
Presented by Tanya Heikkila
Research with Chris Weible
Associate Professors
School of Public Affairs
University of Colorado Denver

CU-Denver Mini-School for Public Affairs & Public Health
October 16, 2014
Matt Damon: the water has been on fire since 1669.

Fracking = Jobs

Projected economic impact: a low of $2 billion, be as high as 7.4 billion

Economic impact not as high as expected

Protect Our Rights
Save Our Future
Natural Gas Now

Save Our Water
No Fracking
Colorado Newspaper Coverage of “Hydraulic Fracturing”, “Fracking”, or “Fracing”

Article Count


Denver Post
Boulder Daily Camera
Colorado Springs, The Gazette
**Study Population:** ‘Policy Actors’ (Govt., NGOs, Industry, Consultants, Academics, etc.)

**Study Locations:** Colorado, New York, Texas

**Methods:** Interviews, Surveys, Media/Document analyses, Hyperlink analyses

**Key Questions:** General positions, problem perceptions, preferences for who addresses problems, evaluation of recent regulations and policies

**Guiding Framework:** Advocacy Coalition Framework

**Research Team:** Jon Pierce, Sam Gallaher, Jennifer Kagan, Ben Blair, and Kristin Olofsson
What are policy actors’ positions on oil and gas development that uses hydraulic fracturing?
Positions on Hydraulic Fracturing in Colorado

Percent of Respondents

- Stop: 0%
- Limit: 27%
- Continue at Current Rate: 33%
- Expand Moderately: 21%
- Expand Extensively: 10%
Positions on Hydraulic Fracturing in Texas

- Stop: 15%
- Limit: 30%
- Continue at Current Rate: 35%
- Expand Moderately: 15%
- Expand Extensively: 15%
Positions on Hydraulic Fracturing in New York

Percent of Respondents

- Stop: 27%
- Limit: 26%
- Continue at Current Rate: 10%
- Expand Moderately: 18%
- Expand Extensively: 18%
Who are these policy actors?
Stop/Limit (n=48) Environmental groups, local government actors, organized citizens

Continue at Current Rate (n=43) Local governments, oil and gas operators, federal and state government actors

Expand (n=46) Oil and gas operators, some local government actors, industry associations
Positions on Hydraulic Fracturing in Texas

<table>
<thead>
<tr>
<th>Percent of Respondents</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Stop</td>
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<tr>
<td>Continue at Current Rate</td>
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<tr>
<td>Expand Moderately</td>
</tr>
<tr>
<td>Expand Extensively</td>
</tr>
</tbody>
</table>

- Stop: 10%
- Limit: 25%
- Continue at Current Rate: 30%
- Expand Moderately: 15%
- Expand Extensively: 5%
Organizational Affiliation by Positions in Texas

Stop/Limit (n=35) Organized citizen groups, environmental groups; some local and state government actors

News media and academics & consultants are in both groups

Expand (n=43) Oil and gas industry; local, state and federal government actors
Position on Hydraulic Fracturing in New York

- Ban the practice: 35%
- Continue de facto moratorium: 10%
- Permit small-scale experimental drilling: 5%
- Permit in some regions of NY: 0%
- Permit statewide drilling: 20%
Organizational Affiliation by Positions in New York

Stop/Limit (n=67) Environmental groups, organized citizen groups, federal government

Expand (n=57) Oil and gas industry, mineral rights groups, state government actors

Local government actors and academics & consultants are in both groups.
What are policy actors’ perceptions of environmental problems?
<table>
<thead>
<tr>
<th></th>
<th>Air quality degradation</th>
<th>Competition over water supplies</th>
<th>Nuisance from well site</th>
<th>Contamination of ground &amp; surface water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td><img src="image" alt="Not at all" /></td>
<td><img src="image" alt="Moderate" /></td>
<td><img src="image" alt="Severe" /></td>
<td><img src="image" alt="Severe" /></td>
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</tbody>
</table>

Perceived Environmental Problems: Colorado
## Perceived Environmental Problems: Texas

<table>
<thead>
<tr>
<th>Severe</th>
<th>Moderate</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Fracking" /></td>
<td><img src="image" alt="Fracking" /></td>
<td><img src="image" alt="Love Fracking" /></td>
</tr>
<tr>
<td><img src="image" alt="Fracking" /></td>
<td><img src="image" alt="Fracking" /></td>
<td><img src="image" alt="Love Fracking" /></td>
</tr>
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</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Moderate</td>
<td>Severe</td>
<td>Severe</td>
</tr>
</tbody>
</table>

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*Images of 'Fracking' and 'Love Fracking' are placeholders for actual visuals*
## Perceived Environmental Problems: New York

<table>
<thead>
<tr>
<th>Severity</th>
<th>Air quality degradation</th>
<th>Competition over water supplies</th>
<th>Nuisance from well site</th>
<th>Contamination of ground &amp; surface water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td>![No Fracking]</td>
<td>![No Fracking]</td>
<td>![No Fracking]</td>
<td>![No Fracking]</td>
</tr>
<tr>
<td>Moderate</td>
<td>![I Love Fracking]</td>
<td>![I Love Fracking]</td>
<td>![I Love Fracking]</td>
<td>![I Love Fracking]</td>
</tr>
<tr>
<td>Not at all</td>
<td>![I Love Fracking]</td>
<td>![I Love Fracking]</td>
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What are policy actors’ perceptions of political problems?
Perceived Political Problems: **Colorado**

- **Severe**
  - Insufficient capacity to regulate or monitor
  - Landowner or mineral rights owner conflicts
  - Public Distrust of Oil & Gas Industry
  - ‘Scare tactics’ on fracking

- **Moderate**
  - No Change

- **Not at all**
Perceived Political Problems: Texas

Severe

- Insufficient capacity to regulate or monitor
- Landowner or mineral rights owner conflicts
- Public Distrust of Oil & Gas Industry
- ‘Scare tactics’ on fracking

Moderate

- Insufficient capacity to regulate or monitor
- Landowner or mineral rights owner conflicts
- Public Distrust of Oil & Gas Industry
- ‘Scare tactics’ on fracking

Not at all

- Insufficient capacity to regulate or monitor
- Landowner or mineral rights owner conflicts
- Public Distrust of Oil & Gas Industry
- ‘Scare tactics’ on fracking
Perceived Political Problems: New York

Insufficient capacity to regulate or monitor
Landowner or mineral rights owner conflicts
Public Distrust of Oil & Gas Industry
‘Scare tactics’ on fracking
How do policy actors evaluate recent state-level policies?
“Colorado fracking chemicals subject to mandatory disclosure rule; potential trade secrets loophole still exists”

Huffington Post
(Dec. 13, 2011)

“The new oil and gas setback buffer will not please the industry.”

Colorado Energy News
(Feb. 11, 2013)
2011 Disclosure Rule Resolving Problems: Colorado

Strongly agree

Agree

Neither agree or disagree

Disagree

Strongly disagree

What chemical information must be disclosed

Protection of trade secrets

Disclosure of chemical information in an emergency

Public distrust of hydraulic fracturing
2013 Setback Rule Resolving Problems: Colorado

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

<table>
<thead>
<tr>
<th>Public nuisance impacts</th>
<th>Priorities of mineral rights owners</th>
<th>Priorities of surface owners</th>
<th>Public distrust of hydraulic fracturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Love Fracking! No Change</td>
<td>No Change</td>
<td>I Love Fracking! No Change</td>
<td>I Love Fracking! No Change</td>
</tr>
</tbody>
</table>
2011 Disclosure Rule Resolving Problems

Texas

Strongly agree

Agree

Neither agree or disagree

Disagree

Strongly disagree

What chemical information must be disclosed
Protection of trade secrets
Accessibility of chemical information to the public
Public distrust of hydraulic fracturing

I love Fracking!
Perceived Impact of Moratorium:

**New York**

<table>
<thead>
<tr>
<th>Positive Impact</th>
<th>No Impact</th>
<th>Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Fracking" /></td>
<td><img src="image2" alt="Fracking" /></td>
<td><img src="image3" alt="Fracking" /></td>
</tr>
<tr>
<td><img src="image4" alt="Fracking" /></td>
<td><img src="image5" alt="Fracking" /></td>
<td><img src="image6" alt="Fracking" /></td>
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<tr>
<td><img src="image7" alt="Fracking" /></td>
<td><img src="image8" alt="Fracking" /></td>
<td><img src="image9" alt="Fracking" /></td>
</tr>
</tbody>
</table>

- **Env Quality**
- **Public Health**
- **Political Debates**
- **Trust in Gov**
- **Econ Vitality**
What Are Policy Actors’ Perceptions of the Appropriate Level of Government for Responding to these Problems?
Preferred Level of Government for Mitigating Public Nuisances

Colorado

Stop
Continue
Expand

- Federal Government
- State Government
- Local Government
- No Regulation

No Change
Fracking!
Preferred Level of Government for Mitigating Public Nuisances

Texas

- Federal Government
- State Government
- Local Government
- No Regulation
Preferred Level of Government for Monitoring Water Quality

**Texas**

- Federal Government
- State Government
- Local Government
- No Regulation

**FRACKING**

**I ❤️ Fracking!**
How do policy actors compare in their capacity to use or mobilize different resources to achieve their goals?
## Policy Actors’ Mean Level of Resources

<table>
<thead>
<tr>
<th></th>
<th>Colorado</th>
<th>Texas</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial resources (staff)</strong></td>
<td>2.2</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Support from the media</strong></td>
<td>3.2</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Support from govt. officials</strong></td>
<td>3.3</td>
<td>2.3</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Support from the public</strong></td>
<td>3</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Technical expertise</strong></td>
<td>2.6</td>
<td>3.2</td>
<td>3</td>
</tr>
</tbody>
</table>

1 = no capacity; 2 = Limited capacity, 3 = Moderate capacity, 4 = Substantial capacity
Who do policy actors regularly interact with to achieve their goals?
### Percent of Policy Actors Interacting with the Following Actor Types:

<table>
<thead>
<tr>
<th>Actor Type</th>
<th>Colorado</th>
<th>Texas</th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Government</td>
<td>79%</td>
<td>58%</td>
<td>61%</td>
</tr>
<tr>
<td>State Government</td>
<td>69%</td>
<td>48%</td>
<td>25%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>52%</td>
<td>36%</td>
<td>10%</td>
</tr>
<tr>
<td>Oil &amp; Gas Industry</td>
<td>42%</td>
<td>45%</td>
<td>9%</td>
</tr>
<tr>
<td>Environmental Orgs.</td>
<td>79%</td>
<td>87%</td>
<td>83%</td>
</tr>
<tr>
<td>Citizen groups</td>
<td>71%</td>
<td>81%</td>
<td>83%</td>
</tr>
<tr>
<td>News Media</td>
<td>50%</td>
<td>81%</td>
<td>53%</td>
</tr>
<tr>
<td>Academics</td>
<td>58%</td>
<td>60%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Summary: How does the political landscape compare across Colorado, Texas, and New York?
Positions and Problem Perceptions

**Positions**
- CO and TX less polarized than NY

**Environmental Problem Perceptions**
- CO and TX share concerns about public nuisances
- Concerns about water competition are highest in TX
- All states polarized on surface and ground water contamination and air quality degradation

**Political Problem Perceptions**
- All states share concerns about public distrust of the industry
- All states polarized on sufficient regulatory capacity and on conflicts between surface and mineral right owners

** Preferred Levels of Government**
- Some agreement that local governments should regulate nuisances in both CO and TX
Impacts of State Policies on Resolving Problems

**Disclosure vs. Setbacks in CO**
- More polarization about whether disclosure rule resolved problems
- Neither group agrees that the setback rule resolved problems
- Common concerns that neither rule has improved public trust

**Disclosure CO vs. Disclosure TX**
- Similar polarized patterns between CO and TX
- Common concerns that the disclosure rules did not improve public trust

**De Facto Moratorium in NY**
- Those against hydraulic fracturing see positive impacts on environmental issues and neutral impact on political/economic issues
- Those for hydraulic fracturing see neutral impact on environmental issues and negative impact on political/economic issues
Policy Actor Resources and Interactions

**Resources Available to Achieve Policy Goals**
- Those in favor report more financial resources than those against in TX and NY and more technical resources in CO and TX
- Those against report more public support in CO & NY

**Interactions of Those Against Hydraulic Fracturing**
- All states - frequent engagement with environmental orgs and citizens groups, plus:
  - CO - frequent engagement with state and local government
  - TX - frequent engagement with media
  - NY – frequent engagement with academics

**Interactions of Those In Favor of Hydraulic Fracturing**
- All states – frequent engagement with industry, plus:
  - CO – frequent engagement with state and local government
What are some of the lessons learned from other natural resource conflicts that can inform how we deal with debates over hydraulic fracturing?
Lessons learned from Other Natural Resource Conflicts

• More technical and scientific information is not always the answer, as it is often used as political salvo
  – Start by understanding citizen priorities, values, and interests

• Learning can occur in professionalized forums
  – Requires shared rules of transparency, negotiations, and representativeness

• Consensus is often undesired and negotiations are unlikely until there is a “hurting stalemate”
  – Look for possible brokers to help and develop conflict mitigation strategies

• Threats, risks, and benefits of the issue spill across levels and jurisdictions of government
  – Consider “polycentric” arrangements
Thank You

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