

**Presentation by Dr. David Dzombak, Chair
SAB Hydraulic Fracturing Research
Advisory Panel**

**Science Advisory Board Meeting
June 14, 2016**

The EPA's June 2015 draft Assessment Report follows five stages of the hydraulic fracturing water cycle:

- (1) Water acquisition for hydraulic fracturing fluids
 - (Chapter 4 of Draft Assessment Report)
- (2) Chemical mixing to form fracturing fluids
 - (Chapter 5 of Draft Assessment Report)
- (3) Well injection of fracturing fluids
 - (Chapter 6 of Draft Assessment Report)
- (4) Flowback and produced water
 - (Chapter 7 of Draft Assessment Report)
- (5) Wastewater treatment and disposal
 - (Chapter 8 of Draft Assessment Report)



Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources

**Presentation by Dr. Jeffrey Frithsen,
U.S. Environmental Protection Agency
Office of Research and Development**

**Science Advisory Board Meeting
28 October 2015**

HF Assessment Objectives



- Assess the potential for hydraulic fracturing for oil and gas to change the quality or quantity of drinking water resources
- Identify factors affecting the frequency or severity of any potential changes

Draft HF Assessment Report



What it is:

- A state-of-the-science integration and synthesis of information concerning impacts on drinking water resources
- Based upon EPA research results, a robust literature review, and other information, including input from stakeholders
- Identifies potential mechanisms and addresses questions identified in the *Study Plan* and *Progress Report*

What it is not:

- Not a human health, exposure, or risk assessment
- Not site specific
- Does not identify or evaluate best management practices
- Not designed to inform specific policy decisions
- Does not identify or evaluate policy options