



**Environment and Health Issues Related to Shale Energy in Ohio:
A Workshop on Current Information, Policy Implications, and
Research Needs**

Sponsored by the Ohio State Subsurface Energy Resource Center

Thursday, May 24, 2012

Room 140 Pfahl Hall, The Blackwell Inn



Photo Credit: Gus Chan, Cleveland Plain Dealer (10/23/2011) Carroll County, Ohio

Environment and Health Issues Related to Shale Energy in Ohio:

A Workshop on Current Information, Policy Implications, and Research Needs

This one-day workshop examines air, water, land and associated health issues related to shale energy development in Ohio. Our keynote speaker will be Dr. Bernie Goldstein, University of Pittsburgh, lead author of *Missing from the Table: Role of the Public Health Community in Government Advisory Commissions Related to Marcellus Shale Drilling*.

Three working panels will discuss current information and the associated policy implications, while identifying knowledge gaps and associated research needs. The planned outcome of the workshop is to identify a path forward for filling knowledge gaps related to shale gas development in Ohio.

Workshop Objectives:

- 1. To bring together researchers, policy-makers, and stakeholders in a collaborative environment to share current information**
- 2. To identify knowledge gaps and research needs surrounding possible environmental health issues related to shale energy development in Ohio**
- 3. To develop a white paper for faculty researchers to address research needs**

AGENDA

- 7:30 a.m. Registration and Continental Breakfast
- 8:00 a.m. Introduction and Welcome: **Dr. Caroline Whitacre**, Vice-President for Research, Ohio State University
- 8:10 a.m. Opening Keynote: **James Ladlee**, Associate Director, Marcellus Center for Outreach and Research, Penn State University

Session I: **Shale Energy Development: Research and Development Foundations**

8:40-10:05 a.m.

Session Chair: **Dr. Jeff Daniels**, Professor and Co-Director of the Subsurface Energy Resource Center (SERC), School of Earth Sciences, Ohio State University.

Outlook for Shale Energy Development: **David Bellman**, Energy Analyst, All Energy Connection

Overview of Ohio Oil and Gas Permitting: **Chief Rick Simmers**, ODNR, Oil and Gas Resource Management

Overview of Effects of Shale Energy Development: **Dr. Alexandra Hakala**, Office of Research and Development, National Energy Technology Laboratory

10:05 – 10:15 Break

Session II: **The Land and Water**

10:15 a.m. -12:15 p.m.

Session Chairs: **Dr. Paula Mouser**, Assistant Professor, Civil and Environmental Engineering, Ohio State University

Dr. John Lenhart, Associate Professor, Civil and Environmental Engineering, Ohio State University

Dr. Nicholas Basta, Professor, School of Environment and Natural Resources, Ohio State University

Flowback Water Management--Biogeochemistry of Radionuclides and Other Metals:

Dr. Kelvin Gregory, Assistant Professor, Civil and Environmental Engineering, Carnegie Mellon University

Current Fluid Management Practices in Shale Energy Development: **James Slutz**, President and Managing Director, Global Energy Strategies, LLC

Road Management Practices--Impact on Sediment Transport to Surface Waters:

Dr. Tim Ziegler, Field Operations Specialist, Center for Dirt and Gravel Road Studies, Penn State University

The Effect of Shale-Gas Development on North-Central Appalachian Landscapes:

Dr. Patrick Drohan, Assistant Professor, Crop and Soil Sciences, Penn State University

LUNCH

12:15 - 1:00

Luncheon Keynote Address

Dr. Bernard Goldstein, Professor Emeritus, Graduate School of Public Health, University of Pittsburgh

1:15-1:45 p.m. Keynote Address

Scott Nally, Director, Ohio Environmental Protection Agency

Session III:

The Air and Community

1:45-3:45 p.m.

Session Chair: **Dr. Timothy Buckley**, Associate Professor and Chair, Environmental Health Sciences, College of Public Health, Ohio State University

Air Quality Issues and Data Gaps: **Paul Koval**, Supervisor, Ohio EPA Division of Air Pollution Control – Air Toxics Unit

Air Quality: **Dr. Lisa McKenzie**, Research Associate, School of Public Health, University of Colorado, Denver

Air Quality: **Dr. Kevin Crist**, Professor, Director of the Air Quality Center, Ohio University

Community Impacts: **Stephen Schumacher**, Assistant Professor, Ohio State University Extension

3:45-4:15 p.m. Conclusions and Summary

Dr. Jeff Daniels to lead session chair summaries

4:15-5:00 p.m. The Path Forward: Developing Key Research Areas/Addressing Data Gaps

Dr. David Cole, Professor and Ohio Research Scholar, School of Earth Sciences, Ohio State University