

Avoiding Groundhog Day

Can collaboration
help
communities
plan for the
boom/bust cycle
of oil and gas
development?

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Topics

- The oil and gas boom/bust cycle: natural cycle vs. unexpected crashes
- Oil & gas booms: beneficial and adverse effects
- Community boom/bust planning challenges
- The Overthrust Industrial Association: an example of industry/community collaboration
- Industry barriers to collaboration
- Kick starting the collaboration process

“Planning” = developing local strategies to...

- Avoid, manage or minimize the adverse effects of oil and gas development
- Enhance beneficial effects of development
- Capitalize on development related opportunities
- Promote community sustainability

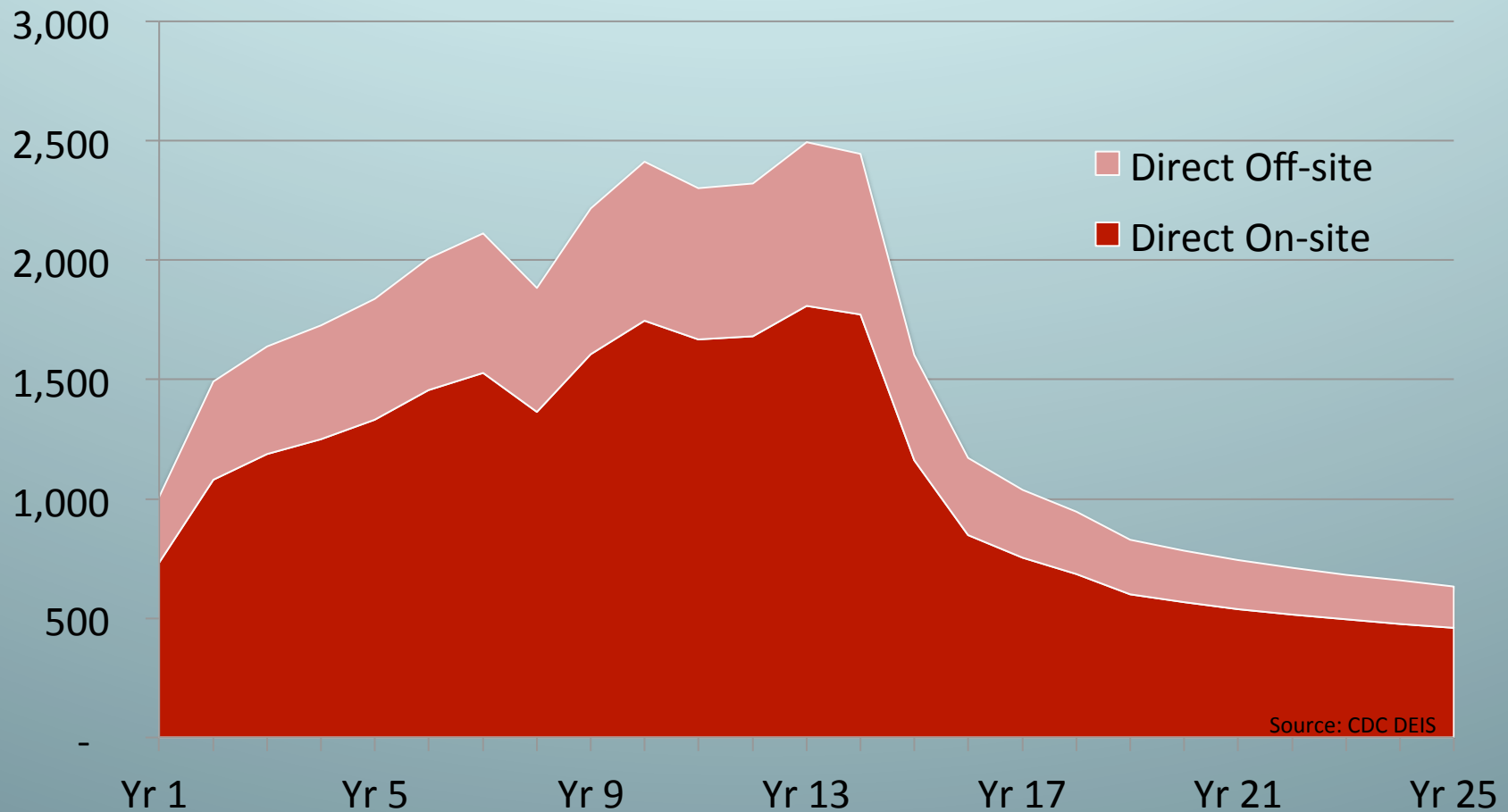
Stages of O&G development: the “natural” cycle

- Exploration/appraisal
- Drilling/field development
- Ongoing production
- Abandonment & reclamation

If the cycle goes as predicted...

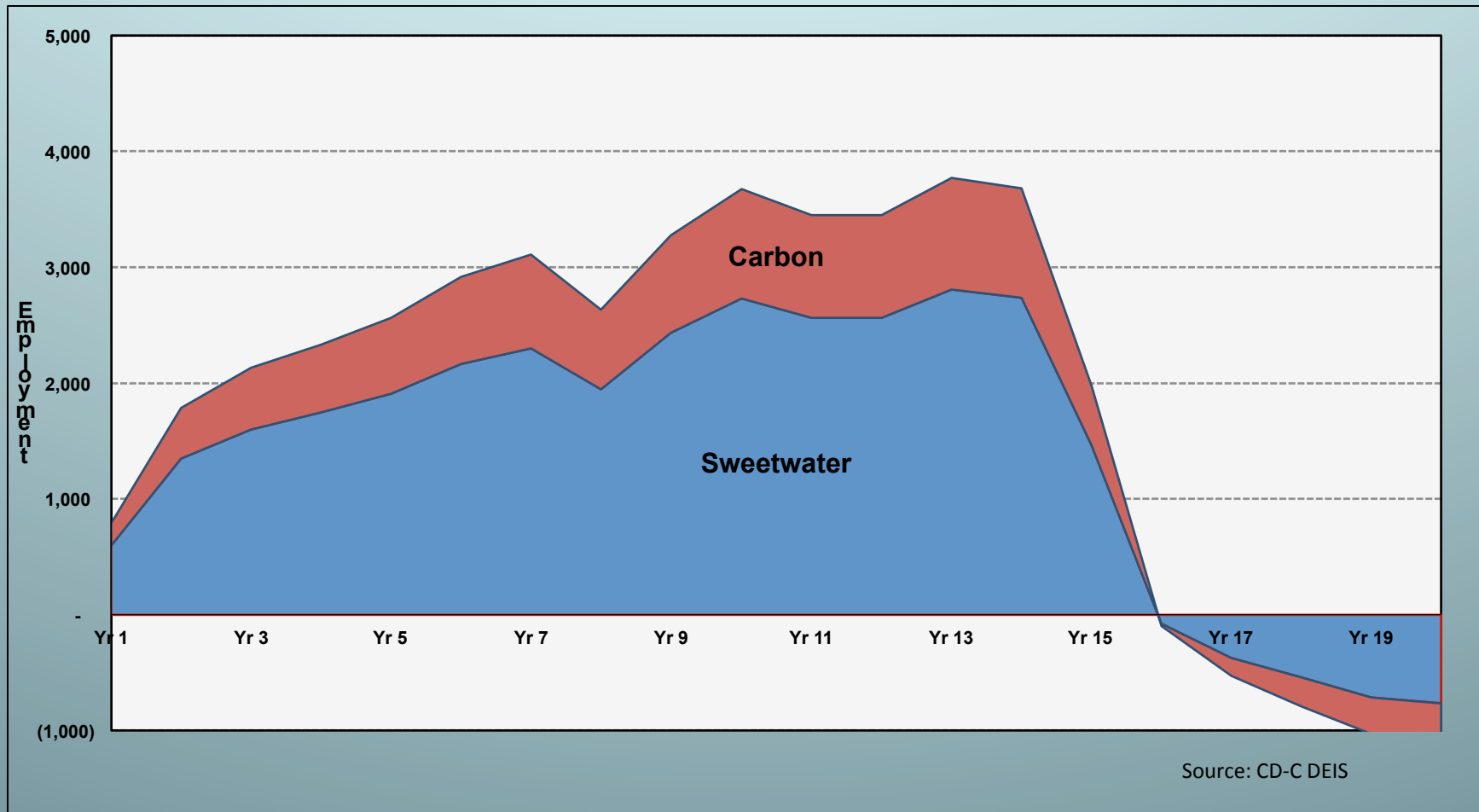
- The drilling/field development stage will bring a flurry of activity
 - Lots of jobs & workers
 - Booming economy & flowing tax revenue
- When the field is fully developed...
 - Number of jobs drops dramatically
 - Economic activity decreases substantially
 - Tax revenues begin to decline

Direct Employment Cycle: 8,950-well CD-C O&G Development Project

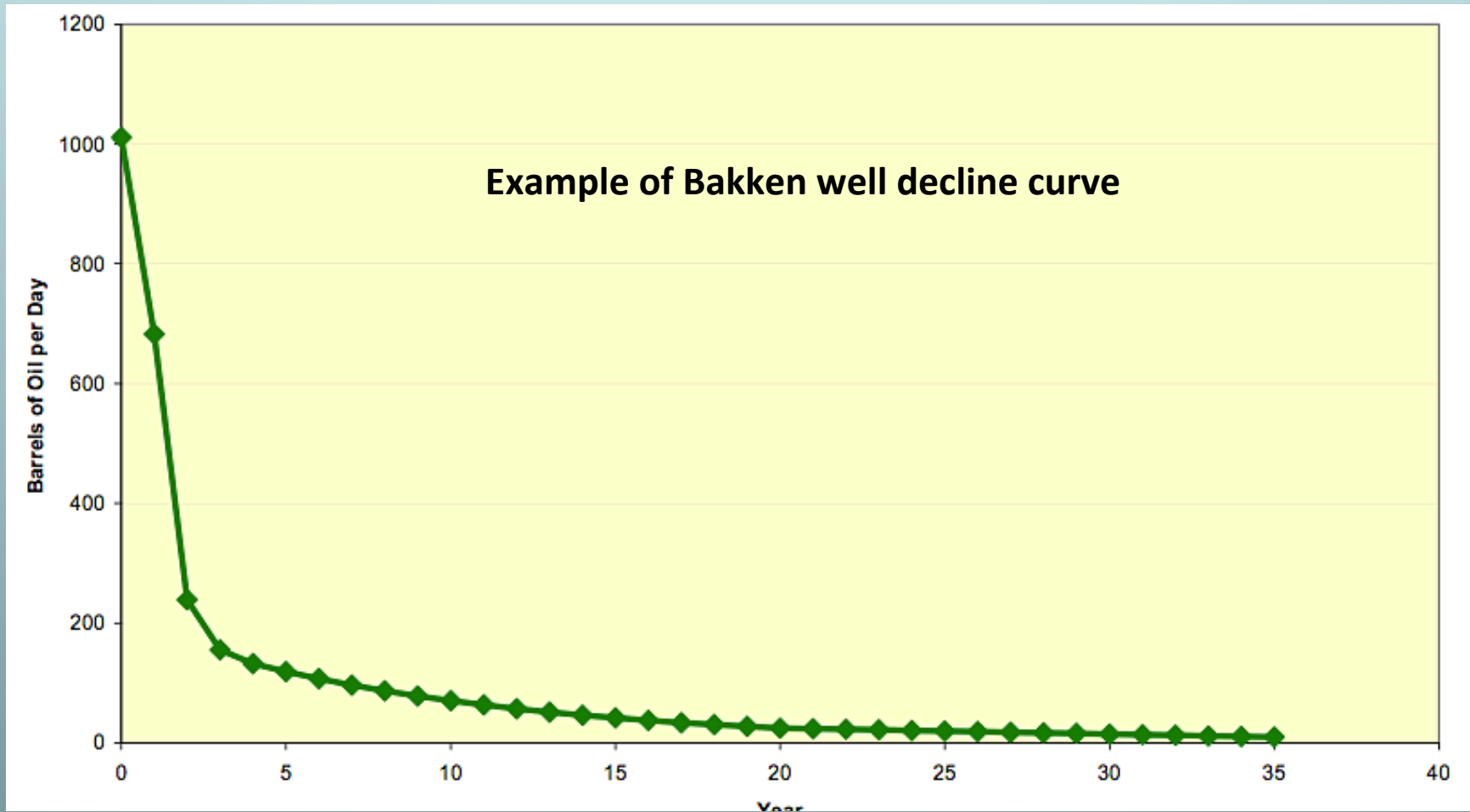


Source: CDC DEIS

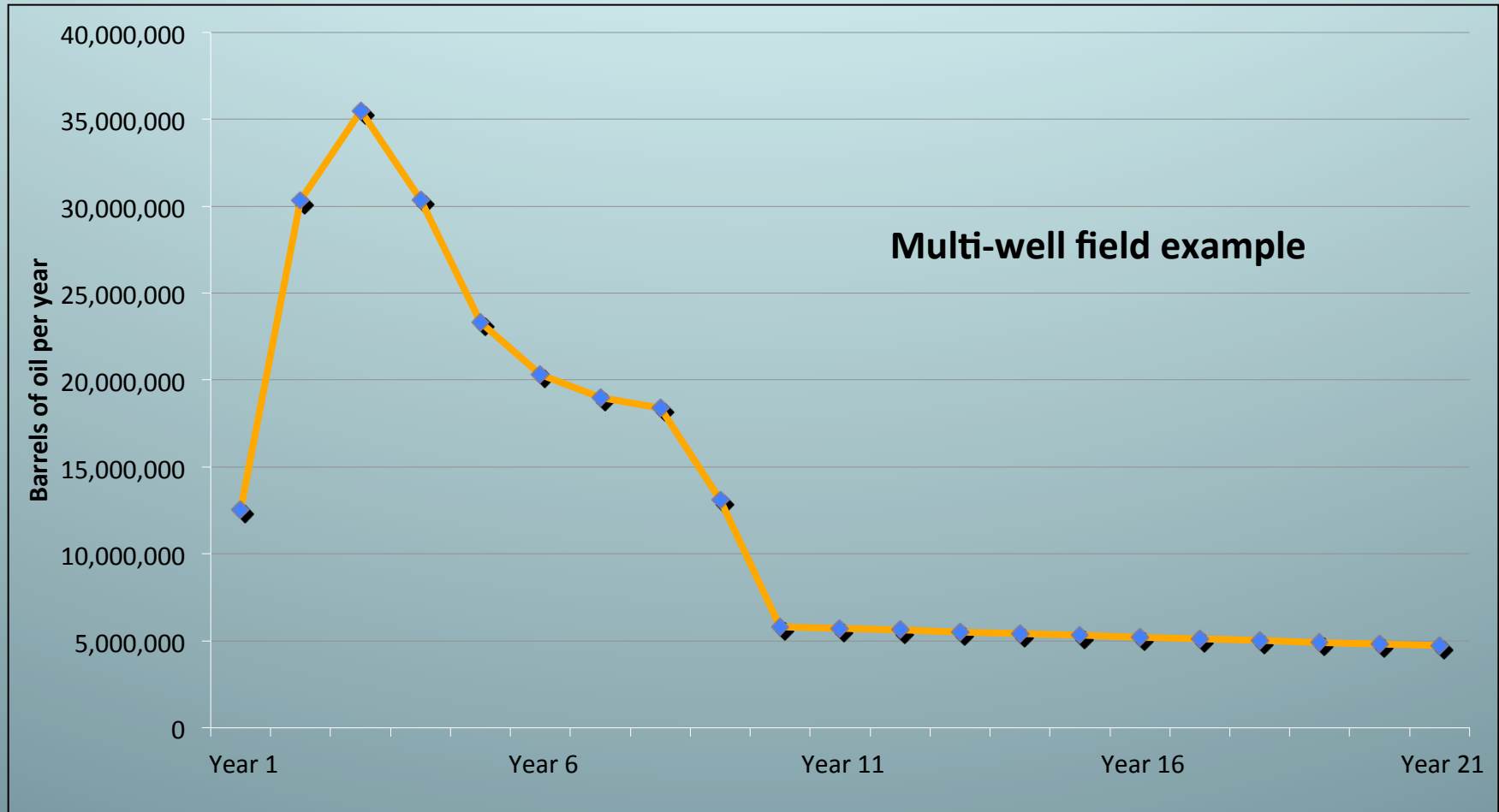
Total Employment Cycle: 8,950-well CD-C O&G Development Project



Tax revenues decline when drilling/
development ends because production declines



Tax revenues decline when drilling/ development ends because production declines



But, if prices plummet and activity falls
prematurely...

**WESTERN COLORADO
STRUGGLES AS ENERGY
JOBS FADE**

New York Times, June 28, 2012

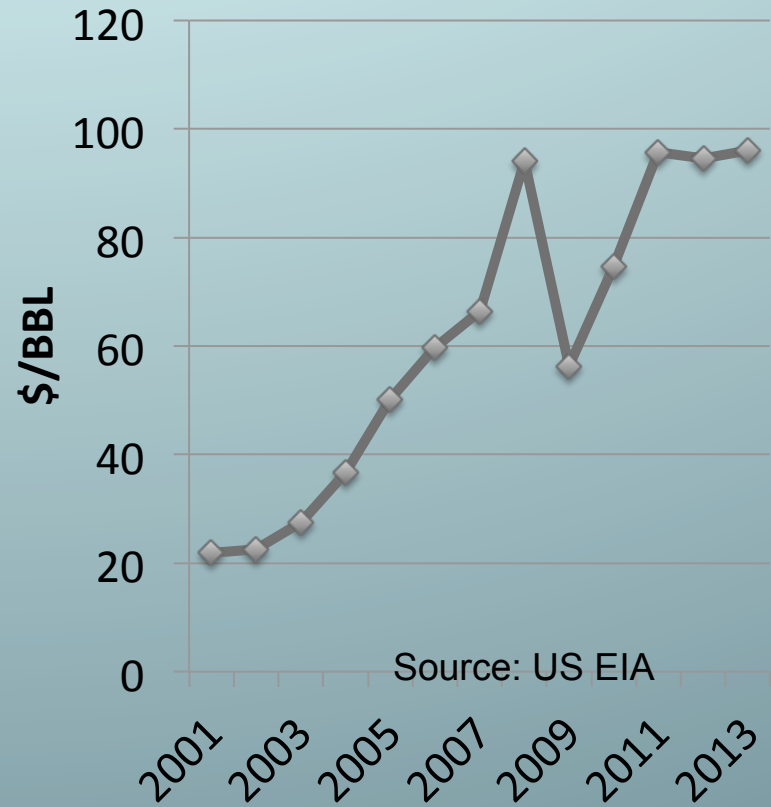
A classic “Bust” can occur

O&G Price Volatility

Natural gas prices

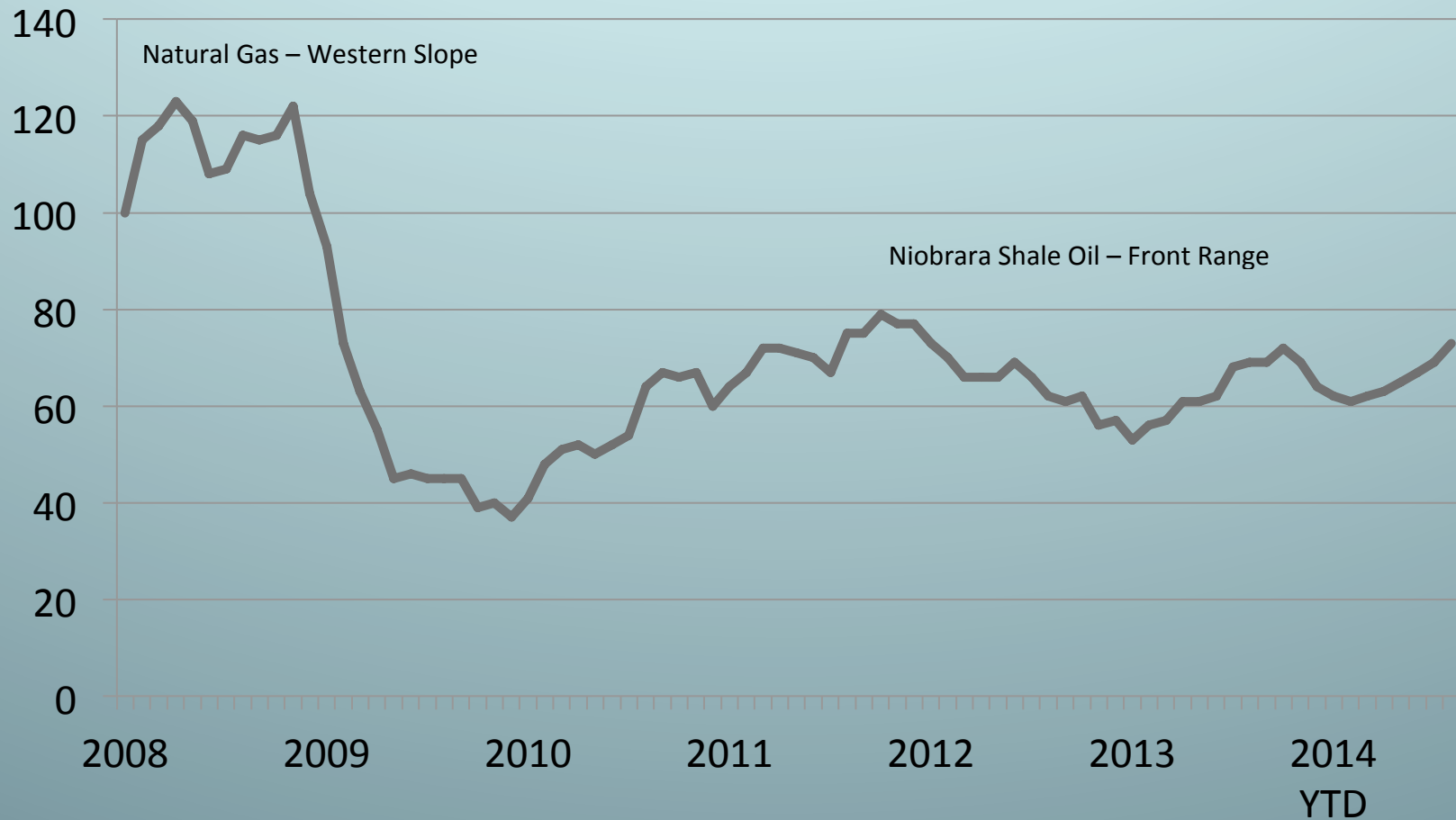


Oil prices

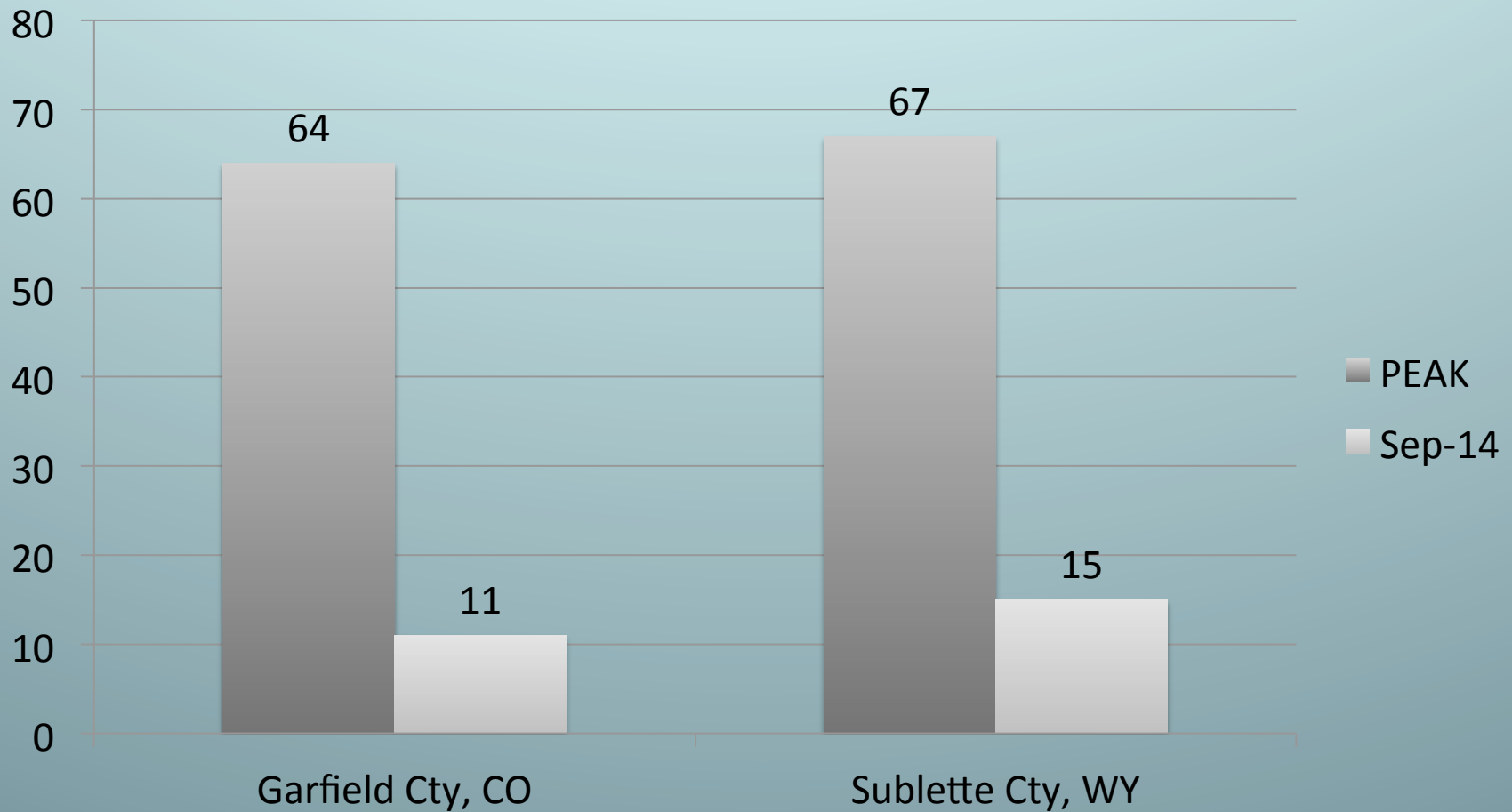


Colorado Rig Counts

January 2008 – December 2013



Recent gas play rig counts



Economic benefits of O&G booms

- O&G booms can bring economic and fiscal bonanzas to communities

Weld County had largest percentage increase in employment nationally Denver Post, 9/19/14

– led by new jobs in construction and oil and gas...

Economic Benefits of O&G Booms

Oil and gas exploration in Mountain West spurs GDP growth nationwide [The Denver Post: 9/17/14](#)

- Oil and gas extracted from the Niobrara shale formation pushed GDP in Greeley up 10.1 percent to \$9.5 billion in 2013, the second-highest percentage change in the nation. The total gain over the past 3 yrs. was \$2.1 billion (30%)
- GDP in the Denver-Aurora-Lakewood metro area logged growth of 4.3 percent to \$178.9 billion, the nation's 47th largest GDP gain, also led by natural resources and mining.
- Casper's GDP grew 7.1 percent, the 11th largest gain in the nation, to \$7.5 billion, attributed to mining/oil and gas activities.

Fiscal Effects of O&G Booms

*ND oil boomtown of Williston approves
\$250M budget* Bismarck Tribune/AP: 9/12/14

- 2011 budget: \$50 million.
- 2000 budget (pre boom): \$20 million.

Adverse effects of O&G booms

- BUT – the boom can also bring problems...
 - Workforce competition & shortages
 - Large transient workforce
 - Rapid population growth
 - Housing shortages & competition
 - Stressed community facilities & services
 - Social issues

Adverse effects of O&G booms

- And...although O&G booms generate bountiful tax revenues...
 - Revenues initially lag local governments' need to provide infrastructure and services
 - Production revenues – the major source of revenue – typically don't accrue to municipalities – the major providers of services
 - Production-related revenues are sensitive to commodity price changes (can be good or bad)

Adverse effects of O&G booms

- *ND oil boomtown of Williston approves \$250M budget* Bismarck Tribune/AP: 9/12/14
- Nearly \$46.5 million will be used to reduce the city's \$140 million debt, largely accrued due to infrastructure projects.
- Roads account for another \$86 million
- \$48 million appropriated for sewer and water improvements

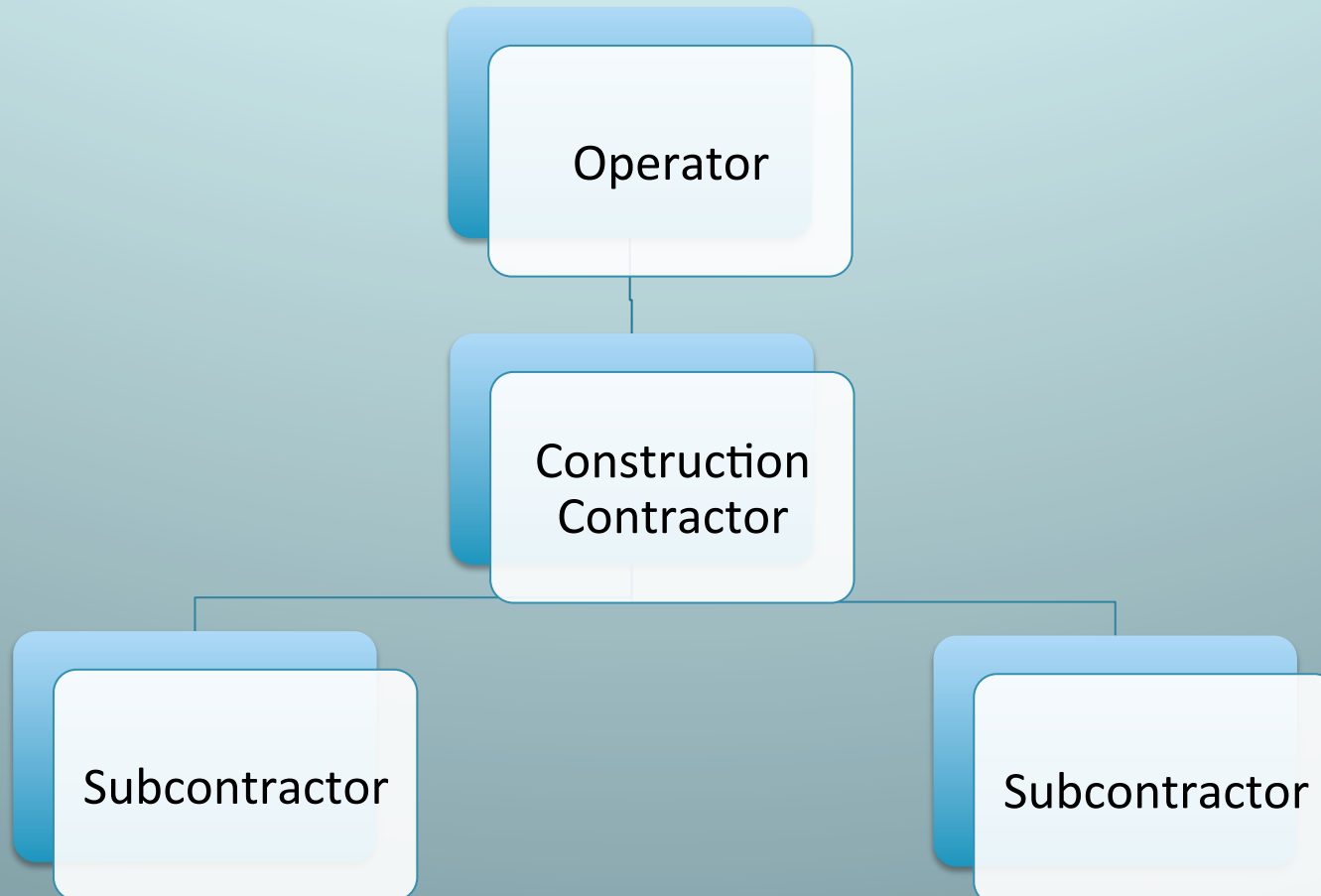
And when the boom busts?

- Rapid exodus of workers and population
- Local businesses suffer
- Housing markets can collapse
- Tax revenues decrease, and in some cases, plummet
- Expanded infrastructure and services may become a burden for communities

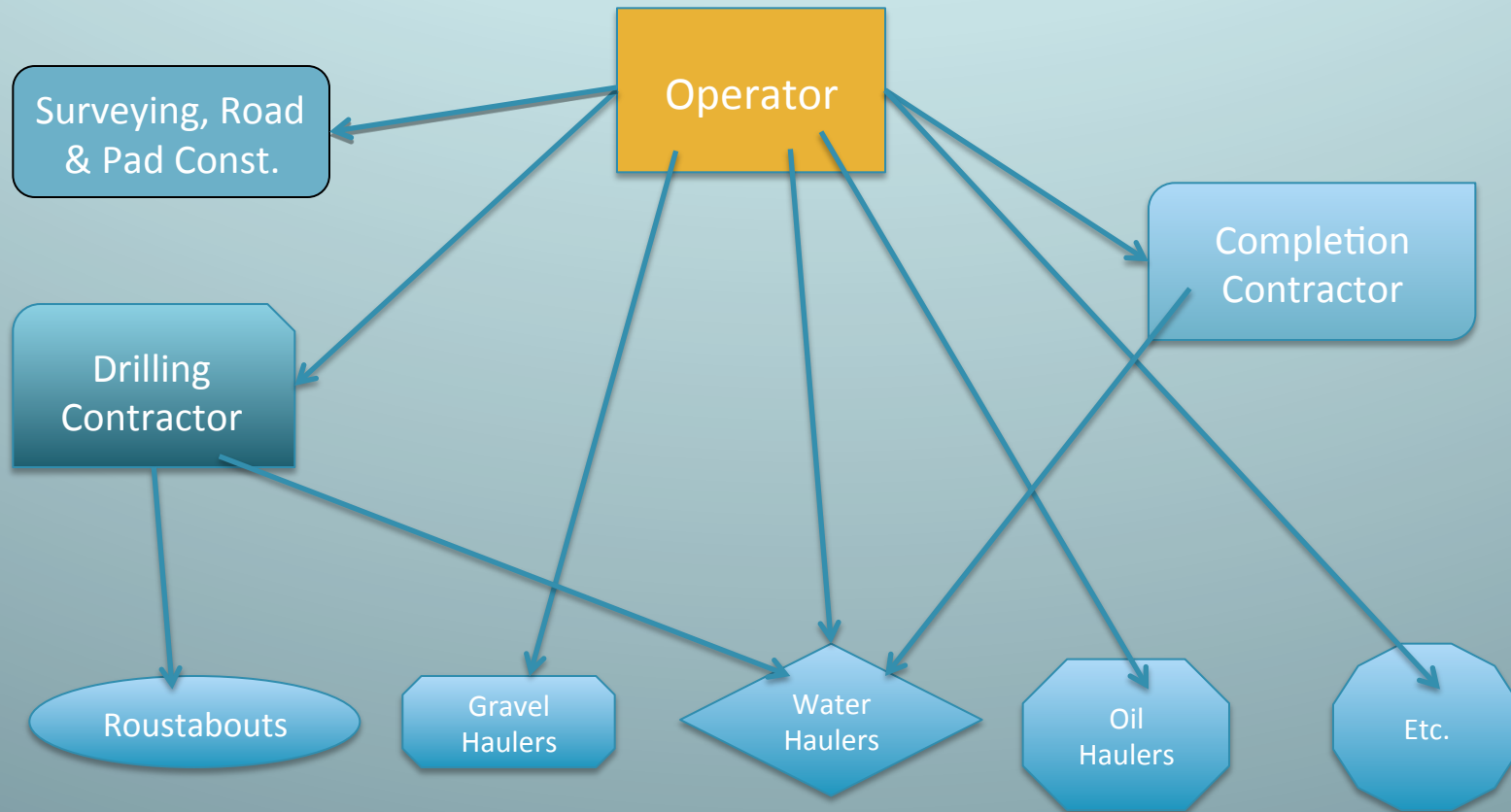
Community O&G boom/bust planning challenges

- Don't know how big the play will be
- Decentralized nature of the O&G industry
- Complexity and volatility of an O&G boom
- Many communities have been “burned once”
- Skeptical about long-range planning
- Don't want to jeopardize development

Mine or power plant development structure



Single operator O&G development structure



Most plays have multiple operators

Converse (WY)

(proposed)

1 county

Up to 50 rigs

6+ companies

Sublette (WY)

(peak)

1 county

67 rigs

12+ companies

Bakken (ND)

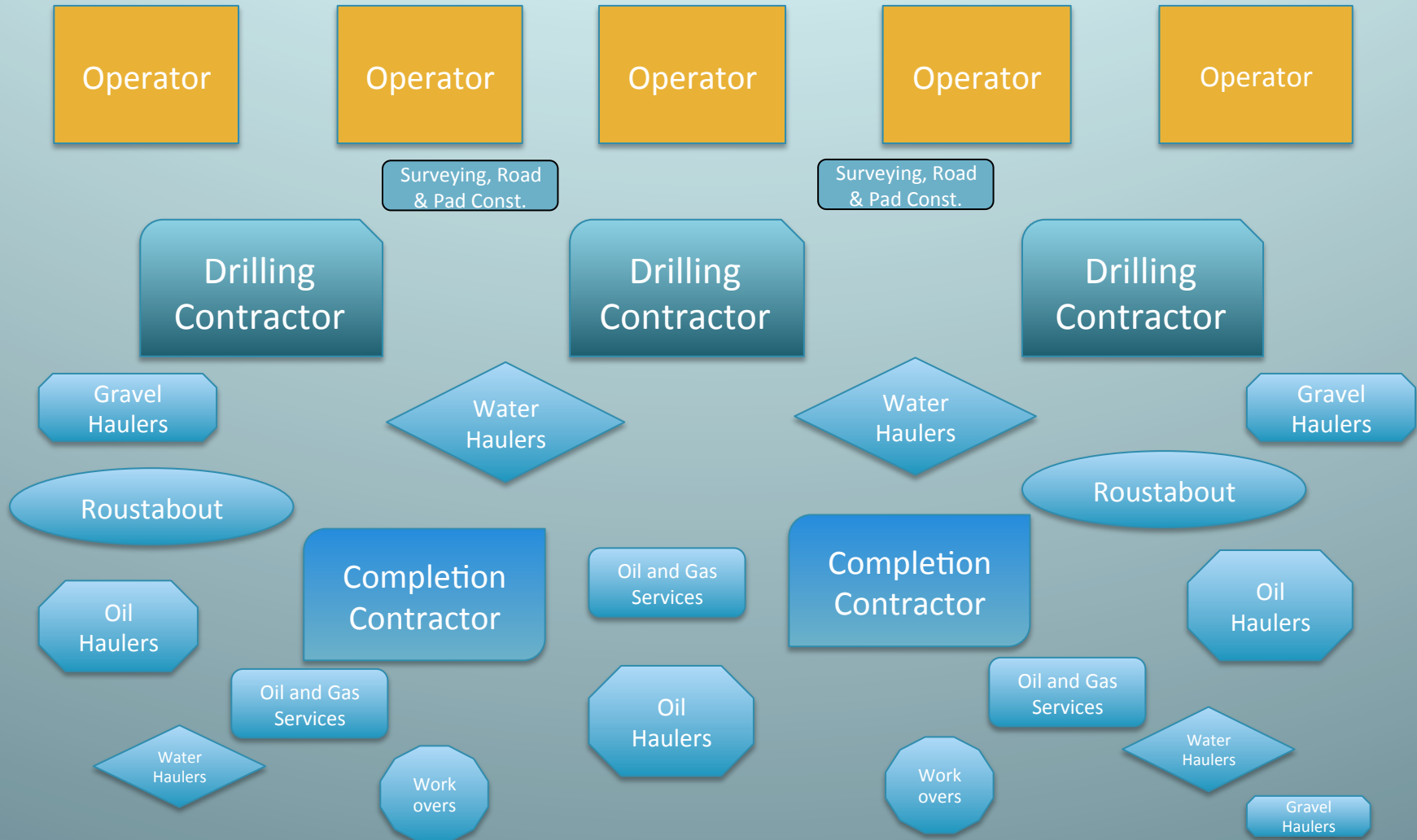
(peak)

6 counties

209 rigs

37 companies

A multiple operator O&G play will have numerous contractors



Multiple operators

- Different resources
- Different development strategies
- Different approaches to dealing with communities

What do these characteristics of the O&G industry mean for communities trying to plan for the future?

- No central source of information
- Development occurring in multiple locations at different paces
- Difficult to predict size and pace of boom
- The pace of development may change quickly

Overthrust Industrial Association

- Formed in 1980 to address Overthrust formation development impacts in Wyoming, Utah & Idaho
- Centered around Evanston/Uinta County, WY
- Formed by Amoco, Chevron & Champlin – later added 33 other member companies
- Life of 48 months

OIA mitigation programs

- Local, state, federal O&G industry and private sector funded
- Industry funds used to leverage other funding & where no other funding sources available
- Mitigation needs were identified by Community Advisory Committees

OIA Community Advisory Committees

- Organized by Western WY Community College:
 - Physical services/land use: planning, water, wastewater, other facilities, municipal finance
 - Education
 - Recreation
 - Health/hospitals
 - Housing
 - Human services/law enforcement

OIA mitigation programs

- Mitigation/Community Development programs were developed and implemented by Impact Coordinating Committees, which included:
 - County Commissioners
 - Mayors of affected communities
 - Representative of WY Governors office
 - Two Industry representatives (OIA Board members)
 - A representative of the Federal Regional Council

Impact Coordinating Committees

- Public/private partnership formed to plan and fund mitigation programs
- Local governments controlled the process of determining and implementing mitigation programs
- Industry wanted to be able to oversee use of funds and effectiveness of programs

OIA technical Assistance Program

- OIA-funded experts that could be accessed to assist Impact Coordinating Committee and service administrators in:
 - Developing programs to effectively address identified needs
 - Planning facilities, programs and service expansions,
 - Preparing grant requests.

OIA facilities program

- County courthouse renovation & expansion
- Human services center
- Recreation center
- Public safety building
- Public works building
- Wastewater treatment facility & system improvements
- Water system improvements
- Safe house
- Day care center

OIA services program – staff & equipment

- City & county employees
- School buses & temporary classrooms
- Law enforcement
- Human services, mental health, youth services, seniors and developmental disabilities programs

OIA monitoring program

- O&G Simulation Model:
 - Employment: direct, indirect & induced
 - Population & residency
- Revenues
- Community needs (housing, infrastructure and services) & mitigation programs
- Updates

OIA in retrospect

- Started after boom was already underway
- Brought local governments & industry together to identify and develop mitigation programs
- Local governments controlled programs
- Technical assistance to support local governments
- Industry \$ used to leverage funding from other sources
- Left communities w/ new facilities & service systems
- Developed facilities without public debt

Industry barriers to collaboration

- Initially play is highly competitive & uncertain
- Worried that info they provide will be used against them
- Worried that they will be asked for funding
 - Companies typically already paying taxes and know they will pay more in the future
- Most work done by O&G service companies
- Some O&G companies not used to collaboration

Recent community/O&G collaboration initiative: BP/Wamsutter

- BP helped build a daycare facility, a town park, and a \$1 million endowment to support an economic development director & daycare operations
- BP worked with governor's office, the state legislature and Wamsutter to identify & fund local infrastructure needs
- In 2009, state funded \$3.5 million for Wamsutter infrastructure, matched by \$3 million from BP for roads, water, sewer, storm drainage improvements, & a basic medical clinic that will be operated using town, county and endowment funds.

Kick starting the collaboration process

- Begin early and informally
 - E.g. regular industry/local government update breakfasts
- Stress cooperative nature of effort
 - Communities bring info & solutions to the table
 - Attractive and well functioning communities benefit the O&G industry

Kick starting the collaboration process

- Make it clear that the monitoring & community response will be ongoing & long term
- Make O&G industry part of the community sustainability effort
- Staff the effort
 - Explore partnerships w/ universities & colleges, associations of governments, etc.