

Update on EPA Hydraulic Fracturing Efforts

Ground Water Protection Council - July 9, 2013

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Outline

- Recap of Draft Guidance for Hydraulic Fracturing (HF) with Diesel Fuels
- Review of diesel fuels definition
- Public comments received
- Update on HF Study



Draft Guidance on HF with Diesel Fuels

- On May 4, 2012, EPA released draft underground injection control (UIC) program permitting guidance for Class II wells that use diesel fuels during hydraulic fracturing activities.
- Outlines for EPA permit writers, where EPA is the permitting authority:
 - Requirements for diesel fuels used for hydraulic fracturing wells,
 - Technical recommendations for permitting those wells, and
 - A description of diesel fuels.
- Recommendations built on best practices from industry and state oil and gas programs.
- Companion *Federal Register* notice included questions for public comment.
- Projected release of final guidance: Late 2013



Developing the Diesel Fuels Description

- Consulted with states, and industry to determine how diesel was used in HF
- Reviewed “diesel fuels” as described in other federal programs, scientific literature, and industry references:
 - Material Safety Data Sheets from different refineries
 - References from Petroleum Refinery Processes
 - Chemical Abstracts Service (CAS) Registry Numbers can be used to identify diesel fuels



Diesel Fuels Description

Six CAS Numbers

Diesel Fuel / Diesel Fuel No. 1 (68334-30-5)	Diesel Fuel / Diesel Fuel No. 2 (68476-30-2)	Fuel Oil No. 2 / Diesel Fuel (68476-34-6)	Fuel Oil No. 4 / Diesel Fuel No. 4 (68476-31-3)	Kerosene / Marine Diesel Fuel (8008-20-6)	Distillates (Petroleum), Crude Oil / Diesel Fuel (VDF) (68410-00-4)
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Draft HF Guidance Content

1. UIC Background and Implementation
 - Determination of Class II as appropriate well class
2. Diesel Fuels Description
3. Use of Area Permits
4. Information for Permit Application
5. Area of Review
6. Permit Duration & Well Closure
7. Construction & Mechanical Integrity
8. Operation, Monitoring, & Reporting
9. Financial Responsibility
10. Public Notification



Overview of Comments

- Total comments: 97,147; unique comments: 2,734
- Requested comment on the following:
 - Diesel fuels description and use of a *de minimis* threshold
 - Diesel fuels usage
 - Permit flexibilities
 - Area permit
 - Short duration permits, etc.
 - Area of review
 - Information submitted with the permit application
 - Well construction and mechanical integrity testing
 - Operation, monitoring, and reporting



Recent EPA Activities

- Incorporating comments
- Looking at implementation issues
 - Coordinating with BLM
 - Engaging with industry to develop alternatives to use of diesel fuels in hydraulic fracturing

Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources



Study Purpose

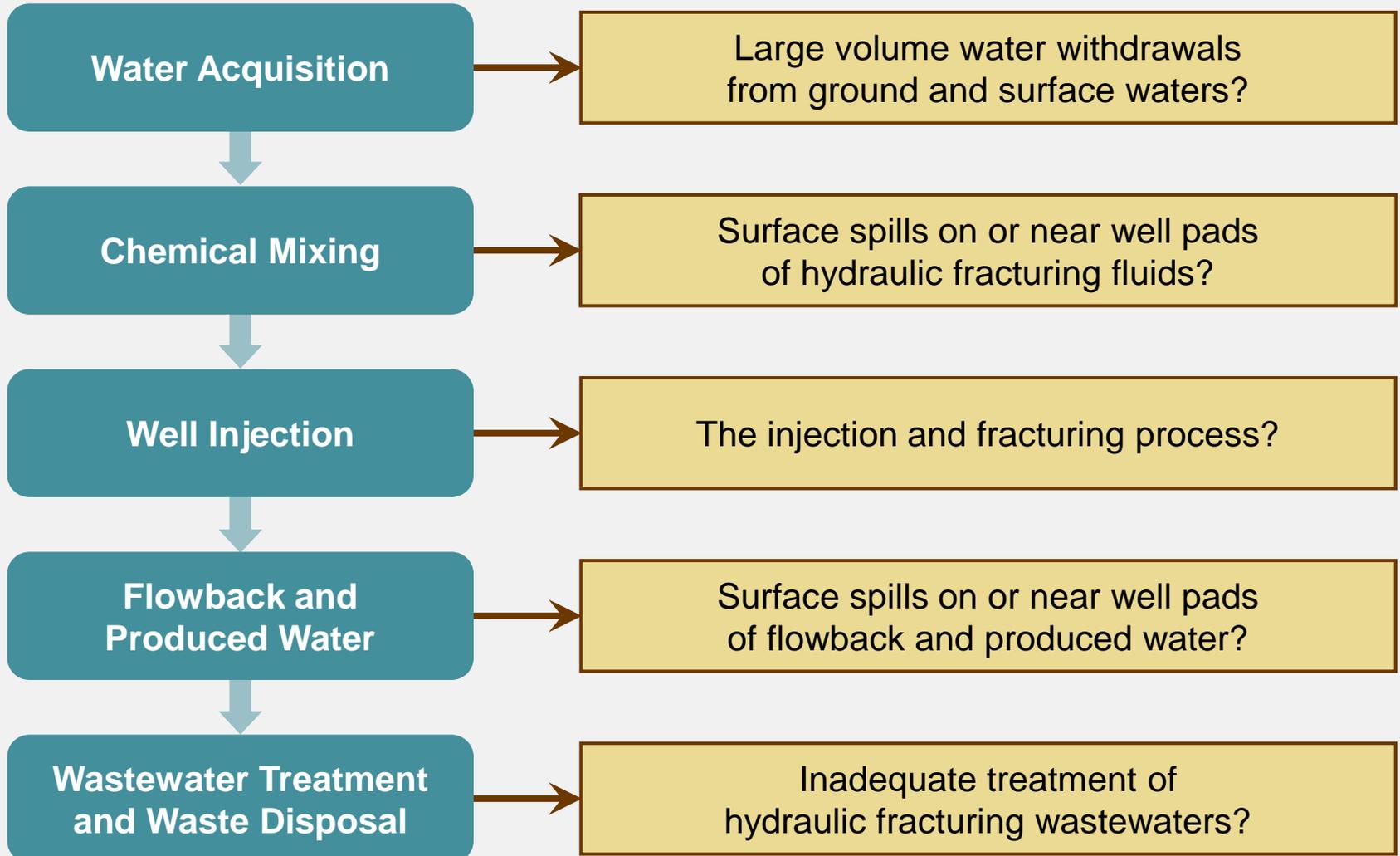
Assess whether hydraulic fracturing may impact drinking water resources

Identify driving factors that may affect the severity and frequency of any impacts



Primary Research Questions

What are the potential impacts on drinking water resources of:



Progress Report

- Includes project-specific updates
 - Research approach
 - Status as of Sept. 2012
 - Next steps
- Does not include research results
- Available at www.epa.gov/hfstudy



Technical Stakeholder Engagement

- Interact with experts outside of the EPA
- Keep up-to-date on changes in technology and practices
- Obtain feedback on current research

6 ROUNDTABLES

- Consult with a broad and balanced panel of experts
 - Oil and gas industry, water industry, non-governmental organizations, state/local governments, tribes, academia
- November 2012
- Summer 2013

5 WORKSHOPS

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

Stakeholder Engagement

WEBINARS

- After technical workshops and roundtables in Summer 2013

INFORMATION REQUEST

- Federal Register Notice requesting relevant studies and data, particularly peer-reviewed studies (November 9, 2012)
 - Available at <https://federalregister.gov/a/2012-27452>

WEBSITE

- Study updates are available at www.epa.gov/hfstudy
- Sign up for email updates

2014 Report of Results

The Report of Results will:

- Answer primary research questions through synthesis of:
 - Available results from study's research projects
 - Scientific literature related to the study
 - Knowledge gained through technical stakeholder engagement
- Inform the public and decision makers about potential impacts of hydraulic fracturing on drinking water resources
- Support potential future work to quantify risks

Study Timeline

US Congress urges the EPA to conduct a study

Peer review of draft study plan*
(February – August 2011)

Release progress report*
(December 2012)

Release final study plan
(November 2011)

Peer review of
draft report of results
(est. late 2014)

Individual reports
and papers

Final report
of results

Planning

Conduct Research

Report of
Results

Technical workshops
(February – March 2011)

Meetings with stakeholders to identify
concerns and study scope
(July – August 2010)

Technical roundtables*
(Summer 2013)

Technical workshops*
(Spring-Summer 2013)

Technical roundtables* / information request
(November 2012)

****Webinars conducted to
provide updates***

Questions?

**See the website for more information:
www.epa.gov/hfstudy**