SHALE GAS IN NORTH CAROLINA

What can North Carolina learn from shale-gas development in other states?
How is public understanding of the technology framing NC opinion and policy?
What will be the economic and environmental impact if shale-gas potential is fully developed?

The purpose of the program is to provide a balanced information-exchange opportunity among the energy industry, the water industry and citizens and communities with an interest in the economic potential of shale-gas development and the long-term environmental sustainability of water sources and water-dependent ecosystems. The objective is to facilitate informed discussion to ensure that science-based policy decisions are made on energy development that will best serve the citizens of North Carolina.

DAY ONE PROGRAM - THURSDAY, AUGUST 9TH, 2012
[Go to www.agwt.org for more presenter details]

9:00 – 10:00 REGISTRATION, EXHIBITS, CEU sign-in

10:00 – 12:30 Session 1  issues & concerns – resource assessment – shale-gas footprint

10:00 – 10:15 WELCOME AND PROGRAM INTRODUCTION
Paul Weaver, AEG Carolinas Chairman, ESP Associates, Greensboro, NC
Rick Kolb, AEG Carolinas Past-Chairman, Duncklee & Dunham, Cary, NC

10:15 – 10:30 PUBLIC PERCEPTIONS & MIS-PERCEPTIONS OF SHALE-GAS DEVELOPMENT IMPACTS
Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

Andrew Stone has over 35 years of ground water experience in as a university professor, groundwater consultant, advocate & educator. He has convened and coordinated over 150 conference programs related to source-water protection, geothermal technology, well design, ground water management, aquifer storage recovery, conjunctive use, water banking, and asset management. From 1990 to 2002, he taught an annual course on Ground Water Protection Policy at Antioch New England Graduate School. He is the Director of the International Association of Hydrogeologists' Commission on Groundwater for Decision Makers.

10:30 – 11:00 USGS SHALE-GAS RESERVE ASSESSMENT METHODS
Robert Milici, Research Geologist, US Geological Survey, Reston, VA

Dr. Milici is the Leader of the East Coast Mesozoic Basin Assessment Team. In June 2012, USGS Fact Sheet 3075 was released “Assessment of Undiscovered Oil & Gas Resources of the East Coast Mesozoic Basins...” Dr Milici has a Ph.D. from the University of Tennessee. He has worked in the area of fossil fuel resources, coal and oil and gas, since 1973; including geologic mapping of the coal fields in Tennessee; supervising mine safety studies in the coalfields of Virginia; and conducting coal, oil and gas research projects for the USGS. He has published 200+ articles and abstracts on geology and energy resources.

11:00 – 11:30 THE POTENTIAL FOR SHALE GAS EXPLORATION & PRODUCTION IN NORTH CAROLINA

Dr. Kenneth B. Taylor manages the N.C. Geological Survey in the Department of Environment and Natural Resources. During his 17 years with state government, he has worked in both geosciences and emergency management in emergency planning & response, hazard mitigation, risk assessment, loss estimation, geo-hazard analysis and resources assessment. During the last four years, he has coordinated a research program to assess the resource potential of shale gas from Mesozoic basins of North Carolina.

11:30 – 12:00 THE ENVIRONMENTAL FOOTPRINT OF SHALE-GAS OPERATIONS
Robert Jackson, School of the Environment. Duke University, Durham, NC

Robert Jackson is the Nicholas Chair of Global Environmental Change at the Nicholas School of the Environment. His research examines how people affect the earth, including studies of the global carbon and water cycles, biosphere/atmosphere interactions, energy use, and global change. He received his Ph.D. in Ecology at Utah State University. He was a Department of Energy Distinguished Postdoctoral Fellow for Global Change at Stanford University and an assistant professor at the University of Texas before joining the Duke faculty. He directs the National Institute for Climate Change Research for the southeastern U.S

12:00 – 12:30 Keynote Presentation

PAST, PRESENT AND FUTURE TIME-LINE FOR THE DEVELOPMENT OF NC SHALE-GAS REGULATIONS
Robin Smith, Assistant Secretary for the Environment, NC DNR, Raleigh, NC

Robin oversees development of major policy initiatives for programs having such diverse responsibilities as permitting of discharges to surface waters; issuance of air emissions permits; implementation of major grant programs for wastewater and drinking water projects; remediation of contaminated soil and groundwater; permitting of coastal development; and regulation of animal operations.

Before being appointed to DNER in September 1999, Robin Smith served in the attorney general's office for 12 years. During that time, she provided legal representation and guidance to DNER on a variety of environmental issues and served as legal counsel to the state's Coastal Resources Commission and the Clean Water Management Trust Fund. She also served as legal counsel to the state's mining, sedimentation and radiation protection commissions.

Robin is a graduate of the University of North Carolina at Chapel Hill School of Law.

12:30 – 1:30 LUNCH
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<th>Time</th>
<th>Session 2</th>
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<tr>
<td>1:45 – 3:00</td>
<td>litigation in other states – North Carolina legal &amp; legislative issues</td>
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<th>Time</th>
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<td>3:30 – 4:00</td>
<td>GROUNDWATER RESOURCES: WHAT TO EXPECT WHEN YOU ARE EXPECTING SHALE-GAS DEVELOPMENT IN YOUR AREA</td>
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<td>Hughbert Collier, CPG, Hydrogeologist, Collier Consulting, Inc., Stephenville, TX</td>
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<td>4:00 – 4:30</td>
<td>SIERRA CLUB PERSPECTIVE ON POTENTIAL SHALE GAS DEVELOPMENT IN NORTH CAROLINA</td>
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<td>Will Morgan, Director of Government Affairs, Sierra Club, Raleigh, NC</td>
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<td>4:30 – 5:00</td>
<td>ENVIRONMENTAL RISK ASSESSMENT FOR SHALE GAS DEVELOPMENT</td>
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<td>Daniel J. Soeder, U.S. Department of Energy, National Energy Technology Laboratory, Morgantown, WV</td>
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<th>Time</th>
<th>Session 4</th>
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<tr>
<td>8:00 – 8:30</td>
<td>role of local government – socio-economic impacts - gas diagnostics – microseismic revelations</td>
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<th>Time</th>
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<td>8:00 – 8:30</td>
<td>THE ROLE OF LOCAL GOVERNMENT IN OIL &amp; GAS PRODUCTION</td>
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<td>Ted Feitshans, Extension Associate Professor, NC State University, Raleigh, NC</td>
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<td>8:30 – 9:00</td>
<td>SOCIO-ECONOMIC IMPACTS OF THE SHALE GAS INDUSTRY ON THE LOCAL ECONOMY</td>
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<td>Jim Womack, County Commissioner, Lee County, Sanford, NC</td>
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**DAY TWO PROGRAM - FRIDAY, AUGUST 10TH, 2012**

[Go to www.agwt.org for more presenter details]
Mr. Oneacre provides hydrogeological consulting services to private industry with an emphasis on environmental studies and litigation support work. Industry clients include solid waste, petrochemical, chemical, insurance, waste-to-energy, and oil & gas. Mr. Oneacre provides both technical litigation support and expert witness testimony. He has 33 years of professional experience in hydrogeology, engineering geology, and environmental geology. Mr. Oneacre has provided technical expertise on geochemical analyses of groundwater to several law firms engaged in litigation cases.

Ughetta has worked 25+ years in the energy industry. Previous employment has been with Halliburton Reservoir Services, Landmark Graphics, (a geophysical and geologic interpretation software company) and Epoch Well Services. He has a BS in Geology from Denison University, OH

Keynote Presentation

ECONOMIC DIMENSIONS FOR SHALE-GAS DEVELOPMENT IN NORTH CAROLINA
Jon Williams, Assistant Secretary for Energy, N.C. Department of Commerce

Jonathan Williams is the Assistant Secretary for Energy and oversees the N.C. Energy Office, the state's weatherization program and the state's Energy Policy Council. Prior to his appointment in 2011, Williams chaired the state Alcoholic Beverage Control Commission. As head of the ABC Commission, Williams played a critical role in creating the comprehensive 2010 ABC reform legislation. Under his oversight the state ABC Commission also has focused on issues related to public health, public safety and fair commercial regulation. Prior to leading the ABC Commission, Williams was deputy secretary of the N.C. Department of Crime Control & Public Safety. He was executive director of the Governor’s Crime Commission, a member of the N.C. Sentencing and Policy Advisory Commission and the Governor’s Advisory Council on Hispanic/Latino Affairs. Prior to that, Williams was a lawyer in private practice in Goldsboro.

CONTINUING EDUCATION

Certificates of attendance will be mailed post event as documentation for professional or licensing requirements.

Association of Environmental & Engineering Geologists, Carolinas Section
- Building public appreciation for how environmental and engineering geology contribute to public safety and the protection of property
- Offering information on environmental and engineering geology useful to practitioners, scientists, students, and the public.

American Ground Water Trust
- Communicating the environmental and economic value of groundwater
- Showcasing ground water science and technology solutions
- Increasing citizen, community and decision-maker awareness
- Facilitating stakeholder participation in water resource decisions

HOTEL INFORMATION

DoubleTree by Hilton Hotel Raleigh, Brownstone – University, 1707 Hillsborough Street, Raleigh, NC 27605
Call (919) 828-0811 for sleeping room reservations. Group rate $94 available. Book before 7/18 to guarantee rate
North Carolina: Get Ready for Hydraulic Fracturing

Two-day conference program Raleigh, NC
Thurs. August 9th and Fri. August 10th, 2012
Hotel: DoubleTree by Hilton Brownstone University
1707 Hillsborough Street, Raleigh, NC 27605

SHALE-GAS DEVELOPMENT IN NORTH CAROLINA:
A REVIEW OF ECONOMIC AND ENVIRONMENTAL ISSUES

American Ground Water Trust
Association of Environmental & Engineering Geologists
Carolinas Section

- WATER SUPPLY
- ENVIRONMENT
- REGIONAL IMPACTS
- SCIENCE
- TECHNOLOGY
- EXPERIENCE IN OTHER STATES
- IMPACTS
- REGULATIONS
- LITIGATION
- LEGISLATION
- EMPLOYMENT
- EXIT STRATEGY
- ALTERNATIVES
- SOURCE PROTECTION
- BEST PRACTICES
- ENERGY POLICY
- CARBON FOOTPRINT
- LEASE DEALS
- SECONDARY IMPACTS
- INFORMATION EXCHANGE
- JUST THE FACTS!

REGISTRATION – SHALE-GAS CONFERENCE – RALEIGH - Go to www.agwt.org for more program details

Registration includes: access to exhibits, networking reception, handouts, breaks and lunch on day 1

YOU MUST CHECK ONE:

General Conference Registration
AGWT and AEG Member
Government Employee (Municipal, County, State, Federal)
Full-Time Student (ID required at Registration)
CD - (Presentation information from speakers mailed post-event)
Exhibit Table (You must also register to attend.)

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