

# SHALE DRILLING

— AND —

# PUBLIC HEALTH:

# A DAY OF DISCOVERY

**November 23, 2013**

**Heinz History Center Fifth Floor Mueller Education Center**



**League of Women Voters of Pennsylvania**

With funding from the

*Colcom Foundation*

to LWVPA Citizen Education Fund "Straight Scoop on Shale"



# SHALE DRILLING & PUBLIC HEALTH: A Day of Discovery

Senator John Heinz History Center • November 23, 2013 • 8:30 AM – 5 PM

- 9 a.m.** Welcome  
**Susan Carty** President, League of Women Voters of Pennsylvania  
**Karen Hacker MD, MPH** Director, Allegheny County Health Department
- 9:15** Opening Remarks  
**Bernard Goldstein MD** Emeritus Dean/Professor Pitt Graduate School of Public Health
- 9:45** Impacts on Animal and Human Health  
**Michelle Bamberger DVM**  
**Robert Oswald PhD** Cornell University Veterinary Medicine
- 10:30** Well Engineering and Health  
**Anthony Ingraffea PhD** Cornell University Engineering
- 11:15** Previewing Future Health Research  
**Reynold Panettieri MD** University of Pennsylvania Medicine/CEET
- Noon – 5:00** HEALTH EXHIBITS OPEN – Hallway
- 12:01 p.m.** Health Effects of Industrial Noise  
**Cynthia Richburg PhD** Indiana U. of Pennsylvania Audiology
- 12:35** Stress  
**Lenore Resick PhD FNP** Duquesne University Nursing FNP Program  
**Lydia Greiner APMHNP-BC** Fairfield University School of Nursing
- 1:10** Worker Health  
**John Snawder PhD DABT** Natl. Inst. for Occupational Safety & Health (NIOSH)
- 1:45** Shale Industry Best Practices  
**Andrew Place** Center for Sustainable Shale Development
- 2:20** How to Protect Yourself  
**David Brown ScD** SWPA-Environmental Health Project
- 3:00** Best Practices for Health Professionals/Medical Tool Kit  
**Leslie Walleigh MD** SWPA-Environmental Health Project
- 3:45** Shale and the Foodshed moderated by Gretchen Sneegas Chatham Food Studies pgm  
Plants, Soil Quality **Mary Beth Adams PhD** US Forest Service  
Animals **Michelle Bamberger DVM**
- 4:30** CLOSING RECEPTION

# **LIST OF EXHIBITORS**

Exhibits open Noon to 5 p.m. in the Mueller Hallway  
Reception 4:30-5 p.m.

## **Health Fair/Exhibits/Activities:**

### **HEALTH ORGANIZATIONS:**

- **Allegheny County Health Department**
- **Consumer Health Coalition – information on accessing health care**
- **Pennsylvania Health Access Network PHAN – help signing up for health insurance**
- **SWPA-Environmental Health Project**

### **AUDIOLOGY:**

- **IUP Audiology Student Association**

### **WATER and AIR MONITORING:**

- **SWPA-Environmental Health Project featuring CMU's Create Lab, CATTFish toilet tank water monitoring and Airbot Speck air monitoring systems**
- **ALLARM – (Alliance of Aquatic Resource Monitoring) water testing training project, Dickinson University**
- **Evergreen Conservancy, water testing and monitoring data demonstration**

### **AGRICULTURE/FOODSHED:**

- **Chatham University Graduate Food Studies Program**
- **Naturality: Chatham Undergraduate organization**
- **Lady Bug Farm**

### **INFORMATION ABOUT SHALE GAS EXTRACTION PROCESSES**

- **LWV Straight Scoop Storybox interactive listening devices “Shale from the Ground to the Consumer” and “Pipelines”**

*All attendees will receive copies of the League of Women Voters of Pennsylvania's new "Shale Drilling and Public Health" Resource Guide*

## **SPEAKER BIOGRAPHIES**

**Mary Beth Adams Ph.D.** is Research Soil Scientist with the USDA Forest Service, Northern Research Station, located in Parsons, West Virginia. She received B.S. and M.S. degrees in forestry at Purdue University and a Ph.D. in soil science and forestry at North Carolina State University. Her research interests, experience and expertise are in the areas of soil science, forest ecology, watershed research and ecophysiology.

Dr. Adams' current research includes long-term ecological research examining sustainable forest ecosystems in the central Appalachians, artificial watershed acidification and nutrient cycling, and air pollution effects on forests. She has published more than 100 manuscripts during her career, and has served as associate editor for the *Journal of Environmental Quality*, *Forest Science*, and *Forestry* journals. She also has provided her expertise as a member of the science and technical committee of the Chesapeake Bay Program, the West Virginia Agriculture and Forestry Experiment Station advisory committee, and the WVU Davis College of Agriculture, Natural Resources and Design visiting committee, among others.

**Michelle Bamberger M.S., D.V.M.** is a veterinarian in private practice in Ithaca, NY. Dr. Bamberger received her DVM from Cornell University in 1985. Prior to attending Cornell, she earned her master's degree in pharmacology from Hahnemann University Medical College and then worked in equine research for two years at New Bolton Center, University of Pennsylvania Veterinary School. After graduating from Cornell, Dr. Bamberger studied at Oxford University and practiced small animal and exotic medicine and surgery in both Massachusetts and New York. Before opening Vet Behavior Consults in 2002, Dr. Bamberger returned to Cornell for training in the field of behavior medicine as a Visiting Fellow. She has a special interest in educating the public on veterinary topics. She has taught adult education courses and written two books on the topic of first aid. She devotes much of her time to documenting and studying the impacts that hydraulic fracturing for extraction of hydrocarbons has on both human and animal health.

**David R. Brown Sc.D.** is the Public Health Toxicologist and Director of Public Health Toxicology for Environmental and Human Health, Inc. He is the past Chief of Environmental Epidemiology and Occupational Health in Connecticut. He was previously an associate professor of toxicology at the Northeastern College of Pharmacy and Allied Health. Dr. Brown also served as deputy director of the public health practice group of the Agency for Toxic Substances and Disease Registry (ATSDR) at the National Centers for Disease Control and Prevention in Atlanta, Georgia. Dr. Brown graduated from Cornell University in biochemistry, received an MS in environmental health from the University of California and his Sc.D. in toxicology from the Harvard School of Public Health.

**Susan Carty** was elected President of the League of Women Voters of Pennsylvania in June 2013. She is also the president of the LWV Chester County, previously serving as LWVCC's education committee chair. She joined the League in 2009.

Ms. Carty has been an insurance underwriter for Prudential. She was also a science teacher in the West Chester Area school district, and a NOAA Teacher-at-Sea in the Pacific. She is the co-author of a science lab instruction manual for Pfizer Corporation. She holds a B.A. from Immaculata College.

Her public service includes serving on the WCASD School Board (2006-2009), as Chair of the East Goshen Township Planning Commission (2002-present) and on the Chester County Regional Planning Commission (2005-2007).

**Bernard D. Goldstein M.D.** is emeritus Dean and Professor at the University of Pittsburgh Graduate School of Public Health. His past experience includes service as EPA Assistant Administrator for Research and Development; Founding Director of the Environmental and Occupational Health Sciences Institute at Rutgers University; and President of the Society for Risk Analysis. Currently Dr. Goldstein chairs the Coordinating Committee of the Gulf Region Health Outreach Program; the UN Environmental Program Emerging Issues Working Group on Chemical Governance; and the Society of Toxicology Issues Writing Team on Shale Gas. He is an elected member of the National Academies of Science Institute of Medicine (IOM), for whom he has chaired and served on numerous committees, and is a current member of both the U.S. National Research Council and Canadian Council of Academies shale gas committees

**Lydia Greiner B.S.N., M.S.N. APMHNP-BC** is a psychiatric nurse practitioner who teaches public health nursing at Fairfield University in Connecticut and psychiatric nursing at California State University San Marcos.

She has 20 years of experience working with communities to implement health promotion initiatives. As former manager of community services for Fairfield University School of Nursing she obtained grant funding to support programs addressing lead poisoning in young children, risky behaviors in adolescents, and cardiovascular health in older adults. In 2008 she was instrumental in creating an academic-community partnership in Nicaragua, which has provided HIV/AIDS education, cardiovascular health resources, and helped improve hand hygiene.

Ms. Greiner earned her bachelors' degree in nursing from the University of Pennsylvania and a master's in nursing at Fairfield University. She is currently completing her DrPH at Boston University School of Public Health. In addition to her teaching and studies, she also volunteers one day a week at a nurse-run clinic for the homeless in Ocean Beach, CA.

**Karen Hacker M.D., M.P.H.** is the Director of the Allegheny County Health Department. Prior to her appointment here, Dr. Hacker was Executive Director of the Institute for Community Health, a community research organization within the Cambridge Health Alliance (CHA). She also served as an Associate Professor in Medicine at Harvard Medical School and School of Public Health, and was the Senior Medical Director for Public and Community Health at CHA.

Dr. Hacker received her undergraduate degree from Yale University, her MD from Northwestern University and her MPH from Boston University. She has extensive experience working with diverse populations as a public health leader, health care administrator, primary care physician and community based participatory researcher. Throughout her career, Dr. Hacker has worked with community partners to catalyze change in both practice and research environments. She previously served as interim Chief Public Health Officer for the City of Cambridge and the Division Director for Child and Adolescent Health at the Boston Public Health Commission.

Dr. Hacker's research has been responsive to community needs, with interests focused on adolescent risk and resiliency, child mental health and the social determinants of immigrant health. She has led efforts to incorporate behavioral health screening into pediatric primary care and worked with communities on issues of substance abuse and overdose prevention and youth suicide. More recently, she has been involved in the evaluation of the transformation of safety net institutions into accountable care organizations.

As Director, Dr. Hacker is the highest ranking official in the Health Department and is responsible for overseeing its programs and activities. She also serves as Secretary to the Allegheny County Board of Health.

**Anthony Ingraffea Ph.D.** is the Dwight C. Baum Professor in Engineering at Cornell University. He has taught structural mechanics, finite element methods and fracture mechanics at Cornell since 1977.

Dr. Ingraffea spent two years as a structural engineer with the Grumman Aerospace Corporation. He also spent two years as a county engineer with the Peace Corps in Venezuela prior to beginning his doctoral studies.

Dr. Ingraffea's research concentrates on computer simulation and testing of complex fracturing processes. He and his students performed pioneering research in the use of interactive computer graphics in computational mechanics. He has authored with his students over 200 papers in these areas. He has been a principal investigator on over \$35 million in R&D projects from the NSF, NASA, FAA, Kodak, U.S. Dept. of Transportation, IBM, Sandia National Labs, U.S. Army Engineer Waterways Experiment Station, Schlumberger, the Gas Research Institute, and others.

Dr. Ingraffea has received numerous awards and honors. He was a member of the first group of Presidential Young Investigators named by the National Science Foundation in 1984. In 1994, he won an award for one of the five most significant papers in the past 20 years in the category of computational/analytical applications. In both 1978 and 1991 he won the National Research Council award for research in rock mechanics. He became a Fellow of the American Society of Civil Engineers in 1991. He has won teaching awards. Dr. Ingraffea was named co-editor-in-chief of *Engineering Fracture Mechanics* in 2005, received the ASTM Irwin Award for contributions to fracture mechanics in 2006, and was named a Fellow of the International Congress on Fracture in 2009. In 2011, *Time* magazine named him one of its "People Who Mattered."

**Robert Oswald Ph.D.** is a Professor of Molecular Medicine at Cornell University in Ithaca, NY. Dr. Oswald received his Ph.D. from Vanderbilt University in Biochemistry studying the effects of toxins on proteins in the central nervous system. He did postdoctoral studies as a Muscular Dystrophy and Collège de France Fellow at the Institut Pasteur in Paris before joining the faculty of Cornell University in 1981. While on sabbatical leave from Cornell, he was a Fulbright Fellow at the University of Oxford (1988-1989) and a Guggenheim Fellow at Harvard Medical School (1994-1995).

Dr. Oswald is currently a Professor of Molecular Medicine in the Cornell College of Veterinary Medicine and a Faculty Fellow of the Atkinson Center for a Sustainable Future. His work on the effects of drugs and toxins on the structure and function of central nervous system proteins has been supported by the National Institutes of Health, the National Science Foundation, and the American Cancer Society. He is currently co-director of the Molecular Biophysics Training Program at Cornell. Dr. Oswald has served on numerous review panels for the National Institutes of Health and the American Heart Association, and is on the editorial board of *Molecular Pharmacology* and the *Journal of Biological Chemistry*.

**Reynold Panettieri Jr. M.D.** is the Robert Mayock and David Cooper endowed Professor of Medicine at the University of Pennsylvania, director of the Airways Biological Initiative, director of the Comprehensive Asthma Program of the Penn Health System, and deputy director of the Center of Excellence in Environmental Toxicology (CEET) at the University of Pennsylvania Perelman School of Medicine.

Dr. Panettieri earned his medical degree at Penn and completed his internship and residency in medicine at the Hospital of the University of Pennsylvania, where he obtained special training in pulmonary diseases.

An author of over 410 peer-reviewed research articles and other published pieces, Dr. Panettieri serves on the editorial board of the *American Journal of Physiology, Thorax and Pharmacologia*, is co-editor-in-chief of *Respiratory Research*, an editor of the *British Journal of Pharmacology* and an associate editor of the *American Journal of Cell and Molecular Biology*. He is the recipient of numerous honors and awards, and holds honorary memberships to various professional societies. In 2013 he was elected chairman of the respiratory structure and function assembly of the American Thoracic Society.

Dedicated to educating the public about asthma, Dr. Panettieri directs the Adult Asthma Patient Education Program in Philadelphia and other asthma education initiatives.



**Andrew Place** is Corporate Director, Energy & Environmental Policy for the EQT Corporation, and also Interim Executive Director of the new Center for Sustainable Shale Development (CSSD). Prior to joining EQT in 2011, he served in the Pennsylvania Department of Environmental Protection, first as a special assistant for energy and climate change and then as acting deputy secretary of the Office of Energy and Technology Deployment. Prior to his work with the DEP, he was a research fellow at Carnegie Mellon University's Department of Engineering and Public Policy, with a primary focus on carbon capture and sequestration among other technical, economic and policy issues related to energy and the environment.

While remaining in his position at EQT, he accepted the role of interim executive director at CSSD in 2012. His role at CSSD has been to raise awareness of the center's work while supporting continued consensus for the center's Performance Standards and certification to those standards.

He holds a B.S. in economics from the University of Pittsburgh and an M.S. in public policy and management from the H.J. Heinz College at Carnegie Mellon.

**Lenore K. Resick Ph.D., CRNP, FNP-BC, NP-BC, FAANP** is a Clinical Professor at Duquesne University School of Nursing, the Noble J. Dick Endowed Chair in Community Outreach, and the Director of Duquesne's Family Nurse Practitioner Program and Nurse-Managed Wellness Center.

She received her Diploma from Presbyterian University Hospital School of Nursing, her bachelor's and master's degrees in nursing from the University of Pittsburgh, and her post-master's certificate in Transcultural Nursing and her Ph.D. from Duquesne University. Dr. Resick's research interests include the health and wellness of vulnerable populations including older adult African Americans, Appalachian women, Russian speaking immigrants, and Iraqi refugees. Recently her research has focused on vulnerable populations and natural gas drilling. She is an author of the paper, "The meaning of health among mid-Appalachian women in the context of the environment," recently published in the *Journal of Environmental Studies and Sciences*.

Dr. Resick continues to maintain an active clinical practice as a family nurse practitioner with a focus on disease prevention, health promotion, wellness and self-care management for chronic disease. She was honored with the Distinguished Nurse Award by the Pennsylvania State Nurses Association.

**Cynthia McCormick Richburg, Ph.D.** is an audiologist and Professor at Indiana University of Pennsylvania (IUP). She also directs the Hearing Conservation Program at IUP. She received a B.A. majoring in speech pathology, an M.A. majoring in audiology and a Ph.D. in Speech and Hearing Science from University of Tennessee, Knoxville, and then completed a post-doctoral fellowship in neuroaudiology at Dartmouth-Hitchcock Medical Center. Prior to becoming a Professor at IUP, she was a licensed audiologist and held teaching positions at universities in Missouri, New York, Utah and elsewhere. The author of numerous scholarly papers, she has presented on noise and public health at local, national and international conferences. Her research interests include educational audiology and auditory processing disorders in children. She is also advisor to the IUP Audiology Student Association, and her students have a display table at today's conference.

**John E. Snawder, Ph.D. D.A.B.T.** is a research toxicologist serving as the Leader of the Biomonitoring Research Team at the National Institute for Occupational Safety and Health (NIOSH) in Cincinnati, OH. He received his Ph.D. degree from Mississippi State University and did his post-doctoral work at the National Center for Toxicological Research.

The present focus of Dr. Snawder's research is biological monitoring and exposure assessment of workers in the oil and gas industry, asphalt pavers, armed forces personnel and first responders. This work relies on the development of rapid, multiplexed assays for biological monitoring and the design and application of direct reading instruments and methods. Dr. Snawder serves on many CDC, interagency and professional society working groups and committees concerned with emergency response, first responder safety and health, direct reading instruments and biological monitoring. He also is a member of multi-state, regional and local hazardous materials teams.

**Gretchen Sneegas** is currently researching shale gas development and dairy farming and pursuing a master's degree in Food Studies at Chatham University. She is a Phi Beta Kappa graduate of Indiana University.

Ms. Sneegas is a Food Systems research assistant at Chatham, and has served as an intern with the Pittsburgh Food Policy Council. She is the author of a forthcoming publication on food justice, has presented on the topic of vat pasteurized milk, has moderated panels and coordinated food systems-related events. She is a member of the Pennsylvania Association for Sustainable Agriculture and the American Public Health Association.

**Leslie Walleigh M.D., M.P.H.** is a public health physician with the Environmental and Occupational Health Programs of the Maine Center for Disease Control (CDC), and also practices occupational medicine one day a week with Employee Health and Wellness of Maine Medical Center. She also serves as a Medical and Occupational Health Consultant for SWPA-Environmental Health Project.

A graduate of Brown University and Stanford Medical School, she originally completed a residency and became board certified in obstetrics and gynecology, practicing in Boston and Cambridge, Massachusetts. While still a practicing OB/GYN she completed a Masters of Public Health in Environmental Health at Boston University School of Public Health, became interested in occupational health and subsequently completed a residency in occupational medicine at the Harvard School of Public Health. She became board certified in occupational medicine and practiced from 1995 through 2009 at Maine General Medical Center. She began her work with the Maine CDC in 2004 as a special consultant regarding medical conditions related to environmental and occupational exposures.

## **SHALE and PUBLIC HEALTH COMMITTEE MEMBERS**

**Vera Bonnet** League of Women Voters of Indiana County, & lead writer of the LWVPA Shale Drilling and Public Health Resource Guide

**Suzanne Fox** League of Women Voters of Greater Pittsburgh

**Barbara Harley MD** League of Women Voters of Greater Pittsburgh

**Heather Harr** League of Women Voters of Greater Pittsburgh

**Sherene Hess** President of the League of Women Voters of Indiana County

**Cecilia Larson** League of Women Voters of Greater Pittsburgh

**Deborah Larson** League of Women Voters of Greater Pittsburgh

**Shirley McIlvried RN MPH** League of Women Voters of Greater Pittsburgh

**Clarice Reber CCCA/SLP** League of Women Voters of Indiana County

**Donna Riggle** League of Women Voters of Washington County

**Raina Rippel** SWPA-Environmental Health Project

**Mary Beth Sweeney** League of Women Voters of Gtr Pittsburgh & Indiana County

**Betty Tatham** League of Women Voters of Bucks County; Vice President LWVPA

**Dreama VanCise-Watta RN** League of Women Voters of Indiana County

**Heather Wechter** League of Women Voters of Greater Pittsburgh

**Dr. Roberta Winters** League of Women Voters of Radnor Township

**Jessica Chow** Intern for the League of Women Voters of Pennsylvania, Chatham University Political Science and Film major

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*Colcom Foundation*

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