

# Shale Boomtowns – The Social and Economic Impacts of Gas Drilling



# Multi-State Shale Research Collaborative



- Keystone Research Center & PA Budget and Policy Center
- Fiscal Policy Institute – New York
- Policy Matters Ohio
- The Commonwealth Institute for Fiscal Analysis - Virginia
- West Virginia Center on Budget and Policy

<http://www.multistateshale.org>

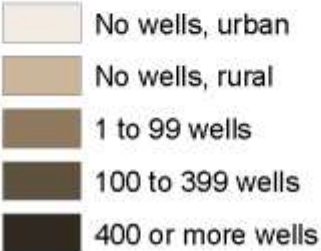
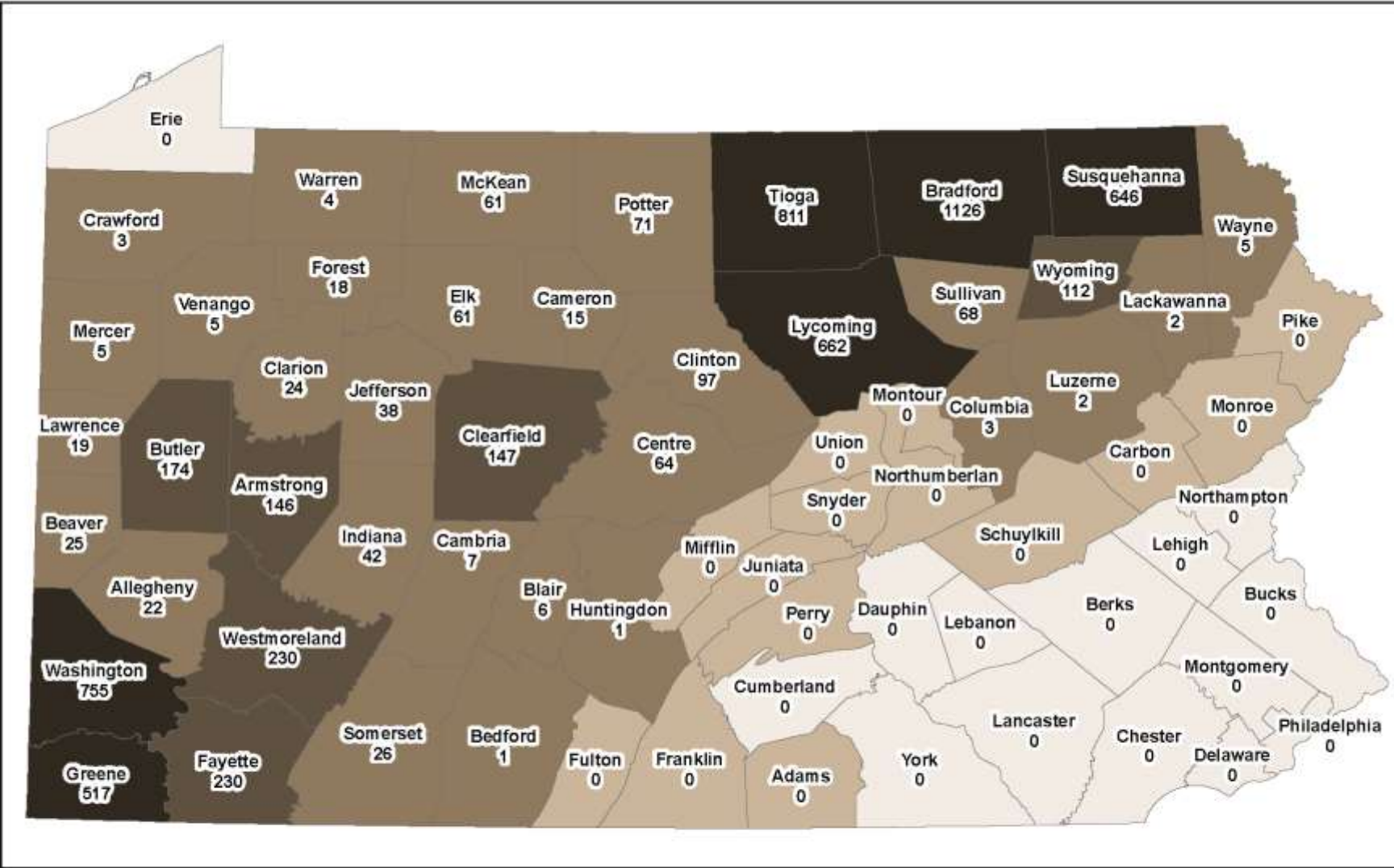


# The Research

- [The Shale Tipping Point: The Relationship of Drilling to Crime, Traffic Fatalities, STDs, and Rents in Pa., West Virginia, and Ohio](#) | December 17, 2014
- [Case Studies: Assessing the Impacts of Shale Drilling: Carroll County, Ohio, Greene & Tioga Counties, Pa., Wetzel County, W.Va.](#) | April 10, 2014
- [New 6-State Study Finds Jobs Impact of Shale Drilling Exaggerated by Industry and Supporters](#) | November 21, 2013

# High Drilling Activity Counties

- Bradford
- Tioga
- Lycoming
- Susquehanna
- Greene
- Washington



Source. Multi-State Shale Collaborative.

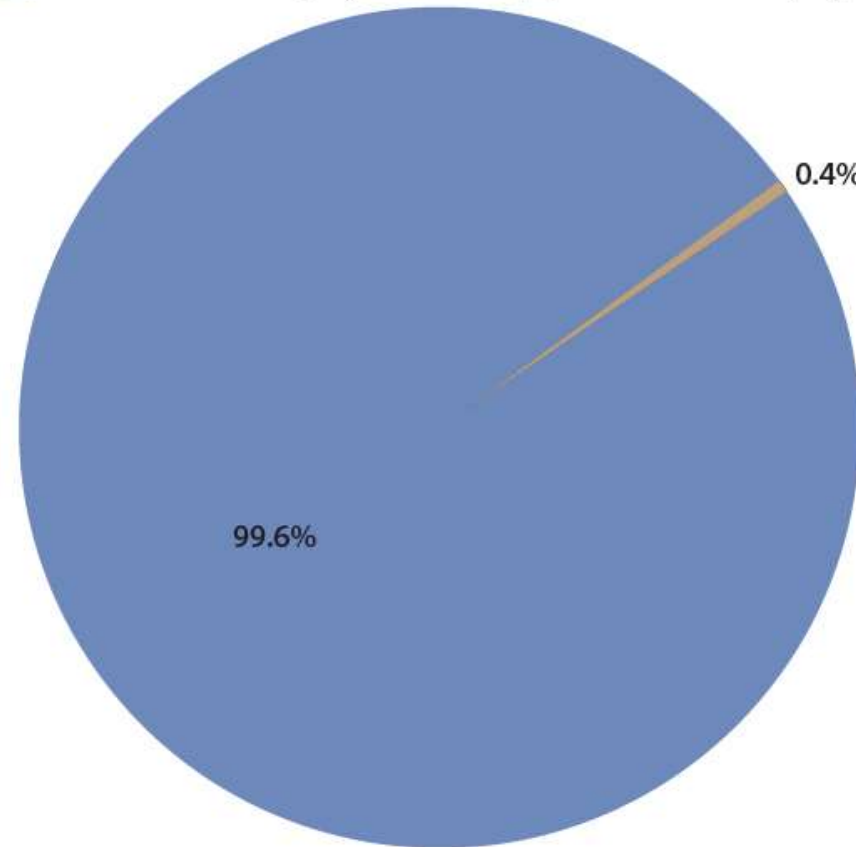
# Employment

- Employment gains concentrated in the six high drilling activity counties
- No real shale-related job gains elsewhere
- Jobs related to gas drilling make up only 0.4% of all PA jobs



**Figure 9. Shale-related Employment as a Share of Total Covered Employment in Pennsylvania**

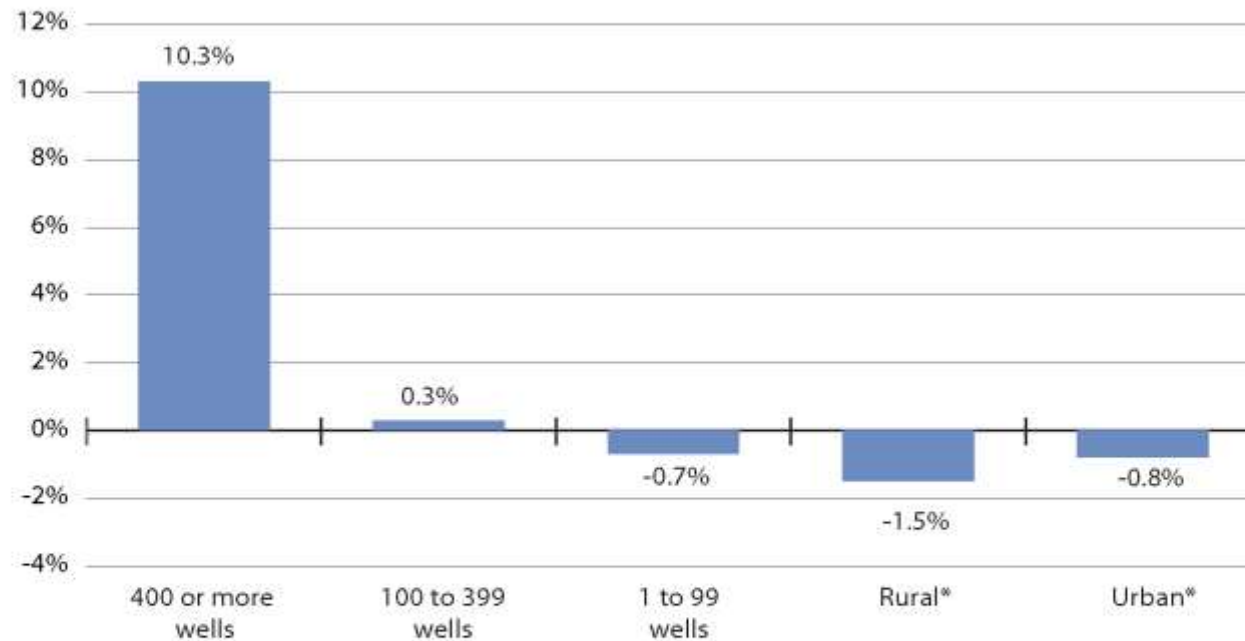
■ Total Non-Farm Employment 2012 ■ Shale-related Employment



Source. Multi-State Shale Collaborative based on QCEW data

# Overall jobs impact only in 6 high drilling activity counties (total employment change from 2005 to 2012)

**The bulk of employment impacts were in six high-drilling counties in Pennsylvania**



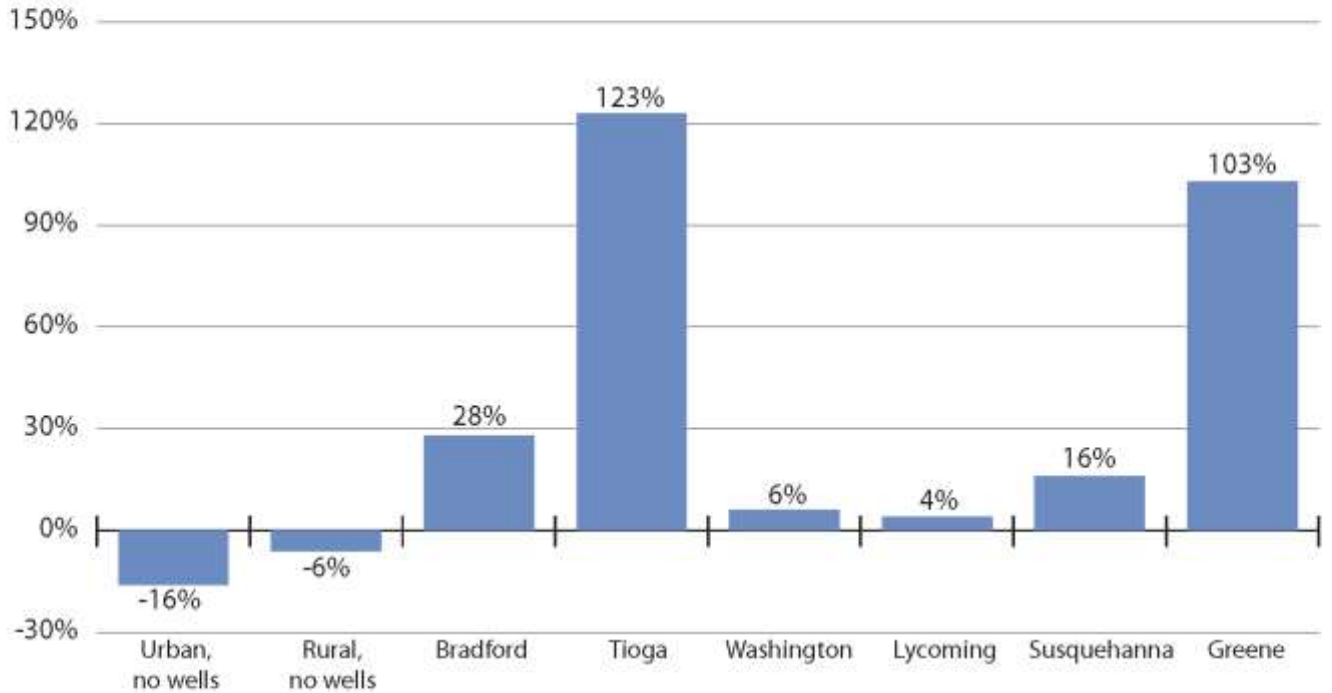
\*The figures here represent employment in counties in rural and urban counties with no wells drilled between 2002 and 2012. A county is defined as rural if the 2005 population per square mile in that county is below its corresponding statewide population per square mile.

Source: Multi-State Shale Collaborative based on Quarterly Census of Employment and Wages data.

# Violent Crime and Property Crime

- Violent crime increased by 17.7%, 130 more incidents of violent crime, in the six high drilling activity counties
- Violent crime was down in non-drilling counties
- Property crime increased by 10.8%

**Percent Change 2005-2012 in Violent Crime Rates in the Heaviest Drilling Counties in Pennsylvania**



Source: Multi-State Shale Collaborative based on Pennsylvania State Police and Bureau of Economic Analysis data.

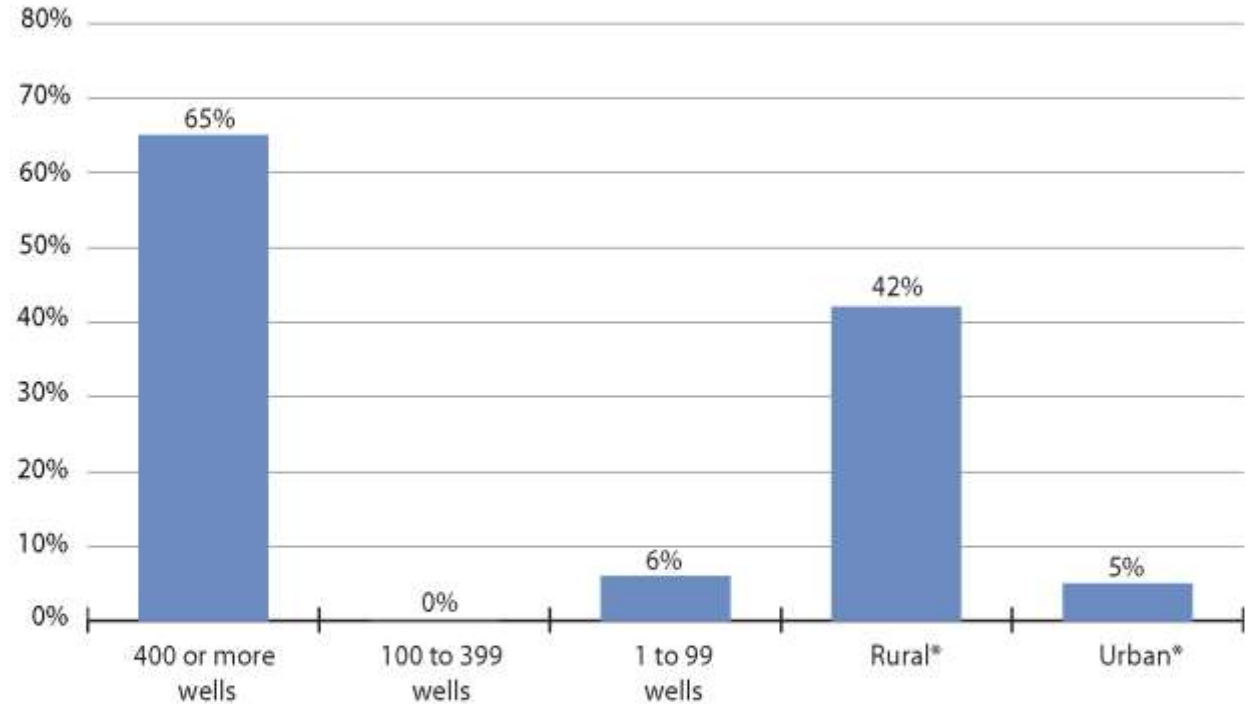


# Drug and Alcohol Crime

- Drug abuse increased by 48%, all other counties saw increases by only half that amount
- DUI offenses were up by 65% in high drilling activity counties, up by 42% in rural non-drilling counties



**DUI Offenses Were Up 65% in the Heaviest Drilling Counties in Pennsylvania**



\*The figures here represent employment in counties in rural and urban counties with no wells drilled between 2002 and 2012. A county is defined as rural if the 2005 population per square mile in that county is below its corresponding statewide population per square mile.

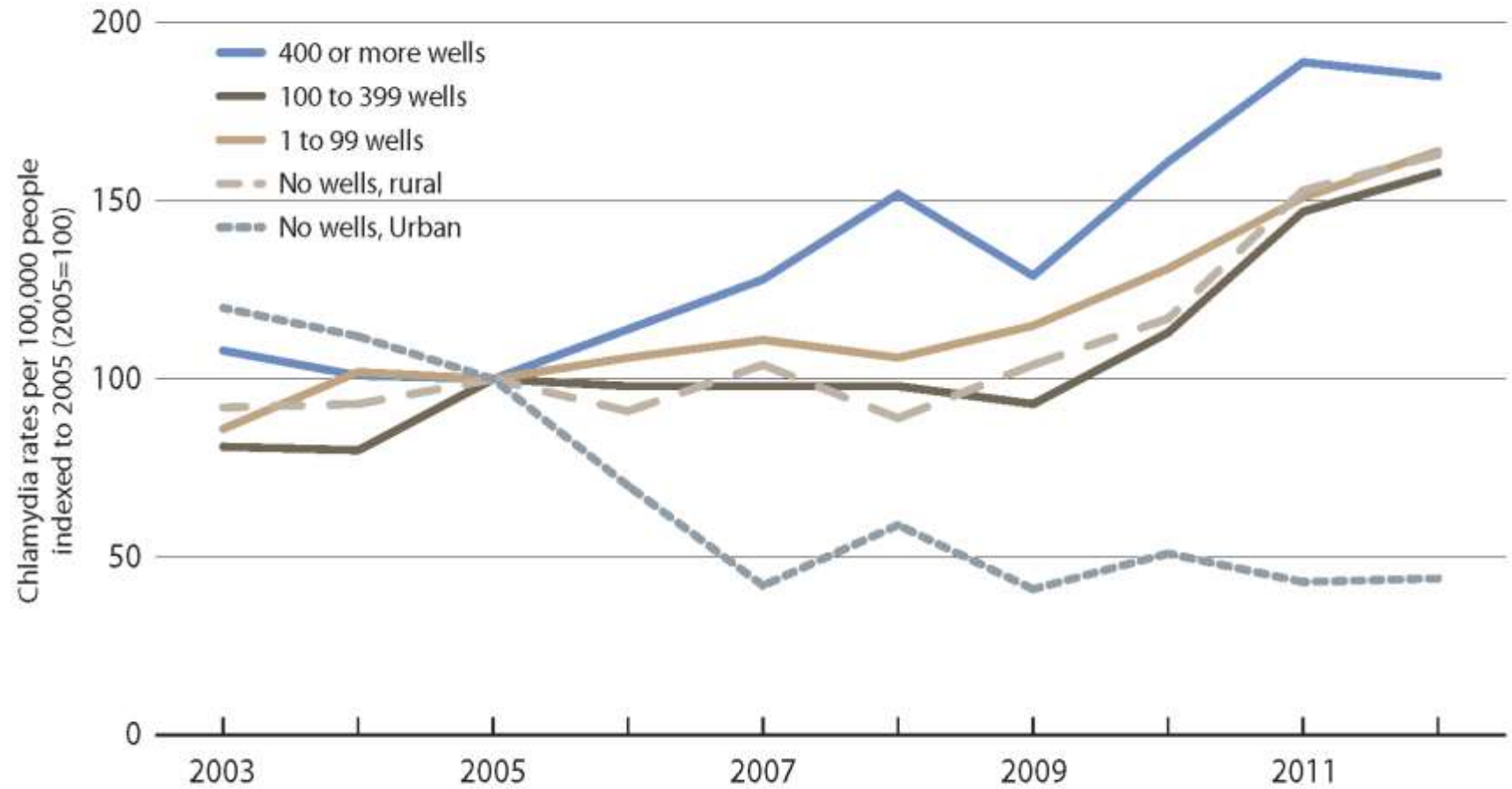
Source: Multi-State Shale Collaborative based on Pennsylvania State Police and Bureau of Economic Analysis data.



# Sexually Transmitted Diseases

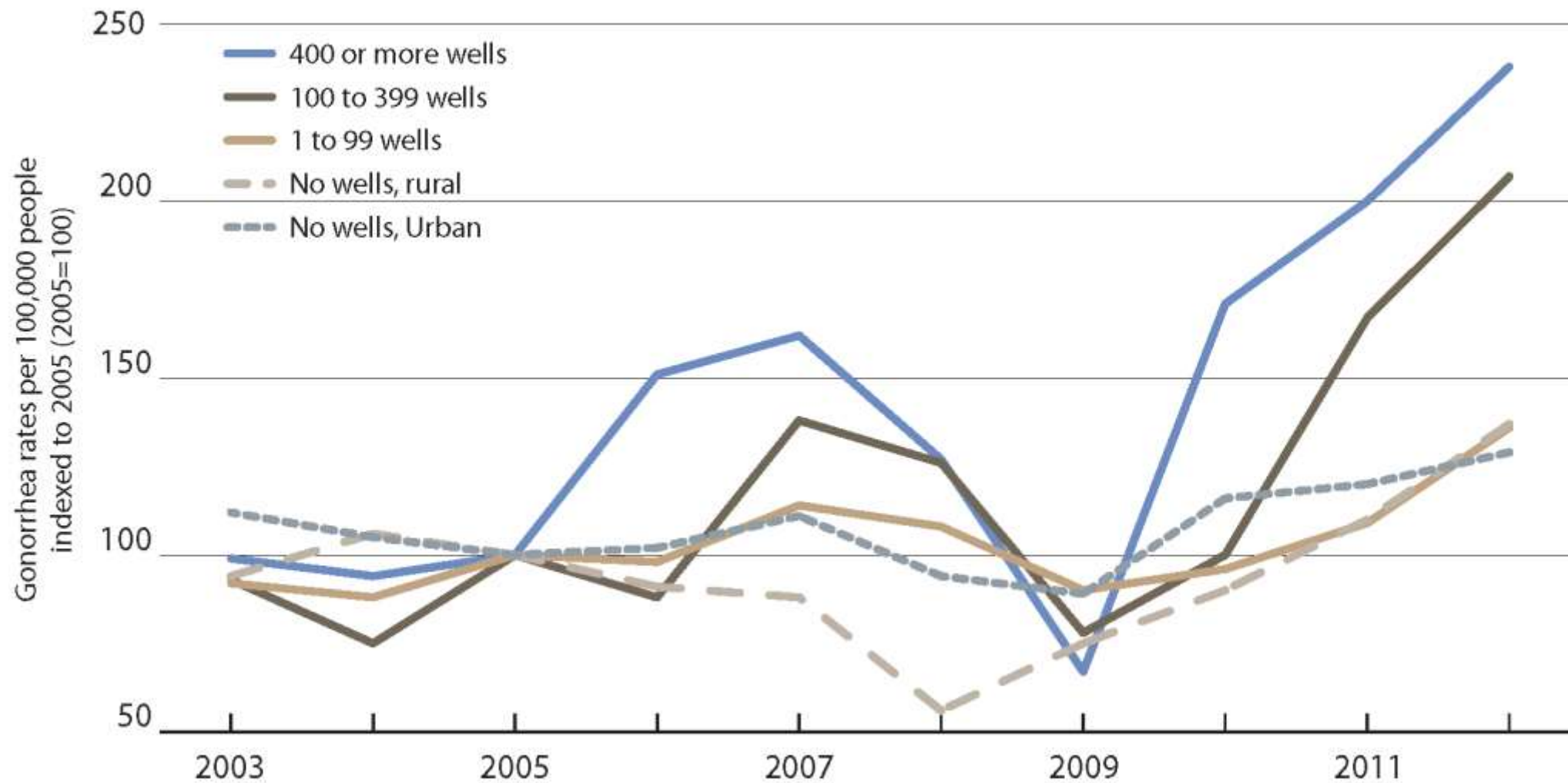
- All counties with drilling reported increases of 24% to 27% in the rate of chlamydia infections

**Chlamydia Rates in Pennsylvania by Drilling Intensity 2003-2012**



Source: Multi-State Shale Collaborative based on Center for Disease Control and Bureau of Economic Analysis data.

## Gonorrhea Rates in Pennsylvania by Drilling Intensity 2003-2012



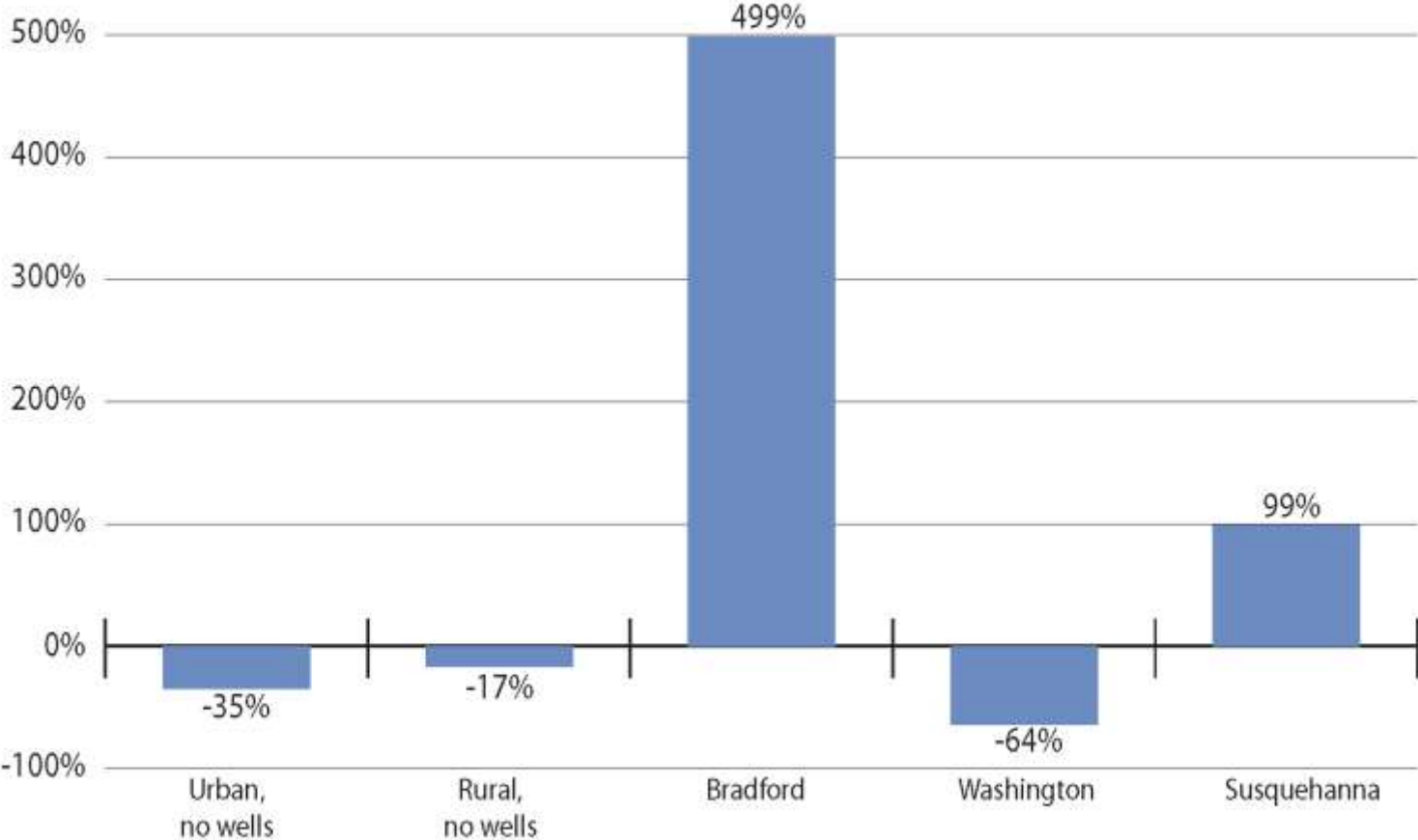
Source. Multi-State Shale Collaborative based on Center for Disease Control and Bureau of Economic Analysis data.

# Truck Involved Motor Vehicle Fatalities

- Fatal truck accidents spike by 499% in Bradford County and 99% in Susquehanna County



**Percent Change in Traffic Fatalities Involving Trucks from 2005-2010 in Three High-Drilling Counties in Pennsylvania**



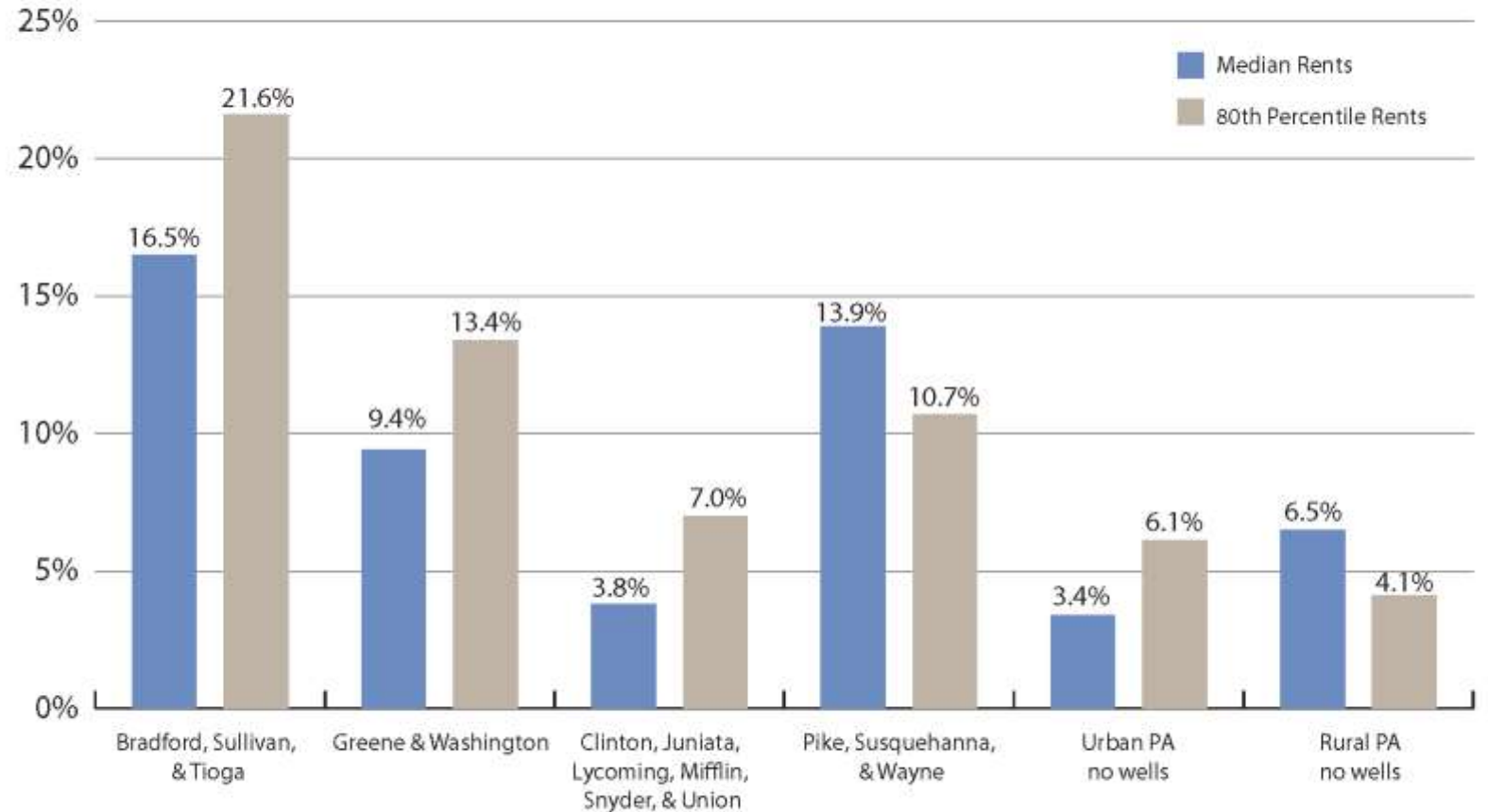
Source: Multi-State Shale Collaborative based on Center for the Management of Information for Safe and Sustainable Transportation and Bureau of Economic Analysis data.

# Housing

- Overall rents increased between 7.6% and 12.3% in the high drilling activity counties
- Tioga County rents doubled or tripled
- Homelessness increased in Tioga and Greene counties
- Fourfold increase in homeless Head Start families in Tioga
- Threefold increase in kids in foster care due to inadequate housing in Greene



## Percent Change in Median and 80th Percentile (High) Rents in the Heaviest Drilling Counties in Pennsylvania

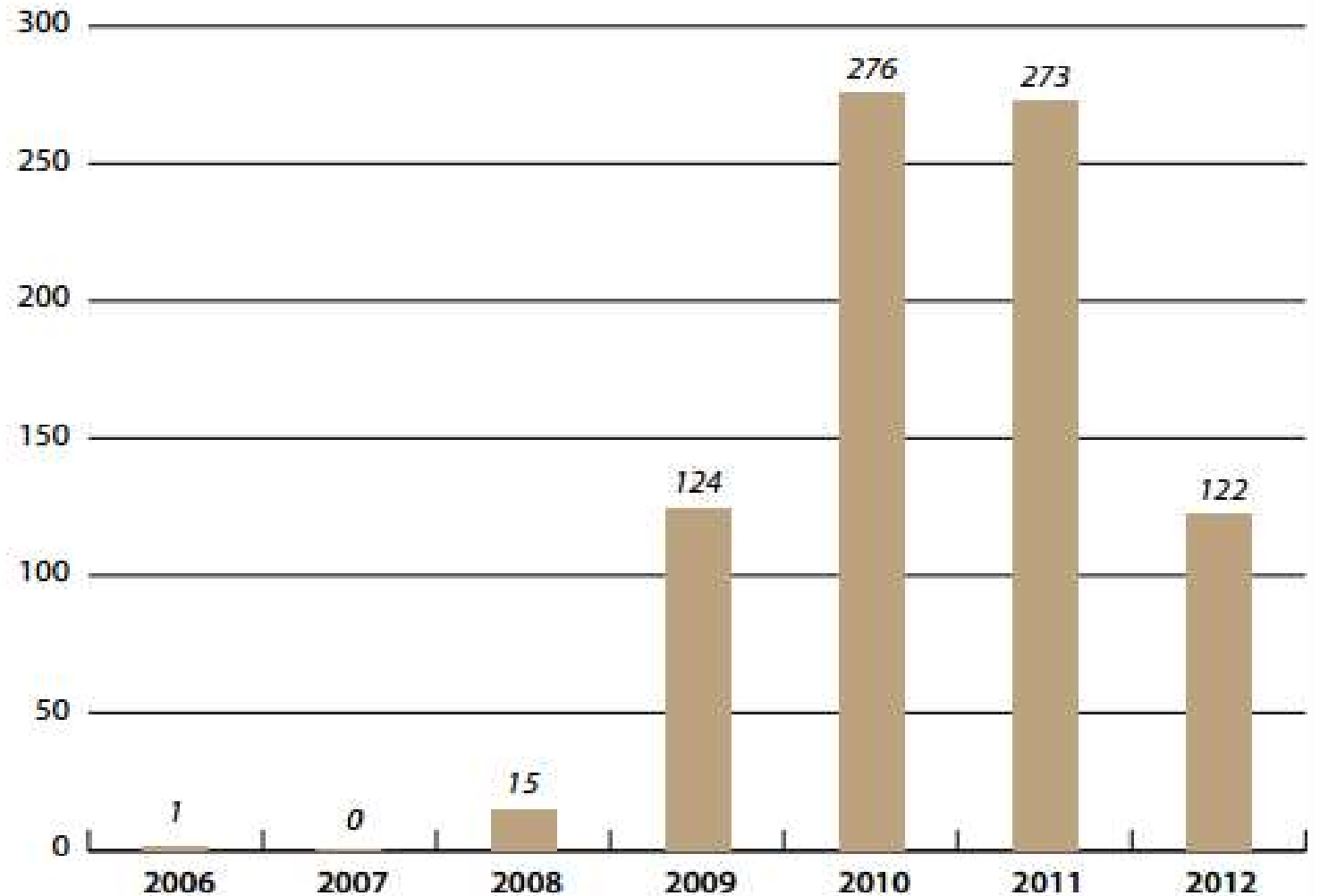


Source: Multi-State Shale Collaborative based on the American Community Survey microdata provided by Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

# Busted

- Number of new wells drilled fell by 55% from 2011 to 2012
- Tioga below state unemployment rate 2010-11
- Since 2012 unemployment rate again above state average

**Figure 2. Unconventional Gas Wells  
Tioga County, PA 2006-2012**



Source. Pennsylvania Department of Environmental Protection, Office of Oil and Gas Management, Spud Data Report, 2006-2012.

# Shale Boomtown Trade-Offs

## The Upside

↑ Employment and income up in high drilling activity counties

## The Downside

↓ Higher rates of crime, sexually transmitted diseases and traffic fatalities

↓ Increased housing costs and homelessness

↓ Boomtown communities ill-prepared for busts

# Lessons Learned

- Enact a severance tax that maintains local impact fee
- Control the pace of drilling
- Create a central point of contact for drillers/locals
- Train first responders
- Make full use of local task forces
- Plan for waves of boom/bust
- Diversify economies