Hydraulic Fracturing

The State of Public Policy in America

Presented by Adam R. Saslow
to the Air and Waste Management Association
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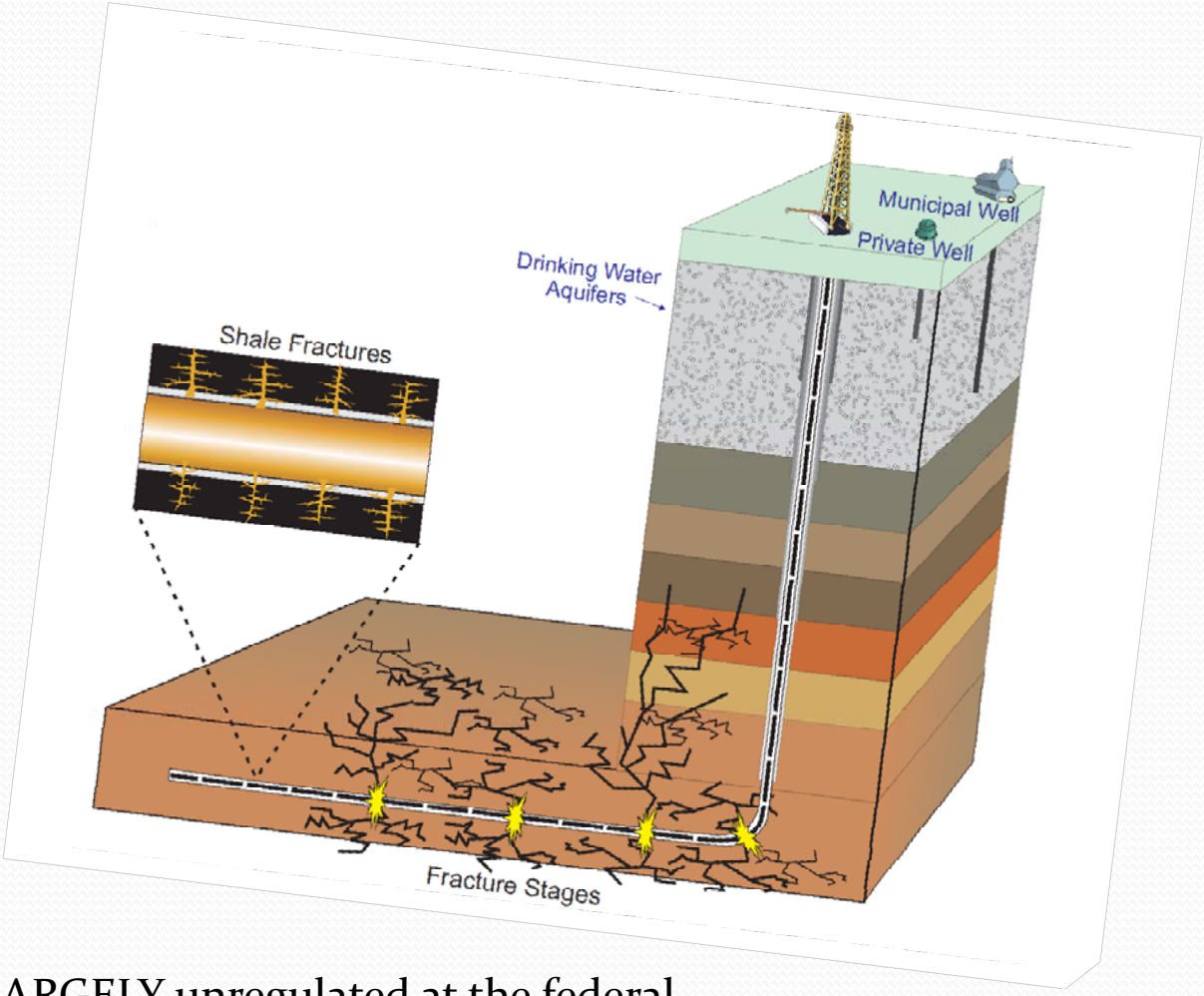
Today's Discussion

- What is "Fracking" and how is it regulated?
- Why is EPA studying hydraulic fracturing?
- What will the study include?
- How can stakeholders be involved?
- The crystal ball
- Next Steps

Fracking – The Graphic

The hydraulic fracturing process includes:

- the acquisition of source water,
- well construction,
- well stimulation,
- waste disposal.



Fracking is LARGELY unregulated at the federal level because of exclusions under SDWA at SDWA § 1421 (d)(1). State regs may apply (e.g., NYS).

Why is fracking in the news?

- Natural gas – the energy resource for energy independence?
  - Projections for shale gas to comprise 20% of the gas supply in ten years according to DOE's 2009 Annual Energy Outlook
- Gasland – the Movie
- The news
  - Fracking fluids are 99% water
  - 350,000 or more gallons may be needed to "frack" a single well
- The regulatory environment

The Federal Reaction

- A Study!
  - In its Fiscal Year 2010 budget report, the U.S. House of Representatives Appropriation Conference Committee identified the need for a focused study of this topic.
  - Natural gas is a key energy resource
  - Public has raised concerns about hydraulic fracturing and water
  - EPA wants to ensure that public health and the environment are protected

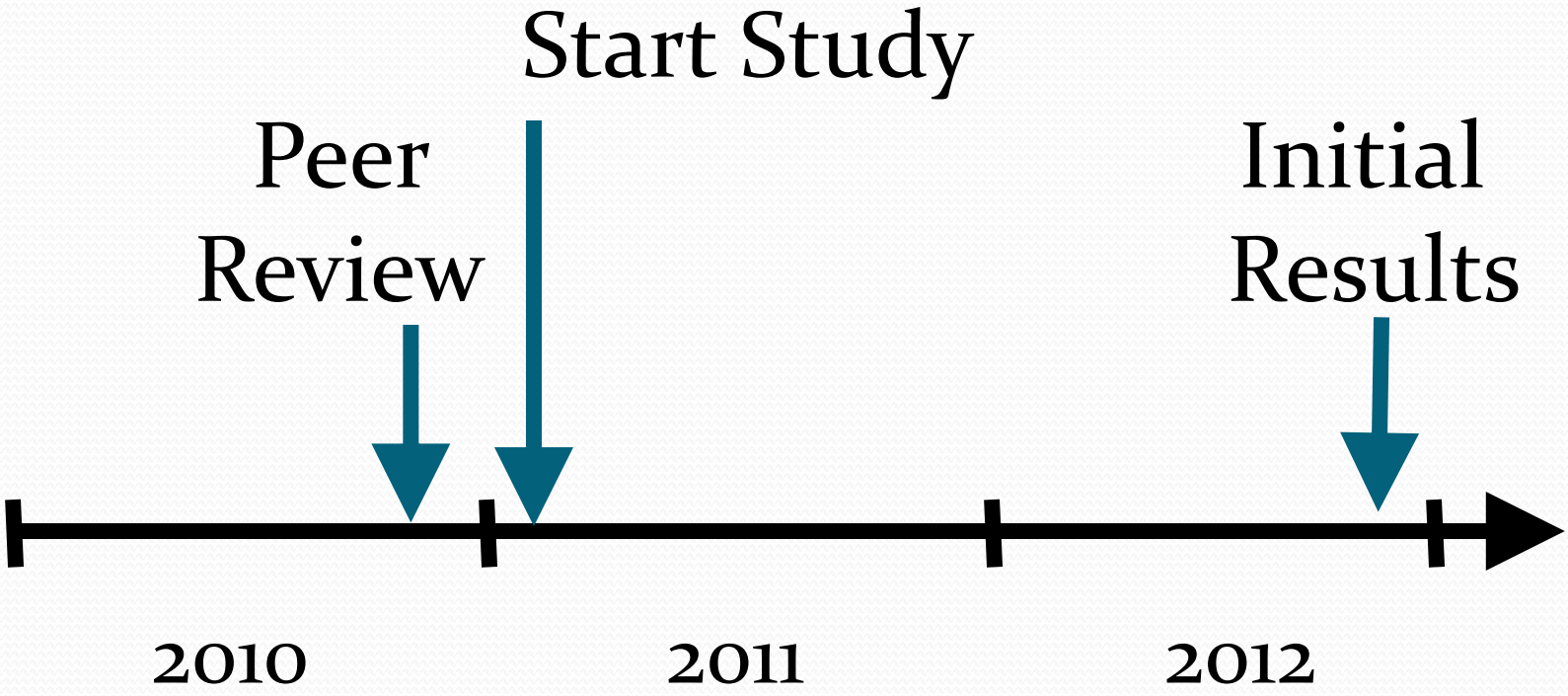
Study Approach

- Best available science
- Independent sources of information
- Transparent, peer-reviewed process
- Consultation with others

Study Plan Development

- Led by EPA scientists
- Initial recommendations by EPA's Science Advisory Board (April 2010):
  - Focus on water resources (quality and quantity)
  - Use case-study approach
  - Stakeholder process important

Study Timeline



What does EPA hope to learn from this study?

- What hydraulic fracturing scenarios might cause impacts on drinking water resources?
- What approaches are effective for protecting drinking water?

What are the major elements of the study?

- Data and information
- Chemical fate and transport
- Case studies

What types of data and information are being collected?

- Pre- and post-drilling site characteristics
- Chemical data
  - Hydraulic fracturing fluids
  - Water quality
- Water use (sources, amount)
- Well construction, well integrity
- Operation and management practices

Where will the data be obtained?

- Existing sources
  - Stakeholders
  - Published reports
- New sources
  - EPA study
  - Other ongoing studies

Fate and Transport

- Characterize fracturing fluids and their degradation products
- Determine the potential to mobilize chemicals from geologic formations
- Identify and refine methods for chemical analysis

Why is EPA Using Case Studies?

- Opportunity for focused field investigations
- Evaluate hydraulic fracturing in different parts of the U.S.
  - Geologic factors
  - Water resource management practices
  - Water quality and quantity

Potential Sites for Case Studies

- Where hydraulic fracturing:
  - is planned
  - is in progress
  - has occurred

Identification and Prioritization of Case Studies

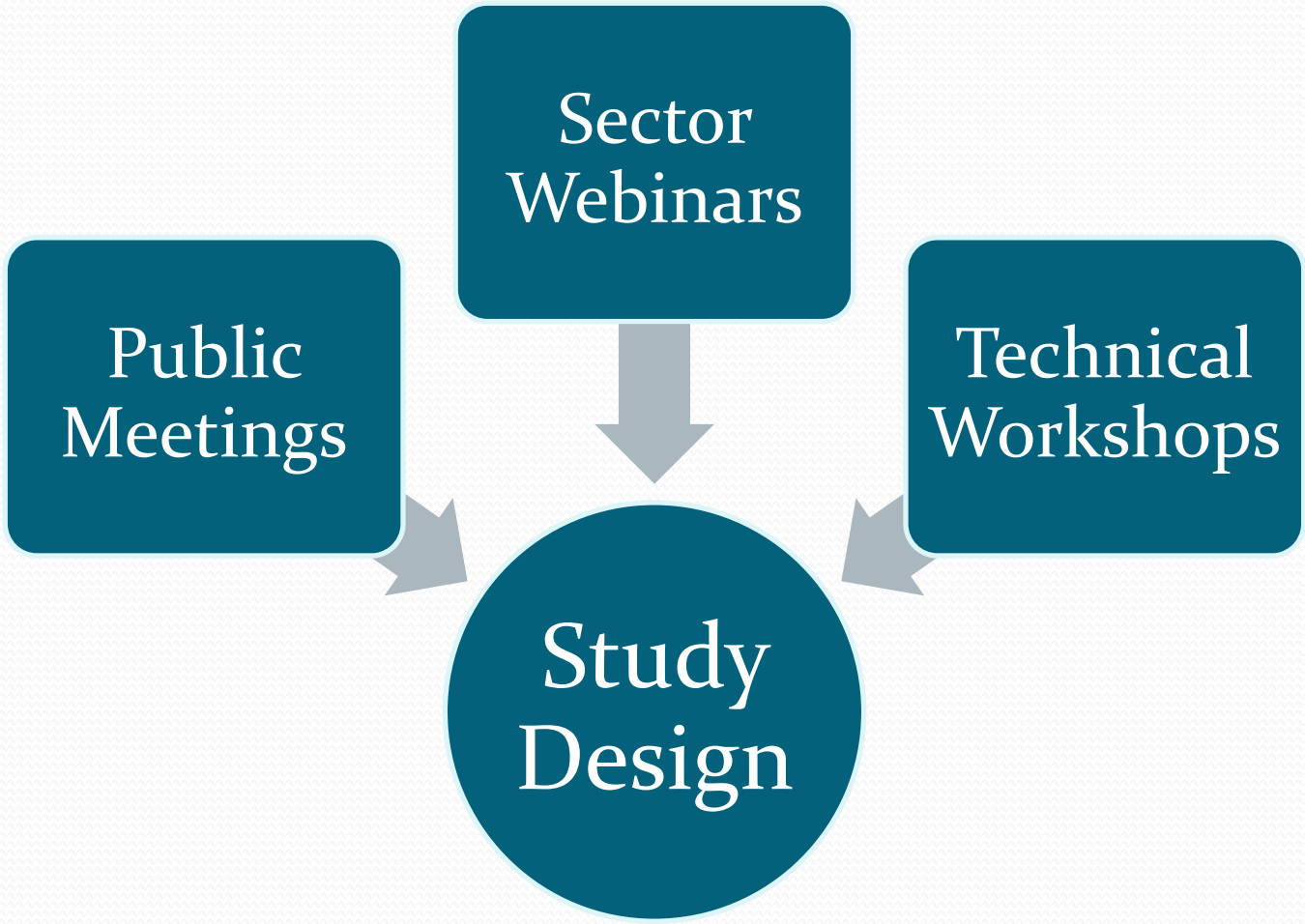
- Stakeholder recommendations
- Vulnerable water resources
  - Proximity of other wells, exposure pathways
  - Extent of activity (wells/acre)
- Geologic conditions
- Geographic variations

How Can Folks Get Involved in EPA's Study?

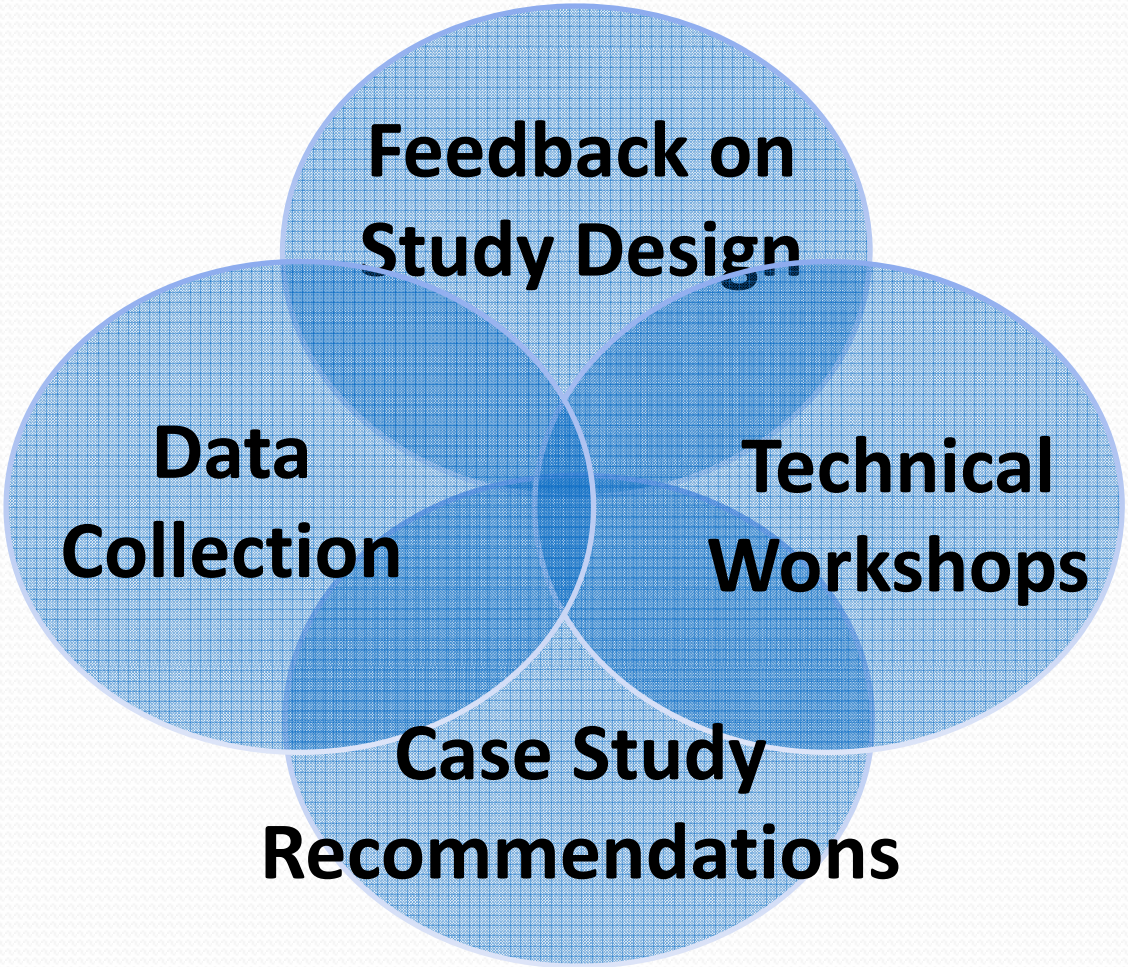
Key Questions

- What should be EPA's highest priorities?
- Where are the gaps in current knowledge?
- Are there data and information EPA should know about?
- Where should EPA conduct its case studies?

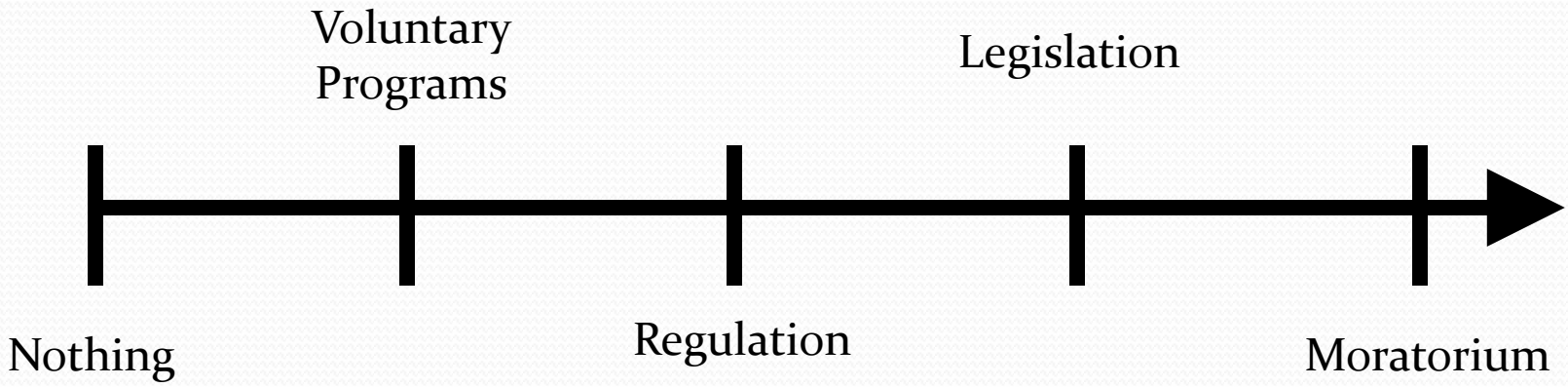
Stakeholder Events



Collaborate with US EPA



A Look Ahead


Voluntary Programs
Legislation
Nothing
Regulation
Moratorium

For More Information

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