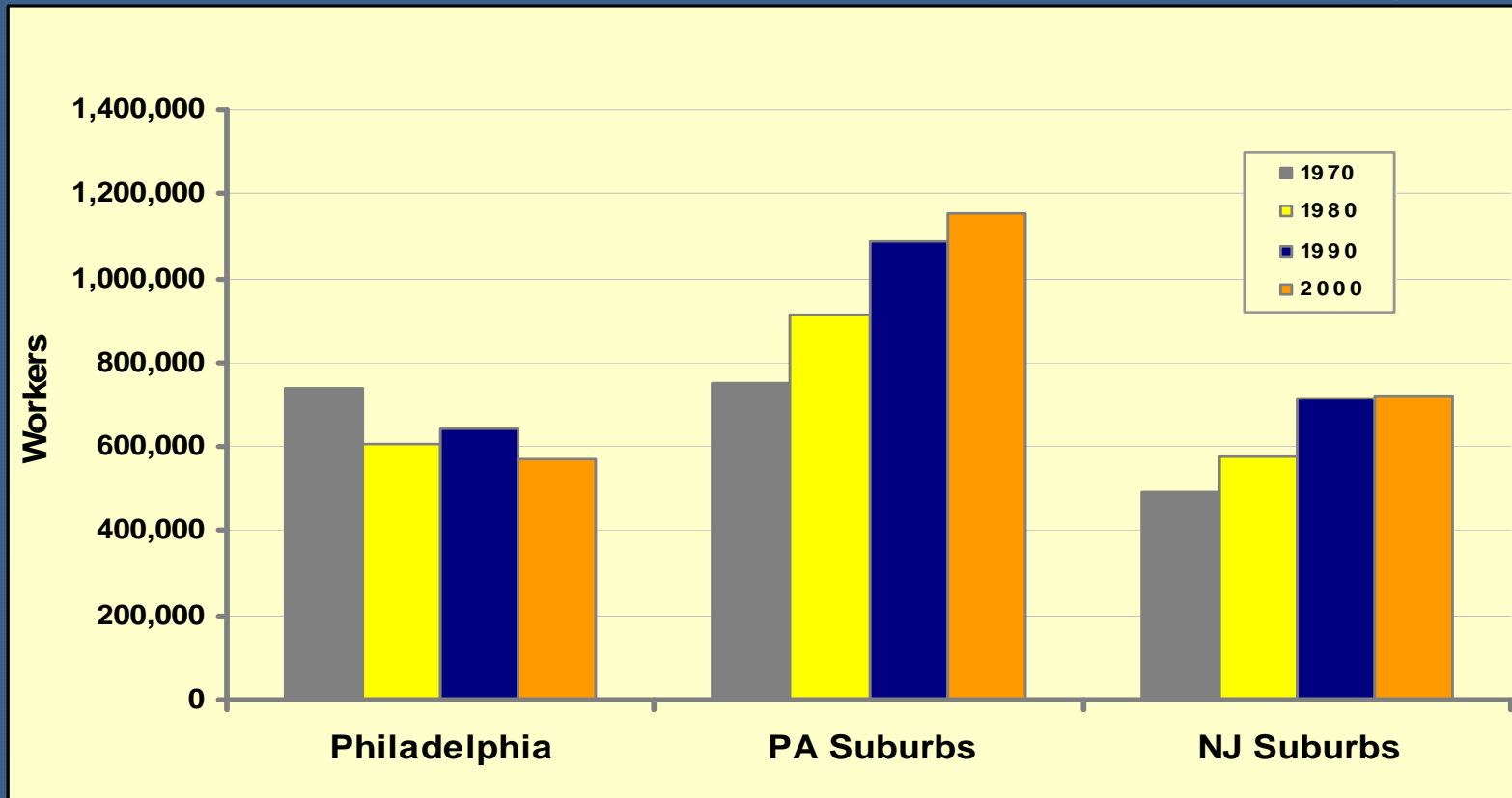
## 1980, 1990, and 2000 Employment Trends in the Delaware Valley Region

County	1980	1990	2000	'80-'90	'90-'00	'80-'00
Chester	134,362	197,752	238,641	47.2%	20.7%	77.6%
Delaware	197,818	230,459	238,164	16.5%	3.3%	20.4%
Philadelphia	835,812	836,874	741,397	0.1%	-11.4%	-11.3%
<b>PA Total</b>	<b>1,717,460</b>	<b>1,967,931</b>	<b>1,978,003</b>	<b>14.6%</b>	<b>0.5%</b>	<b>15.2%</b>
Camden	186,746	227,933	216,931	22.1%	-4.8%	16.2%
Gloucester	61,732	86,079	99,467	39.4%	15.6%	61.1%
<b>NJ Total</b>	<b>564,680</b>	<b>725,949</b>	<b>739,848</b>	<b>28.6%</b>	<b>1.9%</b>	<b>31.0%</b>
<b>TOTAL</b>	<b>2,282,140</b>	<b>2,693,880</b>	<b>2,717,851</b>	<b>18.0%</b>	<b>0.9%</b>	<b>19.1%</b>



# Regional Statistics: Resident Workers

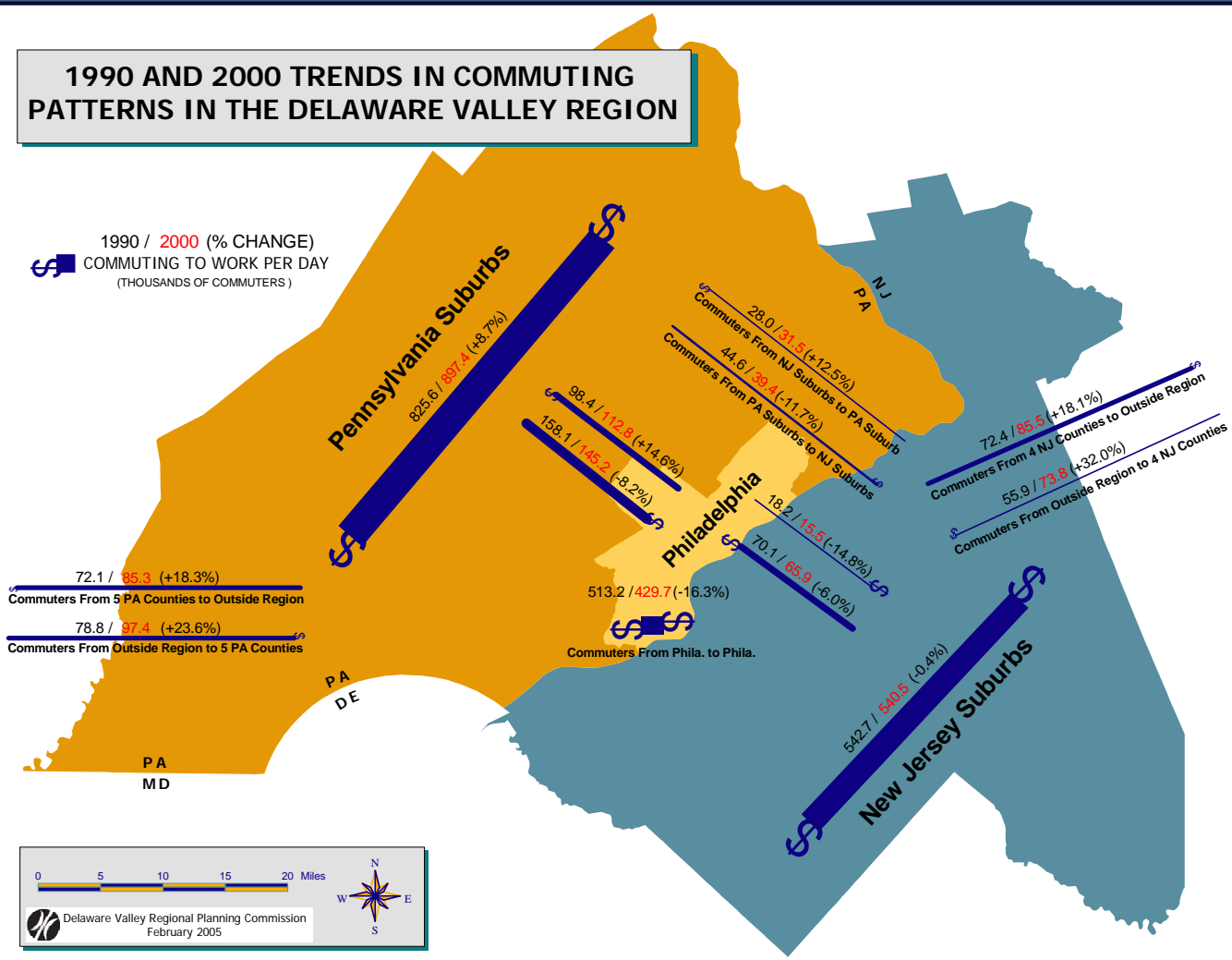
1970, 1980, 1990, and 2000 Resident Worker Trends in the Delaware Valley Region



# Regional Statistics: Commuting Patterns

## 1990 AND 2000 TRENDS IN COMMUTING PATTERNS IN THE DELAWARE VALLEY REGION

1990 / 2000 (% CHANGE)  
COMMUTING TO WORK PER DAY  
(THOUSANDS OF COMMUTERS)





# Regional Statistics: Commuting Patterns

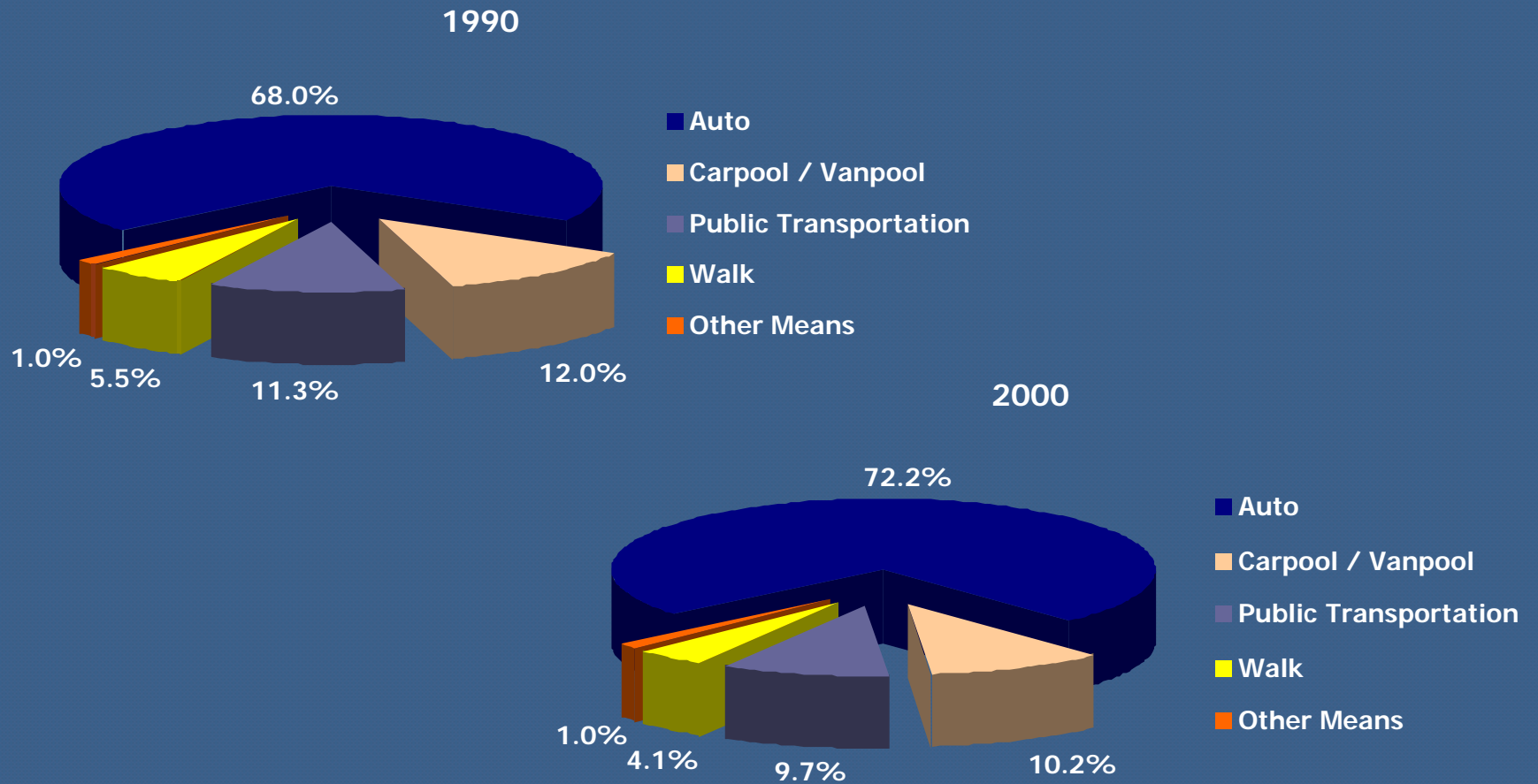
## 1990 and 2000 County-to-County Patterns in the Delaware Valley Region Distribution of Employed Persons by Place of Residence and Employment

Place of Residence	Year	Place of Employment					Outside DVRPC Region	Total Resident Workers
		Chester	Mont.	Phila.	Camden	Mercer		
Chester	1990	118,433	25,411	11,771	1,027	238	18,400	195,507
	2000	137,678	25,673	10,568	539	222	23,633	218,153
Montgomery	1990	17,920	229,923	55,956	2,808	1,024	11,452	352,960
	2000	25,006	245,619	54,576	1,844	1,298	14,045	379,832
Philadelphia	1990	5,303	54,113	513,167	10,083	1,953	10,717	640,577
	2000	7,810	59,970	429,667	7,196	1,676	11,803	569,761
Camden	1990	863	3,835	38,252	130,616	1,949	14,252	234,532
	2000	867	3,910	32,961	123,735	2,472	14,243	230,408
Mercer	1990	122	518	1,229	540	124,761	29,811	162,920
	2000	94	704	1,548	588	112,449	39,864	163,257
Outside DVRPC Region	1990	15,708	22,892	19,882	7,065	33,072	-	134,697
	2000	21,160	29,334	19,248	9,058	43,029	-	171,184
Total Employed Persons at Work	1990	175,975	406,931	761,244	207,286	204,826	144,494	
	2000	241,603	446,812	660,050	196,187	200,225	170,801	



# Regional Statistics: Mode of Commute

## 1990 and 2000 Mode of Travel Trends in the Delaware Valley Region







# Mercer County Statistics: Population & Employment

## Population, Household, Employed Residents and Vehicles Owned (Thousands)

<u>Variable</u>	<u>Census Year</u>				<u>Percent Change</u>	
	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1990-2000</u>	<u>1970-2000</u>
Population	304	308	326	351	7.7%	15.3%
Households	93	106	117	126	7.6%	34.6%
Employed Residents	124	139	163	163	0.2%	31.9%
Vehicles Owned	119	147	188	204	8.9%	71.9%

## Employed Persons at Work and Employment in Mercer County (Thousands)

<u>Variable</u>	<u>Census Year</u>			<u>Percent Change</u>	
	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1980-1990</u>	<u>1990-2000</u>
Employed Persons at Work	165	205	200	24.3%	- 2.2%
Employment (Total Jobs)	180	221	221	22.5%	0.1%





# Mercer County Statistics: Resident Workers

## 1980, 1990, and 2000 Distribution of Mercer County Resident Workers by Place of Residence

Place of Work	Census Year			Percent Change	
	1980	1990	2000	'80-'90	'90-'00
<b>Bucks</b>	3,169	2,935	3,865	-7.4%	31.7%
<b>Montgomery</b>	242	518	704	114.0%	35.9%
<b>Philadelphia</b>	927	1,229	1,548	32.6%	26.0%
<b>PA Total</b>	4,459	4,986	6,455	11.8%	29.5%
<b>Burlington</b>	2,335	2,746	3,765	17.6%	37.1%
<b>Mercer</b>	114,251	124,761	112,449	9.2%	-9.9%
<b>NJ Total</b>	117,009	128,123	116,938	9.5%	-8.7%
<b>Total DVRPC Region</b>	121,468	133,109	123,393	9.6%	-7.3%
<b>New York City, NY</b>	3,957	5,586	6,545	41.2%	17.2%
<b>Hunterdon Co., NJ</b>	547	1,116	1,194	104.0%	7.0%
<b>Middlesex Co., NJ</b>	7,108	12,137	16,597	70.8%	36.7%
<b>Monmouth Co., NJ</b>	981	1,834	2,483	87.0%	35.4%
<b>Somerset Co., NJ</b>	1,758	3,266	5,364	85.8%	64.2%
<b>Other</b>	3,144	5,872	7,681	86.8%	30.8%
<b>Total External</b>	17,495	29,811	39,864	70.4%	33.7%
<b>Total Workers</b>	138,963	162,920	163,257	17.2%	0.2%





# Mercer County Statistics: Employed Persons

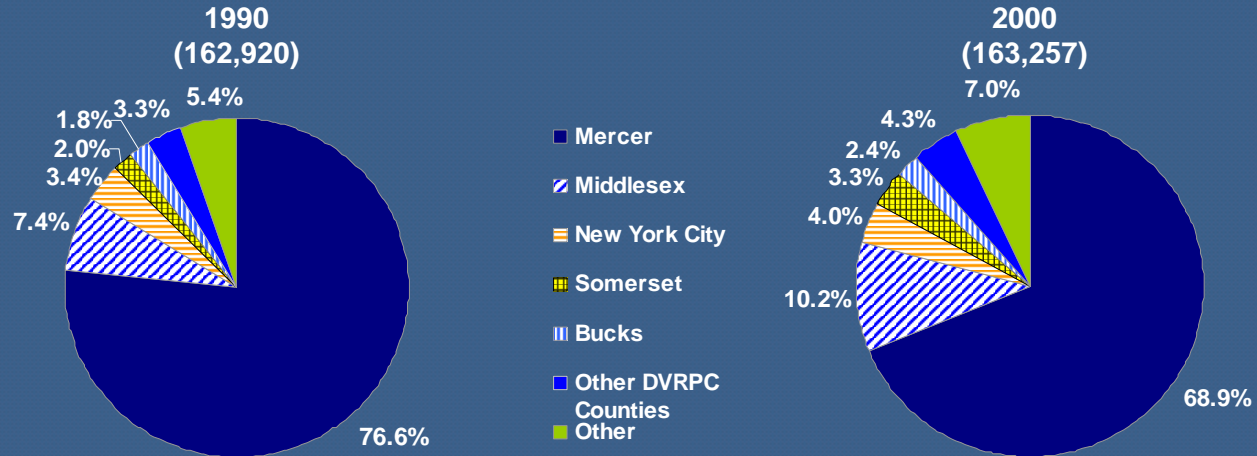
## Distribution of Employed Persons in Mercer County by Place of Work

County of Residence	Census Year			Percent Change '90-'00
	1980	1990	2000	
Bucks	15,678	24,160	20,812	-13.9%
Montgomery	354	1,024	1,298	26.8%
Philadelphia	937	1,953	1,676	-14.2%
<b>Total PA Counties</b>	<b>17,081</b>	<b>27,654</b>	<b>24,353</b>	<b>-11.9%</b>
Burlington	10,738	16,711	17,158	2.7%
Mercer	114,251	124,761	112,449	-9.9%
<b>Total NJ Counties</b>	<b>126,301</b>	<b>144,100</b>	<b>132,843</b>	<b>-7.8%</b>
<b>Total DVRPC Region</b>	<b>143,382</b>	<b>171,754</b>	<b>157,196</b>	<b>-8.5%</b>
Middlesex Co., NJ	6,754	10,264	12,952	26.2%
Monmouth Co., NJ	3,404	5,102	6,393	25.3%
Somerset Co., NJ	3,114	4,376	5,575	27.4%
Ocean Co., NJ	2,655	3,933	5,865	49.1%
Hunterdon Co., NJ	2,659	3,518	3,492	-0.7%
Other	2,868	5,879	8,752	48.9%
<b>Total Outside Region</b>	<b>21,454</b>	<b>33,072</b>	<b>43,029</b>	<b>30.1%</b>
<b>GRAND TOTAL</b>	<b>164,836</b>	<b>204,826</b>	<b>200,225</b>	<b>-2.2%</b>

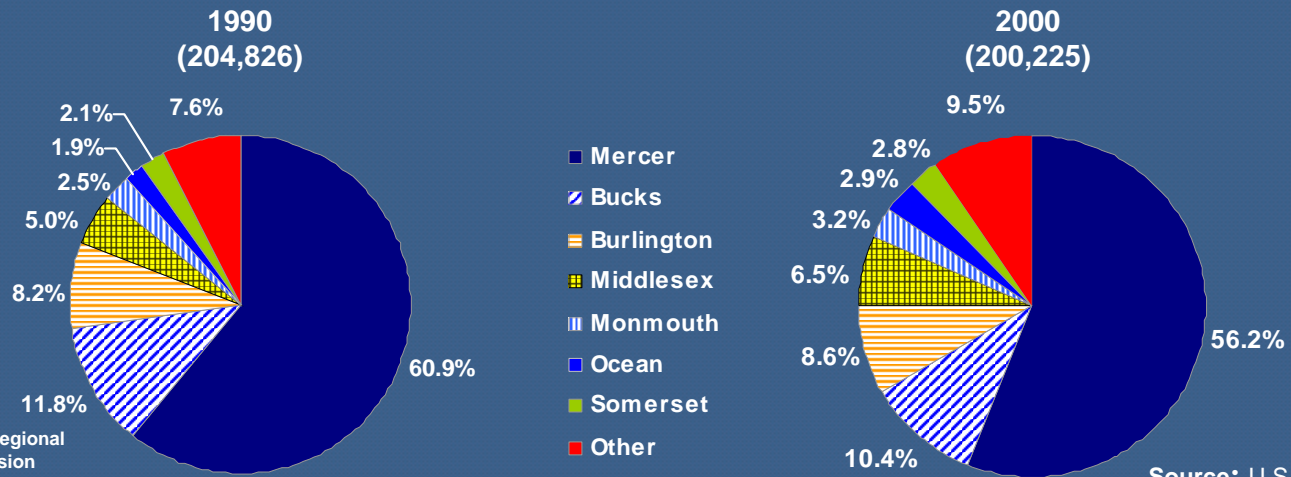


# Mercer County Statistics: Employed Persons & Place of Work

### Distribution of Resident Workers by Place of Work



### Distribution of Employed Persons at Work by Place of Residence





# Mercer County Statistics: Means of Transportation & Travel Time

## 2000 Commuter Means of Transportation & Travel Time

Means of Transportation	Commuters Who Live in Mercer County			Commuters Who Work in Mercer County		
	Number of Commuters	Share of Commuters	Average Travel Time (min)	Number of Commuters	Share of Commuters	Average Travel Time (min)
Drive Alone	119,759	75.7%	24.3	158,850	81.5%	27.4
Carpool / Vanpool	17,976	11.4%	26.5	21,302	10.9%	29.4
Bus / Trolley / Taxi	4,919	3.1%	42.4	4,363	2.2%	38.3
Subway / Elevated	148	0.1%	66.3	298	0.2%	64.8
Railroad	6,145	3.9%	89.3	963	0.5%	79.4
Bicycle	810	0.5%	15.9	826	0.4%	18.1
Walk	7,335	4.6%	10.8	7,329	3.8%	11.1
Other Means	<u>1,007</u>	0.6%	<u>38.3</u>	<u>1,069</u>	0.5%	<u>41.1</u>
<b>TOTAL</b>	<b>158,099</b>	<b>100%</b>	<b>27.1</b>	<b>195,000</b>	<b>100%</b>	<b>27.6</b>



# Mercer County Statistics: Distribution of Carpools/Vanpools by Vehicle Occupancy

## Distribution of Carpools/Vanpools by Vehicle Occupancy

<b>Vehicle Occupancy</b>	<b>Number of Commuters</b>	<b>Percent of Total Commuters</b>
2-person carpool/vanpool	13,280	8.4%
3-person carpool/vanpool	2,201	1.4%
4-or-more-person carpool/vanpool	<u>2,495</u>	<u>1.6%</u>
<b>TOTAL</b>	<b>17,976</b>	<b>11.4%</b>

# Mercer County Statistics: Time Leaving for Work by Mode

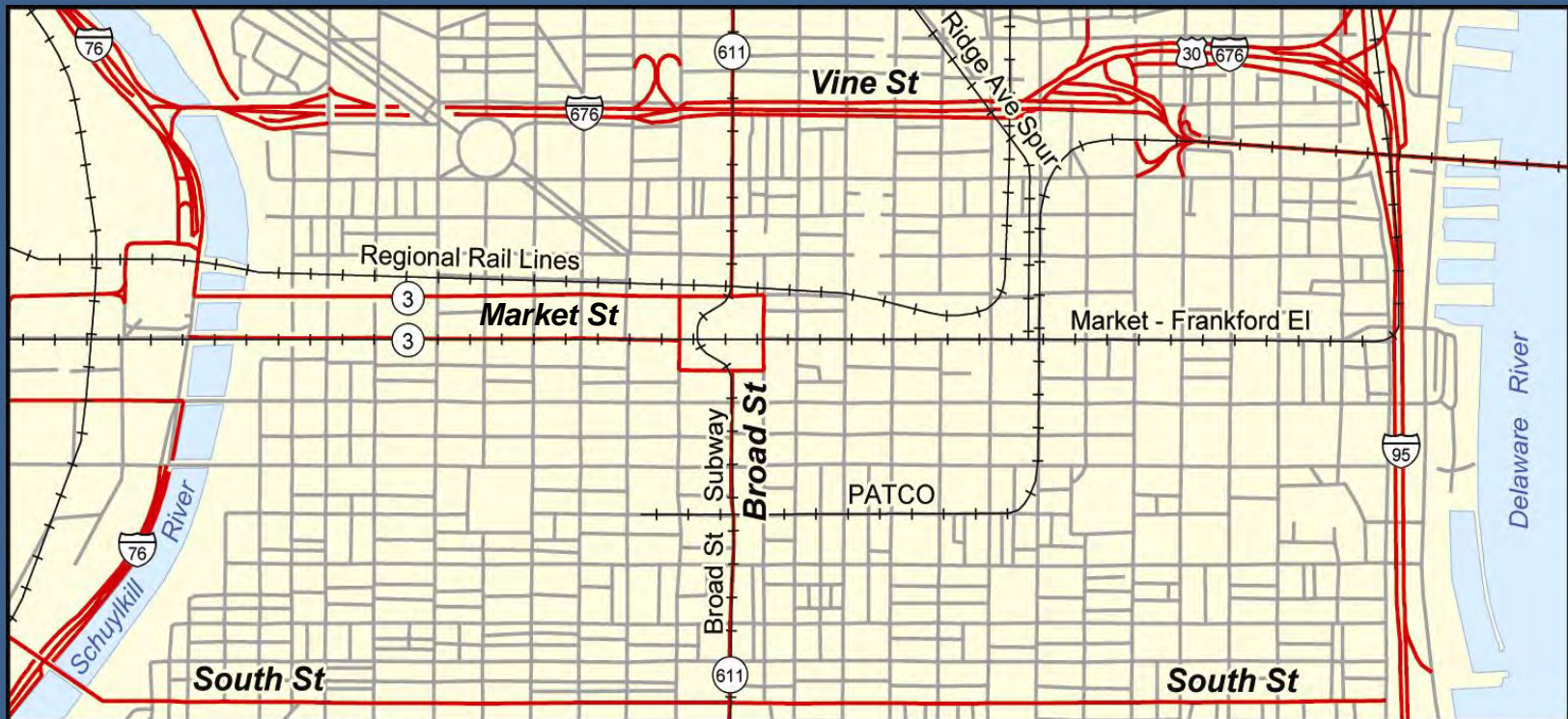
**Time Leaving for Work for 2000 Mercer County Resident Workers by Means of Transportation**

Means of Transportation	Number of Workers	Percent of Commuters	Time Leaving for Work					
			5:00 AM to 6:29 AM	6:30 AM to 7:29 AM	7:30 AM to 8:29 AM	8:30 AM to 9:29 AM	3:00 PM to 3:59 PM	5:00 PM to 5:59 PM
Drove alone	119,646	75.9%	11,519 9.6%	28,903 24.2%	42,070 35.2%	17,288 14.4%	1,833 1.5%	1,054 0.9%
2-person carpool	13,182	8.4%	1,460 11.1%	3,453 26.2%	4,224 32.0%	1,282 9.7%	496 3.8%	159 1.2%
Bus or trolley bus	4,613	2.9%	829 18.0%	1,305 28.3%	1,013 22.0%	384 8.3%	251 5.4%	70 1.5%
Railroad or ferryboat	6,113	3.9%	2,113 34.6%	2,685 43.9%	961 15.7%	102 1.7%	0 0.0%	29 0.5%
Bicycle or walked	8,100	5.1%	428 5.3%	902 11.1%	1,435 17.7%	1,474 18.2%	289 3.6%	1,201 14.8%
Taxicab, motorcycle, or other means	1,221	0.8%	166 13.6%	202 16.5%	308 25.2%	156 12.8%	45 3.7%	59 4.8%
<b>Total excluding "Worked at Home"</b>	<b>157,673</b>	<b>100%</b>	<b>17,700 11.2%</b>	<b>38,885 24.7%</b>	<b>50,905 32.3%</b>	<b>21,109 13.4%</b>	<b>3,008 1.9%</b>	<b>2,623 1.7%</b>



Delaware Valley  
Regional Planning  
Commission

# Philadelphia CBD



Delaware Valley Regional  
Planning Commission  
August 2005

Source: U.S. Bureau of the Census





# Philadelphia CBD: Population & Employment

## Population, Households, Employed Residents and Vehicles Owned

<u>Variable</u>	<u>Census Year</u>			<u>Percent Change</u>	
	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1980-1990</u>	<u>1990-2000</u>
Population	43,502	45,644	49,610	4.9%	8.7%
Households	27,713	29,265	31,154	5.6%	6.5%
Employed Residents	25,661	28,611	29,905	11.5%	4.5%
Vehicles Owned	12,773	14,154	17,310	10.8%	22.3%

## 1980 - 2000 Employment Trend (Total Jobs)

<u>Area</u>	<u>Census Year</u>			<u>Percent Change</u>	
	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1980-1990</u>	<u>1990-2000</u>
Philadelphia CBD	265,135	287,869	265,828	8.6%	- 7.7%
DVRPC Region	2,282,140	2,693,879	2,717,851	18.0%	0.9%



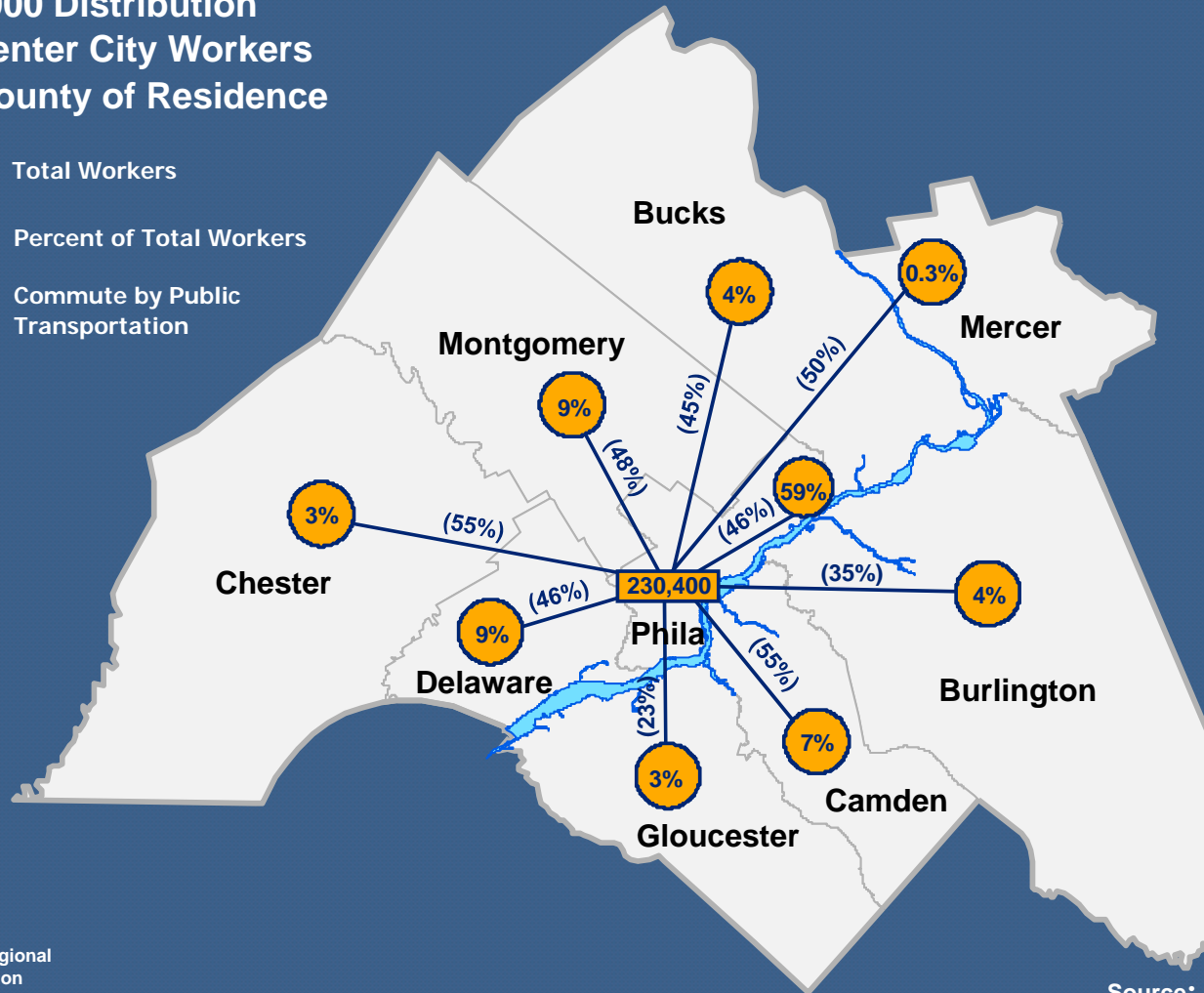
# Philadelphia CBD: Commuting Patterns of Workers

## 2000 Distribution Of Center City Workers By County of Residence

**230,400** Total Workers

**3%** Percent of Total Workers

**(55%)** Commute by Public Transportation





## Philadelphia CBD: Workers by Travel Mode

### Employed Persons in Philadelphia CBD By Means of Transportation

<u>Means of Transportation</u>	<u>Census Year</u> <u>Employed Persons</u>			<u>Percent Change</u>	
	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1980-1990</u>	<u>1990-2000</u>
Highway (total)	82,288	114,510	106,462	39.2%	-7.0%
Share Ride	26,237	28,346	21,126	8.0%	-25.5%
Transit (total)	137,800	109,495	105,387	-20.5%	-3.8%
Walk	14,512	16,223	16,954	11.8%	4.5%
Worked at Home	<u>754</u>	<u>1,268</u>	<u>1,555</u>	<u>68.2%</u>	<u>22.6%</u>
<b>Total</b>	<b>235,354</b>	<b>241,496</b>	<b>230,358</b>	<b>2.6%</b>	<b>-4.6%</b>





# Philadelphia CBD: Means of Transportation & Travel Time

## 2000 Commuters Means of Transportation and Average Travel Time

<u>Means of Transportation</u>	<u>Commuters Who Live In The Philadelphia CBD</u>			<u>Commuters Who Work In The Philadelphia CBD</u>		
	<u>Number of Commuters</u>	<u>Percent of Commuters</u>	<u>Average Travel Time (min)</u>	<u>Number of Commuters</u>	<u>Percent of Commuters</u>	<u>Average Travel Time (min)</u>
Drive Alone	6,709	24.0%	29.4	81,949	35.8%	36.8
Carpool/Vanpool	1,089	3.9%	21.5	21,126	9.2%	35.1
Bus/Trolley/Taxi	3,284	11.8%	28.4	42,362	18.5%	41.6
Subway/Elevated	1,771	6.3%	25.9	28,435	12.4%	42.7
Railroad	782	2.8%	69.6	34,545	15.1%	52.4
Bicycle	888	3.2%	15.3	2,086	0.9%	19.0
Walk	13,104	47.0%	14.8	16,954	7.4%	16.1
Other Means	273	1.0%	55.3	1,346	0.6%	48.5
<b>Total</b>	<b>27,900</b>	<b>100%</b>	<b>22.8</b>	<b>228,803</b>	<b>99.9%</b>	<b>39.0</b>



# Philadelphia CBD: Distribution of Carpools/Vanpools by Vehicle Occupancy

## 2000 Distribution of Carpools/Vanpools by Vehicle Occupancy

<u>Vehicle Occupancy</u>	<u>Number of Commuters</u>	<u>Percent of Total Commuters</u>
2-person carpool/vanpool	16,483	7.2%
3-person carpool/vanpool	3,305	1.4%
4-or-more-person carpool/vanpool	<u>1,338</u>	<u>0.6%</u>
<b>Total</b>	<b>21,126</b>	<b>9.2%</b>

# Philadelphia CBD: Time Leaving for Work by Mode

## Time Leaving for Work for 2000 Center City Philadelphia (CBD) Resident Workers by Means of Transportation

Means of Transportation	Number of Workers	Percent of Commuters	Time Leaving for Work				
			5:00 AM to 6:29 AM	6:30 AM to 7:29 AM	7:30 AM to 8:29 AM	8:30 AM to 9:29 AM	5:00 PM to 5:59 PM
Drove alone	6,711	24.0%	491 7.3%	1,489 22.2%	2,490 37.1%	1,080 16.1%	24 0.4%
2-person carpool	879	3.1%	14 1.6%	79 9.0%	459 52.2%	214 24.3%	10 1.1%
Bus or trolley bus	2,766	9.9%	158 5.7%	317 11.5%	1,133 41.0%	656 23.7%	20 0.7%
Streetcar, trolley car, subway, or elevated	1,934	6.9%	68 3.5%	248 12.8%	827 42.8%	551 28.5%	10 0.5%
Railroad or ferryboat	799	2.9%	152 19.0%	290 36.3%	207 25.9%	50 6.3%	0 0.0%
Bicycle or walked	13,995	50.1%	594 4.2%	1,565 11.2%	4,380 31.3%	4,377 31.3%	132 0.9%
<b>Total excluding "Worked at Home"</b>	<b>27,955</b>	<b>100%</b>	<b>1,532 5.5%</b>	<b>4,168 14.9%</b>	<b>9,742 34.8%</b>	<b>7,165 25.6%</b>	<b>196 0.7%</b>



## Conclusions

- Population increased 3.9% regionally, growing 3.2% and 5.8% in the PA & NJ counties. While decline moderated to 4.3% in Philadelphia. Chester County posted the largest gain at 15.2%.
- Regional employment grew by less than one percent in the 1990's, with growth in NJ (1.9%) greater than PA (0.5%). When the loss in Philadelphia (-11.4%) is withdrawn, the PA growth is 9.3%.
- Resident worker growth in the 1990's totaled 6.0% and 1.4% in the PA and NJ counties.





## Conclusions

- Regionally, Single Occupant Auto commutation continued its domination of the work trip, growing from 68% to 72%. All other distinct modes experienced a declining share during the decade.
- Highway modes experienced a 3.5 minute (15.6%) increase in travel time to work, while transit modes increased by 9.8 minutes (24.9%).
- The 7:30 AM – 8:29 AM hour was the most preferred departure time for work (29.5%). This was true for all modes except carpools and railroad/ferryboat patrons, who preferred one hour earlier (6:30 AM – 7:29 AM.)







RTC OCTOBER 11, 2005



Delaware Valley  
Regional Planning  
Commission



# JOURNEY-TO-WORK

TRENDS IN THE  
DELAWARE VALLEY  
REGION

1980-2000



Delaware Valley  
Regional Planning  
Commission



**FREIGHT**

**D  
V  
R  
P  
C**

***Summary of Freight Analysis Framework  
Commodity Origin-Destination Database  
for the Philadelphia CSA: 2002***

***Presented by:  
Walker Allen  
June 7th, 2006***

## What FAF<sup>2</sup> is

---

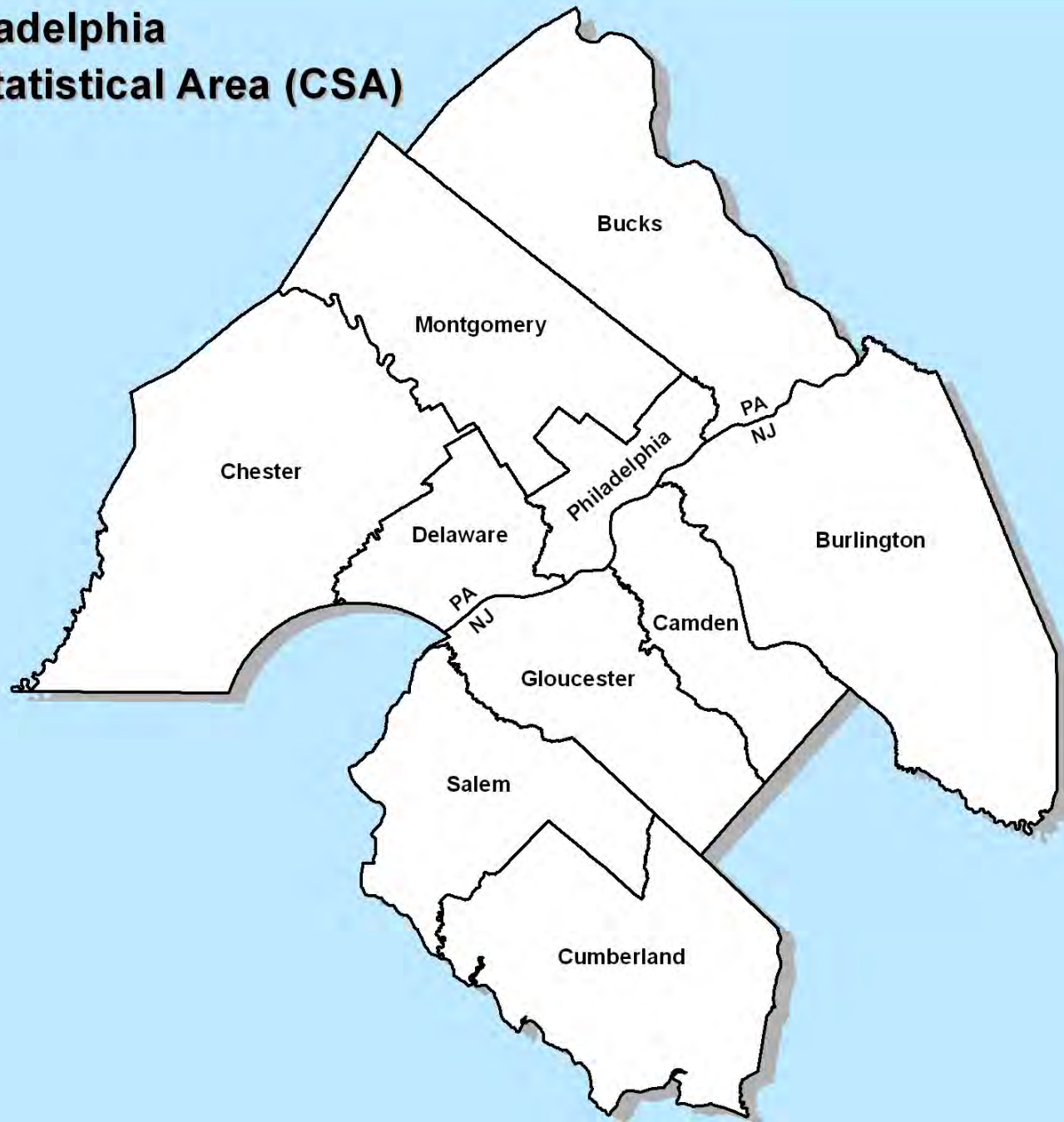
- FAF<sup>2</sup> is the second version of the Freight Analysis Framework database produced by the Federal Highway Administration.
  - The original FAF was produced in 1997 and will be updated every five years.
- FAF<sup>2</sup> is an estimate of Commodity flows and related freight transportation activity among states, metropolitan areas, and international gateways.

## What FAF<sup>2</sup> is

---

- FAF<sup>2</sup> is based on public data sources and transparent methods, covering all modes and significant sources of shipments.
  - Origins and destinations consist of 138 regions, 17 additional international gateways, and 7 international regions.
  - Commodities are broken down in 43 classes by 7 major modes.
- <http://www.ops.fhwa.dot.gov/freight/>

# Philadelphia Consolidated Statistical Area (CSA)



# Major Modes

---

- Truck. Includes private and for-hire trucks.
- Rail. Any common carrier or private railroad.
- Water. Includes shallow draft and deep draft.
- Air (includes truck-air). Commercial or private aircraft, and all air service for shipments that typically weight over 100 pounds.
- Intermodal. Includes shipments weighing less than 100 pounds Parcel, U.S. Postal Service, or Courier, as well as shipments of all size by truck-water, water-rail, truck-rail, and other intermodal combinations.
- Other. Includes pipeline shipments because region-to-region flows by pipeline are subject to large uncertainty.

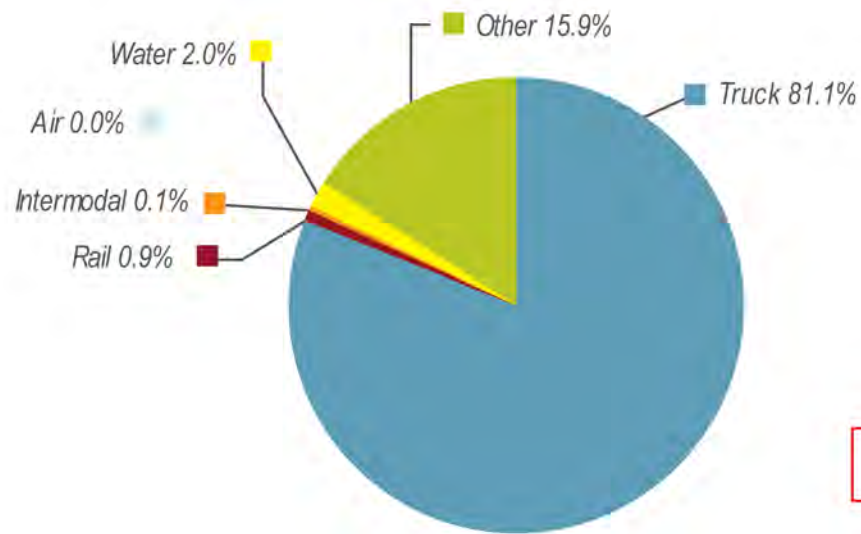
# Examples

---

- Philadelphia to Chicago
  - Counts as an outbound shipment
- Baltimore to Philadelphia to New York
  - If it stops at a distribution center in Philadelphia it is counted as both an inbound and outbound shipment
- Baltimore to New York
  - Shipments passing through are not accounted for.
- Europe to Chicago through Philadelphia
  - Only included if it stops at a distribution facility in the Philadelphia CSA
  - Mode registered is that of domestic leg of the trip

## Weight of Intra-regional Shipments By Mode for the Philadelphia CSA: 2002

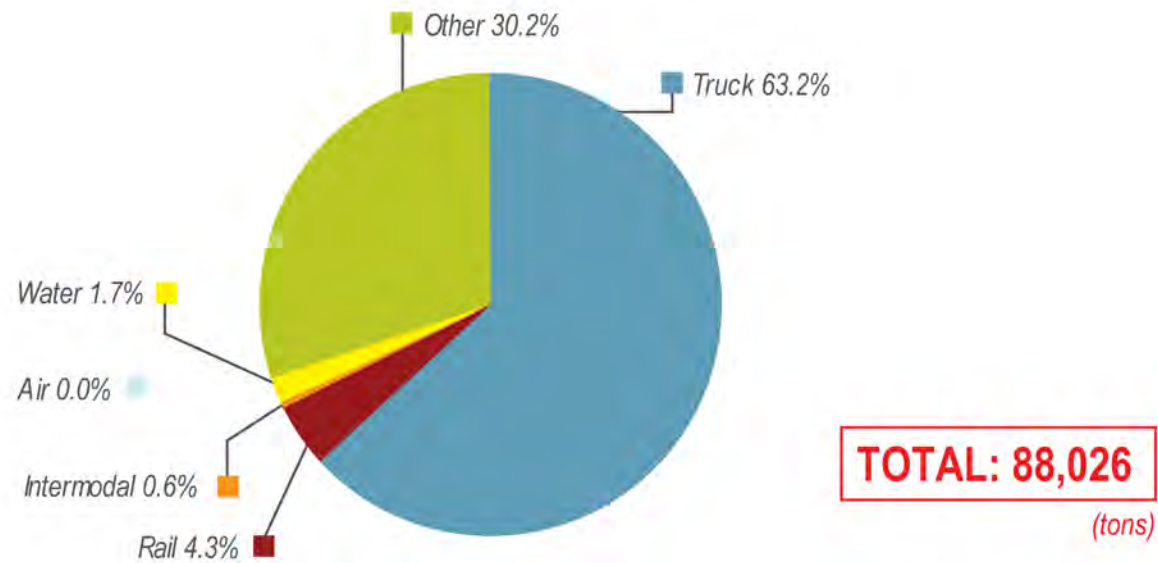
---





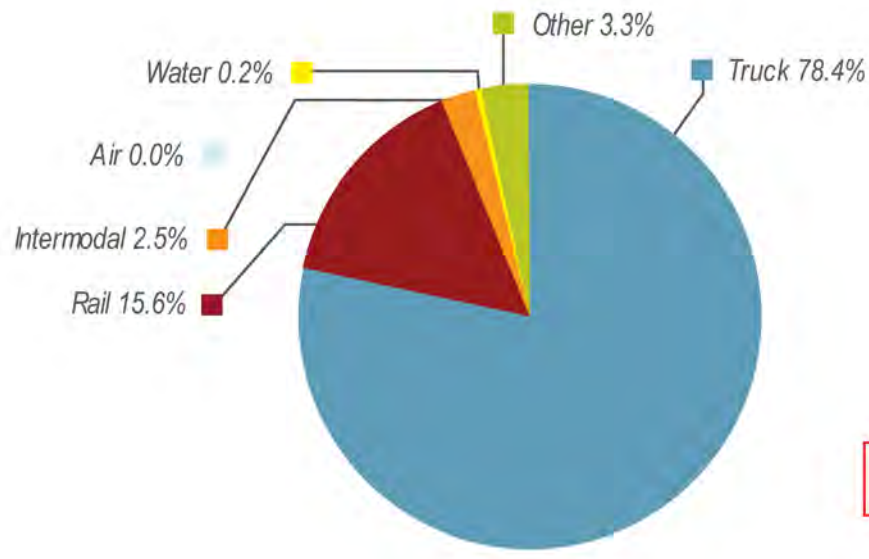
## Weight of Outbound Shipments By Mode for the Philadelphia CSA: 2002

---



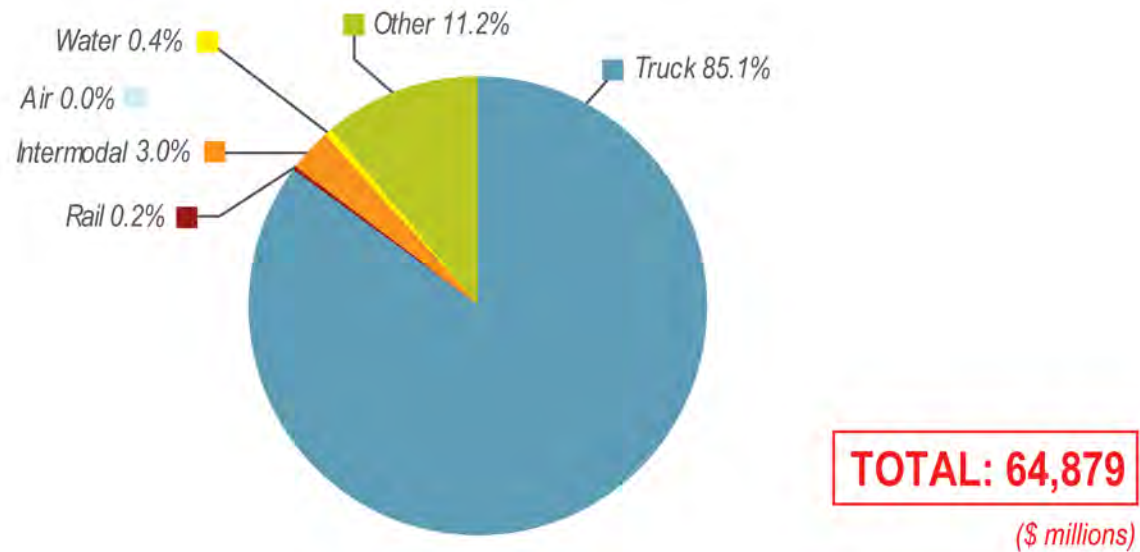
## Weight of Inbound Shipments By Mode for the Philadelphia CSA: 2002

---



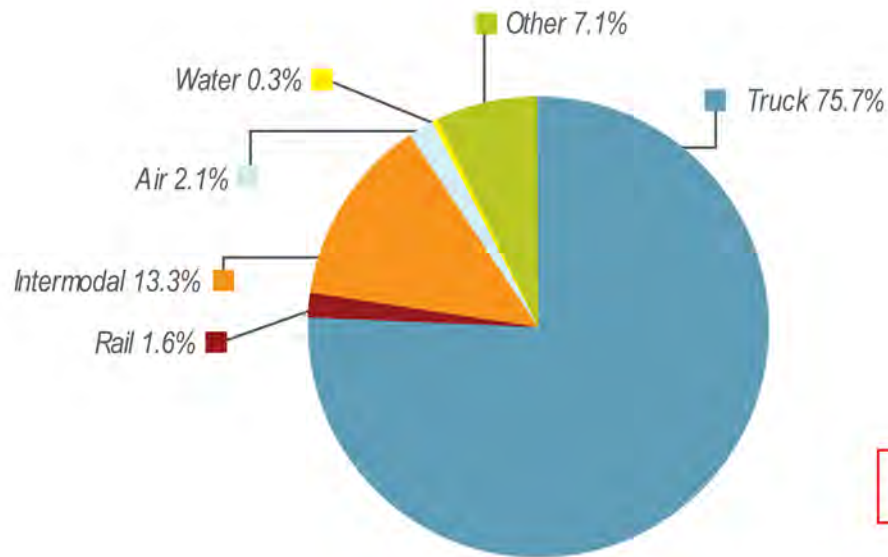
## Value of Intra-regional Shipments By Mode for the Philadelphia CSA: 2002

---



## Value of Outbound Shipments By Mode for the Philadelphia CSA: 2002

---

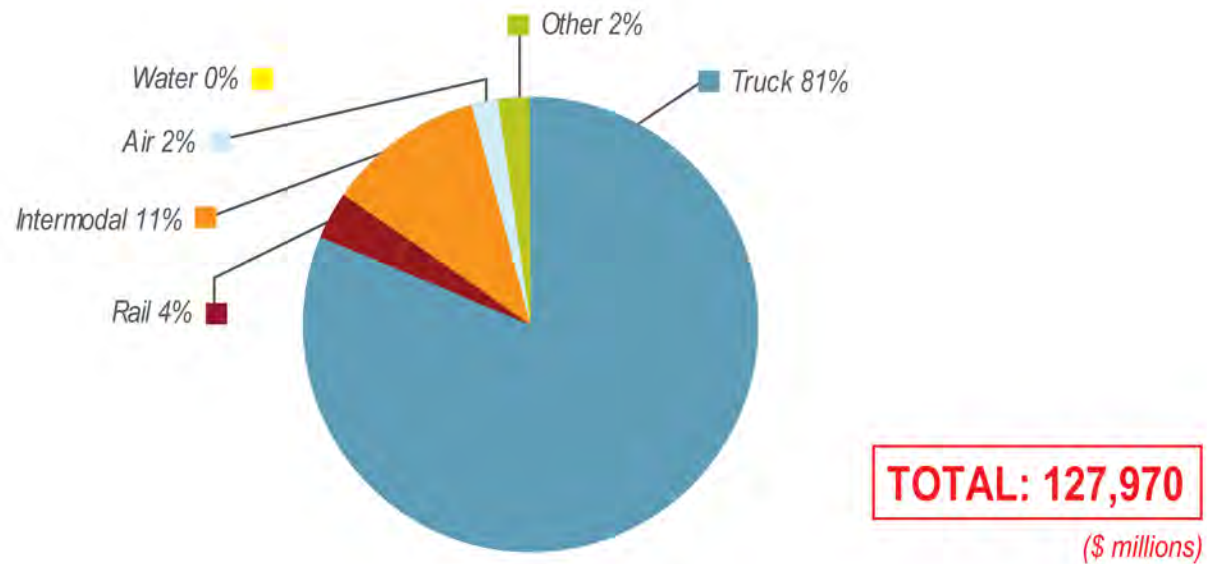


**TOTAL: 149,121**

(\$ millions)

## Value of Inbound Shipments By Mode for the Philadelphia CSA: 2002

---



# Commodities

- The commodities are classified using the Standard Classification of Transported Goods (SCTG).

## Top Commodities: 2002

Tons (thousands)			Value (\$ millions)		
Within Region	From Region	To Region	Within Region	From Region	To Region
<b>Total</b> 126,304	<b>Total</b> 88,026	<b>Total</b> 105,649	<b>Total</b> 64,879	<b>Total</b> 149,121	<b>Total</b> 1 27,970
Gasoline 29,664	Coal, n.e.c. <sup>1</sup> 27,771	Crude Petroleum 19,183	Machinery 5,998	Pharmaceuticals 22,039	Electronics 12,190
Gravel 17,160	Gasoline 10,912	Coal 6,746	Gasoline 5,794	Electronics 13,930	Machinery 11,805
Fuel Oils 15,300	Gravel 5,338	Cereal grains 6,187	Pharmaceuticals 5,024	Plastics/Rubber 9,194	Pharmaceuticals 10,473
Waste/Scrap 8,795	Fuel Oils 4,235	Gravel 5,884	Mixed Freight 4,851	Machinery 9,186	Textiles/Leather 10,061
Coal, n.e.c. <sup>1</sup> 7,588	Base metals 3,869	Base metals 5,739	Electronics 3,954	Coal, n.e.c.1 9,018	Mixed Freight 7,059

<sup>1</sup> Coal and petroleum products, not elsewhere classified.

# Trading Partners

---

- Top partners both to and from Philadelphia CSA

## Top Trading Partners: 2002

Tons (thousands)			Value (\$ millions)		
	Number	Percent		Number	Percent
<b>Total</b>	<b>193,675</b>	<b>100</b>	<b>Total</b>	<b>277,091</b>	<b>100</b>
NY Metro Area	49,830	26	NY Metro Area	49,600	18
Pennsylvania rem <sup>1</sup>	27,204	14	Pennsylvania rem <sup>1</sup>	25,241	9
Delaware	14,333	7	Maryland	16,311	6
Virginia	9,706	5	Delaware	12,332	4
Maryland	8,577	4	Ohio	11,308	4

<sup>1</sup> Pennsylvania remainder includes all counties in Pennsylvania except those included in the Philadelphia CSA.  
Note: Numbers may not add to totals due to rounding.

## Contact Information

---

Any questions?

Walker Allen

215-238-2947

wallen@dvrpc.org