SLIDES: Research on Ground Water Monitoring

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Research on Ground Water Monitoring

- By George E. King

Presented at 2012 SPE Hydraulic Fracturing Technology Conference
Marcellus and Utica study

- Methane contamination of drinking water accompanying gas-well drilling and hydraulic facturing.
  - April 2011

Marcellus and Utica study

Map of drilling operations and well-water sampling locations in Pennsylvania and New York. A drinking-water well is classified as being in an active extraction area if a gas well is within 1 km.
Lack of data to support a relationship between methane contamination of drinking water wells and hydraulic fracturing.

Hydraulic fracturing not responsible for methane migration.
San Juan Basin – COGCC site

Studies in the San Juan Basin

- BLM North San Juan Basin White Paper (December 1999)
- San Juan Basin Summary of Bradenhead Testing and Ground Water Quality (May 2000)
- San Juan Basin Ground Water Modeling Study: Ground Water – Surface Water Interactions Between Fruitland Coalbed Methane Development and Rivers (October 2001)
- Methane in Ground Water, San Juan Basin, La Plata County Colorado: Analysis of Data Submitted in Response to COGCC Orders 112-156 and 112-167 (July 2004)
- Coalbed Methane Stream Depletion Assessment Study - Northern San Juan Basin (February 2006)
  - Responses to Comments (September 2006)
- Trend and Data Analysis San Juan Basin Water Quality Analysis Project San Juan Basin, Colorado (June 2010)
  - Appendix A - Data Quality Review Summary
  - Appendix B - Time Concentration Plots
  - Appendix C - Mann-Kendall Results
- Trend and Data Analysis San Juan Basin Water Quality Analysis Project San Juan Basin, Colorado (June 2011)
  - Appendix A - Time Concentration Plots
  - Appendix B - Mann - Kendall Results

Blm Bradenhead Monitoring Reports

http://cogcc.state.co.us/Library/SanJuanBasinReports.htm
EPA released a draft report outlining findings from the Pavillion, Wyoming groundwater investigation for public comment and independent scientific peer review in December 2011.

http://www.epa.gov/region8/superfund/wy/pavillion/
USGS: Pavillion, Wyoming

In cooperation with the Wyoming Department of Environmental Quality

Groundwater-Quality and Quality-Control Data for Two Monitoring Wells near Pavillion, Wyoming, April and May 2012


- By Tom Myers
- September 30, 2012

Groundwater Protection Council

- 2012 UIC Conference
  - Hydraulic Fracturing Seminar Part 1 Regulatory Considerations for Hydraulic Fracturing and Groundwater Protection
  - Hydraulic Fracturing Seminar Part 2 Technical considerations for Hydraulic Fracturing and Groundwater Protection

- [http://gwpc.brocodev.com/events/gwpc-proceedings/2012-uic-conference](http://gwpc.brocodev.com/events/gwpc-proceedings/2012-uic-conference)
The University of Texas Bureau of Economic Geology will produce a comprehensive Technology Assessment report on the Eagle Ford Shale Play.

This report proposes to cover the entire areal extent of this area and include both surface and subsurface geological analysis and water resources.
Upcoming Studies

- Field Tests – Marcellus/Utica: Establishing the East Environmentally Friendly Drilling Regional Center
- Regional University Alliance is working with the National Energy Technology Laboratory to perform a baseline monitoring field test in the Marcellus.