AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

THE ROLE OF THE STATES IN PROTECTING THE ENVIRONMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

FEBRUARY 15, 2013

Serial No. 113–7

Printed for the use of the Committee on Energy and Commerce

energycommerce.house.gov

U.S. GOVERNMENT PRINTING OFFICE

79–850 WASHINGTON : 2013

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON ENERGY AND COMMERCE

FRED UPTON, Michigan
Chairman

RALPH M. HALL, Texas
JOE BARTON, Texas
Chairman Emeritus
ED WHITFIELD, Kentucky
JOHN SHIMKUS, Illinois
JOSEPH R. PITTS, Pennsylvania
GREG WALDEN, Oregon
LEE TERRY, Nebraska
MIKE ROGERS, Michigan
TIM MURPHY, Pennsylvania
MICHAEL C. BURGESS, Texas
MARSHA BLACKBURN, Tennessee
Vice Chairman
PHIL GINGREY, Georgia
STEVE SCALISE, Louisiana
ROBERT E. LATTA, Ohio
CATHY MCMORRIS RODGERS, Washington
GREGG HARPER, Mississippi
LEONARD LANCE, New Jersey
BILL CASSIDY, Louisiana
BRETT GUTHRIE, Kentucky
PETE OLSON, Texas
DAVID B. MCKINLEY, West Virginia
CORY GARDNER, Colorado
MIKE POMPEO, Kansas
ADAM KINZINGER, Illinois
H. MORGAN GRIFFITH, Virginia
GUS M. BILIRAKIS, Florida
BILL JOHNSON, Missouri
BILLY LONG, Missouri
RENEE L. ELLMERS, North Carolina

HENRY A. WAXMAN, California
Ranking Member
JOHN D. DINGELL, Michigan
Chairman Emeritus
EDWARD J. MARKEY, Massachusetts
FRANK PALLONE, JR., New Jersey
BOBBY L. RUSH, Illinois
ANNA G. ESHOO, California
ELIOT L. ENGEL, New York
GENE GREEN, Texas
DIANA DEGETTE, Colorado
LOIS CAPPS, California
MICHAEL F. DOYLE, Pennsylvania
JANICE D. SCHAKOWSKY, Illinois
ANTHONY D. WEINER, New York
JIM MATHESON, Utah
G.K. BUTTERFIELD, North Carolina
JOHN BARROW, Georgia
DORIS O. MATSUI, California
DONNA M. CHRISTENSEN, Virgin Islands
KATHY CASTOR, Florida
JOHN P. SARBANES, Maryland
JERRY MCNERNEY, California
BRUCE L. BRALEY, Iowa
PETER WELCH, Vermont
BEN RAY LUJAN, New Mexico
PAUL TONKO, New York

SUBCOMMITTEE ON ENVIRONMENT AND ECONOMY

JOHN SHIMKUS, Illinois
Chairman

PHIL GINGREY, Georgia
Vice Chairman
RALPH M. HALL, Texas
ED WHITFIELD, Kentucky
JOSEPH R. PITTS, Pennsylvania
TIM MURPHY, Pennsylvania
ROBERT E. LATTA, Ohio
GREGG HARPER, Mississippi
BILL CASSIDY, Louisiana
DAVID B. MCKINLEY, West Virginia
GUS M. BILIRAKIS, Florida
BILL JOHNSON, Missouri
JOE BARTON, Texas
FRED UPTON, Michigan, *ex officio*

PAUL TONKO, New York
Ranking Member
FRANK PALLONE, JR., New Jersey
GENE GREEN, Texas
DIANA DEGETTE, Colorado
LOIS CAPPS, California
JERRY MCNERNEY, California
JOHN D. DINGELL, Michigan
JANICE D. SCHAKOWSKY, Illinois
JOHN BARROW, Georgia
DORIS O. MATSUI, California
HENRY A. WAXMAN, California, *ex officio*

CONTENTS

	Page
Hon. John Shimkus, a Representative in Congress from the State of Illinois, opening statement	1
Prepared statement	3
Hon. Paul Tonko, a Representative in Congress from the State of New York, opening statement	4
Hon. Fred Upton, a Representative in Congress from the State of Michigan, opening statement	6
Prepared statement	7
Hon. Joe Barton, a Representative in Congress from the State of Texas, opening statement	7
Prepared statement	8
Hon. Henry A. Waxman, a Representative in Congress from the State of California, opening statement	9
Prepared statement	10
Hon. Janice D. Schakowsky, a Representative in Congress from the State of Illinois, opening statement	11
Prepared statement	11

WITNESSES

Harold R. Fitch, Supervisor of Mineral Wells, and Chief, Office of Oil, Gas and Minerals, Michigan Department of Environmental Quality	12
Prepared statement	15
Answers to submitted questions	128
Matthew J. Lepore, Director, Colorado Oil and Gas Conservation Commission	18
Prepared statement	20
Answers to submitted questions	143
Sarah Pillsbury, Administrator, Drinking Water and Groundwater Bureau, New Hampshire Department of Environmental Services	38
Prepared statement	40
Answers to submitted questions	163
Jeffery Steers, Director, Land Protection and Revitalization Division, Virginia Department of Environmental Quality	51
Prepared statement	54
Answers to submitted questions	167
Teresa Marks, Director, Arkansas Department of Environmental Quality	61
Prepared statement	63
Answers to submitted questions	173
Hon. Pricey Harrison, North Carolina House of Representatives	70
Prepared statement	72
Answers to submitted questions	189
Hon. Michael A. Sesma, Council Vice President, City of Gaithersburg, Maryland	83
Prepared statement	86
Answers to submitted questions	197

SUBMITTED MATERIAL

Statement of 7 environmental groups	119
Statement of Patrick Parenteau	121
Statement of Susan Parker Bodine	125

THE ROLE OF THE STATES IN PROTECTING THE ENVIRONMENT

FRIDAY, FEBRUARY 15, 2013

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENVIRONMENT AND ECONOMY,
COMMITTEE ON ENERGY AND COMMERCE
Washington, DC.

The subcommittee met, pursuant to call, at 9:29 a.m., in room 2123, Rayburn House Office Building, Hon. John Shimkus, (chairman of the subcommittee) presiding.

Present: Representatives Shimkus, Gingrey, Hall, Murphy, Latta, Cassidy, McKinley, Bilirakis, Johnson, Barton, Upton (ex officio), Tonko, Green, DeGette, McNerney, Schakowsky, Barrow, and Waxman (ex officio).

Staff Present: Nick Abraham, Legislative Clerk; Charlotte Baker, Press Secretary; Matt Bravo, Professional Staff Member; Allison Busbee, Policy Coordinator, Energy and Power; Jerry Couri, Senior Environmental Policy Advisor; David McCarthy, Chief Counsel, Environment/Economy; Andrew Powaleny, Deputy Press Secretary; Tina Richards, Counsel, Environment; Krista Rosenthall, Counsel to Chairman Emeritus; Chris Sarley, Policy Coordinator, Environment and Economy; Lyn Walker, Coordinator, Admin/Human Resources; Phil Barnett, Minority Staff Director; Alison Cassady, Minority Senior Professional Staff Member; Jacqueline Cohen, Minority Counsel; Greg Dotson, Minority Staff Director, Energy and Environment; Caitlin Haberman, Minority Policy Analyst; and Karen Lightfoot, Minority Communications Director and Senior Policy Advisor.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. Let's see if we can get the doors closed, and I know the folks in the hallway will be happy to hear.

Good morning. Thank you all for being punctual. Who knows when votes will occur, they are going to be earlier today, so we are going to try to get through as much as possible, and then we will see where we go from there.

The subcommittee will now come to order. I would like to welcome all the members of the subcommittee to our first hearing in the 113th Congress. I want to say a special welcome to our new ranking member, Mr. Tonko, as well as our new vice chairman, Dr. Gingrey, who is late, not a good sign, and all our new Republican and Democrat members.

Today's hearing focuses on the important role that States play in environmental protection under current law. This hearing will help raise awareness and set the stage for future discussions we are going to have on environmental protection.

Many of us get caught up with what the U.S. EPA thinks or what it can do and fail to focus on States and what they can and must do. The States are by no means junior regulators or the minor leagues of environmental protection. Rather, their plate is twice as full. To carry out Federal environmental law, States have a lot of delegated authority, but States also have their own protective laws, often beyond anything the Federal Government has asked.

State regulators have every bit the same educational background, expertise, desire to protect the environment, and sense of professionalism as any employee at the EPA, with the added bonus of actually living in the communities they are trying to make safe. They intimately know the terrain being regulated.

Some people might suggest that States lack the will to enforce their laws or that are reluctant to pass anything serious. I think that answer is not fair, and I think history shows that States have generally acted first on matters before the Federal Government has stepped in to do something. In this fast-paced, technology-driven society, a static regulatory regime cannot respond to innovations nor complex problems and challenging geologies. Let me offer a few examples of what I mean from issues familiar to our committee.

In the State of Maryland, there was a terrible coal ash problem. The State did not sit by powerless. Rather, in December 2008, the Maryland Department of Environmental issued one of the most robust sets of coal ash rules in the country. Maryland is not the only State. Pennsylvania and Wisconsin have demonstrated strong programs that are serious, flexible, and successful.

On the issue of hydraulic fracturing, Colorado has shown it can move two major changes to its rules on hydraulic fracturing in a matter of months. Ohio has also jumped in to address seismicity and other fracturing-related issues important to its State. Even North Carolina, which has not fractured a single gas well in the entire State, is moving legislation to place restrictions on this practice. Back in Illinois, we are home to the New Albany shale gas formation with a footprint that is much of the southern part of the State and much of my congressional district.

At the State level, they are quickly realizing the jobs and positive economic impact of hydraulic fracturing and moving steadily towards regulations. While this play is still unproven, estimates of upward to 47,000 jobs annually and $9.5 billion of economic impact for Illinois if the New Albany shale potential is realized.

It is well known that States, rather than the EPA, have been dominating the regulatory space for hydraulic fracturing for decades. When you consider the amount of additional resources and new experiences that would be needed to infuse into the EPA to replace what States already do well, it defies conventional budgetary wisdom that this is a good public policy move. I am not trying to suggest that the EPA does not have an important role to play in protecting the environment, but when you contrast the nimbleness and commitment of the States with the cumbersome and lengthy

process which characterizes U.S. EPA's one-size-fits-all approach, trusting the States a little more seems the right thing to do.

I know some of my colleagues here will dismiss these arguments and suggest coal and gas need even more regulation because they are, quote-unquote, "dirty," and we need cleaner fuels. I would submit to my colleagues that if this is really about environmental protection and not energy use manipulation, we must acknowledge that every fuel production method has risk.

On Monday, ABC News ran a story from the Associated Press about the negative environmental externalities with solar power. It read, Fueled partly by billions in government incentives, the industry is creating millions of pounds of polluted sludge and contaminated water. Companies must transport it by truck or rail to waste facilities hundreds and in some cases thousands of miles away. AP compiled a list of 41 solar makers in California, and based on State data, 24 of them did not report their waste. The State records show that 17 companies, which had 44 manufacturing facilities in California, produced 46.5 million pounds of sludge and contaminated water from 2007 through the first half of 2011. Roughly 97 percent of it was taken to hazardous waste facilities throughout the State, but more than 1.5 million pounds were transported to nine other States, and though it could be manifested, AP reports 2.1 million tons are unaccounted. Even though EPA and this administration are bullish on solar technologies, the same level of Federal data does not exist.

I want to welcome the State officials who have joined us today from across the country to share their experience, perspective, and devotion to their States' environments. We have representatives from State groundwater, drinking water, oil and gas, solid, and hazardous waste offices as well as their agency heads. We also have a State legislator and a city council member.

I now yield to Mr. Tonko, our subcommittee's ranking member, for his opening statement.

[The prepared statement of Mr. Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS

I would like to welcome all the members of the subcommittee to our first hearing in the 113th Congress. I want to say a special welcome to our new Ranking Member, Mr. Tonko, as well as our new Vice-Chair Dr. Gingrey and all our new Republican and Democrat members.

Today's hearing focuses on the important role that states play in environmental protection under current law.

This hearing will help raise awareness and set the stage for future discussions we are going to have on environmental protection. Many of us get caught up with what the U.S. EPA thinks or what it can do and fail to focus on the states and what they can and must do.

The states are by no means, "junior regulators" or the minor leagues of environmental protection. Rather, their plate is twice as full. To carry out federal environmental law, states have a lot of delegated authority. But states also have their own protective laws. Often, beyond anything the federal government has asked.

State regulators have every bit the same educational background, expertise, desire to protect the environment, and sense of professionalism as any employee at EPA, with the added bonus of actually living in the communities they are trying to make safe. They intimately knowing the terrain being regulated.

Some people might suggest states lack the will to enforce their laws or they are reluctant to pass anything serious. I think that answer is not fair, and I think history shows the states have generally acted first on matters before the federal government has stepped in to do something.

In this fast-paced technology driven society; a static regulatory regime cannot respond to innovations nor complex problems and challenging geologies. Let me offer a few examples of what I mean from issues familiar to our committee.

In the state of Maryland, there was a terrible coal ash problem. The state did not sit by powerless. Rather, in December 2008 the Maryland Department of the Environment issued one of the more robust sets of coal ash rules in the country. Maryland is not the only state, Pennsylvania and Wisconsin have demonstrated strong programs that are serious, flexible, and successful.

On the issue of hydraulic fracturing, Colorado has shown it can move 2 major changes to its rules on hydraulic fracturing in a matter of months. Ohio has also jumped in to address seismicity and other fracturing-related issues important to its state. Even North Carolina, which has not fractured a single gas well in the entire state, is moving legislation to place restrictions on this practice.

Back in Illinois, we are home to the New Albany shale gas formation with a footprint that's much of the southern part of the state. At the state level they are quickly realizing the jobs and positive economic impact of hydraulic fracturing and moving steadily towards regulations.

While this "play" is still unproven, estimates have upwards of 47,000 jobs annually and $9.5 billion of economic impact for Illinois if the New Albany Shale's potential is realized.

It is well-known that the states, rather than EPA, have been dominating the regulatory space for hydraulic fracturing for decades. When you consider the amount of additional resources and new experience that would need to be infused into EPA to replace what states already do well, it defies conventional budgetary wisdom that this is a good public policy move.

I am not trying to suggest EPA does not have an important role to play in protecting the environment, but when you contrast the nimbleness and commitment of the states with the cumbersome and lengthy process which characterizes US EPA's one-size-fits-all approach, trusting the states a little more seems the right thing to do.

I know some of my colleagues here will dismiss these arguments and suggest coal and gas need even more regulation because they are "dirty" and we need "cleaner" fuels. I would submit to my colleagues that if this is really about environmental protection—and not energy use manipulation, we must acknowledge that every fuel production method has risks.

On Monday, ABC News ran a story from the Associated Press above the negative environmental externalities with solar power.

It read: Fueled partly by billions in government incentives, the industry is creating "millions of pounds of polluted sludge and contaminated water."

"Companies must transport it by truck or rail to waste facilities hundreds and, in some cases, thousands of miles away.

AP compiled a list of the top 41 solar makers in CA, and based on state data, 24 of them did not report their waste. The state records show the 17 companies, which had 44 manufacturing facilities in California, produced 46.5 million pounds of sludge and contaminated water from 2007 through the first half of 2011. Roughly 97 percent of it was taken to hazardous waste facilities throughout the state, but more than 1.4 million pounds were transported to nine other states. And, though it could be manifested, AP reports 2.1 million tons are unaccounted.

Even though EPA and this administration are bullish on solar technologies, the same level of federal data does not exist.

I want to welcome the state officials who have joined us today from across the country to share their experience, perspective, and devotion to their states' environments. We have representatives from state groundwater, drinking water, oil and gas, and solid and hazardous wastes offices as well as their agency heads. We also have a state legislator and a city council member.

I now yield to Mr. Tonko, our subcommittee's ranking member for his opening statement.

# # #

OPENING STATEMENT OF HON. PAUL TONKO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. TONKO. Thank you, Mr. Chair, and it is a pleasure to join with you, Chairman Shimkus, and our expert witnesses, who will share their thoughts with us this morning. Thank you to the entire

panel for making the effort, and to join with the ranker of our committee, with Ranker Waxman and our team, and all of the members of the subcommittee. While we will not always be in agreement, I hope that we can find common ground to move this Nation forward on important issues in the jurisdiction of this committee, this subcommittee.

Today's hearing revisits an issue that we have been discussing since the day of the 13 original colonies deciding to band together and declare their independence from Great Britain. Over the years, we have continued to struggle to define the proper balance between Federal and State regulation. I expect we will continue to debate this for many years to come. Each one of the individual States we represent is different, to be sure, and the States have a responsibility to their citizens to manage their resources and their economies, but we know that from our Nation's history, decisions made in one State often have impacts beyond that particular State's borders. Just as we have State laws to ensure consistency among the towns, villages, counties, and regions within States, Federal law guarantees minimum standards for all of our Nation's citizens. They promote good relations amongst neighboring States, and they ensure that shared resources—water, air, land, forests, wildlife, and fisheries to name a few—remain viable and available for everyone's beneficial use.

The environment of any one State does not fit discreetly within its political boundaries. New York, my home State, shares its borders with five other States and with the Nation of Canada. We share our watersheds and airsheds with an additional six States. While New York has strong environmental protections, our environment is not only dependent upon how New York State manages its resources. It also depends upon the choices made by those other neighboring States in our region and by Canada.

The system we have today was put in place largely as a result of the experience we had prior to the adoption of sound Federal environmental laws. That experience was not good. It involved polluted surface and groundwater, acid rain, smog, soil erosion, and collapsed fisheries as a result of a States-only approach to environmental protection. Most of these environmental problems have been reduced significantly by Federal laws implemented in cooperation with the States.

I would also point out that we have accomplished these environmental success stories while our population and economy grew. We do not have to choose between a healthy environment and a healthy economy. Indeed, one complements the other, and we know that public health is not a luxury; it is indeed a necessity.

Just last month, a number of reports appeared about the terrible pollution problems in China, problems that are now too large to ignore. The result is increased hospitalizations and emergency shutdowns of some factories. The Chinese are discovering what we learned a long time ago: Unfettered industrial activity results in widespread serious pollution that does, indeed, impact public health and the economy.

Clean air, clean water, and healthy soils are fundamental building blocks of a sound economy and a healthy society. With creativity and willing partners in the private sector, we can do even

better. We do not want to go backward. Forward is our only direction.

Pollution prevention is always less costly than pollution cleanup. Our laws are not perfect, and their implementation is not perfect, but the public is well served by them, and we should be working to improve and strengthen them for the sake of public health and resource protection.

Every citizen in this Nation deserves to live in a community with clean air and clean water. Federal and State partnership in this effort has made this guarantee a reality and delivered real results. We should build on this success to address new challenges, like climate change. Now is not the time to reverse course.

I look forward to hearing from our witnesses, expert that they are, this morning.

Thank you all for agreeing to appear before our subcommittee today.

And again thank you, Mr. Chairman. I look forward to working with you and our fellow committee members, subcommittee members.

Mr. SHIMKUS. Thank you, Mr. Tonko.

And I look forward to working with you, too.

Now I would like to yield to the chairman of the full committee, Mr. Upton, for 5 minutes.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Thank you, Mr. Chairman.

You know, we are eager to better understand the role of the States in conserving resources and protecting the health of their residents.

And it is a special pleasure to see Hal Fitch, who manages Michigan's DEQ's Office of Oil, Gas and Minerals. Welcome.

Effective regulatory management of resource development is crucial. Excess restrictions cost jobs and revenue, but inadequate oversight and regulation could turn a State's residents against resource development. So we have got to strike the right regulatory balance.

Most agree that for policy decisions to be fair, they have to be made at the appropriate level of government, but what is that level? It is the one closest to the people but still has enough authority to carry out the policy. If the decision affects only folks in Kalamazoo, it should be made by the Kalamazoo City Commission. If it also affects others in Michigan, it ought to be made by State officials. Only those policies that impact citizens from more than one State should be made by the Federal Government.

Today's hearing gives us a chance to see environmental protection through the eyes of State officials. We are going to see firsthand that they, A, care about the environments in which they live and work; B, have professional experience and local expertise; C, seek the right balance between environmental protection and economic opportunity; and, lastly, take seriously their legal obligations under both State and Federal law. It is important to understand the important roles States play in protecting the environment, and that is what this hearing is about.

And I yield to my friend, Mr. Barton.

[The prepared statement of Mr. Upton follows:]

PREPARED STATEMENT OF HON. FRED UPTON

We are eager to better understand the role of the states in conserving resources and protecting the health of their residents. It's a special pleasure to see Hal Fitch, who manages the Michigan DEQ's Office of Oil, Gas, and Minerals.

Effective regulatory management of resource development is crucial. Excess restrictions costs jobs and revenue, but inadequate oversight and regulation could turn a state's residents against resource development. We must strike the right regulatory balance.

Most people agree that for policy decisions to be fair, they must be made at the appropriate level of government. But what is that level? It's the one closest to the people but still has enough authority to carry out the policy. If the decision affects only people in Kalamazoo, it should be made by the Kalamazoo City Commission; if it also affects others in Michigan, it should be made by state officials. Only those policies that impact citizens from more than one state should be made by the federal government.

Today's hearing gives us a chance to see environmental protection through the eyes of state officials. We will see first-hand that they:

- Care about the environments in which they live and work;
- Have professional experience and local expertise;
- Seek the right balance between environmental protection and economic opportunity; and
- Take seriously their legal obligations under both state and federal law.

It is important to understand the important role states play in protecting the environment. One thing wealready know is that Washington does not always know best.

# # #

OPENING STATEMENT OF HON. JOE BARTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BARTON. Thank you, Chairman.

And I first want to put to bed the rumor that I would not attend an early morning hearing on a getaway day. Staff seemed to think that I wouldn't show up. I want the record to show the only two members here ahead of me were the subcommittee chairman and the ranking member. They were here when I arrived. So I can show up in the morning, although I will admit there have been times that I have not.

I do appreciate this first hearing of this subcommittee being on this issue. I think we have a great panel of witnesses from around the country. When I was chairman of this committee back in 2005, we passed the Energy Policy Act, and in that, we revised the Safe Drinking Water Act to state as follows: Underground injection, to exclude the term underground injection, the underground injection of fluids or propping agents pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities. In other words, we said that the Federal Government could not regulate those. I think that is the best way to do it.

In my home State of Texas, in my congressional district, there are over 16,000 producing wells that have been hydraulically fractured and horizontally drilled. In the largest county that I represent, Tarrant County, which is an urban-suburban county, the number of mineral property owners went from 500 in the mid 1990s to today well over 100,000. This has been done without affecting the environment in any shape, form or fashion, other than the normal issues you have with noise and dust and trucks and

things like that when you drill or have any kind of a commercial activity.

I think the ranking member's statement from New York State is dead on in the sense that, comparing his State and my State, Texas has chosen to regulate hydraulic fracturing, but to allow it. His State so far has chosen not to. I don't have a problem with that. I do predict over time, his home State of New York may decide, in fact, that it may be well to do it in certain shapes, forms or fashions.

With that, I would like to yield to Dr. Gingrey for 2 minutes.

[The prepared statement of Mr. Barton follows:]

PREPARED STATEMENT OF HON. JOE BARTON

Thank you Chairman Shimkus for holding this hearing. My home state of Texas has been and is currently capable, active, and effective in protecting the environment and public health of Texans. I find it disingenuous for the Federal Government and in particular the Environmental Protection Agency (EPA) and the Department of Energy (DOE) to think that they are the only ones that can do this effectively. The same is true of the other states that sent governmental representatives here today to testify.

The recognition that it is the states rather than the feds that can best regulate their domestic oil and gas productions, especially when it comes to emerging and innovative technologies, was spelled out in the Energy Policy Act of 2005, which passed through this Committee when I was Chairman. Back then, this Committee recognized the importance of hydraulic fracturing and expressly revised the Safe Drinking Water Act term "underground injection" to exclude "the underground injection of fluids or propping agents pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities."

There is a company in my district and several other companies in Texas that are investing in researching reduced or waterless fracking technologies. This kind of innovation should be encouraged by local and federal agencies and these agencies should maintain oversight throughout the process so they understand the environmental and public health impacts instead of guessing at them.

Mr. GINGREY. And I thank the gentleman for yielding.

Mr. Chairman, I want to thank you for calling this hearing today on the role the States play in implementing our Federal environmental laws.

I also would like to welcome our panel of witnesses that will provide the subcommittee with its collective wealth of knowledge on how they implement the various Federal laws, Federal and State laws.

Today's hearing is my first as vice chair of this subcommittee, and today's hearing is a great example of the broad jurisdiction that we have. Mr. Chairman, I look forward to working with you and the other members of this subcommittee on both sides of the aisle, the ranking member Mr. Tonko, my good friend from New York, during this Congress to address the important environmental issues that will have a significant impact on the American people. We will examine spent nuclear fuel and its long-term storage with the hopes of finally turning the use of Yucca Mountain into a reality.

During the 113th Congress, this subcommittee will also study the benefits of hydraulic fracturing in our domestic energy production.

Mr. Chairman, I stand ready to work and I look forward to providing solutions for the policy areas under our jurisdiction on this subcommittee.

Today's hearing provides a strong starting point for the subcommittee for the 113th Congress, and I believe that we will learn a great deal from our panel today that will help guide us throughout the next 2 years, and I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes the ranking member of the full committee, Mr. Waxman, for 5 minutes.

OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WAXMAN. Thank you, Mr. Chairman.

I congratulate you on this hearing and taking over this chairmanship.

And I want to recognize our ranking member on the subcommittee as well. We look forward to working on a bipartisan basis to get things done.

This hearing is to examine the way Federal and State regulators work together to protect public health and the environment. Over the years, the Federal Environmental Protection Agency and the States have developed a proven model that has successfully reduced air pollution and ensured the public's access to safe drinking water.

Under this model, EPA sets minimum standards that States can exceed if they so choose. Implementation can be delegated to States on the showing that they have requirements in place that are at least as stringent as the Federal floor. Even then, EPA retains backstop enforcement authority to ensure that every citizen in the United States is receiving a minimum level of protection from environmental risks. EPA also plays an essential role in supporting State implementation through technical assistance, grants, and often loan funds as well.

As we will hear from the panel, this model has worked. States have received delegation for over 96 percent of the environmental programs that can be delegated. This is an impressive track record, and even more so when you consider the fact that this approach has offered protection to American families from pollution that causes respiratory diseases, from contaminants in their drinking water, and from toxic environmental exposures that can cause cancers and other diseases.

Despite these successes, there have been recent proposals to abandon the proven models and abdicate responsibilities to the States. One of the most immediate examples is the coal ash legislation from the last Congress.

As we hear from State regulators about the good work they are doing, we should be mindful of the serious threat the sequester and the Republican budget pose to this proven model of environmental protection. Without Federal technical assistance and funding, States may be unable to maintain their delegated programs. If the programs are handed back to EPA, EPA may not have the resources to take on this added implementation. The transition between State and Federal programs may create costs for regulated entities and uncertainty for industry. And worst of all, bad actors

may see opportunities to shirk environmental regulations, because of the lack of enforcement resources.

According to EPA, if sequestration goes into effect, there will be nearly 300 fewer cleanups under the leaking underground storage tank program. There could be a thousand fewer inspections to protect communities from toxic air pollution and other pollution that could can cause illness and death. And essential services to industry, like EPA's certification of auto engines for emission standards, could be curtailed.

Budget cuts that undermine implementation of our environmental statutes are penny wise and pound foolish. I hope my colleagues will listen closely to the testimony we hear today and bear it in mind as we consider sequestration, which is to take effect just a couple weeks from now, and EPA's budget in the coming weeks.

So I thank you for this hearing and look forward to the testimony.

I would be happy to yield to any of my colleagues.

Ms. Schakowsky, I yield to you the balance of my time.

[The prepared statement of Mr. Waxman follows:]

PREPARED STATEMENT OF HON. HENRY A. WAXMAN

I thank the Chairman for calling this hearing so that we can examine the way federal and state regulators work together to protect public health and the environment. Over the years, the federal Environmental Protection Agency (EPA) and the states have developed a proven model that has successfully reduced air pollution and ensured the public's access to safe drinking water.

Under this model, EPA sets minimum standard that states can exceed if they so choose. Implementation can be delegated to states on a showing that they have requirements in place that are at least as stringent as the federal floor. Even then, EPA retains backstop enforcement authority to ensure that every citizen in the United States is receiving a minimum level of protection from environmental risks. EPA also plays an essential role in supporting state implementation through technical assistance, grants, and often loan funds as well.

As we will hear from the panel, this model has worked. States have received delegation for over 96% of the environmental programs that can be delegated. This is an impressive track record, and even more so when you consider the fact that this approach has offered protection to American families from pollution that causes respiratory diseases, from contaminants in their drinking water, and from toxic environmental exposures that can cause cancers and other diseases.

Despite these successes, there have been recent proposals to abandon the proven models and abdicate responsibilities to the states. One of the most immediate examples is the coal ash legislation from last Congress.

As we hear from state regulators about the good work they are doing, we should be mindful of the serious threat the sequester and the Republican budget pose to this proven model of environmental protection. Without federal technical assistance and funding, states may be unable to maintain their delegated programs. If the programs are handed back to EPA, EPA may not have the resources to take on this added implementation. The transition between state and federal programs may create costs for regulated entities and uncertainty for industry. And worst of all, bad actors may see opportunities to shirk environmental regulations, because of the lack of enforcement resources.

According to EPA, if sequestration goes into effect, there will be nearly 300 fewer cleanups under the leaking underground storage tank program. There could be a 1,000 fewer inspections to protect communities from toxic air pollution and other pollution that can cause illnesses and death. And essential services to industry like EPA's certification of auto engines for emissions standards could be curtailed.

Budget cuts that undermine implementation of our environmental statutes are penny wise and pound foolish. I hope my colleagues will listen closely to the testimony we hear today and bear it in mind as we consider sequestration and EPA's budget in the coming weeks.

OPENING STATEMENT OF HON. JANICE D. SCHAKOWSKY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Ms. SCHAKOWSKY. I thank the gentleman for yielding, and I appreciate this hearing.

An overarching theme of today's hearing will be the role of States in monitoring and enforcing regulations over the process of hydraulic fracturing, I suspect. I am principally concerned about the environmental impacts of hydraulic fracturing.

According to Cornell University president Robert Howarth, 3.6 to 7.9 percent of the methane from shale gas production which, results from fracturing, escapes to the atmosphere in venting and leaks over the lifetime of a well, that was a quote. The study claims that this represents a 30 to 100 percent increase over conventional gas production. The impact of that methane pollution could be more impactful on greenhouse gas emissions than on the burning of oil.

Concerns about the impact of hydraulic fracturing on water are well documented. Reports have been filed in more than 10 States about water contamination that occurred shortly after hydraulic fracturing commenced.

I just want to point out that last month the EPA announced its third delay in its investigation into water contamination that the residents of Pavillion, Wyoming, believe is connected to hydraulic fracturing. We need to make sure that the EPA does follow up and examine the cause of contamination of drinking water.

And I yield back.

Thank you.

[The prepared statement of Ms. Schakowsky follows:]

PREPARED STATEMENT OF HON. JANICE D. SCHAKOWSKY

Thank you, Chairman Shimkus, for holding today's hearing about the role of states in protecting our environment. This is an important topic, and I'm glad to start this congress on such a critical issue.

An overarching theme of today's hearing will be the role of the states in monitoring and enforcing regulations over the process of hydraulic fracturing. I am principally concerned about the environmental impacts of hydraulic fracturing.

According to Cornell University Professor Robert Howarth, "3.6% to 7.9% of the methane from shale-gas production (resulting from hydraulic fracturing) escapes to the atmosphere in venting and leaks over the lifetime of a well." The study claims that this represents a 30 100% increase over conventional gas production. The impact of that methane pollution could be more impactful on greenhouse gas emissions than the burning of oil.

Concerns about the impact of hydraulic fracturing on water are well-documented. Reports have been filed in more than 10 states about water contamination that occurred shortly after hydraulic fracturing commenced. A well-funded EPA would enable faster investigation and action in the case of water contamination across the country.

Last month, the EPA announced its 3rd delay in its investigation into water contamination that residents of Pavillion, Wyoming believe is connected to Hydraulic Fracturing. I sent a letter, along with 20 colleagues, to EPA Administrator Lisa Jackson voicing our concern about the delays—which have now stretched over a year—and reiterating the need to examine and rule on the cause of contamination of drinking water.

Again, thank you for holding today's important hearing. I look forward to the testimony of our witnesses.

Mr. SHIMKUS. The gentlelady yields back her time.

Again, thank all members for their attendance.

And now I would like to turn to our panel. Thank you for being patient.

We are going to go left to right, and I am just—for the sake of time, I am just going to—I usually do a whole introduction, but I am just going to go straight. We are just going to run into this.

So, first, let me welcome Mr. Harold Fitch, who is supervisor of the mineral wells and chief, Office of Oil, Gas, and Minerals for Michigan Department of Environmental Quality.

Sir, your full statement is in the record, you have 5 minutes, and you are now recognized.

STATEMENTS OF HAROLD R. FITCH, SUPERVISOR OF MINERAL WELLS, AND CHIEF, OFFICE OF OIL, GAS AND MINERALS, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY; MATTHEW J. LEPORE, DIRECTOR, COLORADO OIL AND GAS CONSERVATION COMMISSION; SARAH PILLSBURY, ADMINISTRATOR, DRINKING WATER AND GROUNDWATER BUREAU, NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES; JEFFERY STEERS, DIRECTOR, LAND PROTECTION AND REVITALIZATION DIVISION, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY; TERESA MARKS, DIRECTOR, ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY; THE HONORABLE PRICEY HARRISON, NORTH CAROLINA HOUSE OF REPRESENTATIVES; AND THE HONORABLE MICHAEL A. SESMA, COUNCIL VICE PRESIDENT, CITY OF GAITHERSBURG, MARYLAND

STATEMENT OF HAROLD R. FITCH

Mr. FITCH. Thank you, Mr. Chairman and members of the subcommittee.

I am Hal Fitch, as you heard. I am the State geologist of Michigan as well as the director of our Office of Oil, Gas, and Minerals. Our office is charged with regulating oil and gas and mining in Michigan. I am here today on behalf of the Interstate Oil and Gas Compact Commission. I am also a member of the board of directors of the Groundwater Protection Council, which you are going to hear from in just a minute.

The IOGCC is an organization chartered by Congress that represents the Governors of 38 States. Its mission is to promote the conservation and efficient recovery of domestic oil and gas, while protecting health, safety, and the environment. Thank you for the opportunity to be here this morning.

I want to talk briefly about the regulatory structure and processes in Michigan, recognizing that Michigan is typical of many of our sister States in many respects, and we are also unique; each State is unique. And I want to talk about IOGCC's role in assisting the States in coordinating their efforts. The States have a long and successful history of regulating oil and gas operations. The States recognized the need, in fact, to protect the environment while at the same time fostering orderly development of oil and gas decades before the beginning of the modern environmental movement.

Michigan's regulatory structure is typical of our sister States. We oversee well drawing and production from cradle to grave, and we also cover injection wells that are associated with oil and gas oper-

ations. We have a staff of about 60 people, comprised of geologists, engineers, attorneys, enforcement specialists, and administrative support staff. Michigan has had over 60,000 oil and gas wells drilled starting back in the 1920s. We currently have about 19,000 wells active.

My agency's oversight starts with issuance of permits and administration of our rules. They cover well drilling and construction to assure that oil and gas and by-products are contained within the well bore. If a well is productive, we regulate production rates, surface equipment, and environmental monitoring. Our staff conduct regular inspections over the life of a well, and we prescribe how a well has to be plugged and the site restored at the end of its productive life. Last year, we conducted over 17,000 field inspections.

My agency enforces strict requirements for spill prevention, containment, cleanup and reporting. We monitor air and water emissions to assure compliance with State and Federal standards. Finally, we have dedicated funding to plug wells in the event that the operator isn't solvent or enters into bankruptcy so that the State can take care of that well and plug it properly.

State oil and gas statutes, regulations, and administrative procedures are tailored to the legal structure and doctrines, environmental conditions, geology, topography, climate, and community sensitivities that are specific to each State. In addition, our regulatory staff must have highly specialized backgrounds and expertise in well drilling, oil and gas production, law enforcement, and property rights as they apply in each specific State. A one-size-fits-all Federal approach would not be as effective or efficient in accommodating those unique issues.

Hydraulic fracturing is an example of the adaptability of State regulations in addressing emerging technologies. Michigan has had over 12,000 wells hydraulically fractured, starting back in 1952. We have not had one incident of environmental contamination related to hydraulic fracturing. In talking to my counterparts in other States, they have the same conclusion. None of us have seen a direct impact or direct contamination of groundwater from hydraulic fracturing. There are some other issues associated with it that have to be managed properly. One of those is management of wastewater, the flow-back water that comes back out of the well. Another one is the increased water withdrawals that are necessary for large-scale fracturing which we are seeing in recent years.

Michigan issued special requirements for evaluation of water withdrawals. We use a Web-based assessment tool, and we issued requirements for monitoring and reporting of hydraulic fracturing operations. We have also begun posting chemical additive reports on our Web site. Oil and gas agencies in other States have taken similar steps to address those same issues.

While we are unique, we also—States also have elements in common with each other, and that is where the IOGCC and Groundwater Protection Council come in. They are very effective in helping us to coordinate our efforts and increase our effectiveness. The IOGCC provides a forum for States to share ideas, it has a training program, provides model statutes, coordination, and they have an inspector certification program.

Groundwater Protection Council developed FracFocus in cooperation with the IOGCC, the nationwide Web-based registry for reporting of chemicals used in hydraulic fracturing. It is used by 10 States currently. We also, the IOGCC, supports underground injection peer-review program; the RBDMS, risk-based data management system, and we are evaluating the use of that RBDMS to help provide information to the Energy Information Administration.

Mr. SHIMKUS. Mr. Fitch, if you can just sum up real quickly. We are going to have time for questions, so I think we will be able to——

Mr. FITCH. That is all I have to say. Thank you very much.

[The prepared statement of Mr. Fitch follows:]

TESTIMONY SUBMITTED TO THE SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY OF THE HOUSE COMMITTEE ON ENERGY AND COMMERCE HEARING ON "THE ROLE OF THE STATES IN PROTECTING THE ENVIRONMENT UNDER CURRENT LAW"

HAROLD R. FITCH, DIRECTOR, OFFICE OF OIL, GAS, AND MINERALS
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FEBRUARY 15, 2013

Good morning Mr. Chairman and members of the Subcommittee. My name is Hal Fitch. I am the Director of the Office of Oil, Gas, and Minerals (OOGM) of the Michigan Department of Environmental Quality and have served in that capacity for the past 16 years. The OOGM is charged with regulating oil, gas, and mineral exploration and production operations in Michigan.

I am here today on behalf of the Interstate Oil and Gas Compact Commission (IOGCC) to describe the states' role in protecting the environment through regulation of oil and gas drilling and production. The IOGCC is an organization chartered by Congress that represents the governors of 38 states. Its mission is to promote the conservation and efficient recovery of domestic oil and natural gas resources while protecting health, safety, and the environment. I am Michigan's Official Representative to the IOGCC. I am also a member of the Board of Directors of the Ground Water Protection Council, which is also represented here today.

I appreciate this opportunity to address you on this important issue. I want to talk briefly about the regulatory structure and processes in Michigan as well as other states, and the role of the IOGCC in assisting the states in those efforts and in coordinating state actions.

The states have a long and successful history of regulating oil and gas operations. In fact, the states' recognition of the need to protect the environment while supporting the efficient production of oil and gas dates back many decades before the modern environmental movement.

Michigan is typical of other oil- and gas-producing states in the scope and depth of our oil and gas regulations. We oversee well drilling and production from cradle to grave. I have a staff of about 60 people, comprised of geologists, engineers, attorneys, enforcement specialists, and administrative support personnel. Our oversight starts with siting of each well to assure protection of ground water, surface water, wetlands, aquatic habitat, cultural features, property, and other features. We also regulate the location and spacing of wells so that the oil and gas resources can be efficiently extracted with the minimum number of wells and least amount of surface disturbance. In addition to oil and gas extraction wells, we regulate wells for injection of brine, gas, and other fluids for disposal, enhanced oil recovery, or underground gas storage.

Oil and gas operators must obtain a permit from the state for each well before beginning to drill. Permits incorporate specific drilling and well construction criteria to assure that oil, gas, and byproducts are contained within the wellbore and do not escape to the environment. If a well is productive, we enforce regulations on production rates, surface equipment, and environmental monitoring. At the end of a well's productive life, or if the well is initially non-productive (i.e., a "dry hole"), we prescribe how it must be plugged and how the site must be restored. Our staff inspect well operations to assure adherence to requirements for protection of the environment and public health. We have a total of 15,000 oil and gas wells and 4200 injection wells in Michigan. Our staff conducted over 17,500 field inspections in 2012.

Throughout the life of a well, we enforce requirements for spill prevention, containment, and cleanup. We require secondary containment, such as synthetic liners, under areas prone to accidental spills. If spills occur, they must be promptly reported, monitored, and cleaned up. We monitor for emissions to the air and water to minimize potential impacts and assure adherence to federal and state laws. We have a dedicated fund, provided from taxes paid by the oil and gas industry, to plug wells and restore sites if an owner is in bankruptcy or ceases to exist.

Michigan's oil and gas statutes, regulations, and administrative procedures are tailored to the legal structure and doctrines, environmental conditions, geology, topography, climate, and community sensitivities specific to our state. A one-size-fits-all federal approach would not be as effective or efficient in accommodating these unique issues. In addition, our staff must have highly specialized background and expertise in well drilling, oil and gas production, law enforcement, and property rights that are distinctive to Michigan in many respects.

Our regulatory oversight has to be flexible and adaptable. A good example is our response to the issue of hydraulic fracturing. Hydraulic fracturing was first used in Michigan in 1952. Since then, we have had over 12,000 wells hydraulically fractured and there have been no instances of environmental contamination related to the practice. Recent increased use of the technology, particularly in conjunction with horizontal drilling, has dramatically increased U.S. oil and gas production; however, it has also caused concern among the public and environmental advocacy groups over potential environmental impacts.

Our agency has responded to this concern in several ways. We issued a special permitting instruction that requires evaluation of potential impacts of water withdrawals using a web-based assessment tool; reporting of chemical additives used in hydraulic fracturing and posting of the information on our website; and monitoring and reporting of pressures and fluid volumes during hydraulic fracturing operations. Over the past year my staff and I have given over 100 presentations to the public and special interest groups to provide the facts about hydraulic fracturing and explain our regulatory response to the concerns.

While each state is unique, the states also have many things in common. This is where multi-state organizations play an important role. The IOGCC and GWPC are the two main organizations that have assisted and supported the states in implementing our responsibilities.

The IOGCC provides a forum for states to share ideas, compare similarities and differences, and formulate regulatory solutions. The organization provides training, model statutes, and coordination among its member states. The IOGCC developed an Inspector Certification program used by several states to help ensure that on-the-ground inspectors have the necessary qualifications and background.

A good example of interstate cooperation around a common issue is the development of FracFocus—a nationwide web-based registry for reporting chemicals used in hydraulic fracturing operations. The registry was established in 2011 by the GWPC in cooperation with the IOGCC. Three hundred seventy-five companies now report their fracturing operations on FracFocus, and the database has more than 37,000 records of individual fracturing operations. Currently, ten states require disclosure to FracFocus by rule, and additional states may adopt this approach. FracFocus was recently upgraded to version 2.0, which provides improved searchability.

The IOGCC also supports the Underground Injection Control Peer Review program implemented by the GWPC. This program provides review and advice to help states evaluate the effectiveness of their injection well programs in protecting the environment and public health.

Another example of states working together is the Risk-Based Data Management System (RBDMS) developed by the GWPC. Michigan and many of our sister states also have adopted RBDMS to manage our oil and gas drilling and production data. RBDMS provides a common platform that can be tailored to meet the specific needs of each individual state. RBDMS is a mission critical tool for regulatory program management and environmental resource protection. Most recently, states through the GWPC are exploring ways that RBDMS can assist the Energy Information Administration to increase the public availability of timely, accurate, and comprehensive U.S. oil and gas production data.

In conclusion, we are confident in the ability of the laws, rules, regulatory procedures, and professional staff in Michigan and our sister states to protect the environment and public health in an efficient and effective manner. Our regulatory structures are adaptable in addressing new technologies and new concerns, and they yield consistent results tailored to our specific needs and priorities.

Thank you again for the opportunity to appear here today. I would be glad to entertain any questions the Subcommittee may have.

Mr. SHIMKUS. Thank you.

I would now like to turn to my colleague and friend Diana DeGette from Colorado to introduce our next member of the panel.

Ms. DEGETTE. Mr. Chairman, I am really happy to welcome Matthew Lepore from Colorado. He is the director of the Colorado Oil and Gas Conservation Commission, relatively new to that post, and he has been very busy since he got there. We have had two rule changes, and he is working hard to implement all of the rules.

Colorado has a really innovative way that we are trying to grapple with this new oil and gas development, particularly hydraulic fracturing. The Oil and Gas Commission has been working with a coalition that includes environmentalists as well as the industry. While I don't always agree 100 percent with all the rules they are promulgating, I think they are working hard, and I think he is a great witness to the high standard that some States like Colorado, of course, has always had.

So thank you for coming, Mr. Lepore. We are looking forward to hearing your testimony.

STATEMENT OF MATTHEW J. LEPORE

Mr. LEPORE. Thank you very much, Mr. Chairman.

Thank you very much, Ms. DeGette, I appreciate that a great deal.

I am pleased to be here to provide our perspective on how the State of Colorado regulates oil and gas exploration and production to develop our important indigenous resources responsibly and in a manner that protects our environmental resources.

I am here today on behalf of both the State of Colorado and the Groundwater Protection Council. The Groundwater Protection Council was formed in 1983. It has 43 member States, and its purpose is to—its members include organizations of environmental underground injection control, source water, groundwater, and oil and gas regulatory agencies. GWPC promotes the use of best practices and fair but effective laws regarding comprehensive groundwater protection. Among many other projects intended to protect groundwater, GWPC, in conjunction with the Interstate Oil and Gas Compact Commission, manages FracFocus, the national hydraulic fracturing chemical registry, which I will discuss in greater detail below.

Colorado has a very long history of oil and gas production. Our first well was drilled in 1862. It was one of the first wells in the country. Today we have 50,265 active oil and gas wells. We add about 2,000 a year and will continue to do so for the foreseeable future. In 2012, we produced a record-breaking, for Colorado, 47 million barrels of oil. At the same time, we have a thriving resort and tourist economy. Our rugged mountains, clear streams, and abundant wildlife are an essential part of our heritage.

I would like to focus for just a minute or two on some of the rules that Colorado has adopted, specifically in the last 15 months. Starting in December 2011, Colorado adopted the most progressive frack fluid chemical disclosure rule in the country up to that time. It requires operators to disclose all of the chemicals used in their frack fluid. All those chemicals are posted on FracFocus and are available for public review. Colorado's rule has been imitated by several

States, including Pennsylvania, Ohio, and Tennessee, and much of BLM's proposed regulation looks to Colorado for a model.

In January of this year, last month, we adopted a groundwater monitoring requirement. Beginning on May 1st all new wells drilled in Colorado will be required, the operator will be required to take a pre-drilling groundwater sample and two post-drilling groundwater samples so that we can understand what baseline conditions are and have an opportunity to see if any drilling has impacted any of those groundwater resources.

And, finally, Monday of this week, although it seems much longer ago, we adopted a rule setting new setback distances, the distance between occupied buildings and wells, after about a year-long stakeholder process.

My agency has 76 full-time employees dedicated to protecting the environment and seeing that our resources are responsibly developed. Many of those have advanced degrees, including Ph.D.s, master's degrees, we have geochemists, we have hydrologists, we have environmental specialists. There is no one on my staff who is interested in seeing oil and gas development adversely impact our environment.

In the limited time I have left, I would like to show you a couple of pictures and talk about some of the tools that we use to regulate efficiently, effectively, and transparently.

If you can go to the next slide for me, please. We have—these are hard to see. This is an interactive map that is available on our Web site, that is publicly accessible. This map has 125 layers of information. What you are looking at there is a picture of Weld County, Colorado, and all of the wells in that particular section. You click on any one of those links, you will find out everything you want to know about that well, when it was drilled, how deep it is drilled, how it was completed, how much production there has been, whether there has been an inspection, a violation, an enforcement action.

If I could have the next slide please.

I am going to keep going, skip a couple, please. One more. That is a production report. This is a FracFocus link. You can get there directly from our Web site. Again, for any well in the State, you can pull this up. If it was stimulated since the rules became effective, you can find out what was used in the frack stimulation fluid.

Next slide please. I want to go one more. Thank you.

This is what we call an e-form through GWPC. GWPC developed for us an electronic form submittal and management system so that an operator's permit to drill is submitted electronically, and this is an inspection report. So we generate electronic inspections, we send these to the operators directly. Tremendously efficient and effective regulatory system developed by GWPC for us.

My time is up. Thank you very much.

[The prepared statement of Mr. Lepore follows:]

THE HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

"THE ROLE OF THE STATES IN PROTECTING THE ENVIRONMENT UNDER CURRENT LAW"

Matthew J. Lepore
Director, Colorado Oil and Gas Conservation Commission
Colorado Department of Natural Resources
Friday, February 15, 2013

Mr. Chair, thank you for this opportunity to provide our perspective on how the state of Colorado regulates oil and gas exploration and production to develop our important, indigenous resources responsibly and in a manner that protects our environmental resources. My name is Matthew Lepore, and I am the Director of the Colorado Oil and Gas Conservation Commission, the state agency responsible for regulating oil and gas development.

I am here today on behalf of Colorado and the Groundwater Protection Council (GWPC) to describe the states' role in protecting the environment through progressive, balanced regulation of oil and gas exploration and production. GWPC is a nonprofit (501(c)(6)) organization whose members include state environmental, UIC, source water, ground water, and oil and gas regulatory agencies. GWPC promotes the use of best practices and fair but effective laws regarding comprehensive ground water protection. Among many other projects intended to protect groundwater, GWPC, in conjunction with the Interstate Oil and Gas Compact Commission, manages FracFocus, the national hydraulic fracturing chemical registry, which is discussed in greater detail below.

I would like to speak briefly about Colorado's regulatory regime, and the important ways GWPC enhances the Colorado Oil and Gas Commission's efficiency, effectiveness, and regulatory transparency.

Colorado has a long and proud history of oil and gas development, with our first oil well dating back to 1862. Today, we have 50,265 active wells, having passed the 50,000 mark just this past December. We have been adding at least 2,000 new wells per year for the past nine years, and expect 2013 to be similar. 2012 was a record-breaking year for oil production in Colorado; we expect production to top 47 million barrels when the final numbers are tallied. We rank fifth in the nation in natural gas production and tenth in oil production. Our diverse hydrocarbon resources encompass a variety of shale, tight sand, coal bed methane, and other formations that span the state. At the same time, we have a thriving resort and tourist economy, and our rugged mountains, clear streams, and abundant wildlife are an essential part of our heritage.

With respect to modern technologies that are very much in today's headlines, nearly one-third of all wells drilled in Colorado last year were horizontal wells, and we expect that percentage to grow steadily, as it has in each of the past four years. We have more than twenty years of experience with hydraulic fracturing, a technology that is absolutely vital to unlocking Colorado's rich natural gas and oil reserves. These reserves are a critical source of domestic

energy for our state and nation, and their exploration, development, and production provides good-paying jobs for our residents and needed tax revenues for our communities.

But it is also essential that this development occurs in an environmentally responsible manner that protects our water resources generally and our drinking water specifically. This is a fundamental part of our regulatory mission, and something that everyone at our agency takes very seriously. To that end, our Rules continue to evolve to keep pace with technological changes in the industry.

During 2007 and 2008, our agency devoted substantial time and effort to updating our regulations to address a broad range of environmental issues associated with oil and gas development. The final rules strike a responsible balance between energy development and environmental protection, and they reflect input from dozens of local governments, oil and gas companies, and environmental groups, as well as thousands of our residents. These rules have become the basis for regulatory initiatives in other states, and even other countries, most recently the Ukraine.

In December 2011, the COGCC worked with such diverse partners as the Environmental Defense Fund and Halliburton, to craft a hydraulic fracturing fluid chemical disclosure rule that has been hailed as a model and widely imitated by other states, including Ohio, Pennsylvania, and Tennessee.

In January of this year, Colorado adopted rules requiring mandatory testing of groundwater near new wells, both before and after drilling and completion operations. We are one of just three states in the country to require groundwater sampling, and the only state that requires post-drilling sampling.

Finally, just this week, on February 11, the COGCC adopted new rules that increase the minimum distance, or "setback," between oil and gas facilities and occupied buildings, and require the most stringent set of mitigation measures in the country to ensure work occurs with the least disturbance to nearby residents. Among other measures, closed-loop or "pitless" drilling systems and "green completions" are required at all locations within 1,000 feet of occupied buildings. Increased notice to, and communication with, nearby residents is also a central tenet of these new rules. Operators are required to notify local governments and citizens well in advance of commencing operations, and to meet with interested or concerned citizens if requested to do so. We believe improving communications among these stakeholder groups at the front end will alleviate many questions, concerns, and potential conflicts as operations progress.

In partnership with our universities, we are launching a comprehensive study of the impacts of natural gas drilling on air quality and public health. This comes after several steps in recent years to reduce pollutants that originate at oil and gas facilities, including requiring emission-control devices to capture emissions that might otherwise escape.

These recent state rulemakings exemplify the benefits associated with state oversight and site-specific regulation. Colorado's amended rules contain various provisions to ensure that oil and gas operations do not harm our drinking water or unreasonably interfere with other land use

activities, while recognizing the distinctions between, and idiosyncrasies of, different producing basins in different regions of our state. For example,

- Rule 205A requires operators to disclose the chemicals used to hydraulically fracture a well. Under this Rule, effective April 1, 2012, operators are required to disclose all known chemicals in hydraulic fracturing fluids to the public via the website www.FracFocus.org or, with respect to an operator's trade secrets, directly to the Commission or health professionals upon request. FracFocus.org is a national hydraulic fracturing chemical registry website created by the GWPC and the Interstate Oil and Gas Compact Commission. Public access to this information provides greater transparency to help build public trust and provide the tools to those who want to ensure their water supplies are protected.
- Rule 317 requires wells to be cased with steel pipe and the casing to be surrounded by cement to create a hydraulic seal and ensure that gas and fluids do not leak into shallower aquifers. Further, operators are required to run cement bond logs on all production casing to confirm that the cement has properly isolated the hydrocarbon bearing zones. Rule 341 requires operators to monitor well pressures during hydraulic fracturing and promptly report significant increases. Together, these requirements help to ensure that ground water is protected and that prompt action is taken if conditions arise that could lead to the subsurface release of hydraulic fracturing fluids.
- Rule 317B imposes mandatory setbacks and enhanced environmental protections on oil and gas development occurring near sources of public drinking water. These requirements provide an extra layer of protection for our public water supplies and help ensure that these critical resources are not inadvertently contaminated by energy development.
- Rules 608, 609, and 318A require operators to sample nearby water wells before, during, and after operations to ensure that they are not contaminated by gas or other pollutants. Rule 608 applies to coalbed methane basins in the state, Rule 381A applies in the DJ Basin in northeastern Colorado, and Rule 609 applies to all other areas of the state. The COGCC recognizes that each of these areas has unique characteristics, making a one-size-fits-all solution impractical; however, groundwater must be protected on a statewide basis. These rules provide an extra layer of protection, above and beyond our casing and cementing requirements.
- New Rule 604 establishes a 500 foot setback from occupied buildings, and a 1,000 foot setback from "high occupancy buildings" such as schools, hospitals, and day care centers. This Rule also mandates specific mitigation measures to alleviate potential noise, odor, light and dust issues associated with drilling and completion activities for wells located near occupied buildings.
- Amendments to Rules 305 and 306 require early and more detailed notification to residents living within 1,000 feet of new oil and gas operations, including an opportunity to meet with the operator regarding the planned operations and proposed mitigation measures.

The oil and gas industry is a dynamic one, and its methods and technologies are continually evolving. The industry's continued success depends upon its ability to develop new resources using innovative techniques, and the ability of state regulations and regulators to stay apace of these developments and apply appropriate, fast-adapting oversight. For many years now, the

GWPC has been an important partner in COGCC's efforts to regulate efficiently, effectively, and transparently. GWPC's Risk Based Data Management System (RBDMS) is an important tool COGCC and other state oil and gas regulatory agencies use to manage and analyze oil and gas program data and water resources management information. RBDMS can provide data about oil and gas well locations, permitting, and production to regulators, the public, and industry through its Web interfaces. COGCC is working with the GWPC and the Energy Information Administration on an effort to us an RBDMS interface to update the U.S. oil and gas production database in an automated fashion to provide timely and accurate information from its states online data.

Three specific RBDMS tools developed by or in collaboration with GWPC are critical components of COGCC's regulatory arsenal: our E-Forms application, which allows many of our regulatory forms, including drilling permits, to be filed electronically; FracFocus; and our interactive Environmental Database.

E-Forms is a software application that allows the agency to manage regulatory forms, including drilling permits, completion reports, and oil and gas location assessments, electronically. Users of these forms – primarily operators – are able to submit them electronically. Additionally, the agency can transmit electronic copies of these forms to parties, such as the surface owner or local governments, that are entitled to notification under our Rules. Furthermore, interested parties can access and provide comments on drilling permits and location assessment forms on-line. The automated functionality of e-forms has greatly reduced staff time spent entering data from paper forms, allowing them to spend more time on primary duties. Processing time for drilling applications has also been reduced. We continue to work with GWPC as we transition additional forms from paper to electronic format as quickly as we can.

FracFocus, the national hydraulic fracturing chemical registry, developed and managed by GWPC and IOGCC, also provides important benefits to the COGCC, industry, and the public. GWPC worked with us to develop a direct link between our COGIS interactive map and the FracFocus database, so that a user viewing a well on our map can go directly to FracFocus and read the hydraulic frac' fluid disclosure report for that well. The ability to use FracFocus as the repository for disclosure reports, rather than developing one from scratch, saved the COGCC both time and money. Industry has benefitted by having a single repository, with one set of submission requirements, rather than dealing with different requirements across the country. Finally, FracFocus lends invaluable transparency to, and increases confidence in, the regulatory process by enabling the public to see what chemicals are being used to frac' wells.

Our Environmental Database is a publicly-accessible database of environmental sampling data associated with specific wells or locations. The database is linked to our GIS Map, so a user can instantly call up, view, and download water, soil, or air sampling data associated with, for example, a well located near their home. The Environmental Database went "live" in September 2012, and will continue to grow as operators submit groundwater sampling data required under our new Rules. The Environmental Database also houses sampling results related to remedial investigations and environmental clean-up projects undertaken or directed by COGCC staff. GWPC originally developed an environmental database application for use by Ohio, and was

able to modify the application to work with Colorado's existing GIS map and related applications.

The COGCC was established by the Colorado General Assembly in 1951. The COGCC has a full time staff of 76; that includes PhDs, Professional Engineers, Groundwater Hydrologists, Geochemists, and other environmental specialists, all dedicated to ensuring compliance with our rules. We have learned much through experience, and our rules have evolved to keep pace with changing technologies. Today, advances in horizontal drilling, hydraulic fracturing, and three-dimensional seismic imaging have combined to open a new frontier in exploration and development in Colorado and across the country – shale oil and shale gas. The economic and energy-security benefits of developing these resources is potentially transformative. Yet, we must ensure that our respective regulatory regimes set the highest standards of conduct for industry and protect our air, water, and wildlife as these technologies are deployed. The recent changes to COGCC's Rules demonstrates Colorado's firm commitment to this course of action. Our experience, and that of other states, demonstrates exploration and production activities are most effectively regulated at the state level, where highly diverse regional and local conditions are more fully understood and where rules can be tailored to fit the needs of local basins, environments and communities. We believe in Colorado that we can best ensure that our precious natural resources and environment are protected while allowing for the innovation and experimentation that are the hallmarks of our nation.

COGCC Website

HOME

Colorado Oil and Gas Conservation Commission

PRINT PAGE
MISSION
KIDS' TAGE
GENERAL
CONTACTS
LIBRARY
HEARINGS
RULES
POLICIES
ORDERS
FORMS
STAFF RPT
PERMITS
NEWS/MEDIA
DATABASE
LOCAL GOV.
IMAGES
MAPS
HELP

February 13, 2013

PUBLIC ANNOUNCEMENTS

Top Operating | Rider 1A Extended (02/06/2013)
The comment period for the Top Operating Rider 1A Permit 400360983 has been extended by request to 02/15/2013.

SG Interests I LTD Federal 8-89-31 1 Extended (01/31/2013)
The comment period for the for the SG Interests I LTD Federal 8-89-31 1 Form2A 400360104 and Form 2 400359915 has been extended by request to 02/24/2013.

SG Interests I LTD Federal Comment Period Extended (01/31/2013)
The comment period for the for the SG Interests I LTD Federal 8-89-7 1 Location 400360334 and Permit 400340641 has been extended by request to 02/23/2013.

County KIA Inspector (01/15/2013)
County has recently retained a contractor pursuant to an Intergovernmental Agreement between the Board of County Commissioners of Garfield County and the Colorado Oil and Gas Conservation

January 7th - 9th Rulemaking Audio Available (01/15/2013)
The January 7th - 9th Rulemaking Audio is now available for download. These are large audio files and depending on your computer's ability, could take some time to download.

COGCC Approves Measures to Limit Drilling Impacts (01/10/2013)
The Colorado Oil and Gas Conservation Commission preliminarily approved comprehensive new rules to limit the impact of drilling near residences and other occupied buildings.

COGCC Approves New Groundwater Protections (06/07/2012)
The Colorado Oil and Gas Conservation today approved pioneering new groundwater protection rules considered among the strongest in the country.

Water Sampling Data Now Available (08/13/2012)
Includes COGCC Baseline and COGA Voluntary Data. The database is under construction and will continue to have historical information added in the coming months.

Information on Hydraulic Fracturing Document (04/06/2012)
Click on the above link to download the COGCC document with information on Hydraulic Fracturing.

HOT TOPICS

Statewide Water Sampling and Monitoring Rulemaking (11/26/2012)
New and amended rules for statewide water sampling and monitoring. (500 Series)

Rulemaking to consider Statewide Setbacks (11/26/2012)
New and amended rules for statewide setbacks and aesthetic and noise control. (100, 200, 300, 500, 600, 800, 900, 1100, and 1200 Series)

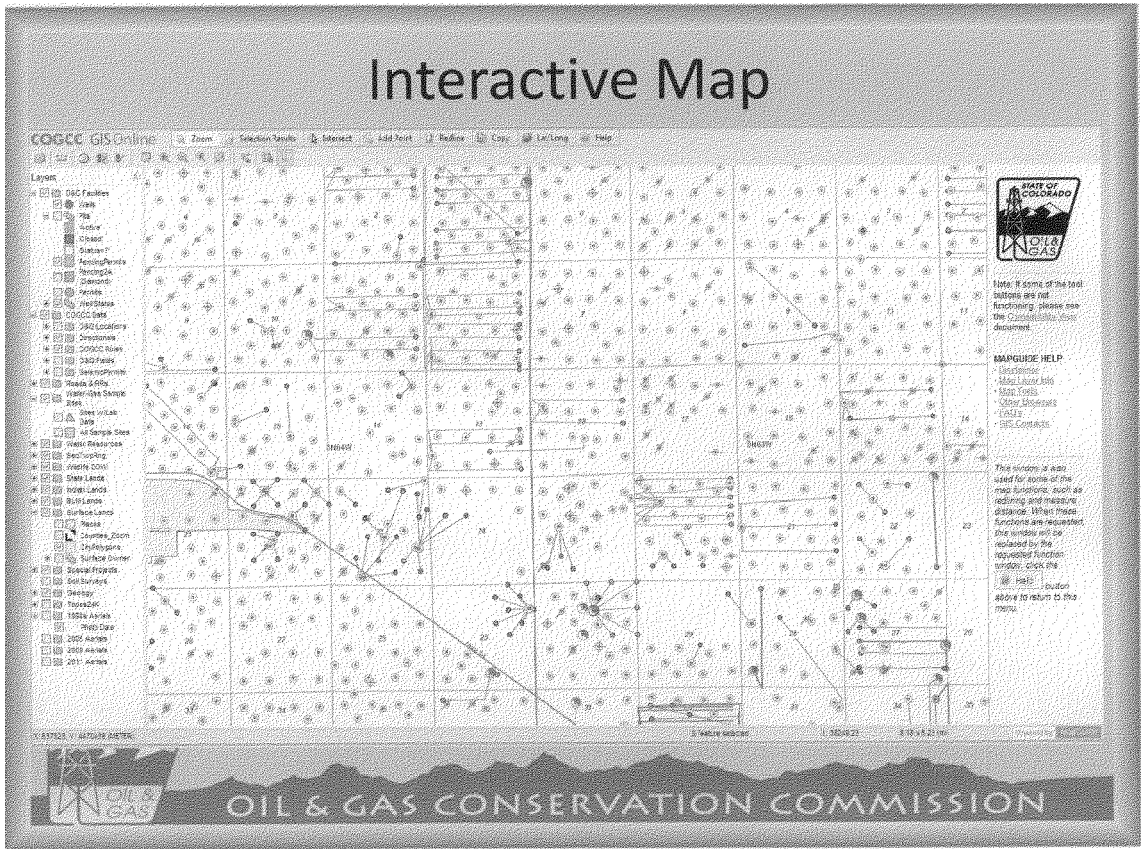
Oil and Gas Industry Spills and Releases (10/12/2011)
This memorandum explains how the COGCC seeks to prevent spills and releases, and, when they occur, ensure that they are promptly contained, investigated, and remediated.

Hydraulic Fracturing Information (08/12/2011)
With the public's interest in and concern about the potential impacts of fracking on public health and the environment, the COGCC has compiled information for the public's review.

STATE OF COLORADO
OIL & GAS

OIL & GAS CONSERVATION COMMISSION

Interactive Map



Well Information with Links

Scout Card Related Insp MIT GIS Doc Wellbore Orders

Surface Location Data for API # 05-005-07167 Status: PR

Well Name/No:	STATE OF CO #5-24/QH/Z (click well name for production)		
Operator:	ANADARKO E&P ONSHORE LLC - 2800		
Status Date:	11/29/2011	Federal or State Lease #:	70-8032-S
County:	ARAPAHOE #005	Location:	NENE 24 5S 65W 6 PM
Field:	WATTENBERG - #90750	Elevation:	5,954 ft
Planned Location	500 FNL 500 FEL	Lat/Long: 39.607989/-104.605935	Lat/Long Source: Field Measured
As Drilled Location	Footages Not Available	Lat/Long: 39.607989/-104.605955	Lat/Long Source: Field Measured

FracFocus
Chemical Disclosure Registry Job Date: 11/18/2011 Reported: Prior to rule 205A.b.(2)(A)

Wellbore Data for Sidetrack #00 Status: AB 5/6/2011

Spud Date:	8/26/2011	Spud Date is:	ACTUAL
Wellbore Permit		HORIZONTAL	
Permit #:		Expiration Date:	6/15/2013 11:56:41 PM
Prop Depth/Form:	12750	Surface Mineral Owner Same:	Y
Mineral Owner:	STATE	Surface Owner:	STATE
Unit:		Unit Number:	
Formation and Spacing:	Code: NBRR , Formation: NIOBRARA , Order: , Unit Acreage: 640, Drill Unit: ALL		
Casing:	String Type: SURF , Hole Size: 12.25, Size: 9.625, Top: 0, Depth: 2370, Weight: 36		
Cement:	Sacks: 530, Top: 0, Bottom: 2370, Method Grade:		
Casing:	String Type: 1ST , Hole Size: 8.75, Size: 7, Top: 0, Depth: 8449, Weight: 26		
Cement:	Sacks: 730, Top: , Bottom: 8449, Method Grade:		
Casing:	String Type: 2ND , Hole Size: 6.125, Size: 4.5, Top: 7166, Depth: 12750, Weight: 11.6		
Cement:	Sacks: 0, Top: , Bottom: 12750, Method Grade:		
Wellbore Completed			
Completion Date:	9/15/2011		
Measured TD:	8416	Measured PB depth:	8416
True Vertical TD:	8016	True Vertical PB depth:	8016
Top PZ Location:	Sec: 24 Twp: 5s 65w	Footage: 628 fsl 732 fel	Depth:

STATE OF COLORADO OIL & GAS

OIL & GAS CONSERVATION COMMISSION

Production Data Link

COGIS - Monthly Well Production

PRODUCTION DATA REPORT -- GRS

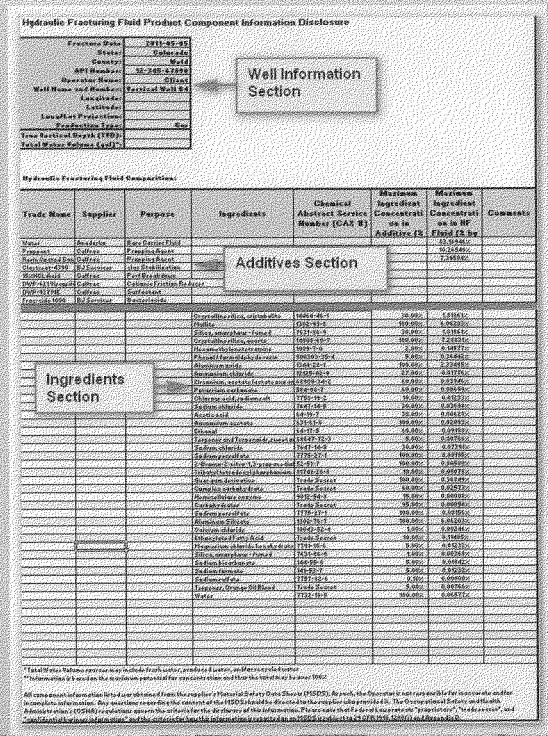
API #:	05-005-07167	Location:	NENE 24 5S 65W 6
Field:	WATTENBERG	Field Code:	90750
Facility Name:	STATE OF CO	Facility #:	5-24XXHZ
Operator Name:	ANADARKO E&P ONSHORE LLC	Operator #:	2800

PRODUCTION YEAR: All

Year	Month	Formation	Sidetrack	Well Status	Days Prod	Product	Oil BOM	Oil Produced	Oil Sold	Oil Adj.	Oil EOM	Oil Gravity	Water Prod	Water(psig) Tbg.	Water(psig) Csg.
							GAS Prod	GAS Flared	GAS Used	GAS Shrinkage	GAS Sold	GAS BTU	Water Disp. Code	Gas (psig) Tbg.	Gas (psig) Csg.
2011	May	NIOBRARA	02	DG	3	Oil -> Gas ->								0 0	0 0
2011	Jun	NIOBRARA	02	AB	3	Oil -> Gas ->								0 0	0 0
2011	Jul	NIOBRARA	02	WO	3	Oil -> Gas ->								0 0	0 0
2011	Aug	NIOBRARA	02	DG	3	Oil -> Gas ->								0 0	0 0
2011	Sep	NIOBRARA	02	AB	3	Oil -> Gas ->								0 0	0 0
2011	Oct	NIOBRARA	02	WO	3	Oil -> Gas ->								0 0	0 0
2011	Nov	NIOBRARA	02	PR	3	Oil -> Gas ->	310	127 240	72		127			0 0	0 0
2011	Dec	NIOBRARA	02	PR	29	Oil -> Gas ->	127 542	5,663	5,104 542		686	41.7		0 0	0 0
2012	Jan	NIOBRARA	02	PR	31	Oil -> Gas ->	686 4,306	3,624 3,631	4,093 675		222	42.1		0 0	0 0
2012	Feb	NIOBRARA	02	PR	28	Oil -> Gas ->	222 8,939	1,955 8,272	1,770 658		407	42.1		0 0	0 0
2012	Mar	NIOBRARA	02	PR	20	Oil -> Gas ->	407 1,522	672 209	836 189	1	244 1,154	41.9 1,360		0 0	0 0
2012	Apr	NIOBRARA	02	PR	14	Oil -> Gas ->	244 1,169	1,069	1,205 179	1	109 930	40.3 1,360		0 0	0 0
2012	May	NIOBRARA	02	PR	31	Oil -> Gas ->	109 3,813	1,462	1,366 379		205 3,234	41.0 1,329		0 0	0 0
2012	Jun	NIOBRARA	02	PR	30	Oil -> Gas ->	205 3,980	1,259	1,225 366		239 3,614	41.2 1,329		0 0	0 0
2012	Jul	NIOBRARA	02	PR	23	Oil -> Gas ->	239 1,958	581	664 285		156 1,673	40.3 1,329		0 0	0 0
						Oil -> Gas ->	156	1,122	1,100		178	41.7		0 0	0 0

OIL & GAS CONSERVATION COMMISSION

Frac Focus Link



STATE OF COLORADO

OIL & GAS CONSERVATION COMMISSION

Inspection Link

COGIS - Inspection/Incident Inquiry

You requested : Inspection Information
API Number : 05-005-07167

Inspection Search Results - 3 record(s) returned.

Inspection Date	Doc #	Location ID	Insp. API #	Insp. Status	Overall Inspection Status	Overall I.R. Pass/Fail	Overall F.R. Pass/Fail	Violation (Y/N)
01/04/2012	664000297	423626	005-07167	PR	Satisfactory			N
10/25/2011	664000066	423626	005-07167	WO	Satisfactory			N
09/21/2011	664000024	423626	005-07167	OG	Satisfactory			N

Search Results - No Records Found

Inspection Date	Doc #	Insp. Type	Insp. Status	PA P/F1	Pass/Fail P/F	Violation Y/N

STATE OF COLORADO
OIL & GAS

OIL & GAS CONSERVATION COMMISSION

eForm Inspection Report

Inspector Name: LEONARD, MIKE

FORM INSP Rev 05/11

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109

FIELD INSPECTION FORM

DE	ET	OE	ES

Inspection Date: 01/04/2012
Document Number: 664000257
Overall Inspection: Satisfactory

Location Identifier	Facility ID	Loc ID	Tracking Type	Inspector Name
	423639	423626		LEONARD, MIKE

Operator Information:

OGCC Operator Number: 2800 Name of Operator: ANADARKO E&P COMPANY LP
Address: PO BOX 173779
City: DENVER State: CO Zip: 80217

Contact Information:

Contact Name	Phone	Email	Comment
[redacted], Keith	970-[redacted]	[redacted]@anadarko.com	Production Superintendent

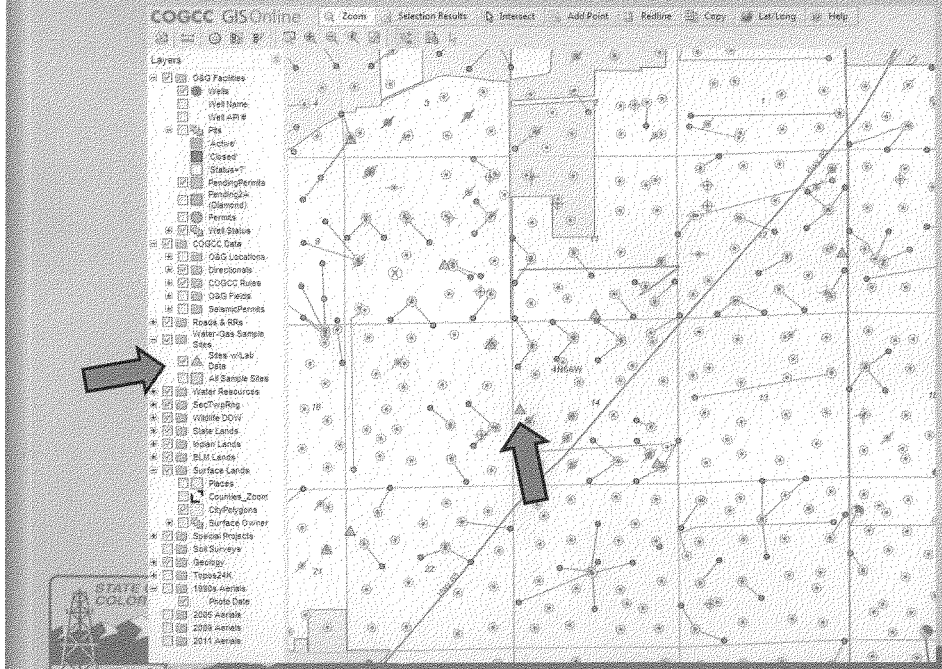
Compliance Summary:

QtrQtr: NENE Sec: 24 Twp: 5S Range: 65W

Insp. Date	Doc Num	Insp. Type	Insp Status	Satisfactory /Unsatisfactory	PA P/F/I	Pas/Fail (P/F)	Violation (Y/N)
10/25/2011	664000060	XX	WO	S			
10/25/2011	664000060	XX	DG	S			

OIL & GAS CONSERVATION COMMISSION

Interactive Map Link to Water Samples



Water Sample

COGIS - Environmental Sample Site Information

GIS

#705027 Information

Sample Site ID:	705027		
FacilityType:	DOM	ProjNumber:	
County:	WELD - #123	Location:	NWSW 14 4N 66W
Elevation:	0	Lat/Long:	40.31119/-104.75312
DWR Receipt #:		WellDepth:	70

COGCC Water Quality Database Disclaimer:
The analytical data and other information in this database are a compilation of data collected by COGCC staff, data submitted to COGCC from a variety of third parties, and historical data. All analytical data collected by or submitted to the COGCC is public information and COGCC posts the data to this database as a public service. The data is provided for informational purposes only. COGCC does not conduct a detailed review of quality control/quality assurance protocols, chain of custody procedures, or field or laboratory methodologies on data received from third parties. The level of review performed on historical data is unknown. COGCC does not regularly perform formal data validation for any of the data posted to this database. **The COGCC makes no warranties or representations of any kind, express or implied, regarding the quality, accuracy, reliability, merchantability, or fitness for a particular purpose of the data provided herein.**

Sample(s)

All Export to CSV

Sample ID:	473660	Sample Date:	10/19/2006	Matrix:	WATER	Lab:	TestAmerica Inc.

STATE OF COLORADO OIL & GAS

OIL & GAS CONSERVATION COMMISSION

Water Sample Analysis

Sample(s)

All Export to CSV

Sample ID: 473660 Sample Date: 10/15/2006 Matrix: WATER Lab: TestAmerica Inc.

Sample Results for Sample # 473660 TestAmerica Inc. ID: MPJ2352-01 Minimize

MethodCode	ParamDescription	ResultValue	Units	DetectionLimit	Qualifier
UnSpec	BICARBONATE ALKALINITY as CACO3	305	mg/L		
UnSpec	CALCIUM	152	mg/L		
UnSpec	CARBONATE ALKALINITY AS CACO3	ND	mg/L	10	U
UnSpec	CHLORIDE	129	mg/L		
UnSpec	FLUORIDE	0.63	mg/L		
UnSpec	IRON	0.364	mg/L	0.05	
UnSpec	MAGNESIUM	38.2	mg/L		
UnSpec	MANGANESE	ND	mg/L	0.015	U
UnSpec	METHANE	1.86	mg/L	0.025	
UnSpec	NITRATE	23	mg/L	0.1	
UnSpec	NITRITE	ND	mg/L	0.1	U
UnSpec	POTASSIUM	6.67	mg/L	1	
UnSpec	SELENIUM	ND	mg/L	0.01	U
UnSpec	SODIUM	125	mg/L		
UnSpec	SPECIFIC CONDUCTIVITY	1560	umhos/cm		
UnSpec	SPECIFIC CONDUCTIVITY, FIELD	1374	uS/cm		
UnSpec	SULFATE	302	mg/L		
UnSpec	TOTAL ALKALINITY AS CACO3	305	mg/L		
UnSpec	TOTAL DISSOLVED SOLIDS	1120	mg/L		

OIL & GAS CONSERVATION COMMISSION

eForm Form 2 Drilling Permit

FORM 2 Rev 12/05

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 400251452
Date Received: 02/14/2012
PluggingBond SuretyID 19880020

APPLICATION FOR PERMIT TO:

1. [X] Drill, [ ] Deepen, [ ] Re-enter, [ ] Recomplete and Operate

2. TYPE OF WELL
OIL [X] GAS [ ] COALBED [ ] OTHER ____
SINGLE ZONE [X] MULTIPLE [ ] COMMINGLE [ ]
Refiling [ ]
Sidetrack [ ]

3. Name of Operator: MARATHON OIL COMPANY
4. COGCC Operator Number: 53650
5. Address: 5555 SAN FELIPE
City: HOUSTON State: TX Zip: 77056
6. Contact Name: Erin Bibeau Phone: (970)419-7816 Fax: (970)493-9219
Email: ebibeau@marathonoil.com
7. Well Name: French Lake 3-63-14 Well Number: 3H
8. Unit Name (if appl): ____ Unit Number: ____
9. Proposed Total Measured Depth: 10533

WELL LOCATION INFORMATION

10. QtrQtr: SWSE Sec: 14 Twp: 3N Rng: 63W Meridian: 6
Latitude: 40.219487 Longitude: -104.403048
Footage at Surface: 455 feet FNL/FSL FSL 2162 feet FEL/FWL FEL
11. Field Name: Wildcat Field Number: 99999
12. Ground Elevation: 4748.6 13. County: WELD

OIL & GAS CONSERVATION COMMISSION

Oil and Gas Location Assessment eform Form 2A

CONDITIONS OF APPROVAL, IF ANY:

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

GENERAL COAs:

Flowback and stimulation fluids must be sent to tanks to allow the sand to settle out before the fluids can be placed into any pipeline or pit located on the well pad. The flowback and stimulation fluid tanks must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material (per Rule 604.a.(4)).

Berms or other containment devices shall be constructed in compliance with Rule 604.a.(4) around crude oil, condensate, and produced water storage tanks.

The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.

The location is in an area of high run off/run-on potential, therefore the pad shall be constructed as quickly as possible and appropriate BMPs need to be in place both during, after well pad construction completion, as well as during all drilling and well completion operations. Standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and/or stormwater runoff.

SENSITIVE AREA (CLOSE PROXIMITY TO SURFACE WATER) COAs:

Notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspection Supervisor for Northwest Colorado (Shaun Kellerby; email shaun.kellerby@state.co.us) 48 hours prior to start of construction.

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines.

Reserve pit, or any other pit used to contain/hold fluids, if constructed, must be lined or a closed loop system (as indicated on the Form 2A Permit application by operator in Section 6, Construction) must be implemented during drilling.

Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations, including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

STATE OF COLORADO OIL & GAS

OIL & GAS CONSERVATION COMMISSION

Cooperative Development of COGIS

- Colorado Oil and Gas Conservation Commission
- Ground Water Protection Council
  - RBDMS (Risk Based Data Management System)
    - eForms
    - Environmental
- IOGCC and GWPC
  - FracFocus

STATE OF COLORADO

OIL & GAS CONSERVATION COMMISSION

Mr. SHIMKUS. And I thank you. One of the things we did do in the last Congress, do an e-manifest issue which I think was a bipartisan bill that actually passed Congress, signed into law, so we appreciate that.

Now representing the Association of State Drinking Water Administrators, Sarah Pillsbury, who is the administrator, Drinking Water and Groundwater Bureau of New Hampshire's Department of Environmental Sciences.

Ma'am, welcome, you are recognized for 5 minutes.

STATEMENT OF SARAH PILLSBURY

Ms. PILLSBURY. Great, thank you. And I don't have any pictures, but every once in a while I will hold this up, just to remind everybody how important public drinking water is.

I thank you very much for this opportunity to testify. I represent the Association of State Drinking Water Administrators, I am the current president, and our members include the 50 States, the District of Columbia, five territories, and the Navajo Nation.

State drinking water programs are fully committed to their public health mission. States recognize that the health and well-being of their citizens and communities are dependent on receiving safe and reliable drinking water. It is important to remember that the State drinking water program personnel live and work in the communities served by the programs they administer. It is personal to us.

State personnel are highly qualified to implement the public drinking water programs. They fully understand the multifaceted nature of the challenges they face and what is needed to protect the sources of drinking water, adequately treat those sources, and get good water to the tap. Our work is especially challenging in light of extremely constrained resources for the State drinking water programs.

State personnel also have the on-the-ground knowledge about how to best tailor Federal programs to States' needs and conditions. In brief, the key role of the State drinking water programs are to inform water systems of what the requirements are, make sure they have the capabilities to implement those requirements and comply, and then giving ongoing oversight to ensure that that compliance continues over time.

Turning to the EPA–State partnership, we believe it should be and currently is one of mutual respect that allows each partner to do what they do best. For EPA, this involves establishing overarching national requirements along with needed tools and information. States believe that the Federal requirements need to be based upon State input so that implementation is both possible and practical. For States, this partnership entails implementing Federal requirements in a manner consistent with local conditions and realities.

Two recent examples of where this partnering has really led to great results, the first is the total coliform rule, the revised total coliform rule, and the second is the agency's decision to allow electronic distribution of our consumer confidence report.

To appreciate the challenge of ensuring compliance with the Safe Drinking Water Act, it is important to understand the universe of

water systems that the act covers, from restaurants to manufactured housing parks to America's largest cities.

While most Americans receive their water from large community water systems, most of the 53,000 community water systems serve less than 3,300 people. In my State of New Hampshire, of the 700 community water systems, 82 percent of those serve less than 500 people. And those systems have to meet basically the same requirement as my largest city. So States must employ strategies for addressing systems of all sizes and capabilities.

In addition, States are challenged by complex regulations, many of which are risk-based and system-specific. That is really a good thing in terms of the water that gets delivered, but it can be challenging to implement.

Finally, we are challenged by an ever-increasing number of emerging contaminants and the need to work with our partners on protecting the sources of drinking water.

Certainly, one of the most multifaceted source-protection challenges currently is the rapid expansion of hydrofracturing to extract oil and gas. We understand that State oil and gas programs have been working diligently to provide needed oversight of these activities. We await the results of EPA's studies to help shed light on the relationship between hydraulic fracturing and the sources of our drinking water and whether additional support of the States is necessary.

One last programmatic responsibility worthy of mention is the need for States to continue their work on emergency preparedness and response, whether the emergency is rooted in terrorism, vandalism, natural disasters, or cyber intrusions is the latest.

As I mentioned earlier, State drinking water programs are constrained by lack of resources. State budgets are under extreme pressure and are unable, often, to bridge the gap between the currently inadequate Federal funding and the amount of funds that is actually necessary to implement the Federal requirements.

The Public Water Supply Supervision grant is the primary, and in some cases the only, Federal funding source for the State. It has been flatlined at roughly $100 million for several years, whereas about twice that is needed. And we understand that this subcommittee has no jurisdiction over appropriations, but we believe that you are key and that your support is key to get that funding increased to where it needs to be to be adequate.

So, in summary, States are doing a remarkable job, all things considered, and are carefully setting priorities to help ensure that public health protection remains preeminent. A strong drinking water program supported by the Federal-State partnership and adequately funded by Congress will ensure that the quality of drinking water in this country remains safe, no matter where we live or work or play.

Thank you.

Mr. SHIMKUS. Thank you.

[The prepared statement of Ms. Pillsbury follows:]

ONE PAGE SUMMARY OF TESTIMONY

Hearing on "The Role of the States in Protecting the Environment Under Current Law"
Subcommittee on Environment and the Economy
Friday, February 15, 2013
Sarah Pillsbury, President; Association of State Drinking Water Administrators

- **Who Are We?** The Association of State Drinking Water Administrators (ASDWA) represents the collective interests of the 50 state drinking water programs, the District of Columbia, the five territories, and the Navajo Nation.

- **State Commitment to the Mission:** State drinking water program personnel are fully committed to their public health protection mission.

- **State Personnel are Trained for the Job, Have Knowledge of Local Conditions, and Provide Needed Assistance:** State personnel also have the necessary background and expertise to administer these programs. State personnel also have the on-the-ground knowledge about how to best tailor Federal programs to state needs and conditions.

- **How do States Administer Their Programs and Ensure Compliance with Drinking Water Regulations?** In brief, this responsibility involves informing water systems of requirements; ensuring that water systems have the capability to implement and comply with those requirements; and providing oversight to ensure that they continue to comply.

- **What is EPA's Role and How is the State-EPA Partnership Working?** States view this partnership as essential to achieving our collective goals. We believe the partnership should be (and currently is) one of mutual respect that allows each partner to do what they do best.

- **Technical Challenges in Implementing State Drinking Water Programs:** Effective public health protection must involve strategies for both large and small public water systems. States are also challenged by implementing complex regulations.

- **What are ASDWA's Views of Hydrofracturing?** We await the results of EPA's Congressionally mandated four year study to help shed light on the relationship between hydraulic fracturing and drinking water resources and whether additional support of states' efforts is needed.

- **Programmatic Challenges in Implementing State Drinking Water Programs – What Can Congress Do?** States urgently need more resources for administering their programs.

- **What is the Role of State Drinking Water Programs in Ensuring the Security of Drinking Water?** State drinking water programs are critical partners in emergency planning, response, and resiliency at all levels of government.

TESTIMONY

Hearing on "The Role of the States in Protecting the Environment Under Current Law"
Subcommittee on Environment and the Economy
Committee on Energy and Commerce
Friday, February 15, 2013

Sarah Pillsbury, Drinking Water Administrator
New Hampshire Department of Environmental Services
and
President, Association of State Drinking Water Administrators

Who Are We?

The Association of State Drinking Water Administrators (ASDWA) represents the collective interests of the 50 state drinking water programs, the District of Columbia, the five territories, and the Navajo Nation in their efforts to provide safe drinking water to their citizens. State drinking water programs operate "source to tap" programs – implementing all aspects of the Safe Drinking Water Act (SDWA) within their jurisdictions.

State Commitment to the Mission:

State drinking water program personnel are fully committed to their public health protection mission. States recognize that the health and well being of their citizens and communities are dependent on receiving safe and reliable drinking water. It's important to remember that state drinking water program personnel live and work in the communities served by the programs they administer -- it's personal for them. They often know, first hand, about the negative consequences of lack of vigilance in ensuring that these protections are in place (e.g., waterborne disease outbreaks, cancer clusters, etc.)

State Personnel are Trained for the Job, Have Knowledge of Local Conditions, and Provide Needed Assistance:

State personnel also have the necessary background and expertise to administer these programs. They're highly qualified professionals who fully understand the multi-faceted nature of the challenges they face and what's needed to *protect* sources of drinking water, *adequately treat* those sources, and *deliver* safe water to the tap. That task is particularly challenging in light of extremely constrained resources for state drinking water programs, as discussed later in this testimony.

State personnel also have the on-the-ground knowledge about how to best *tailor* Federal programs to state needs and conditions. States have developed a detailed understanding of the conditions in their states and how Federal requirements should be adapted to local conditions to achieve Safe Drinking Water Act goals. States essentially "translate" the Federal requirement to local situations. They provide the needed training and technical assistance to public water systems who are on the front lines of delivering safe tap water.

How do States Administer Their Programs and Ensure Compliance with Drinking Water Regulations?

In brief, this responsibility involves informing water systems of requirements; ensuring that water systems have the capability to implement and comply with those requirements; and providing oversight to ensure that they continue to comply. The overarching objective of states, in all of these efforts, is to get and keep public water systems in compliance -- whether a restaurant or large city water utility -- thereby protecting public health. Ideally, this process occurs proactively on the part of water systems; however, if not, states undertake an escalating series of compliance and enforcement actions to return a facility to compliance.

- **Informing:** Most water systems do not read the *Federal Register* on a routine basis and many do not have full time staffs. Thus, states reach out to water systems to inform them of all applicable requirements. Many states also adapt the Federal regulations into

more user-friendly state-specific regulations and guidance documents. States may also include additional state requirements, beyond the Federal minimums.

- **Training/Technical Assistance**: States (along with technical assistance providers, industry organizations, and EPA) spend considerable time training water facilities to enhance their overall technical, managerial, and financial capacities to comply with all rules as well as providing rule-specific training, where appropriate. Proactive approaches to building water system capacity is by far the best and most effective approach to public health protection. Reactive approaches (after problems occur) tend to be expensive, time-consuming, and less protective of public health.

  - ***Underscoring the Importance of the Drinking Water Industry/Promoting Succession Planning:*** *States recognize that the day to day efforts of providing safe drinking water to customers at their taps is undertaken by dedicated men and women at the local water utility level who share the same overarching public health protection goals as state drinking programs. States employ a variety of strategies to partner with the drinking water industry to provide the support necessary for these "unsung heroes", including exploring approaches to recruitment and retention of water system operators at a time when a cadre of experienced personnel is retiring.*

- **Compliance/Enforcement Actions**: States routinely conduct on-site inspections and review various water quality reports to ensure public water systems are complying with all drinking water requirements. When a system is not in compliance, a state will employ an escalating series of responses appropriate to the severity of the violation. For instance, minor infrequent violations can often be addressed by a phone call or letter. Ongoing, more serious violations warrant more serious responses – up to and including fines and penalties levied through Administrative Orders or Consent Decrees.

What is EPA's Role and How is the State-EPA Partnership Working?

EPA's Office of Ground Water and Drinking Water, together with the ten EPA Regional offices oversee the activities of the states in their respective regions in connection with implementing states drinking water programs. EPA has been instrumental in providing outreach and training materials to help water systems understand their obligations in connection with particular rules or across-the-board capacity-building approaches. Rule training materials are most useful when they're provided "upfront" (i.e., at the same time or shortly after a new rule is promulgated) and EPA has been very attuned to that need in recent years. For instance, EPA's Simple Tools for Effective Performance (STEP guides) have been very valuable outreach tools in explaining various aspects of the program to small water systems. EPA also provides (through their Office of Research and Development) information about treatment options and analytical methods that water systems may use to help comply with drinking water regulations. States view this partnership as essential to achieving our collective goals. We believe the partnership should be (and currently is) one of mutual respect that allows each partner to do what they do best:

- ***For EPA,*** this involves establishing overarching national requirements, per the statute, along with needed tools and information. States believe that nationally-established requirements need to be based upon considerable state early involvement, so that the eventual requirements are as "implementable" as possible.

- ***For states,*** this entails implementing those requirements in a manner consistent with local conditions. We would add here that it's not just the EPA-State partnership that states value. We also appreciate partnerships with training and technical assistance provider organizations, local utilities, other state organizations, and other branches of the Federal government (e.g., USGS, USDA, HHS-CDC).

Early involvement of states (and other stakeholders, as appropriate) in EPA decision-making is an extremely important aspect of the state-EPA partnership – particularly given the fast-paced

and ever evolving nature of the challenges to safe drinking water. A couple of recent examples where this partnership worked particularly well were the promulgation of the final revised **Total Coliform Rule (TCR)** and the Agency's recent decision to allow **Consumer Confidence Reports (CCRs)** to be distributed (by water utilities to customers) electronically. In the former case, a full and comprehensive stakeholder involvement process led to a final TCR rule (the principal Federal rule for controlling microbiological contaminants) that has been widely lauded by stakeholders as being both more practical and protective of public health. The CCR decision was based on effective pilot projects undertaken by selected states and water utilities to demonstrate that electronic dissemination of this "right-to-know" information can indeed be more efficient and effective than the current practice of mailing paper copies to all customers. (Those customers unable to receive the reports electronically will still be provided with paper copies under the new policy.) A final example of the state-EPA partnership is manifest in an initiative currently underway that's designed to more effectively leverage and target the tools of the Clean Water Act to protect sources of drinking water – thereby reducing treatment costs for water utilities and ultimately providing safer drinking water to customers.

Technical Challenges in Implementing State Drinking Water Programs:

To appreciate the challenge of ensuring compliance with the SDWA, it's important to understand the universe of water systems to which the Act applies. Public water systems in the U.S. can be divided into two principal groups: *community water systems* serving cities, villages, counties and various types of residential facilities (of which there are approximately 53,000) and *non-community water systems* (of which there are approximately 107,000). Non-community water systems can be further subdivided into *non-transient* water systems (e.g. schools and manufacturing facilities) and *transient* water systems (e.g. restaurants and camp grounds). Most of the citizens in the U.S. receive their water from large community water systems, but the overwhelming number of systems are *small* (serving less than 3,300 people). (77% of the nearly 53,000 community water systems in the U.S. serve between 25 and 3,300 customers.) This fact has real implications for the challenges that states, EPA, and water systems themselves face in complying with drinking water regulations. Thus, effective public health protection must

involve strategies for both addressing the greater number of citizens served by larger water systems as well as approaches designed to help medium and small water systems comply with all applicable drinking water requirements. Further, for most of the above-mentioned non-community water systems, provision of drinking water to their customers is typically *not* their principal purpose – which has particular implications for the strategies states employ in support of such systems.

In addition, states are challenged by complex regulations; many of which are risk-based (i.e., tailored) – that's a good thing generally, but challenging to implement. For example, the recent suite of regulations addressing microbial contaminants and disinfection by-products (known as "LT 2/ Stage 2") involves states assigning water treatment facilities into one of four "bins"-- based on the microbiological threat posed – and tailoring the regulatory requirements accordingly. States are further challenged by working with their Federal, other state, and local partners to address contaminated sources of drinking water. It's much more expensive (and sometimes simply not feasible) to remove contaminants at a drinking water treatment plant rather than prevent it from reaching sources of drinking water in the first instance. There is also a host of "emerging contaminants" (e.g., pharmaceuticals and personal care products) -- many of which are currently unregulated and whose risk is not well known.

What are ASDWA's Views of Hydrofracturing?

Certainly, one of the more multi-faceted technical challenges facing many state drinking water programs is the rapid expansion of oil and gas extraction using the recently enhanced techniques of hydrofracturing and the associated strains on water resources and water infrastructure. We believe there are an array of challenges associated with each stage in the life cycle of these drilling operations – from procuring the make-up water needed for injecting fracking fluids; to proper design and installation of wells; to safe disposal (or reuse) of the flow-back waters. We understand that our colleagues in state oil and gas programs have been conscientiously revamping their regulations as well as enhancing their field presence to provide the needed oversight for these activities. We await the results of EPA's Congressionally

mandated four year study to help shed light on the relationship between hydraulic fracturing and drinking water resources and whether additional support of states' efforts is needed.

Often overlooked is the strain placed on drinking water systems to meet rapidly increasing demands in areas of oil and gas development. Water is needed directly for drilling, as well as for support industries, midstream processors, and end users. Many local areas have experienced rapid population growth without adequate water infrastructure to support it. State drinking water programs, already strained to meet federal requirements under the Safe Drinking Water Act, are often engaged in providing technical assistance to water systems, assessing potential impacts to water supplies, and addressing water infrastructure needs. We think these efforts need both Federal and state support.

Programmatic Challenges in Implementing State Drinking Water Programs – What Can Congress Do?

States urgently need ***more resources*** for administering their programs. (We also believe much more is needed for drinking water infrastructure; but in today's hearing, we're talking about funding for ***state drinking water personnel and programs***.) While we understand that this Subcommittee has no jurisdiction over appropriations, we believe the input of this Subcommittee (and indeed the full Energy and Commerce Committee) to the House Appropriations Committee can be instrumental in helping address what we believe is a critical problem. State budgets are under extreme pressure and are unable, often times, to bridge the gap between currently inadequate Federal funding and the funding actually needed to administer Federal requirements. (ASDWA estimates at least a $100 million gap between funding needed and available Federal and State funding for state drinking water programs.) Inadequate funding has direct negative consequences for state drinking water program staffing. Most states are typically very short staffed and are simply not able to administer their programs in the manner they would prefer -- or that's envisioned under the SDWA. For instance, states struggle to perform sanitary surveys at public water systems on the frequency the SDWA calls for. This funding shortfall also makes it extremely difficult to attract and retain qualified staff.

State drinking water programs have two principal sources of Federal revenue to administer their programs: the Public Water Supply and Supervision (PWSS) grant and set-asides from the Drinking Water State Revolving Fund (SRF). The PWSS grant, which is the primary, and in some cases the only federal funding source for states has been "flat-lined" at roughly $100 million per year for the past several years (on average, a wholly inadequate amount of about $2 million per state). These funds are supplemented to some extent, in most states, by state General funds and/or state fees for service charged to public water systems. However, these state-based sources of are insufficient to ensure a baseline of effective drinking water protection throughout the country, as called for under the SDWA. There is no realistic expectation for significant increases in state funding in the near future. In light of the above-described shortfall, we strongly recommend that Congress appropriate at least $200 million annually for the PWSS grant to states.

The PWSS grant, that the sates received to implement the SDWA, is very flexible and has been used by states to effectively address priorities, to the extent funding allows. In addition, since 1996, some states have had access to set-asides from the Drinking Water SRF. While extremely helpful, set-asides have key "strings attached" under the terms of the SDWA and can only be used for certain types of activities. These funds are also "in competition" with use of those funds for critical drinking water infrastructure improvements. The amounts used for set-asides for state program activities (instead of "concrete and pipes" for drinking water treatment infrastructure) is often hotly contested within states. In some states, the Drinking Water SRF is administered by a separate agency and the drinking water Primacy agency has little or no access to set-asides. Boosting the appropriation for the PWSS grant to states would relieve the pressure on Drinking Water SRF funds and free up more for infrastructure uses.

What are ASDWA's Views on Alternative Financing Mechanisms for Drinking Water Infrastructure?

While not the subject of today's hearing, we're aware that there have been a number of discussions between some of our partner organizations in the utility community with both House and Senate Committees whose purview includes water and wastewater infrastructure. In the current budget climate (in which "offsets" from other programs must be identified before any new funding can be appropriated), we think the potential for unintended adverse consequences to the SRFs from creating and funding a new infrastructure program is *high*. We're also concerned about the implications for funding small water system infrastructure needs if a separate, new program -- primarily designed for large water systems -- changes the credit-worthiness of the SRF "portfolios" of loans. This is admittedly a complex discussion with many implications and subtleties which we look forward to discussing with you separately, in the future. It is important, however, to leave you with an understanding that, currently, the only source of capital available for addressing infrastructure needs for small, struggling public water systems is the Drinking Water SRF.

What is the Role of State Drinking Water Programs in Ensuring the Security of Drinking Water?

State drinking water programs are critical partners in emergency planning, response, and resiliency at all levels of government. States provide key resources and critical support regardless of whether the emergency is rooted in terrorism, natural disasters, or cyber intrusions. States continue to expand their efforts to reflect a more resilient "all hazards" approach to water security and to focus their efforts toward smaller water systems. These systems rely heavily on the states to help them meet their needs and identify potential funding sources. After seven years of supporting state security programs through a small grant in EPA's appropriation, *no funds* have been provided for this purpose since FY 09 and none were requested by EPA for FY 13. State drinking water programs need funds to continue to maintain and expand their security activities, particularly for small and medium water systems and to support utility-based mutual aid networks for all drinking water systems.

Summary

States are doing a remarkable job, all things considered, and are carefully setting priorities to help ensure that public health protection remains preeminent. But, without question, if we are going to achieve our mutual goals, states need more funding and Congress could certainly help in this regard. A strong drinking water program supported by the Federal-state partnership and adequately funded by Congress will ensure that the quality of drinking water in this country will not deteriorate and, in fact, will continue to improve – so that the public can be assured that water from the tap is safe to drink, no matter where they find themselves in the this country.

Mr. SHIMKUS. Now I would like to recognize Mr. Jeffrey Steers. He is here on behalf of the Association of State and Territorial Solid Waste Management Officials. He works as the director of the Land Protection and Revitalization Division for the Virginia Department of Environmental Quality.

Sir, welcome. And you are recognized for 5 minutes.

STATEMENT OF JEFFERY STEERS

Mr. STEERS. Good morning. And thank you, Chairman Shimkus and members of the subcommittee, for allowing me the opportunity to testify this morning.

My name is Jeffrey Steers, and I am president of the Association of State and Territorial Waste Management Officials and am testifying on behalf of the organization. Our association represents the waste management and remediation programs of the 50 States, 5 territories, and the District of Columbia.

I would like to preface my remarks by commenting that our organization has a positive working relationship with U.S. EPA. Our collaborative efforts and problem-solving should not be underestimated. However, it is appropriate to have a conversation about the role, the significant role, that States play in regulating and protecting the environment, which is oftentimes understated.

In implementing EPA's delegated programs, such as in the hazardous waste and underground storage tank programs, States develop regulatory programs and approve permits, conduct inspections, provide compliance assistance, and, yes, take appropriate enforcement action when necessary. Implementing these programs, however, oftentimes involves duplication of effort and resources. In carrying out our responsibilities under these Federal programs, State management and cleanup programs have identified opportunities to gain efficiencies and work together to alleviate such duplicative energy.

To illustrate this point, I would like to provide three examples: risk-based planning, area-wide approaches to remediation, and leveraging resources in voluntary cleanup programs.

Let me begin with the value of State-based risk planning expertise. States are in a unique position to evaluate the specific conditions of how those conditions relate to the surrounding area. Having the knowledge and experience to assess environmental population and economic factors associated with a site make a risk-based approach to planning and prioritization possible.

States are similarly better suited to assess risk and set priorities on permitting of inspections for regulated facilities. And the results thereby allow States to make better use of their resources. The regional knowledge and experience that the State environmental programs possess is vital in establishing the requirements for the protection of our citizens.

Two States recently completed a 3-year pilot project on the benefits of a risk-based inspection planning strategy. Rather than using traditional models of a one-size-fits-all approach to targeting inspections, we looked at several opportunities to target specifically those high-risk facilities where it may have had poor performance in the compliance histories or are located in environmentally sensitive areas.

The discoveries that we found through these pilot projects included understanding that there were greater violations found during inspections at the higher-risk facilities and the opportunity for inspectors to work closer with the facilities to improve compliance rates over time.

With respect to area-wide approaches to remediation, State-specific knowledge and natural economic resources in surrounding sites that are contaminated are particularly beneficial for States. And they have the expertise to evaluate how remediation at multiple sites can be integrated to an area-wide approach.

The full advantage can be made of economic redevelopment opportunities, and it affords the opportunity to evaluate and recognize communities where they are often overburdened. It offers a more holistic approach to site cleanup and development.

For example, several States effectively leveraged resources and brought parties to the table to address contaminated properties and stream sediment using an area-wide approach. In Ohio, two rivers within the Lake Erie Watershed, the Ottawa and Ashtabula, are shining examples where Federal, State, local governments, private parties, and nonprofit organizations worked together using an area-wide approach to assess contamination, develop implementation, remediation, and restoration plans.

The State of Ohio was a driving force in collaborating, using its knowledge of local issues and understanding of economic and development interests to facilitate the investment of over $50 million at dozens of sites and miles of contaminated river. The result in that watershed included restored habitat, creation of green spaces, and the construction of a world-class auto assembly plant on land that many had thought too blighted and contaminated to ever be reused.

Regarding the leveraging of resources, States are able to develop voluntary cleanup programs and, doing so, leverage Federal funding to achieve results that benefit business, create parks, and build community resources. Brownfield programs are highly successful, due in large part to the flexibility that can be achieved when business and developers work together.

In Virginia, for example, in my home State, we leveraged Federal brownfield grant funds and developed an economically distressed area of Roanoke, Virginia. The State played a critical role in bringing the parties together and creating synergies that transformed 23 acres of blighted and contaminated land into vibrant medical research facilities with over $200 million in public and private investment.

The time-critical development project not only relied upon the State to help bring the parties together, but it also necessitated the use of flexible approaches in assessing and remediating pollution on the property. Virginia's voluntary cleanup program gave developers the certainty they needed with respect to future liability and, thus, allowed for the private funding of the project.

In conclusion, ASTSWMO's membership takes seriously its responsibility to protect the environment and human health, and we do so in the face of ongoing reductions in Federal budgets and funding—a paradigm shift from Federal command and control policies that limit the States' being able to carry out our mission as

needed. We will work continually to collaborate with U.S. EPA and work with the local level at managing risk.

Thank you.

Mr. SHIMKUS. Thank you, Mr. Steers.

[The prepared statement of Mr. Steers follows:]

U.S. House of Representatives

Committee on Energy and Commerce

Subcommittee on Environment and the Economy

Hearing

""The Role of the States in Protecting the Environment Under Current Law"

February 15, 2013

Testimony of

Jeffery Steers

On Behalf of the

Association of State and Territorial Solid Waste Management Officials

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is an association representing the waste management and remediation programs of the 50 States, five Territories and the District of Columbia (States). Our membership includes State program experts with individual responsibility for the regulation or management of wastes and

hazardous substances, including remediation, tanks, materials management and environmental sustainability programs.

I would like to preface my remarks with commenting that our organization does enjoy a positive working relationship with the U.S. Environmental Protection Agency. Our collaborative efforts and problem solving should not be underestimated. However, it is appropriate to have a conversation about the significant role of States in environmental protection, which is oftentimes understated.

In implementing EPA delegated programs, such as hazardous waste and underground storage tanks, States develop regulatory programs, review and approve permits, monitor and assess permit and program compliance, provide compliance assistance and information to the regulated community and the public, conduct inspections, and take enforcement actions. States fulfill their responsibilities for these federal programs even though federal funds diminish each year.

These delegated programs often involve unnecessary State and federal duplication of effort. A strong State lead in environmental waste programs has many benefits. An Associate Professor at California State University, Northridge, wrote: "the redundancy in state and federal programs may have made more sense in the early days of the EPA, but such duplication is expensive as well as unnecessary in our more sophisticated era of environmental protection."[1] The article was written in 1995 - nearly twenty years ago.

In carrying out their responsibilities under delegated federal programs, State waste management and cleanup programs have also identified opportunities for innovations and efficiencies in program implementation that alleviate the duplication of State and federal efforts. Risk based planning, an area-wide approach to remediation, and leveraging resources in voluntary cleanup programs provide three illustrations of the benefits of a strong State role in waste management and cleanup.

Value of State Risk Based Planning Expertise

States are in a unique position to evaluate site specific conditions and how those conditions relate to the surrounding area. Having the knowledge and experience to assess the environment, population and economic factors associated with a site make a risk based approach to planning and prioritization possible in a manner that is protective of human health and the environment. States are similarly better suited to assess risk and set priorities on permitting and inspections for regulated facilities. As such, it can result in more efficient and more effective results. Thus, States are able to make better use of limited resources. The regional knowledge and experience that State environmental programs possess is vital in establishing requirements for the protection of the State's citizens.

Case Study

Two States recently completed three year pilot projects on the benefits of risk based inspection (RBIS) planning. The study used a targeted approach to focus inspections at higher risk facilities (e.g., past compliance history, environmental sensitivity, multi-media transfers, sector initiatives) rather than using the traditional inspection strategy of considering all facilities the

same. The results indicate that targeting resources at higher risk sites resulted in the discovery of a greater number of violations. Over time, these riskier facilities were improving their compliance as inspectors focused more attention on them. Allowing States the flexibility to target certain facilities or sectors of industry in compliance assessments results in an overall improvement to compliance rates.

Area-wide approach to remediation

State specific knowledge of the natural and economic resources in areas surrounding contaminated sites can be particularly beneficial in another way. States have the expertise to evaluate how remediation at multiple sites can be integrated for an area-wide approach. Area-wide remediation planning encourages the development of an entire area so that full advantage can be made of economic and redevelopment opportunities. It also affords an opportunity to evaluate and recognize communities that are overburdened. It offers a more holistic approach to site cleanup and development.

Case Study

Several States have effectively leveraged resources and brought parties to the table to address contaminated properties and stream sediment using an area-wide approach. For example, in Ohio, two rivers within the Lake Erie watershed (the Ottawa and Ashtabula Rivers) are shining examples where federal, State, local governments, private parties and nonprofit organizations worked together using an area-wide approach to assess contamination, develop and implement remediation and restoration plans. The State of Ohio was a driving force in this collaboration, using its knowledge of the local issues along with an understanding of the economic

development interests to facilitate the investment of over $50 million at dozens of sites and miles of river sediment. The result within the watershed includes restored habitat, creation of green spaces and the construction of a world class auto assembly plant on land that many had thought too blighted and contaminated to ever consider reusing. All of this was accomplished holistically by realizing the economies of scale in managing the costs associated with the large scale remediation of several sites and river sediment. This collaboration by all parties was accomplished without exerting burdensome federal authorities under RCRA and CERCLA.

Leveraging resources

States are able to develop voluntary cleanup programs, and in doing leverage federal funding to achieve results that benefit business, create parks, and build community resources. Brownfields programs are highly successful due in large part to the flexibility that can be achieved when businesses, developers, local governments and the States work together in a cooperative manner. Contaminated properties are often more suited to be addressed through State voluntary cleanup programs in lieu of federal government authorities. While RCRA Corrective Action and Superfund programs remain important, the flexibilities inherent in State voluntary programs are better suited to address contamination when economic redevelopment is a driver. All too often, the long administrative process and cleanup standards associated with RCRA and CERCLA that are one size fits all inhibit reinvestment and job creation. One size fits all remediation does not work in these circumstances. Economic development projects are time critical and depend upon certainty with respect to future liability. State voluntary cleanup

programs inherently provide for this certainty through appropriate site specific risk management in a timely fashion.

Case Study

Virginia successfully leveraged federal Brownfield grant funds with State and local assistance, helping to redevelop an economically depressed area of Roanoke Virginia. The State played a critical role in bringing together the parties and creating synergies that transformed 23-acres of blighted and contaminated land into vibrant medical research facilities, with over $200,000,000 in public and private investment. The time critical development project not only relied upon Virginia to help bring together the parties, but also necessitated the use of a flexible approach to address the assessment and remediation of pollution on the property. Using Virginia's Voluntary Cleanup Program, developers were given certainty with respect to future liabilities, thus allowing for the private funding of the project.

Conclusion

At a recent workshop highlighting the States' roles in environmental protection[2], a Massachusetts professor noted that "The role of states in environmental protection is more critical than ever, given the virtual stalemate at the federal level on many of the most pressing environmental issues of the day." The fact that States are taking the lead in developing policies and regulations for emerging issues, such as those that associated with the biotechnology industry, in the absence of federal guidance, at the same time they are fulfilling their responsibilities under federal delegated programs, attests to the benefits of State primacy in environmental regulation. Understanding the local communities allows States to apply risk

based approaches that maximize opportunities for area wide remediation and leveraging of resources that ultimately benefit the environment, economic development and the citizens of the States.

---

[1] Hatfield, Thomas H., "California Environmental Goals and Policy, Part III: Federal and State Parallelism In Environmental Regulation", Center for California Studies, California State University, May 1995.
[2] "Environmental Policy in Massachusetts: Promoting Safe Development in a Time of Economic Uncertainty", Northeastern University, October 2012.

Mr. SHIMKUS. I would now like to recognize Ms. Teresa Marks, who is director of the Arkansas Department of Environmental Quality, on behalf of the Environmental Council of States.

Welcome, ma'am.

STATEMENT OF TERESA MARKS

Ms. MARKS. Thank you, Mr. Chairman and members of the committee. Thank you for inviting me here today to discuss the role of State environmental agencies in protecting our Nation's environment.

As the chairman told you, I am representing the Environmental Council of States, or we refer to them as ECOS, whose members are the leaders of the State and territorial environmental protection agencies. I am the current president.

My comments are primarily directed at the Federal programs enacted through legislation by Congress and administered by the United States Environmental Protection Agency. These include, for example, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, and the Resource Conservation and Recovery Act. There are certainly other applicable statutes, but these are the four that are most integral to our environmental protection efforts.

EPA and the States each play a complementary role in administering these laws. In general, EPA has oversight and rule issuance authority, while the States implement the day-to-day activities needed to ensure the programs are carried out on the local level.

States obtain the authority to implement the Federal programs from EPA through a delegation process. Delegation occurs once for each program and is updated as new rules are issued or changed.

Nearly every State has taken delegation of nearly every such Federal program. As of 2013, ECOS and EPA agree that 100 percent of the Clean Air Act programs are delegated; all but one State has the Safe Drinking Water program; all but two have the RCRA or the hazardous waste program. There are still four States that do not have delegation for the Clean Water Act discharge permitting program. You can see that the States assumed operation of a Federal environmental program in 193 out of the possible 200 cases, or 96.5 percent of the time.

While operating these programs, the State agencies issue permits, conduct inspections, monitor pollutants, conduct enforcement, and work on many other related matters, such as setting standards for watersheds. States conduct about 96 percent of the inspections at regulated facilities. Pursuant to ECOS data, when violations are found, States conduct about 90 percent of the enforcement cases.

States are the source of about 94 percent of the data found in EPA's six biggest air, water, and waste databases. The States also review and issue nearly all of the water, air, and waste permits across the Nation.

The States' implementation of the delegated programs provides benefits to government, the regulated community, and our citizens. States pay for the majority of the cost of operating these delegated programs, thereby saving the Federal Government millions of dollars. ECOS has no firm estimates of the cost to the Federal Gov-

ernment if it were to operate these programs, but we are confident it would be significantly greater than the current EPA budget.

The operation of the environmental programs by the States also provide for a more efficient and effective regulation of environmental issues, in that the States are more familiar with their regulated industries and they are located geographically closer to them, thereby providing more timely compliance assistance in response to citizen concerns and complaints. In addition, States are generally able to provide a quicker turnaround on permit issuance, renewal, and modification.

States contribute to our successes on environmental protection in other key ways. We are often the first to see the impacts of new pollution sources, and therefore we react quickly. We often develop innovative ways to address environmental challenges. We can sometimes tailor environmental rules to fit local conditions. Some States may also implement more stringent rules in cases where such a rule is needed to protect a State resource that is not addressed in national legislation.

Both ECOS and EPA understand that a cooperative relationship is important to the successful implementation of national environmental policies. States are coregulators with EPA, and in addition to implementing the Federal laws, they also implement their own State laws.

While States and EPA agree on how to address most matters, our different roles mean that sometimes States and EPA see our mutual challenges somewhat differently. Sometimes these views are driven by concerns that more is being asked of the States without the provision of new resources. Sometimes a State may think an EPA-issued rule or policy would result in a fundamental shift in the State-Federal relationship. We usually work through these differences in a professional manner, and we are usually successful in resolving them.

As mentioned previously, State environmental agencies are coregulators with the U.S. Environmental Protection Agency. Both agencies are key to our joint mission to protect human health and the environment. I hope I have given you the information you need to understand how vital the State role is and how much we, as States, contribute to this joint mission.

Mr. SHIMKUS. Thank you very much, ma'am.

[The prepared statement of Ms. Marks follows:]

Testimony
Hearing on "The Role of the States in Protecting the Environment Under Current Law"
Subcommittee on Environment and the Economy
Committee on Energy and Commerce
Friday, February 15, 2013
by
Teresa Marks, Director
Arkansas Department of Environmental Quality
and
President, Environmental Council of the States

Main Points

1. State environmental agencies are co-regulators with the U.S. Environmental Protection Agency in a national system of environmental protection.
2. The state agencies and the US EPA play complementary roles in this national system.
3. States now implement 96.5% of the federal programs that can be delegated to the states.
4. State agencies conduct over 90% of the environmental inspections, enforcement, and environmental data collection, and issue a similar amount of all the environmental permits.
5. States supply most of the funding for the implementation of the delegated federal programs – typically 80% of the actual cost.
6. States are concerned about the increasing workload that is being asked of the states coming at a time when federal funding support for states is declining.

Thank you for inviting me here today to talk about the role of state environmental agencies in protecting our nation's environment. I am representing the Environmental Council of the States (ECOS), whose members are the leaders of the state and territorial environmental protection agencies. I am the current President of ECOS.

Environmental protection is a multi-faceted endeavor and requires the contributions and cooperation of many persons and entities, including the federal government and the states. My comments are primarily directed at the federal programs enacted through legislation by Congress and administered by the United States Environmental Protection Agency (EPA). These include, for example, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act and the Resource Conservation and Recovery Act. Although there are other such statutes, these are the four that are most integral to our environmental protection efforts.

EPA and the states each play a complementary role in administering these laws. In general, EPA issues rules to implement the provisions of the law and acts as an oversight authority while the states implement the day-to-day actions needed. For example, EPA will issue rules, may set standards (although states sometimes do this), conduct research and assist states with technical matters and with funding. EPA also retains the right to supersede state actions should it find they are in conflict with federal law.

One of the basic interactions between states and EPA is the "delegation" process. "Delegation" is a term I will use to describe the process EPA uses to transfer the operation of all or part of the program implementation to the states. Delegation is sometimes called "primacy" or "assumption." Delegation occurs once for the entire program and is updated as new rules are issued or are changed. Although states are not required to operate federal programs through delegation, most do.

Nearly every state has taken delegation of nearly every program. As of 2013, ECOS and EPA agree that 100% of the Clean Air Act programs are delegated. All but one state has the Safe Drinking Water program and all but two have the RCRA (hazardous waste) program. There are still four states that do not have delegation for the Clean Water Act discharge permitting program. You can see that the states assumed operation of a federal environmental program in 193 out of the possible 200 cases, or 96.5% of the time.

While operating these programs, the state agencies issue permits, conduct inspections, monitor pollutants, conduct enforcement, and work on many other related matters, such as setting standards for watersheds. These activities constitute the majority of such environmental actions taken each year by any level of government.

States conduct about 96% of the inspections at regulated facilities. Pursuant to ECOS data, states conduct about 90% of the enforcement cases when violations are found.[1] States are the source of about 94% of the data found in EPA's six biggest air, water, and waste databases.[2]
The states also review and issue nearly all of the air, water and waste permits across the nation.

The states' implementation of the delegated programs provides benefits to government, the regulated community and our citizens. States pay for about 80% of the cost of operating these delegated programs, thereby saving the federal government millions of dollars. ECOS has no

[1] Brown, R. Steven and Valerie Green. *Report to Congress: State Environmental Agency Contributions to Enforcement and Compliance*, (Environmental Council of the States, Washington) 2001.
[2] *Environmental Pollutant Reporting Data in EPA's National Systems: Data Collection by State Agencies*, (U.S. EPA and Environmental Council of the States), 1999.

firm estimates of the potential cost to the federal government to operate these programs, but we are confident it would be significantly greater than the current EPA budget.

The operation of the environmental programs by the states also provides for more efficient and effective regulation of environmental issues. The states, having more familiarity with their regulated industries and being located in closer proximity thereto, generally provide timelier compliance assistance and response to citizen concerns and complaints. In addition, states are generally able to provide a quicker turnaround on permit issuance, renewal and modification.

States contribute to our successes on environmental protection in other key ways. We are often the first to see the impacts of new pollution sources. We often develop innovative ways to address environmental challenges. We can sometimes tailor environmental rules as needed to fit local conditions. States may also implement more stringent rules in cases where such a rule is needed to protect a state resource that is not addressed in national legislation.

Both ECOS and EPA understand that a cooperative relationship is important to the successful implementation of national environmental policies. States are co-regulators with EPA, and implement most of the federal laws, but they also have their own state laws. While states and EPA agree on how to address most matters, our different roles mean that sometimes states and EPA see our mutual challenges somewhat differently. Sometimes these views are driven by concerns that more is being asked of the states without the provision of new resources. Sometimes states may think Certain EPA actions could cause a fundamental shift in the state-

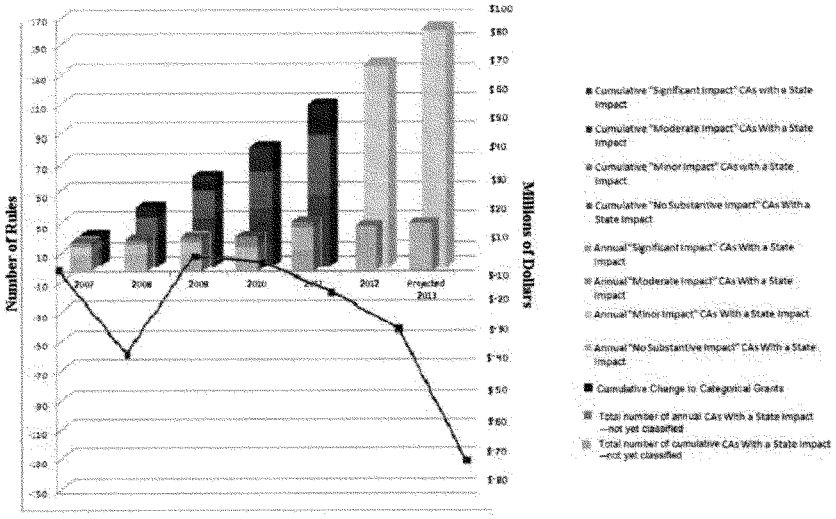
federal relationship. We usually work through these differences in a professional manner and we are usually successful in resolving them.

EPA reports the number of rules it issues and ECOS reviews those regularly. Our review is particularly concerned with any impact the rule may have on state and local government. ECOS also monitors the annual appropriations to "categorical grants," which is the part of EPA's budget that assists states in implementing the delegated programs.

I call to your attention the graph entitled "Balancing Workload and Budgets." This graph was developed by ECOS staff and tracks three things: the number of "completed actions" (i.e., "rules") that EPA issues each year, the cumulative number of those rules over the past few years, and the budget provided to the states to implement those rules. The first two items concerning the number of rules are further divided into their impact, such as "significant," "moderate," or "no substantive impact."

The number of rules completed each year is the small set of bars. You will see that varies between 20 and 30 per year. Behind the small set of bars is a much taller set that shows the cumulative impact. Beginning with 2007 by the time we reach 2012, we have about 140 new rules. It is important to note that ECOS rarely opposes these rules. We acknowledge that many of them will have a positive impact on human health or the environment, or that they may simply be court-ordered.

Balancing Workload and Budgets



Now let us turn to the green line on the chart. This line shows the cumulative change that states have seen to the "categorical grant" part of EPA's budget during the same years. As you can see, some years we lost funds, some years we gained funds. In 2013, with a 5% cut coming from sequestration we seem likely to take the biggest single year cut in recent memory. As a result, states find themselves in 2013 with a lot more rules, and the possibility of a lot less money to implement them. States are very unsure how much longer these two trends can continue before the core environmental programs in each state begin to significantly suffer.

In conclusion, the state environmental agencies are co-regulators with the U.S. Environmental Protection Agency. Both agencies are key to our joint mission to protect human health and the

environment. I hope this information has been helpful in understanding the vital role the states play in our nation's environmental protection efforts.

Mr. SHIMKUS. And now I would like to recognize, on behalf of the National Caucus of Environmental Legislators, the Honorable Pricey Harrison. She is from the North Carolina House of Representatives.

Ma'am, welcome. You are recognized for 5 minutes.

STATEMENT OF THE HONORABLE PRICEY HARRISON

Ms. HARRISON. Thank you, Mr. Chairman and members of the committee, for the opportunity to speak to you today.

I am Pricey Harrison, serving in my fifth term in the North Carolina House. I am also here as a representative of the National Caucus of Environmental Legislators. I am on their board of directors. It is an organization of 850 environmentally progressive legislators from around the country. It is a bipartisan organization.

On the topic of today's hearing regarding the States' role in protecting the environment under current law, I think most of us agree that the States play an important role.

My own State of North Carolina has had a tradition of environmental leadership and passed landmark legislation in 2002 called the Clean Smokestacks Act that established an ambitious timetable for reducing emissions from our coal-fired power plants and allowed our utilities to stagger costs of pollution-control technologies over a longer period while keeping State rates low and providing significant health benefits.

But the States can't do it alone. One only has to think back to the Cuyahoga River on fire and cities cloaked in smog as evidence of the inability of some States to protect the public health and environment of their citizens. It was during that time in 1970 that the National Environmental Policy Act was passed and the EPA was established with overwhelming bipartisan support. Other environmental measures were also enacted, such as the Clean Water Act, the Clean Air Act, and the Safe Drinking Water Act.

I think Congress recognized the importance of a Federal role in providing a backstop of protection, especially in cases where States are incapable, unable, or unwilling to act to protect the public health and the environment. And, as Congressman Tonko pointed out, we know pollution doesn't observe political boundaries and we are all downwind or downstream from pollution sources.

My testimony focuses on two areas where our State needs help from the EPA and other Federal agencies, and that is coal ash and hydraulic fracturing.

North Carolina ranks tenth in the country in coal ash production. We have more high-hazard ponds than any other State, yet we have a complete absence of State regulations for safe disposal or containment of the sometimes toxic product. We have no liner requirements for our ponds; no closure, siting, or structural stability requirements; no reporting requirements; no emergency action plans; no plans for dealing with legacy ponds despite the fact that several coal-fired power plants are converting to cleaner-burning natural gas. Our lax regulation of coal ash has resulted in seepage and exceedances of a variety of toxins, from arsenic to selenium to boron to cadmium, and the list goes on.

I wish we were more like Maryland. I have tried for years since the Kingston spill brought attention to the issue in our State to

enact legislation for safer regulation of coal ash and haven't been able to even get a hearing, and that includes when my party was in charge of State government. I think that speaks, in part, to the enormous influence of the regulated industries at the State legislatures, both through their lobbies and campaign support. I think we are more vulnerable to those pressures and less equipped to deal with them and the complexities in many of these complicated environmental issues.

Regarding fracking, we are in a similar position. We have had very little history of extractive industries in our State, and, prior to last summer, fracking was prohibited. But we have rushed to permit fracking and established the Mining and Energy Commission and charged them with establishing rules over the next 18 months. But our agencies are ill-equipped to do the work needed to properly regulate and enforce natural-gas drilling, and strong Federal oversight is needed.

It is a problem for us that the industry is exempted from so many Federal protections. We have had a significant change of leadership in our State in the past 2 years, and they seem to be seized with an enthusiasm for deregulation. We have undertaken a number of measures to weaken environmental protections.

Legislation—and there was a chart included in your handouts, and I am sorry I don't have a slide, but this is what rulemaking is like in North Carolina now for environmental and public health regulations. That legislation contained language which is significant which prevents any State regulations from being stronger than any Federal standard. And that means we are completely dependent on the Federal Government for setting standards to protect our public health and our environment.

Last week, the Senate passed legislation that wipes out the membership of many of our environmental commissions as well as our utilities commission and removes conflict-of-interest restraints and designated seats for specialized and diverse knowledge and experience. We have also had legislation that will sunset all rules in our administrative code, and they will have to be rejustified to be reenacted.

Budget issues have been challenging in North Carolina, as well. We have slashed our Department of Environment's budget by 40 percent off of 2005–2006 levels, and our State is not alone in this trend.

So I am here today to plead with you to let the EPA do its job. Our State is not unique in its inability or intransigence to protect the public health and environment of its citizens from issues relating to coal ash and fracking. We need the involvement of the Federal agencies. It is vital that the Federal Government be allowed to establish at least minimal standards of health and safety regulations to ensure effective oversight of State agencies.

Thank you for the opportunity.

Mr. SHIMKUS. Thank you, ma'am.

[The prepared statement of Ms. Harrison follows:]

Pricey Harrison

Representative of the 57th District of North Carolina

National Caucus of Environmental Legislators

Testimony on "The Role of the States in Protecting the Environment Under Current Law" before the House Committee on Energy and Commerce, Subcommittee on Environment and the Economy

February 15, 2013

Thank you Chairman Shimkus and members of the Subcommittee for the opportunity to speak. My name is Pricey Harrison and I am serving in my fifth term representing the 57th district in the North Carolina House of Representatives. I am here as a member of the Board of Directors of the National Caucus of Environmental Legislators, an organization of nearly 850 environmentally progressive legislators from around the country.

On the topic of today's hearing, "The role of the states in protecting the environment under current law," I assume that most panelists and members of the committee agree that states have always had — and always will have — an important role in protecting the environment. My own state of North Carolina has a tradition of environmental leadership and passed a landmark law in 2002 called the Clean Smokestacks Act, which put our coal-fired power plants on a significantly more ambitious timescale for

reducing air pollution emissions than federal rules require. A recent study by Duke University concluded that the passage of the Clean Smokestacks Act allowed North Carolina to stagger the cost of pollution-control technologies over a longer period and positioned the state to comply with the EPA rules while providing health benefits, reduced costs and protection from a sudden spike in consumer electricity rates.

However, state efforts to protect the environment and public health have time and again proven insufficient to attain the level of environmental protection demanded by the American people. It was the demonstrable failure of many state agencies to regulate polluting industries effectively that created the overwhelming bipartisan support for a federal role in environmental protection in the first place, resulting in the National Environmental Policy Act and establishment of the Environmental Protection Agency in 1970. The spectacle of the Cuyahoga River fires and cities cloaked in smog provided sufficient evidence for most Americans that states were unable to go it alone.

The question is not whether states or the federal government have a role in environmental protection, but whether each is playing its appropriate role under current law. The purpose of my testimony today is to illustrate how my state of North Carolina is not playing an effective role in environmental protection and how our agencies' inability to address the growing problem of water pollution from coal ash disposal sites perfectly demonstrates the need for a proactive and forceful role of the federal government.

I'm also here to speak on behalf of people that my state is failing to protect — people

like Sara Behnke, a mother and cancer survivor living near Mountain Island Lake who worries about the slow contamination of leaking coal ash ponds at Duke Energy's Riverbend plant into groundwater and into the lake near her home. She worries about the threat of a health and safety crisis should the dam break into the lake, which is the drinking water supply of 860,000 people in the Charlotte, N.C. area. And now that Duke Energy has announced Riverbend will be retired this year, Sara is particularly concerned about the lack of any state or federal plan to deal with legacy coal ash pond sites, which, if the state doesn't act, could pose an ongoing threat to her family and community and leach heavy metals into groundwater for decades to come.

Another coal ash dam located near the Sutton plant in Wilmington, N.C., was breached in 2010. Fortunately, that dam was not a "high hazard" dam and there was no loss of life or environmental damage on the scale that occurred at TVA's Kingston plant in 2008. The greater concern about coal ash ponds at the Sutton plant for the low-income communities living nearby are the high arsenic levels — up to 29 times the federal maximum contaminant levels — that have been found within a half mile of their wells.

These citizens' situation is made worse by the growing power of utilities to influence state lawmakers and a wave of anti-regulatory fervor that has swept across state government. The bottom line is that a strong federal role in environmental protection is the only hope these citizens have to gain basic protections for their health, environment and quality of life.

A Growing Problem of Coal Ash Pollution in North Carolina

After the TVA disaster prompted EPA to evaluate the risks posed by hundreds of similar coal ash dams at power plants across the country, the agency published a report documenting 70 known cases of groundwater pollution and 44 coal ash dams that are considered "high hazard" because a failure would likely result in loss of life. Thirteen of those high hazard dams are in North Carolina.

Environmental watchdog groups then reported 681 exceedances of arsenic, boron, cadmium, chloride, chromium, iron, lead, manganese, pH, sulfate and total dissolved solids in voluntary groundwater monitoring reports conducted by Progress and Duke Energy near their coal ash ponds. Another report documented 31 additional cases of groundwater pollution from coal ash dams that were not included in EPA's report, six of which were in North Carolina.

All of this new information prompted *The Charlotte Observer* to write in March 2010, "The reports of additional contamination at N.C. sites, such as Duke's Belews Creek power plant, suggest that state and federal officials have not been as aggressive as they should in monitoring pollution, informing the public about hazards and taking appropriate steps to safeguard water supplies."

As a result of all the new information and media attention, the N.C. Division of Water Quality required Duke and Progress Energy to drill additional monitoring wells 500 feet

from the edge of coal ash dams to determine whether groundwater contamination had spread further. Thanks to these new reporting requirements and research by academic and public interest groups, a clear picture is emerging of the threat North Carolinians face from poorly regulated coal ash sites. The new reporting has not, however, resulted in any enforcement actions against polluters or any substantive efforts by the state to actually reduce or eliminate the pollution originating from coal ash ponds.

For example, little has been done to reduce the threat of water contamination from coal ash ponds at the Sutton Plant where levels of arsenic, boron, manganese and iron in groundwater testing at the plant all exceed North Carolina standards. Monitoring also indicates that the contamination is migrating outside of the state designated compliance boundary on-site. Despite the N.C. Department of Environment and Natural Resources issuing a notice of violation and request for corrective action, no action has been taken.

Now, as Duke-Progress modernizes its fleet, retiring the oldest coal plants in the state and converting them to natural gas generation, there is no clear plan to deal with legacy coal ash sites. Duke announced that in April it will close the Riverbend Plant, which has operated since the 1920s. The utility, however, has not said what it plans to do with the two coal ash ponds at the plant that contains 2.7 million gallons of waste.

Removal of the coal ash would be expensive and likely require a private partnership, as no municipal landfill would be large enough to store it. Duke will likely propose a plan to cap the basin, which, if approved, will require N.C. Division of Water Quality to continue

monitoring groundwater at the legacy site for years to come.

North Carolina is Moving Too Fast on Fracking

At the same time that state agencies are struggling to protect the environment and human health by effectively regulating coal-burning utilities, the North Carolina General Assembly is rushing to bring hydraulic fracturing for natural gas to the state. Last year, an industry dominated Mining and Energy Commission was created to develop a comprehensive set of regulations to protect Piedmont landowners and communities where drilling will likely take place. In the meantime though, a moratorium on drilling permits was issued to allow the commission to promulgate regulations and give the General Assembly the opportunity to review those regulations before allowing the issuance of permits.

A new bill in the state Senate, which cleared a committee this week, would allow permitting of hydraulic fracturing to begin in North Carolina in two years, no matter the status of the state's regulatory development, resources, or staffing. To change the timeline now and limit the General Assembly's and the public's opportunity to provide input on regulations eliminates a critical step in the review process.

Experienced state regulators, industry and environmental representatives have identified more than 70 recommended regulatory needs for a North Carolina oil and gas program. But in the absence of strong federal standards, the race to the bottom and the

threats to water and air quality, and the health of residents and Piedmont communities in the path of gas development are very real.

As the North Carolina General Assembly recklessly pushes to allow fracking sooner rather than later, our state agencies may be ill equipped to do the work needed to properly regulate and enforce natural gas drilling. Strong federal oversight is needed to ensure that state regulatory programs have standards that will protect our citizens from harm.

Handcuffing The State Enforcers of Environmental and Human Health Protections

North Carolina's tradition of environmental leadership has been turned on its head in the past few years. We brought much of it on ourselves through a series of legislative measures designed to eviscerate the state's ability and authority to enforce environmental protections.

The state effectively abdicated its responsibility for developing science-based health and environmental protections when the General Assembly passed S781, which says, "An agency may adopt only rules that are expressly authorized by federal or State law and that are necessary to serve the public interest."

Some legal analysts are concerned with changes to the administrative review process concerning who has final decision-making authority in Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act legal issues. The changes run counter to the Memorandum of Agreement between the state and the EPA, which outlines federal legal requirements under which the state has the authority to administer the Clean Air Act, Clean Water Act and RCRA, or risk de-delegation of these programs.

It could get far worse if the Assembly passes S10, the "Government Reorganization and Efficiency Act," legislation that seeks to remove 131 members of state boards and commissions, including the Environmental Management Commission, the Utilities Commission and the Coastal Resources Commission. S10 will disrupt institutional knowledge and experience, allow the appointment of commissioners with financial conflicts of interest and will allow commissioners with no specialized and diverse knowledge and experience in the various areas related to the subject matter of the commission.

Budget issues have also increased challenges state agencies face when attempting to protect and manage environmental resources in a responsible manner.

Not only was DENR's budget cut the last biennium by 40% of 2005 funding levels, there was the threat of DENR regional offices being defunded. The final version of the state budget did subject DENR and other agencies to a "justification review" in order to keep their regional offices open.

Industries who benefit from this regulatory scarcity have a part to play as well. Duke and Progress Energy merged last year, making them the largest utility in the country. Duke Energy has been the top contributor to more than 140 members of Congress for at least one year for the past 13 years. Duke Energy also spent almost $5 million dollars on lobbying efforts in 2012. Significant funds have been contributed to state level races as well. And I can speak from personal experience that it is nearly impossible to enact legislation that the public utilities have not agreed to.

Congress should let EPA do its job

The obvious inability of North Carolina to protect the health of our citizens and environment from coal ash is partially the result of factors that are unique to the state at this time, but my conversations with other members of the National Caucus of Environmental Legislators indicate that many other states are performing just as badly. Moreover, any state is likely to be ill-equipped to confront problems like coal ash disposal because an effective solution requires the involvement of federal agencies.

For instance, the Congressional Research Service issued a report in December 2012, on pending legislation (entitled H.R. 2273 and S.3512 in the 112th Congress) that was designed to eliminate the federal government's role in regulating coal ash and other

coal combustion residuals (CCR) by putting permitting and enforcement authority entirely in the hands of the states. The report described the approach taken by the bill's authors as "unprecedented" and criticized the bills for lacking a clear purpose and for failing to ensure state adoption and implementation of minimum standards "necessary to protect human health and the environment."

Overall, the harsh CRS report serves as a warning to members of Congress against reckless and single-minded attempts to bypass established federal authority for environmental enforcement. The attached document entitled "New CRS Report Finds Coal Ash Bills Will Not Ensure Protection of Public Health" provides a summary of eight major failings the CRS report found in the bills' attempts to circumvent federal authority, including:

- Lack of any standard to protect human health and the environment;
- Creating unclear, ambiguous, and altogether missing standards;
- Failure to ensure federal backstop authority and minimum standards;
- Lack of deadlines to issue permits or compel compliance with permits;
- Lack of requirements to reduce threats from ash ponds and toxic dust.

The bottom line is that the federal role in protecting the environment is essential and irreplaceable for protecting the health of Americans and the quality of our environment. While federal attempts to establish minimum safety standards and ensure effective

enforcement by state agencies can be inconvenient for specific industries at times, members of Congress would serve their constituents best by allowing agencies like the EPA to do their job and providing them the resources they need to do it effectively.

Mr. SHIMKUS. And now I would like to recognize our last member of the panel, not least, from the National League of Cities, the Honorable Michael Sesma, who is a council vice president, city of Gaithersburg, Maryland, and has some friends in Edwardsville, Illinois, which is the county seat of my home county. So I may be generous a few seconds with time.

So welcome.

STATEMENT OF THE HONORABLE MICHAEL A. SESMA

Mr. SESMA. I will probably need it. Thank you.

Good morning, Chairman Shimkus——

Mr. SHIMKUS. Extend your mike.

Mr. SESMA [continuing]. Ranking Member Tonko, and members of the subcommittee. I am Michael Sesma, council member of the city of Gaithersburg, Maryland.

Mr. SHIMKUS. Will you either pull it closer or make sure the light is on?

Mr. SESMA. All right. The light is on. It is probably going to count against my time.

Mr. SHIMKUS. It is starting to come now.

Mr. SESMA. All right. Thank you.

Mr. SHIMKUS. Just get a little bit closer, and I think we will all be happy.

Mr. SESMA. OK.

I appreciate the opportunity to share our perspective. I am here today on behalf of the National League of Cities, the oldest and largest organization representing cities and towns across America. I appreciate the opportunity to share our perspective on the important role local governments play in protecting the environment.

We have heard a lot about States this morning. States can't do it without the cities being part of it. As implementers of State and Federal environmental policies and programs and with authority over local land use, zoning, and code development decisions, cities and towns are key partners in ensuring that the health, safety, and welfare of the public is protected.

Many local governments, including my city of Gaithersburg, are at the forefront of sustainability and planning, taking action to make our communities vibrant places to live, work, and play. America's cities and towns serve as the first line of defense and innovation for environmental protection. I would like to highlight some of the approaches that Gaithersburg has used as an example of the role cities and towns, urban and rural, large and small, have in protecting the environment.

While not currently required by the Federal or State government, the city of Gaithersburg has taken steps to minimize storm-water runoff and encourage residents to be active participants in protecting our watershed and public and private property. We have a popular RainScapes program that rebates rain barrel use and conservation landscaping to keep our neighborhoods green and to prevent rainwater from running into the storm drains.

We have constructed "green streets" to achieve the same thing. We have been a Tree City USA since 1990, but Gaithersburg is becoming more urban. As you know, urban forests contribute significantly to energy conservation and overall environmental quality.

So our forest conservation plan allows us to protect our urban tree canopy even as we promote development throughout the city. We try to replace every lost mature tree with a new tree.

In 2007, the city adopted a resolution requiring LEED Silver certification for all future municipal buildings. We were one of the first cities in the country to enact mandatory green building requirements for both residential and commercial development. Happily, there was no resistance from the development community, and our approach has been good for business. Green buildings are going up throughout the city.

And Gaithersburg has the first youth center in the United States and the fourth building in Maryland to be certified LEED Platinum by the USGBC.

Cities are committed to working in partnership with the EPA to develop strategies and enact policies that enhance our environmental resources and create viable communities for future generations. These efforts are aided by several positive steps that EPA has taken in recent years that strengthen the Federal, State, and local partnership. I would like to touch on three of these.

The first is the federalism consultation process. We thank EPA for lowering the threshold for triggering the State and local consultation process from a threshold of $100 million to $25 million. Since lowering the threshold for triggering the federalism consultation process, State and local governments have been consulted on a more regular basis on issues of mutual importance. And we firmly believe that early consultation will lead to better results and strengthen the partnership between Federal, State, and local government in achieving the environmental goals of the EPA.

In regulatory review and reform, an Executive order calling on Federal agencies to identify opportunities for reducing administrative and regulatory burdens on local government has saved cities money. As cities and towns continue to recover from the economic downturn, every dollar counts, and this flexibility is a welcome means of lessening the financial burden on local governments.

Finally, EPA's integrated municipal storm-water and wastewater planning approach planning approach framework and the recent memorandum on assessing financial capability from Municipal Green Water Act requirements serve as acknowledgment that local governments face difficult financial conditions that impact their ability to meet the Clean Water Act obligations. By allowing an integrated planning approach, local governments, not the agency, can decide how they will meet the CWA requirements. This flexibility allows for better compliance, better planning, and more efficient spending.

So cities and towns across the country continue to have concerns about the affordability of meeting CWA requirements. In Maryland, the implementation of storm-water management programs has a direct impact on the quality of water in streams and rivers that flow into the Chesapeake Bay. And a healthy, clean Chesapeake Bay is vital to the economic health of the mid-Atlantic States. While the CWA mandates may be necessary to maintain and improve water quality, they come with high costs to local governments and taxpayers.

For example, under our next permit cycle, Gaithersburg must retrofit 20 percent of its impervious acreage at a cost that is estimated to be about $127,000 per acre. And the projected cost for Gaithersburg to do this over 576 acres is $73 million. Our operating budget for fiscal year 2013 was $46 million. Montgomery County in Maryland has a bigger problem. About 20 percent of their budget must be used—or a proportion of their budget of $4.6 billion will be spent to retrofit their impervious services before 2020.

So in response to local government concerns about affordability and the fiscal impact of regulatory compliance, EPA issued a memorandum on the fiscal burdens of compliance. Local governments will continue to dialogue with EPA on affordability. And we commend EPA for both the integrated planning effort and local government affordability dialogue that will serve to strengthen the intergovernmental partnership.

However, this integrated planning framework can still be improved, and we urge EPA to include drinking-water regulations in the planning framework.

So I will just cut to the quick chase and the major reason that we are here. And one is to call on Congress some support existing and new financing mechanisms for funding water infrastructure projects. Cities have been forced to contend with significant decreases in intergovernmental revenue, including Federal, State, and county aid, adding to the fiscal problem.

Elected officials are making difficult decisions and working hard to find innovative solutions to re-energize their communities. And without the resources to do that, it will be difficult to implement the objectives of the Safe Drinking Water and the Clean Drinking Water Act. So there is a need for new financing—for financing mechanisms.

As the administration and Congress seek to identify savings and new revenue to reduce the deficit, the Federal income tax exemption on interest paid on State and municipal bonds is under threat. Tax-exempt municipal bonds are——

Mr. SHIMKUS. Mr. Sesma, I have been overly generous——

Mr. SESMA. Thank you.

Mr. SHIMKUS [continuing]. With a minute more than the other——

Mr. SESMA. A minute more. Thank you.

Mr. SHIMKUS. No, no, no. I——

Mr. SESMA. Thank you. I end my remarks.

Mr. SHIMKUS. Thank you very much.

[The prepared statement of Mr. Sesma follows:]

Statement of

The Honorable Michael A. Sesma
Council Member, Gaithersburg, Maryland

On behalf of the National League of Cities

Before the House Energy and Commerce Committee, Subcommittee on Environment and Economy

"The Role of States in Protecting the Environment Under Current Law"

February 15, 2013

Good morning, Chairman Shimkus, Ranking Member Tonko and Members of the Subcommittee. I am Michael A. Sesma, Council Member, Gaithersburg, Maryland. I am here today on behalf of the National League of Cities (NLC), the oldest and largest organization representing cities and towns across America. I appreciate the opportunity to share our perspective on the important role local governments play in protecting the environment. Local governments and the U.S. Environmental Protection Agency (EPA) have a long and productive history of working together to improve the environmental quality of life in our communities. As implementers of state and federal environmental policies and programs and with authority over local land use, zoning, and code development decisions, cities and towns are a key partner in ensuring that the health, safety and welfare of the public is protected.

Environmental degradation respects no political boundaries; therefore a coordinated national environmental quality policy is vital to our nation. NLC believes a national environmental quality policy must improve the quality of the total environment while protecting the

environment from further harm. Moreover, such national policy must assess both current and long term environmental impacts, ensuring that the needs of the present are met without compromising the ability of future generations to meet their own needs.

While a national environmental policy is important in ensuring that decisions made by one city do not have a negative impact on neighboring cities, many local governments, including my city of Gaithersburg, are at the forefront of sustainability in planning, taking actions to make our communities vibrant places to live, work, learn and play. From ensuring proper zoning and density, to enforcing local, state and national regulation, America's cities and towns serve as the first line of defense and innovation for environmental protection. I'd like to highlight some of the approaches that Gaithersburg has taken as an example of the role cities and towns—urban and rural, large and small—have in protecting our environment.

While not currently required by the federal or our state government, the City of Gaithersburg has taken several steps to minimize stormwater runoff and encourage residents to be active participants in protecting our watershed. In 2009, Gaithersburg began offering a Rainscapes Rewards program—offering a rain barrel and a conservation landscaping rebate program for city residents. Additionally, the city has also pursued stormwater mitigation through the construction of green streets, which use a natural approach of curb extensions, porous paving materials and native plantings to reduce stormwater flow. Our first two green streets were constructed in 2009 and 2010, and the city will begin construction of three more this spring. These actions reduce the amount of stormwater entering local streams, control flooding, decrease water usage, increase groundwater supply, and reduce chemical and nutrient pollutants entering waterways.

Additionally, Gaithersburg is becoming more urban, and we are mindful that residential and commercial development could result in the loss of healthy trees. Therefore, we have taken steps to maintain and protect our urban tree canopy, which contributes significantly to energy conservation and overall environmental protection. As mandated by the State of Maryland, we require forest conservation at new and redeveloped properties. The city also operates a fee-in-lieu program for those developments where on-site retention of forested areas is not possible. This money is used to fund tree plantings within the public right-of-way and to reforest public lands. I am proud to say that Gaithersburg has earned a Tree City USA designation from the National Arbor Day Foundation every year since 1990.

Moreover, in 2007, the city adopted a resolution requiring LEED Silver certification for all future municipal buildings. The city has also enacted rigorous green building requirements for both residential and commercial development. Gaithersburg's Olde Towne Youth Center achieved LEED Platinum certification in 2010, making it the first youth center in the country and the fourth building in Maryland at the time to achieve this highest level of certification from the U.S. Green Building Council.

Finally, as part of our submission to become a Sustainable Maryland Certified community, the city prepared a three-year Green Team Action Plan. In 2013 we will be tracking our municipal carbon footprint, creating a watershed plan and participating in the Maryland Department of Housing and Community Development Sustainable Communities program. In 2014 we will continue to track our carbon footprint, create a climate action plan, promote the Maryland Green

Registry (of which we are a member), complete a Green Guide to Gaithersburg, and create a watershed plan for the second of our three watersheds.

Importance of Intergovernmental Partnership

The implementation of impactful and sustainable environmental programs is a core responsibility of local government. With every aspect of our environmental health being interrelated, cities are committed to working in partnership with EPA and those who live and work in our communities to develop strategies and enact policies that enhance our environmental resources and create viable communities for future generations. Our efforts to ensure environmental protection are aided and enhanced by several positive steps that EPA has taken in recent years toward renewing and strengthening the federal-state-local partnership. I would like to touch on three.

Federalism Consultation

As you know, the 1995 Unfunded Mandates Reform Act (UMRA) requires federal agencies to assess the costs and benefits of a final rule that may result in the expenditure by state, local, and tribal governments, in the aggregate, of $100 million or more. Under UMRA, this threshold amount also triggers the required intergovernmental consultation process between regulatory agencies and elected officials.

In 1999, President Clinton issued Executive Order 13132: Federalism (Executive Order) to "further the policies of the Unfunded Mandates Reform Act" and to "insure that the principles of federalism established by the Framers guide the executive departments and agencies in the

formulation and implementation of policies." In addition to enumerating the basic principles of federalism, the Executive Order directed federal agencies to set up a consultation process "to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications."

In 2008, EPA revised its Guidance document on Executive Order 13132: Federalism, lowering the threshold for triggering the state and local consultation process from $100 million to $25 million.

Because the threshold was so high from the Executive Order's effective date (1999) through 2008, only two EPA regulations met the threshold and triggered the review process. This led to many instances where agency regulations imposed unplanned expenditures on local governments and diverted scarce resources from other important local activities, without the benefit of our consultation. Since lowering the threshold for triggering the federalism consultation process, state and local governments have been consulted on a more regular basis on issues of mutual importance to the quality of life in our communities and the fiscal impacts of those decisions. While cities and towns do not always agree with the substance of rules put forth by EPA, particularly the increasing number of unfunded federal mandates imposed on local governments, we strongly believe that early consultation can lead to better results and can strengthen the federal, state, and local government partnership, and we encourage Congress to continue to support this process.

Regulatory Review

Second, earlier this year, EPA published a memorandum, "Safe Drinking Water Act - Consumer Confidence Report Delivery Options," which clarified that water suppliers may use electronic delivery options for Consumer Confidence Reports (CCRs). As there are approximately 51,651 community water systems in the country that are currently publishing and distributing the CCRs to their consumers, granting local governments electronic delivery options for CCRs will provide local water utilities and taxpayers with significant savings in printing and mailing costs. As cities and towns continue to recover from the economic downturn, this is a welcome means of lessening the financial burden on local governments.

This Administrative action stemmed from Executive Order 13563: Improving Regulation and Regulatory Review (January 2011), which called on federal agencies to identify opportunities for reducing administrative and regulatory burdens on local governments, and EPA's Final Plan for Periodic Retrospective Review of Existing Regulations (August 2011) that followed.

Integrated Planning and Affordability Dialogue

Finally, EPA's Integrated Municipal Stormwater and Wastewater Planning Approach Framework (Framework, June 2012) and recent memorandum on Assessing Financial Capability for Municipal Clean Water Act Requirements (January 2013) serve as Agency acknowledgement that many local governments face difficult financial conditions that impact their ability to meet Clean Water Act (CWA) obligations.

The integrated planning framework is aimed at helping state and local governments identify opportunities to achieve clean water by controlling and managing releases of wastewater and stormwater runoff in an efficient and cost effective manner. By allowing for an integrated planning approach, local governments can decide how they will meet their CWA requirements through the sequencing, scheduling and prioritization of projects.

In developing the Framework, EPA sought stakeholder input, including from NLC. In a February 2012 letter to EPA, NLC called on the agency to consider affordability issues for communities, to grant local governments flexibility to evaluate and make improvements to the plan, and to rely on the permit process, rather than through consent decrees, for the implementation of long-term integrated plans. NLC emphasized these key concerns to Congress as part of testimony before the House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment in December 2011 and July 2012.

Cities and towns across the country continue to have concerns about the affordability of meeting CWA requirements. In Gaithersburg, the implementation of stormwater management programs has a direct impact on the quality of water in the streams and rivers that flow into the Chesapeake Bay. A healthy, clean Chesapeake Bay is vital to the economic health of the Mid-Atlantic States. While the federal mandates of the CWA may be necessary to maintain and improve water quality, they do not come without a high cost to local governments and taxpayers.

For example, there are approximately 24 miles of streams in Gaithersburg, many of which are in need of restoration in order to protect our watershed. We are in the process of soliciting for and

conducting assessments for three of our major watersheds, as required by our Phase II MS4 permit. The first of these studies is expected to cost taxpayers $99,000. The U.S. Army Corps of Engineers has identified a 10,000-foot portion of the city's Muddy Branch watershed as in need of restoration—at a cost of $2.5 million to taxpayers. Moreover, the city recently reconstructed three stormwater management facilities at a cost of $860,000. Our taxpayers support the efforts to protect the environment but also ask, "Is this a cost effective and efficient use of taxpayer money?"

Additionally, under our next permit cycle, Gaithersburg will have to retrofit 20 percent, or 576 acres, of our current 2,882 acres of impervious surface, much of which is owned by the private sector. Using neighboring Montgomery County's treatment estimate of approximately $127,000 per acre, for Gaithersburg to treat its 576 acres, the projected cost would be approximately $73 million. Gaithersburg's fiscal year 2013 total operating budget is $46 million. The impact and cost to Montgomery County will be even greater; by 2020, Montgomery County estimates that 7,722 acres of impervious surface will have to be retrofitted at a cost to taxpayers of $987 million. This amounts to more than 20 percent of the county's annual operating budget of $4.56 billion for fiscal year 2013. Again, while these are important projects, the cost to local governments and taxpayers is high.

In addition to implementation costs and effort, staffing costs to ensure compliance with our MS4 permit will require additional funding within the city's budget. We will need to conduct routine surveys and monitor commercial and industrial areas for discovery and elimination of hotspots. We will need to establish a more exhaustive mechanism for annual reporting related to our

permit. And we will need to conduct more systematic watershed assessments and combine them with a report of restoration goals prior to the permit term ending. The city will also need to meet new Total Maximum Daily Load and Waste Load Allocations approved by EPA for our water bodies.

Because of the continuing concerns of local governments around the issue of affordability and the fiscal impact that regulatory compliance has on communities, EPA issued a memorandum to the regions, Assessing Financial Capability for Municipal Clean Water Act Requirements, clarifying how the financial capability of a community will be considered when developing schedules for municipal projects necessary to meet CWA obligations. EPA also began an affordability dialogue with local elected officials and local government organizations on this topic. We commend EPA for both the integrated planning effort and local government affordability dialogue that will serve to strengthen the intergovernmental partnership.

Despite these good efforts, however, cities have a concern with the integrated planning framework. While the local government affordability discussions with EPA will include a focus on assessing a community's financial capability including their obligations under the Safe Drinking Water Act (SDWA), the integrated planning framework does not apply to drinking water regulations. As drinking water utilities are increasingly being called on to monitor and remove emerging contaminants, such as chromium and pharmaceutical products, and with the forthcoming proposed regulatory revisions to the Lead and Copper Rule, we have called on EPA to consider drinking water within the integrated planning approach. Moreover, drinking water and wastewater are viewed as one system indistinguishable from each other by our citizens and

customers. Utilities, especially those with responsibility for wastewater, stormwater and drinking water, often take a holistic approach to water management, and would benefit from a national policy framework that allows for a similar integrated and coordinated approach.

Fiscal Impact of Aging Infrastructure

As you know, local governments construct, operate, and maintain the vast amount—95 to 98 percent—of the country's water infrastructure networks, which are essential for economic development and quality of life in our communities, and the needs in our communities continue to grow. Cities face a backlog of projects and, especially as cities continue to recover from the economic downturn, are finding challenges in funding much needed water infrastructure improvements, as well as other priorities. Meanwhile, federal mandates, along with aging infrastructure, are straining local budgets and federal options for grants and loans are dwindling. We, therefore, call on you to support existing and new financing mechanisms for funding water infrastructure projects.

Infrastructure Needs

The need for infrastructure investment—and the jobs that come with it—is acute. The American Society of Civil Engineers estimates that the nation should spend $2.2 trillion over the next five years on infrastructure projects. Specifically, EPA's most recent Drinking Water Infrastructure Needs Survey and Assessment estimates the cost of drinking water infrastructure upgrades over a 20 year period to be $334.8 billion. Likewise, the most recent EPA Clean Watersheds Needs Survey indicates that the 20 year investment needed to upgrade our nation's total wastewater and

stormwater management infrastructure to meet the water quality goals set in the CWA to be $298.1 billion. In our estimation, these investment levels are actually an underestimate given the advancing age of our infrastructure, the burden of unfunded federal regulatory mandates, and factors not yet known as a result of our changing climate.

The lack of quality water infrastructure threatens local and regional economies, the environment, and public health and safety. Like other communities, much of Gaithersburg's water infrastructure is beyond its expected design life and is in need of substantial funding to address our existing system needs. City leaders remain committed to meeting the growing water infrastructure needs in our communities. We call upon the federal government to be a full partner in this important endeavor.

City Fiscal Conditions

According to NLC's 2012 *City Fiscal Conditions* report[1], general city revenues are continuing to fall, with a projected -3.9 percent decrease over 2011. This is the sixth straight year of declines in revenue with probable further declines in 2013 due to stagnant housing markets, high unemployment, and looming federal budget cuts. Cities are responding to these declines by cutting personnel (48 percent), increasing service fees (43 percent), delaying infrastructure projects (33 percent)—in addition to deferring facility maintenance and equipment replacement, and making cuts in services such as public works, library, parks and recreation programs (25 percent).

[1] Hoene, Christopher W. and Michael A. Pagano, *City Fiscal Conditions in 2012*, National League of Cities, September 2012. (Available at http://www.nlc.org/find-city-solutions/center-for-research-and-innovation/finance/city-fiscal-conditions-in-2012)

Cities also have been forced to contend with significant decreases in intergovernmental revenue, including federal, state, and county aid, adding to the fiscal pressures. In addition to on-going deficit reduction efforts at the federal level, which has led to spending cuts in federal programs for local communities, according to NLC's report, since 2010, cities report state cuts in shared revenues (45 percent), general aid (42 percent), and reductions in reimbursements and other transfers (30 percent). As states make these cuts to balance their budgets, it puts greater budgetary pressure on local governments that must balance their budgets as well.

There can be no doubt that in Gaithersburg and in cities around the country, city officials are making difficult decisions and are working hard to find innovative solutions to reenergize our communities. But, without more resources and more cooperation from the federal government, the outlook will continue to be challenging. Moreover, at a time when financial resources are increasingly limited, the federal government continues to impose costly federal regulatory requirements to carry out the objectives of the SDWA and CWA without regard for the efficacy of the regulation or a prioritization scheme.

Financing Mechanisms

As the Administration and Congress look to identify savings and new revenue to reduce the deficit, the federal income tax exemption provided to interest paid on state and municipal bonds (debt) is under threat. These bonds are the primary financing mechanism for state and local infrastructure projects, with three-quarters of the infrastructure projects in the U.S. built by state and local governments using municipal bonds as the primary tool, and with over $3.7 trillion in outstanding tax-exempt bonds, issued by 30,000 separate government units. According to the

National Association of Clean Water Agencies, in the first six months of 2012, tax-exempt municipal bonds financed more than $23 billion worth of water and wastewater infrastructure projects.

Local governments save an average of 25 to 30 percent on interest costs with tax-exempt municipal bonds as compared to taxable bonds. This is true because investors are willing to accept lower interest on tax-exempt bonds in conjunction with the tax benefit. If the federal income tax exemption is eliminated or limited, states and local governments will pay more to finance projects, leading to less infrastructure investment, fewer jobs, and greater burdens on citizens who will have to pay higher taxes and fees. NLC opposes any attempt to eliminate or limit the traditional tax exemption for municipal bonds whether as a part of a deficit reduction plan, a push for comprehensive tax reform, or as an offset for new spending.

While we recognize that the federal government has many funding challenges to meet, we urge you to prioritize funding for the Drinking Water and Clean Water State Revolving Loan Fund (SRF) programs. The SRF programs are integral tools used by our communities for providing clean, drinkable, and swimmable water to the American people. In 2010, local governments spent $111 billion[2] on water and wastewater investments, while the SRF programs provided $3.5 billion, primarily in the form of loans from state agencies to local governments. Federal investment in our nation's infrastructure is critical if the nation's cities, counties and states are to improve aging infrastructure, meet federal regulatory requirements, create and retain jobs, and foster a climate of economic growth in our communities.

---

[2] *2010 Annual Surveys of State and Local Government Finances,* U. S. Census Bureau, October 2012. (Available at: http://www.census.gov/govs/estimate/)

Accordingly, local governments need a reliable, long-term source of substantial capital for municipal water infrastructure systems to help close the gap between current expenditures and anticipated needs to enhance and maintain critical water infrastructure in our communities. NLC supports water infrastructure funding through the SRF programs and other alternative mechanisms of financing water infrastructure improvements and investments, such as, for example, mechanisms that lower the cost of borrowing that will help leverage local funding, offer direct loans and loan guarantees from the federal government to cities, or remove the federal volume cap on tax-exempt bonds for water and wastewater infrastructure projects.

Conclusion

The United States marked the 20th century with breakthroughs and investment in water infrastructure that helped lift our nation to international prominence for the past 100 years. We ask you to lead and serve the country by addressing the underlying issue of aging infrastructure and unmet infrastructure needs. This effort will strengthen the intergovernmental partnership by enabling our cities and towns, our states, and country to meet the challenges and opportunities of leading the world into the next century.

Local governments remain committed to meeting the water infrastructure needs and environmental protection standards in our communities now and in the future. We hope the federal government remains committed to being a full partner in this important endeavor. As the nation's cities continue to endeavor to improve aging infrastructure, meet federal regulatory

requirements, create and retain jobs, and foster a climate of economic growth in our communities, a partnership with the federal government is essential.

Thank you for the opportunity to speak on behalf of America's cities and towns. I look forward to your questions.

Mr. SHIMKUS. Now I would like to recognize myself for 5 minutes for questions. The first question to goes to Mr. Fitch.

Please explain the Risk-Based Data Management System. And can you give me a specific example of how this tool aids in the regulatory effort?

Mr. FITCH. The Risk-Based Data Management System is a kind of a common platform that is used by many of the oil- and gas-producing States. We enter all of our data into it, all the information on individual wells, the drilling, construction, production history. And it can be linked to other records associated with the well. It helps us to manage our internal data, and it also is a good portal for public or industry, any interested party, to access that data.

Mr. SHIMKUS. Thank you.

And, Mr. Lepore, how did the Risk-Data Management System help you manage the delicate balance between water and energy?

Mr. LEPORE.Mr. Chairman, as Mr. Fitch alluded to, the RBDMS allows us to track a vast amount of information, tie that information to specific wells, search that information, keep that information publicly available. So I guess all of those tools combined can be used by someone looking to that energy-water balance as they want to use that information.

Mr. SHIMKUS. And is water data shared across State lines?

Mr. LEPORE. It certainly can be. One of the slides that I didn't have time to show you is we have an environmental database now that went live in September of 2012. Go to that database, click on a well, you can find out everything there is to know about that particular groundwater well. Again, fully publicly accessible, so it could be shared across State lines.

Mr. SHIMKUS. Ms. Pillsbury, do you agree? Do you agree with the comments of Mr. Lepore?

Ms. PILLSBURY. That we are able to get information from other States about water and water quality? Yes, I agree with that.

Mr. SHIMKUS. Great. Thank you.

Mr. Steers, do you believe that with the Federal standards set by Congress in statute rather, than set by the EPA, that you could establish, implement, and enforce a permit program that meets the requisite level of protection established by the Federal Government?

Mr. STEERS. Mr. Chairman, yes, I do believe the States are capable. We have a significant history over the last 20 to 30 years of permitting and implementing standards and using the flexibilities and understanding local conditions on how we apply permitting program across the Nation.

Mr. SHIMKUS. And, Ms. Marks, if EPA has authority to take over control of a State permit program when the permit program isn't meeting a minimum Federal standard, would you consider that backstop authority for the EPA?

Ms. MARKS. Yes. I do think that is a backstop authority. And it is rarely exercised. Fortunately, it hasn't had to be.

Mr. SHIMKUS. And going back to Ms. Pillsbury, your testimony talks about other partnerships for training and technical assistance. Could you please discuss these and what are you trying to obtain from them? And how do you think they will help your members with the mission?

Ms. PILLSBURY. Sure. On both the national organization and State level, two of the big partners are the National World Water Association and the Community Assistance Program. And they basically put boots on the ground to help water systems obtain financing, meet compliance, those kinds of things.

In addition to that, up until pretty recently, there were both finance centers and technical centers that EPA sponsored. And for us in New Hampshire, arsenic was a huge issue, and that technical center at University of New Hampshire was critical in figuring out what was the least-cost way to these small, struggling systems to meet arsenic compliance.

Mr. SHIMKUS. And I am going to wrap up. I appreciate the testimony. I think it is a very good panel.

I think it is safe to say that the States, you know, are doing most of the work. I am a former infantryman, so I would call you the boots on the ground and the infantry of protecting our citizens and their air quality and their environment and the like. And I want to thank you for your service.

And I yield to the ranking member, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair.

And I heard a number of concerns about financing, about funding streams from the Federal level. Over 40 percent of EPA's budget is typically passed through the agency to the States to make their work possible. And, according to EPA, 75 percent of that volume of its State cleanup grants and 80 percent of its State prevention grants support the salaries of State staff, so that that could mean huge cuts and losses at your important State agency level.

Ms. Pillsbury, you represent the State officials trying to provide all of our constituents with safe drinking water. You held up a great visual. According to EPA, if the sequester goes into effect, more than 100 water quality protection and restoration projects would be eliminated. What does that mean from your perspective in trying to provide safe drinking water?

Ms. PILLSBURY. Well, the Safe Drinking Water Act is really structured to be a multibarrier approach to safe drinking water. So, you know, you start with a source, the treatment, the distribution system, and then monitoring and getting information out there. That source piece of it, making sure that the water is clean to begin with, is really critical. Trying to treat it at the public water systems is very difficult, sometimes impossible, oftentimes very expensive.

So we like the Clean Water Act. And there is actually work in progress between Groundwater Protection Council, as do our association, the State Drinking Water Administrators, and the Association of Clean Water Administrators to look at what tools can be brought to bear under the Clean Water Act to protect the sources being used by public drinking waters.

Mr. TONKO. And, Ms. Marks, you represent the State officials who work every day to address cleanup of contaminated sites. If the sequester, again, goes forward, we are told that nearly 300 contaminated, leaking underground storage tanks would not be cleaned up. Nearly 600 contaminated properties would not get cleaned up under the voluntary cleanup program.

What does that mean to the work that is assigned you and your colleagues?

Ms. MARKS. Well, the Federal dollars that come in to do cleanups are absolutely vital, and it would be devastating to our programs to lose that assistance. Certainly, the States provide a certain amount of that funding, but the Federal funding is actually integral to getting those sites cleaned up.

Mr. TONKO. And, Ms. Harrison, as a State legislator, you have to deal with State budgetary issues every year. I served for 25 years in State government in New York; I know the struggles States are facing.

Are the States prepared to step in and make up for any loss of funding if that should be the result here from Washington?

Ms. HARRISON. The short answer is, no, sir. I think we have made significant cuts to our department budgets already, and we have actually replaced a lot of the State funding with Federal funding and moved positions into federally funded positions. So I think any cuts would be devastating to our ability to protect the public health of our citizens.

Mr. TONKO. And, Mayor Sesma, you represent cities across the country. Can our cities absorb these costs if Federal funding is cut significantly? And what plans would perhaps States make to respond to the shortfall?

Mr. SESMA. Well, the intergovernmental revenue from State and Federal governments have caused other stresses on local budgets. That either means an increase in local taxes or an increase in fees or new fees, or projects don't get done or they don't even get planned.

So one of the big asks of the NLC is to continue to support the financing mechanisms that exist, and ask the Federal Government, Congress, to consider new or additional creative mechanisms that allow us to begin to deal with this infrastructure—not just new infrastructure, but maintaining the existing infrastructure that is becoming obsolete and inefficient.

Mr. TONKO. Thank you.

It becomes clear to me that this panel is working hard every day to implement our environmental laws and doing a commendable job, but sequestration is an imminent threat. If these important programs survive sequestration, the budget here, the Ryan budget, threatens to cut Federal funding even more drastically.

One of today's witnesses has suggested that the members of this subcommittee write to the Appropriations Committee and urge them to ensure adequate funding for these programs. I think that is a great idea. And I would like to pledge to work with our outstanding chair to convey that message to the appropriators. I hope that we can work together and make sure that we don't sacrifice public health and the environment with ill-considered budget cuts.

So thank you for your advocacy and your advice.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes the vice chairman of the subcommittee, Mr. Gingrey, for 5 minutes.

Mr. GINGREY. Mr. Chairman, thank you for the recognition. And since we are somewhat rushed for time—I think votes are coming

up pretty soon—let me get right to my questions. And I would like to begin with Ms. Marks.

Ms. Marks, how much staffing and other resources would the EPA need to amass to replicate the technical expertise, the enforcement, and administrative efforts provided by the States for environmental and public health protection?

Ms. MARKS. Since each State runs their own programs, it would be difficult to estimate that. But I can tell you from Arkansas, which is a small State, we employ anywhere from 375 to 400 people. We have expenditures of over $50 million a year.

And even though we do operate State programs in addition to the Federal programs, if EPA came in they would have to pick up those State programs, such as landfills. You can't leave landfills unregulated. So they would have to pick up beyond what they are currently overseeing.

Mr. GINGREY. So, basically, lots of boots on the ground and lots of expertise.

Ms. MARKS. Yes, sir, absolutely. It would be a tremendous, massive effort and change in the Federal organization.

Mr. GINGREY. Thank you. Thank you so much.

And now I would like to move to a couple of questions for Mr. Steers.

Some have argued that States use variances as a, quote, "copout" for enforcing strict environmental standards in their States. Do you agree with that, Mr. Steers?

Mr. STEERS. No, I do not. I think that variances are a necessary——

Mr. GINGREY. And if you don't mind, also just explain what they are, how that works, and——

Mr. STEERS. Sure. Variances are a regulatory process that States use in order to adapt local conditions and site-specific risk that may be present that the regulations may not account for, and the ability to allow facilities to operate at a different standard based on those local conditions.

Variances are not a copout, and they are taken seriously by the States, inasmuch as they are needed in order to look at the differences in the way that regulation is applied across the country.

For example, groundwater protection standards and how we regulate groundwater in the eastern part of the United States around the landfill where there may be shallow aquifers is not necessarily the same as you would have out west or in the desert where groundwater may be several hundred feet below the surface. And so you need to be able to take into account the local geologic conditions when you are applying a one-size-fits-all national standard.

Mr. GINGREY. So that basically is what you are talking about when you say "variances."

Mr. STEERS. Variances, yes.

Mr. GINGREY. Thank you very much.

In my remaining time, I would like to conclude with one question for Ms. Pillsbury. Your testimony talks about tailoring of Federal regulations. This doesn't mean compromising water quality for consumers in that State, does it?

Ms. PILLSBURY. No, it certainly does not. The ultimate compliance with whatever the regulation is is the compliance that we achieve.

There is in implementing pretty much any national regulation some discretion on the part of States about how best to do that given local circumstances. So that is really what I meant by saying "tailoring," to make it so that it is as practical to implement as possible.

Mr. GINGREY. Can you tell me the difference in tailoring and variances? Is there a distinct difference there?

Ms. PILLSBURY. Well, "variance" I think is an actual term that is used in the rules and regulations. And so tailoring is more of a concept of making a national standard fit within your State and how best to implement it, how best to train people, you know, what kind of capabilities they are going to need to be able to meet compliance.

So we don't really do variances in the drinking water program that are allowed by statute, but we do a lot of tailoring to get the job done.

Mr. GINGREY. I understand. Thank you.

Thank all three of you.

Mr. Chairman, I would yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The chair recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. Well, I thank the chairman. And I want to congratulate you for your elevation and selection. And I look forward to working with you on a bipartisan basis to solving some of the problems that we are facing in this committee.

You know, I found the testimony on fracking, Mr. Fitch and Mr. Lepore, very informative. So thank you for coming, as well as all the witnesses.

One of the questions that I have that is sort of ongoing about fracking is, how important is complete transparency to public acceptance of fracking in local communities?

Mr. FITCH. I think transparency is a crucial element in the whole debate there. There is a lot of misunderstanding, frankly, on the part of the public about what fracking is and what the potential impacts are. There is a lot of suspicion about the chemicals that are used.

I think it is important for the States to get that information out there. In Michigan, we are going all over the State, my staff and I, giving presentations to kind of try to get the facts out there and hear people's concerns.

Mr. MCNERNEY. Mr. Lepore?

Mr. LEPORE. I would agree with Mr. Fitch's comments. I think transparency is critical. Building trust with our community members is critical. Imparting information is critical is a huge challenge.

To use one example, I think the term "fracking" has been used widely as sort of a substitute for all things oil and gas. And it is an ongoing challenge to try to parse those distinctions.

Mr. MCNERNEY. I mean, it sounds to me like disclosure is something that the Federal Government could impose as a requirement

on fracking nationwide. I mean, there are differences in terms of geologic formations, but disclosure is something that should be universal in all fracking requirements. Would you agree with that?

Mr. LEPORE. Obviously, Colorado has made the decision that disclosure is important. And it was a long and lengthy conversation in Colorado. It started in 2008. There were a lot of concerns by operators with respect to trade secrets, in particular. And I think FracFocus is a tremendous tool that is available to all States. I think it is in operators' best interest, to be quite frank, to disclose the chemicals they use in frack fluids.

Mr. MCNERNEY. Good. I agree.

Like Colorado, California, my home State, is water-bound. I mean, we always have to worry about our water sources. And one of the concerns I have about fracking is the amount of water that is used and what happens to that water after it is used. Is it reclaimed? Is it discarded into local aquifers?

How do we deal with the water issue in a State like California and Colorado?

Mr. LEPORE. When you talk about how much water it takes to frack a well and you talk about several million gallons, it certainly seems like a big number. For the State of Colorado, the amount of water used totally for fracking is, we have calculated, at less than 1 percent. The vast, vast majority of our water is used for agriculture.

That said, again, I would say that reclaiming and recycling and reusing that water is becoming an entrepreneur's dream. There is a huge need to do that. And we are approached fairly regularly now—we, the Colorado Oil and Gas Conservation Commission—from businesses interested in instituting onsite recycling and reclamation and asking us questions about how that would be regulated and so forth.

So it is an important issue. It is going to continue to be an important part of discussion. And we should encourage as much reuse as we can.

Mr. MCNERNEY. So that is an area for innovation, then.

Mr. LEPORE. Yes, sir.

Mr. MCNERNEY. Recycling and recovering.

What about the water that is just discarded after fracking? I mean, is some of the water that is recovered just discarded into the aquifer? Or how is that managed?

Mr. FITCH. That so-called flow-back water has to be handled carefully because it does have some—it may have some remnant contaminants it in from the hydraulic fracturing additives, and it may also may be picking up salts and compounds from that target formation.

In Michigan, it all has to be contained in steel tanks and injected into deep injection wells. And most States have similar methods for dealing with it.

Mr. MCNERNEY. And so that is part of the transparency, is how that wastewater is finally disposed of.

Mr. FITCH. That is correct.

Mr. MCNERNEY. That would have to be part of the transparency.

Mr. FITCH. Yes.

Mr. MCNERNEY. Go ahead.

Mr. LEPORE. I think the disposal question, too, is one which highlights what we are talking about today, which are the differences regionally or locally. In Colorado, like Michigan, most of our exploration and production waste, when it is exhausted, is injected into deep disposal wells. Other States use different disposal methods depending on the geology and topography and so forth, including discharge to surface streams. So they have to deal with the waste the way that works for them.

Mr. MCNERNEY. Thank you.

Mr. Chairman, I yield back.

Mr. SHIMKUS. The gentleman yields back.

Just for notification of how we are going to operate, we are going to try to finish 5 more, 10 more minutes of questioning. The two Texans, Mr. Barton will be next, then Mr. Green. I think Mr. Green and I have agreed to be the last guys out of here to hit the floor to vote. We would like to come back after the votes for those who still want to ask questions.

And, with that, I recognize Mr. Barton for 5 minutes.

Mr. BARTON. Thank you, Mr. Chairman.

I have listened to all the testimony and to the questions that have been asked so far and want to go back to the purpose of the hearing. "The Role of the States in Protecting the Environment," that is the title of this hearing.

As I read the Constitution, it starts with three words, "We, the people," which means the power comes from God to the people. The people delegate some of that power to the States; States delegate some of their power to the Federal Government. And then the Tenth Amendment says that all powers that are not explicitly enumerated in the Constitution are reserved for the States or the people, respectively.

As is pointed out by the witness from Arkansas, who represents all the States, as I understand her role, the States are doing most of the work in actual environmental protection on a day-to-day basis. They use some Federal law, and, of course, there are State laws to do it.

So the issue before the subcommittee and this panel is really, who is going to set the policy? Who is best able to set the policy? Is it the Federal Government, top-down, or is it the people in the States, bottom-up?

And I listened, and with the exception of the gentlelady from North Carolina, I didn't hear too much complaint about the States being able to set the policy.

Now, I want to ask the gentleman from Colorado, do you think the Federal Government is better able to set the policy in your State than you and the legislature and the people of Colorado?

Mr. LEPORE. No, sir, I don't think so. I think that we have had a successful oil and gas commission in the State for 60 years that understands the distinctions not only of Colorado versus other States but in our different oil- and gas-producing basins. We have coal-bed methane, we have Niobrara shale, we have a variety of different geologies. We have a 60-year history of rules that have evolved over time as our understanding and as technology have evolved. So I think the Oil and Gas Commission is perfectly capable of setting policy.

I think there is a role for the Federal Government in research and other things that are a little bit beyond our reach in terms of the ability to finance those kinds of projects. But I think the States are doing a fine job.

Mr. BARTON. As I understand the process in Colorado, these State regulations that have just been promulgated are the result of a process. There was a lot of stakeholder interaction, a lot of involvement with the people and the legislature and the industries, and it kind of evolved. And, finally, either there was a regulation issued by your agency or a law passed by the State of Colorado that you are implementing. Is that correct?

Mr. LEPORE. That is correct, sir. What we adopted are rules of the agency that the commission itself adopted pursuant to our statutory authority. The stakeholder process for the setback rules, in particular, was a year long. About 11 separate stakeholder meetings over a period of 7 months, and then we moved into more formal rulemaking.

We had representatives from industry, of course, from environmental groups, from groups like homebuilders, agricultural interests—very, very diverse. So everybody had an opportunity to be heard.

Mr. BARTON. So not everybody is totally happy, but everybody had input. And you have a set of regulations now that seems to be working and seems to be successful. Is that a fair statement?

Mr. LEPORE. I think that is a fair statement. I might add that I don't think anybody was totally happy. But, yes.

Mr. BARTON. Now, the gentleman next to you, Mr. Fitch, represents the Interstate Oil and Gas Compact Commission, which is a voluntary association of State regulators and State governments. Is that not correct?

Mr. FITCH. That is correct, sir.

Mr. BARTON. And you have provided technical information to any State who wishes on the various technical aspects of hydraulic fracturing. And in doing that, you have been able to use some research from various universities, like mine, Texas A&M, that could give States a technical basis on which to base their regulations. Is that not correct?

Mr. FITCH. That is correct. That is one of the great benefits of IOGCC, that ability to share information and coordinate between the States.

Mr. BARTON. Now, is anybody complaining that that process is flawed or broken?

Mr. FITCH. No, sir. It has been very effective.

Mr. BARTON. Mr. Chairman, I am going to yield back. But it would appear to me that the current law gives the States great flexibility, great opportunity. They can get research money and technical assistance from a number of sources, including the Federal EPA. But the basic policy decisions on these issues appear to me to be best made at the State. And the State seems to be using those authorities, if Colorado is any example, in a very fair and effective process.

And, with that, I yield back.

Mr. SHIMKUS. The gentleman yields back the time.

The chair recognizes the gentleman from Texas, Mr. Green, for 5 minutes, the former ranking member of this committee. Noted.

Mr. GREEN. When am I going to get my picture put up, Mr. Chairman?

Thank you, Mr. Chairman. I appreciate the panel and the questions.

We conveniently hear that uniform Federal standards are necessary whenever Federal legislators want to override State actions. However, isn't it accurate to describe most Federal environmental laws as creating a broad, overarching Federal framework, while delegating to the States the responsibility of creating specific regulations, regulations to reflect the realities of circumstances that differ in each State that may require different approaches?

And if you can't tell, I am from Texas also and served 20 years in the legislature. And, of course, we always have complaints about EPA, but we also know that our Texas Environmental Quality Commission and EPA work out the relationship that they have so that permits are issued, except now in carbon. But is that generally the State experience?

Mr. FITCH. I would say so. A lot of the States, including Michigan, had environmental regulations on the books before some of the major Federal legislation. So it is not like we have been lagging behind. But I think some of the Federal legislation did establish kind of a threshold or a standard that applies across the States, so it does encourage some consistency.

Mr. GREEN. But in every case I can think of, it is a partnership, though, between EPA and the local State regulator in actually issuing permits and enforcing it.

Mr. FITCH. Yes, it is.

Mr. GREEN. OK.

Mr. Fitch, much has been discussed regarding the States' role in regulating oil and gas, natural gas development, production, and the process of hydrofracking. In some cases, hydrofracking is taking place in States that aren't traditionally viewed oil- and gas-producing States.

And I will give you an example. We have fracked in Texas for, I guess, 30 years. Of course, the success now is because, you know, first Barnett Shale, Eagle Ford, and even in west Texas now reopening the Permian Basin. And, for example, Pennsylvania has actually done some things locally that Texas actually followed Pennsylvania's lead on, one in the release of the—at least a lot of the information that is in the fluid.

Is there a program available to States to review their State regulatory programs and assess what is currently on the books between the interstate compact?

Mr. FITCH. Yes. The IOGCC does perform that function. And the Groundwater Protection Council has a peer-review program for the Underground Injection Program also that—you know, other States come in and compare against standards to assure some consistency.

Mr. GREEN. Do you know—which is STRONGER? How many State reviews have there been done?

Mr. FITCH. By STRONGER? We have done about six or seven just on hydraulic fracturing. I think the States with probably about

90 percent—accounting for 90 percent of the production have undergone an overall State review.

Mr. GREEN. Is there a separate review available to States for hydraulic fracking, or fracturing?

Mr. FITCH. I am sorry?

Mr. GREEN. Is there a separate review available for States for hydraulic fracking?

Mr. FITCH. STRONGER, by the way, is the State Review of Oil and Natural Gas Environmental Regulations—they do have a module for hydraulic fracturing.

The IOGCC does—I mean, we have kind of an informal system, and they also have an inspector certification program that will help assure that State inspectors are qualified and capable.

Mr. GREEN. I have some information that says STRONGER has completed specific hydrofracking reviews for Arkansas, Colorado, Louisiana, Oklahoma, North Carolina, Pennsylvania, and Ohio. In each of these reviews, have they had a critical assessment? And is that available to other States who may also be experiencing expansion of hydrofracturing?

Mr. FITCH. Yes, there is a report made on each of those reviews, and it is available on the STRONGER Web site.

Mr. GREEN. OK.

Thank you, Mr. Chairman. I will give you back 49 seconds.

Mr. SHIMKUS. And I will take that 40 and make an announcement that we will recess and return approximately 10 minutes after the last vote is called, which should give you time to get a little boy's or girl's break, maybe a soda or a sandwich. But we will reconvene about 10 minutes after the vote.

[Recess.]

Mr. SHIMKUS. Let me call the hearing back to order. And there are a couple pieces of business I want to make sure I accomplish.

I ask unanimous consent that all Members be given 5 days for opening statements that will be submitted as part of the record.

Without objection, so ordered.

And, with that, thank you for coming back. Hopefully, you got a chance to take a break. I didn't get my soda or candy bar, so I am a little grouchy. But they are used to that in this committee, so I am in good shape.

So, with that, I would like to—seeing no other Members present, Mr. McKinley is recognized for 5 minutes for his round of questions.

Mr. MCKINLEY. Thank you, Mr. Chairman. I heard earlier it was going to be quite a few minutes before, but I will go with it. Thank you very much.

I have questions of Ms. Harrison, if I could, please, if you could get your mike on and close.

Ms. HARRISON. Yes, sir.

Mr. MCKINLEY. OK. I was one of the sponsors of the bill on the fly ash legislation, so I am just curious. Let's just start with that, if you would. Have you read both of the bills?

Ms. HARRISON. I have read some summaries of them.

Mr. MCKINLEY. OK. Could you summarize the difference between the two bills?

Ms. HARRISON. I am not sure—between the Senate and the House bills?

Mr. MCKINLEY. No, between the House bills that passed. The Senate has never taken one.

Ms. HARRISON. Oh, I am sorry. OK. No, sir, then I haven't read both of them. And I am not familiar enough to summarize the differences.

Mr. MCKINLEY. OK. Because you made quite a bit in your written presentation about your knowledge of it. But you are saying you have not even read the bill and you don't know the difference between the two.

Ms. HARRISON. I——

Mr. MCKINLEY. Thank you. That is it.

Do you acknowledge that the—does the EPA have the expertise to deal with fly ash?

Ms. HARRISON. Well, I think my position——

Mr. MCKINLEY. It is kind of a yes-or-no.

Ms. HARRISON. I think they are in a better position than we are——

Mr. MCKINLEY. OK.

Ms. HARRISON [continuing]. To deal with fly ash.

Mr. MCKINLEY. And that is fine.

Ms. HARRISON. And that was my point.

Mr. MCKINLEY. So if they have the expertise and they have made some determinations about fly ash over the last few years, I am just curious, do you disagree with their reports? You are familiar they have done two reports on fly ash; are you not?

Ms. HARRISON. Well, I am familiar that they have done the reports. I am not sure I am intimately familiar with the details of those reports.

Mr. MCKINLEY. Interesting. They have done two reports, and both times the EPA has said it is not a hazardous material. So your statements in your testimony are based on what fact?

Ms. HARRISON. Based on—actually, I——

Mr. MCKINLEY. Do you have the educational background, science background, to differ with them on this? If the EPA has said it is OK——

Ms. HARRISON. No, I have submitted with my testimony some pretty significant research that has taken place at Duke University. And that study that was released and attached to my testimony by——

Mr. MCKINLEY. No, my question was, how did you differ from the EPA's own determination? They have done it in 1993 and 2000. Both times they said, the EPA, that the fly ash is not a hazardous material, and it should be continued to be recycled. It is a way of taking care of the product.

So if you are differing from that, I am just curious, on what scientific basis are you saying the EPA is wrong?

Ms. HARRISON. As I mentioned—thank you for that question.

As I mentioned, we have had some scientific studies that have been undertaken in North Carolina by Duke University, Dr. Vengosh. I included it in my testimony, and it shows contamination from seepages from some of these coal ash ponds.

Mr. MCKINLEY. The material—I think one of the material differences is that the opponents of the legislation—and we have passed it four times out of the House—is that they did not—the people in the House did not want the EPA to have primacy, and they wanted to retain that control with the State legislatures, State governing groups.

Now, are you saying that North Carolina doesn't have the expertise to handle fly ash?

Ms. HARRISON. Yes, sir. That has been my experience with working with our agencies and working with the legislature and trying to get a better, safer regulatory regime for coal ash. I don't feel like we have good regulations in place.

Mr. MCKINLEY. Do you know that—do you—the way you have acknowledged that you haven't even read the bill and you don't know the differences. You know, in the bill, one of the major differences was that we listened to people like you and we put language into the bill to deal with the disposal of fly ash that heretofore is not in current law. And for you in North Carolina, it gave you the ability in North Carolina to call for liners under new impoundments.

So we are trying—and the EPA—and, furthermore, that if the EPA determines that you in North Carolina are not following those standards, they can seize the landfill and take over primacy themselves.

So by virtue of what you are saying, you were having a problem that you thought you—with the legislation. It actually was intended to help you in North Carolina and any other State that has some degree, or lack thereof, of how to dispose of fly ash.

So I am really troubled by your remarks and particularly your written testimony. And I appreciate what you are saying. I am—fortunately, we have run over time. But thank you. Because you have explained a little bit about why you have taken the position you have had. Thank you very much.

Ms. HARRISON. I appreciate that. I think a lot of my remarks were driven by the findings of the CRS report. And I think they found significant shortcomings with the bill. And I think I was basing my testimony on that, the CRS report.

Thank you.

Mr. MCKINLEY. OK. So, in other words, you are in opposition to what the Environmental Council of States, one of the more well-recognized groups around the country, that they were supporting; the Association of State and Territorial Solid Waste—so many people all came together, the stakeholders, to make this bill possible. And you are saying they were wrong. I find that curious.

Thank you very much. Sorry. I yield back my time.

Mr. SHIMKUS. The gentleman's time has expired.

Just for comity and appreciation for the committee, not everyone has a lot of scientific expert—I definitely don't. I understand legislators trying to be involved. And I am a big coal ash supporter. We appreciate your being here and your testimony.

I want to do a couple more pieces of business. I ask unanimous consent to include statements from seven environmental groups, dated February 15, 2013; a statement from Patrick Parenteau, P-a-r-e-n-t-e-a-u; and a statement from Susan Bodine for the record.

Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. SHIMKUS. We still have—Mr. Bilirakis, are you prepared to ask questions?

The chair recognizes the gentleman from Florida for 5 minutes.

Mr. BILIRAKIS. Thanks so much. Appreciate it.

Chairman Shimkus and Ranking Member Tonko, I am honored, of course, to have the opportunity to represent Florida's Ninth—12th Congressional District—it is 12 now—on the committee, and I look forward to working with you. Thank you forgiving me the opportunity to serve on this committee.

Ms. Marks, you have spoken about the delegation process and the importance of respect between the Federal and local agencies responsible for protecting the public. Unfortunately, this relationship does not always live up to our ideals. For example, the EPA issued an America nutrient criteria for Florida to avoid litigation with environmental groups and, in the process, circumvented the State's reasonable and scientifically based efforts to address its water quality. That rule was based on flawed science, had no consideration for the harm it would inflict on Florida jobs, particularly in agriculture, and was a threat to other States' rights to self-regulate.

Considering the EPA's recent agenda, what are some of the examples of specific steps that Congress can take to ensure that State and local governments are able to compete with Federal agencies on a level playing field when disputes over Federal regulations are called into question?

Thank you.

Ms. HARRISON. Thank you, Congressman.

I am not sure that I can tell you what type of specific statutes might be passed or anything to that effect.

I can tell you that we certainly are concerned that cooperation with the States be encouraged at every point, that there be full disclosure with the States. We would like to be in on the rulemaking process at an earlier time, and we would like to certainly be in on the guidance that is issued with these rules. There have been times, I think, where guidance has been issued that has not adequately taken into account the effects that it will have, particularly the resources it will drain from the States.

So we would like to work with EPA. And I don't know if a statute would be necessary in that regard——

Mr. BILIRAKIS. Well, any steps, exactly, not necessarily statutes.

Ms. MARKS. We would like to work with EPA and have EPA encouraged to work with us on getting us involved early in the adoption of rules and on the guidelines to implement those rules.

Mr. BILIRAKIS. Very good.

Anyone else on the panel wish to comment?

Well, thank you very much, Mr. Chairman. Appreciate it. I yield back the balance of my time.

Mr. SHIMKUS. The Gentleman yields back his time.

The chair recognizes the gentlelady from Colorado, Ms. DeGette, for 5 minutes.

Ms. DEGETTE. Thank you very much, Mr. Chairman.

For those of you who don't know, I have been working on a bill called the FRAC Act since 2006. And what this bill basically does is it says, just like every other industry or activity that puts substances into drinking water, the oil and gas industry should be subject to the requirements of the Safe Drinking Water Act.

Now, as you all know and we know, what the Safe Drinking Water Act does is it establishes baseline requirements for underground injection control, but then States may set stricter standards. And, also, the EPA works with States to make sure that they promulgate regulations that are unique and work for those States.

So, for example, if you have a State like my State of Colorado or Pennsylvania or North Carolina or California or New York or any of these other States that are doing hydraulic fracturing, the geologic issues are different in all of those States, the depth of the wells is different in all of those States.

So the Safe Drinking Water Act wouldn't put a cookie-cutter process into place. What it would simply do is say, you have to meet a minimum requirement for the chemicals that are being injected into that ground. And you have to have a readily accessible disclosure scheme.

And, frankly, a couple of years ago, the industry and I were this close to being able to come up with an agreed-upon reporting scheme that would not be overly onerous but would allow consumers to see what chemicals were going into their drinking water.

I am getting ready to reintroduce that bill again next month, and I want to ask a couple of questions around that.

First of all, Mr. Lepore, since you are my guy from Colorado, and I am so proud of the work that your agency has done, Colorado, you would say we are really in the vanguard of the States that have enacted rules around fracking and natural gas development, correct?

Mr. LEPORE. Yes, I would.

Ms. DEGETTE. And one reason is because, as you said, we have been doing natural gas and oil in Colorado for over 100 years, right?

Mr. LEPORE. Yes.

Ms. DEGETTE. Now, Representative Harrison, in your State, you said you only just started fracking, and you really don't have a regulatory scheme, right? Is that correct?

Ms. HARRISON. Actually, we haven't actually started fracking. We lifted the ban on fracking and are anticipating permitting in the next year or 2.

Ms. DEGETTE. So you have absolutely no regulatory history on hydraulic fracturing.

And this is particularly true with fracking, Mr. Chairman, because it is a technique that has been found to use in all types of formations, whereas, before, some of the traditional techniques were not economically feasible to use all around the country.

So, Mr. Lepore, I wanted to ask you, if we have widely ranging techniques and formations and State regulatory frameworks, I am going to assume that you and your association wouldn't disagree if there was a Federal disclosure rule that was sort of a baseline rule so long as the EPA worked with States and States could adapt that to their own needs, correct?

Mr. LEPORE. With the caveat that the devil is in the details.

Ms. DEGETTE. Well, obviously. But, I mean, the general concept, you don't disagree with that, right?

Mr. LEPORE. The general concept of disclosure I do not disagree with.

Ms. DEGETTE. OK.

And let me ask you another question. In your written testimony, you said that the Colorado Commission prides itself on oil and gas development tailored to the needs of specific basin, environments, and communities.

Do you think that further flexibility is needed for development on split estate lands?

Mr. LEPORE. Split mineral and surface estate lands?

Ms. DEGETTE. Yes.

Mr. LEPORE. I think that is why we have the rules that we have and why we have just gone through the setback——

Ms. DEGETTE. So would you say, yes, local consultation is necessary to do that?

Mr. LEPORE. With local governments?

Ms. DEGETTE. Yes.

Mr. LEPORE. I think engaging with local governments is very important.

Ms. DEGETTE. It is critical, right?

Mr. LEPORE. Yes.

Ms. DEGETTE. Thanks.

And one more thing, I wanted to ask you about this reporting under FracFocus. How many States are requiring disclosure of frack fluid components through FracFocus?

Mr. LEPORE. I am getting two different answers, but——

Ms. DEGETTE. Mr. Fitch, do you know the answer to that?

Mr. LEPORE [continuing]. I believe the answer is 10 or 13.

Ms. DEGETTE. OK.

Mr. LEPORE. Thirteen.

Ms. DEGETTE. And is it required disclosure through FracFocus, or is it voluntary disclosure?

Mr. LEPORE. Required by statute or rule, as I——

Ms. DEGETTE. In all of those States? Yes. OK. The audience member is nodding yes.

So that is about 10 or 12 States, correct?

Maybe, Mr. Fitch or Mr. Lepore, you can supplement your testimony and give me a list of those States. I am sure my staff knows, but I don't know off the top of my head.

One last thing I wanted to ask is, the EPA study on the fracking is coming out next year. And once that happens, then we are going to all sit down, and I hope that you will come and help us work this out to see what the appropriate regulatory framework will be. Because I think the States and the Federal Government really need to work together on this issue.

Thank you for your comity, Mr. Chairman.

Mr. SHIMKUS. The gentlelady yields back her time.

The chair now recognizes the ranking member of the full committee, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you very much, Mr. Chairman.

We have heard today from some of the witnesses that we can rely upon the States—or Members—we can rely on the States to protect the public health and environment, and, therefore, a reduced Federal role is appropriate. But the States' track records are not flawless.

For example, sea-level rise is an undisputed consequence of a warming climate. Many States are dealing with this challenge, but the response is not uniform. For example, the scientists on North Carolina's Coastal Resource Commission recently concluded that North Carolina could see a sea-level rise of more than 3 feet by the end of the century. This is critically important information for coastal development decisions, but the information wasn't consistent with the ideology of some in the General Assembly.

Representative Harrison, are you familiar with what happened in the General Assembly, and could you tell us about it?

Ms. HARRISON. Yes, sir, I am. It was rather a black mark in the history of our legislature, I think.

What happened was, under pressure from developers in the communities on the coast, legislation was introduced that would have banned the calculation of sea-level rise as a factor in climate change and acceleration from thermal expansion and melting glaciers. So rather than factoring in a trajectory of about a meter sea-level rise over the next century, the legislation would have in fact limited us to anticipate an 8-inch rise in sea-level rise.

We are particularly vulnerable in North Carolina because of our 4,000-plus miles of shoreline and the low-lying areas near the shoreline. So this is a real problem for folks who are trying to have a better adaptation strategy——

Mr. WAXMAN. The bill that was introduced would have precluded the commission from planning for anything other than 8 inches of sea-level rise. Is that right?

Ms. HARRISON. Yes, sir.

Mr. WAXMAN. And after enduring public ridicule, the legislature succeeded in blocking the Coastal Resources Commission from estimating rates of sea-level change until July 1, 2016. Is that right?

Ms. HARRISON. Yes, sir.

Mr. WAXMAN. Well, in your view, was this policy a policy that ensures North Carolina makes the best decision possible about its coastal development?

Ms. HARRISON. I think it is sort of reflective of the current attitude of the legislature, that they are not doing what is best for the State or its resources.

Mr. WAXMAN. Well, States play a critical role in environmental protection, but they don't always get it right. And in some cases, as in the North Carolina example, State legislatures have proposed or passed bills to tie the hands of the State regulators, whose job it is to protect the environment and public health.

Another example is South Dakota. And numerous other States have laws on the books, as well, that prohibit the State agencies from taking any actions that are more protective than rules adopted by the Federal Government. In Ohio, the State environmental agency is blocked from setting air quality standards that are more stringent than the Federal standards. And those are just a few examples.

State regulators may have the best interests of public health and environment at heart, but they can only do what their legislatures authorize them to do.

I assume that—do any of the witnesses disagree that an agency can't take action if their State legislatures enact a law that blocks them from doing so? Does anybody disagree with that? That is just the reality.

While some here may believe that State regulators will always be better than Federal regulators at protecting the local environment, we have to remember this important lesson: Polluters are fighting hard at the State level, as they do at the Federal level, to block or weaken meaningful safeguards. And that is why it makes sense to set a Federal floor of protection for environmental laws, so that all Americans are guaranteed a minimum baseline of protection. I wanted to bring out that point.

And thank you, Mr. Chairman. I will yield back the balance of my time.

Mr. SHIMKUS. The gentleman yields back his time.

Seeing no other Members present—Mr. Tonko, do you wish to be recognized?

Mr. TONKO. Yes, Mr. Chair, just briefly. And I appreciated the comments you offered on behalf of the subcommittee concerning the cross-examination of our witness, Representative Harrison.

But I am compelled to state that, you know, the representative was invited here to speak as a legislator on behalf of the National Caucus of Environmental Legislators. She cited a scientific review or a study done by others.

And I thought that the cross-examination just didn't respect this panel and its sacrifice, in whatever dimension, to be here today. Their role is to inform us and to share their opinions. And I found that being treated as a scientist, which—I don't know her resume, but she was here as a legislator. And, you know, to begin with, 2273 had passed the House, but 1391 wasn't even released from committee.

And, again, I just feel it is important for us to stay focused on the perspective that was being shared at the table by our witnesses, and we show due respect when we conduct ourselves that way. So I was very concerned about the cross-examination by the gentleman from West Virginia.

With that, I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

And I appreciate the comments. And I would just hope that, as we move forward, that the same concern expressed on this exchange will be the same expressed on the other side whence there are other interchanges that will occur, because we are a big, powerful committee here in Washington, we have divergent views, and we fight like cats and dogs. We can agree to disagree respectfully, and I think that is the point being made. And we will do our utmost to try to do that.

We do thank you. Great testimony. We appreciate you coming here. Thanks for staying through lunch so that everyone had a chance to come and ask their questions.

You may get a few questions for the record submitted by Members who were here or even were not here but are members of the

committee. If you would get those back to us as promptly as possible.

I think our rules say—do we give a set time?

We have no idea. So try to do it as soon as possible. We would appreciate it.

With that, I will adjourn the hearing.

[Whereupon, at 12:04 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

February 15, 2013
STATEMENT FOR THE RECORD
HOUSE ENERGY AND COMMERCE COMMITTEE
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

"The Role of States in Protecting the Environment Under Current Law"

Earthjustice, Clean Water Action, Sierra Club, Natural Resources Defense Council, Appalachian Voices, Environmental Integrity Project, and Citizens Coal Council appreciate the opportunity to submit this statement for the record. Together our organizations represent several million citizens in all 50 states. Our organizations work for strong health and environmental protections and have a long history of encouraging and assisting in the implementation of the Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), and the Clean Air Act (CAA), as well as other federal environmental statutes.

The U.S. Environmental Protection Agency (EPA) is the steward of national environmental protection. It is therefore essential that EPA establish minimum federal standards sufficient to ensure clean and healthy water and air under federal environmental statutes, maintain clear benchmarks for state performance, and implement effective enforcement to guarantee consistent nationwide compliance. The federal authority afforded EPA under the RCRA, CWA, CAA, and SDWA to ensure consistent and scientifically sound national regulations, as well as fair and effective enforcement of standards, is critical to the protection of all communities. While the States have an essential role in implementing delegated programs, EPA must serves as an effective backstop to ensure consistent enforcement and implementation under federal statutes.

Recent bills in the 112th Congress, including H.R. 2273 and H.R. 4043, attempted to constrain this essential function of the EPA. Among other constraints, these bills would reduce EPA's authority to perform oversight of state programs, reduce EPA's ability to ensure effective enforcement of environmental laws, and prevent EPA from setting national standards through rulemaking. For the following reasons, we urge this subcommittee to protect EPA's rulemaking and oversight role to ensure consistent and protective programs that protect the health and environment of all Americans:

- **Pollution does not obey state borders**: Because environmental pollution often migrates across state lines, pollution in one state may cause damage in another. National consistency of state programs ensures that all Americans live in states that meet minimum environmental standards.

- **Prevention of unfair economic advantage:** Federal standards level the playing field among regulated entities, preventing a "race to the bottom" and ensuring that regulated facilities in one state do not have an unfair economic advantage over facilities in other states. In addition, through consistent enforcement nationwide, law-abiding facilities are not placed at an economic disadvantage to those facilities that choose not to comply with the law.

- **Effective national enforcement.** EPA's authority to enforce consistent, minimum safeguards in states where enforcement is absent or inadequate is a necessary failsafe protection established by Congress in the RCRA, CWA, CAA and SDWA. By authorizing states to enforce portions of these acts, EPA does not forfeit its authority to continue to conduct its own inspections and take action against polluters, particularly when violations are widespread or related to a national priority. EPA can engage in independent enforcement activities in states and also take action against polluters when it determines a state either did not act or did not take strong enough action. Ultimately EPA's authority to withdraw state programs when states fail to take appropriate enforcement action ensures consistent national protection.

- **Nationwide programs that meet federal requirements.** According to federal federal regulations, EPA must provide adequate oversight so that it can determine when states fail to meet their federally-mandated enforcement and implementation commitments. Without effective monitoring of state programs under clear statutory standards, EPA cannot ensure national consistency.

- **Assurance that rules reflect the best science.** EPA retains a vital role under role under federal environmental statutes to ensure that its rules reflect the best science and thus effectively protect human health and the environment. Without authority to revisit rules in the face of changing technologies and advancing science, there is no assurance that the American public will be protected from new threats to health and the environment in the most efficient and effective manner.

There can be no national consistency of protective standards without a strong and uncompromised EPA. Nor can American communities and industries be ensured of consistent and effective enforcement of such standards without a strong EPA backstop. In the absence of minimum federal standards, environmental disasters have been mounting at both coal ash and natural gas hydrofracking sites. We urge all members to consider the essential role of EPA before abridging its ability to perform the critical functions that protect the health and environment of all Americans.

We appreciate the opportunity to submit this statement.

Respectfully,

Lynn Thorp, Clean Water Action
Debbie Sease, Sierra Club
Scott Slesinger, Natural Resources Defense Council
Lisa Evans, Earthjustice
Eric Schaeffer, Environmental Integrity Project
Jeffrey Stant, Citizens Coal Council
Tom Cormons, Appalachian Voices

Committee on Energy and Commerce

Subcommittee on Environment and the Economy

U.S House of Representatives

Oversight Hearing:

The Role of the States in Protecting the Environment under Current Law

February 15, 2013

Statement of Patrick Parenteau

Dear Chairman Shimkus and members of the Subcommittee.

I appreciate the opportunity to submit this brief statement for the record in the above captioned hearing. I am currently a professor of law and senior counsel to the Environmental and Natural Resources Law Clinic at Vermont Law School. I have been involved in drafting, litigating, administering, teaching, and writing about environmental law and policy for almost forty years. I have seen environmental law from virtually every perspective. I have represented environmental organizations seeking to enforce these laws as well as industries seeking to comply. As it relates to the topic of today's hearing my experience includes serving as Regional Counsel for Region I of the Environmental Protection Agency from 1984-87, and as Commissioner of the Vermont Department of Environmental Conservation from 1987-1990. In these roles I have had the opportunity to see exactly how the "cooperative federalism" model of many environmental laws actually work in practice. I would like to share a few perspectives that I hope will be of benefit to the subcommittee as it takes up important and difficult questions such as how to improve the management of coal combustion residue to better protect public health and the environment.

First, the basic model incorporated into all of the major pollution control statutes—air, water, waste—is that EPA sets the floor of protection for public health and the states are free to set more stringent standards. That model has worked successfully for over 40 years and has saved the lives and improved the health of countless Americans without impeding economic growth; in fact GDP has grown by over 200% over this period of environmental regulation. No matter where Americans live they can rest assured that the air they breathe, the water they drink and the land use is being protected. This was not always the case before the era of federal environmental laws. We do not want to go back to the pollution havens of the past. One only has to look at the stark images coming from Beijing, New Delhi, or Mexico City to see what can happen in the absence of strong national pollution control programs.

Second, there are many situations where the states cannot address the sources of pollution that originate beyond their borders. For example, the acid rain that was killing the lakes of the Adirondacks and damaging the forests here in Vermont was coming from coal-fired power plants in the Midwest. The problem was only addressed when Congress amended the Clean Air Act to set up a special market-based control program administered by EPA to reduce the emissions of sulfur dioxide coming from these distant plants. More recently in the Cross State Air Pollution Rule EPA was once again called upon to fashion a national control program to protect the health of residents in downwind states who were otherwise powerless to stop the pollution. Similar problems exist with water pollution. The dead zone in the Gulf of Mexico, which is causing tremendous economic harm to the states and communities that rely heavily on fishing and tourism, is the result of polluting discharges and runoff from point and nonpoint sources throughout the vast landscape of the Mississippi River watershed. No one state, or even a collection of states, can deal with a problem of this scope. Indeed, in the case of Chesapeake Bay, it was the states in the basin that turned to EPA for help in setting a TMDL (pollution budget) for nutrients to facilitate development of a market-based water quality trading program that the states are now in the process of implementing. A similar program has been established in Long Island Sound. In the Great Lakes EPA was called upon to set a standard for mercury that no one state had the authority to set.

Third, states often lack the capacity to deal with major problems even within their own borders. This was exactly the case with the discovery of Love Canal in the late '70s and the ensuing explosion of hazardous waste sites all across the country. One of the first sites to be listed on the National Priority List was the Pine Street Barge Canal in Burlington, Vermont. This was a technically challenging site to address; those responsible for the pollution had long since departed the scene; the current PRPs were reluctant to step forward and undertake a costly cleanup; and it was unclear what the best remedial option was. In short the state of Vermont did not have the wherewithal to tackle a problem like this. It took EPA and years of study, negotiation and experimentation to finally come up with a solution and a comprehensive settlement with affected parties. This story has been repeated at other hazardous waste sites in Vermont and in thousands of communities across the country. These sites simply would not have been cleaned up were it not for CERCLA and EPA. And of course the "polluter pays" concept imbedded in CERCLA's liability scheme, along with the prospective regulation of solid and hazardous wastes under RCRA, has led to significant improvement in reducing and properly handling hazardous materials.

Fourth, there is value in having EPA set uniform standards of performance that can be incorporated into permits; provided of course there is sufficient flexibility to account for unique circumstances and unexpected consequences. Most of the time, however, it is better for all concerned, including the public and the regulated entities, to have rules that are clear, specific

and relatively stable and predictable. By contrast a legal framework that leaves everything to the discretion of individual states is a recipe for failure. A perfect example is the management of hazardous wastes. The rule banning the disposal of liquid hazardous wastes in landfills has done a lot to protect underground sources of public drinking water and prevent future Superfund sites. It was a common sense rule but it took EPA to put it into effect. No state was willing to step forward and be the first to impose such a ban. Similarly, in the case of coal combustion residue, it would make sense to have consistent standards of siting, design and construction for waste impoundments. Even though site characteristics will vary and precise construction specifications will be need to accommodate local conditions, the basic safety standards should be the same as they are for many other industrial activities. The same can be said of financial responsibility and closure requirements. These are simply elements of responsible environmental management that should apply everywhere. Industry should welcome the clear rules and level playing field that allows for sound business planning.

Fifth, there are times when having EPA backup is important even where a state has a good environmental regulatory program in place. The truth is that states do not always have the expertise, the resources, the authority or the political will to take actions required to protect public health and the environment. The cleanup of Boston Harbor is a case in point. When I arrived at EPA Region I in the summer of 1984 the harbor was a stinking mess. The treatment works were antiquated, the sludge was being disposed of on the outgoing tide and it was unsafe to swim or even walk the beaches at certain times of the year. And this was happening in a relatively wealthy and sophisticated metropolitan area in a state with a progressive government that prided itself on its environmental record. But it took a lawsuit by EPA to overcome the inertia, opposition and squabbling among the jurisdictions that were contributing to the problem but reluctant to shoulder the responsibility for the solutions. Today Boston Harbor is regarded as the "Great American Jewel." Without EPA this remarkable turnaround would not have been possible. Even in a State like Vermont, with its well-deserved reputation for environmental quality, EPA has had to step in and investigate pollution from dairy farms that are causing water quality problems in Lake Champlain. The point is that no state -- no matter how well intentioned --can deal with every single environmental problem that needs attention. Having a strong and vigilant EPA at the ready is an important safety net for public health and environmental protection.

Finally I have read the Congressional Research Service report on H.R. 2273 and S. 3512 titled "Analysis of Proposals to Create a Coal Combustion Residuals Permit Program under RCRA." I understand this report has created some controversy within the subcommittee, and I have no wish to take sides in the political debate. What I can say from my experience as both a federal and state regulator is that the report raises important questions with the proposed legislation that need to be addressed if problems are to be avoided down the line. Specifically, the

regulatory framework proposed in section 4011 of both bills would in fact establish a novel and problematic structure for state-federal management of CCR. A detailed analysis of the CRS report and the subject bills is beyond the scope of this statement. But I do find myself in agreement with the report's overall conclusion that "the proposed amendments to RCRA include no provisions that would ensure state adoption and implementation of a CCR permit program that would result in the adoption and implementation of minimum federal standards necessary to protect human health and the environment from risks associated with CCR disposal." I would also note that EPA has raised many of the same questions and problems with the bills as the CRS report. I am particularly concerned by EPA's statement that HR 2273 "does not grant the EPA the authority to meaningfully evaluate the substance or adequacy of state CCR programs at the time of the initial certification." Unless corrected, this approach is guaranteed to create unnecessary conflict and confusion. Unless EPA and the states are on the same page when designing regulatory programs there is bound to be trouble. The regulated industries will be caught in the middle. The public will be confused and lose confidence in the regulators. Much time will be wasted trying to sort out disagreements and repair relationships. I have seen this happen and it is not good government. The program should be designed right the first time; the rules must be well crafted to accomplish the purpose of protecting public health; and everyone must be held accountable.

In closing I urge the committee to carefully consider the problems with the proposed bills identified in the CRS report and EPA comments. We have 40 years of experience with a system in which EPA and the states have collaborated in the important task of safeguarding the public health from proven environmental dangers such as the irresponsible disposal of CCR. In my view the only way this problem will be resolved is through a strong partnership between EPA and the states in the development and implementation of a national program grounded on science, fully transparent and with clear, enforceable standards of conduct.

Thank you for considering these observations.

S. 3512 "Coal Ash Recycling and Oversight Act of 2012" and the Resource Conservation and Recovery Act

Susan Parker Bodine
Barnes & Thornburg[1]

Many have described the Resource Conservation and Recovery Act (RCRA) as "an inch wide and a mile deep." That description reflects the fact that under RCRA, Congress directed EPA to promulgate and implement detailed and extensive regulations prescribing specific requirements for the management of materials that are hazardous wastes. These regulations are authorized under Subtitle C of RCRA. However, if a waste material is not a hazardous waste it is essentially unregulated at the federal level. This division of labor reflects that fact that impacts from solid waste management are local and that Congress has determined that the management of non-hazardous waste does not rise to the level of federal interest.

The exception to this general rule is the regulation of municipal solid waste landfills authorized under Subtitle D of RCRA. Under Subtitle D, EPA is authorized to establish guidelines to assist in the development and implementation of state solid waste management plans. If approved by EPA, these plans make the state eligible for federal assistance. Under Subtitle D, EPA also is required to promulgate regulations that establish criteria for sanitary landfills. Landfills that do not meet the EPA-established criteria are classified as open dumps. Under section 4005 of RCRA, open dumping of solid waste is prohibited and open dumps must either be upgraded to meet the sanitary landfill criteria or be closed. The prohibition on open dumping is enforceable by citizens under 7002 of RCRA, and, in states that do not have an adequate permit program, is directly enforceable by EPA under section 3008 of RCRA. In addition, EPA has authority under section 7003 to take action against any person who is contributing to an imminent and substantial endangerment caused by the management of solid or hazardous waste, authority under 106 of the Comprehensive Environmental Response, Liability and Compensation Act (CERCLA) to order responsible parties to respond to releases of hazardous substances into the environment, and authority under section 104 of CERCLA to take direct action to respond to such a release. This statutory framework reflects the view of Congress that states should be the lead regulators of non-hazardous waste, while allowing EPA to take action if a state program is inadequate or if there is a specific environmental risk that must be addressed.

In May 2000, EPA made a Regulatory Determination under section 3001(b)(3)(C) that regulation of fossil fuel combustion wastes is not warranted under Subtitle C of RCRA. As a result, the disposal of such wastes is left to that states, subject to the prohibition on open dumping under Subtitle D and the EPA authorities discussed above.

---

[1] Ms. Bodine was the Assistant Administrator for EPA's Office of Solid Waste and Emergency Response from January 2006 through January 2009. In this capacity, Ms. Bodine was the head of the EPA office responsible for implementing the Resource Conservation and Recovery Act. The opinions in this paper are her own.

S. 3512, the Coal Ash Recycling and Oversight Act of 2012, is consistent with the structure of RCRA. S. 3512 would amend Subtitle D of RCRA to establish criteria for the design, ground water monitoring, corrective action, closure, and post-closure care for structures (including surface impoundments) that receive coal combustion residuals. The Act also would establish specific requirements for state permit programs to implement the new criteria. If a state decides not to implement such a program, or develops a program that does not meet the statutory criteria and fails to correct the deficiencies, then the Act gives EPA the authority to implement the program in lieu of the state, and can enforce that program under section 3008 of RCRA. It would be a violation of the 10th Amendment to the Constitution for Congress to purport to compel states to adopt a federal regulatory scheme. Authorizing EPA to implement a program in the case of state inaction is a way to constitutionally ensure that a regulatory program is carried out in a state, and this is the mechanism adopted by S. 3512.

S. 3512 goes further than Subtitle D of RCRA and also gives EPA express authority to implement the coal ash structure permitting program for lands in a state over which the state has limited jurisdiction, such as Indian Country. The Act also goes further than Subtitle D in that it allows EPA to provide enforcement assistance to states, upon request.

S. 3512 does not require EPA to issue implementing regulations. However, it is not necessary for EPA to promulgate federal regulations to operate in lieu of state regulations should EPA implement a coal combustion residuals permitting program in a state. The requirements of the program include reference to existing federal regulations for sanitary landfills at 40 C.F.R. Part 258. In addition, EPA has demonstrated its ability to implement RCRA without promulgating implementing regulations. For example, EPA never promulgated regulations governing the application of the Hazardous and Solid Waste Amendments of 1984 to existing hazardous waste surface impoundments under section 3005(j) of RCRA. Notwithstanding the lack of federal regulations to implement this section of RCRA, some states chose to adopt regulations and seek authorization to implement it, but most did not. So, this section of RCRA was implemented by EPA with no regulations. Further, while EPA has promulgated regulatory procedures to approve state Subtitle D landfill permitting programs (40 C.F.R. Part 239) EPA has never promulgated federal regulations that would apply in the case of disapproval of a state program. "In states with no approved permitting program, Subtitle D landfill owners and operators must follow the specific, self-implementing provisions of the federal requirements." EPA530-F-98-024 (Oct. 1998). This same regulatory structure is adopted by S. 3512.

Fossil fuel combustion wastes are not hazardous wastes so S. 3512 appropriately leaves the regulation of these wastes to states, while establishing federal criteria for the disposal of these wastes, to be implemented through state law and enforced through state authorities, while authorizing a federal program in the case of state inaction. This is not the same statutory and regulatory structure that Congress created under RCRA Subtitle C for hazardous wastes, but that is appropriate given the fact that coal combustion residuals are a high volume, low toxicity waste stream for which the comprehensive "cradle-to-grave" regulatory regime would be inappropriate. In fact, attempting to regulate coal combustion residuals under Subtitle C of RCRA likely would overwhelm the resources of both states and EPA. Any criticism of S. 3512 as "inconsistent with

RCRA" for choosing a Subtitle D model rather than a Subtitle C model is inappropriate and demonstrates a failure to understand the choices Congress has made to distinguish between hazardous and non-hazardous wastes.

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

DAN WYANT
DIRECTOR

May 13, 2013

The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515-6115

Dear Representative Shimkus:

Thank you for the opportunity to testify at the hearing before the Subcommittee on Environment and the Economy held on February 15, 2013, entitled "The Role of the States in Protecting the Environment."

Attached are my responses to the additional questions for the record submitted subsequent to the hearing.

I appreciate the opportunity to respond to these questions. If you have any more questions please contact met at 517-241-1548; fitchh@michigan.gov; or Department of Environmental Quality, Office of Oil, Gas, and Minerals, P.O. Box 30256, Lansing, Michigan 48909-7756.

Sincerely,

Harold R. Fitch
Assistant Supervisor of Wells
and Chief
Office of Oil, Gas, and Minerals
Michigan Department of Environmental Quality
517-241-1548

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

The Role of the State in Protecting the Environment Under Current Law
Additional Questions with Responses

The Honorable John Shimkus

1. **You mention 12,000 hydraulic fracturing wells in Michigan since 1952 without an environmental contamination related to the practice. Do other states have the same type of record?**

   Response: Yes. While there have been incidents of environmental contamination resulting from handling or disposal of fracture fluids at the surface and from other phases of oil and gas exploration and production, there are no known instances of groundwater contamination resulting directly from hydraulic fracturing.

2. **What gives you confidence that the information reported on FracFocus is accurate and complete?**

   Response: Some states require submittal of information on FracFocus; other states require submittal directly to the state oil and gas agency, and that information can be cross-checked against FracFocus. In either case, states have penalties for submittal of false information. In Michigan it is a felony. In addition, the effects of adverse publicity are severe if falsification of records is discovered.

3. **At the hearing you mentioned the Underground Injection Control Peer Review program.**

   a. **Is this a new initiative?**

      Response: No. The peer Review program has been in existence for more than 24 years.

   b. **How does it help states evaluate their injection well programs?**

      Response: It helps a state to compare its program against consensus standards that have been designed to assess the adequacy of the state's UIC program to the environment and public health.

   c. **Who is involved in this process?**

      Response: It is sponsored by the Ground Water Protection Council (GWPC). The GWPC recruits reviewers from member state agencies that oversee Underground Injection.

d. What is the significance of this program compared other audit programs?

Response: The reviewers are UIC program staff from other states who have first-hand, extensive background and experience in underground injection and are familiar with the legal and technical challenges involved.

4. You mention in your testimony that you are a board member of the Groundwater Protection Council.

a. Is it typical that the IOGCC official and the Ground Water Protection Council member are different people or are they the same person wearing two different hats?

Response: There are many state agency personnel who are members of both organizations.

b. What are the respective roles of the two sets of officials?

Response: Members of the Interstate Oil and Gas Compact Commission (IOGCC) and the GWPC have the common objective of preventing damage to the environment, natural resources, and public health and safety. The IOGCC is focused on fostering the efficient development and conservation of our domestic oil and gas resources while preventing threats of associated damage whereas the GWPC is focused on broad issues of ground water use and protection, including potential impacts from underground injection and oil and gas operations in general.

5. Your testimony mentions the rapid changes occurring in the technologies used to hydraulically fracture wells.

a. How do States keep up with technology as it changes on the ground?

Response: State oil and gas agencies stay abreast of changes in technology through in-house research, communication with state, regional, and national industry and public interest groups, and through seminars and training provided by interstate organizations. That information is disseminated internally through training sessions and information exchange. I must note that my testimony reflects that hydraulic fracturing is not a new technology. The changes in recent years have been in the increased scale of the use of hydraulic fracturing, particularly in conjunction with horizontal drilling (which has been used since the 1980s).

State oil and gas agencies generally have decades of experience with both technologies.

b. Do you have training Centers to educate your regulators on new developments?

Response: The IOGCC and GWPC, as well as other interstate organizations, provide training and information exchange sessions for state regulators. State oil and gas regulators also organize state-based training sessions as needed, utilizing qualified legal and technical experts.

6. How would you characterize EPA's technical experience as opposed to the expertise of State regulators regarding hydraulic fracturing regulation?

Response: The U.S. Environmental Protection Agency (USEPA) has some staff with technical background and experience in oil and gas operations within the organization. However, the level of experience and expertise is inconsistent across the agency; it is often not focused on the practical operational level; it is quite variable at the Region level; and it is typically not specific to the geology, legal structure, and special concerns of individual states.

7. In your testimony you state "a one-size-fits all federal approach would not be as effective or efficient" in addressing a state's individual geological topographical or societal sensitivities.

a. Can you please give examples where something is unique to the state of Michigan and the adaptability of state level regulations was able to address this?

Response: A good example is the common case where there are several Michigan statutory programs that apply to one operation—e.g., where a proposed oil and gas well involves statutory provisions that apply to wetlands, fish and wildlife, surface impacts, property rights, air quality, etc. The state application review can incorporate consideration of all of these program concerns in one comprehensive process.

b. What are some specific concerns of how a federal "one-size-fits all" federal approach would be detrimental to Michigan?

Response: Federal agency personnel are not always familiar with local geology or environmentally-sensitive features. I can cite several incidents I have been personally involved in: In one case, the federal agency permitted a disposal well that could have posed a threat to fresh water

because agency staff were not aware of unique local geologic conditions; our state agency, which has dual jurisdiction, denied the permit. In another case, the federal agency has delayed issuance of a disposal well permit for almost three years largely based in an objection by a local citizen that is irrelevant in light of our knowledge of the geology and subsurface conditions.

8. **You all emphasize the importance of a risk-based approach to regulation and compliance enforcement. How important is local expertise to making the risk-based approach effective? In prioritizing which permittees need more attention, do you use metrics, personal knowledge of the neighborhood, both, or something else?**

Response: Local expertise is essential in assessing risk. My agency prioritizes our inspection and enforcement activities based on the type and history of operation (e.g., commercial vs. non-commercial, wastewater sources, etc.), environmental setting (i.e., sensitive water, wildlife, and aquatic features), history of violations of any environmental laws or regulations (i.e., under our state air, water, wetland programs, etc.), and personal communications with local citizens and oilfield employees.

9. **Do you know of any state that has hydraulic fracturing activities occurring in their state with zero regulations regarding these activities?**

Response: No.

10. **Please explain the types of communications that occur between State agencies or departments within your State or among the IOGCC members regarding the many facets of natural gas development and production.**

Response: At the state level, staff communicate extensively—often on a daily basis—between program areas (such as oil and gas, water quality, air quality, and waste management) and between departments (such as environmental quality, conservation, state land management, public utility, and treasury departments) to coordinate actions and share information. State oil and gas agencies communicate with their counterparts in other states through the IOGCC and other inter-state organizations to share information and regulatory approaches, promote best practices, and provide a common voice for state interests.

The Honorable Robert E. Latta

1. **According to the American Petroleum Institute (API), nine million U.S. jobs are tied to the oil and natural gas industry, and in my state of Ohio, over 230,000 jobs are provided or supported by the industry. Furthermore, the industry contributes $227 billion to the Ohio economy and those who work in the industry (non-gas station employees) earn an average salary of $68,000 a year, nearly $30,000 more than the average Ohio salary. Advances in technology like hydraulic fracturing are making this possible. Can you discuss some of the positive economic impacts that the industry is having on your area?**

   Response: My agency does not track employment numbers, so I do not have direct knowledge of that aspect of the industry. We do, however, track production and revenues. Michigan produces about 22 percent of the natural gas we use in the state, and most of that gas production is from wells that required hydraulic fracturing to be productive. Michigan oil and gas production in 2012 was valued at more than $1 billion, and provided $48.5 million in state severance taxes and additional other revenues from payroll taxes, sales taxes, and personal property taxes.

   a. **As a follow up question, I mentioned how advances in technology are contributing to the success of hydraulic fracturing. What role do you see further advances in technology having on the continued success of this industry?**

      Response: Oil and gas technology is continually evolving, and technological advances will undoubtedly have a strong influence on future production trends. It is difficult to predict where the next advances may occur; however, it is important for our regulatory structures to maintain the flexibility and adaptability to accommodate new technology. State regulatory programs generally have greater capability for that than do federal programs simply because the state programs are more focused and changes are much less cumbersome.

2. **Over the past few years, Ohio has put in place some of the nation's toughest regulatory measures to ensure hydraulic fracturing and oil and gas exploration technologies are conducted in an environmentally safe and transparent manner. In fact, I think we're talking about 50 regulations. These measures ensure collaboration among stakeholders, proper well construction, chemical disclosure requirements, protection of groundwater, and sound environmental quality testing methods. These high standards of environmental protections allow for a thriving oil and**

natural gas sector in Ohio. In turn, it creates over 230,000 jobs for Ohioans and greater U.S. energy independence and less reliance on foreign oil. Can you discuss some measures your state has taken to ensure hydraulic fracturing is done in an environmentally safe manner?

Response: Michigan has had strict and comprehensive oil and gas regulations dating back many decades that address concerns with hydraulic fracturing. These regulations cover well construction to assure containment of fluids and gasses within the wellbore and protect fresh water supplies; spill containment and cleanup requirements; and containment and disposal of waste fluids from oil and gas operations. Due to recent concern over high-volume hydraulic fracturing operations, the Michigan Department of Environmental Quality (MDEQ) implemented a new permitting instruction in May, 2011, that covers evaluation of impacts of large water withdrawals for hydraulic fracturing, protection of nearby water wells, reporting of fluid volumes and pressures, and disclosure of chemical additives.

The Honorable Paul Tonko

1. **The impact of one or two hydraulic fracturing wells in an area may be minimal, but the pace of expansion of gas production has been rapid in some states and the cumulative impacts of this expansion results in additional challenges for local communities, regions and states. For example, there are estimates that each well requires additional heavy equipment traffic on roads leading to and from the well site to transport the construction, operation, and maintenance of the well of as many as 1500 trips while the well is being constructed and is producing gas.**

   The water and chemicals required for hydrofracking and the produced water resulting from gas production, the resources required for treating, storing, or disposing of these liquids safely are considerable when the needs of each well are multiplied by the number of wells in a given area. A similar argument can be made regarding fugitive emissions from each production well.

   a. **How are these cumulative impacts of oil and gas production handled within your state's regulatory program?**

      Response: Regulation of truck traffic and routes is generally under the purview of local governmental authorities, who can make adjustments according to local needs. The MDEQ requires evaluation of the effects of water withdrawals at each site; as new sites are proposed, past withdrawals are factored in to the model to address cumulative effects.

Treatment and storage of spent fracturing fluids and produced water is done at each individual site and is temporary. Michigan has excess capacity for disposal of waste fluids with existing deep disposal wells and volumes of spent hydraulic fracturing fluids are not expected to increase significantly. Michigan limits fugitive emissions to levels that will not be an air quality concern either at an individual site or when aggregated over a field. Michigan also establishes a standard drilling unit—a tract of land of specified size on which one well can be located. One purpose of that is to limit the density of development so as to reduce site-specific as well as cumulative impacts.

b. **What provisions does your state have (e.g. taxes, fees) to ensure that the costs of impacts to public resources and for additional infrastructure to support oil and gas production are covered by the oil and gas industry?**

Response: Michigan imposes an oil and gas severance tax on the gross market value of oil and gas produced. The tax rate is 4 percent on marginal oil, 6.6 percent on regular oil, and 5 percent on natural gas. The revenue goes into the state general fund for multiple purposes, and some of it is passed on to local jurisdictions through revenue sharing. The state also levies a surveillance fee to support the MDEQ's monitoring and enforcement program. The fee is adjusted each year to match the appropriation for the program, and is capped at 1 percent of the gross value of production.

2. **There are also cumulative impacts on the economics of gas production as we are already seeing. States and resource owners certainly receive lucrative gross receipts from the produced gas, directly, and economic benefits from the increased indirect economic activity associated with the increase in workers and demand for all inputs required for production activities. However, as gas production continues to expand nationally, the market's ability to absorb all the gas produced is being saturated and the price per unit has dropped. Certainly individual gas production companies realize this and may decide to cap existing wells or to forgo drilling a play they have leased to allow supply to be more in line with demand.**

a. **Does your state consider the market price of gas in your permitting process - permitting fewer wells when the price is lower and increasing them when the price improves to ensure the state maximizes its return from hosting the expanding gas production?**

Response: No. Determination of the levels of drilling and production are viewed as the proper realm of the free market. However, the state will not issue a permit if there is no reasonable assurance that the prospective product could be marketed— e.g., if there is no potential for a pipeline connection for a gas well.

The Honorable Henry A. Waxman

Drilling mud and other wastes from the exploration and production of oil and gas have been exempt from the requirements of the Resource Conservation and Recovery Act since July 1988, but now include recovered hydraulic fracturing fluid with potentially dangerous constituents. Democratic members of the Energy and Commerce Committee released a report in April, 2011 finding that the top hydraulic fracturing companies had injected fluid containing 29 chemicals that are known or possible human carcinogens, as well as other contaminants regulated under the Clean Air Act-and the Safe' Drinking Water Act

Despite this, according to the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration, shippers and transporters of these materials do not have to comply with any Federal hazardous materials safety regulations. And, as mentioned above, such mud and other wastes are also exempt from requirements under the Resource Conservation and Recovery Act. This means that these hazardous materials are not required to be labeled as hazardous, contained and transported in accordance with Federal hazardous materials regulations or included in shipping manifests to track the material, prevent diversion, and ensure proper handling by emergency response personnel in accidents and incidents.

The risks of this approach are illustrated by a recent event in Youngstown, Ohio, where authorities were alerted to illegal dumping of drilling fluid into the Mahoning River on January 31, 2013, by an anonymous tip. According to Federal investigators, the dumping went on for several months before the tip was received. Even after the dumping was discovered, state officials failed to inform the public and drinking water facilities drawing water downstream of the dumping site. Public health and environmental impacts are still being assessed.

1. **What, if any, requirements does your Department impose through regulation to ensure that drilling mud and associated wastes from the exploration and production of oil and gas are properly disposed?**

   Response: The MDEQ requires drilling mud to be contained in steel tanks or lined pits at drilling sites. The mud must be dewatered and the solid and dissolved salt in the mud must be removed. The residual solids may be either

encapsulated on site if they meet criteria for chemical composition or disposed of at a licensed landfill. Hydraulic fracturing waste fluids and produced water must be contained in tanks and transported for disposal in licensed deep disposal wells, although limited volumes of produced water may be spread on roads for dust control if the water meets chemical criteria. Liquid wastes must be transported by licensed liquid industrial waste haulers, and the wastes must be manifested so the source and disposal site are documented. Michigan has strict penalties for illegal transport or disposal of wastes.

2. **What, if any, authority or ability does your Department have to address the interstate movement of drilling mud and other associated wastes and to track such wastes entering or leaving the state?**

   Response: Michigan cannot restrict the interstate transport of exploration and production wastes because such transportation is deemed interstate commerce and thus under the jurisdiction of the federal government. However, Michigan does have authority to regulate the characteristics of such wastes and the means of subsequent containment and disposal.

3. **How many investigators are employed by your Department to identify and investigate illegal dumping of these wastes within the state, and ameliorate the potential risks posed by any such dumping?**

   Response: The MDEQ has 23 field inspectors who are responsible for monitoring virtually all aspects of oil and gas exploration and production, including disposal of wastes. The MDEQ also has a significant number of employees in other program areas that are responsible for monitoring and investigating liquid waste transport and spill cleanup (I am unable to identify the exact number of such employees because they are employed by other divisions or offices of the MDEQ and typically have other responsibilities in addition to liquid waste monitoring).

The Honorable Henry A. Waxman and The Honorable Diana DeGette

1. **Does the IOGCC provide technical assistance to reporting companies who have questions about how to complete the FracFocus form or what to disclose on the form?**

   Response: Technical assistance to companies is provided by the Ground Water Protection Council (GWPC) and the GWPC contractor. With respect to what to disclose on the form most of these questions are referred to the individual states because each state may have a different disclosure requirement and it would not be proper for FracFocus to provide regulatory guidance to users regarding individual state laws and regulations.

2. **Does the IOGCC offer or provide trainings to reporting companies on how to submit data to FracFocus, besides the webinar available on the FracFocus website? If so, please explain.**

   Response: The GWPC has held numerous webinars and live training events for companies, states, and state oil and gas associations. These sessions have been designed to provide users with the training needed to access and utilize the FracFocus system to submit disclosures. To date the GWPC has held at least seven live training events in Texas, Colorado, and Oklahoma. Additional events are scheduled for Pennsylvania.

3. **Does the IOGCC consider itself to be a "public agency" and therefore subject to the disclosure requirements of the federal Freedom of Information Act (FOIA)? Does the IOGCC consider itself subject to the disclosure requirements of the Oklahoma Open Records Act? Please explain why or why not.**

   Response: This question calls for a legal interpretation that I am not qualified to answer.

4. **Colorado's regulations state that if the chemical disclosure registry (FracFocus) (a) "does not allow the Commission staff and the public to search and sort the registry for Colorado information by geographic area, ingredient, chemical abstract service number, time period, and operator" and (b) there is "no reasonable assurance that the registry will allow for such searches by a date certain acceptable to the Commission," then operators disclosing to FracFocus also must submit the disclosure forms to the Commission for appropriate disclosure.**

   a. **What is FracFocus doing to ensure that FracFocus meets the "search and sort" requirements of Colorado's regulations?**

      Response: FracFocus has already met the search and sort requirements of the Colorado regulations. The current search forms available on FracFocus allow for the searches provided for in the Colorado regulations.

   b. **Has IOGCC or FracFocus staff met with the Colorado Oil and Gas Commission to discuss this "search and sort" requirement? Please explain.**

      Response: The GWPC has met with representatives of the COGCC and discussed the search and sort requirements. Based on these discussions

a date certain for the availability of these elements was defined and has been met.

5. **A number of states direct companies to disclose directly to FracFocus or provide companies with the option of disclosing to FracFocus.**

   a. **For those states that require companies to disclose directly to FracFocus, such as North Dakota and Utah, does FracFocus provide the state agencies with the chemical disclosure forms once received? If no, please explain.**

      Response: The FracFocus system makes the disclosure forms available to everyone, including state agencies.

   b. **For those states that provide companies with the option of disclosing to FracFocus, such as Montana, does FracFocus provide the state agencies with the chemical disclosure forms once received? If no, please explain.**

      Response: The FracFocus system makes the disclosure forms available to everyone, including state agencies.

   c. **Does FracFocus notify the relevant state agency when a company has submitted a disclosure form for a well?**

      Response: The system provides periodic reports of disclosures reported to FracFocus to the states. This includes all disclosures reported but is not done on a well by well basis at the request of the states.

   d. **Does FracFocus tailor its disclosure form template for each state? If no, please explain why. If yes, please describe how FracFocus tailors the form.**

      Response: The FracFocus template is designed to be flexible enough to meet the needs of all states. There is no need to tailor the form differently for each state as it can capture a wide range of information based on individual state requirements.

   e. **Some states require operators to disclose to FracFocus all chemical components in a fracturing fluid, not just chemicals subject to 29 CFR 1910. 1200(i) and Appendix D. How has FracFocus modified its template disclosure form to facilitate operator compliance with**

requirements to disclose chemicals that do not appear on Material Safety Data Sheets?

Response: The FracFocus template has always been capable of capturing MSDS and Non-MSDS chemicals. However, in the new xml schema of FracFocus 2.0 these chemicals are divided in the data entry form to make it easier for the data entry operator to split them. They are also split on the final disclosure pdf.

f. **Some states require a well operator or service company to report the type of base fluid used in a fracturing job if it does not use water. In Texas, for example, the regulations state that an operator has to disclose "the total volume of water used in the hydraulic fracturing treatment(s) of the well or the type and total volume of the base fluid used in the hydraulic fracturing treatment(s), if something other than water." How has FracFocus modified its template disclosure form to facilitate operator compliance with requirements to disclose the type and volume of any non-water base fluid used?**

Response: The FracFocus 2.0 System (now in use) includes fields for non-water base material types and volumes.

g. **If a state requires an operator to disclose an aspect of the fracturing fluid or process that is not on the FracFocus disclosure form, such as the length of a fracture, how does the operator include that required information on the disclosure form?**

Response: FracFocus is a chemical disclosure system. Aspects of hydraulic fracturing such as fracture length, zones fractured, depths of fracturing, pressures used, etc. that are required to be reported to the state must still be reported on each state's well completion forms. FracFocus was never intended to capture "all" aspects of a hydraulic fracturing job.

6. **Does the FracFocus disclosure form allow an operator to enter Chemical Abstract Service (CAS) numbers that do not exist or are inaccurate?**

Response: Yes. While the system will warn the user that a CAS number does not appear to be in the standard format, it does not prevent the user from entering an inaccurate or non- existent CAS number. NOTE: Operators cannot change the CAS number reported to them by their service-company or chemical provider. To do otherwise might result in the reporting of an incorrect chemical, and could expose the company to legal ramifications. Therefore, if an erroneous

number is reported to the operator by the service company or chemical provider, the operator is obligated to report it in the exact manner it is reported to them without alteration.

7. **What is IOGCC or FracFocus doing to improve the (a) accuracy and (b) completeness of the data it receives from operators?**

   Response: The current FracFocus 2.0 system utilizes a number of data validation algorithms to evaluate the entries made in fields and to notify the user of errors and warnings for inaccurate or incomplete information. These include such items as dates, coordinate locations, volumes, state and county auto-fills from API field, and other checks.

8. **What does IOGCC or FracFocus do to substantiate an operator's claim that a chemical component constitutes a trade secret or confidential business information?**

   Response: Because each state has different laws concerning what is acceptable as a trade secret or confidential business information, and such laws are subject to change or modification, it would not be technically feasible for FracFocus to evaluate the validity of such claims. Further it would not be appropriate for FracFocus to make a judgment call as to what is and is not confidential under individual state laws. This authority rests with the state, not with FracFocus. Consequently, FracFocus simply reports the claim and leaves the determination of whether or not a claim of confidentiality is appropriate or valid to the regulatory authority.

9. **The FracFocus "terms of use" states the following (see http://fracfocus.org/terms-of-use): "You are only permitted to use the content as expressly authorized by us or the specific content provider. Except for a single copy made for personal use only, you may not copy, reproduce, modify, republish, upload, post, transmit, or distribute any documents or information from this site in any form or by any means without prior written permission from us or the specific content provider, and you are solely responsible for obtaining permission before reusing any copyrighted material that is available on this site. Any unauthorized use of the materials appearing on this site may violate copyright, trademark, and other applicable laws and could result in criminal or civil penalties."**

   a. **If EPA downloaded and analyzed chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that EPA would be violating the "terms of use"?**

Response: With respect to the contents of the "informational" section of the site and the data provided on a strictly voluntary basis the answer is technically yes. However, with respect to the data provided for those states that require or allow the use of FracFocus as the means of regulatory reporting, all data is considered public data and for this information the answer would be no. Regardless, it is the policy of FracFocus to allow for downloads of all disclosures, whether voluntary or required. The only restriction we place on such downloads is that they must not be conducted by automated programs (commonly referred to as bots) because these programs can cause system resource issues which could affect access to the system by other users. (Note: To this effect we have facilitated the download of disclosure data for the USEPA).

b. **If a state agency downloaded and analyzed chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that the state agency would be violating the "terms of use"?**

Response: The response to this question is the same as that provided for item a. above with the exception to a state accessing the disclosures from that state; that would not be a technical violation of the "terms of use" regardless of whether or not the state used the FracFocus system for its regulatory reporting.

c. **If a non-profit organization downloaded and analyzed 'chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that the non-profit organization would be violating the "terms of use"?**

Response: The response to this question is the same as that provided for item a. above.

DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper, Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

May 1, 2013

Dear Honorable John Shimkus:

My responses to follow-up questions from testimony I gave before the Subcommittee on Environment and the Economy at the February 15, 2013 hearing entitled "The Role of the States in Protecting the Environment Under Current Law" are attached. I apologize for the delay in providing these responses. I sincerely appreciate the opportunity to testify before the Committee on behalf of both the Groundwater Protection Council and the Colorado Oil and Gas Conservation Commission. Some of my responses reflect the dual nature of my representation before the Subcommittee.

Sincerely,

Matthew Lepore
Director

DEPARTMENT OF NATURAL RESOURCES: Mike King, Executive Director
COGCC COMMISSION: Richard Alward – John Benton – Thomas L. Compton – DeAnn Craig – Tommy Holton – W. Perry Pearce – Andrew Spielman – Mike King – Chris Urbina
COGCC STAFF: Matt Lepore, Director – Margaret Ash, Field Inspection Manager – Jim Milne, Environmental Manager – Stuart Ellsworth, Engineering Manager

The Honorable John Shimkus

1. **You all emphasize the importance of a risk-based approach to regulation and compliance enforcement. How important is local expertise to making the risk-based approach effective? In prioritizing which permittees need more attention, do you use metrics, personal knowledge of the neighborhood, both, or something else?**

Answer: The Colorado Oil and Gas Conservation Commission's ("COGC") risk-based approach includes assigning field inspectors to specific regions of the state. Inspectors live and work in their assigned regional areas and become more familiar with unique characteristics of the region to which they are assigned, including the geologic characteristics, waste management requirements, and the oil and gas operators working in the region. We also use a computer-based risk management tool that prioritizes inspections for certain operations, such as cementing the casing, and plugging and abandoning operations, or on site-specific characteristics, such as locations that have had recent violations or that have not been inspected recently. Location-specific data is available to inspectors in the field via laptop computers synchronized with our database. We believe basin-specific, localized knowledge coupled with a database driven risk-based approach greatly enhance the overall effectiveness and efficiency of our field inspection program.

2. **Do you know of any state that has hydraulic fracturing activities occurring in their state with zero regulations regarding those activities?**

Answer: While many states have hydraulic fracturing occurring without "direct" regulatory language identifying the practice, all producing states have regulations designed to protect groundwater during such a process. State well

construction requirements are designed to prevent contamination during all phases of the well development process, including hydraulic fracturing. The fact that many states do not have a section of their rules title "Hydraulic fracturing operations" does not mean they do not regulate the practice through other rules or requirements. Colorado, for example, has extensive well construction regulations, which require steel casing and cement to be completed below the deepest drinking water aquifer to protect the aquifer. Colorado also has a fracture fluid disclosure regulation. In addition, Colorado has many regulations related to spill prevention and reporting, as well as exploration and production waste management requirements, that are intended to minimize and mitigate surface releases of hydraulic fracturing and other fluids.

3. **Keeping up with the changing technology of hydraulic fracturing seems important. How can an individual state agency ensure that its staff expertise is current?**

Answer: The COGCC staff regularly conducts technological training for its engineering, inspection, and environmental departments. Industry service providers, oil and gas operators, industry and environmental consulting firms, continuing education programs at local universities, and other state and federal regulatory agencies have provided training to COGCC in the past. Our engineering department coordinates most of our training. We also conduct cross-departmental training internally.

4. Your testimony talks about a state information exchange.

a. Could you please elaborate on what this is and why you think it is an important effort by the states?

Answer: The State Oil and Gas Regulatory Exchange (SOGRE) will bring state policy and technical staff together on a routine and coordinated schedule to share the way they do business, review internal operations, and open up opportunities for extrapolating effective practices from one state to another. The SOGRE creates a dynamic forum where states can reach out and communicate with one another in an ongoing effort to keep current with rapidly changing technology, as well as to share the very best and innovative regulatory procedures from state to state.

The SOGRE will focus first on field operations. This critical area is where the states know best how to conduct oversight of exploration and production activities. It is in the field where state regulators interact daily with the public and the operating companies. The program's initial goals are identifying opportunities for new operating procedures, improving communication with the public and improving efficiency and effectiveness in regulatory oversight.

Field Inspectors Education and Certification Program

We have teamed with highly respected university educators and will develop technical training opportunities for oil and gas inspectors and others associated with oilfield operations. The goal of this program is to provide a formal certification process for experienced field inspectors who desire an in-depth understanding of

new and/or emerging technical practices, as well as for persons new to the field who need in-depth basic training.

FracFocus 2.0

Many states have revised, or are in the process of revising, regulations in response to changing technology and public concerns. Subsequently, twelve states have led in adopting chemical disclosure requirements, using FracFocus, that require companies to disclose chemicals used in the hydraulic fracturing process. A new, more searchable version of FracFocus, designed with the public in mind, will be fully functional June 1, 2013 and will contain information on over 45,000 individual fracturing jobs.

Underground Injection Wells (UIC): Peer Reviews

These UIC disposal well Peer Reviews will be conducted jointly by the states and USEPA, in the respective program offices. They will help states and the USEPA continuously improve their programs to protect the environment through the UIC program. UIC wells can safely dispose of a variety of fluids, including produced water which can include water returned from the hydraulic fracturing of wells. Conducting peer-to-peer reviews of this critical environmental protection program will help ensure an extra level of environmental oversight for the public.

Science and Technology Transfer

This effort will focus on the emerging technology from pure and applied research projects being done through the US Department of Energy, National Labs, Universities, and other institutions. Opportunities will be provided for researchers

to communicate with states on how the application of their work might improve environmental protection and regulatory oversight.

b. Is this a new initiative?

Answer: Information sharing among states is not new, but the current State Oil and Gas Regulatory Exchange (SOGRE) is a revitalized effort to formalize the information exchange.

c. How does it help states evaluate their injection well programs?

Answer: See above.

d. Who is involved in the process?

Answer: See above.

e. What is the significance of this program compared to other audit programs?

Answer: Audit programs tend to be prescriptive and frequently do not address new technologies and developing trends. Oil and gas drilling and development are constantly evolving, and new processes and procedures are deployed continuously. An information exchange like SOGRE can be flexible and adaptive, to help regulators keep up with emerging technologies and related regulatory challenges.

f. Is this similar to the new Underground Injection Control Peer Review Program?

Answer: The UIC Peer Review Program is one part of the SOGRE.

5. **Question. Some are concerned about first responders being able to know what chemicals fracturing workers have been exposed to in case of an emergency.**

   a. **Does FracFocus address this concern?**

Answer: To the extent this question specifically asks about chemicals "fracturing workers have been exposed to in case of an emergency" FracFocus may not address the concern due to the lag in time between conducting a fracturing job and reporting the fracture fluid chemicals to FracFocus. First responders would have access to Material Safety Data Sheets ("MSDS") for chemicals on-site as required under federal Occupational Safety and Health Administration regulations. FracFocus was not intended or designed to replace MSDS requirements.

   b. **Do some states provide a way for first responders to get information that includes confidential business information?**

Answer: In Colorado under COGCC Rules the specific identity and amount of any fracturing chemicals used, including those claimed to be trade-secrets or confidential business information, must be disclosed immediately in a medical emergency upon verbal request by a health professional, which includes emergency medical technicians, if the information is necessary for emergency treatment.

6. **Question: How do you make sure a site in your state is geologically suitable for hydraulic fracturing?**

Answer: Oil and gas exploration, development and production have been taking place in Colorado for more than 100 years, in many different and diverse basins across the state. Hydraulic fracturing has been taking place for at least 50

years in Colorado. Between the COGCC and the Colorado Geological Survey, we have vast repositories of information about the state's geology. For example, the COGCC has well log data showing the lithology of the bore holes, for thousands of wells. In addition, we have a well-developed understanding of the location and depths of major aquifers in the state. In most parts of the state, target formations for oil and gas operations are separated from drinking water aquifers by several thousand feet. Finally, our engineering staff reviews each proposed oil and gas location and permit to drill with respect to known particular geologic characteristics of the region to determine whether any special conditions should be imposed on drilling or fracturing operations at the location.

7. **Question: Is it clear that hydraulic fracturing occurs in diverse areas, with diverse geography and geology? Do you believe a federal, one size fits all standard is craft-able or useful?**

Answer: Colorado has several diverse oil and gas producing basins, including coal bed methane, conventional reservoirs, and unconventional shale formations. The geography and geology varies dramatically in of these basins. We do not believe one-size-fits-all federal standard governing hydraulic fracturing is craft-able or necessary.

8. **Question: What type of data quality assurance does FracFocus employee? How can the public be assured of the accuracy, completeness, and timeliness of the information on the FracFocus website?**

Answer: COGCC has monitored the timeliness of reporting, and failures to report, since shortly after chemical disclosures became required under our Rules. FracFocus supplies a monthly report that identifies the well, the stimulation date,

and the date the required report was submitted. COGCC uses this information to check reporting compliance. The upgrade to FracFocus Version 2 will enhance quality control features such as spelling, chemical name and CAS number alignment, and calculation of the total volume of fluids and chemicals reported.

The Honorable Robert E. Latta

1. **Can you discuss some of the positive economic impacts that the industry is having on your area?**

Answer: In 2010, the oil and gas industry in Colorado directly employed over 40,000 people and supported over 107,000 jobs in the state. The industry provided $6.5 billion in total labor income and $31 billion in economic output annually. The total assessed values for taxable Oil and Gas property in 2010 was $6.25 billion or 5.63% of the state total. At $72,373, average wages in 2010 were 51% higher for workers in the oil and gas industry compared to all industries in the state. Additionally, in 2008 while the state has been gripped by recession, the industry was one of a few that experienced upward employment cost pressures, with average wages increasing over 2009.

a. **What role do you see further advances in technology having on the continued success of this industry?**

Answer: Technological improvements hold the promise to continue minimizing or eliminating environmental impacts associated with hydraulic fracturing, which will lead to greater public acceptance and removal of certain barriers to operations. Recent advances in development of more environmentally friendly fracture fluids is one example. A cottage industry is emerging around

reclaiming and reusing flowback fluid and produced water, which means lower demands for fresh water and, again, greater public acceptance of the process. Advances in vapor recovery and reduce air emissions are on the horizon. Continued technological advances in drilling technology likely will lead to greater success with longer wellbore lateral lengths in some shale formations, resulting in lower surface impacts. All of these advances will contribute to the continued success of the industry.

2. **Can you discuss some measures your state has taken to ensure hydraulic fracturing is done in an environmentally safe manner?**

Answer: In December 2011 Colorado adopted what was then considered the nation's most comprehensive and progressive hydraulic fracture fluid chemical disclosure rule. Colorado's disclosure rule set the standard for the rest of the country, and has since been emulated by multiple states and the Federal Bureau of Land Management. In 2013, Colorado adopted new rules governing groundwater monitoring around new oil and gas wells, and became the first state in the nation to require post-drilling water samples to be taken near newly completed wells. In addition, Colorado adopted a series of new rules governing best management practices for oil and gas operations, information to be provided to nearby residents and local governments prior to conducting drilling operations, and required minimum distances between oil and gas locations and residences and other occupied buildings. Like Ohio, Colorado is proud of its regulatory regime, which we believe to be one of the most progressive, yet balanced, in the nation.

The Honorable Paul Tonko

1.a. How are these cumulative impacts of oil and gas production handled within your state's regulatory program?

Answer: Colorado has experienced solid, but not exponential, growth in oil and gas drilling in recent years. Depressed natural gas prices have resulting in a decrease in drilling activity in Colorado's gas producing basins.

The majority of recent drilling and associated hydraulic fracturing activity is taking place in the Wattenberg Field in north-central Colorado. This Field has been a prolific producer for more than 30 years. With respect to regulating potential cumulative impacts of increased drilling and stimulation, COGCC regulates environmental impacts including wildlife habitat (1200-series rules), well site reclamation (1000-series rules) and stormwater management requirements. All of these Rules mitigate potential cumulative effects of oil and gas operations.

In addition, the COGCC recently provided funding to study air emissions associated with drilling and completion in the Wattenberg field. The study will examine emissions and dispersion of air contaminants from specific drilling and completion activities. In addition, the Colorado Department of Public Health and Environment has begun a rule making process intended to strengthen emission requirements for oil and gas operations in the state. In the current legislative session, the COGCC is supporting a bill that would facilitate recovery of gas vapors from condensate tanks and allow the recovered gas to be sold. Other proposed legislation supported by COGCC would expedite issuance of required air permits if the operator agrees to enhance emission controls.

1.b. What provisions does your state have (e.g. taxes, fees) to ensure that the costs of impacts to public resources and for additional infrastructure to support oil and gas production are covered by the oil and gas industry?

Answer: In Colorado, oil and gas producers may local property taxes, which county governments can use to build, repair or maintain roads and other infrastructure. Operators also pay a severance tax, a portion of which is returned to local governments.

2.a. Does your state consider the market price of gas in your permitting process – permitting fewer wells when the price is lower and increasing them when the price improves to ensure the state maximizes its return from hosting the expanding gas production?

Answer: The market price for gas is not a consideration in Colorado's permitting process.

The Honorable Henry A. Waxman

1. **What, if any, requirements does your Department impose through regulations to ensure that drilling mud and associated wastes from the exploration and production of oil and gas are properly disposed?**

Answer: The COGCC has an entire series of regulations to address Exploration and Production Waste Management, including treatment, storage and disposal requirements, as well as spill reporting and remediation requirements. The preface to this series of regulations states:

The rules and regulations of this series establish the permitting, construction, operating and closure requirements for pits, methods of E&P waste management, procedures for spill/release response and reporting, and sampling and analysis for remediation activities. These regulations are in 2-CCR 404-1, 900 series.

2. **What, if any, authority or ability does your Deparment have to address the interstate movement of drilling mud and other associated wastes and to track such wastes entering or leaving the state?**

Answer: COGCC Rule 907.b., Waste Transportation, addresses interstate transport of exploration and production waste as follows:

> **907.b. Waste transportation.**
>
> (1) E&P waste, when transported off-site within Colorado for treatment or disposal, shall be transported to facilities authorized by the Director or waste disposal facilities approved to receive E&P waste by the Colorado Department of Public Health and Environment. **When transported to facilities outside of Colorado for treatment or disposal, E&P waste shall be transported to facilities authorized and permitted by the appropriate regulatory agency in the receiving state.** (emphasis supplied).
>
> (2) **Waste generator requirements.** Generators of E&P waste that is transported off-site shall maintain, for not less than five (5) years, copies of each invoice, bill, or ticket and such other records as necessary to document the following requirements A through F:
> A. The date of the transport;
> B. The identity of the waste generator;
> C. The identity of the waste transporter;
> D. The location of the waste pickup site;
> E. The type and volume of waste; and
> F. The name and location of the treatment or disposal site.
> Such records shall be signed by the transporter, made available for inspection by the Director during normal business hours, and copies thereof shall be furnished to the Director upon request.

3. **How many investigators are employed by your Department to identify and investigate illegal dumping of these wastes within the state, and ameliorate the potential risks posed by any such dumping?**

Answer: COGCC currently has a primary field operations staff that includes both field inspectors and environmental protection specialist who inspect oil and gas locations, and respond to spills and releases of exploration and production wastes. There are 17 inspectors and 12 environmental protection specialists. The General

Assembly has proposed increasing the COGCC staff by 19 full-time employees this fiscal year. A majority of those new FTE would be inspectors and environmental protection specialists.

The Honorable Henry A. Waxman and The Honorable Diana DeGette

1. **Question: Does the IOGCC provide technical assistance to reporting companies who have questions about how to complete the FracFocus form or what to disclose on the form?**

Answer: Technical assistance to companies is provided by the Ground Water Protection Council (GWPC) and the GWPC contractor. With respect to what to disclose on the form most of these questions are referred to the individual states because each state may have a different disclosure requirement and it would not be proper for FracFocus to provide regulatory guidance to users regarding individual state laws and regulations.

2. **Question: Does the IOGCC offer or provide trainings to reporting companies on how to submit date to FracFocus, besides the webinar available on the FracFocus website: If so, please explain.**

Answer: The GWPC has held numerous webinars and live training events for companies, states, and state oil and gas associations. These sessions have been designed to provide users with the training needed to access, and utilize the FracFocus system to submit disclosures. To date the GWPC has held at least seven live training events in Texas, Colorado, and Oklahoma. Additional events are scheduled for Pennsylvania.

3. **Question: Does the GWPC consider itself to be a "public agency" and therefore subject to the disclosure requirements of the federal Freedom of Information Act (FOIA)? Does the GWPC consider itself subject to the disclosure requirements of the Oklahome Open Records Act? Please explain why or why not.**

Answer: The GWPC is a private corporation and does not consider itself to be subject to the disclosure requirements of FOIA or similar state open records laws. However, GWPC does endeavor to provide non-privileged information to the public in response to a request for information.

4. **Question: Colorado's regulations state that if the chemical disclosure registry (FracFocus) (a) does not allow the Commission staff and the public to search and sort the registry for Colorado information by geographic area ingredient, chemical abstract service number, time period, and operator" and (b) there is "no reasonable assurance that the registry will allow for such searches by a date certain acceptable to the Commission," then operators disclosing to FracFocus also must submit the disclosure forms to the Commission for appropriate disclosure.**

a. **What is FracFocus doing to ensure that FracFocus meets the "search and sort" requirements of Colorado's regulations?**

   a. Answer: FracFocus has already met the search and sort requirements of the Colorado regulations. The current search forms available on FracFocus allow for the searches provided for in the Colorado regulations.

b. **Has IOGCC or FracFocus staff met with the Colorado Oil and Gas Commission to discuss this "search and sort" requirement? Please explain.**

   b. Answer: The GWPC has met with representatives of the COGCC and discussed the search and sort requirements. Based on these discussions a date certain for the availability of these elements was defined and has been met.

5. **Questions: A number of states direct companies to disclose directly to FracFocus or provide companies with the option of disclosing to FracFocus.**

   a. **For those states that require companies to disclose directly to FracFocus, such as North Dakota and Utah, does FracFocus provide the state agencies with the chemical disclosure forms once received? If no, please explain.**

   a. Answer: The FracFocus system makes the disclosure forms available to everyone, including state agencies.

   b. **For those state that provide companies with the option of disclosing to FracFocus, such as Montana, does FracFocus provide the state agencies with the chemical disclosure forms once received? If no, please explain.**

   b. Answer: The FracFocus system makes the disclosure forms available to everyone, including state agencies.

   c. **Does FracFocus notify the relevant state agency when a company has submitted a disclosure form for a well?**

   c. Answer: The system provides periodic reports of disclosures reported to FracFocus to the states. This includes all disclosures reported but is not done on a well by well basis at the request of the states.

   d. **Does FracFocus tailor its disclosure form template for each state? If no, please explain why. If yes, please describe how FracFocus tailors the form?**

   d. Answer: The FracFocus template is designed to be flexible enough to meet the needs of all states. There is no need to tailor the form differently for each state as it can capture a wide range of information based on individual state requirements.

e. **Some states require operators to disclose to FracFocus all chemical components in a fracturing fluid, not just chemicals subject to 29 CFR 1910.1200(i) and Appendix D. How has FracFocus modified its template disclosure form to facilitate operator compliance with requirements to disclose chemicals that do not appear on Material Safety Data Sheets?**

e. Answer: The FracFocus template has always been capable of capturing MSDS and Non-MSDS chemicals. However, in the new xml schema of FracFocus 2.0 these chemicals are divided in the data entry form to make it easier for the data entry operator to split them. They are also split on the final disclosure pdf.

f. **Some states require a well operator or service company to report the type of base fluid used in a fracturing job if it does not use water. In Texas, for example, the regulations state than an operator has to disclose "the total volume of water used in the hydraulic fracturing treatment(s) of the well or the type and total volume of the base fluid used in the hydraulic fracturing treatment(s), if something other than water." How has FracFocus modified its template disclosure form to facilitate operator compliance with requirements to disclose the type and volume of any non-water based fluid used?**

f. Answer: The FracFocus 2. System (now in use) includes fields for non-water base material types and volumes.

g. **If a state requires an operator to disclose an aspect of the fracturing fluid or process that is not on the FracFocus disclosure form, such as the length of the fracture, how does the operator include that required information on the disclosure form?**

g. Answer: FracFocus is a chemical disclosure system. Aspects of hydraulic fracturing such as fracture length, zones fractured, depths of fracturing, pressures used etc., that are required to be reported to the state must still be reported on each

state's well completion forms. FracFocus was never intended to capture "all" aspects of a hydraulic fracturing job.

6. **Question: Does the FracFocus disclosure form allow an operator to enter Chemical Abstract Service (CAS) numbers that do not exist or are inaccurate?**

Answer, Yes. While the system will warn the user that a CAS number does not appear to be in the standard format, it does not prevent the user from entering an inaccurate or non- existent CAS number. NOTE: Operators cannot change the CAS number reported to them by their service-company or chemical provider. To do otherwise might result in the reporting of an incorrect chemical, and could expose the company to legal ramifications. Therefore, if an erroneous number is reported to the operator by the service company or chemical provider, the operator is obligated to report it in the exact manner it is reported to them without alteration.

7. **Question: What is IOGCC or FracFocus doing to improve the (accuracy) and (b) completeness of the data it receives from operators?**

Answer: The current FracFocus 2.0 system utilizes a number of data validation algorithms to evaluate the entries made in fields and to notify the user of errors and warnings for inaccurate or incomplete information. These include such items as dates; coordinate locations, volumes, state and county auto-fills from API field and other checks.

8. **Question: What does IOGCC or FracFocus do to substantiate an operator's claim that a chemical component constitutes a trade secret or confidential business information?**

Answer: Because each state has different laws concerning what is acceptable as a trade secret or confidential business information, and such laws are subject to change or modification, it would not be technically feasible for FracFocus to evaluate the validity of such claims. Further it would not be appropriate for FracFocus to make a judgment call as to what is and is not confidential under individual state laws. This authority rests with the state, not with FracFocus. Consequently, FracFocus simply reports the claim and leaves the determination of whether or not a claim of confidentiality is appropriate or valid to the regulatory authority.

9. **Question: The FracFocus "terms of use" states the following (see http://fracfoucs.org/terms-of-use): "You are only permitted to use the content as expressly authorized by us or the specific content provider. Except for a single copy made for personal use only, you may not copy, reproduce, modify, republish, upload, post, transmit, or distribute any documents or information from this site in any form or by any means without prior written permission from us or the specific content provider, and you are solely responsible for obtaining permission before reusing any copyrighted material that is available on this site. Any unauthorized use of the materials appearing on this site may violate copyright, trademark, and other applicable laws and could result in criminal or civil penalties."**

   a. **If EPA downloaded and analyzed chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that EPA would be violating the "terms of use"?**

a. Answer: With respect to the contents of the "informational" section of the site and the data provided on a strictly voluntary basis the answer is technically

yes. However, with respect to the data provided for those states that require or allow the use of FracFocus as the means of regulatory reporting, all data is considered public data and for this information the answer would be no. Regardless, it is the policy of FracFocus to allow for downloads of all disclosures, whether voluntary or required. The only restriction we place on such downloads is that they must not be conducted by automated programs (Commonly referred to as bots) because these programs can cause system resource issues which could affect access to the system by other users. (NOTE: To this effect we have facilitated the download of disclosure data for the USEPA).

b. If a state agency downloaded and analyzed chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that the state agency would be violating the "terms of use"?

b. Answer: The response to this question is the same as that provided for item a. above with the exception to a state accessing the disclosures from that state; which would not be a technical violation of the "terms of use" regardless of whether or not the state used the FracFocus system for its regulatory reporting.

c. If a non-profit organization downloaded and analyzed chemical disclosure data posted on FracFocus, without obtaining permission from GWPC, IOGCC, or FracFocus, is it your position that the non-profit organization would be violating the "terms of use"

c. Answer: The response to this question is the same as that provided for item a. above.

Questions for and Answers from Sarah Pillsbury
New Hampshire Drinking Water Administrator &
President of the Association of State Drinking Water Administrators

Pursuant to February 15, 2013 Hearing
of the House Subcommittee on Environment & the Economy

The Honorable John Shimkus

1. *You devote part of your testimony to talking about the importance of State drinking water program officials living and working in the communities served by the programs they administer and how it's personal for them. Could you please elaborate for me, perhaps using an example of your own, as to why you consider this a plus?*

   The reason that it's advantageous for state drinking water program officials to live and work in the communities served by their drinking water programs is that they are acutely aware of the range of issues confronting their programs and are thus able to tailor their programs to meet these challenges. They are very familiar, for instance, with the numbers and types of water systems, the capabilities of those systems, and the prevailing political and economic climate in which those water systems operate. New Hampshire has predominately small (i.e., serving less than 500 people) water systems that require our one-on-one assistance in order to shore up their technical, managerial, and financial capacity. States are also knowledgeable about any special challenges associated with various parts of the state. For instance, in New Hampshire, there is a considerable amount of naturally occurring radon in sources of drinking water in some parts of the state. Radon is not the subject of a national regulation, but must be addressed at the state level to ensure adequate protection for those affected communities.

2. *How much of the work that your member agencies do is strictly part of Federal legal requirements under the Safe Drinking Water Act? How would you contrast that with the work your own state ask you to do outside of the Federal obligations? What types of activities are your members engaged in outside of these Federal efforts?*

   As the question rightly implies, states undertake a wide array of activities that are above and beyond the Federal minimums. They perform these tasks to ensure that a comprehensive state drinking water program, designed to fully protect the health of the citizens of the state, is in place. These include activities such as hands on technical assistance and training of water systems; source water protection; and outreach to customers. As a rough estimate, I might suggest that 60-70% of a state's workload is driven by Federal requirements and the remaining 30-40% are state-driven activities. However, the number and type of "extra" activities each state takes on varies generally – and, indeed, it may vary from year to year; depending upon initiatives underway in any given year at both

the Federal and state levels (e.g., whether or not a new Federal rule has recently been promulgated).

3. *Your testimony talks about other partnerships for training and technical assistance. Could you please discuss these. What are you trying to obtain from them and how do they help your members with their mission?*

State and regional affiliates of organizations such as the National Rural Water Association (NRWA), the Rural Community Assistance Partnership (RCAP), the American Water Works Association (AWWA), and the network of EPA-created Technical Assistance Centers & Environmental Finance Centers are all key partners in providing technical assistance and training for water systems – especially, small water systems. These organizations extend the reach and breadth of state drinking water programs. They perform tasks that are beyond the capability and expertise of state drinking water programs or which state drinking water program personnel may not have the time or resources to perform. In partnering with these organizations, states seek to match the technical assistance and training needs of water systems with the most capable provider of that service. Activities could include tasks such as training town councils to ensure that they understand the value of their water system and the needs for their full support of the system; training on conducing energy audits at water treatment systems; training on drinking water system resiliency and preparedness; and training on operating a treatment facility to remove a particular contaminant (or contaminant group). It is important to note that, while these partnerships are important to the success of state drinking water programs, their effectiveness varies depending on the willingness of each partner to focus on shared priorities and communicate results

4. *You testify that state drinking water programs are challenged by contaminated source waters and "emerging contaminants." Could you please elaborate on this point and states themselves are doing to tackle this problem?*

Both ground and surface water sources of drinking water across the country can be and often are contaminated with a host of contaminants from municipal and industrial activities. Although other statutes (e.g., CWA, TSCA, RCRA, CERCLA) impose some controls over these activities, contamination of sources of drinking water may still occur. Some of the contaminants are fairly readily identified and removed. Others (e.g., perchlorate, MTBE, perfluorinated compounds, pharmaceutical and personal care products) are hard to detect and even more challenging to remove. Those contaminants for which relatively little is known are sometimes referred to as "emerging." The pace of Federal drinking water regulatory development does not always keep pace with the proliferation of these contaminants. Moreover, not all contaminants require a national regulation – they may only be of consequence in a particular state or part of the country. States must still take actions that afford adequate protection to the citizens of their states – irrespective of what may be happening at the Federal level. The first and typically most effective way to deal with such contaminants is prevention – i.e., keeping them out of or minimizing their presence in

sources of drinking water. Thus, states actively work with a variety of partners in order to leverage other tools and programs to this end. Many states also have their own state regulations for contaminants for which Federal regulations have not yet been established. All of the above-described activities are resource-demanding and are why I argued, in my testimony, for more appropriate levels of Federal support for state drinking water programs.

5. *Your testimony briefly mentions hydraulic fracturing. What type of coordination exists between ASDWA and GWPC members to promote better understanding of produced waters?*

   State drinking water programs are typically in a different part of a state government from the agency that has purview over oil and gas extraction activities in a state. Thus, it is incumbent on state drinking water administrators and their staffs to fully coordinate with their state Oil & Gas and Underground Injection Control program counterparts (i.e., GWPC and IOGCC members). State drinking water programs would typically provide – to their sister agencies -- information about ground and surface water intakes of public water systems as well as available source water monitoring data (including trend data). State drinking water program staff, in turn, would typically receive -- from their colleagues involved in permitting oil and gas extraction activities -- information about types and location of extraction wells as well as characteristics and quantities of produced waters. We believe communication and coordination among state agencies is critical, as the question implies.

The Honorable Henry A. Waxman

Congressman Waxman has asked a number of questions regarding my Bureau's approach to dealing with coal ash and drilling muds (and associated wastes). The regulatory activities in question are not under the purview of my program, nor was this subject part of my testimony. I am thus not able to respond to the questions posed. We believe these questions are more appropriately directed to the witnesses from the Environmental Council of the States (ECOS) and the Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

The Honorable Janice D. Schakowski

1. *Would requiring pre- and post-drilling testing of groundwater help you identify and address potential sources of drinking water contamination in New Hampshire?*

   Yes, we support the approach of performing pre- and post- drilling testing.

2. *Could pre- and post-drilling testing help administrators in all states where fracking occurs identify and address potential sources of drinking water contamination?*

4

Yes; but while pre/post testing can be a useful tool, it should be left to individual state agencies to decide, on an "as needed" basis, whether to require such testing. Issues that need to be resolved, at a state level, in terms of specifying such testing are: how deep to drill the test wells, where to site such wells, and which constituents to test for.

Association of State and Territorial
ASTSWMO
Solid Waste Management Officials

444 North Capitol Street, N.W., Suite 315
Washington, DC 20001
tel: (202) 624-5828 fax: (202) 624-7875
www.astswmo.org

March 31, 2013

The Honorable John Shimkus, Chairman
Subcommittee on Environment and the Economy
United States House of Representatives
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Chairman Shimkus:

Thank you for allowing the Association of State and Territorial Solid Waste Management Officials to testify at the hearing on "The Role of the States in Protecting the Environment Under Current Law". The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is an association representing the waste management and remediation programs of the fifty States, five Territories and the District of Columbia (States). Our membership includes State program experts with individual responsibility for the regulation or management of wastes and hazardous substances, including remediation, tanks, materials management and environmental sustainability programs.

We respectfully offer the attached response pursuant to the request by the Subcommittee for additional written responses to members' questions. Please do not hesitate to contact me should you need additional information.

Sincerely,

Jeffery A. Steers, (VA)
President

The Role of States in Protecting the Environment Under Current Law
Written Responses to Questions

The Honorable John Shimkus

1. **You mentioned in your written testimony that the Virginia Department of Environmental Quality (DEQ) successfully brought parties together and using only the authorities of the Virginia Voluntary Cleanup Program, was able to successfully redevelop a blighted area in Roanoke, VA.**

   a. Would you say that your Agency's local expertise and knowledge of the area and the stakeholders helped you successfully complete this complex cleanup.

   Virginia's knowledge of local stakeholders' needs and area wide environmental concerns played a significant role in the success of the project. The *South Jefferson Redevelopment Area* located in Roanoke consisted mainly of abandoned and underutilized property which has been remediated by completion of enrollment of six different sites in Virginia DEQ's Voluntary Remediation Program. The Carilion Riverside Clinic and the Virginia Tech Carilion School of Medicine are among the redeveloped properties now valued at over $200 million. Curtis Mills, Executive Vice President of the Carilion Clinic, applauded this private-public working relationship, when he said, "We were impressed by the practical approach the DEQ (Virginia's Department of Environmental Quality) took in partnering with us on the cleanup of one of the worst areas in Roanoke. We couldn't be more pleased with the results."[1] It is likely that little progress would have been made on this remediation if this property had been the subject of the traditional CERCLA project using federal authorities because of the prolonged level of uncertainty regarding legal liabilities and remediation plans associated with projects subject to CERCLA. An often overlooked, but important point is that economic development projects are dependent upon the time critical actions of environmental regulators and delay and legal uncertainty can have adverse impacts on the viability and success of these projects.

   b. Do you think that States may be better suited to deal with some of these complicated cleanup sites under state voluntary cleanup programs and state Brownfields programs than EPA is under federal law?

   Yes, when there are viable parties that have an economic interest in redeveloping Brownfields, it makes sense to defer to the states' voluntary cleanup programs to take the lead in overseeing remediation of property that ensures risk management decisions are commensurate with the future planned use of the property. This is not meant to imply that the use of federal authority under RCRA and CERCLA is not an appropriate approach to address contaminated sites. However, it should not preclude the use of state authorities where appropriate.

[1] http://www.epa.gov/reg3hwmd/bf-lr/newsletter/2010-Winter/03-scrapstoscrubs.html

c. Can States achieve cleanups faster and more efficiently than EPA and why (or why not)?

In certain circumstances, States can achieve cleanups faster and more efficiently than EPA. Although not all states operate a federal equivalent Superfund program, having states take a lead role in overseeing non-fund lead sites involving a potentially responsible party (PRP), can be more efficient as state regulators are closer to the issues and recognize local environmental conditions early in the process that may impact future risk management decisions. The same can be said for cleanups following the RCRA Corrective Action process. As illustrated in the above responses, neither RCRA nor CERCLA should preclude states from using voluntary cleanup programs to address the remediation of pollution on properties that have viable redevelopment opportunities.

d. What changes to current federal law would make the cleanup process quicker and more efficient?

One suggested change relates to RCRA Corrective Action authority. Under certain circumstances, a responsible party should be allowed to enroll in a state's voluntary cleanup program in lieu of using RCRA to advance remediation, deferring cleanup decisions and targeted remedial goals to such programs when appropriate. Such deferment could also contemplate the use of a state's voluntary remediation program's administrative process in lieu of the federal process under RCRA. Operating under the state program when a viable and motivated party is able to facilitate a more cost efficient cleanup creates a win-win situation that protects human health and the environment while facilitating faster remediation.

2. **If EPA has authority to assume control of a state permit program when the permit program isn't meeting minimum federal requirements, would you consider that backstop authority for EPA?**

Yes. With that authority, if a state was not meeting minimum requirements, EPA could assume control and this provides backstop authority.

3. **Your boss, Governor McDonnell, wrote to us two years ago in support of the coal ash bill, H.R. 2273, which sets a minimum federal standard for regulating coal ash but gives States the authority to develop and implement their own permit programs based on the needs of the State. Governor McDonnell noted that Virginia's program would need to make some improvements in order to meet the requirements of our bill and called the bill a "sensible approach for the management of CCR." Since that time the Senate has introduced legislation, that we support, which provides additional pollution prevention focused initiatives.**

a. How has EPA's current rulemaking impacted the regulation of coal ash in Virginia?

EPA's current efforts have resulted in uncertainty for Virginia's regulation of coal ash. Virginia suspended action to amend its regulation due to the EPA rule making and continued efforts to amend the regulation are difficult with the uncertainty regarding federal regulation. Virginia stakeholders, including coal ash generators, permitted disposal facilities and those beneficially using this material recognize that Virginia's regulations should be enhanced. We were working together to develop an efficient yet protective CCR program at the time that EPA began its proposed rulemaking. The longer this uncertainty exists, the more difficult it becomes to continue the positive momentum and consensus on changes to Virginia's regulations.

b. Does Virginia still support the approach in the bills based on the fact that States are in a better position to regulate coal ash?

Yes. Virginia continues to support this approach. Virginia believes that allowing states to implement their own programs provides the best approach to regulating coal ash. It also provides the best approach for addressing individual states' circumstances and resources.

4. **In June 2010, EPA proposed a rule for coal combustion residuals with multiple regulatory scenarios. Now, almost 3 years later EPA is not close to picking one. What has Virginia done in the meantime? How do you and other States know what direction to take with making improvements to your coal ash programs?**

Virginia has not moved forward with any regulation revision due to the uncertainty of EPA action on coal ash. Virginia and other states cannot be sure of what direction to take given that any EPA action may supersede or conflict with state action.

<u>The Honorable Henry Waxman</u>

1. **What, if any, requirements does your state apply to drilling mud and other wastes from the exploration and production of oil and gas when generated, stored, transported, or disposed of within the state?**

The handling and disposal of these in-state generated wastes are regulated by the Virginia Department of Mines, Minerals, and Energy. In Virginia, requirements for the handling, management, and disposal of these wastes are set forth in the Virginia Gas and Oil Act as well as the Virginia Gas and Oil Regulations, which are found in 4 Virginia Administrative Code (VAC) 25-150 *et. seq* . For example, a site must submit a plan

for approval addressing permanent disposal of fluids from an extraction well pursuant to 4 VAC 25-150-420. All disposal of drill cuttings and solids must be addressed in an approved operations plan pursuant to 4 VAC 25-150-430.

2. **What, if any, authority or ability does your Department have to address the interstate movement of drilling mud and other associated wastes and to track such wastes entering the state?**

   All such wastes entering the state are subject to Virginia's Solid Waste Management Act. Federal courts have determined that the interstate movement of solid waste shall not be restricted under the Interstate Commerce Clause. Once these wastes enter Virginia, they are subject to proper management and disposal which includes reporting under the Commonwealth's Solid Waste Information Assessment reporting as enumerated in 9VAC21-81-80.

3. **What, if any, requirements does your Department impose to ensure that drilling mud and associated wastes from the exploration and production of oil and gas that enter the state are properly disposed?**

   As discussed in response to Question #2, wastes associated from oil and gas exploration and production are considered solid wastes. As such, they must be managed and disposed of by a facility permitted by the Virginia Department of Environmental Quality.

4. **What, if any, requirements does your state apply to coal ash when generated, stored, transported, or disposed of within the state?**

   Virginia considers coal ash to be a solid waste, and thus it must be managed and disposed of as such. Current disposal design criteria require coal ash disposal facilities to meet the state's industrial landfill criteria which includes performance based liner systems, groundwater monitoring and post closure care. Virginia also has separate regulatory requirements for the safe beneficial reuse of coal ash; both as an ingredient in a material and for use in land based fill projects.

5. **What, if any, authority or ability does your Department have to address the interstate movement of coal ash and to track coal ash entering the state?**

   Coal ash is a solid waste. Please refer to the response to Question #2.

6. **What, if any, requirements does your Department impose to ensure that coal ash that enters the state is properly disposed?**

   While the Commonwealth of Virginia cannot prohibit the transportation of coal ash into the state, we do maintain authority to regulate this material as a solid waste. The management and disposal of solid waste is subject to the Virginia Solid Waste Management Act. Please refer to the response to Question #4 regarding specific management requirements

7. **How many investigators are employed by your Department to identify and investigate illegal dumping of drilling mud, other wastes from the exploration and production of oil and gas, and coal ash within the state and ameliorate the potential risks posed by any such dumping?**

   The Department's Pollution Response Program (PReP) is a statewide program to receive complaints from the public regarding potential illegal dumping or discharges that pose a threat to human health and the environment. Staff in each of DEQ's six regional offices staff this program and as necessary refer complaints to inspectors in the Department's solid and hazardous waste programs for further investigation. Statewide, the Department employs approximately 30 staff as inspectors.

Responses to Questions for the Record
Teresa Marks, Director of the Arkansas Department of Environmental Quality

The Honorable John Shimkus

1. If Congress includes in legislation, specific national standards, in other words, minimum requirements that a State program must meet, do you think it is necessary for EPA to first issue federal regulations in order for states to implement protective programs?

No.

2. Critics of the approach taken in H.R. 2273 and S._ 3512 from the last Congress- allowing States to be in the driver's seat with respect to creating a coal ash regulatory program that meets a minimum federal standard -argue that without a greater role for EPA, in particular rulemaking authority and concurrent enforcement authority, that there won't be a consistent level of protection across the States. Do you agree? Why or why not?

EPA will continue to oversee a state's implementation of a coal ash program, with the ultimate authority to withdraw the program if a state fails to implement it. States can ask for EPA's enforcement assistance, which means EPA can be involved in enforcement.

3. The chart in your written testimony indicates that EPA is increasing its regulatory output, which then increases the amount of work States have to do. Are their times when the rules coming out of EPA make it harder for your State members to manage their programs?

Yes, although it is rare for states collectively to oppose the rules. Our primary concern is often loss of flexibility and increased costs of implementation, although there may be other reasons from time to time.

The Honorable Henry A. Waxman

Drilling mud and other wastes from the exploration and production of oil and gas have been exempt from the requirements of the Resource Conservation and Recovery Act since July 1988, but now include recovered hydraulic fracturing fluid with potentially dangerous constituents. Democratic members of the Energy and Commerce Committee released .a report in April, 2011 finding that the top hydraulic fracturing companies had injected fluid containing 29 chemicals that are known or possible human carcinogens, as

well as other contaminants regulated under the Clean Air Act and the Safe Drinking Water Act.

Despite this, according to the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration, shippers and transporters of these materials do not have to comply with any Federal hazardous materials safety regulations. And, as mentioned above, such mud and other wastes are also exempt from requirements under the Resource Conservation and Recovery Act. This means that these hazardous materials are not required to be labeled as hazardous, contained and transported in accordance with Federal hazardous materials regulations, or included in shipping manifests to track the material, prevent diversion, and ensure proper handling by emergency response personnel in accidents and incidents.

The risks of this approach are illustrated by a recent event in Youngstown, Ohio, where authorities were alerted to illegal dumping of drilling fluid into the Mahoning River on January 31, 2013, by an anonymous tip. According to Federal investigators, the dumping went on for several months before the tip was received. Even after the dumping was discovered, state officials failed to inform the public and drinking water facilities drawing water downstream of the dumping site. Public health and environmental impacts are still being assessed.

Coal ash is also currently exempt from federal requirements under the Resource Conservation and Recovery Act and Federal hazardous materials safety regulations, despite the presence of hazardous constituents including arsenic, lead, mercury, and hexavalent chromium in the ash. On December 22, 2008, a coal ash impoundment in Kingston, Tennessee, burst, releasing 5.4 million cubic yards of toxic sludge, blanketing the Emory River and the surrounding land, and creating a superfund site that could cost up to $1.2 billion to clean up. On August 23, 2005 an ash impoundment at the Martins Creek power plant in Allentown, Pennsylvania was breached, releasing over 100 million gallons of contaminated water and ash into Oughhoughton Creek and the Delaware River. The spill impacted public water supplies in Pennsylvania and New Jersey, elevating arsenic levels to 3,000 times the drinking water standard. The cleanup lasted several months and cost an estimated $37 million.

1. What, if any, requirements does your state apply to drilling mud and other wastes from the exploration and production of oil and gas when generated, stored, transported, or disposed of within the state?

The State of Arkansas encourages recycling of drilling muds and frac fluids to the extent practicable and most, if not all, operators recycle these fluids. The storage, transport, and disposal of drilling fluids are covered by various permits or authorizations issued either

by the Arkansas Department of Environmental Quality (ADEQ) or the Arkansas Oil and Gas Commission (AOGC).

The AOGC issues permits for the exploration and/or production wells. ADEQ authorizes coverage for pits storing drilling fluids associated with the drilling of oil and gas production wells through a permit by rule under APC&EC Regulation No. 34 (copy attached). These pits are similarly regulated under AOGC's Rule B-17 (copy attached). Disposal of water-based drilling fluids through land application is permitted by ADEQ. Subsurface disposal of frac fluids in injection wells is permitted by the AOGC.

This material, when disposed, is a solid waste, which can be disposed in a Municipal Solid Waste Landfill or an Industrial Solid Waste Landfill (designed and permitted for the specific material). The material must be non-liquid or solidified before being incorporated into the daily waste mass and must be covered with six (6) inches of soil cover at the end of each working day or more, as necessary to prevent nuisance conditions (odors being a primary concern). There are some reuses for this waste, which may be allowable under certain circumstances.

Exploration and production fluid transportation is not regulated by ADEQ, but is regulated by AOGC's Rule E, a copy of which is attached. ADEQ's regulations are available at:

http://www.adeq.state.ar.us/regs/default.htm

AOGC's regulations are available at the following site:

http://www.astateogc.ar.us/OnlineData/Forms/Rules%20and%20Regulations.pdf

2. What, if any, authority or ability does your Department have to address the interstate movement of drilling mud and other associated wastes and to track such wastes entering the state?

In Arkansas, AOGC regulations prohibit any person from operating an Exploration and Production Fluid Transportation System without a permit. Further, transporters of exploration and production fluids are required to maintain records of all fluids "received, transported delivered or disposed of" and to keep those records in the Arkansas Office of the permit holder for three years. (See AOGC Rule E-3, a copy of which is attached.)

3. What, if any, requirements does your Department impose to ensure that drilling mud and associated wastes from the exploration and production of oil and gas that enter the state are properly disposed?

See Response to Question 2.

Although ADEQ does not regulate the transportation of these materials, state laws and regulations generally prohibit the improper disposal of wastes. It is unlawful for any person to operate any solid waste processing or disposal facility or site without a permit from ADEQ or to dispose of wastes at any disposal site or facility that is not permitted. (Ark. Code Ann. §8-6-205(a).) Further, it is unlawful to cause pollution of the waters of the state or to place wastes in a location likely to cause pollution of waters of the state. (Ark. Code Ann. §8-4-217(a). Both the Arkansas Solid Waste Management Act (Ark. Code Ann. § 8-6-201 *et seq*,) and the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-201 *et seq*.) contain enforcement and penalty provisions.

Also, AOGC's Rule E-3(i) states that transporters shall only:

> transport [drilling fluids] to a permitted well for re-use…, a permitted off-site temporary storage facility, a permitted surface disposal facility or a permitted injection well disposal facility. Exploration and production Fluid shall not be released or discharged onto the ground surface or into Waters of the State, unless otherwise authorized by [ADEQ].

4. What, if any, requirements does your state apply to coal ash when generated, stored, transported, or disposed of within the state?

The State of Arkansas manages coal ash through our Subtitle D Solid Waste program. Coal ash in the state may be disposed in a permitted Municipal Subtitle D Landfill or in an Industrial Solid Waste Landfill. All Municipal or Industrial Landfills in the state must be permitted, and Arkansas' regulation governing solid waste management (Regulation 22) details specific requirements for facility siting, geologic and geotechnical investigations, liner and final cover design standards, operating standards, construction quality assurance, groundwater monitoring and corrective action, closure and post closure care and financial assurance. These requirements have been in place since 1995. Regulation 22 also includes requirements governing the reuse of coal ash.

5. What, if any, authority or ability does your Department have to address the interstate movement of coal ash and to track coal ash entering the state?

The interstate transportation of coal ash is not regulated by ADEQ.

6. What, if any, requirements does your Department impose to ensure that coal ash that enters the state is properly disposed?

Although ADEQ does not regulate the transportation of coal ash, as stated in response to the question on the transportation of drilling fluids, state laws and regulations generally prohibit the improper disposal of wastes. As previously mentioned, it is unlawful for any person to operate any solid waste processing or disposal facility or site without a permit from ADEQ or to dispose of wastes at any disposal site or facility that is not permitted.

(Ark. Code Ann. §8-6-205(a).) Further, it is unlawful to cause pollution of the waters of the state or to place wastes in a location likely to cause pollution of waters of the state. (Ark. Code Ann. §8-4-217(a).) Both the Arkansas Solid Waste Management Act (Ark. Code Ann. § 8-6-201 *et seq*,) and the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-201 *et seq*.) contain enforcement and penalty provisions.

7. If contamination from drilling mud, associated wastes, or coal ash is discovered in a source of public drinking water in your state, what information and resources will be available to your Bureau to track the source of that contamination?

ADEQ has worked with the Arkansas Department of Health and public water suppliers in locating potential environmental sources when elevated levels of hazardous constituents appear in the drinking water supply.

ADEQ may conduct inspections, collect samples, and review existing databases to identify potential sources of contamination. ADEQ also may seek information from other agencies or the regulated community in order to track the source of any contamination, including, for example, information from the licensed transporters maintained by the AOGC.

Regulation 22 details regulatory requirements for permitted Municipal or Industrial Landfills, including requirements for groundwater monitoring and corrective action. As part of these requirements, the owner or operator of a disposal site would be required to notify appropriate local government officials and all persons who own the land or reside on the land that directly overlies any part of the contaminant migration if contaminants have migrated off-site….. (Reg. 22.1205(g).)

8. How many investigators are employed by your Department to identify and investigate illegal dumping of drilling mud, other wastes from the exploration and production of oil and gas, and coal ash within the state, and ameliorate the potential risks posed by any such dumping?

The Water Division has five (5) inspectors dedicated to monitoring oil and gas activities. In addition, the Water Division has seventeen (17) other inspectors who can also evaluate any improper disposal practices associated with oil and gas activities or coal ash. The Solid Waste Management Division employs eight (8) inspectors, who are responsible for inspecting all permitted disposal facilities and investigating illegal dump sites.

The potential risk associated with the illegal disposal of any solid waste material, including but not limited to coal ash and oil gas exploration wastes, will vary significantly based on the quantity illegally disposed and the location of the disposal. Wastes dumped in or near waters of the State will generally present the greatest potential risk. Where the ADEQ has investigated and found the illegal dumping of these materials the effects have generally been localized and of short duration.

Pollution Control and Ecology Commission # 014.00-034

ARKANSAS POLLUTION CONTROL and ECOLOGY COMMISSION

REGULATION NO. 34
State Water Permit Regulation

FILED
11 SEP 28 PM 3:56
BY

Approved by Arkansas Pollution Control and Ecology Commission
August 26, 2011

TABLE OF CONTENTS

CHAPTER 1 GENERAL PROVISIONS **1-1**

REG.34.101 PURPOSE 1-1
REG.34.102 AUTHORITY 1-1
REG.34.103 SCOPE 1-1
REG.34.104 DEFINITIONS 1-1

CHAPTER 2 PERMIT REQUIREMENTS FOR CONSTRUCTION, OPERATION, AND CLOSURE OF PITS ASSOCIATED WITH OIL AND GAS WELLS **2-1**

REG.34.201 PITS COVERED BY THIS REGULATION SHALL INCLUDE: 2-1
REG.34.202 PERMIT REQUIREMENTS FOR CONSTRUCTION, OPERATION, AND CLOSURE OF PITS ASSOCIATED WITH OIL AND GAS WELLS 2-1

CHAPTER 3 RESERVED **3-1**

CHAPTER 4 RESERVED **4-1**

CHAPTER 5 RESERVED **5-1**

CHAPTER 6 ADMINISTRATIVE PROCEDURES **6-1**

REG.34.601 PENALTY POLICY AND ADMINISTRATIVE PROCEDURES 6-1
REG.34.602 SEVERABILITY 6-1

CHAPTER 7 EFFECTIVE DATE **7-1**

REG.34.701 EFFECTIVE DATE 7-1

Chapter 1 GENERAL PROVISIONS

Reg.34.101 Purpose

It is the purpose of this regulation to adopt standards applicable to the storage, discharge, or disposal of any waste which, if unregulated, will cause pollution of waters of the state or result in wastes being placed in a location where it is likely to cause pollution of the waters of the state. These standards are intended to protect public health and the environment, and prevent, control, or abate pollution.

Reg.34.102 Authority

Pursuant to the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-101 *et seq.* (hereinafter "the Act"), the Arkansas Pollution Control and Ecology Commission (hereinafter the "Commission" or "APC&EC") hereby promulgates this Regulation No. 34.

Reg.34.103 Scope

This regulation applies to all persons proposing to construct, alter, extend, or operate any storage, discharge, or disposal system that does not discharge directly to waters of the state, and the operation of which, if unregulated, will cause pollution of waters of the state or result in wastes being placed in a location where it is likely to cause pollution of the waters of the state. This regulation does not apply to liquid animal waste management systems regulated under APC&EC Regulation 5 or underground injection control (UIC) facilities regulated under APC&EC Regulation 17 or Class II UIC wells permitted by the Arkansas Oil and Gas Commission. This regulation also does not apply to storage or disposal systems permitted under APC&EC Regulation 1 or Regulation 4 or to storage, discharge, or disposal systems which have been issued any NPDES permit other than a stormwater permit or to septic systems regulated by the Arkansas Department of Health.

Reg.34.104 Definitions

The following definitions apply to this Regulation:

"ADEQ" or **"Department"** means the Arkansas Department of Environmental Quality, or its successor.

"Commission" means the Arkansas Pollution Control and Ecology Commission.

"Director" means the Director of the Arkansas Department of Environmental Quality, or his or her designee, unless the context dictates otherwise.

"Discharge" means a discharge of any wastes in any manner which directly or indirectly permits such wastes to reach any of the waters of the state.

"Disposal" means the final use of waste, including, but not limited to, surface disposal, subsurface disposal, transport to a recycling or reuse facility, or placement in a landfill, incinerator, or injection well.

"Facility" or "system" means any site (including land or appurtenances thereto) or activity or operation that is subject to this regulation.

"Industrial Waste" means any liquid, gaseous, or solid waste substance resulting from any process of industry, mining, manufacturing, trade, or business or from the development of any natural resources.

"Owner" or "Operator" means any person (an individual, association, partnership, corporation, municipality, state or federal agency) who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity. The operator is responsible for ensuring compliance with all applicable environmental regulations and conditions.

"Other Wastes" means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, oil, tar chemicals, and all other organic or inorganic substances, not including sewage or industrial waste which may be discharged into the wasters of the state. "Any wastes" and "pollutants" include sewage, industrial wastes, or other wastes.

"Person" means any state agency, municipality, governmental subdivision of the state or the United States, public or private corporation, individual, partnership, association, or any other entity.

"Sewage" means the water-carried waste products from residences, public buildings, institutions, or other buildings, including excrementitious or other discharge from the bodies of humans or animals, together with such groundwater infiltration and surface water as may be present.

"Storage" means holding wastes prior to disposal in an open pit or pond dug in the ground, in open tanks, or other open vessel.

"Waste" means industrial waste, sewage, or other wastes.

"Waters of the State" means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state.

Chapter 2

PERMIT REQUIREMENTS FOR CONSTRUCTION, OPERATION, AND CLOSURE OF PITS ASSOCIATED WITH OIL AND GAS WELLS AND BRINE PRODUCTION AND INJECTION WELLS

Reg.34.201 Pits covered by this Regulation shall include:

(A) Circulation Pit: A pit used during drilling where Drilling Fluids are circulated during drilling operations. The Circulation Pit may be part of the Mud Pit. Circulation Pits may also refer to a series of open, above-ground tanks, usually made of steel.

(B) Completion Pit: A pit used for storage of Completion Flow-Back Fluid and Drilling Fluids or other materials which have been cleaned out of the well bore during the initial completion of a well. Circulation or Mud Pits may be used as a Completion Pits when drilling operations conclude.

(C) Emergency Pit: A pit used for containing fluids at an operating well during an actual emergency and for a temporary period of time. Use of the Emergency Pit is necessitated due to unplanned operational issues, which may include but is not limited to, a temporary shutdown of a disposal well or fluid injection well or associated equipment, temporary overflow of saltwater storage tanks on a producing lease, gas flaring, cement circulation, or a producing well loading up with formation fluids.

(D) Mud Pit: A pit or series of pits used during drilling where fluids are mixed and circulated during drilling operations. Mud Pits may also refer to a series of open, above-ground tanks, usually made of steel.

(E) Reserve Pit: A pit not part of the active circulation system, used to store Drilling Fluids or to contain fluids generated during drilling operations. Such fluids would include, but not be limited to, Cuttings, Drilling Fluids, and Encountered Water.

(F) Test Pit: A pit constructed for use during a well test.

(G) Workover Pit: A pit used for storage of Completion Flow-Back Fluid, Workover Flow-Back Fluid and other materials which have been cleaned out of the well bore during any subsequent completion or re-completion.

Reg.34.202 Permit Requirements for Construction, Operation, and Closure of Pits Associated with Oil and Gas Wells

(A) Owners or Operators of all pits constructed during the drilling, completion, or testing of an oil, gas, or oil and gas production well, [brine production and injection wells], Class II

Disposal Well, and Class II Commercial Disposal Well shall be deemed to have a permit by rule pursuant to Ark. Code Ann. §8-4-203(l), for the construction, operation, and closure of any pits covered under this Regulation if the Owner or Operator is in full compliance with Rule B-17, as adopted by the Arkansas Oil and Gas Commission on October 28, 2010.

(B) No discharge or wastes resulting from pit construction, operation, or closure shall cause pollution of any of the waters of the state. No wastes resulting from pit construction, operation, or closure shall be placed in a location where it is likely to cause pollution of any waters of the state.

(C) Any Owner or Operator who constructs, operates, or closes a pit in violation of any provisions of this Regulation may be subject to ADEQ enforcement action under the provisions of the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8- 4-101 et seq., including the penalties provided in Ark. Code Ann. § 8-4-103.

RULE B-17: WELL DRILLING PITS AND COMPLETION PITS REQUIREMENTS

a) Applicability

This rule applies to all pits constructed during the drilling, completion and testing of a brine, oil, gas, or oil and gas production well, brine injection or disposal well, Class II Disposal Well, and Class II Commercial Disposal Well. Pits as used in context of this rule refer to the type pits as defined in subparagraph c) below.

b) Joint Enforcement

After the effective date of this rule, any Operator who constructs or operates a pit covered by this Rule, shall be subject to the specific enforcement provisions under the respective authorities of the Arkansas Oil and Gas Commission (AOGC) or the Arkansas Department of Environmental Quality (ADEQ). The regulation of the activities covered under this rule by AOGC and ADEQ shall be in accordance with a Memorandum of Agreement (MOA) between AOGC and ADEQ.

c) Definitions:

1) AOGC: Arkansas Oil and Gas Commission.

2) ADEQ: Arkansas Department of Environmental Quality.

3) APC&EC: Arkansas Pollution Control and Ecology Commission.

4) Closed Loop System: A system that uses a combination of solids control equipment incorporated in a series of steel tanks that eliminates the use of a Pit.

5) Completion Flow-Back Fluid: Any of a number of liquid and gaseous fluids or mixtures of fluids, chemicals and or solids that flow from a well and consisting of Drilling Fluid, silt, debris, water, brine, oil scum, paraffin, or other materials which have been removed from the well bore during the initial completion of a well, but does not include Frac Flow-Back Fluid.

6) Cuttings: Fragments of rock which are a result of the cutting action of the drill bit on rock formations encountered in the well, which are transported to the surface by the Drilling Fluid.

7) Discharge: The release, overflow, leakage or seepage of any fluids covered by this Rule.

8) Drilling Fluid: Any of a number of liquid and gaseous fluids and mixtures of fluids and solids (as solid suspensions, mixtures and emulsions of liquids, gases, Cuttings and other solids) utilized during brine, oil, or gas drilling operations. Drilling Fluid is generally synonymous with drilling mud, which typically contains bentonitic clays, chemical additives, foaming agents, lubricants, emulsifiers and weighting materials, and which encompasses most muds used in drilling operations, especially muds that contain significant amounts of suspended solids, emulsified water or oil. Mud includes all types of Water-Based, Oil-Based and synthetic-based Drilling Fluids.

9) Director of the ADEQ: The Director of the Arkansas Department of Environmental Quality or his or her designated representative.

10) Director of AOGC: The Director of the Arkansas Oil and Gas Commission or his or her designated representative.

11) Ecologically Sensitive Waterbody (ESW): Waters that have been given the designated use of Ecologically Sensitive Waterbody by the Arkansas Pollution Control and Ecology Commission. This beneficial use identifies segments known to provide habitat within the existing range of threatened, endangered or endemic species of aquatic or semi-aquatic life forms.

12) Encountered Water: Water encountered during brine, oil, or gas drilling operations, which is of sufficient quantity to require disposal, and which is not Produced Water.

13) Exploration and Production Waste (E&P Waste): Wastes associated with the exploration, development and production of brine, oil, or gas and which are not regulated by the provisions of, and, therefore, exempt from the Federal Resource Conservation and Recovery Act, and may include, but are not limited to the following: salt water (produced brine or produced water); Oil-Based Drilling Fluids; Water-Based Drilling Fluids, Completion Flow-Back Fluid, Frac Flow-Back Fluid, Workover Flow-Back Fluid, Produced Water; rainwater from firewalls and Pits at drilling and production facilities; and other wastes not described above.

14) Extraordinary Resource Waters (ERW): Waters that have been given the designated use of Extraordinary Resource Waterbody by the Arkansas Pollution Control and Ecology Commission. This beneficial use is a combination of the chemical, physical and biological characteristics of a water body and its watershed which is characterized by scenic beauty, aesthetics, scientific values, broad scope recreation potential and intangible social values.

15) Frac Flow-Back Fluid: Fluids that consist of fresh water and solids such as sand or other proppant (resin or ceramic grains) or other additives that flow from a well following hydraulic fracturing of a well.

16) Natural and Scenic Waterways (NSW): Waters that have been given the designated use of Natural and Scenic Waterways by the Arkansas Pollution Control and Ecology Commission. This beneficial use identifies segments which have been legislatively adopted into a state or federal system.

17) Nonhazardous Oilfield Wastes (NOW): Fluids to be used or reused in connection with activities associated with the exploration, development, and production of brine, oil, or gas and includes, but is not limited to, Drilling Fluids, completion fluids, surfactants, and chemicals used to detoxify brine, oil, or gas wastes.

18) Oil-Based Drilling Fluid: Drilling Fluid containing diesel or crude oil rather than fresh water as the main liquid phase of the drilling mud.

19) Operator: Any person who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity. The Operator is responsible for ensuring compliance with all applicable regulations and conditions.

20) Person: Natural person, corporation, organization, municipality, government or governmental subdivision or agency, public or private corporation, business trust, estate, trust, individual, partnership, association, or any other legal entity.

21) Pit: shall include:

A) Circulation Pit: A pit used during drilling where Drilling Fluids are circulated during drilling operations. The Circulation Pit may be part of the Mud Pit. Circulation Pits may also refer to a series of open, above-ground tanks, usually made of steel.

B) Completion Pit: A pit used for storage of Completion Flow-Back Fluid and Drilling Fluids or other materials which have been cleaned out of the well bore during the initial completion of a well. Circulation or Mud Pits may be used as a Completion Pits when drilling operations conclude.

C) Emergency Pit: A pit used for containing fluids at an operating well during an actual emergency and for a temporary period of time. Use of the Emergency Pit is necessitated due to unplanned operational issues, which may include but is not limited to, a temporary shutdown of a disposal well or fluid injection well or associated equipment, temporary overflow of saltwater storage tanks on a producing lease, gas flaring, cement circulation, or a producing well loading up with formation fluids.

D) Mud Pit: A pit or series of pits used during drilling where fluids are mixed and circulated during drilling operations. Mud Pits may also refer to a series of open, above-ground tanks, usually made of steel.

E) Reserve Pit: A pit not part of the active circulation system, used to store Drilling Fluids or to contain fluids generated during drilling operations. Such fluids would include, but not be limited to, Cuttings, Drilling Fluids, and Encountered Water.

F) Test Pit: A pit constructed for use during a well test.

G) Workover Pit: A pit used for storage of Completion Flow-Back Fluid, Workover Flow-Back Fluid and other materials which have been cleaned out of the well bore during any subsequent completion or re-completion.

22) Pollution: Such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, or such discharge of any liquid, gaseous, or solid substance in any waters of the state as will, or is likely to, render the waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish, or other aquatic life.

23) Produced Water: Water produced from any productive or potentially productive brine, oil, or gas producing interval in the well, which is not Completion Flow-Back Fluid, Frac Flow-Back Fluid, Workover Flow-Back Fluid, or Encountered Water.

24) Stormwater: Rainwater runoff, snow melt runoff, and surface runoff and drainage.

25) Water-Based Drilling Fluid: Drilling Fluid containing fresh waters rather than diesel or crude oil as the liquid component of the drilling mud.

26) Waters of the State: All streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of

water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state.

27) Water Table: The surface between the zone of saturation and the zone of aeration and the surface of a body of unconfined ground water at which the pressure is equal to that of the atmosphere.

28) Workover Flow-Back Fluid: Any of a number of liquid and gaseous fluids and mixtures of fluids, chemicals and or solids consisting of Drilling Fluid, silt, debris, water, brine, oil scum, paraffin, or other materials which are removed from the well bore during the subsequent or recompletion of a well.

d) Commencement of Construction Operations

The Operator shall notify the appropriate AOGC Regional Office, via mail, e-mail or fax, at least forty-eight (48) hours prior to the commencement of Pit construction operations. The Notice of Commencement (NOC) shall be on a form agreed upon by AOGC and ADEQ and shall include at a minimum (i) the Operator information (name, address, and emergency contact phone number), (ii) the location of the drill pad site (latitude and longitude in degrees, minutes, seconds, and County, Section, Range, and Township, including the 1/4 of the 1/4 position within the Section), (iii) the approximate size of the drill pad, (iv) the approximate distance to the nearest Waters of the State, (v) the type of fluid system and type of Drilling Fluids to be used, (vi) well name, (vii) nearest city/town, and (viii) the approximate date Pit construction operations shall commence. Upon receiving the Notice of Commencement, AOGC shall forward a copy to ADEQ, Arkansas Department of Health, and the County Judge of the county in which the pit is located. AOGC and ADEQ staff may conduct site inspections as deemed necessary.

e) Discharges Prohibited

The Discharge from a Pit or any activity associated with the drilling or completion of a well to any surface or ground waters or in a location where it is likely to cause pollution to any surface or groundwaters is prohibited. Such discharge may subject the Operator to ADEQ enforcement actions under the provisions of the Water and Air Pollution Control Act (Act 472 of 1949, as amended, A. C. A. § 8-4-101, et seq.) and enforcement actions of AOGC under Act 105 of 1939, as amended. Any Discharge must be reported within twenty-four (24) hours to the AOGC and ADEQ. Leakage from any Pit is considered an unauthorized Discharge.

f) Mud, Circulation and Reserve Pit Construction Requirements:

1) General Requirements:

A) Mud, Circulation and Reserve Pits constructed within the 100 year flood plain must be in accordance with any county or other local ordinance or requirement pertaining to the 100 year flood plain.

B) The location of all Mud, Circulation or Reserve Pits shall be chosen with reasonable consideration to maximizing the distance from surface waters. Mud, Circulation or Reserve Pit construction in streams, creeks, lakes, or any other water bodies is strictly prohibited.

C) Any Mud, Circulation or Reserve Pit construction in wetlands must receive appropriate prior authorization from the U.S. Army Corps of Engineers.

D) In areas other than jurisdictional wetlands referenced in subparagraph f) 1) C) above, where the water table is ten (10) feet or less below the ground surface, all Mud, Circulation or Reserve Pits shall be constructed above ground, or the Operator shall use a closed loop system.

2) Reserve Pit Requirements:

A) All Reserve Pits shall be constructed with a minimum of two (2) feet of freeboard, and shall be maintained to handle a storm event up to a 10-year, 24-hour storm event during the operation of the Reserve Pit. Reserve Pits constructed above ground utilizing bermed side walls, shall be constructed with a minimum of 2:1 (two feet horizontal to one foot vertical) side slope on both the interior and exterior walls. The top of the bermed pit walls must be a minimum of 2 feet wide.

B) All Reserve Pits shall be constructed with a liner using one of the following methods:

i) A synthetic liner of at least twenty (20) mils thickness, with a four (4) inch welded seam overlap, completely covering the Reserve Pit bottom and inside walls. Sand or sandy material must be placed below the liner if a rocky or uneven surface is encountered. The synthetic liner must be protected from deterioration, punctures and/or any activity which may damage the integrity of the synthetic liner.

ii) A compacted clay liner may be applied to the bottom and sides of the Reserve Pit to create an impervious/impermeable barrier. Construction of the Reserve Pit and compacted clay liner shall be in accordance with sound construction and engineering principles designed and constructed to prevent any leakage or seepage to Waters of the State, with due consideration given to the topography, Pit material composition, and availability of liner material(s). The clay used to construct the liner may be in situ or mixed with additional off-site materials, if the on-site clay is inadequate.

iii) Other materials or methods used for liner construction must be approved by both the Director of the ADEQ and the Director of the AOGC prior to use.

3) Mud and Circulation Pits:

A) Closed Loop Systems may be used for Mud and Circulation Pits, and must be maintained in a leak-free condition.

B) Earthen Mud and Circulation Pits shall be constructed with a minimum of two (2) feet of freeboard, and shall be maintained to handle a storm event up to a 10-year, 24-hour storm event during the operation of the Mud or Circulation Pit.

C) Earthen Mud and Circulation Pit liners shall be constructed using one of the following methods:

i) A synthetic liner of at least twenty (20) mils thickness, with a four (4) inch welded seam overlap, completely covering the Reserve Pit bottom

North Carolina General Assembly
House of Representatives
State Legislative Building
Raleigh, NC 27601-1096

Pricey Harrison
57th District, Guilford County

Office Address: 2119 Legislative Building
16 W. Jones Street
Raleigh, NC 27601-1096
Telephone: (919) 733-5771
(919) 754-3259 Fax
E-mail: pricey.harrison@ncleg.net
Home Address: P.O. Box 9339
Greensboro, NC 27429

March 21, 2013

COMMITTEES:
Appropriations, Vice Chair
Appropriations Subcommittee on
Natural & Economic Resources, Co-Chair
Election Law & Campaign Finance Reform
Energy & Energy Efficiency, Vice Chair
Environment & Natural Resources, Vice Chair
Judiciary I
Marine Resources & Aquaculture
Public Utilities

Environmental Review Commission, Co-Chair
Energy Policy Council

Dear Chairman Shimkus:

Thank you for the opportunity to testify on February 15, 2013, before the Subcommittee on Environment and the Economy on "The Role of States in Protecting the Environment Under Current Law". I hope I was able to make the case that states like ours need at least minimum federal protections to protect the health of our people and our natural resources. Our regulatory structure continues to be weakened, and took a big hit during the last biennium when we enacted legislation prohibiting any regulations stronger than federal regulations. Below are my answers to Representative Schakowsky's specific questions on fracking.

1) **How would you describe the likelihood of passing a law like Colorado's requiring groundwater monitoring before and after drilling and well completion?**

North Carolina's Mining and Energy Commission (MEC) is a young institution, created in late 2012 (NC Session Law 2012-143) for the purpose of developing a comprehensive regulatory program to oversee potential oil and gas development in the state. North Carolina has no history of large-scale oil and gas development. This places a heavy burden on the newly formed MEC, which must build a modern program for managing the development of oil and gas resources in North Carolina from the ground up.
The MEC has not yet proposed any rules for adoption. Thus, it is somewhat difficult to characterize or predict the Commission's tendencies on substantive policy matters. There is also some concern that the makeup of the MEC is very heavily industry dominated. This having been said, committees of the MEC are currently considering draft rules to regulate several different aspects of modern oil and gas development. Among these is a draft rule for chemical disclosure, currently before the Commission's Environmental Standards Committee. As currently drafted, this rule draws heavily from hydraulic fracturing chemical disclosure rules in Texas and Colorado and also incorporates model regulatory language developed by Environmental Defense Fund. The Chair of the Environmental Standards Committee has stated his intent to take up the issue of baseline groundwater testing in the coming weeks. In preparation for that discussion, the Chair has directed specific attention to and provided committee members with information pertaining to the groundwater testing requirements recently adopted in Colorado.

I have concerns that baseline and post-testing of water supply wells is far from sufficient to provide assurance that contamination has not occurred. Unless extensive monitoring wells are installed to allow sampling at vertical intervals close to and along the vertical portion of a well as well as frequently along the horizontals, it is only too likely that groundwater contamination could be extensive before it is actually detected in a post-drilling or –fracking sample from a drinking water well. In presentations to the Environmental Standards Committee of the Mining and Energy Commission, the cost of baseline testing for all of the wells within a 5,000 foot radius of a gas extraction well head was emphasized (this is a highly populated area, with over 5 times the population density of Bradford County PA, with its intensive gas development), with other calculations appearing to suggest that costs could be reduced for operators by only requiring a fraction of the wells within that radius be tested, a discouraging indication of the regulatory priorities in play. Rules such as Colorado's may be an improvement on the lack of any baseline and post drilling water well testing requirements by other states, but for a state like ours, that has protected its groundwater for a best use of drinking water, and for which private wells are the daily water source for nearly 3 million residents, they are not adequate to prevent a legacy of contamination that may not show up for years after closure of a gas well site.

Further, the success of a baseline testing program depends greatly on the extent of chemical disclosure, so that unique and characteristic compounds for any operator can be detected. It is a very sobering indication for the rulemaking process and its potential to provide any protection or accountability that several recommendations made by stakeholders (including industry, consumer, landowner, local govt, health, enviro representatives) to improve the level of information to be provided to the regulatory agency, even before drilling and fracking, were discarded by the NC DENR Deputy Director as "too burdensome" for industry. The consequences of such a filtering of conscientious stakeholder input, including an industry perspective, is that the agency will not have adequate information for groundwater monitoring during drilling and completion, and emergency responders/health providers have a potentially long delay before obtaining critical information.

In summary, it is difficult to predict the final form rules will take as they make their way through rulemaking process, but the MEC seems to be looking to recent policy advances in other states and Colorado has caught the attention of influential MEC members.

2) Could regulators in North Carolina adopt such a requirement without the Legislature passing a law?

As enacted, NC Session Law 2012-143 directs the MEC to adopt rules to require the collection of baseline water quality data and pre-drilling groundwater testing. The law also assigns presumptive liability to oil and gas well operators for any groundwater contamination occurring with 5,000 feet of a wellhead. While the law does not specifically require post-completion groundwater testing, the MEC is required to adopt rules for the "protection of the quality of the water, air, soil, or any other environmental resource against injury or damage or impairment." Further, the MEC is given some discretionary authority to adopt rules regarding "any other matter the Commission deems necessary for implementation of a modern regulatory program for the management of oil and gas exploration and development in the State." Taken together, the provisions of NC Session Law 2012-143 seem to provide the MEC with a legal foundation for adopting a pre-drilling/post-completion groundwater testing rule, similar to the Colorado rule, without requiring additional legislative action.

That said, I am skeptical that the Mining and Energy Commission would propose or end up adopting a baseline and post drilling monitoring program without diluting the requirements to minimize the "regulatory burden" for operators/vendors.

Were the MEC to adopt such a baseline and post testing rule, in our state where private well use is intensive, it would be quite inadequate to detect contamination before a plume became too widespread for capture of the plume and remediation to be feasible. In the areas where fracturing would occur in NC, groundwater flows somewhat unpredictably in bedrock fractures, leaving water supply well users even more vulnerable to contamination with no prior indications of a problem.

3) Is North Carolina's current regulatory system equipped to handle development of the state's shale gas resources? What are the most significant weaknesses in the state's exiting safeguards?

North Carolina's regulatory system is not currently equipped to adequately regulate large-scale oil and gas development in the state. As noted, North Carolina has no history of large-scale oil and gas development and therefore has no regulatory program for administering such activities. While directing the MEC to begin developing rules for a modern oil and gas regulatory program, NC Session Law 2012-143 also enacted a legislatively imposed moratorium on the issuance of permits for unconventional oil and gas development. This moratorium can only be lifted by legislative action. This moratorium was implemented to ensure that rules for the protection of public health, communities and the environment are adopted and implemented before drilling or hydraulic fracturing are authorized.

As it is not yet possible to comment on the weaknesses of regulatory program that does not yet exist, I would offer the following as potential threats that could undermine efforts to establish an adequate state regulatory program in North Carolina:

1) NC Session Law 2012-143 requires that the MEC adopt rules for a comprehensive oil and gas regulatory program by October 2014. This is an ambitious goal given the sheer volume of work that must be completed. The arbitrary timeline has also been widely criticized as encouraging the MEC to "cut corners" and rush the rulemaking. Even so, there is some doubt that the MEC will be able to meet the October 2014 deadline.

Adding to this threat, a proposal currently before the NC General Assembly which has passed the Senate, seeks to sunset the current moratorium on the issuance of permits for unconventional oil and gas development on March 1, 2015. The proposed legislation also appears to functionally pre-approve any MEC generated regulations. Even if the MEC does meet its October 2014 deadline for rulemaking, the complexities of North Carolina's Administrative Procedures Act enacted in 2011 which I mentioned in my testimony, could prevent rules from going into effect prior to the sunset of the moratorium. This creates the potential for unconventional oil and gas development permits to be issued before a comprehensive regulatory program is in place.

2) The geology in the region where North Carolina's potential shale gas resources are located is known to be highly fractured and crosscut by vertical diabase dykes. Groundwater collects in these fractures and in the eroded margins adjacent to diabase formations. Insufficient scientific knowledge of the geology and movement of groundwater within this complex system limits the ability of regulators to design and implement regulations for oil and gas well construction and operation to most effectively protect ground water resources and ensure the integrity of oil and gas well. NC Legislators seem almost ideologically opposed to questioning the complexities of extraction operations in such a setting. The state legislature has, so far, declined to make the personnel and funding investments needed to develop a more comprehensive understanding of this region's unique hydrogeological characteristics. As I also mentioned in my testimony, the Legislature has slashed our Department of Environment and Natural Resources budget by 40% off of 2005-2006 levels.

3) In a review of existing NC regulations related to oil and gas program for North Carolina, the STRONGER (State Review of Oil and Natural Gas Environmental Regulations) process produced over 60 recommendations for regulatory development, ranging from stormwater management, to handling of naturally occurring radiation resulting from drilling and extraction, to management of various oil and gas wastes, to regulating water withdrawals. While many of these recommendations were captured in the rules to be developed under authority of NC Session Law 2012-143, not all of them were incorporated, and there are shortcomings of the STRONGER process itself (see attached critique by Clean Water for NC) in not stipulating minimum requirements, merely recommending best practices. There is discussion of a "comprehensive permit" for such operations, with all of the shortcuts likely to result from multi-divisional responsibility for inspections and lack of expertise with shared responsibilities. The regulatory agency has been significantly downsized in the last two years, with little prospect of staffing increases sufficient to support an oil and gas program, particularly during any lag time before any state revenues would be generated by production.

4) A key failure of regulatory accountability in NC's program is the very inadequate level of bonding for operators/vendors to be able hold them accountable for performance during operations, liability for environmental or property damage, as well as final closure and testing. Currently, the only bond required for an operator is $5,000 plus a dollar per linear foot, supposedly sufficient to buy enough cement to pour down the vertical segment of an extraction well. Consistent with the Commission's and new agency leadership's motivation to reduce "regulatory burdens" it may prove difficult to raise the bonding requirement to a level commensurate with the risks involved.

In sum, as I mentioned in my testimony, North Carolina is ill-equipped to handle development of the state's shale gas resources at the current time for the above reasons.

Please let me know if you have any additional questions.

Best regards

Pricey Harrison

Pricey Harrison

cc: Representative Paul Tonko
Representative Jan Schakowsky

MEMORANDUM

TO: Clean Water For NC, Evan Kane of DWQ Aquifer Protection
FROM: Tabitha Vigliotti, Duke Stanback 2011 Intern, Hope Taylor, Exec. Director
DATE: August 5, 2011
RE: STRONGER Fracking Audit

CWFNC's general assessment of STRONGER's Hydraulic Fracturing Guidelines?

In general, the STRONGER Hydraulic Fracturing Guidelines provide appropriate parameters for hydraulic fracturing regulations, however they are lacking critical specifications to assess the value of such regulations and fall short of protecting residents and the environment in some areas.

STRONGER's Hydraulic Fracturing Guidelines are a suite of parameters to consider while making the regulatory framework for overseeing hydraulic fracturing in a state, but do not provide the specifics necessary to create regulations in North Carolina. They offer no prescriptive solutions to gaps in protections and fail to address any regionally specific issues.

Generalized strength and weaknesses in the Hydraulic Fracturing Guidelines and associated references to the 2005 Guidelines:

Strength:

- The Guidelines set forth an appropriately comprehensive list of parameters for consideration of a hydraulic fracturing regulatory program.

Weaknesses:

- The Guidelines are nonspecific. They leave words like "adequate" undefined and this ambiguity can lead to insufficient and/or inappropriate protections;
- The Guidelines leave too much "flexibility" to the states. With no bottom-line standards, The Guidelines allow states to hide insufficient protections under the guise of their discretion. This could be partially ameliorated though the inclusion of examples of states implementing improvements to inadequate regulations;
- The guidelines do not assess the extent or effectiveness of enforcement of the regulatory program;
- STRONGER's Workgroup dismissed several relevant public comments on their Hydraulic Fracturing Guidelines.

Specific strengths and weaknesses in the Hydraulic Fracturing Guidelines and associated references to the 2005 Guidelines (Following the structure of the Hydraulic Fracturing Guidelines)

X.2. General

- The Guidelines' first consideration is of potential risks associated with the depth of the reservoir to be fractured and its proximity to water. This signifies the importance of protecting drinking water.

X.2.1 Standards

- The Guidelines recommend that protections vary within a state based on local conditions. This is a strong suggestion in theory, but if the state does not have the capacity to investigate differences and enforce disparate standards, this recommendation may lead to lacking protections;
- "Waivers" or "variances" are mentioned as a means to provide "flexibility" in meeting requirements. However, extensive use of waivers or variances functionally weakens regulatory authority and, therefore, a state's ability to protect residents and the environment.
- The Guidelines set forth a strong waste management hierarchy (2005 Guidelines, section 5.3).

X.2.2 Reporting

- The Guidelines intentionally do not require sufficient field staffing in the following phrase "reporting should be sufficient to allow for the presence of field staff." STRONGER's response to a public comment shows the lack of a specific requirement was intentional: A "commenter recommended that states have the flexibility to determine which hydraulic fracturing operations should require notice rather than all operations. The Workgroup's intent was to provide states with flexibility. The language in the revised guidelines states that the notification should be sufficient to allow for field staff to monitor activities."
- The inclusion of a recommendation to exclude confidential chemicals from reporting after recommending that chemicals should be reported to the state and medical providers, leaves ambiguity for disclosure guidelines and contradicts the general intent of the guideline;
- The guideline that agencies keep records for only three years unless in active use is an insufficient time to hold records. Mitigation may be required after the three-year interval and loss of records would lead to potentially increased expenses and inadequate information about quantities and chemicals injected, thus impairing ability to remediate;
- The Guidelines (section 4.2.2.3) recommend states should get input from advisory groups, but this falls short of saying states should incorporate or give weight to that information.

X.2.3 Staffing and Training

- Strong consideration of different categories of personnel needs, but no mention of the consequences of insufficient staffing or the priority of staffing needs if a state is operating with a limited budget;
- The Guideline's have useful specifications of proper education for Technical Support (2005 Guidelines, section 4.3.1.2);
- The Guidelines mention funding needs must be sufficient to meet environmental goals. The mention of funding for environmental goals as the first consideration reveals the importance of funding to meet these goals. However, without a clear definition of "sufficient,", the guideline has little effect;

- The Guidelines recommend states address funding though a variety of sources beyond general appropriations. However, there is no discussion of challenges inherent in different funding options. If a state relies entirely on a fee-dependent system, limited enforcement or lax permitting of the industry that effectively pays for enforcement officers may result, as observed for FDA programs.

X.2.4 Public Information

- The Guidelines wisely recommend public information, especially where fracking has not occurred and high volumes of water will be used, but there is no recommendation of an adequate effort for public disclosure and education;
- The Guidelines recommend that industry associations disseminate public education materials; this may lead to biased information or selective distribution.

X.3 Water and Waste Management

- It is encouraging that the first consideration of this section is the evaluation of the availability of water;
- The Guidelines promote the recycling of wastewater without mention of potential for increased toxicity levels in recycled water and the need for increased precautions for use and handling of recycled water;
- States should be required to refuse to issue or reissue permits if the applicant is out of compliance or has shown a "history of past violations demonstrates the applicant's unwillingness or inability to comply with permit requirements," rather than simply have the "authority" to do so as the guidelines suggest;
- The Guidelines make no mention of compliance and enforcement of wastewater releases or contaminant standards;
- Rather than states setting Naturally Occurring Radioactive Material (NORM) action levels (section 7, 2005 Guidelines) to protect human health and the environment during handling, transport and waste management, action levels must be set to fully implement federal OSHA and EPA worker and environmental standards. This seems to follow with requirements for training and certification for workers in 7.3.4.;
- Entities with amounts of NORM exceeding action levels MUST (not "should") be required to be permitted;
- States must have stronger and more specific regulation than "performance standards" for removal, decontamination and remediation to protect human health and the environment, and MUST have standards for storage of radioactive materials;
- Transfer of NORM contaminated land and equipment must require specific agency notification and approval and oversight of transfer plan to prevent off site contamination and exposures, in addition to "notification of appropriate parties";
- State regulation must include standards and procedure for release of materials and equipment only after agency inspection to assure that radiation is below action levels;
- The Guidelines suggest states encourage adequate infrastructure development, but do not address what is considered adequate and make no mention of infrastructure as an additional cost to a state or local entity. More detailed guidance for the

"encouragement" of infrastructure, and responsibilities for funding it, should be included.

Public Comments not incorporated by STRONGER's Workgroup into the Hydraulic Fracturing Guidelines, but which CWFNC strongly recommends to NC DENR for consideration:

- "Agencies should review direction and extent of a fracture due to the proximity of ground water;"
- "Identification of potential conduits for fluid migration be conducted by independent certified geologist and include all potential opportunities for migration, not only man-made ones;"
- "State require the performance of ground water analysis and inventory prior to any drilling activities in order to develop baseline data;"
- "States should have guidelines in place to govern and perhaps restrict fracking when circumstances provide that management and monitoring cannot assure the prevention of contamination;"
- "require a state to develop regulations regarding the placement of gas wells in relation to domestic water wells and the monitoring of groundwater contamination;"
- "use of closed-loop systems;"
- "state require that quantitative aquifer characterization be performed to evaluate water supply levels, and that a maximum permitted depletion be establishes to maintain existing beneficial use, prior to and potential drawdown for drilling and hydraulic fracturing."

Gaithersburg
A CHARACTER COUNTS! CITY

March 21, 2013

The Honorable John Shimkus,
Chairman
Subcommittee on Environment and the Economy
One Hundred Thirteenth Congress
Congress of the United States
House of Representatives

Dear Chairman Shimkus,

Thank you for the opportunity to respond to additional questions for the record from members of the Subcommittee on Environment and the Economy. I would also like to express my appreciation of your warm greeting of the panel of speakers on February 15. It was an honor for me to appear before your committee and deliver testimony on behalf of the National League of Cities.

Sincerely,

Michael A. Sesma

Michael A Sesma
Council Vice President
City of Gaithersburg, Maryland

Attachment: Questions for the Record

City of Gaithersburg 31 South Summit Avenue, Gaithersburg, Maryland 20877-2038
301-258-6300 FAX 301-948-6149 TTY 301-258-6430 cityhall@gaithersburgmd.gov
www.gaithersburgmd.gov

MAYOR
Sidney A. Katz

COUNCIL MEMBERS
Jud Ashman
Cathy C. Drzyzgula
Henry F. Marraffa, Jr.
Michael A. Sesma
Ryan Spiegel

CITY MANAGER
Tony Tomasello

Subcommittee on Environment and the Economy
Questions for the Record, Michael A Sesma

The Honorable John Shimkus

1. **Your testimony states that "cities and towns do not always agree with the substance of rules put forth by EPA, particularly the increasing number of unfunded federal mandates imposed on local governments." I would imagine that members of the League of Cities face a finite amount of resources to address any particular production (i.e. education, health, environmental protection). Could you please site specific trade-offs you have had to make meet these mandates?**

   In the state of Maryland, EPA rules are administered through several state agencies. These rules have been designed to address not only local water quality, but also the recovery and health of the Chesapeake Bay, which is intimately linked to the economic health of the state and its communities. The benefits of these regulations are clearly understood by the public. Nonetheless, the costs of compliance are to both capital and operating budgets, which are already stressed in the current economy. These unfunded federal mandates translate into unfunded state mandates, which municipalities such as Gaithersburg must address. My testimony describes the significant fiscal impact of the 20% retrofit mandate. Indirectly, the costs of the mandates are often related to an element of "catching up" due to a lack of past regulation for local and regional water quality issues and failure to meet voluntary guidelines. A result has been additional and significant fiscal impact to planned and anticipated growth and development in the city.

   Increasing regulation on water quality issues locally and regionally brings with it additional operating costs. As the city continues to grow we must also increase our staff and resources to address growing community needs, including costs for training, vehicles, equipment, information technology and education, all of which have budgetary impacts.

   For cities such as Gaithersburg, whose primary source of revenue is its tax base, the incurred costs as a result of increased regulatory requirements have the potential to slow needed and desired new and redevelopment. The rate of our growth is influenced by the cost of providing a minimal level of service to support that growth, maintain the quality of life, and remain in compliance with environmental regulations. Public needs and demands do not shrink as populations grow and cities must have the fiscal health to address these needs without hampering opportunities for growth. A choice cities will face in accommodating growth is whether to raise fees and/or taxes for building and operating the facilities to ensure regulatory compliance, or defer or fail to invest in the infrastructure necessary to support growth.

Subcommittee on Environment and the Economy
Questions for the Record, Michael A Sesma

The following is a list of mandated programs requiring increased operating and capital resources in the City of Gaithersburg:

- NPDES Permit
  - Twenty percent retrofit requirement: Requires retrofit of untreated impervious surface; requirement is impossible to meet on public lands, so will require innovative approach to meet requirement as many private owners will not be able to afford requirements
  - Stormwater BMP inspection and maintenance program: Additional operating costs
  - Illicit discharge detection and elimination program: Additional operating and capital costs
- Chesapeake Bay total maximum daily load (TMDL) (part of watershed implementation plans-WIP)
  - Increased reporting requirements
  - Unknown mitigation costs
  - Uncertainty of timeline and actual requirements for small municipalities makes planning and budgeting difficult
- Growth Offset (Nutrient Trading) Policy
  - Uncertainty of policy status, content, and timeline results in planning and budgeting difficulties
  - Unknown impacts to public and private development
- Water quality protection charge to provide continuous funding for stormwater programs
  - may require the establishment of an enterprise fund and credit/appeals process and additional operating costs
  - Implementation and applicability issues bring additional costs that could disproportionately impact small businesses and affordable housing

The Honorable Janice D. Schakowsky

The right-to-know about chemicals used in fracking fluids is not contingent on the geologic formations in which they are used. Several states, with varying geology, have adopted very similar laws requiring disclosure of chemicals used in fracking fluids.
Colorado recently enacted a new rule requiring groundwater testing both before and after drilling and well completion operations. Currently, Colorado is the only state that requires this.
As with disclosure of fracking chemicals, this rule could and should apply in any state, regardless of geology. Residents of every state should be protected by early detection of potential groundwater contamination from oil and gas

drilling operations, and local governments should have the information they need to protect their drinking water sources and systems.

1. **Would pre- and post-drilling testing of groundwater provide useful information and early warning of contamination for cities like Gaithersburg?**

   Yes, pre- and post-drilling testing of groundwater would provide useful information and early warnings of contamination to drinking water supplies from any drilling actions in Maryland. Gaithersburg is served by drinking water supplies from the Washington Suburban Sanitary Commission (WSSC), which obtains its water supplies from the Potomac and Patuxent Rivers. The Potomac has its headwaters in West Virginia within the Marcellus Shale formation. Requiring pre- and post-drilling testing of groundwater in any community upstream from ours would help protect our drinking water supplies.

2. **Would pre- and post-drilling testing of groundwater provide useful information and early warning of contamination for other local governments represented by the National League of Cities?**

   Yes, pre- and post-drilling testing of groundwater would provide useful information and early warnings of contamination of drinking water supplies to any community where oil and natural gas drilling is present, as well as to communities downstream from such drilling.

   It is likely that contamination that may result from drilling and gas well mining will have a greater impact on downstream communities, where the costs of clean up are likely to be much higher. Moreover, downstream communities may not benefit directly from revenue associated with the gas recovery operations that would be required to address any contamination.

○