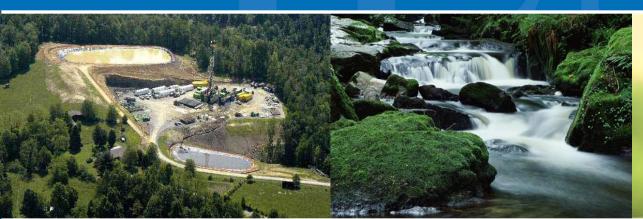


Stakeholder Engagement for EPA's Hydraulic Fracturing Study

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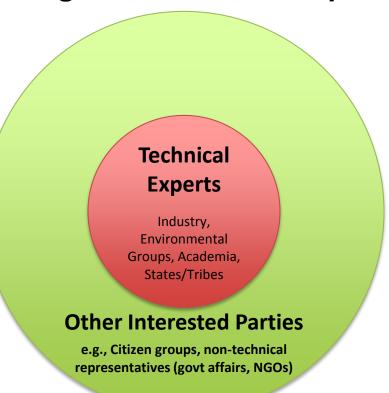




Stakeholder Engagement Goals

- 1. Effective, meaningful two-way engagement with technical experts to inform and positively impact EPA's research study.
- 2. Engage broader stakeholder community to provide status updates on the study, report out on technical roundtables and workshops, and to seek information and data to inform the 2014 draft report.

Targeted Interest Groups



A transparent, research-driven approach with stakeholder involvement can address questions about hydraulic fracturing.



Key Objectives are to:

- Increase technical engagement with stakeholder community to assure that EPA has ongoing access to a broad range of expertise and data outside the Agency.
- Obtain timely and constructive feedback on data and analysis developed in the study.
- Assure that EPA is current on changes in industry practices and technologies.
- Improve public understanding of the goals and design of the study.
- Provide useful information to stakeholders which can be used to reduce environmental and public health impacts of hydraulic fracturing.



Stakeholder Involvement in Hydraulic Fracturing Study 2010-13:

- 2010 public meetings held in 4 states and 2011 technical workshops to inform the research.
- Webinar consultations with tribal governments and an in-person meeting with the Haudenosaunee Environmental Task Force in 2010.
- 2012 Roundtables | 2013 Workshops 213 individual attendees from 138 organizations, representative of 14 states.
- Contacts in person and via phone/email to exchange data and information for research projects.
- Responses to information requests through Federal Register Notice and Science Advisory Board reviews.



Stakeholder Engagement

- Interact with outside experts
- Keep up-to-date on changes in technology and practice
- Obtain feedback on current research

Technical Roundtables

- Consult with technical representatives from key stakeholder groups
 - Oil and gas industry, water industry, non-governmental organizations, state/local governments, tribes, academia
- November 2012
- December 9, 2013

Technical Workshops

- Engage with subject-matter experts on specific topics:
 - Analytical chemistry methods
 - Well construction/operation and subsurface modeling
 - Wastewater treatment and related modeling
 - Water acquisition modeling
 - Case studies
- Winter/Spring/Summer 2013



Stakeholder Engagement Moving Forward

- Continue stakeholder outreach
 - Reconvene roundtable in 2014
 - Increased focus on states: How can EPA's work be useful for state decision making?
 - Outreach to tribes
- What topics or issues within our scope would stakeholders like to see EPA address in its final report?



Shale Play Region **State** NY 2 **Marcellus Shale** PA, WV, MD 3 OH **Utica Shale Fayetteville Shale** AR Haynesville-TX/LA 6 **Bossier Shale Barnett & Eagle** TX **Ford Shale** Vermejo & Raton CO **Formations** ND **Bakken Shale** Mancos, Manning 8 UT Canyon, & **Hermosa Shale** WY Niobarra CA **Monterey Shale**

Active States by Play and Region

