

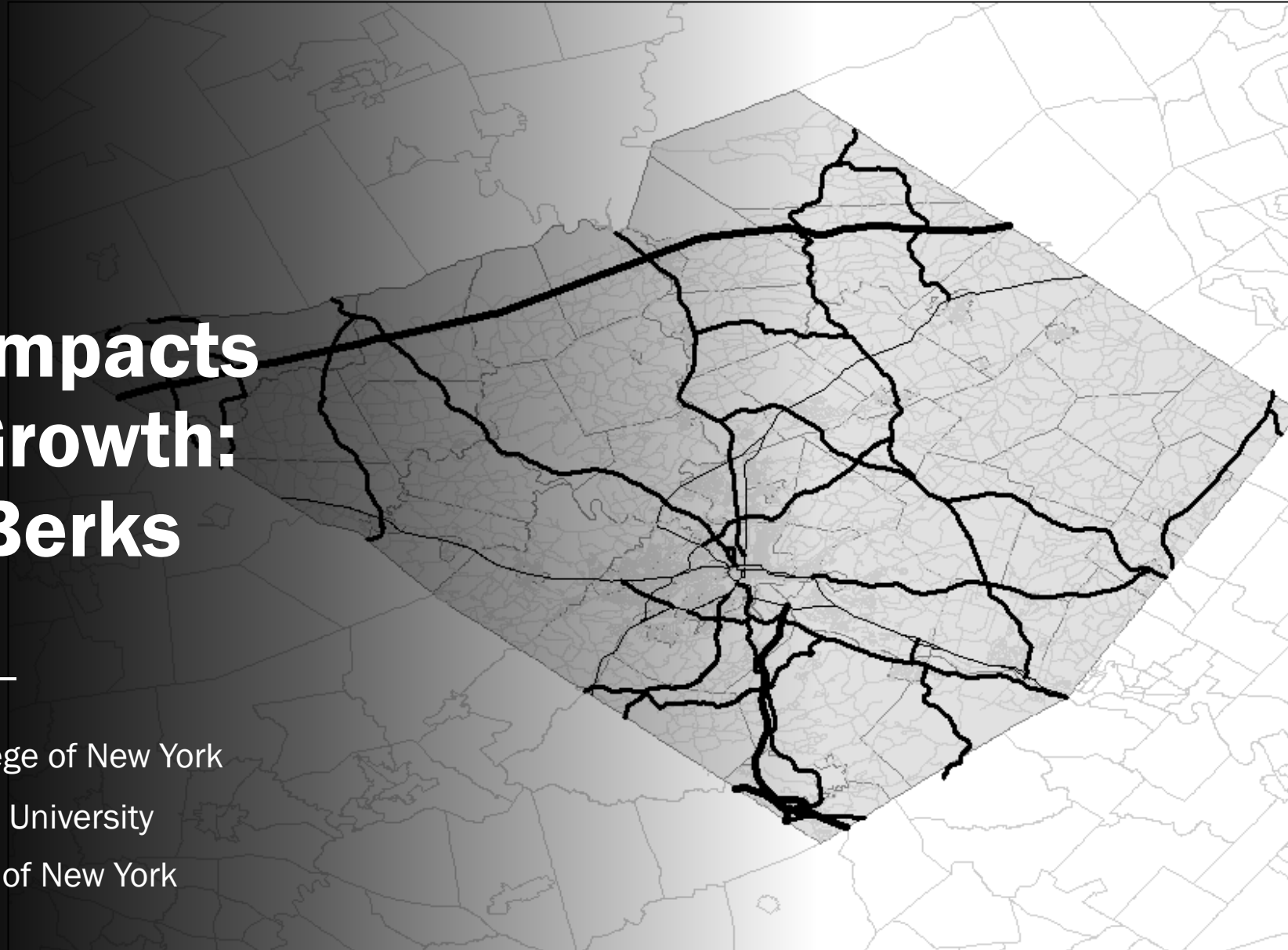
# The Community Impacts of E-Commerce Growth: A Case Study of Berks County, PA

---

Alison Conway, Assoc. Professor, City College of New York

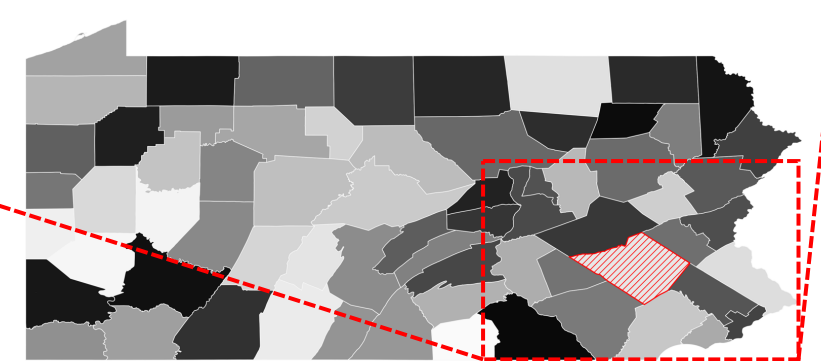
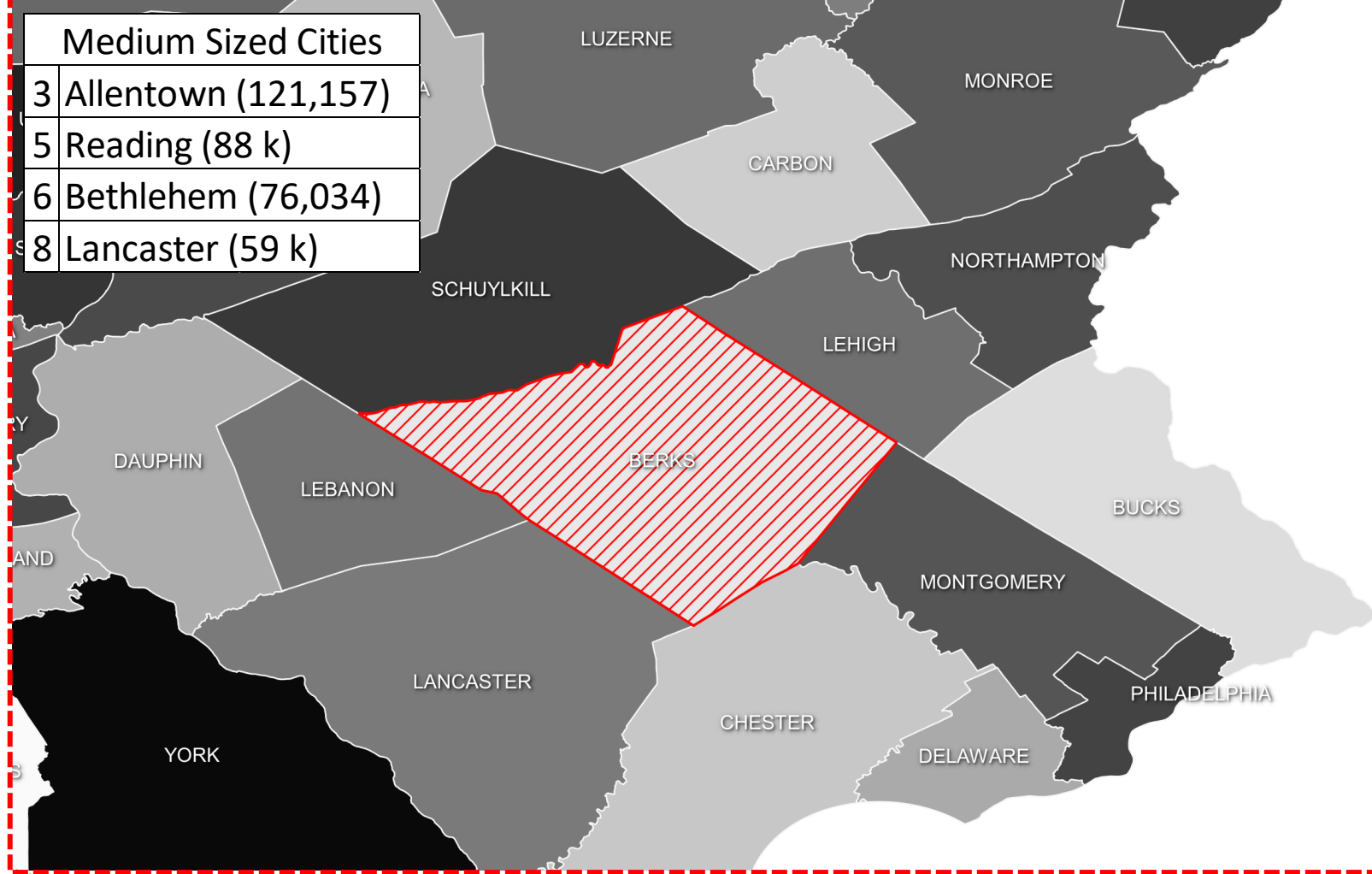
Moira Conway, Assoc. Professor, Kutztown University

Carla Tejada, PhD Candidate, City College of New York



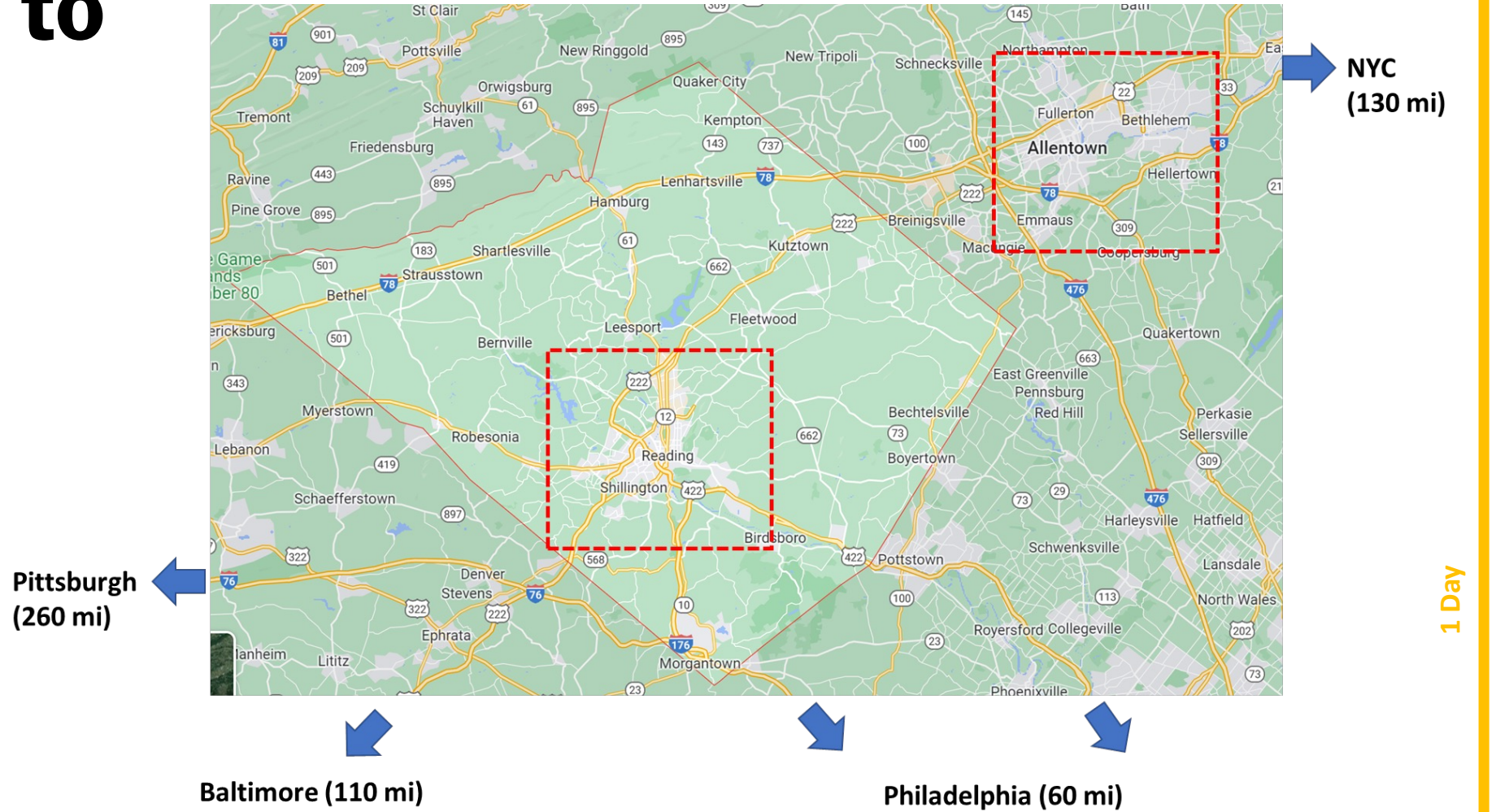
# Big Picture

- How will e-commerce warehouse growth impact Berks county?



The City College  
of New York

# Proximity to Markets



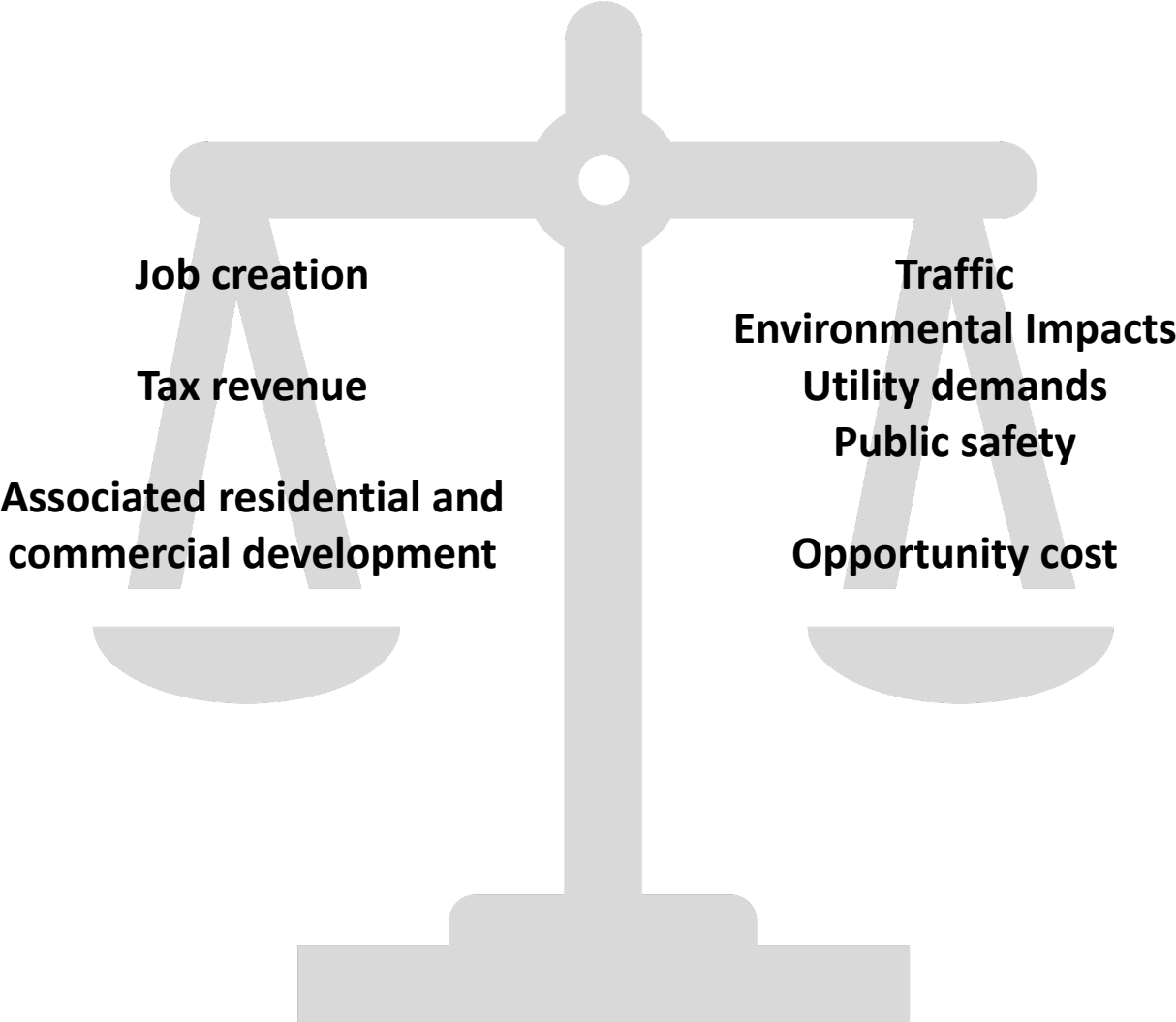
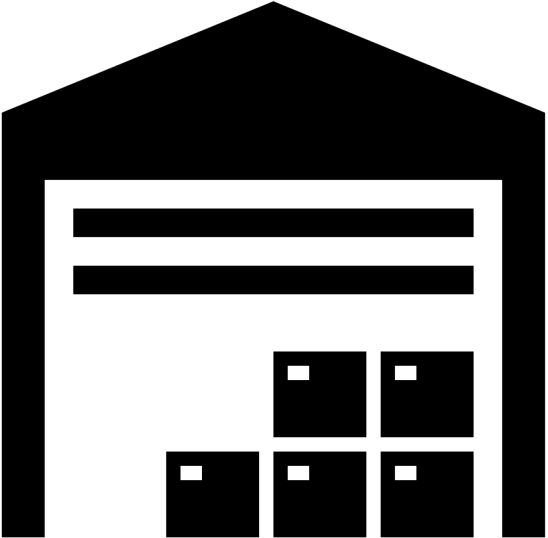
The City College  
of New York

Virginia

# Short Term Decisions

- Should communities:
  - approve development?
  - incentivize development?
- What transportation improvements are needed for
  - truck traffic?
  - job access?
- What utility/community service improvements are needed?

# What are the benefits and costs of e-commerce development in Berks County?





# Warehouse Variables

- Many warehouses being built on spec
- Some building characteristics specific to use
  - Building Height
  - Refrigeration
- Variables:
  - Trip demand (e.g. 3x higher for automated)
  - Hours of operation
  - Number and type of jobs (e.g. 50 – 1000)
  - Tax revenue

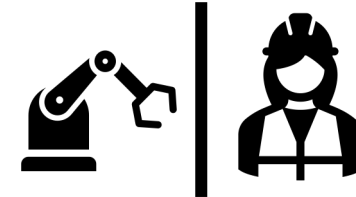
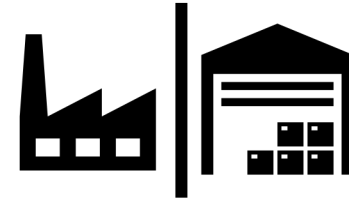
# Job Types

- Construction
  - Warehouse
    - Management
    - Picking
    - Operations
  - Trucking
  - Secondary Jobs
    - Related industries (e.g. packaging manufacturer)
    - Service industries
- Wages
  - Working conditions
  - Potential for growth
  - Specialized training



# Warehouse Employment Variables

- Total jobs
- New jobs vs. replaced jobs
- Type of jobs
  - Local vs. regional vs. long distance
  - Manual vs. automated
- Access to jobs
  - Modes of travel to work
  - Opportunities for education/training





# Zoning Issues

- **Approvals/Taxing Authorities**

- County Planning Commission - recommend
- Township Planning Commissions
- Township Supervisors
- School Boards – 18 districts, must approve LERTA
- PennDOT – highway permit for entrance
- Environmental approvals
- Stormwater issues
- Sewer

- **Tax Incentives**

- Local Economic Revitalization Tax Assistance (LERTA)
- Job creation

- **Relief/Variances Sought**

- Height restrictions
- Bridge proximity to stream
- Fire code exits
- Parking lot landscaping
  - Truck vs. car parking
  - Obstruction of Loading Docks

# Community Concerns – Transportation and Emergency

- Truck Traffic
  - Collisions
  - School bus stops
  - Detour traffic on local roads
  - Ramp obstructions
  - Driveway obstructions
  - Inadequate turning radius/encroachment
  - Sight distance
  - Pavement/bridge damage
- Truck overnight parking
- Emergency access
- Fire protection
  - Demand
  - Tank refill rate
  - Distance to exits

# Community Concerns – Other Issues

- Construction
  - Noise
  - Dust
  - Water quality (Nitrate in soil, well contamination)
- Operations
  - Noise
  - Light pollution
  - Air quality
- Decreased property values (?)
- Reduced “quality of life” (e.g. views, “rural character”)
- Endangered species
- Wetlands
- Building damage (from vibration)
- Crime (traffic violations, prostitution)
- Sewage processing demand
- High legal cost to contest development

# What do we know from existing warehouses?

Preliminary Results



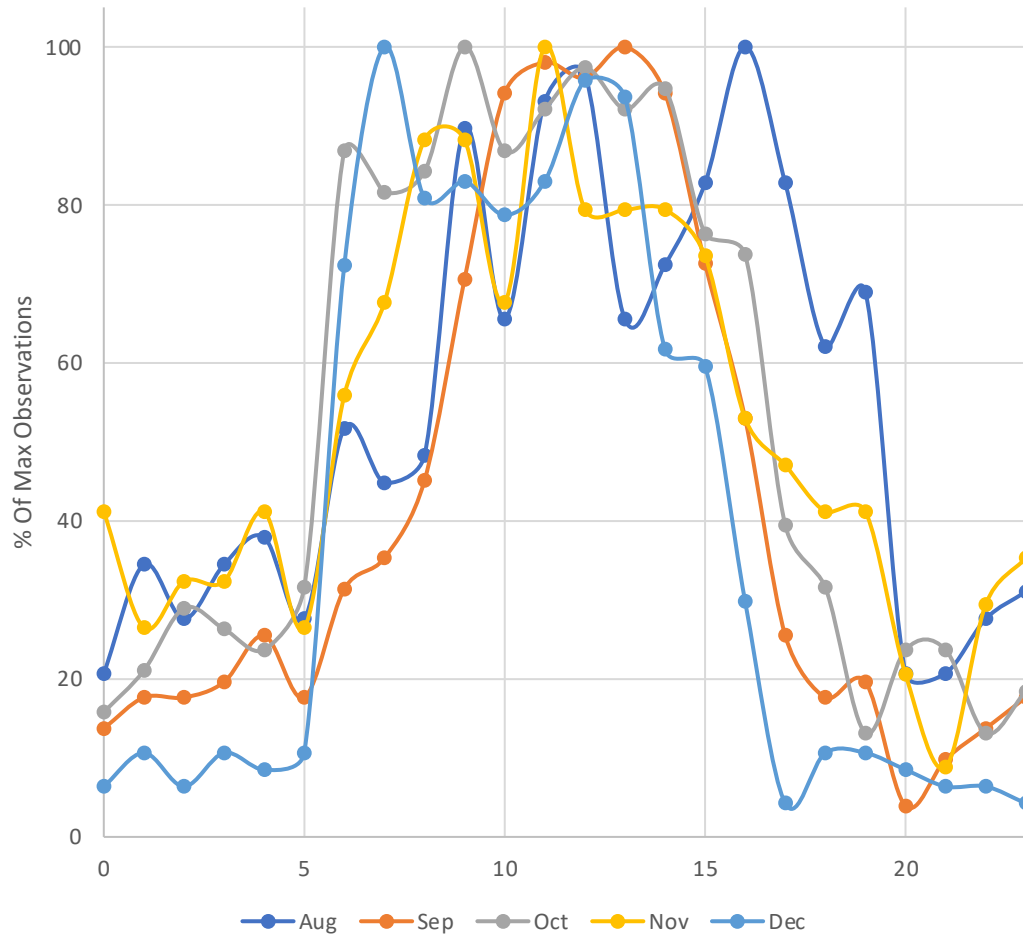
The City College  
of New York

# Data

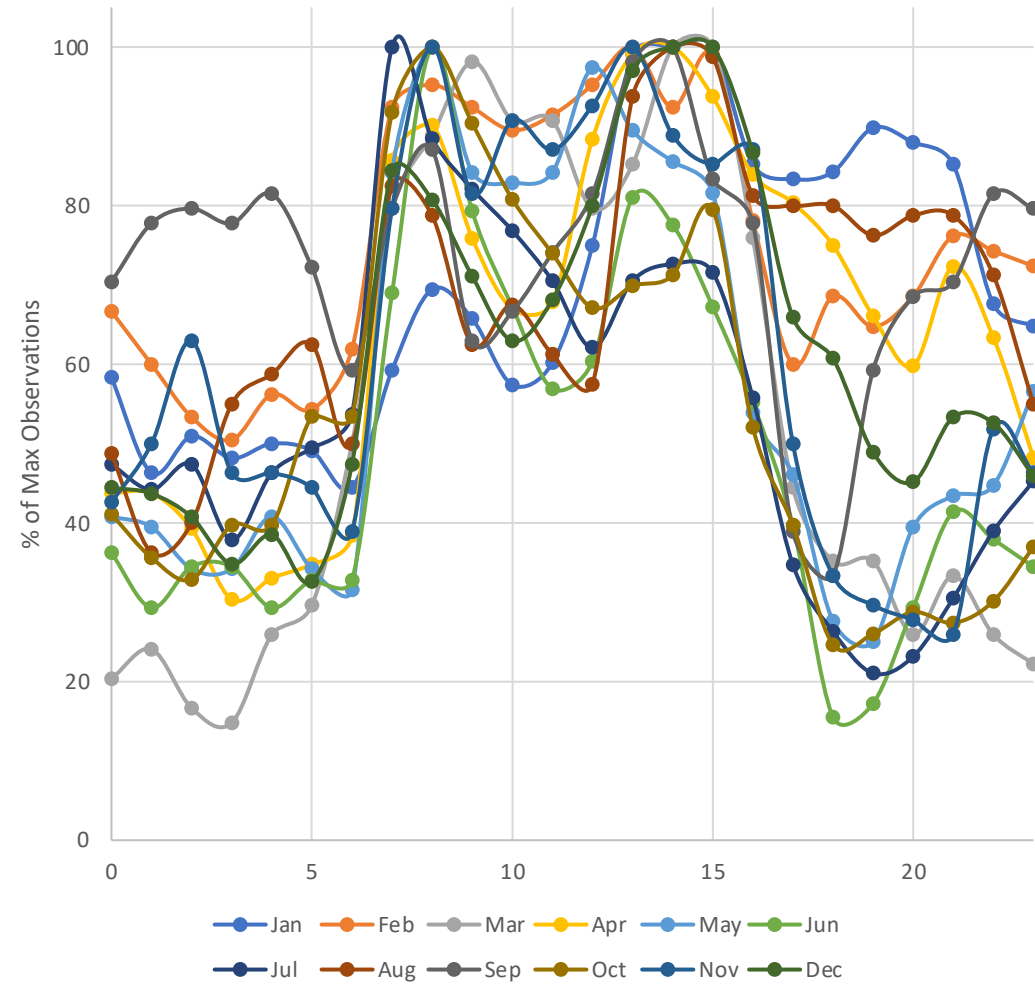
- Safegraph
  - Observed monthly device visits
    - By day
    - By hour
    - Same day brands
  - Device home census block group
- Longitudinal Employer Household Dynamics (LEHD) Origin Destination Employment Statistics (LODES)
  - Overall distribution of transportation and warehousing employment
  - Intra-county distribution of transportation and warehousing employment
  - Employment characteristics

# Time Distributions of Warehouse Activity (1)

Saddle Creek

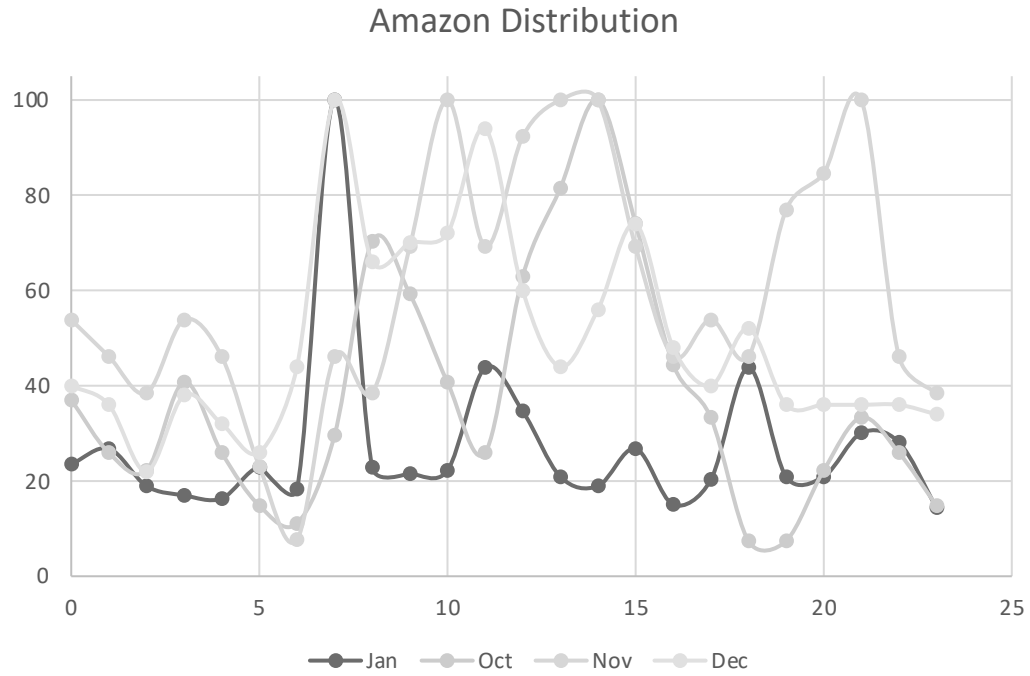


Americold

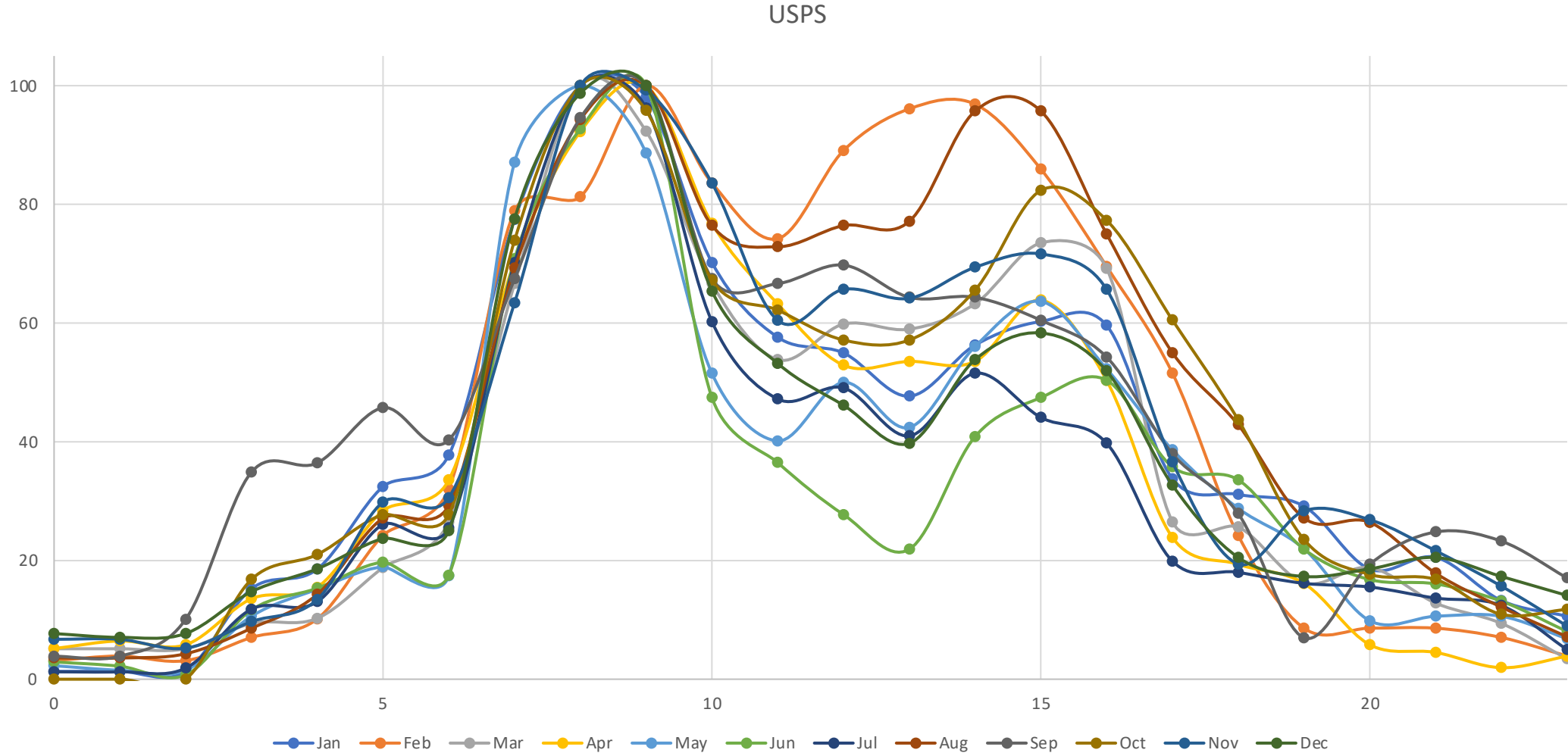




# Time Distributions of Warehouse Activity (2)

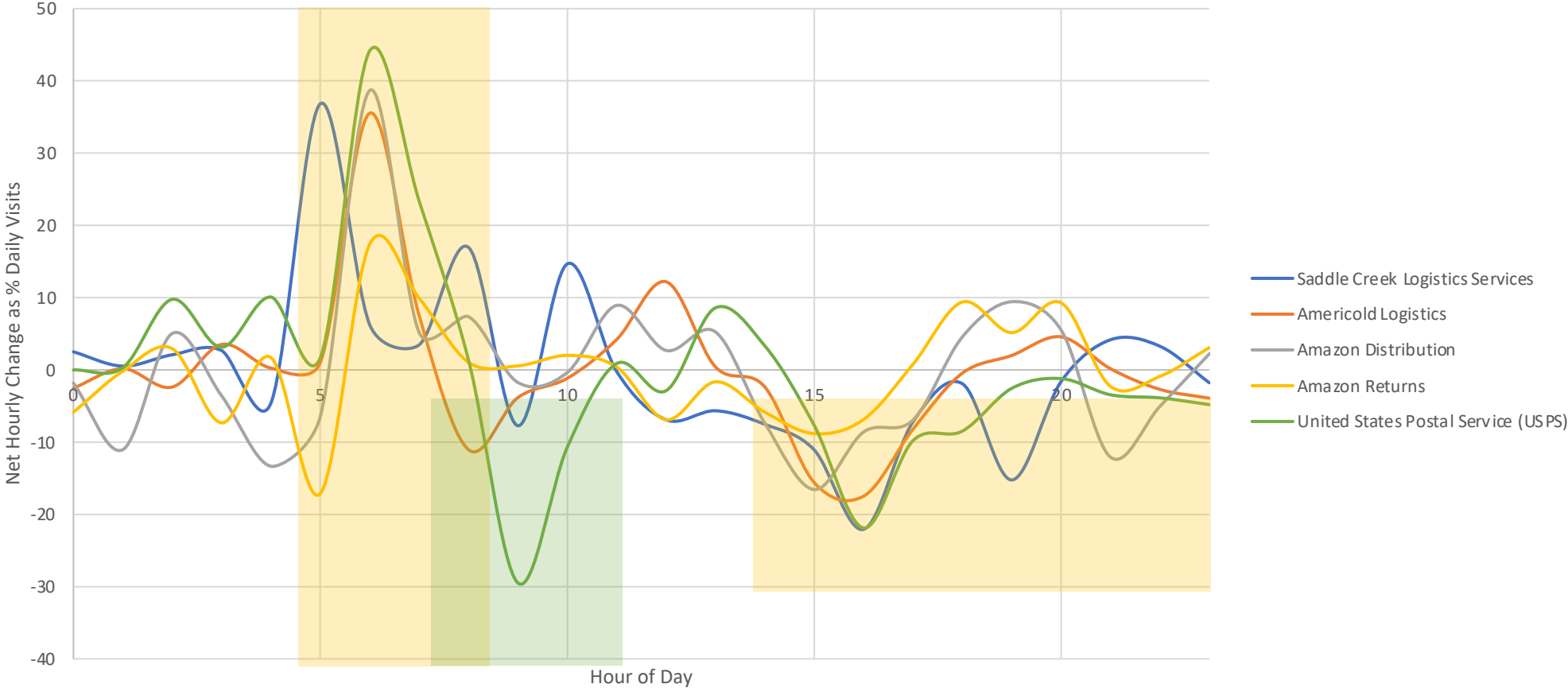


# Time Distributions of Warehouse Activity (3)

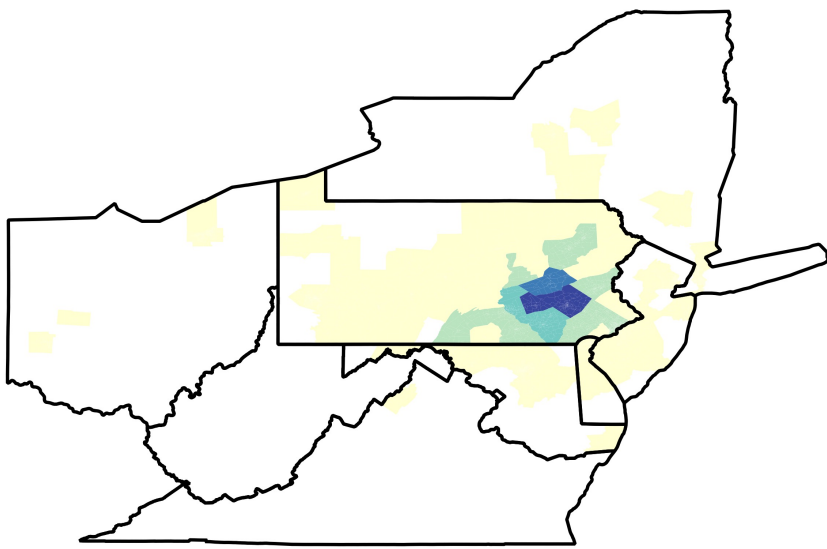


The City College  
of New York

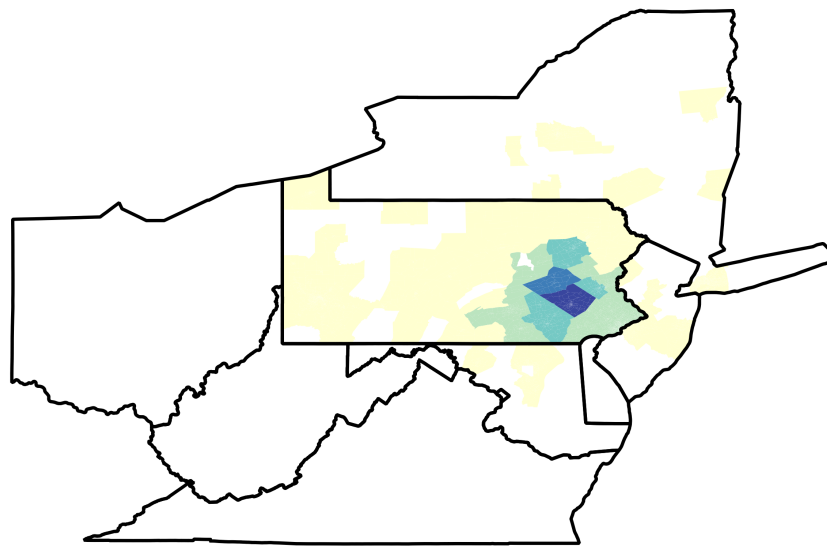
# Net Change by Hour



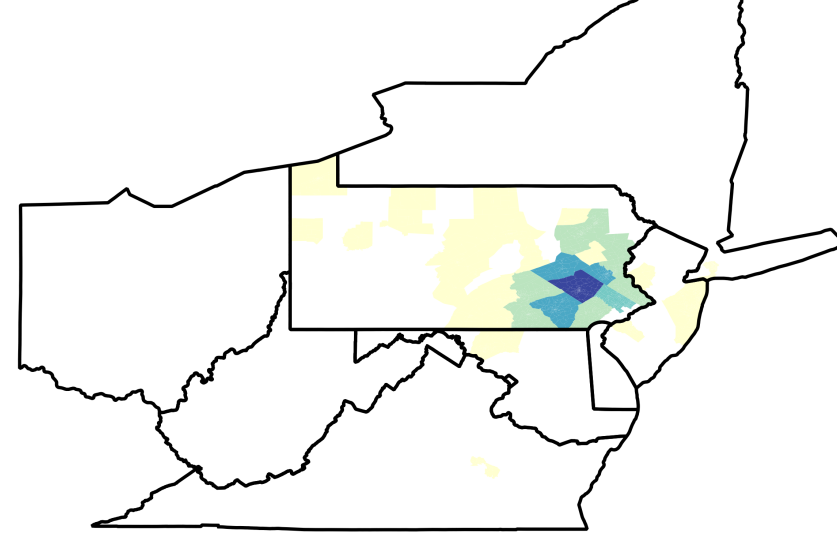
The City College  
of New York



**Census Tract 101**  
Saddle Creek

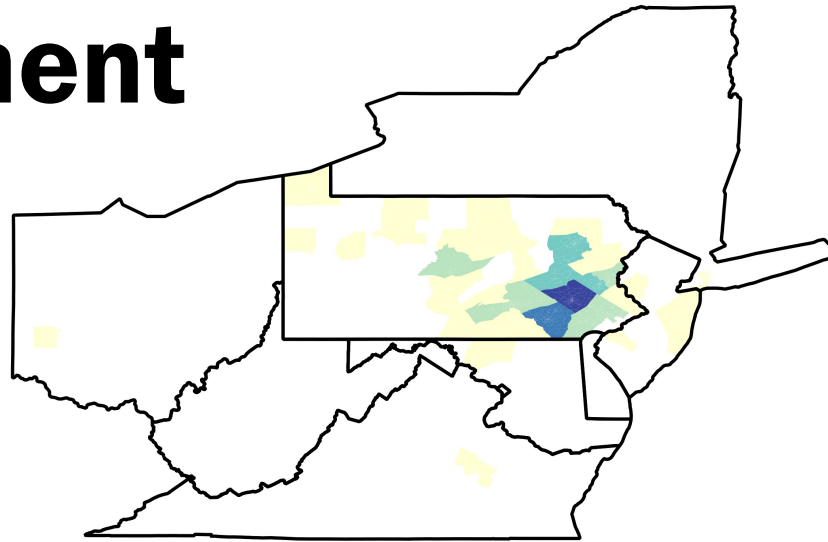
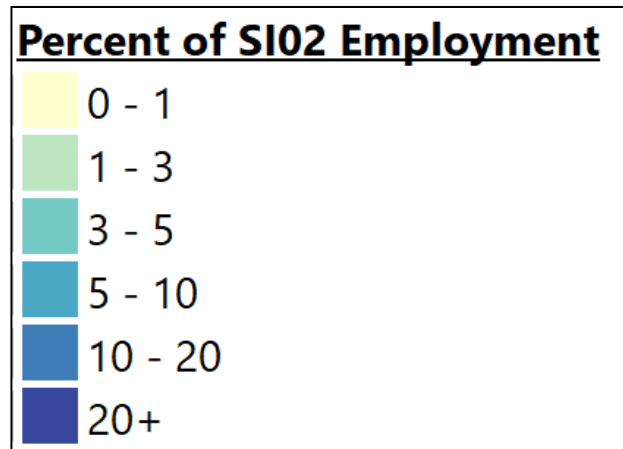


**Census Tract 102.02**  
USPS Reading

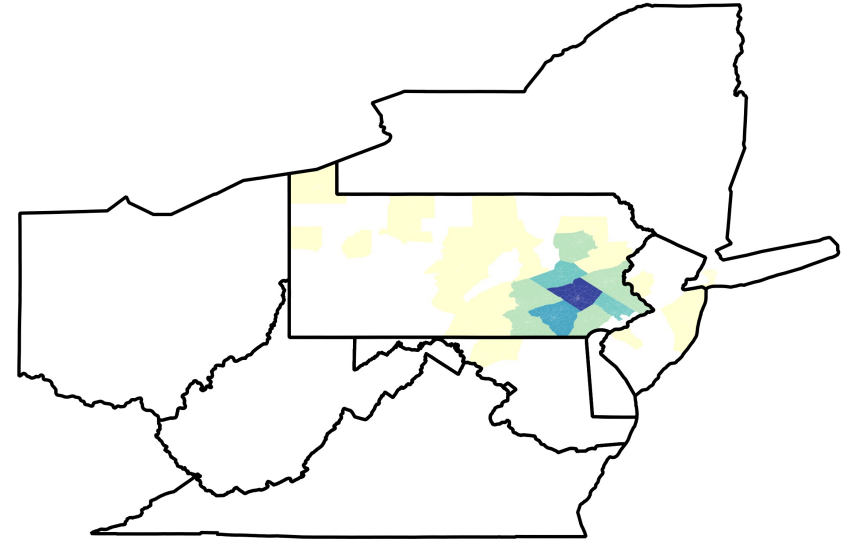


**Census Tract 124**  
Amazon Distribution

# T&W Employment



**Census Tract 127**  
Amazon Returns



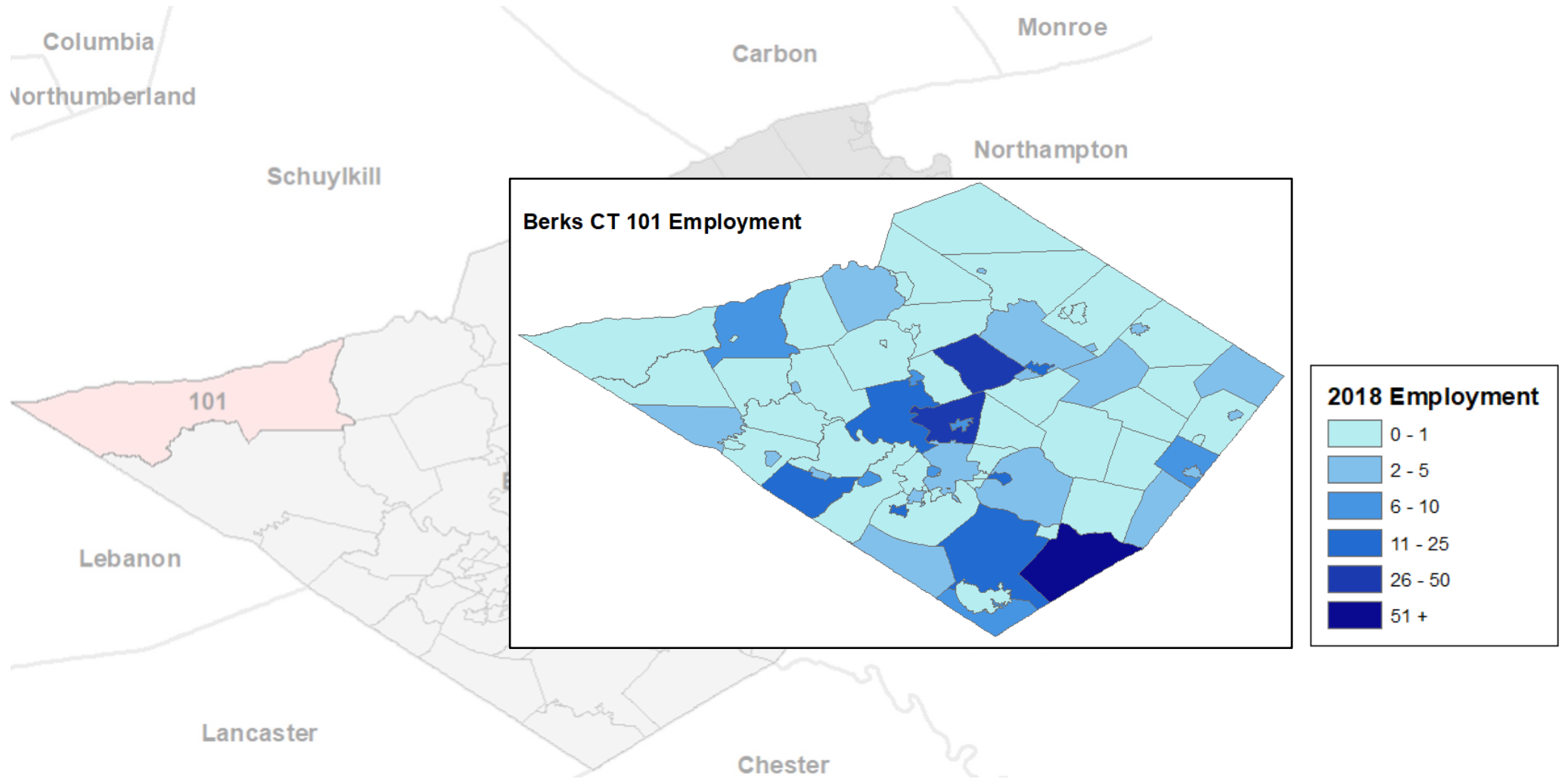
**Census Tract 135**  
Americold

	Saddle Creek	Americold Logistics	Amazon Distribution	Amazon Returns	USPS Reading
<b>Total Days Observed</b>	<b>153</b>	<b>365</b>	<b>365</b>	<b>365</b>	<b>365</b>
<b>Same Day Truck Stop Locations</b>					
<i>Love's</i>	2.12	3.16	4.32	0.21	--
<i>Pilot Flying J</i>	9.46	3.16	0.10	0.37	0.001
<i>Travel Centers of America</i>	1.98	1.08	--	0.34	--
<b>% Visits same day to truck stop</b>	<b>13.56</b>	<b>7.40</b>	<b>4.41</b>	<b>0.92</b>	<b>0.00</b>

# Same Day Visits



The City College  
of New York



# Local Employment



The City College  
of New York



# Next Steps

- Expanded employment analysis
- Route mapping
- Transit route assessment
- Safety impacts

# Acknowledgements

- **Collaborator:** Moira Conway
- **PhD Student:** Carla Tejada
- **Berks County Planning Commission**
  - David Hunter
  - Beth Berkowicz
  - Ashley Showers

# Questions?

[conway@kutztown.edu](mailto:conway@kutztown.edu)

[aconway@ccny.cuny.edu](mailto:aconway@ccny.cuny.edu)



The City College  
of New York