

Community Challenges During the Boom

Jeffrey B. Jacquet, PhD

Federal Reserve Bank of Cleveland
Shale Symposium: What Communities Need to Know

March 19, 2015 | Wheeling, WV

Community Impacts

- ***It's Not All Bad!***
- **Many Positives:**
 - ***Employment***
 - ***Income to land owners***
 - ***Economic activity***
 - ***Population Growth***
 - ***Energy Production***



© Copyright 2005 Tim Matsui
www.timmatsui.com

Community Impacts

- *Results will vary!*
- *Key Factors:*
 - *Population Size*
 - *Pace, Scale, Location of Development*
 - *Degree of Rurality and Isolation*

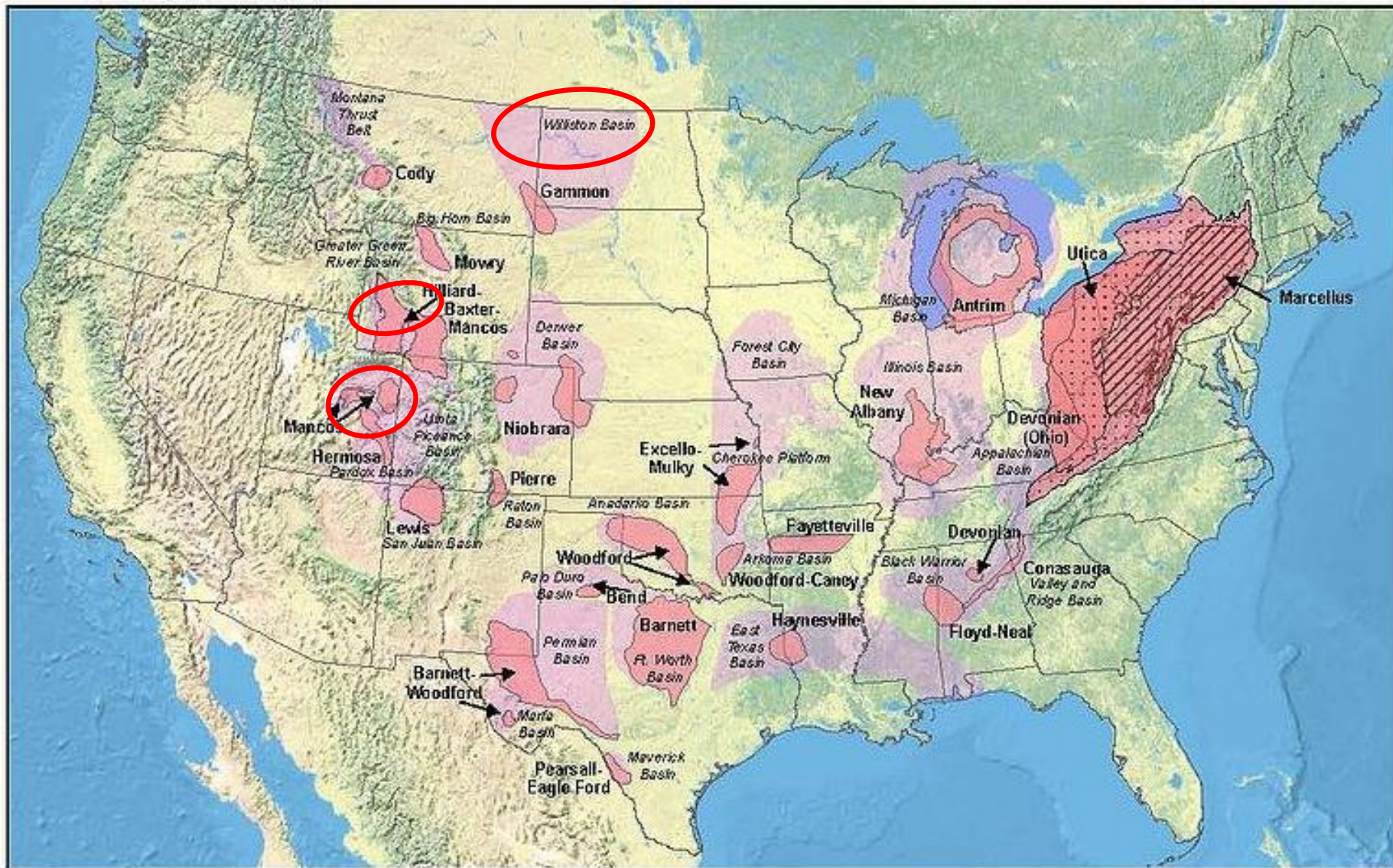
Community Impacts

- *Results will vary!*
- **Key Factors:**
 - *Population Size*
 - *Pace, Scale, Location of Development*
 - *Degree of Rurality and Isolation*
 - ***Degree of Economic Diversity***
 - ***Amount of Revenue Collected Locally***
 - ***Local Govt. Capacity***

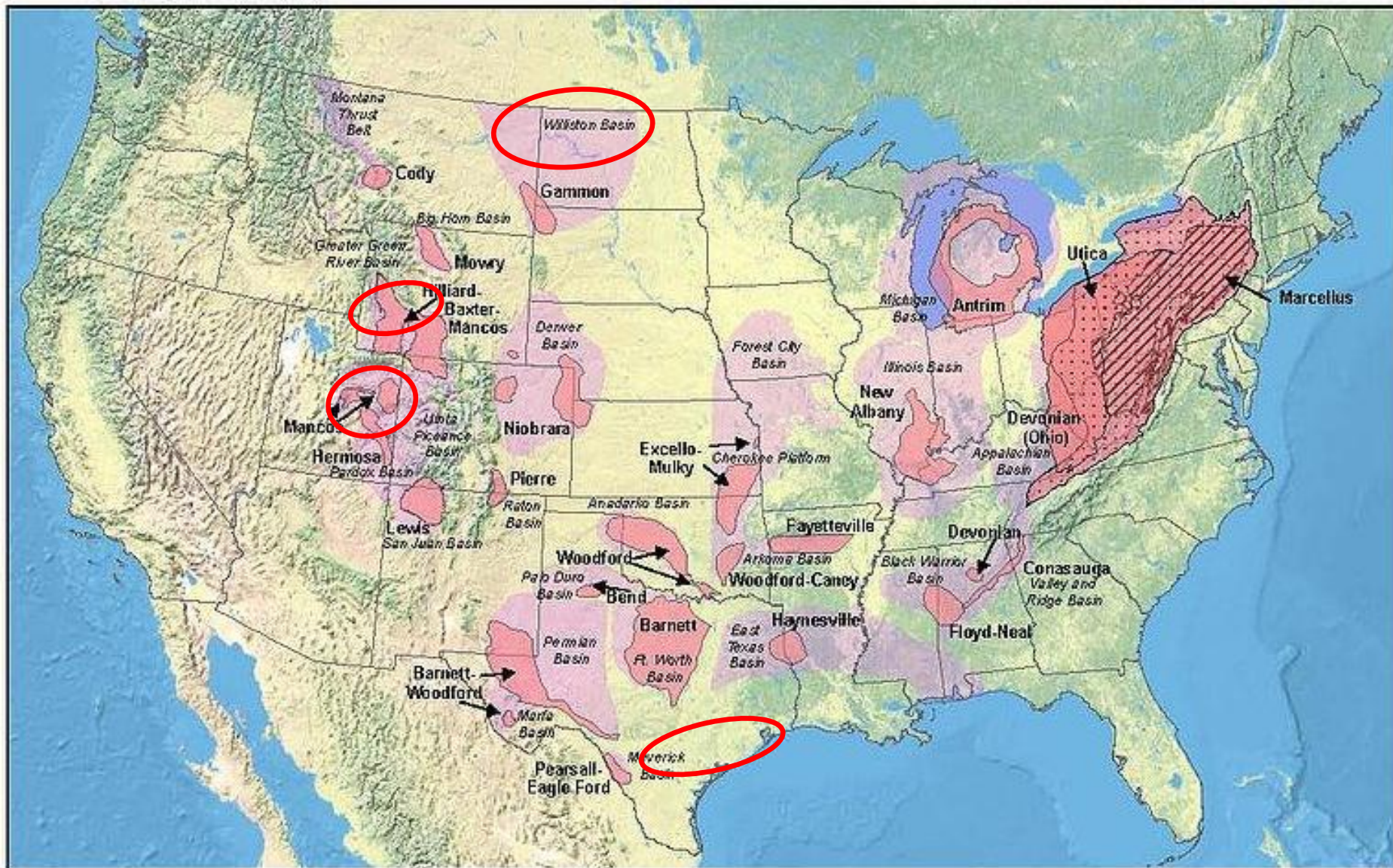
Community Impacts



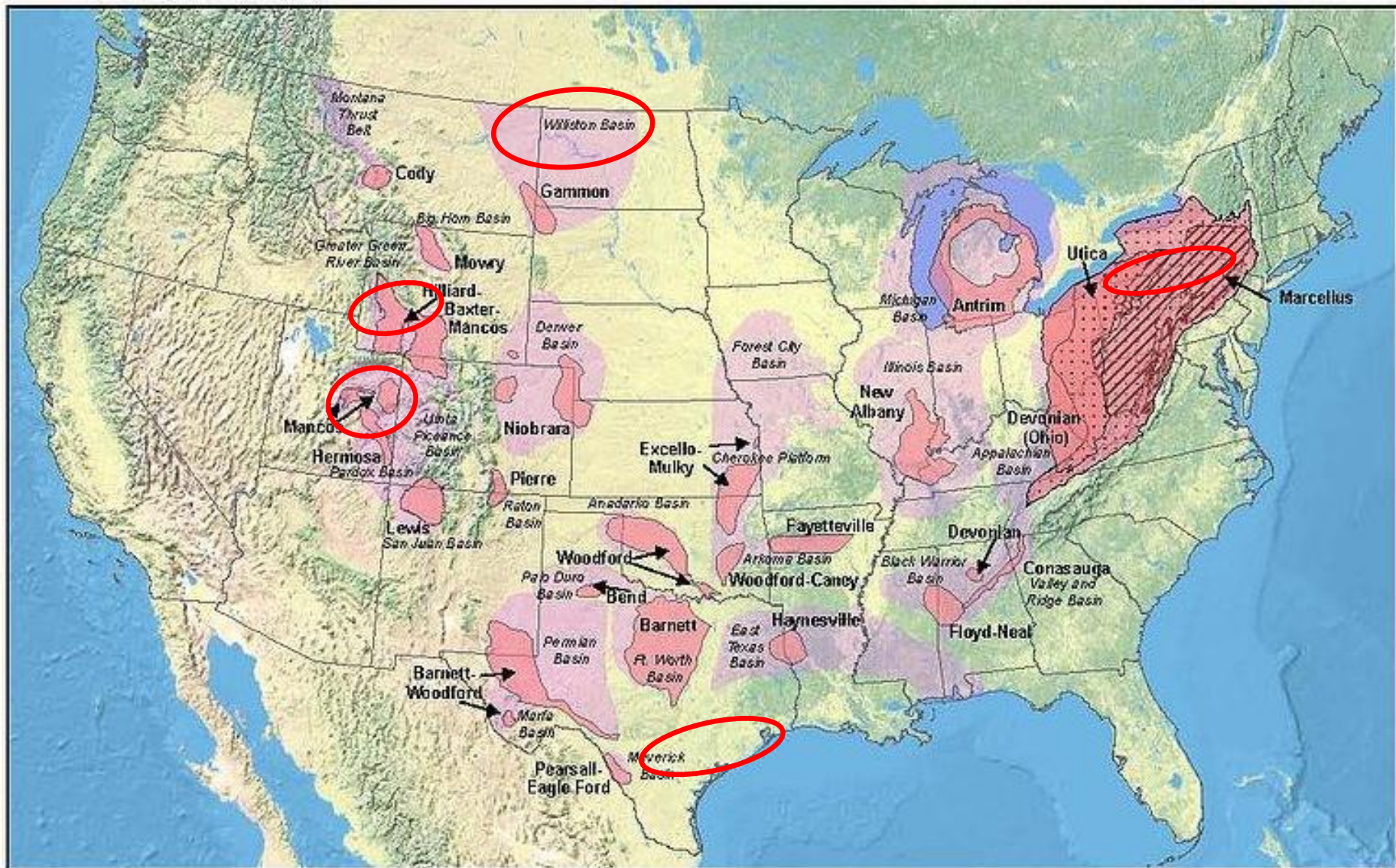
Community Impacts



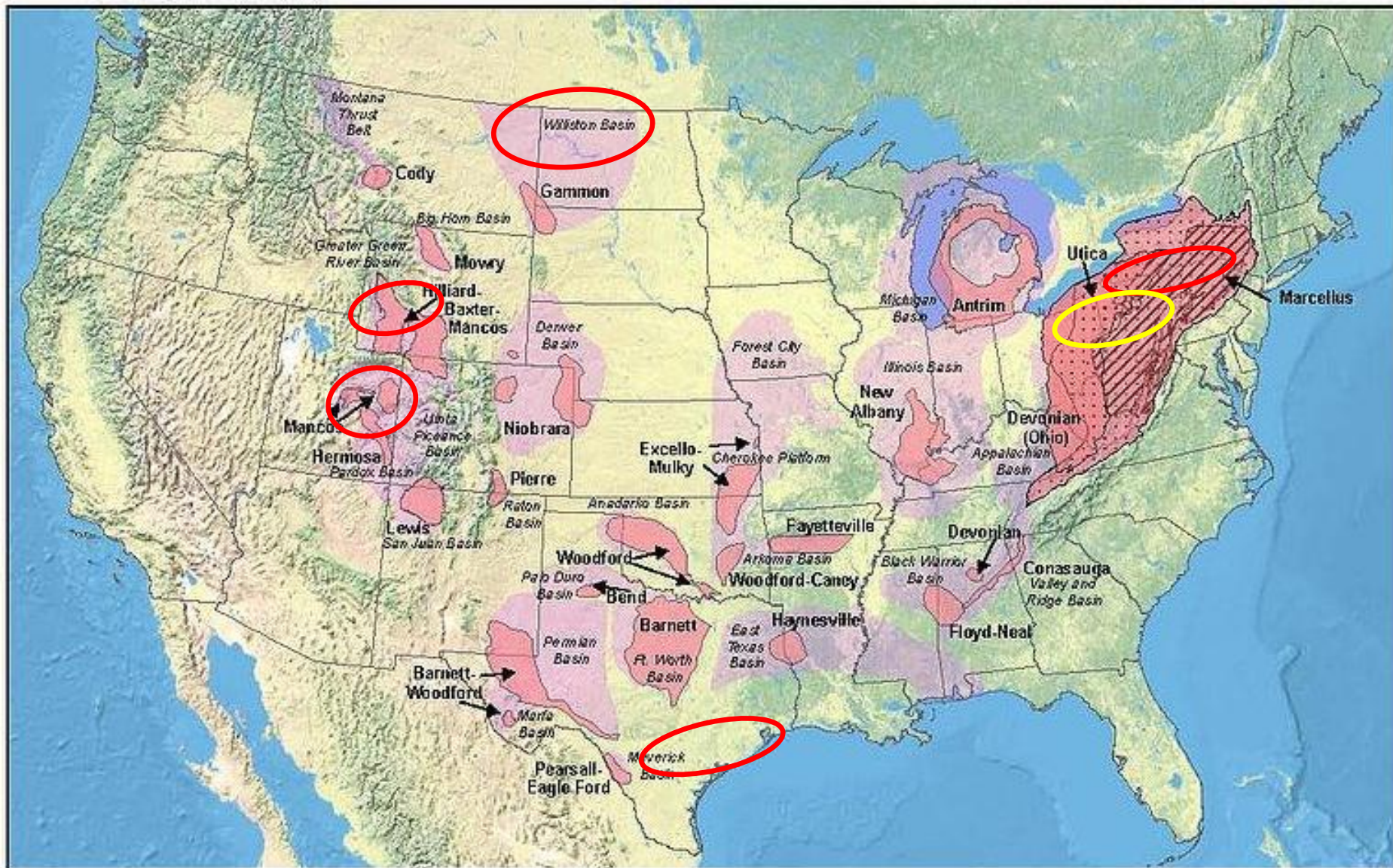
Community Impacts



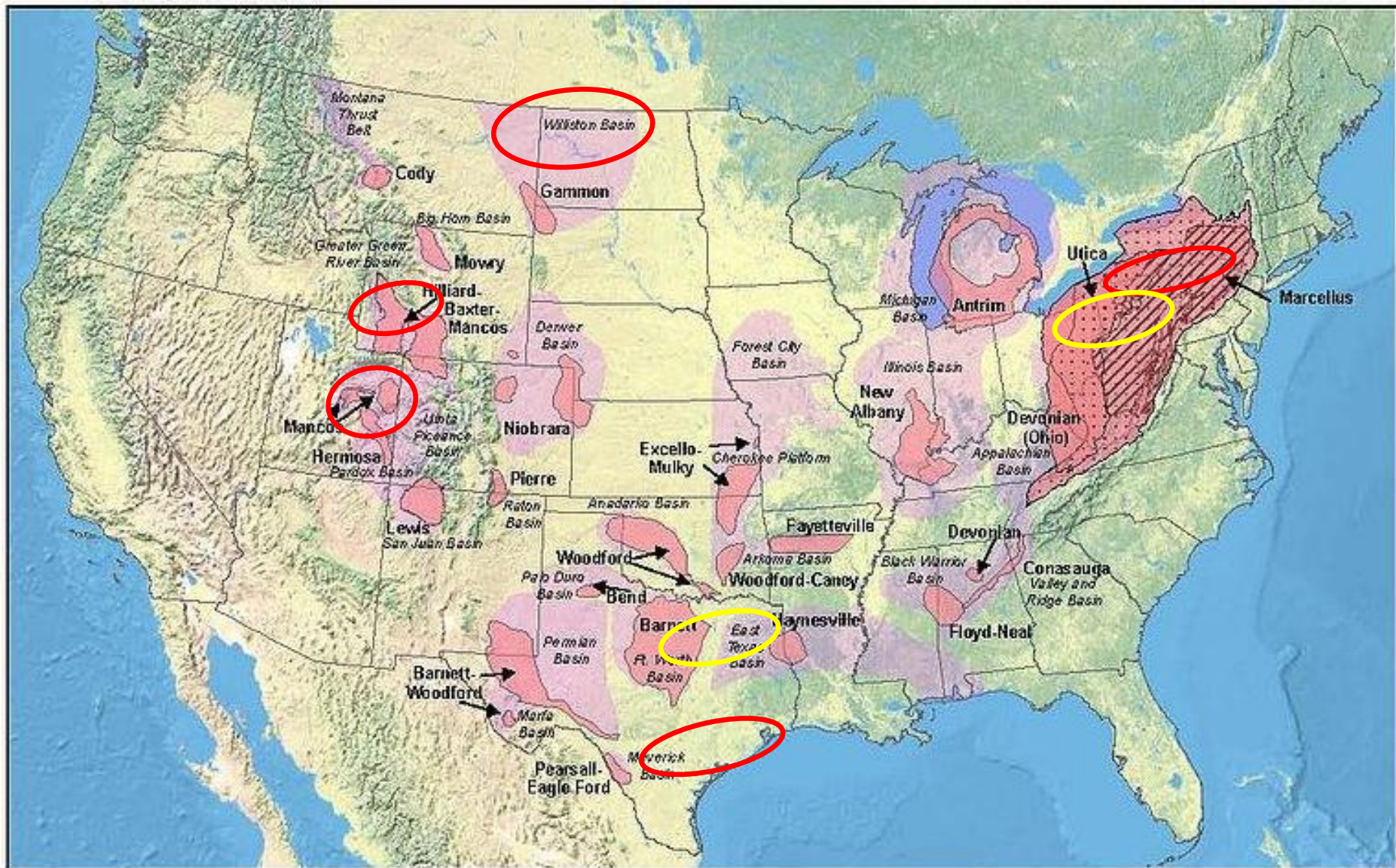
Community Impacts



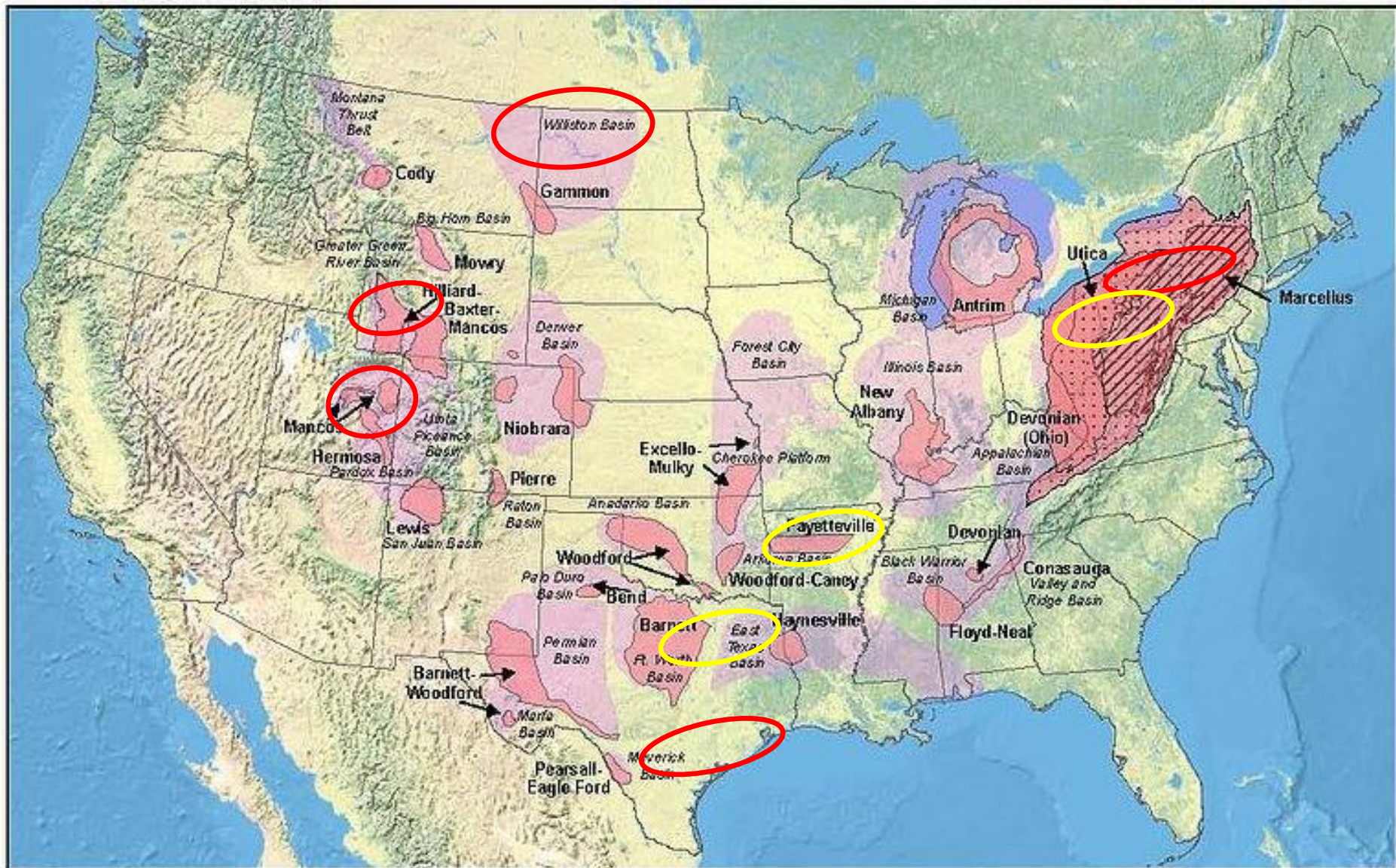
Community Impacts



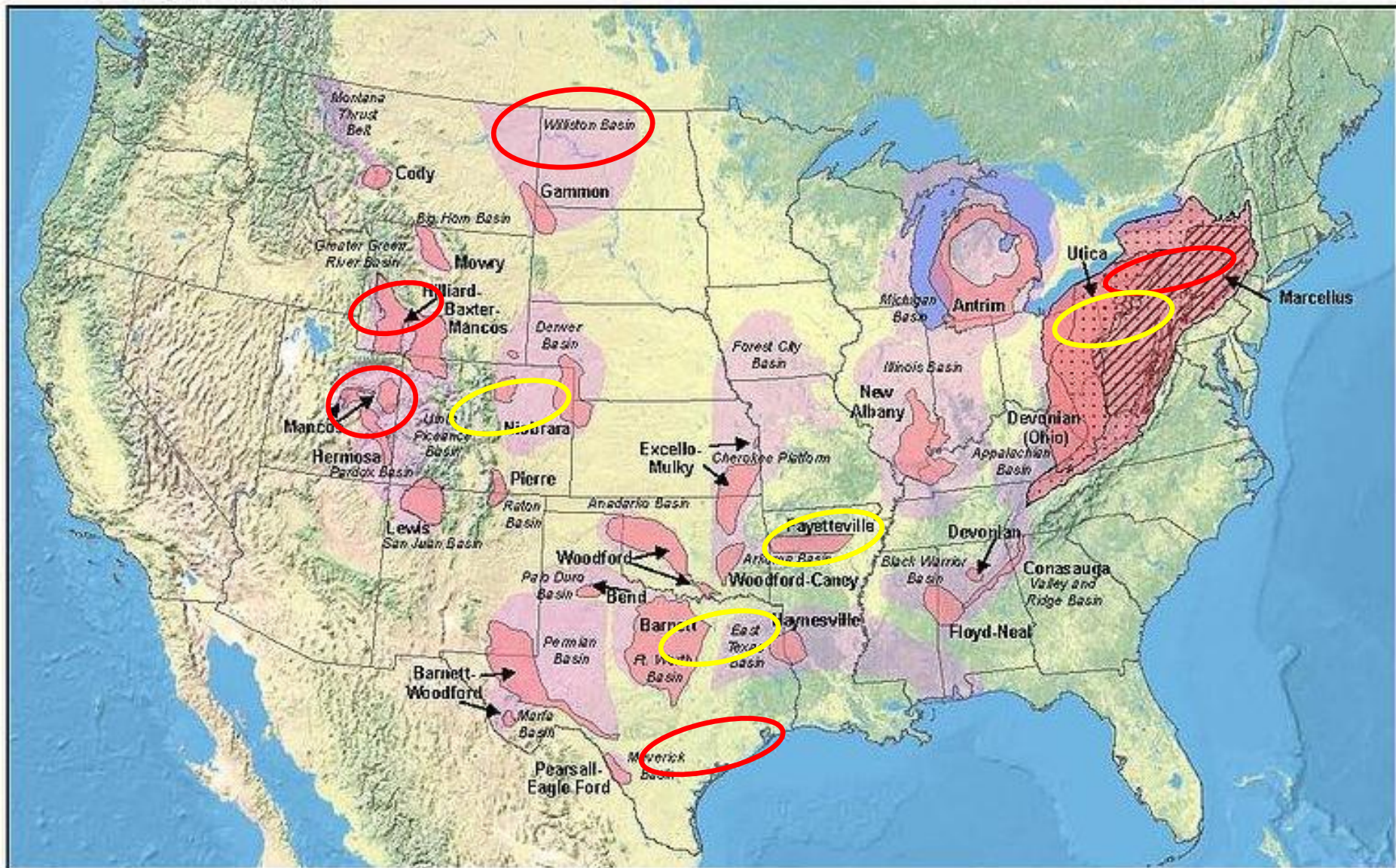
Community Impacts



Community Impacts



Community Impacts



Community Impacts

- **Key Challenges**
- ***Growth Management***
- ***Planning in an Information Vacuum***
- ***Mitigation in a Revenue Vacuum***
- ***Lessening Community Conflict***

Growth Management

Gas boom catches community off guard



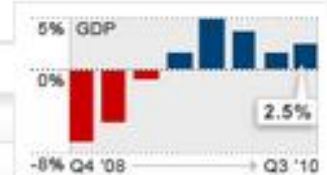
Traffic in downtown Towanda is one example of how a drilling boom taxes a town.

Right Now

Economic growth picks up steam

Stocks tumble on Korea jitters

Existing home sales slow down



Helping set opportunity
in motion for our customers,
communities and economy.

Bank of America

LEARN MORE

Hot List

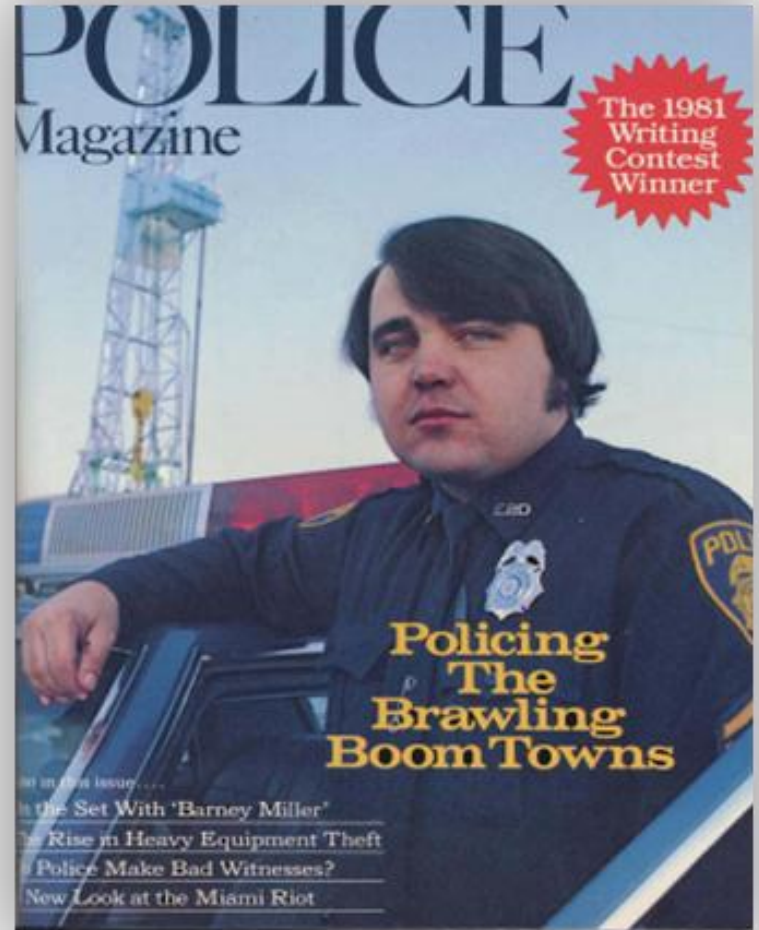
Bush tax cuts: What if Congress punts?

If Congress continues to drag its feet, paychecks could get smaller on Jan. 1. Policymakers could prevent it, but will they? Pay attention to your W-4!



Growth Management

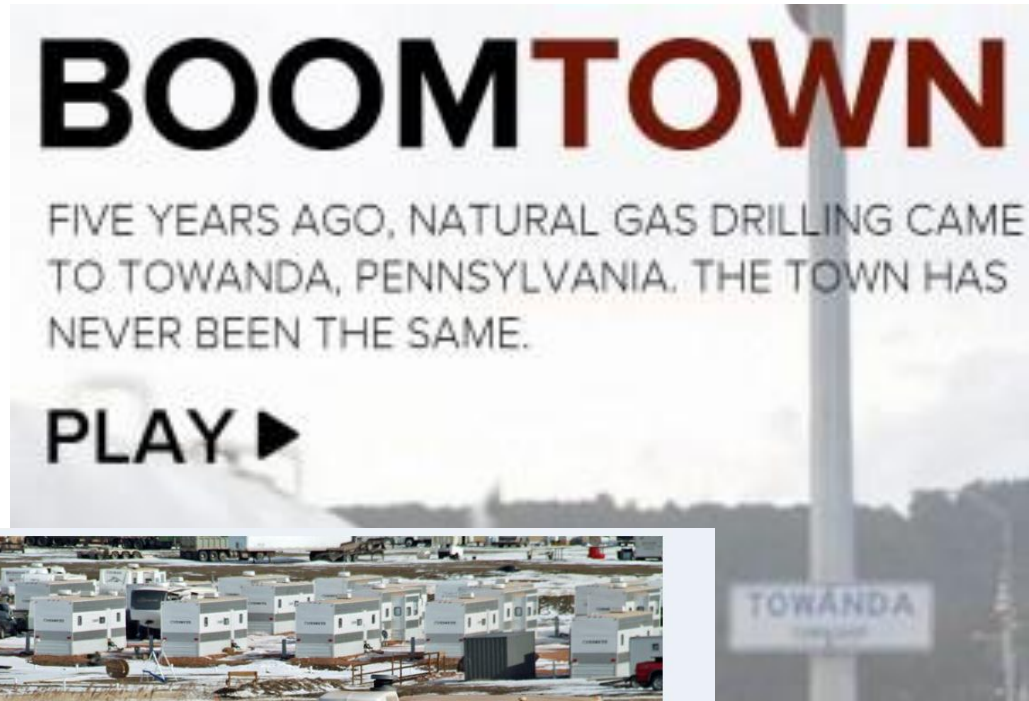
- **Rapid Growth**
- **Strained Municipal Services**
- **Poor Quality of Life**
- **Out-migration of residents**
- **Overbuilt and Unplanned Construction**



Police Magazine, 1981

Growth Management

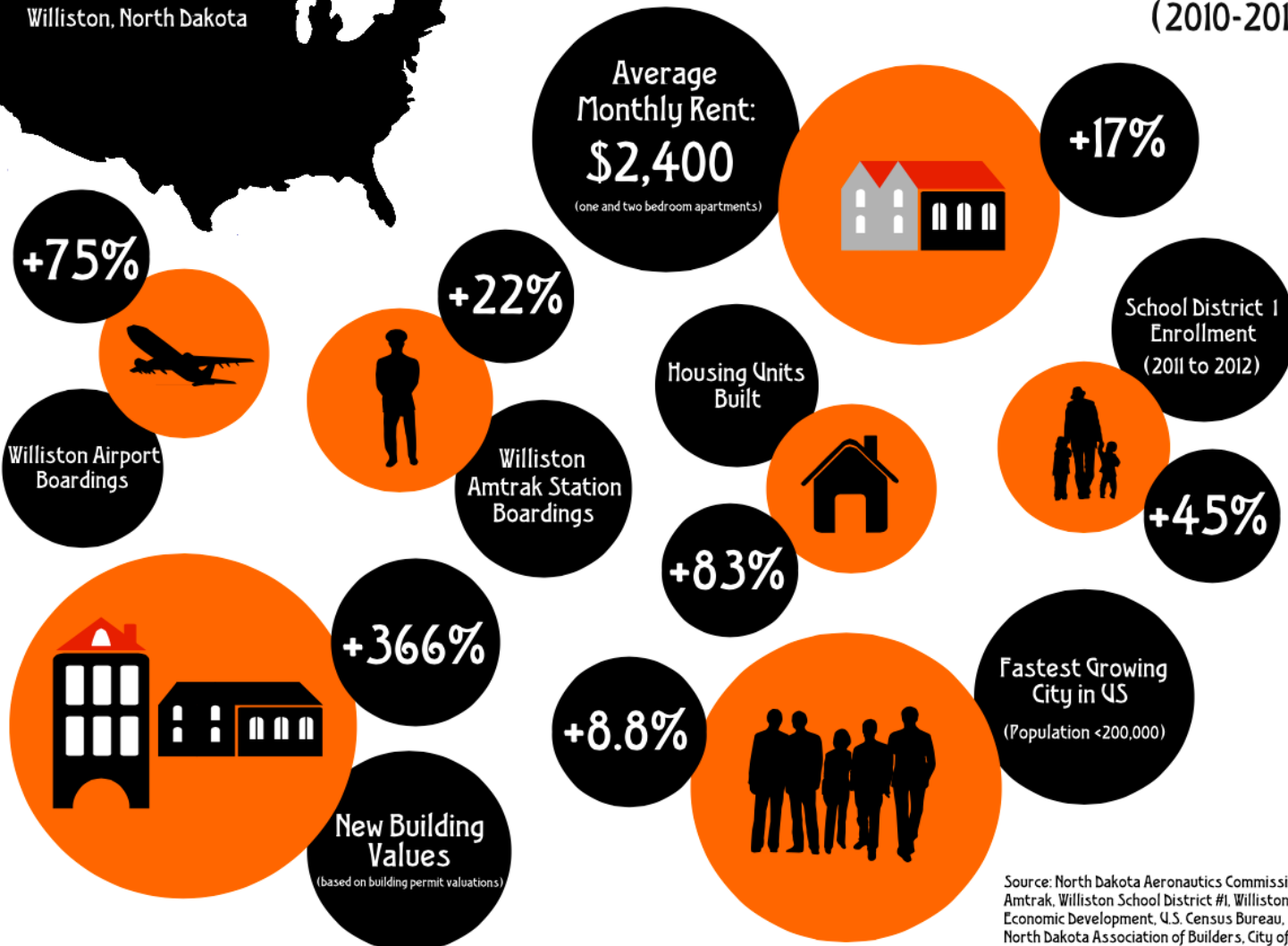
- Sidney, MT
- Williston, ND
- Dickinson, ND
- Pinedale, WY
- Eagle Ford, TX
- Montrose, PA
- Towanda, PA



Growth Management



The Oil Boom Impact: Williston, North Dakota (2010-2011)

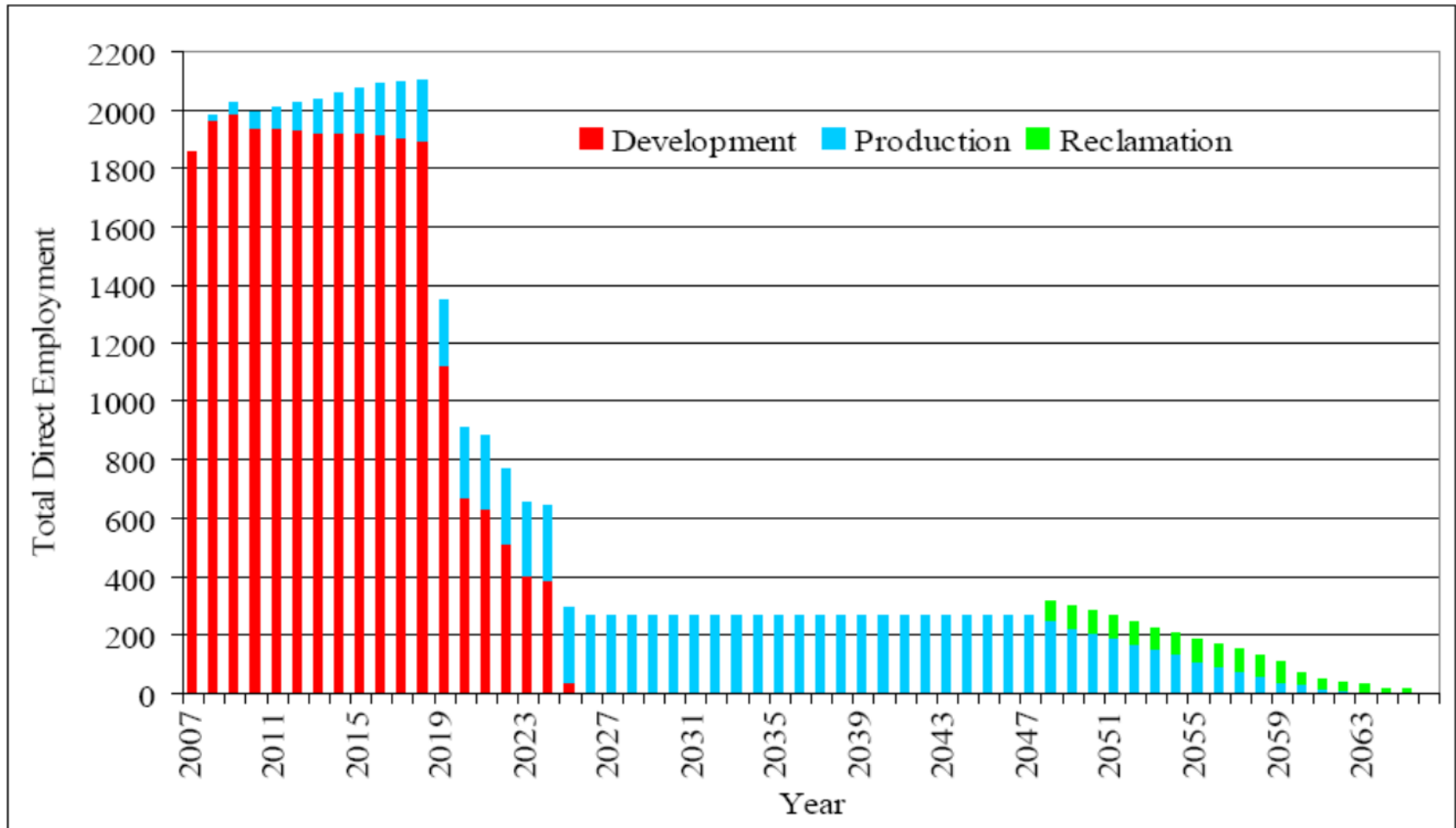


Source: North Dakota Aeronautics Commission, Amtrak, Williston School District #1, Williston Economic Development, U.S. Census Bureau, North Dakota Association of Builders, City of Williston Building Department

Growth Management

- **Influx of New Workers**
 - *First, Direct Workforce*
 - *Then, Influx of Indirect and Induced Workforces*
 - *Finally, influx of families, permanent residents, people relocating*
- ***More people = more demand for everything***

Growth Management



Employment Projections for Jonah Field, Wyoming (ERG/Jacquet, 2007)

Growth Management

- **Largest Impact on Housing**
 - Demand for Hotels, Apartments, RV Parks, man-camps
 - Temporary housing at first, moving to permanent
- ***Impacts to municipal infrastructure, water and sewer, roads, parking,***

Growth Management

- ***New Demands on Police, Fire, EMS,***
 - More people = more demands
 - New types of industry, accidents, procedures

Growth Management

Solutions are context specific

- Meet demands without over building
- Increase capacity of municipal government
- Keep good data on the impacts being felt
- Engage operators to help lesson negative impacts
- Use growth to diversify economic base
- Temporary housing: man camps, RVs, etc.

Community Impacts

- **Key Challenges**
- *Growth Management*
- ***Planning in an Information Vacuum***
- *Mitigation in a Revenue Vacuum*
- *Lessening Community Conflict*

Planning in an Information Vacuum

- **High Uncertainty**
 - When will drilling occur?
 - Where will drilling occur?

Planning in an Information Vacuum

- **High Uncertainty**

- When will drilling occur?
- Where will drilling occur?
- **How much drilling will occur?**
- **How long will drilling occur?**
- **Natural Resource development is unpredictable**
 - **Dependent on complex, external factors**
 - **Volatility is proven again and again**

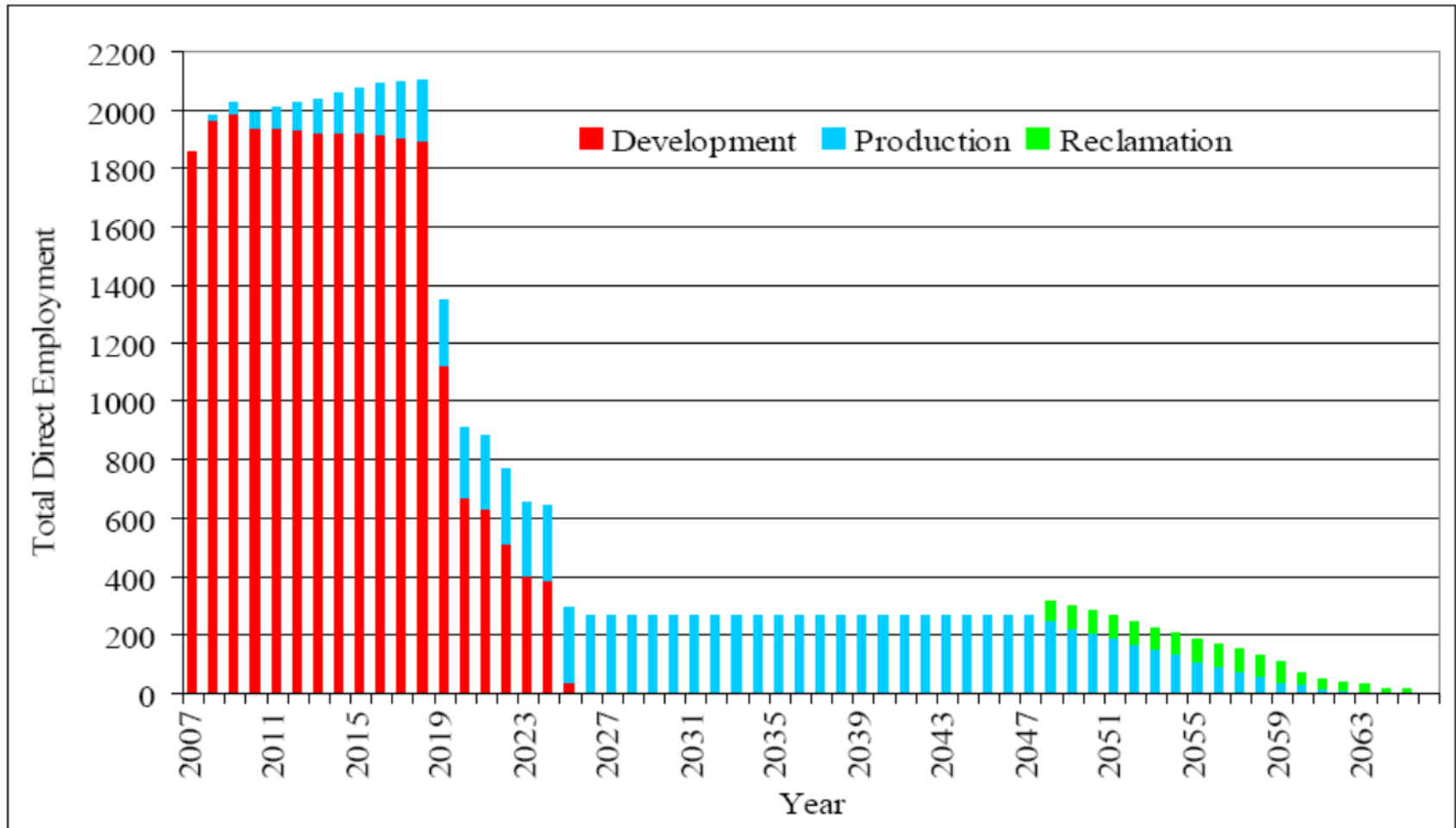
Planning in an Information Vacuum

- **Drilling Information is hard to find:**
 - **No central source**
 - Many different companies, different plans for drilling
 - **Companies have incentive to not disclose**
 - **Companies don't know the future, either**

Planning in an Information Vacuum

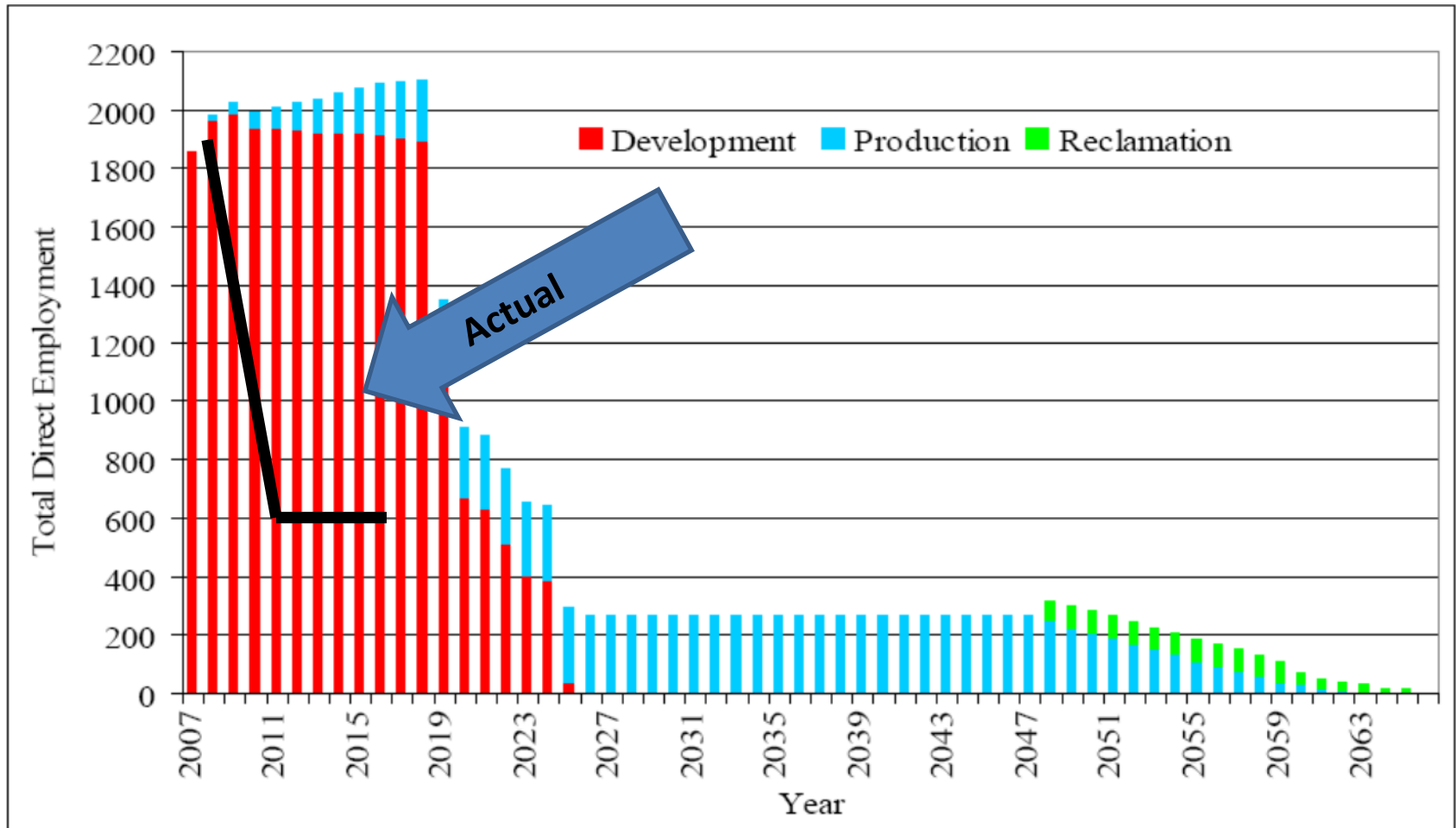
- **Drilling Information is hard to find:**
 - **No central source**
 - Many different companies, different plans for drilling
 - **Companies have incentive to not disclose**
 - **Companies don't know the future, either**

Planning in an Information Vacuum



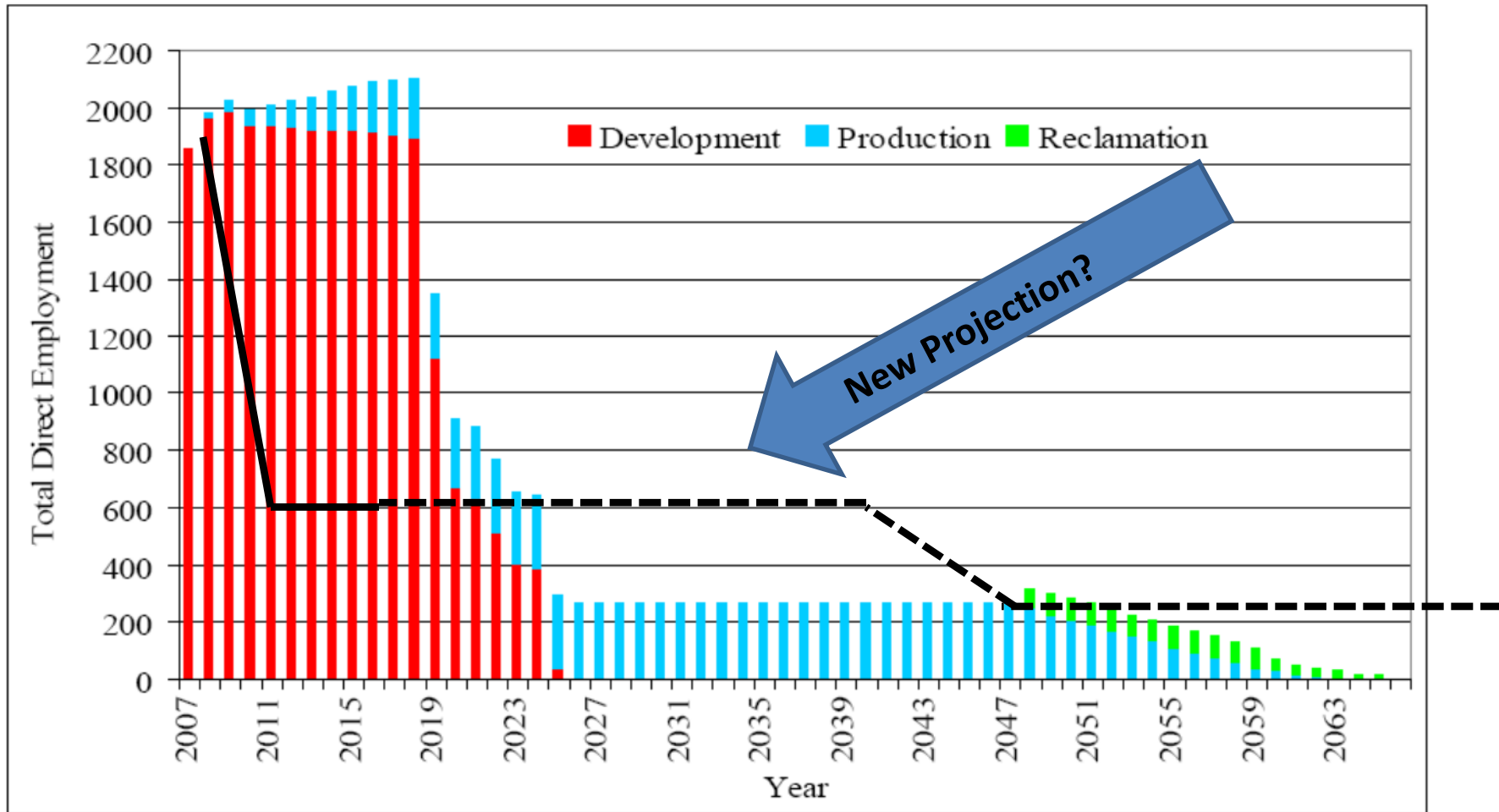
Employment Projections for Jonah Field, Wyoming (ERG/Jacquet, 2007)

Planning in an Information Vacuum



Employment Projections for Jonah Field, Wyoming (ERG/Jacquet, 2007)

Planning in an Information Vacuum



Employment Projections for Jonah Field, Wyoming (ERG/Jacquet, 2007)

Planning in an Information Vacuum

Some Solutions

- **Get the best data you can**
 - Engage operators, create projections, understand factors at play.
- **Understand planning is a process**
 - Act of planning will increase capacity, even if future is uncertain
- **Expect the un-expected**

Community Impacts

- **Key Challenges**
- *Growth Management*
- *Planning in an Information Vacuum*
- ***Mitigation in a Revenue Vacuum***
- *Lessening Community Conflict*

Mitigation in a Revenue Vacuum

- Revenues typically slow to reach impacted communities, if at all.....
- Staff and infrastructure most important, and most expensive
- Short-term “boom” needs vs. long-term “bust” needs
- Many issues are not in traditional govt. domain, such as housing.

Mitigation in a Revenue Vacuum

Western States Learned their lesson in 1970s

- State's Share of Federal Energy Royalties increased from 37% to 50%
 - Western States directed royalties back to host communities
- Federal Payment In Lieu of Taxes (PILT) Started
- Western States began energy severance taxes
- Western states increased regulation over construction of large facilities

Mitigation in a Revenue Vacuum

Some Solutions:

- **Keep good data on impacts experienced**
- **Engage state officials on revenue needs**
- **Look for win-win opportunities with industry**
 - **Projects that help industry and help community**
- **Secure revenues for long-term needs**

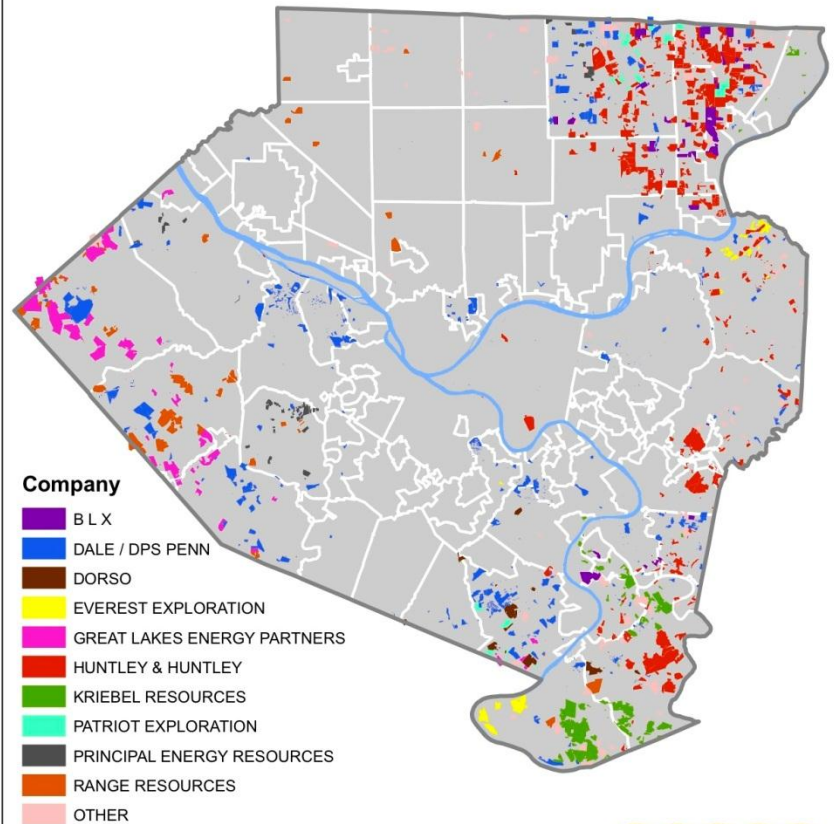
Community Impacts

- **Key Challenges**
- *Growth Management*
- *Planning in an Information Vacuum*
- *Mitigation in a Revenue Vacuum*
- ***Lessening Community Conflict***

Lessoning Community Conflict

- **Leasing and Royalties are not uniform**
- **Non-landowners not eligible**
- **Costs and benefits are not equal**
- **Opportunities for Participation not equal**

Oil and Gas Leasing Activity by Parcel and Company, Allegheny County, 2003 - 2010*



* January - May 2010

Source: Allegheny County Department of Real Estate
University Center for Social and Urban Research
University of Pittsburgh

Lessoning Community Conflict

- **Split-Estate**
- **What is the impact of a growing amount of land without mineral rights?**
- **How money is obtained and spent will Impact communities**



JOE WERTZ / STATEIMPACT OKLAHOMA

Communities that have Taken Legislative Action in Response to HVHF Shale Gas Drilling in New York

December 31, 2012

Legend

- Communities with legislation to delay, restrict or ban HVHF shale gas development
- Ban or Local Regulation
- Moratorium
- Communities with resolutions to encourage HVHF shale gas development under state regulation
- Extent of Marcellus Shale Formation
- Extent of Utica Shale formation
- County Boundaries
- Municipal Boundaries

Data Sources:
NYS GIS Clearinghouse
fractracker.org
Joint Landowners Coalition of New York

Author: Clay Frickey
Coordinate System: NAD 1983 UTM Zone 18N

Lessoning Community Conflict

- **Fierce Debate in Many Communities**
 - New York
 - Colorado
 - Texas
 - California
 - Pennsylvania
 - Maryland

Lessoning Community Conflict

Shaleshock.org



nyshalegasnow.blogspot.com



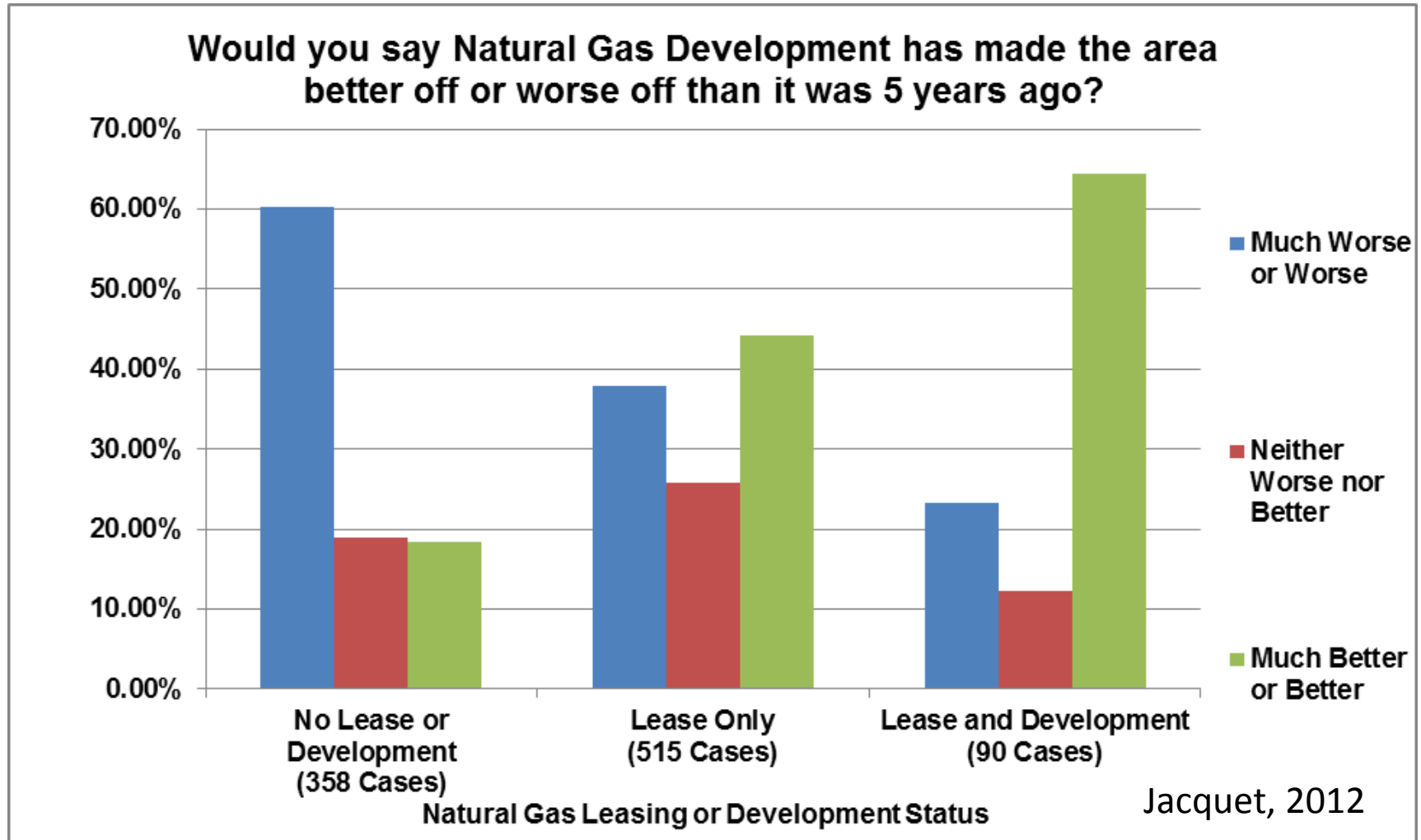
Lessoning Community Conflict

- **Corrosive Communities** (Freudenberg and Jones 1991)
 - **Fierce Community Conflict**
 - **Winners and Losers**
 - **Distrust**
 - **Confusion and Uncertainty**
 - **Litigation**
 - **Blame over faults**
 - **Distaste over benefits**

Lessoning Community Conflict

- **Community conflict worse than the environmental problem itself**
 - **Hampered decision-making, community capacity**
 - **Broken communication and social structures**
 - **Impossible to obtain scientific “facts”**
 - **Disinvestment, outmigration**

Lessoning Community Conflict



Lessoning Community Conflict

Some Solutions

- Increase public opportunity in decision-making
 - Public Forums, meetings, planning
 - forum for public and industry to work together
 - Let people feel like they are part of the process
- Treat both sides with respect
 - Take all parties seriously
- Increase benefits to non-landowners
 - Increase perception of public benefits
 - Increase reality of public benefits.