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MODERNIZING THE BUSINESS OF ENVIRONMENTAL REGULATION AND PROTECTION

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

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MODERNIZING THE BUSINESS OF ENVIRONMENTAL REGULATION AND PROTECTION

WEDNESDAY, JULY 23, 2014

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

The subcommittee met, pursuant to call, at 10:00 a.m., in room 2322 of the Rayburn House Office Building, Hon. John Shimkus (chairman of the subcommittee) presiding.

Members present: Representatives Shimkus, Murphy, Latta, McKinley, Bilirakis, Johnson, Tonko, Green, McNerney, Schakowsky, Barrow, Matsui, and Waxman (ex officio).

Also present: Representative Yarmuth.

Staff present: Nick Abraham, Legislative Clerk; Charlotte Baker, Deputy Communications Director; Leighton Brown, Press Assistant; Jerry Couri, Senior Environmental Policy Advisor; Brad Grantz, Policy Coordinator, Oversight and Investigations; David McCarthy, Chief Counsel, Environment and the Economy; Tina Richards, Counsel, Environment and the Economy; Chris Sarley, Policy Coordinator, Environment and the Economy; Jacqueline Cohen, Democratic Senior Counsel; Caitlin Haberman, Democratic Policy Analyst; and Ryan Schmit, Democratic EPA Detailee.

Mr. SHIMKUS. I would like to call the hearing to order, and first, I want to ask unanimous consent that all members' opening statements can be submitted for the record. Without objection, so ordered. And I want to welcome the panel and I want to take a request, a personal request, to recognize one shadow and one intern. Alexa is from Taiwan. She has been interning in my office all summer. Wave, Alexa. And Reza is from Albania, Kosovo, and she just joined to shadow with me today. And I can't pronounce the name, her last name. But it is a town. What is it? Gjakova. So, welcome, and this is her first chance to be in Washington and see the legislative process. And we are glad to have her with us.

I will now recognize myself for 5 minutes for an opening statement.

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

Every day we hear about innovations in system communications and logistics that make businesses more productive. Some of this modernization is technological and some is just common sense. Today, we explore these system innovations in the context of envi-

ronmental regulation, modernizing environmental programs and making them more efficient.

The States and EPA are partners in the business of working toward cleaner air, water, and soil because the States implement a significant percentage of the environmental laws, and EPA relies on the States for the implementation of its programs as Ranking Member Waxman will remind me almost every time we have a hearing. So I am learning. I have been listening, Mr. Waxman. In this age of declining budgets and workforce, States, EPA, the regulated community, and the public must work together to find ways to improve environmental protection while spending less resources.

A great example of Congress working with the EPA and the regulated community to modernize and streamline the way an existing statute is carried out began with enactment of Public Law 112–195, the Hazardous Waste Electronic Manifest Establishment Act. Negotiations on this bill involved members from both parties, from several committees, and from House leadership, and from the Senate. Once a deal was reached, it passed the House and the Senate without a single dissenting vote. The President signed it into law on October 5, 2012. This Act authorizes EPA to employ a system that uses electronic manifests to track shipments of hazardous waste, under Resource Conservation and Recovery Act, known as RCRA, Subtitle C, from its generation to its ultimate disposal. This streamlines the current process, which requires paper forms and replaces the millions of paper manifests produced each year.

Today, we will hear from the Commissioners of three States who will share their stories about how their States analyze their programs to determine how they can boost efficiency while maintaining and improving environmental protection. Arizona applies a management principle used in the private sector called Lean which is centered on preserving or creating value using fewer resources. The process improvements made in Arizona as a result of the Lean analysis has resulted in a decrease in the average permitting timeline by more than 60 percent and reduced the average time for a facility to return to the compliance by more than 50 percent. That means greater and faster protection of the environment and shortening the wait time for the regulated entity to use the permit to carry out their business strategy. Government and permit holders both win.

Arkansas will give us examples of its modernization efforts including how State site inspections are now using electronic tablets to record inspection data and allow the regulated community to sign the forms at the time and the place of the inspection. The permit holder obtains the inspection form on the spot which means they will know immediately what they need to fix and will allow them to return to compliance much more quickly. Again, most everybody is a winner.

Massachusetts will tell how it plans to use geographic information systems and mapping software to provide easy access to site cleanup documents to enable realtors and investors to more easily identify sites that are available for redevelopment. This facilitates real estate redevelopment. Economic growth and environmental cleanup are both improved.

And finally, Bill Kovacs will give us the perspective of the regulated community. We expect Bill to discuss how these initiatives affect the bottom line of businesses across America and what further modernization steps could be taken. We welcome all our witnesses and look forward to their testimony.

[The prepared statement of Mr. Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS

Every day, we hear about innovations in system communications and logistics that make businesses more productive. Some of this modernization is technological and some is just common sense. Today, we explore these system innovations in the context of environmental regulation—modernizing environmental programs and making them more efficient. The States and EPA are partners in the business of working toward cleaner air, water, and soil because the States implement a significant percentage of the environmental laws and EPA relies on the States for the implementation of its programs. In this age of declining budgets and workforce, States, EPA, the regulated community, and the public must work together to find ways to improve environmental protection while spending less resources.

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We welcome all our witnesses and look forward to their testimony.

Mr. SHIMKUS. I yield back the balance of my time and recognize the ranking member of the subcommittee, Mr. Tonko, for 5 minutes.

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

Mr. TONKO. Thank you, Mr. Chair, and welcome to all of our panelists. Today's hearing gives us an opportunity to examine innovative new tools to enable State and Federal environmental regulators to accomplish their mission of environmental and public health protection more efficiently and more effectively. Smart metering, advanced data management and mapping tools and advanced monitoring devices can provide State and local governments with the means to deliver significant benefits to the public. We are all aware that budgets are tight and that there are many demands placed upon State and local governments. We have been asking States to do more with less for far too long. New tools can be helpful, but they come at a price. Without funding to procure these new tools and to train people to use them, we are simply imposing another mandate.

We should incentivize and support agencies' use of innovative technologies to achieve greater environment and public health protection. I believe that the initial investment will pay for itself in a rather short period of time. For example, water leaking from mains represents significant loss of revenue and the loss of a resource that is growing scarce in some areas of our country. New monitoring technologies can identify leaks in water mains enabling municipalities to target maintenance and repairs of infrastructure to areas of greatest need. Advanced monitoring devices can identify spills or pollution problems when they first occur, enabling authorities to act quickly to mitigate the problem and avoid costly cleanups and risks to our public health.

A clean environment is not a luxury. It is a necessity. We have years of experience to demonstrate that communities do not have to sacrifice public health and the environment for economic growth. And a clean environment is not achieved automatically as a byproduct of a growing GDP and expanding job base. Unfortunately, common essential resources—land, air and water—are often used as free disposal areas by industry when there are no standards to define and require pollution controls. We learned that lesson many years ago. China is learning it today. The impressive economic growth in job creation in China in the absence of enforceable environmental protection standards has led to serious air, water and land pollution in many of their industrialized areas. It is leading to health problems, resource shortages, and in some areas, it has led to companies offering hardship pay to attract skilled people.

Modernizing environmental regulation implies that we will move forward, not backward, on environmental protection. The public relies on State and Federal environmental regulators to protect their interests. EPA and their partner agencies in the States are making decisions that will have impacts far into our future. Over the years we have seen industries come and go. That is the nature of a dynamic economy. But we have never lost our need for productive land, clean air and clean water. Tools to modernize environmental regulation should be evaluated to determine whether they indeed help agencies to achieve greater public health and environmental protection, and better recordkeeping. Web-based reporting of inaccurate or incomplete information achieves nothing. Fast permitting

may benefit the permit applicant, but without robust evaluation of a proposed project, there is no guarantee that a new business will be the type of good neighbor that truly benefits an entire community.

I look forward to hearing about the initiatives that are underway in the States from our distinguished panel of witnesses. I thank you all for being here this morning to share your experiences and ideas with the subcommittee. My bottom line, if it improves our environmental stewardship, so be it. Let us go forward. If haste makes waste, if it gives us a worse outcome and avoids the mission statement to which we are all assigned, no go. Thank you very much.

Mr. SHIMKUS. I thank my colleague. I turn to the Republican side to see if anybody wishes time for an opening statement. Seeing none, 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 very much, Mr. Chairman. Technology has an enormous potential to improve environmental protection. From the catalytic converter to smokestack scrubbers, technological advances have brought us cleaner cars and cleaner energy. Now mobile technology can empower citizens to monitor their environment and can help them access real-time information about chemical releases in their neighborhoods. It is important for regulators to embrace new technology, and EPA and the States have taken significant steps toward modernization.

In 2011, the Government Accountability Office found serious problems with the State Drinking Water Information System. The EPA is now undertaking a significant effort to improve and modernize that system which will ensure that regulators and citizens have access to accurate drinking water quality information.

Progress is also being made on hazardous substances. Consumers and researchers looking for information about the dangers of potentially toxic chemicals can now turn to the EPA's ChemView Web portal. That new Web site brings together information from multiple programs and sources in a sortable and searchable format. As more testing is done under EPA's chemical action plans, this resource will become more and more valuable.

The environmental community is also using new technology to improve environmental protection. Just last week, an environmental group published the results of a partnership with Google that put sensors on Google's Street View mapping cars to detect methane leaks from utility pipes under city streets. The maps they produced illustrate priorities for repair and replacement of aging lines, helping States and municipalities prioritize funding and reduce carbon pollution.

We will hear from the panel today about similar projects bringing attention to the health impacts from coal mining and empowering people to participate in the protection of their local environment.

I welcome this opportunity to hear about some of these new tools and the strong partnership that has been created between EPA and the States to pursue E-Enterprise, a joint effort to maximize the use of advanced information technologies, optimize operations and increase transparency.

I am supportive of efforts to improve the experience of regulated entities, but these initiatives should remain focused on enhancing environmental protection. The primary customers of environmental regulations, the people served by them, are the public, not the regulated entities.

In North Carolina last year, the new Republican head of the Department of Environment and Natural Resources shifted the agency's focus from protecting the public to providing customer service to regulated entities. When staff resigned in protest, he penned an op-ed to proclaim his success in turning the department into "a customer-friendly juggernaut." We saw the results of that customer service approach in the Dan River coal ash spill. The effects of that spill were visible across 70 miles of the Dan River, crossing from North Carolina into Virginia and affecting drinking water sources for the citizens of Danville and Virginia Beach. According to a recent estimate, the economic impacts of the spill could exceed $70 million.

So as we discuss this new technology and the potential for improving the process of environmental regulation, we must ensure that the role of regulators as protectors of the environment is not undermined. State and Federal regulators should remain focused on protecting human health in keeping the air and water clean.

I look forward to today's testimony and learning how new technologies can be adopted to achieve these goals. Thank you, Mr. Chairman. I yield back my time.

Mr. SHIMKUS. The gentleman yields back his time. I want to thank him for his comments. And now I would like to recognize our panel. I will do that one at a time. Your full statement has been submitted for the record. You have 5 minutes to summarize. We will not be draconian if you get off for a few seconds. But if you go 5 minutes extra, then you might hear the gavel come down. So that way we can get to questions. It is a large first panel. We want to make sure everyone has access to your testimony and questioning.

So with that, first, we have Mr. Henry Darwin who is the Director of Environmental Quality for the State of Arizona. Sir, you are recognized for 5 minutes.

STATEMENTS OF HENRY DARWIN, DIRECTOR, ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY; DAVID CASH, COMMISSIONER, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION; TERESA MARKS, DIRECTOR, ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY; WILLIAM L. KOVACS, SENIOR VICE PRESIDENT, ENVIRONMENT, TECHNOLOGY & REGULATORY AFFAIRS, U.S. CHAMBER OF COMMERCE; SCOTT SLESINGER, LEGISLATIVE DIRECTOR, NATIONAL RESOURCES DEFENSE COUNCIL; AND MATTHEW F. WASSON, DIRECTOR OF PROGRAMS, APPALACHIAN VOICES

STATEMENT OF HENRY DARWIN

Mr. DARWIN. Thank you. Thank you, Chairman Shimkus, Ranking Member Tonko and distinguished members of the committee. I am Henry Darwin, Director of the Arizona Department of Environmental Quality. I have been director of ADEQ since February 2011, and prior to my appointment as director, I served approximately 15 years in various staff level and management positions throughout the agency, including chief counsel and acting director of the Water Quality Division. I am the only director in the agency's 27-year history to have worked in all three of ADEQ's environmental programs, air, water and waste.

As a trained hydrologist and environmental lawyer, as an enforcement officer who has worked to ensure regulated facilities comply with environmental laws, and as a former rank-and-file staff member who sat long hours inside a cubicle, I believe I bring a unique perspective to my role as the head of a State agency responsible for protecting and enhancing public health and the environment of Arizona.

During my tenure as a State employee, I have heard many times the demand for increased privatization of Government services, as if all that ails Government could be fixed simply by turning over the keys to the private sector. Roughly 40 percent of ADEQ's annual budget is already allocated to private, outside services. So we readily support privatization as being possible for an organization entrusted with the important responsibility of ensuring preservation of the delicate balance between the natural world and a society that depends on it for sustenance, prosperity and a rewarding quality of life.

This does not mean, though, that we support entrusting the private sector with guarding the delicate balance between environmental protection and economic prosperity. To critics who complain about how poorly Government agencies perform, I say amen. Such critics are by and large correct. Most systems of Government are indeed a mess, but rather than having Government run by corporations, perhaps we might be better off encouraging agencies to operate more like corporations—the successful corporations, of course, because why would we emulate flops just because they operate in the private sector?

Looking at successful businesses today, we see they have several things in common. First and foremost, they do a very good job listening to their customers. Second, they rapidly adapt their processes to fulfill customer expectations. They are also adept at using

technology to deliver faster, better, cheaper service and integrate technology the right way at the right time. We only have to look to the demise of Blockbuster video, who used to have stores on virtually every street corner, to see the consequence of not keeping up with the American public's increasing expectation that quality products and services be delivered immediately and online.

At ADEQ, we have made tremendous strides in the past 2 years to improve productivity and efficiency for the benefit of our customers and shareholders by looking to the private sector for lessons about how to improve our processes and use technology to speed customer transactions. In the written comments I leave you with today, I elaborate on what we are doing, especially to deploy Lean management as a core philosophy and use it to instill a culture of continuous improvement throughout our organization. I also touch on a key project we have undertaken, which we call myDEQ, to leverage e-technology to radically simplify and further speed up operational transactions with our customers.

The point I want to leave you with is this. To be effective in meeting customer expectations, Government agencies have much to learn from successful private-sector businesses. What business knows, and what Government agencies are starting to learn, is that to be successful, organizations must both streamline processes to improve capacity for a value-added activity and integrate information technology solutions to accelerate delivery of products and services. But these steps must occur in the proper order. First Lean your systems then integrate e-solutions. Reverse this order and agencies may well lock-in existing burdensome bureaucracy.

Before closing my remarks, I would like to mention my participation in and effort by EPA to bring Federal environmental protection into the 21st century. Their effort, known as E-Enterprise, represents an unprecedented level of partnership with the States. As a member of the leadership committee, I can tell you that EPA is not merely listening to States like Arizona, they are involving us deeply in developing a model for modern environmental protection, a model very close to what I have just described. Now, I am not usually one to say that EPA is heading in the right direction, but I can honestly say that I am happy to join them on this important journey and hope that we can count on your support. Thank you.

[The prepared statement of Mr. Darwin follows:]

Introduction – Oral Remarks

Thank you, Mr. Chairman and distinguished members of the Committee. I am Henry Darwin, Director of the Arizona Department of Environmental Quality (ADEQ). I have been director of ADEQ since February 2011, and prior to my appointment as director, I served approximately 15 years in various staff level and management positions throughout the agency, including chief legal counsel and acting director of the Water Quality Division. I am the only director in the agency's 27-year history to have worked in all three of ADEQ's environmental program divisions (Air, Water and Waste.)

As a trained hydrologist and environmental lawyer, as an enforcement officer who has worked to ensure regulated facilities comply with environmental laws, and as a former rank-and-filed staff member who sat long hours for too many days inside a cubicle, I believe I bring a unique perspective to my role as head of the state agency responsible for protecting and enhancing public health and the environment of Arizona.

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touch on a key project we have undertaken, which we call "myDEQ," to leverage e-technology to radically simplify and further speed up operational transactions with our customers.

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Ignore Your Customers at Your Peril

The Arizona Department of Environmental Quality (ADEQ) has been a cabinet level agency since July 1987. I am honored to be one of the privileged few to have served as director of ADEQ, and the only one who joined the agency as a staff-level employee and worked in each of its three environmental program divisions – Air Quality, Water Quality and Waste Programs. As someone who has worked as an enforcement officer, and sat in cubicles alongside other rank-and-file staff, I can say that I absolutely agree with our critics who have taken issue with the way the agency has performed over the years. As an employee, I could see the waste and I could feel the impact it had on both our customers and my coworkers. This experience framed my thinking, and I vowed that if ever came the day I'd be in a position to change how we performed as an agency, I'd make it my personal mission to fix things.

The recession actually gave us the opportunity. Like agencies elsewhere in Arizona and across the country, ADEQ was forced to downsize, losing about a third of our workforce even as new regulatory requirements and initiatives from EPA mounted. We had to find a way to restore capacity. One of our first steps was to take a close, hard look at our ecosystem and its myriad of components that influence our decision-making. In short, we listened to our customers and what they said we must do increase value in delivering our products and services.

Another thing high on the list was to invest time in talking with our own labor force. Using a method of interview known as Appreciative Inquiry, we talked at length with of our staff to find out what brought them to State service in the first place, and to ADEQ specifically. We wanted to learn from each of them what changes they would like to see that could possibly rekindle the magic and make their "dream ADEQ" a reality within the next five years. These interviews were documented and resulted in many of the commitments ADEQ leadership set about achieving in the immediate aftermath of the recession to unleash our human potential within the organization.

In an admittedly bold move, we also worked with our elected leaders to remove ADEQ from the State's General Fund in favor of a fee-for-service model. Today, roughly 85 percent of ADEQ's $133 million budget comes from fees and other revenue from the regulated community. The shake-up actually gave ADEQ both the freedom and the imperative to begin making changes that our customers – the organizations paying for our products and services – demanded.

As seen from the employee perspective, the changes that need to occur are about building capacity so that we can do more environmental good. We have to stop performing those activities that do not result in value-added benefit for our customers (i.e., the end users of our products and services). As for our customers, they merely expect us to get faster and more efficient at delivering products and services they depend on us to provide. In an age of Netflix and Amazon, people now expect transparent and nearly instantaneous results. A lesson we have learned is that you ignore your customers' wishes and expectations at your peril, because they will invent solutions, and impose changes on you, changes you may not like.

Lean Deployment

We made a conscious choice at ADEQ to deploy Lean as our management philosophy. There are other business methods to choose from, and Lean alone is not the sole answer to all that ails us as an agency. We have other strategies in place to unleash human potential, strengthen core programs and increase outreach as a way to educate and inform citizens about the value ADEQ brings to Arizona.

Lean was our preferred method, in part, because as a science-based agency, it was already familiar to us. In fact, some of our staff had been engaging in what we like to call "guerilla Lean" on their own to make their work easier. Lean's emphasis on process improvement using the Plan-Do-Check-Act model (commonly referred to as the Deming Cycle) is known to the world over as a scientific method. ADEQ is committed to developing a culture of continuous improvement at the very core of our organization. The method by which we are deploying Lean is intended to build a strong foundation of continuous improvement by working iteratively, in stages, so that each unit and team uses the tools and techniques as we roll them out to improve the actual work that they do. Such hands-on learning helps build employee engagement, too, as our processes become faster and more value-added. Time no longer spent on wasteful activity is freed up so staff can focus on doing more environmental good. We also have deployed visual management tools, familiar in many industrial and manufacturing settings, so that staff members may track progress and see how their ideas translate into process improvement projects that tie directly to the outcome based performance measures in the agency's Strategic Plan.

Since beginning its Lean transformation in 2012, ADEQ has completed more than 150 process improvement projects to date. The results have been impressive. For example, we have:

- Reduced by more than 60 percent the average permitting timelines for the most complex permits
- Reduced by more than 50 percent the average time required to return facilities to compliance
- Reduced by more than 70 percent the average time to retrieve public records
- More than doubled the number of state-led underground storage tank cleanups (as compared to 2011)
- Closed two State superfund sites (zero closures in the previous 15+ years)

MyDEQ

In addition to the results from eliminating waste and streamlining processes to make them more efficient and value-added, customers invariably still expect even faster service. This is true even in cases

like ADEQ is experiencing where we've drastically improved our process times. The public no longer compares government agencies to one another anymore; they expect us to be just like Amazon. By deploying Lean in a systematic, iterative way, we are discovering the root causes of problems, reducing the number of wasteful steps in our processes, and in some cases, eliminating whole processes altogether because they are not value-added in terms of what customers are willing to pay for. Efficiencies gained, in turn, result in freed up capacity to look at faster, better, cheaper ways to deliver service. Without information technology, though, we are still unable to meet customer demand for immediate delivery of products and services.

E-technology is critical to an organization's ability to deliver radically simpler, faster service and respond to ever-growing customer expectation. But agencies must but be careful not to apply information technology solutions to existing inefficient, and often overly bureaucratic, ways of doing business. It's important first to do the laborious work up front, identifying customer value streams, ensuring you have standard work flow for similar type activities so continuous improvement can occur. If you get these steps out of order, you run an almost certain risk of locking in inefficiency because of the considerable financial investment such solutions often incur. Conversely, if performed in the correct sequence, process improvements involving information technology can greatly enhance and even accelerate improving the delivery of government services.

In my opinion, ADEQ is doing things the right way, as evidenced by the myDEQ Web-based portal project, which will enable the agency's customers to conduct all manner of business transactions they have with us, from submitting required data and reports to applying for and receiving permits. Over 18,000 facilities in Arizona currently conduct business with ADEQ, resulting in some 28,000 paper transactions a year. There is a lot of wasted effort embedded in the current process, and it invites error and delay in evaluating adherence to environmental requirements. For example, ADEQ receives between 25 and 500 applications for each of 70 permits types annually; only three of these are currently available on-line. This requires customers to fill out applications by hand, submit their paper copies to the Department, where staff then must manually enter the data into our system. We estimate that for many of these permitting processes, we can improve elapsed time in days, from application submission to permit issuance, by 67 to 99 percent.

Though certainly worthy goals, the point of myDEQ is not simply to make things simpler and easier for customers and staff. The fact is, real environmental good results, and the public at large benefits, when those we regulate are able to report their activities, receive feedback about compliance, and take corrective action quicker. After deploying myDEQ, those who are required to report monitoring data by ADEQ's groundwater protection permits will be able to submit their information on-line and get feedback about compliance within 24 hours. Prior to myDEQ, permittees would receive feedback regarding compliance at best three months after submitting the data, if at all. More timely feedback about compliance will mean an opportunity for quicker corrective action - a result Ohio has already documented after implementing on-line self-monitoring report forms.

Conclusion

Ultimately myDEQ will result in more environmental good as customers are able to complete their transactions with the agency faster with less potential for error. They will more likely be in compliance with environmental laws and rules at inspection because the whole process, which has been thoroughly leaned, will be increasingly transparent and streamlined for value added customer benefit. Customers get exactly what they need when they need it and are ready to receive it. This is the point of Lean, made radically faster and simpler when e-technology is applied in responsible order. Because we're doing these steps correctly, myDEQ will be more than the most ambitious project to date in the history of the agency; it will be the legacy from which further progress and environmental benefit result.

Mr. SHIMKUS. Thank you. Now, the Chair recognizes Commissioner David Cash from Massachusetts, the State of Massachusetts, and he is in charge of the Department of Environmental Protection. Sir, you are recognized for 5 minutes.

Mr. CASH. Thank you.

Mr. SHIMKUS. Well, I was going to say Commonwealth, but I couldn't get it out.

STATEMENT OF DAVID W. CASH

Mr. CASH. Thank you very much, Chairman Shimkus, and Ranking Member Tonko and other distinguished members of the subcommittee. It is a pleasure to be here today to talk about how the Massachusetts Department of Environmental Protection has been able to reach its two complementary goals of protecting public health and the environment and helping drive economic development. The agency, catalyzed by both significant reductions in resources and an evolving new economic development mission, devised a path forward that not only ensured the agency fulfilled its critical missions of protecting the environment, ensuring public health, and preserving the Commonwealth's natural resources, but also supported the needs of the Commonwealth's regulated community to facilitate growth and economic development.

Between 2002 and 2011, MassDEP's budget and staffing were reduced by more than 30 percent with no corresponding reduction in the agency's statutory environmental mission. In response, MassDEP undertook initiatives to restore alignment between available agency resources and work requirements. Those initiatives included identification and implementation of alternative regulatory approaches to streamline MassDEP's processes and procedures and pursuing major information management initiatives to increase automation and effectiveness of agency activities.

MassDEP's Regulatory Reform Initiative provided a mechanism for reviewing existing regulations to identify efficiency improvements which were required of all State agencies under Governor Deval Patrick's Economic Development Reorganization Act of 2010. MassDEP solicited regulatory reform ideas from a wide array of external stakeholders as well as from agency staff in consultation with other agencies including our Economic Development Agency. This solicitation effort included establishing an external Regulatory Reform Working Group to serve as key advisors in addition to hosting discussion forums with a number of other external stakeholders, with representatives as diverse as the Massachusetts Health Officers Association, Boston Bar Association, Associated Industries of Massachusetts, and a group of prominent environmental advocacy groups. Successful alternative approaches being used by other States across the Nation were also evaluated.

As a result of its Regulatory Reform Initiative, MassDEP recommended changes that (1) streamlined environmental permitting requirements, (2) eliminated certain State permits that either were of low environmental protection value or duplicated local approvals, and (3) encouraged better environmental outcomes by reducing barriers to environmentally and economically beneficial projects such as renewable energy. The resulting programmatic changes will achieve substantial agency efficiencies without sacrificing environ-

mental protection by allowing MassDEP to disinvest from low-value regulatory activities, rely upon local regulatory entities where redundant oversight currently exists, and utilize authorized and accredited third parties for selective environmental inspection and regulatory implementation services. These regulatory changes include improvements to the following MassDEP programs: the cleanup of oil and hazardous materials waste sites; public waterfront protection; wetlands protection; septic systems; solid waste transfer stations and landfills; and siting of clean energy projects. Promulgation of these regulations is complete, with the exception of wetlands and waterfront protection regulations which are due to be finished by the end of this year.

One significant example of how MassDEP's streamlining of the regulatory permitting process resulted in reducing barriers to environmentally beneficial projects is the use of closed and capped landfills to support renewable energy facilities, such as solar panels or wind turbines. Previously, MassDEP regulations prohibited the utilization of closed and capped landfills for any other purpose. By understanding the opportunity that renewable energy facilities could provide for closed landfills, MassDEP revised its regulations to allow renewable energy projects while maintaining environmental protection. Just in the last couple of years, 52 projects at about 100 megawatts of renewable energy have been proposed, and 23 of those are already running.

In addition to effectively revising its regulations, MassDEP is undertaking an agency-wide review of its business processes to achieve greater efficiency and consistency across the Agency. The effort was initiated in coordination with MassDEP's proposed information system development effort, known as EIPAS, Energy and Environmental Information and Public Access System, and is intended to enable both MassDEP to perform timely, predictable and cost-effective permitting and implement data-driven strategies and policies, while responding effectively to environmental threats.

In particular, EIPAS is designed to reduce uncertainty and time to businesses, improve stewardship of Massachusetts' environmental resources, use data-driven strategies and policies, increase civic engagement, and enhance collaboration and data sharing.

Massachusetts' Brownfield programs also has incentives that are available to buyers and sometimes sellers of contaminated property, provided it is a commitment to environmental cleanup and property redevelopment. We have committed to this clean-up in such a way that we are coordinating data gathering for a variety of different criteria that the developing community is interested in accessing and coordinating this with our MassGIS system, so through a mapping and data program, we are able to provide information to municipalities and the development community on these sites that show great promise for both renewable energy development and development of more traditional economic development.

Finally, by partnering with EPA on the E-Enterprise for the Environment Initiative, MassDEP and EPA can achieve additional governmental efficiencies while reducing administrative burden reduction. E-Enterprise for the Environment is an innovative 21st Century business strategy utilizing joint governance of States and EPA to improve the performance of our shared environmental en-

terprise by closely coordinating job program implementation and creating efficiencies for the regulated community and the public.

Through continued support of the E-Enterprise, I believe that EPA, the States and regulated entities will all benefit from a more coordinated environmental enterprise. I also believe that the E-Enterprise Initiative will maximize governmental efficiencies and significantly reduce administrative burdens through streamlining regulations, optimizing processes and coordinating system development activities.

Thank you for providing me this opportunity to provide testimony today. I am happy to take any questions.

[The prepared statement of Mr. Cash follows:]

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Testimony

Subcommittee on Environment and the Economy

House Committee on Energy and Commerce

Wednesday, July 23, 2014

By

David W. Cash, Commissioner

Massachusetts Department of Environmental Protection

Main Points

1. Massachusetts Department of Environmental Protection (MassDEP) is executing a multi pronged approach to improve the agency's ability to fulfill its critical mission of protecting the environment, the public health of Massachusetts citizens, and the Commonwealth's natural resources through regulatory reform and enhanced information management system design.
2. MassDEP has pursued these activities to reduce regulatory burden, maximize efficiencies, and increase agency responsiveness to the Commonwealth's regulated community, while maintaining or increasing environmental protection.

Testimony

Subcommittee on Environment and Economy

House Committee on Energy and Commerce

Wednesday, July 23, 2014

By

David W. Cash, Commissioner

Massachusetts Department of Environmental Protection

Thank you for inviting me here today to talk about how the Massachusetts Department of Environmental Protection has been able to reach its two complementary goals of protecting public health and the environment and helping drive economic development. The agency, catalyzed by both significant reductions in resources and an evolving new economic development mission, devised a path forward that not only ensured the agency fulfilled its critical mission of protecting the environment, ensuring public health, and preserving the Commonwealth's natural resources, but also supported the needs of the Commonwealth's regulated community to facilitate growth and economic development.

Between 2002 and 2011, MassDEP's budget and staffing were reduced by more than 30%, with no corresponding reduction in the agency's statutory environmental mission. In response, MassDEP undertook initiatives to restore alignment between available agency resources and work requirements. Those initiatives included: 1) identification and implementation of alternative regulatory approaches to streamline MassDEP's processes and procedures and 2) pursuing major information management initiatives to increase automation and effectiveness of agency activities.

MassDEP's Regulatory Reform Initiative provided a mechanism for reviewing existing regulations to identify efficiency improvements which were required of all state agencies under Governor Deval Patrick's Economic Development Reorganization Act of 2010. MassDEP solicited regulatory reform ideas from a wide array of external stakeholders, as well as from agency staff. This solicitation effort included establishing an external Regulatory Reform Working Group to serve as key advisors in addition to hosting discussion forums with a number of other external stakeholders (which represented diverse interest groups, such as the Massachusetts Health Officers Association, the Boston Bar Association, MassDEP's Superfund Advisory Committee, the Associated Industries of Massachusetts, the Massachusetts Municipal Association and a group of prominent environmental advocacy organizations). Successful alternative approaches being used by other states across the nation were also evaluated for application by MassDEP on behalf of the Commonwealth.

As a result of its Regulatory Reform Initiative, MassDEP recommended changes that 1) streamlined environmental permitting requirements, 2) eliminated certain state permits that either were of low environmental protection value or duplicated local approvals, and 3) encouraged better environmental outcomes by reducing barriers to environmentally beneficial projects such as renewable energy. The resulting programmatic changes, which are now being codified into final regulations, will achieve substantial agency efficiencies without sacrificing environmental protection, by allowing MassDEP to disinvest from low-value regulatory activities, rely upon local regulatory entities where redundant oversight currently exists, and utilize authorized and accredited third parties for selective environmental inspection and regulatory implementation services. These regulatory changes include improvements to the following MassDEP programs: the cleanup of oil and hazardous materials waste sites; public waterfront protection; wetlands protection; wastewater permitting; septic systems; solid waste transfer stations and landfills; asbestos abatement; and clean energy projects. Promulgation of

these regulations is complete, with the exception of wetlands and waterfront protection which are expected to be promulgated before the end of 2014.

One significant example of how MassDEP's streamlining of the regulatory permitting process resulted in reducing barriers to environmentally beneficial projects is the use of closed and capped landfills to support renewable energy facilities, such as solar panels or wind turbines. Previously, MassDEP regulations prohibited the utilization of closed and capped landfills for any other purpose. By understanding the opportunity that renewable energy facilities could provide for closed landfills, MassDEP revised its regulations to allow renewable energy projects while maintaining environmental protection. MassDEP has approved to date: 52 projects rated at 99.9 megawatts of renewable energy projects on closed landfills, and of those projects, there are 23 projects currently operating generating 43.8 megawatts.

In addition to effectively revising its regulations, MassDEP is undertaking an agency-wide review of its business processes to achieve greater efficiency and consistency across the Agency. This effort was initiated in coordination with MassDEP's proposed information system development effort, known as EIPAS. Once developed, the Energy and Environmental Information and Public Access System (EIPAS) is intended to enable both MassDEP (and its sister state environmental and energy agencies) to perform timely, predictable and cost-effective permitting, implement data driven strategies and policies, and respond effectively to environmental threats. In particular, EIPAS will be designed to enhance the permitting process by enabling the submittal of data electronically in an easy-to-use manner, including the online provisioning of fact sheets and permit pre-application guidelines to facilitate the permitting process for the permittee. While MassDEP has existing data systems and an online reporting system, these systems are built on out-dated technology and cannot meet agency needs.

Overall, the goals of the new EIPAS system include:

- Reduced uncertainty and time to business
- Improved stewardship of Massachusetts environmental resources through quicker identification of problems/violations resulting in faster mitigation and resolution.
- Execute data driven strategies and policies
- Increased civic engagement
- Enhance collaboration and data sharing with other agencies (state, Federal and municipalities).

Through implementation of the new EIPAS system, MassDEP expects to provide information to regulated entities and constituents that will promote economic development by utilizing improved permitting guidelines and tools to facilitate access to data regarding all aspects of the permitting process. One important example of how online data will provide valuable benefits to constituents and supports economic development pertains to Brownfields properties. The Commonwealth of Massachusetts is committed to the cleanup and redevelopment of Brownfields properties as a way to stimulate the state economy while promoting environmental protection goals. Typically, Brownfields properties have certain characteristics in common: these sites are typically abandoned or for sale or lease; they typically were utilized previously for commercial or industrial purposes; and the properties may have been reported previously to MassDEP because contamination has been found.

Massachusetts has Brownfields program incentives that are available to buyers, and sometimes sellers, of contaminated property, provided there is a commitment to environmental cleanup and property redevelopment. Brownfields properties are often located in communities where there is a pre-existing infrastructure, workforce and other amenities. There are multiple state incentives can help parties identify risk, limit liability, and fund the cleanup of Brownfields sites, enabling their re-use for industry, housing and other purposes. Through the future implementation of the EIPAS system, it is

MassDEP's intent to utilize Geographic Information Systems (GIS) to display Brownfield sites, in a map format, that are available for redevelopment, and provide easy access to corresponding documents, to enable realtors and other investors to more easily find sites that are available for development.

Finally, by partnering with EPA on the E-Enterprise for the Environment Initiative, MassDEP and EPA can achieve additional governmental efficiencies while reducing administrative burden reduction. E-Enterprise for the Environment is an innovative 21st Century business strategy utilizing joint governance of States and EPA (and soon Tribes) to improve the performance of our shared environmental enterprise by closely coordinating program implementation and creating efficiencies for the regulated community and the public.

Joint governance of the E-enterprise effort means EPA and the States together are coordinating investments, implementing program improvements and modernization, and achieving economies of scale. A new state-EPA governance body, the E-Enterprise Leadership Council, coordinates priority setting and funding. Together, we believe that this effort will make permitting simpler and more efficient for the regulated community while enhancing our shared environmental protection goals. MassDEP participates on the leadership board for E-Enterprise for the Environment and believes strongly in its vision and the opportunities this effort will bring to our regulated entities and constituents.

Through continued support of the E-Enterprise for the Environmental Initiative, I believe that EPA, the states and regulated entities will all benefit from a more coordinated environmental enterprise. I also believe that the E-Enterprise Initiative will maximize governmental efficiencies and significantly reduce administrative burdens through streamlining regulations, optimizing processes and coordinating system development activities.

Thank you for providing me with this opportunity to provide testimony today. I am happy to take any questions.

Mr. SHIMKUS. Thank you. Now I would like to recognize Director Teresa Marks, Director of Environmental Quality from the State of Arkansas.

STATEMENT OF TERESA MARKS

Ms. MARKS. Chairman Shimkus, Ranking Member Tonko and all the members of the subcommittee, thank you for inviting me to speak today about my department's ongoing efforts to modernize environmental regulations through electronic reporting.

By way of disclaimer, let me just say initially that I am probably the least tech-savvy person in this room. I am one of those people that when I fire up my computer in the morning, I am still amazed by the miracle of email. But I am a very practical person, and I realize the tremendous benefits that can be achieved through the use of electronic reporting.

The Arkansas Department of Environmental Quality strives to be responsive to members of the public, whether they are seeking water quality data, filling out a Title V air permit application or reporting an environmental concern.

We all realize that electronic reporting doesn't completely replace traditional ways of doing business. A citizen in Rose Bud wanting a speaker for the local Lion's Club will probably still pick up the phone, and the owner of a small salvage yard in Romance will most likely mail in their storm water permit application. But electronic reporting puts a wealth of information and opportunity at a user's fingertips and greatly benefits the department. Users save time and money, not to mention the sparing of a few trees. From the department's standpoint, electronic reporting allows us to more quickly respond to complaints, review permits and upload data. In this day and age, the large majority of the businesses and residents we serve are tech savvy so it behooves the department to keep up.

I would like to talk briefly about what ADEQ has done to modernize reporting and how we plan to improve and expand electronic offerings in the future. Since 2012, ADEQ has used the State and Local Emissions Inventory System, or SLEIS as it is referred to, to allow permitted facilities to submit point source emissions inventory data online. SLEIS is compliant with the Environmental Protection Agency's Cross-Media Electronic Reporting Regulation, commonly called CROMMER. ADEQ used an EPA grant to develop the system in partnership with environmental agencies in Arizona, Delaware, New Hampshire, West Virginia, and Tennessee. The system has proven popular in our State with 90 to 95 percent of reporting facilities entering their data directly into the system.

Hazardous waste generators and treatment, storage and disposal facilities in Arkansas can use a CROMMER-approved system to submit annual reports that detail how much hazardous waste a given facility generates or manages. Clean Water Act permit holders can submit discharge monitoring reports electronically using a NetDMR system developed by EPA and used nationally. Again, these reporting tools streamline the reporting process not only for the public, but for ADEQ's employees as well, resulting in the saving of both public and private resources.

An example of how modernized reporting has made the department more efficient is the use of electronic tablets in our Regulated

Storage Tanks Division. Each inspector at ADEQ in the Storage Tank Division carries such a tablet when performing facility inspections. The inspection forms are loaded onto the tablets, and the inspector is able to fill out the form on site while in the presence of the facility operator. Once the inspection is complete, the facility operator signs the inspection report, and with the use of secure software, the form is locked to ensure the signature can't be copied or the form changed without the facility operator's knowledge. The inspection report can be printed on site with the mobile printers they carry in their truck and given to the facility owner who can start addressing potential issues immediately instead of waiting for a copy of the report to arrive through traditional mail services.

We are excited about the strides we have made to modernize reporting in recent years, but in many ways the best is yet to come.

I often say that the citizens of Arkansas are our eyes and ears. Our inspectors insure that facilities across Arkansas comply with their permits, but they can't be everywhere all the time. Currently citizens can submit complaints online 24 hours a day or call our offices directly when they see something they view as an environmental hazard. Our staff is developing a mobile application that would allow users to submit complaints, along with GPS coordinates and photos, from their phones. Those details will aid our inspectors in determining the severity of any violation as well as the exact location of the area of concern. This information will be invaluable in addressing violations in a timely and efficient manner.

Finally, we are in the late stages of developing an ePortal system that will allow applicants to apply for permits, licenses and registrations online. The ePortal system, which we hope to roll out in the fall, was developed using CROMMER standards and is currently being reviewed by EPA. The first feature to go live will be the online permit applications submission process. The development of this system has involved an incredible amount of staff time and resources, a good bit of trial and error and a lot of testing. But we are confident the end result will be well worth the effort.

Electronic reporting has allowed the department to be more efficient and more responsive. We hope to continue to improve and expand our offerings to meet the demands of the public in the most efficient and effective way possible.

Thank you for your time. I would be happy to answer any questions.

[The prepared statement of Ms. Marks follows:]

Testimony

Hearing on Modernizing the Business of Environmental Regulation and Protection

House Committee on Energy and Commerce,

Subcommittee on Environment and the Economy

Wednesday, July 23, 2014

By

Teresa Marks, Director Arkansas Department of Environmental Quality

Main Points

1. The Arkansas Department of Environmental Quality (department) recognizes the importance of providing the public with procedures to obtain and provide information electronically
2. The department has taken a number of steps to modernize reporting for the public and our own employees through:
    a. Point Source Emissions Inventory
    b. Semi-annual monitoring and annual compliance certifications for Air Permits
    c. Hazardous waste generation
    d. Discharge monitoring reports
    e. Mobile inspections that can be uploaded from the field to the web
3. The department is continuing to develop and expand its electronic offerings through:
    a. ePortal - an online system that will provide online permitting
    b. mobile apps that will allow residents to submit complaints from their smartphones

Ladies and gentleman of the subcommittee, thank you for inviting me to speak today about my department's ongoing efforts to modernize environmental regulations through electronic reporting. The Arkansas Department of Environmental Quality strives to be responsive to members of the public, whether they're seeking water quality data, filling out a Title V air permit or reporting an environmental concern.

We all realize that electronic reporting doesn't completely replace traditional ways of doing business. A citizen in Rose Bud wanting a speaker for a local club will probably still pick up the phone and the owner of a small salvage yard in Romance will most likely mail in their stormwater permit. But electronic reporting puts a wealth of information and opportunity at a user's fingertips and greatly benefits the department. Users save time and money, not to mention the sparing of a few trees. From the department's standpoint, electronic reporting allows us to more quickly respond to complaints, review permits and upload data. In this day and age, the large majority of the businesses and residents we serve are tech savvy so it behooves the department to keep up.

I'd like to talk briefly about what ADEQ has done to modernize reporting and how we plan to improve and expand electronic offerings in the future.

Since 2012, ADEQ has used the State and Local Emissions Inventory System, or SLEIS to allow permitted facilities to submit point source emissions inventory data online. SLEIS is compliant with the Environmental Protection Agency's Cross-Media Electronic Reporting Regulation, commonly called CROMMER. ADEQ used an EPA grant to develop the system in partnership with environmental agencies in Arizona, Delaware, New Hampshire, West Virginia

and Tennessee. The system has proven popular in our state with 90 to 95 percent of reporting facilities entering their data directly into the system.

Hazardous waste generators and treatment, storage and disposal facilities in Arkansas can use a CROMMER-approved system to submit annual reports that detail how much hazardous waste a given facility generates or manages.

Clean Water Act permit holders can submit discharge monitoring reports electronically using a "NetDMR" system developed by EPA and used nationally.

Again, these reporting tools streamline the reporting process not only for the public, but for ADEQ's employees as well, resulting in the saving of both public and private resources.

An example of how modernized reporting has made the department more efficient is the use of electronic tablets in our Regulated Storage Tanks Division. Each inspector at ADEQ carries such a tablet when performing facility inspections. The inspection forms are loaded onto the tablets and the inspector is able to fill out the form on site while in the presence of the facility operator. Once the inspection is complete, the facility operator signs the inspection report and with the use of secure software the form is locked to ensure the signature can't be copied or the form changed without the facility operator's knowledge. The inspection report can be printed on site and given to the facility owner, who can start addressing potential issues instead of waiting for a copy of the report to arrive through traditional mail services.

We're excited about the strides we've made to modernize reporting in recent years, but in many ways the best is yet to come.

I often say that the citizens of Arkansas are our eyes and ears. Our inspectors insure that facilities across Arkansas comply with their permits, but they can't be everywhere all the time. Currently citizens can submit complaints online 24 hours a day or call our offices directly when they see something they view as an environmental hazard. Our staff is developing a mobile application that would allow users to submit complaints, along with GPS coordinates and photos, from their phones. Those details will aid our inspectors in determining the severity of any violation as well as the exact location of the area of concern. This information will be invaluable in addressing violations in a timely and efficient manner.

Finally, we're in the late stages of developing an ePortal system that will allow applicants to apply for permits, licenses and registrations online. The ePortal system, which we hope to roll out in the fall, was developed using CROMMER standards and is currently being reviewed by EPA. The first feature to go live will be the online permit applications submission process. The development of this system has involved an incredible amount of staff time and resources, a good bit of trial and error and a lot of testing. But we are confident the end result will be well worth the effort.

Electronic reporting has allowed the department to be more efficient and more responsive. We hope to continue to improve and expand our offerings to meet the demands of the public in the most efficient and effective way possible.

Thank you for your time. I'd be happy to answer any questions.

Mr. SHIMKUS. Thank you very much. Now I would like to recognize Mr. Bill Kovacs representing the U.S. Chamber of Commerce. Welcome, sir. Five minutes.

STATEMENT OF WILLIAM L. KOVACS

Mr. KOVACS. Good morning, Chairman Shimkus, Ranking Member Tonko and other members of the committee. Thank you for inviting me here today to discuss modernizing the business of environmental regulation and protection.

The committee should really be commended for this very important issue dealing with the Federal-State relationship, especially in the implementation of environmental laws. The relationship between the States and EPA is very important because the States manage most of the implementation, permitting, enforcement, inspections and data collections for Federal environmental programs. According to ECOS, the Environmental Council of the States, the States manage approximately 96 percent of the Federal programs that are delegated to the States. And I think it is fair to say that without the States' cooperation and willingness to assume these responsibilities, EPA would have a difficult time implementing Federal statutes.

The Chamber is also pleased to learn that ECOS and EPA are partnering in the E-Enterprise Initiative. My understanding is that E-Enterprise Initiative aims to modernize environmental programs in order to reduce paperwork, enhance services to the regulated community and streamline operations. E-Enterprise is presently in a concept phase, so it is kind of hard for us to offer a blanket support for the program. But we do offer a general support because we think it is an excellent idea, and any way in which the business community can help, we would be glad to assist.

It is important to note, however, that over the last—since really since the Carter administration, many of these efforts have been tried, and really, we have had somewhat of a mixed success. What seems to happen is the streamlining efforts literally get overwhelmed by a regulatory system that continuously becomes much more complex and much more costly. As a result, the States assume responsibility for managing more programs, implementing and enforcing more and newer regulations in shorter timeframes, and they have to do all of this with less money. In fact, the amount of money awarded to the States by the Federal Government has been reduced from $5 billion in fiscal year 2010 to $3.6 billion in fiscal year 2013.

So the complexity and the cost of the mandates imposed on the States are significant, and they are really going to get worse as we cut the budgets. I think just this year, if you look at it, you are going to see three very complex and staff-intensive rule-makings that the States are going to have to pick up over the years: greenhouse gas regulations for existing power plants, ozone for which the States are going to do implementation plans and Waters of the United States. These are three huge programs that they are going to have to deal with. So we need to be conscious of how much we can impose upon the States and how much we can ask them to do with the resources that we are willing to give them.

So I have several suggestions. One is anything we can do to help on E-Enterprise, let us know. We will help. The Chamber has been very active in pursuing what we call permit streamlining. We believe it is one of the few efforts in the Federal Government that has really garnered an enormous amount of bipartisan support. The House passed a bill on permit streamlining, H.R. 2641 with bipartisan support. The Senate Federal Permitting and Improvement Act, sponsored by Senator Portman, has six Democrat cosponsors, and permit streamlining was one of the top recommendations of the President's Jobs Council. It has been the subject of several presidential directives, and it has been the focus of the new infrastructure initiative released by the White House. I am not saying there is all agreement, but we are much closer on this issue than we are on most.

Second, I think we can look at just some practical things. EPA promulgates, for example, National Ambient Air Standards. Every 5 years it must be revised. By law they must at least review them. And every 5 years, EPA does revise them. This is very rushed because when you are a State, the States have to go back, and they have to, once they get the Federal mandate, they have to design it, they have to implement it and many times they have to litigate it. And we are saying that rather than doing something every 5 years, there should be more discretion because what happens is if you do everything in a 5-year period, the States really never catch up. They just finish, and they are onto a new system. And it is so rushed, that we really never get a time even to find out what is working and what is not. I think Federal agencies should truly look at the Unfunded Mandates Act and so should Congress. They should look at regulatory alternatives.

And finally, I really think that the States do a fabulous job. In the course of the year they end up doing hundreds of thousands of types of transactions and enforcements and inspections. But sometimes the EPA decides that it wants to over file them because it doesn't like one particular way in which they are handling an issue.

So anyway, with that I will quit, and thank you very much. I will answer any questions.

[The prepared statement of Mr. Kovacs follows:]

Statement of the U.S. Chamber of Commerce

FOR: HEARING ON "MODERNIZING THE BUSINESS OF ENVIRONMENTAL REGULATION AND PROTECTION"

TO: HOUSE COMMITTEE ON ENERGY AND COMMERCE, SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

BY: WILLIAM L. KOVACS
SENIOR VICE PRESIDENT, ENVIRONMENT, TECHNOLOGY & REGULATORY AFFAIRS

DATE: JULY 23, 2014

The Chamber's mission is to advance human progress through an economic, political and social system based on individual freedom, incentive, initiative, opportunity and responsibility.

The U.S. Chamber of Commerce is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations. The Chamber is dedicated to promoting, protecting, and defending America's free enterprise system.

More than 96% of Chamber member companies have fewer than 100 employees, and many of the nation's largest companies are also active members. We are therefore cognizant not only of the challenges facing smaller businesses, but also those facing the business community at large.

Besides representing a cross-section of the American business community with respect to the number of employees, major classifications of American business—e.g., manufacturing, retailing, services, construction, wholesalers, and finance—are represented. The Chamber has membership in all 50 states.

The Chamber's international reach is substantial as well. We believe that global interdependence provides opportunities, not threats. In addition to the American Chambers of Commerce abroad, an increasing number of our members engage in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

Positions on issues are developed by Chamber members serving on committees, subcommittees, councils, and task forces. Nearly 1,900 businesspeople participate in this process.

BEFORE THE COMMITTEE ON ENERGY AND COMMERCE OF THE U.S. HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

Hearing on "Modernizing the Business of Environmental Regulation and Protection"

Testimony of William L. Kovacs
Senior Vice President, Environment, Technology & Regulatory Affairs
U.S. Chamber of Commerce

July 23, 2014

On behalf of the U.S. Chamber of Commerce, thank you for the opportunity to testify on "Modernizing the Business of Environmental Regulation and Protection." My name is William L. Kovacs and I am Senior Vice President for Environment, Technology and Regulatory Affairs at the U.S. Chamber of Commerce. The Subcommittee should be commended for examining the current relationship between states and the federal government as it looks for ways to modernize environmental programs. This is a fundamental issue for the Chamber because states implement approximately **96.5%** of the environmental laws that are delegated to them.[1] As a result, the success of the Environmental Protection Agency (EPA) depends on the states to which the Agency provided $3.6 billion in 2013 for the administration of its programs.[2] That means that federal grants represent between 26% - 29 % of the environmental budgets of the states.[3] The bottom line: states continue to do the lion's share of the implementation of federal environmental programs with less and less money.

Against this background, the Chamber is pleased that the Environmental Council of the States (ECOS) is beginning its E-Enterprise initiative with EPA. The initiative aims to modernize environmental programs in order to reduce paperwork burdens, enhance services to the regulated community, and streamline operations. These are very worthy goals involving innovative and sensible ideas; however, we all need to remind ourselves that this is a difficult objective. Every administration and Congress since the Carter Administration has made similar attempts with limited success. In reality, the regulatory system has become much more costly and complex since the late 1970s. As a result, the states have assumed more responsibility for implementing these new regulations, and they have done so within shorter timeframes and generally with less funding from the federal government.

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[1] *See* https://www.dropbox.com/s/jgdbu4rql29oexh/EEnterprise%20One%20Pager%205_21%20FINAL.docx.
[2] *See* EPA FY 2014 Budget in Brief, p. 87 (http://www2.epa.gov/planandbudget/fy2014).
[3] *See* https://www.dropbox.com/s/jgdbu4rql29oexh/EEnterprise%20One%20Pager%205_21%20FINAL.docx.

When it comes to modernizing the environmental regulatory system, the Chamber recommends that the states and EPA focus on top-level challenges. The number one challenge the Chamber has identified is permit streamlining because it is the one opportunity that can help create jobs and growth, both of which are vital to environmental protection.

I. OVERVIEW

For several years now, the Chamber has promoted and endorsed efforts to improve the federal environmental review and permitting process. As the President himself has said on several occasions, including as recently as his January 28, 2014 State of the Union address, we need to "cut red tape" in order to get back in the business of building things and creating jobs. The principles behind ECOS's E-Enterprise – innovation, modernization, and efficiency in the environmental review and permitting process – echo these same sentiments. The Chamber supports these principles and the efforts of ECOS to promote them because they address one of the most significant problems plaguing our current regulatory system – the maze of approvals and legal challenges that must be navigated before any kind of permitting decision is made on a development project.

According to ECOS, E-Enterprise is "a joint initiative of States and EPA to improve environmental outcomes and enhance service to the regulated community, stakeholders and the public by using advanced monitoring and information technologies, optimizing operations, reducing paperwork and regulatory reporting burdens, increasing productivity through mobile applications, and facilitating access to more accurate information."[4] In 2013, EPA and ECOS signed a Memorandum of Agreement to begin the E-Enterprise initiative. That MOA focuses on ten principles, including streamlining and modernizing programs before automating them, respecting existing delegations and operating agreements, and ensuring that systems will work smoothly together for staff, regulated entities, and the public. ECOS maintains that "E-Enterprise will improve environmental results and dramatically enhance the delivery of environmental services to the regulated community, stakeholders, and the public."[5]

II. STATES IMPLEMENT MOST FEDERAL ENVIRONMENTAL REGULATIONS

As previously mentioned and as shown in the chart below, states implement approximately **96.5%** of federal environmental programs.[6] This is a tremendous burden for states, particularly from a time, money and resource perspective. To add to the difficulties that states face, according to ECOS, states have seen a trend in declining funds from the federal government to implement these programs.[7] Federal budget documents confirm that EPA's State

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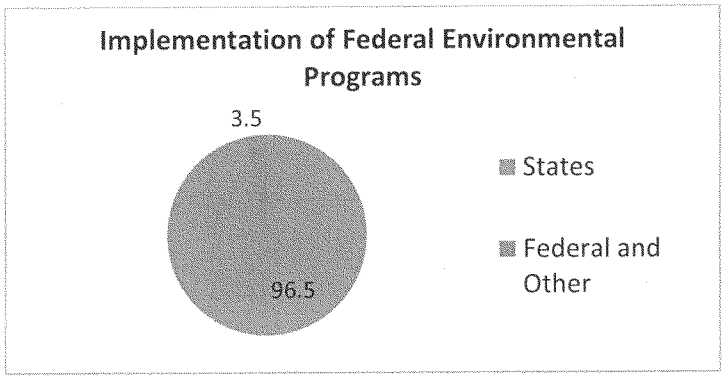
[4] *Id.*
[5] *Id.*
[6] *Id.* The chart on page 4 ("Implementation of Federal Environmental Programs") is based upon information from ECOS (https://www.dropbox.com/s/jgdbu4rql29oexh/EEnterprise%20One%20Pager%205_21%20FINAL.docx).
[7] *Id.*

and Tribal Assistance Grants (STAG) budget has decreased significantly in recent years.[8] While the largest funding source for state environmental agencies is permit fees, federal funding is the second largest source. ECOS reports that "[d]ecreasing funds from the federal government jeopardize states' ability to implement federally delegated programs and policies."[9]



We, the regulated community, recognize and appreciate the fact that states are carrying such a huge burden and doing so with shrinking resources. Indeed, that burden is only going to grow in the future as EPA issues many more complex and costly regulations. On the horizon for states are the implementation of federal carbon regulations for new and existing power plants, a new definition of "waters of the U.S." under the Clean Water Act, and potentially lower National Ambient Air Quality Standards for ozone. All of this amounts to a sobering conclusion – states are being asked to do more and more with less and less when it comes to implementing federal environmental programs and policies.

Consequently, efforts to streamline the federal environmental review and permitting process are more critical than ever. The good news is that this streamlining can be achieved through some commonsense measures: establishing time frames for the review and permitting process, selecting a lead agency to oversee the review and permitting process for individual projects, and requiring coordination among agencies for that process. The Chamber looks forward to working with Congress and ECOS to find ways to implement these types of measures.

III. THE FEDERAL ENVIRONMENTAL REVIEW AND PERMITTING SYSTEM IS BROKEN

The principles behind ECOS's E-Enterprise touch upon numerous issues involving the federal and state partnership that develops, promulgates and implements federal environmental

[8] *See* EPA FY 2014 Budget in Brief, p. 87 (http://www2.epa.gov/planandbudget/fy2014).

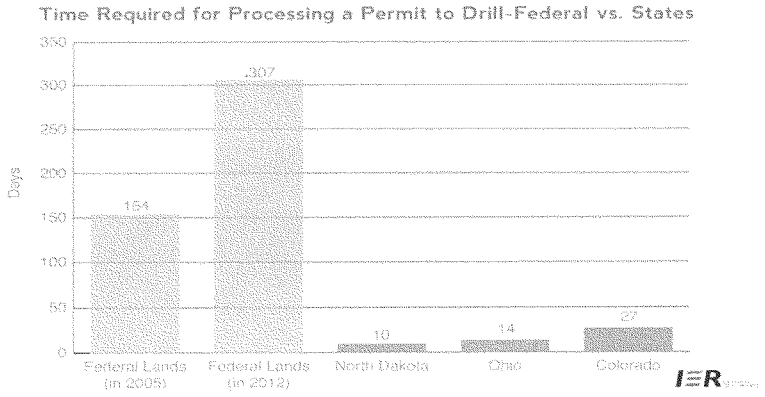
[9] *See* https://www.dropbox.com/s/jgdbu4rql29oexh/EEnterprise%20One%20Pager%205_21%20FINAL.docx.

programs and policies. There is an immediate and dire need to modernize and streamline that process.

The Hoover Dam was built in five years. The Empire State Building took one year and 45 days. The Pentagon, one of the world's largest office buildings, took less than a year and a half. The New Jersey Turnpike needed only four years from inception to completion. Fast forward to 2014, and the results are much different. Cape Wind needed over a decade to obtain the necessary permits to build an offshore wind farm. After obtaining federal leases in 2005, it took Shell Corporation seven years to obtain oil and gas exploration permits for the Beaufort Sea. And the Port of Savannah, Georgia, spent thirteen years reviewing a potential dredging project.

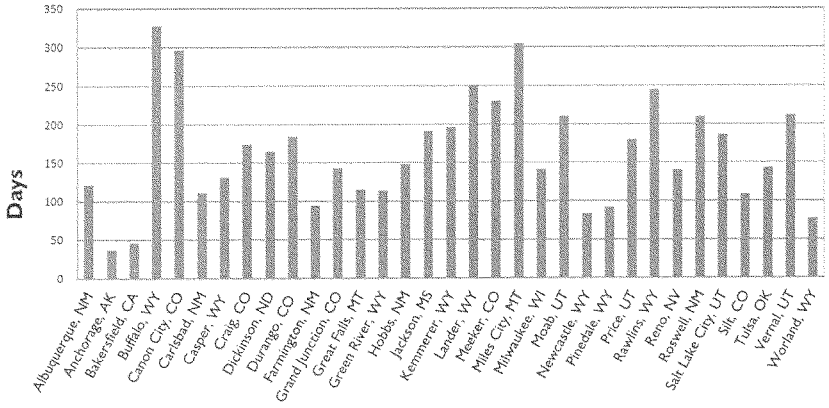
Significantly, these are not outlier projects – these projects represent the "rule" and not the "exceptions" when it comes to our federal environmental review and permitting process. According to an April 2014 report issued by the U.S. Government Accountability Office (GAO), when there is information available on review times under the National Environmental Policy Act (NEPA), the process is a slow one with the average preparation time for the environmental impact statements finalized in 2012 running **4.6 years**. This is the highest average since **1997**. When the costs associated with these reviews are tracked, they are, not surprisingly, high; for example, the Department of Energy's average payment for an environmental impact statement between 2003 and 2012 was **$6.6 million**.

At a February 5, 2013, hearing before the House Subcommittee on Energy and Power, the Institute for Energy Research (IER) testified that it currently takes more than **300 days** to process a permit to drill for oil and gas on federal lands onshore. This is in contrast to the time it takes to process a permit for the same drilling activities on private and state lands – **less than one month**.



In a June 2014 report, the Office of Inspector General of the U.S. Department of Interior reached similar conclusions to IER on the problems with the federal onshore oil and gas permitting process.[10] The DOI's IG concluded that "[i]n assessing the effectiveness and efficiency of the drilling permit process for oil and gas wells … the Bureau of Land Management (BLM) approves thousands of permits each year, but review times are **very long**."[11] According to the report findings, BLM reported an average of **228 calendar days**, or about **7.5 months**, to process an application for a permit to drill (APDs) during 2012. The graph below shows the average processing days for APDs in BLM's 33 field offices.[12]

Appendix 2: APD Average Processing Days



Oil and gas production on federal and tribal lands has averaged $3 billion in annual royalty revenues since 2011. Despite this significant revenue (and the potential for even more), the DOI's IG identified the following problems plaguing the permitting process: (1) neither BLM nor the operators applying for the permits can predict when the permits will be approved; (2) "review(s) may continue indefinitely" because target dates for completing permit applications are neither set nor enforced; (3) "the process at most field offices does not have sufficient supervision to ensure timely completion; and (4) BLM does not have a "results-oriented performance goal" to tackle processing times.[13]

These delays and inefficiencies in our country's federal environmental review and permitting process are systemic problems that are pervading our country across geographic and

[10] *Available at* http://www.doi.gov/oig/reports/upload/CR-EV-MOA-0003-2013Public.pdf.
[11] *Id.* at 1.
[12] *Id.* at 19.
[13] *Id.* at 1.

industry lines. In the World Bank and International Finance Corporation's most recent "Ease of Doing Business" index, the United States ranks **34th in the world** in the category "Dealing with Construction Permits" (in other words, permitting and building projects). If this ranking and the problems with the permitting system persist, real dollars will be lost, along with good-paying jobs. The Associated General Contractors of America testified before this Subcommittee last week that in 2013, $911 billion in public and private investment in the construction of residential and nonresidential structures occurred in the United States.[14] The construction industry contributes significantly to employment and GDP – "[a]n extra $1 billion in nonresidential construction spending adds about "3.4 billion to GDP, about $1.1 billion to personal earnings and creates or sustains 28,500 jobs."[15]

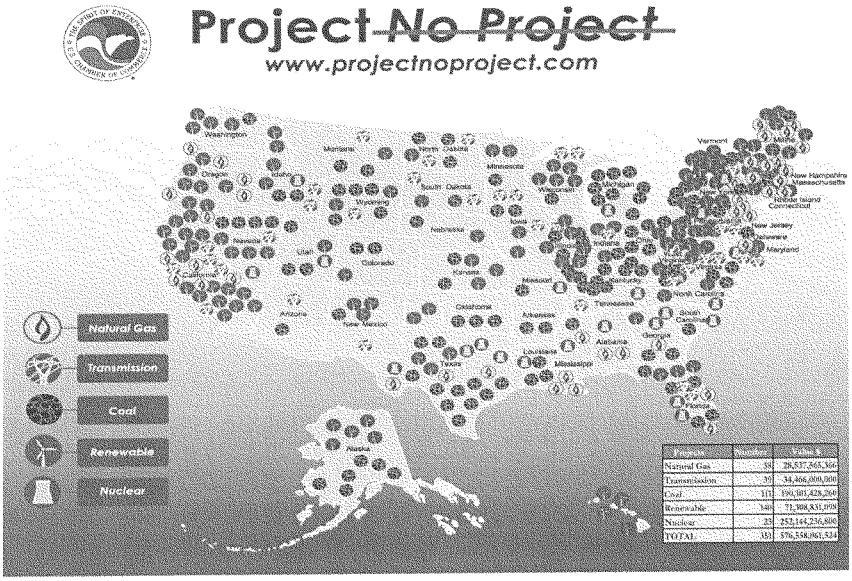
If our great nation is going to begin creating jobs at a faster rate, we must get back in the business of building things. But that is only going to happen if we figure out how to eliminate inefficiency, duplication and delays in our federal environmental review and permitting process. Otherwise, that process will continue to lead to stalled or even cancelled projects across the country.

IV. THE IMPACTS OF A DELAYED AND INEFFICIENT ENVIRONMENTAL REVIEW AND PERMITTING PROCESS

In 2009, the Chamber unveiled *Project No Project*, an initiative that catalogued the broad range of energy projects that were delayed or halted because of the inability to obtain permits and endless legal challenges by opponents of development. Results of the assessment are compiled onto the *Project No Project* Website (http://www.projectnoproject.com). The purpose of the initiative was to understand the impacts of serious project impediments on our nation. It remains the only attempt to catalogue the wide array of energy projects being challenged nationwide.

Through *Project No Project*, the Chamber identified usable information for 333 distinct projects. These included 22 nuclear projects, 1 nuclear disposal site, 21 transmission projects, 38 gas and platform projects, 111 coal projects and 140 renewable energy projects—notably 89 wind, 4 wave, 10 solar, 7 hydropower, 29 ethanol/biomass and 1 geothermal project. The multi-state electric transmission projects were apportioned among the states, resulting in 351 state-level projects attributed to forty-nine states.

[14] *See* http://transportation.house.gov/uploadedfiles/2014-07-15-pilconis.pdf.
[15] *Id.* at 9.



It quickly became clear from our research that the nation's complex, disorganized process for permitting new facilities and its frequent manipulation by opponents constitute a major impediment to economic development and job creation. This realization prompted the next question: what are the economic effects of this problem on the economy and job growth?

According to an economic study that we commissioned, the successful construction of the **351 projects** identified in the *Project No Project* inventory could have produced a **$1.1 trillion** short-term boost to the economy and created **1.9 million jobs annually** during the projected seven years of construction.[16] Moreover, if these facilities had been constructed, they would have continued to generate jobs because they would have operated for years or even decades. According to the study, in aggregate, each year of operation of these projects could have generated **$145 billion** in economic benefits and involved **791,000 jobs**.

[16] The Chamber-commissioned economic study is titled *Progress Denied: The Potential Economic Impact of Permitting Challenges Facing Proposed Energy Projects*, which was produced by Steve Pociask of TeleNomic Research, LLC and Joseph P. Fuhr, Jr., Ph.D, of Widener University. An electronic copy of the study can be accessed at http://www.projectnoproject.com/progress-denied-a-study-on-the-potential-economic-impact-of-permitting-challenges-facing-proposed-energy-projects/.

The impacts of this country's seriously flawed environmental review and permitting process sometimes go beyond facts and figures. And even more notably, those anecdotal impacts often are highlighted by as many Democrats as Republicans.

- In April 2013, Senator Barbara Boxer (CA) was quoted as saying, **"[t]he environmentalists don't like to have any deadlines set so that they can stall projects forever**...I think it's wrong, and I have many cases in California where absolutely necessary flood control projects have been held up for so long that people are suffering from the adverse impacts of flooding."[17] She also added that she did not think that environmentalists' concerns about potentially rushed permit approvals were "legitimate."[18] The Senator made these comments in support of legislation that would impose deadlines for environmental reviews of water projects.

- The environmental review process for a project to deepen the harbor in Savannah, Georgia began in 1999. The review was still not completed in September 2013 when Vice President Biden visited the Savannah port. During his visit, the Vice President – recognizing that something must be done about these delayed projects – was quoted as saying, "What are we doing here? We're arguing about whether or not to deepen this port? ... **It's time we get moving. I'm sick of this. Folks, this isn't a partisan issue. It's an economic issue**."[19]

- Democratic Governor Jerry Brown of California, in his January 24, 2013 State of the State, called upon lawmakers to "rethink and streamline our regulatory procedures" so that they are "based upon more consistent standards that **provide greater certainty and cut needless delays**."

- Minnesota Governor Mark Dayton (Democratic-Farmer-Labor Party) increased his efforts to expedite the permitting process by announcing in January 2013 that he had directed the Minnesota Department of Natural Resources and the Minnesota Pollution Control Agency to issue or deny permits within 90 or 150 days (depending on the nature and complexity of the permit), rather than allowing applications to languish indefinitely.

As the Vice President so articulately phrased it – this issue is not a partisan one, but an economic one. Streamlining our permitting process, developing and building projects, and getting the American people back to work should be the priorities of everyone, from Democrats to Republicans, and state governments to the federal government. The improved process aspects called for in ECOS's E-Enterprise initiative are exactly the type of efforts that will "cut red tape," thereby creating jobs and generating economic revenue for the United States.

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[17] April 28, 2013 *Los Angeles Times* article by Richard Simon, "Sen. Boxer finds herself at odds with environmentalists." (*Available at* http.latimes.com/news/nationworld/nation/la-na-boxer-environmentalists-20130429,0,1134896.story.)

[18] *Id.*

[19] http://www.ajc.com/news/news/breaking-news/vice-president-vows-savannah-dredging-will-happen-/nZyTG/

Greater efficiency in the permitting system results in more certainty for the business community, particularly for the purposes of project investment and planning. The streamlining efforts enacted in the American Recovery and Reinvestment Act, and both recent highway transportation bills (SAFETEA-LU and MAP-21) are proven successes when it comes to the federal environmental review and permitting system. According to CEQ data, of the 192,707 NEPA reviews required for Recovery Act projects, **184,733** of them were satisfied with the streamlining provisions, i.e. categorical exclusions.[20] Similarly, the Federal Highway Administration has reported that the process streamlining component of SAFETEA-LU has cut the time to complete a NEPA review in half, from **73 months down to 36.85 months**.[21] The next step is bringing similar successes and positive statistics to the federal environmental review and permitting process as a whole, through initiatives like E-Enterprise and the permit streamlining legislation supported by the Chamber (H.R. 2641 and S. 1397).

V. MODERNIZING AND STREAMLINING THE PERMITTING PROCESS IS A PRIORITY FOR THE BUSINESS COMMUNITY

As previously mentioned, last year ECOS and EPA signed a MOA with ten organizing principles forming the basis for the E-Enterprise initiative. While the regulated community would prefer to have a seat at the table for such discussions and while the Chamber may not agree with every aspect of E-Enterprise, the foundational concepts of the initiative are important objectives for the business community as a whole. As the states and EPA proceed with their E-Enterprise initiative, the Chamber believes there are certain modifications to the initiative that could be easily achieved. The need for these modifications is prompted by the Chamber's experience with analogous reform proposals that have garnered significant agreement from differing political perspectives. These recommendations are as follows:

- **Increase Coordination among Federal & State Entities:** E-Enterprise aims overall to encourage more coordination among federal and state officials on environmental permitting for projects. However, the E-Enterprise initiative appears limited to reducing reporting burdens and establishing easier access to environmental data. If permit coordination is the focus, the Chamber urges support of S. 1397 (Federal Permitting Improvement Act) and H.R. 2641 (Responsibly And Professionally Invigorating Development [RAPID] Act). These bills not only would provide better access to information through the development of a regulatory dashboard – an Obama Administration initiative – but also would provide the broader structure for streamlining permits without changing substantive laws. This legislation would require coordination among multiple agencies involved in environmental reviews, provide for concurrent reviews by agencies rather than serial reviews, and allow state-level

[20] The Eleventh and Final Report on the National Environmental Policy Act Status and Progress for American Recovery and Reinvestment Act of 2009 Activities and Projects, *available at* http://ceq.hss.doe.gov/ceq_reports/reports_congress_nov2011.html.

[21] Federal Highway Administration, *Integrating Freight into NEPA Analysis* (Sept. 2010), available at http://ops.fhwa.dot.gov/publications/fhwahop10033/index.html.

environmental reviews to be used where comparable thereby avoiding needless duplication of state work by federal reviewers.

- **Increase Transparency:** E-Enterprise seeks to increase stakeholders' access to information and data used and gathered during the environmental review and permitting process. Increased transparency in the regulatory process is a high priority for the Chamber and its members. From the regulated community's perspective, such transparency is important to understanding how regulations are formulated, justified and implemented. It should be noted, however, that the Information Quality Act and the Data Access Act have been law for years, but generally have been ignored by federal agencies. If the goal of the regulatory process is to work from the best information available, then agencies need to secure such information by being open to input from the public, but also release information to the public so it can better evaluate regulatory actions. Therefore, the transparency issue really rests in the hands of EPA. EPA must realize that the use of high quality data means the development of high quality policy.

- **Innovation and Modernization:** E-Enterprise also endeavors to innovate and modernize the environmental review and permitting process. For example, it calls for updating the technology and information systems behind the federal and state permitting processes, i.e. online permits. To the extent these types of updates would bring efficiency and streamlined processes to the environmental review and permitting system, the Chamber and its members are supportive. These efforts to innovate and modernize also would save states and the regulated community costs, time and other resources. Notably, we must keep in mind that as records are made electronic and public, the federal and state agencies have a fundamental duty to protect Confidential Business Information.

- **Increase Review Time for Standards:** EPA administers statutes that require periodic review of the standards established, such as the National Ambient Air Quality Standards. Generally, EPA makes the standard more stringent with each review and sometimes these changes occur before the state has completed the needed actions to comply with the prior review. In a sense, EPA creates a merry-go-round of regulations that place never ending responsibilities on the states. By forcing such activities, EPA fails to appreciate the limited resources of the states or the uncertainty that it imposes on the regulated community.[22] EPA should consult the states on a regular basis to ensure implementation of these kinds of standards can be achieved in a reasonable manner.

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[22] Last month, Reps. Salmon (AZ) and Olson (TX) introduced H.R. 4947, the Ozone Regulatory Delay and Extension of Assessment Length Act of 2014, or "the ORDEAL Act." Senator Flake introduced a companion bill in the Senate, S. 2514. These bills would revise the EPA's existing timeline to review the NAAQS and air quality criteria from 5-year intervals to 10-year intervals. Additionally, they would prohibit the EPA from finalizing, implementing or enforcing a revised ozone NAAQS until 2018, putting it on a true 10-year cycle. The additional time between the requisite NAAQS reviews would mean a more efficient use of federal and state agency resources, less confusion in the review and implementation of NAAQS, and NAAQS reviews based upon more comprehensive data.

- **Improve Cost-Benefit Analysis:** When EPA undertakes a cost-benefit analysis, it should identify clearly the cost per ton reduction, as it has in the past, but which more recently it has abandoned. It also should state the primary pollutant sought to be reduced, how much of it will be reduced, and the benefits directly related to the targeted pollutant.

- **No Micromanagement of State Delegated Programs:** EPA should not micromanage state delegated and approved programs. Once EPA delegates a program to the state, it should not micromanage the program because of a specific issue over which there is disagreement. States undertake hundreds of thousands of regulatory actions in the course of administering a delegated program. When EPA disagrees with one state action, often it will "overfile" or take enforcement action. Unless EPA is willing to take back control of the delegated program, it should not micromanage the details of the program.

- **Update SAB Study on Reducing Risk:** EPA should update its Science Advisory Board study, "Reducing Risk: Setting Priorities and Strategies for Environmental Protection." In 1990, EPA undertook this study to compare the seriousness of different risks so as to correlate the resources dedicated to different environmental problems and the relative risks posed by these problems. At this time, EPA and the states should jointly undertake this task so that in an age of limited resources they can prioritize those problems that pose the greatest risk and allocate resources accordingly.

VI. CONCLUSION

As even more of the implementation burden of an ever-growing number of federal environmental regulations has fallen on the states, the environmental review and permitting system has not kept up in terms of efficiency, modernization and innovation. The business community understands – and sympathizes with – the weight of the financial and resources burden that states must carry in this system. As a result, the Chamber and its members view permit streamlining efforts like ECOS's E-Enterprise initiative as critical to improving the federal environmental review and permitting system and alleviating the burden placed on states.

If this nation is to create more jobs and generate more revenue, it has to begin building again. For this to occur, permit streamlining efforts are imperative. We commend the leadership and members of this Subcommittee, as well as ECOS, for bringing much needed attention to this problem and for setting forth practical and feasible solutions to the problem. Thank you for the opportunity to testify today. I look forward to answering any questions that you may have.

Mr. SHIMKUS. Thank you very much. The Chair now recognizes Scott Slesinger, Legislative Director for the National Resources Defense Council. He has appeared before us many times. Welcome back, and you are recognized for 5 minutes.

STATEMENT OF SCOTT SLESINGER

Mr. SLESINGER. Thank you, Mr. Chairman, Ranking Member Tonko, members of the subcommittee. Thank you for the opportunity to testify today. My name is Scott Slesinger, and I am the Legislative Director of the Natural Resources Defense Council. NRDC is a nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment.

Before becoming the legislative director, I spent a decade promoting the e-Manifest concept as a lobbyist for the hazardous waste disposal industry. My remarks reflect that experience as well as my years as a regulator at EPA and my current perspective at NRDC.

The striking lesson trying to move towards electronic manifest was how new technologies gradually put to rest concerns over security and costs. There was plenty of resistance at the outset. The Justice Department had serious concerns about anything but a handwritten signature, based on hundreds of years of American and common law jurisprudence. This concern about new-fangled technology in some ways echoed a mortgage bankers' magazine article from 1947 that talked about the signature problems spawned by a new technological invention that they said was made for counterfeiters: the ball point pen.

When I left the industry in 2009, the major technology problem was how to allow waste haulers to confirm delivery by use of a landline. The idea that virtually everyone would have a smartphone was just not contemplated. Another problem was how and who should pay for the reduction of the paperwork burden on companies. This was finally compromised, and the bill authorizing electronic manifests passed this committee and was signed into law.

A key lesson learned through this process is that technology keeps changing. The goal of finding a platform and using it over and over again, which is contemplated in the E-Enterprise principles, must be done with care and eyes wide open. Tomorrow's technology may make today's cloud tomorrow's VCR.

The other hurdle to get e-Manifest authorized was how hard it was to pass even what we thought was minor changes in basic environmental laws. Manifest changes at least 10 years. Many more of the advances in electronic reporting will regulatory changes. However, regulatory process because of executive orders and required impact statements is so convoluted it often takes the agency more than 6 years to do a simple regulatory change, enough time to make a rule dealing with new technologies obsolete before the rule is final. Proposals to expand these processes for guidance documents and adding on top of that something like the REINS Act places epic hostile artificial barriers in the path of EPA and State modernization.

Using new technologies is necessary as industry becomes wired and budget cuts make working the traditional way unsustainable. But these benefits come at a financial start-up cost to develop while this Congress continues to eviscerate the EPA budget.

The E-Enterprise vision implies that improving environmental outcomes and dramatically enhancing services to the regulated community and public are equal principles. We believe the number one goal of E-Enterprise should and must be striving for better environmental outcomes. Reducing paperwork, as with the manifest, is a nice outcome. But EPA should not be investing its few dollars, now at a long-time low, for anything that does not advance EPA's mission of improving the environment and public health.

The movement towards E-Enterprise in enforcement is positive because it could lead to more and cheaper inspections and enforcement. However, because of the budget cuts E-Enterprise is helpful but insufficient. However, EPA's strategic plan promises significantly less compliance and enforcement efforts going forward, even using new technologies. Cuts in environmental enforcement inevitably lead to less protection and unfair competitive disadvantage to responsible companies who play by the rules. EPA's plan to use technology and aim its enforcement at the greatest threats in the largest companies lies a problem. How can they tell where these threats are with their acknowledged reduced capacity? Aiming at just the large companies doesn't help, either. Actual experience shows that many times, such as the recent spill in West Virginia or the kepone spill that closed the James River, that very small companies can cause substantial harm. Recent amendments and proposals outlined in my footnotes in my testimony show that essentially taking low-profit-margin recyclers of toxic hazardous materials off the grid—companies under tremendous pressure to cut corners—worry the environmental community and these companies' local communities, at least in those communities that even know what these companies are doing. High-tech monitoring only works with companies that have the technology and the States even know exist.

Because of other priorities, the environmental community, and particularly the environmental justice communities, without a substantial outreach by the States and EPA, could be detached to the E-Enterprise effort. We believe the final products of E-Enterprise will be significantly improved if meaningful efforts are made to include these customers in the development of these programs.

Thank you.

[The prepared statement of Mr. Slesinger follows:]

TESTIMONY BY SCOTT SLESINGER

LEGISLATIVE DIRECTOR OF

THE NATURAL RESOURCES DEFENSE COUNCIL

FOR THE HEARING ENTITLED "MODERNIZING THE BUSINESS OF ENVIRONMENTAL REGULATION AND PROTECTION"

BEFORE THE COMMITTEE ON ENERGY AND COMMERCE

THE SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

JULY 23, 2014

Mr. Chairman and members of the Committee, Thank you for the opportunity to testify today. My name is Scott Slesinger, and I am the Legislative Director for the Natural Resources Defense Council (NRDC). NRDC is a nonprofit organization of scientists, lawyers, and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has over 1.4 million members and online activists nationwide, served by more than 350 lawyers, scientists and other professionals from offices in New York, Washington, Los Angeles, San Francisco, Chicago, and Beijing.

Before becoming the legislative director of NRDC, I spent about a decade promoting the e-manifest concept as the lobbyist for the hazardous waste disposal industry. My remarks reflect that experience as well as my years before that as a regulator at EPA and my current perspective at NRDC.

Moving to electronic manifests

One of the largest paperwork burdens of the federal government was, and is, the tracking of hazardous waste under the Resource Conservation and Recovery Act (RCRA). RCRA tracks waste from cradle to grave, often with six or more paper copies. The striking lesson trying to move towards electronic manifest was how new technologies gradually put to rest concerns over security and costs.

There was plenty of resistance at the outset. The Justice Department had serious concerns about anything but a handwritten signature, based on hundreds of years of American and common law jurisprudence. This concern about new-fangled technology in some ways echoed a mortgage

bankers' magazine article from 1947 that talked about signature problems spawned by a new technological invention that they said was made for counterfeiters, the ball point pen.

Another issue holding up the manifest was cost to industry. When we started the campaign, companies were concerned about the costs of purchasing computers. Declining prices made this concern vanish, as all those companies ended up having to buy computers for other reasons anyway. When I left the industry in 2009, the major technology problem was how to allow waste haulers to confirm delivery by use of a landline; the idea that virtually everyone would have smartphones was not contemplated.

Another problem was how and who should pay for the reduction of paperwork burden on companies. This was finally compromised and the bill authorizing electronic manifests passed this committee and was signed into law on October 5, 2012.

Lessons Learned from Manifests

The state-federal partnership for E-Enterprise has and will learn lessons from the e-manifest history, not only going forward during its implementation but also from the legislative history. A key lesson learned through this process is that technology keeps changing. The goal of finding a platform and using it over and over again, which is contemplated in the E-Enterprise Principles, must be done with care and eyes wide-open – tomorrow's technology may make today's cloud tomorrow's VCR.

The other hurdle to get e-manifest authorized was how hard it was to pass even minor changes to basic environmental laws. Environmental statutes and the implementation of these laws have been under significant attack for years. Requiring changes to move forward electronic commerce may require minor changes. However, such a legislative process allows for mischief that many

would like to avoid. Many more of the advances in electronic reporting will not require legislative changes but regulatory amendments. However, regulatory process through executive orders and required impact statements is so convoluted it often takes the agency more than six years to do a simple regulatory change; enough time to make a rule dealing with new technologies obsolete before it is even final. Proposals to expand these processes for guidance documents and adding on top of that something like the REINS Act, places epic hostile artificial barriers in the path of EPA modernization.

The Need for E-Enterprise to improve the environment

Some of the examples of new technologies under E-Enterprise, NRDC heartily endorse. Many states have taken the lead that others will surely copy. Some of the new technologies that some states have used making inspections easier, cheaper and more efficient have had great environmental benefits. Some states, such as Massachusetts, have been able to map its wetlands lost better through the use of overflights. Expanding these technologies should be broadly supported. Citizens using new technology for measuring pollution levels are also welcomed.

Moving towards E-Enterprise, to make the interaction with EPA and the public and industry better, is an admirable goal. Making it easier for companies to find out what the requirements are and making it easy to fill out forms and permit application is a worthy endeavor. Letting companies easily go online to find out the status of their applications is helpful.

But these benefits come at a price to develop while this Congress continues to eviscerate the EPA budget. The "E-Enterprise Vision states that "improv[ing] environmental outcomes" and "dramatically enhance[ing]services to the regulated community and the public" are equal

principles. We believe the number one goal of E-enterprise should and must be striving for better environmental outcomes. Reducing paperwork, as with the manifest, is a nice outcome. And the fact that the major beneficiaries of this rule will be the users and the users will eventually be paying for establishing and operating the e-manifest system, not the taxpayers, is proper. But EPA should not be investing its few dollars – now at a long-time low -- for anything that does not advance EPA mission of improving the environment and public health. Improving the interactive experience of the regulators and even the public must come second to EPA's core responsibility of improving the environment. We urge that the principles reflected this point.

The public and public health and environmental groups support greater transparency, better monitoring, real-time monitoring, electronic reporting, greater use of the Internet, apps etc. We are impressed with some of the technologies; many tested by states that have increased the efficiency and number of inspections. But we should all acknowledge candidly that the greatest resistance to many of these things, such as citizen reporting, have come from regulated industries and trade associations. It has been our experience that the lowest common denominator among these groups does not want local communities and the public to have better and timelier access to pollution data, especially not in real time over the Internet.

E-Enterprise and Enforcement

The movement towards E-Enterprise in enforcement is positive because it could lead to more and cheaper inspections and enforcement. However, because of the budget cuts E-Enterprise is helpful but insufficient. Cuts in environmental enforcement inevitably lead to less protective outcomes and unfair competitive disadvantage to responsible companies who play by the rules. With unprecedented cuts in EPA's budget, EPA recently announced plans to significantly scale

back traditional enforcement of environmental law but couched it with a positive spin of using new technologies. In its strategic plan for fiscal years 2014-2018, the Agency expects to conduct about 25% fewer compliance inspections and initiate approximately 20% fewer civil enforcement actions, as compared to recent years. Specifically, EPA is reducing its five-year cumulative inspection and evaluation goal from 105,000 inspections to 79,000 inspections. The agency expects to initiate fewer civil judicial and administrative enforcement cases, setting its initiation goal at 14,000 compared to an earlier 19,500. EPA plans to aim its enforcement at the greatest threats, but how can they tell where these threats are with its acknowledged reduced capacity?

EPA states that this so-called "next generation compliance"—relying more on industry self-reporting, advanced monitoring, and notifications by communities—will not diminish compliance with laws or successful enforcement against violations. These are untested, and we think based on the state of available information, suspect claims. We currently lack an adequate network of advanced monitoring allowing real-time reporting. Concentrating on the largest sources ignores the real experience that many times, such as the recent spill in West Virginia or the kepone spill that closed the James River that very small companies, can cause substantial harm. Recent amendments[1] and proposals[2] that essentially take low-profit margin recyclers of

[1] One appropriation rider in the House bill exempts hazardous waste recycling operations under RCRA. This special interest prohibition would block the EPA proposed rule applicable to scrap metal and shredded circuit board recyclers, exempting them from requirements to (1) formally notify EPA of activities (thereby giving the state, affected communities and EPA information regarding location, quantities and nature of materials being handled); (2) demonstrate recycling is "legitimate" (unlike sham recycling which has led to Superfund sites); (3) comply with containment requirements to prevent the release of hazardous materials; and (4) comply with requirements regarding recordkeeping so that waste is not speculatively accumulated for extended periods of time, thereby increasing the risk of releases and abandonment. EPA has identified more than 200 cases of damage to human health or the environment from hazardous waste recycling, and 96% were at facilities operating under RCRA exemptions like the one proposed in this rider.

[2] EPA's Definition of Solid Waste rule, (proposed in 2011 at 76 Fed. Reg. 44,094) which details the reach of RCRA, proposes to exempt toxic waste recyclers under a false premise that their contractors are responsible for any environmental harm these subcontractors cause. These companies ship hazardous waste (e.g. solvents, organic chemicals, steel mill waste) and return it to generators in a usable form. They are essentially off-site reclaimers, but EPA proposes to exempt them from permitting and financial assurance under the false notion they are exempted as "under the control of the generators." There are at least two sites

toxic hazardous materials off the grid –companies under tremendous pressure to cut corners--worry the environmental community and these companies local communities--at least in those communities that even know what these companies are doing.

Conclusion

The benefit of using our digital technology to make regulators and enforcement personnel more efficient is something we strongly support. However, as the environmental community continues to defend environmental safeguards from a seemingly endless legislative onslaught, the movement to E-Enterprise will be a low priority for us. I think everyone would agree that future input from the environmental community and particularly environmental justice communities will be lacking without substantial outreach by the states and EPA. And moving forward without these key customers will adversely affect the final product. I believe EPA and state assistance to those communities to participate in the process would be a useful endeavor.

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involving tolling contractors that are already Superfund sites, including one is currently subject to a Unilateral Administrative Order under RCRA for cleanup of more than a thousand containers of hazardous waste and hazardous waste releases (Docket No. RCRA-05-2012-0014, *available at* http://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/4A01728D22E9D8DA85257A87001B852E/$File/RCRA-05-2012-0014%20UAO%209-27-2012.PDF.

Mr. SHIMKUS. Thank you very much. And last but not least is Matt Wasson, a Director of Programs for the group Appalachian Voices. Sir, you are recognized for 5 minutes.

STATEMENT OF MATTHEW F. WASSON

Mr. WASSON. Thank you, Chairman Shimkus, Ranking Member Tonko and members of the subcommittee for the opportunity to speak today. My name is Matt Wasson. I am the Director of Programs at Appalachian Voices. We are an organization dedicated to protecting the land, air, water and people of the Southern and Central Appalachian region.

Appalachian Voices supports the committee's goal of modernizing environmental regulation and protection. Certainly using technology and science to achieve better environmental outcomes at lower cost is a goal that we, and I think all Americans, share. But modernization doesn't only mean finding technological solutions. Modernization means adapting to modern realities.

And so in the context of today's hearing, it is useful to ask, what has changed over the 40 or 50 years since Congress passed the Nation's key environmental laws and our modern State and Federal regulatory apparatus that was put in place? Certainly the ability of private interests to influence the political process has skyrocketed in recent years, and that influence is even greater at the State level than it is at the Federal level. That means that the ability of regulated industries to influence the regulatory process at the State level is greater than it has ever been. Any genuine attempt to confront that threat requires a greater, not lesser, role for Federal agencies like the EPA.

Another thing that has changed since the 1970s is the assumption underlying our key environmental laws, that industry can be trusted to self-report environmental violations to regulators. That now appears naive, at least as it applies to the coal industry in Appalachia.

As I went into in depth in my written testimony, the biggest coal companies in Kentucky for years routinely failed to deliver discharge monitoring reports to State regulators in addition to filing false reports that regulators failed to detect until environmental groups like Appalachian Voices stepped in. Worst of all, companies appear to have manipulated water quality results in a manner that is virtually impossible to explain with an innocent explanation. For instance, the statistical likelihood that the conductivity values submitted by one of the biggest coal companies in Kentucky could have occurred through natural variation approaches one in a google. That is one with 100 zeroes after it.

Modernizing environmental regulation protection in this context means confronting this reality and investing more resources and manpower in State and Federal regulatory agencies' ability to review and independently verify the discharge monitoring reports provided by coal companies. Decreasing the funding and power of these agencies' funding moves in the direct opposite direction of modernization.

Most importantly of all, there was little scientific information linking mountaintop removal to elevated cancer and other disease among nearby residents back in the 1970s or even 10 years ago.

But as I discussed quite a bit in my written testimony, a trove of peer-reviewed scientific studies and multiple independent sources of information have emerged over the last 5 years that regulators should not continue to ignore.

Here are the modern facts for people living near mountaintop removal mines in Appalachia. And if we can have that first slide?

[Slide.]

Mr. WASSON. People living near mountaintop removal mines in Appalachia—which are shown in red on the slide—are 50 percent more likely to die from cancer than other people in Appalachia. In addition, their children are 42 percent more likely to be born with birth defects.

Next slide, please. Did you skip one? My apologies.

[Slide.]

We can continue on. People living near mountaintop removal or in counties with mountaintop removal mining in Appalachia have a life expectancy that is far behind the national average and is comparable to people living in developing countries like Iran, Syria, El Salvador, and Vietnam. And these negative trends are not just about health. They also include socioeconomic trends. For instance, the counties where mountaintop removal mining occurs are seeing some of the most rapid population loss of anywhere in the country, as the next slide shows.

[Slide.]

Mr. WASSON. Modernizing environmental regulation and protection in Appalachia means confronting these facts directly, and it happens that this subcommittee has unique ability to do just that. A bill called the Appalachian Community Health Emergency Act, or ACHE Act for short, was reported to this subcommittee. I am not in a position to speak substantively about the bill, but fortunately, Congressman Yarmuth, the lead sponsor, was able to join us today. I thank you, Congressman.

What I can say is this. The voices of the Appalachian residents supporting the ACHE Act deserve to be heard, and this committee should hold hearings on that bill and the community health emergency in Appalachia that the bill addresses.

One final thing that has changed dramatically in Appalachia since the 1970s is the simple geological reality that the highest quality and easiest to access coal seams have been mined out. In addition, the modern reality of energy markets is that Appalachian coal simply can no longer compete with inexpensive new sources of natural gas. What this means is that the market for Central Appalachian coal is going away, and it is not coming back.

Appalachians are proud of the contribution their region has made in supplying affordable energy to power America's rise to the greatest economy on Earth. But the word modernization in Appalachia means looking beyond the coal industry for a sustainable source of jobs and economic growth in the region.

Thank you, Mr. Chairman. I will be happy to take any questions.

[The prepared statement of Mr. Wasson follows:]

Dr. Matthew F. Wasson
Director of Programs, Appalachian Voices

Testimony on " **Modernizing the Business of Environmental Regulation and Protection"**
House Committee on Energy and Commerce, Subcommittee on Environment and the Economy
July 23, 2014

Thank you Chairman Shimkus and members of the Subcommittee for the opportunity to speak today. My name is Matt Wasson and I am the Director of Programs at Appalachian Voices, a non-profit organization dedicated to protecting the land, air, water and people of the Southern and Central Appalachian region. Beginning with my doctoral research at Cornell University on the impacts of acid rain on birds, I have spent much of the last 20 years involved in research on the mining, processing and combustion of coal.

Appalachian Voices is a member of the Alliance for Appalachia, which is an alliance of 15 organizations working to end mountaintop removal coal mining and bring a just and sustainable future to Central Appalachia. These organizations share the belief that mountain people are experts of their own lives and that all people should have a seat at the table in determining the future of their communities.

Appalachian Voices supports the committee's goal of modernizing environmental regulation and protection and we believe that using technology and science to achieve better environmental outcomes at lower cost is a goal that our members and all Americans can get behind.

We caution, however, that an approach that focuses on streamlining environmental permitting at the expense of protecting human health and natural resources would not only risk failure of the very mandate that our regulatory agencies were created to fulfill, but would be economically short-sighted as well. For instance, a few weeks ago, researchers at the US Geologic Survey published a study that found a 50 percent decline in the number of fish species and a two-thirds decline in the total number of fish in streams below mountaintop removal mines in West Virginia's Guyandotte River drainage[1]. This, combined with the fact that the sportfishing industry creates far more jobs than surface coal mining in all states where mountaintop removal occurs[2], demonstrates how allowing continued degradation of water quality in order to simplify permitting for coal companies is the very definition of "penny wise and pound foolish."

The starting place for any effort to modernize environmental regulation and protection should be ensuring better environmental outcomes. When a regulatory agency is using the best science, monitoring compliance, enforcing existing rules and providing an inclusive permitting process, then eliminating duplication and cutting red tape are the most important considerations.

Unfortunately, in the examples I will give today about states' failure to enforce regulations on mountaintop removal coal mining in Appalachia and disposal of coal combustion wastes in the Southeast, regulatory agencies are not at the point where the best science is being considered or the best practices for ensuring public participation are being followed. In other words, an effort to modernize the regulation of mountaintop removal mining and coal ash disposal should start with improving environmental outcomes in the permitting and public participation processes.

Appalachian Voices has long embraced interactive mapping technology as a tool to improve environmental protection and enforce rules that protect streams and communities from the impacts of mountaintop removal mining in Appalachia. In 2009, we were named a "Google Earth Hero" for our innovative use of Google Earth to shine a spotlight on the destruction caused by mountaintop removal and tell the stories of people fighting to save their homes and homeland from encroaching mines.

Below, I describe a number of ways that we have built on our initial work using Google technology. What all of the technological resources have in common is that they were developed specifically to address failures of state and federal regulatory agencies to adequately enforce laws that protect human health and natural resources from the impacts of coal mining in Appalachia or to provide sufficiently useful and accessible information to the public.

Example 1: The "Human Cost of Coal" tool

"The Human Cost of Coal" is a resource on iLoveMountains.org, a website designed and managed by Appalachian Voices on behalf of the Alliance for Appalachia. The tool compiles and presents through an interactive Google Maps interface a broad range of health and socioeconomic data from government sources and peer-reviewed studies, as well as a comprehensive GIS map of areas where mountaintop removal coal mining has occurred. The maps show the strong correlation between mountaintop removal coal mining and health and socioeconomic problems ranging from increased cancer rates and incidences of birth defects in newborns to reduced life expectancy and high poverty rates among residents of counties where mountaintop removal occurs.

The tool pulls from national data including poverty rates from the U.S. Census, mortality rates for a number of diseases from the Center for Disease Control and life expectancy, the Gallup-Healthways Well-Being Index and demographic data from the Institute for Health Metrics and Evaluation. The site also includes summaries for more than twenty peer-reviewed scientific studies that provide evidence that human health problems such as heart, respiratory and kidney diseases, cancer, low birth weight and serious birth defects are significantly higher in communities near mountaintop removal mine sites.

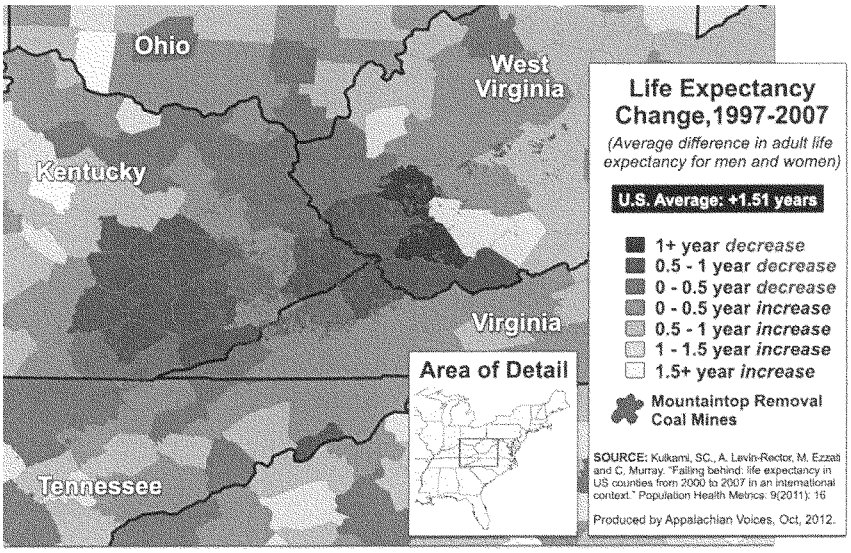
We created "Human Cost of Coal" page on iLoveMountains.org to call attention to the fact that a growing number of peer-reviewed scientific studies were published associating living near coal mines - and mountaintop removal mines in particular – with negative trends in human health and well-being in Central Appalachia[3-20]. What is so notable about the science linking mountaintop removal to elevated death rates and poor health outcomes in nearby communities is not the strength of any individual study, but rather the enormous quantity of data from independent sources that all point toward dramatic increases in rates of disease and decreases in life expectancy and physical well-being.

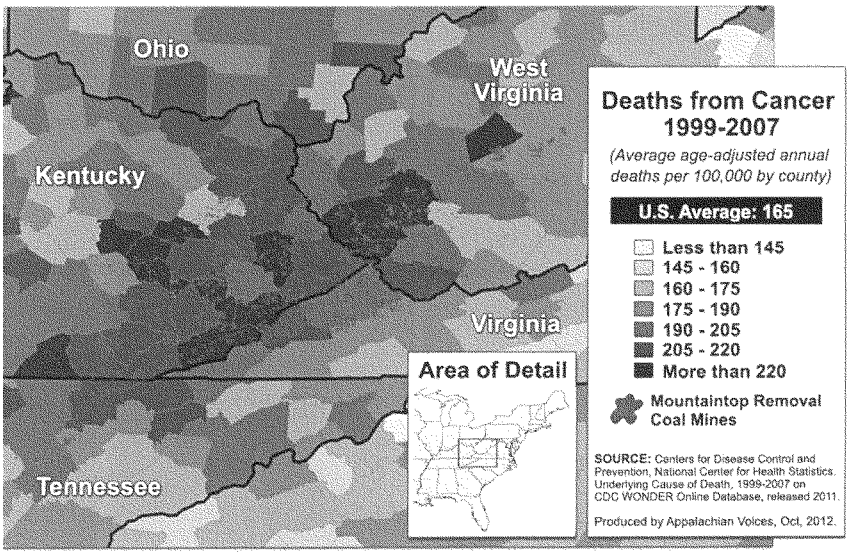
It was this abundance of evidence from independent sources that led the Kentucky Medical Association to pass a resolution in 2011 pledging to "educate the public and make publicly visible its support for national and state laws, rules and regulations that protect individual health and public health from the impact of the extraction, transportation, processing and combustion of coal.[21]" As reasons for adopting the policy, the KMA noted the following:

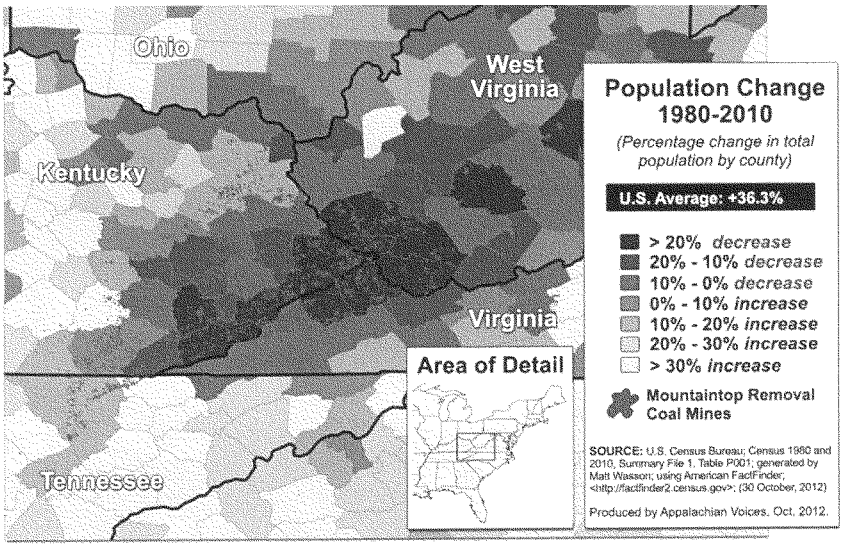
- *"A recent study found that the loss of stream integrity from valley fills associated with mountaintop removal (MTR) coal mining is related to increased cancer mortality;*
- *"A recent study found elevated birth defect rates in MTR areas of central Appalachia compared with other coal mining areas and non-mining areas;*
- *"MTR areas are also associated with the greatest reductions in health-related quality of life even when compared with counties with other forms of coal mining;*
- *"Considering the value of life lost, a 2009 study concluded that the human cost of the Appalachian coal mining economy outweighs its economic benefits."*

Despite this overwhelming amount of peer-reviewed scientific data, however, regulatory agencies in Appalachian states have so far refused to consider these new studies in assessing the impact that permitting new mountaintop removal mines could have on the health of nearby residents.

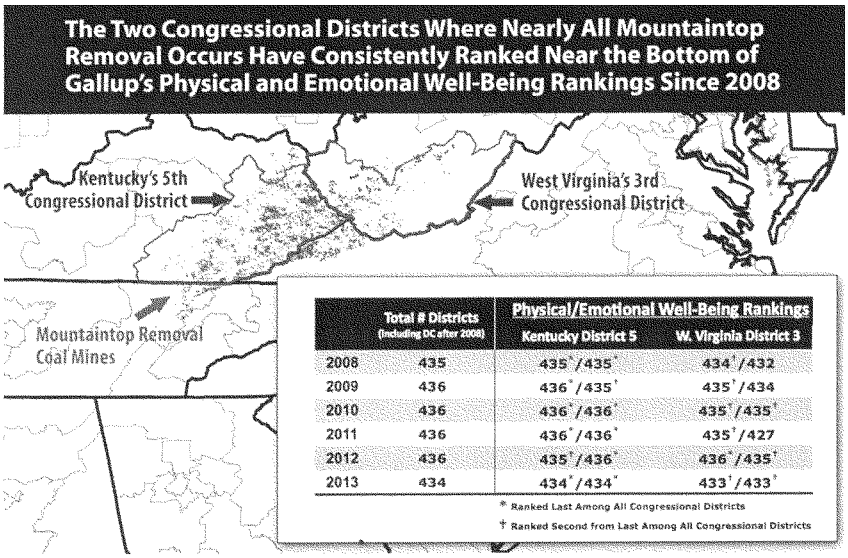
Appalachian Voices developed the Human Cost of Coal resource because we felt that by providing access to all of these data sources in one location, we could better demonstrate the breadth of poor health outcomes associated with mountaintop removal and enhance the ability of people living near proposed mountaintop removal sites to hold their state regulators accountable for considering the human health impacts of the practice. The three strikingly similar maps below are from entirely independent data sources available on the "Human Cost of Coal" page:


Ohio
West Virginia
Kentucky
Virginia
Tennessee
Area of Detail
Life Expectancy Change,1997-2007
(Average difference in adult life expectancy for men and women)
U.S. Average: +1.51 years
1+ year decrease
0.5 - 1 year decrease
0 - 0.5 year decrease
0 - 0.5 year increase
0.5 - 1 year increase
1 - 1.5 year increase
1.5+ year increase
Mountaintop Removal Coal Mines
SOURCE: Kulkarni, SC., A. Levin-Rector, M. Ezzati and C. Murray. "Falling behind: life expectancy in US counties from 2000 to 2007 in an international context." Population Health Metrics. 9(2011): 16
Produced by Appalachian Voices, Oct, 2012.


Ohio
West Virginia
Kentucky
Virginia
Tennessee
Area of Detail
Deaths from Cancer 1999-2007
(Average age-adjusted annual deaths per 100,000 by county)
U.S. Average: 165
Less than 145
145 - 160
160 - 175
175 - 190
190 - 205
205 - 220
More than 220
Mountaintop Removal Coal Mines
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death, 1999-2007 on CDC WONDER Online Database, released 2011.
Produced by Appalachian Voices, Oct, 2012.



Similarly, polling data collected by the Gallup organization and compared across 435 Congressional Districts (plus the Distric of Columbia) in annual Gallup-Healthways "State of Well-Being" reports since 2008 reveal that residents of the two congressional districts where most mountaintop removal mining occurs consistently rank lowest in the nation for physical and emotional well-being[22]. For the past two years, these districts have also ranked lowest in the country in Gallup's overall well-being index, which combines six separate measures of well-being.



	Total # Districts (Including DC after 2008)	Physical/Emotional Well-Being Rankings	
		Kentucky District 5	W. Virginia District 3
2008	435	435*/435*	434†/432
2009	436	436*/435*	435†/434
2010	436	436*/436*	435†/435†
2011	436	436*/436*	435†/427
2012	436	435†/436*	436*/435†
2013	434	434*/434*	433†/433†

* Ranked Last Among All Congressional Districts

† Ranked Second from Last Among All Congressional Districts

It remains to be seen, whether this resource or other efforts to call attention to the health and socioeconomic impacts of mountaintop removal will lead to a change in behavior by state regulatory agencies, but the "Human Cost of Coal" project represents the kind of resource we wish regulators would use to better inform their regulatory decisions.

Example 2: The Appalachian Community Enforcement (ACE) Project

The ACE Project is a project of the Alliance for Appalachia, its member organizations, and other local and regional groups. Like iLoveMountains.org, Appalachian Voices designed and continues to maintain the website. The goal of the ACE Project is to equip everyday people with the knowledge, instruments, and professional support to monitor local waterways and protect them by pursuing enforcement actions under the Clean Water Act.

The ACE project augments state government enforcement by developing a broad view of water contamination across the entire region. Citizen monitoring results are posted on this website, making them available for review by local people, as well as state and federal agencies. The data are used to advocate for the enforcement of existing laws, and to enact local, state and national policies to better protect Appalachian waterways.

Appalachian Voices and our allies were inspired to develop the project in 2010 when we discovered two significant barriers to our efforts to protect citizens and communities from water pollution and other impacts of mountaintop removal coal mining in Kentucky. After beginning a project to document Clean Water Act violations by coal companies we realized that the state routinely declined to take enforcement actions against coal companies who reported violations of permitted effluent limits in their discharge monitoring reports (DMRs). We uncovered thousands of exceedances by two of the state's largest mining companies for which the Kentucky Environment and Energy Cabinet had failed to issue violations.

Then, while compiling this dataset, we uncovered even more worrisome patterns. In dozens of instances, we found that companies had submitted fraudulent DMRs to state regulators, who in turn had never reviewed, much less detected them. To remedy this situation, Appalachian Voices, Kentuckians For The Commonwealth, Kentucky Riverkeeper, and Waterkeeper Alliance filed notices of intent to sue two coal mining companies on the grounds that they had exceeded pollution discharge limits in their permits, consistently failed to conduct the required monitoring

of their discharges and, in many cases, submitted false monitoring data to the state agencies charged with protecting the public.

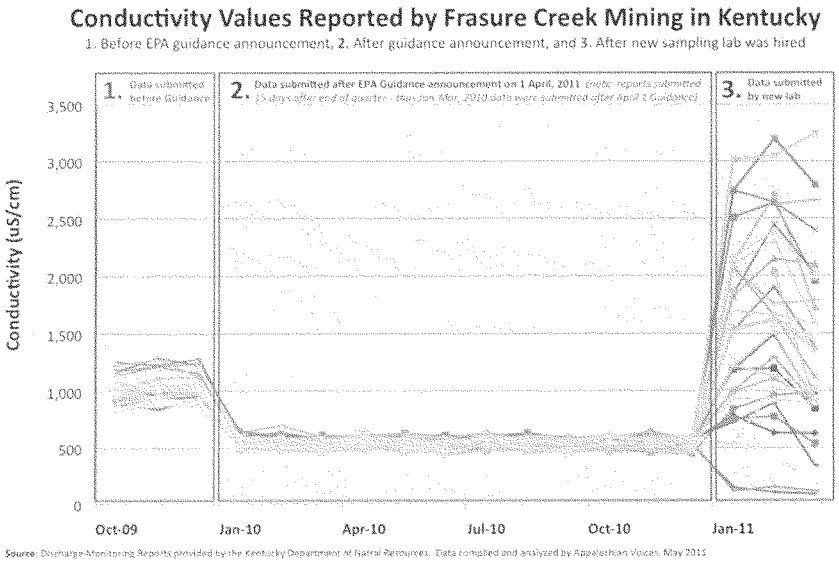
An editorial in the Lexington Herald-Leader summed up the story in December, 2009:

> *"The environmental groups uncovered a massive failure by the industry to file accurate water discharge monitoring reports. They filed an intent to sue which triggered the investigation by the state's Energy and Environment Cabinet. Also revealed was the cabinet's failure to oversee a credible water monitoring program by the coal industry.*
>
> *"In some cases, state regulators allowed the companies to go for as long as three years without filing required quarterly water-monitoring reports. In other instances, the companies repeatedly filed the same highly detailed data, without even changing the dates. So complete was the lack of state oversight it's impossible to say whether the mines were violating their water pollution permits or not."*

As a result of our lawsuit, the state ultimately imposed fines on these two coal companies for violations that ranged from "Failure to maintain required records" to "Degrading the waters of the Commonwealth."

However, the companies have never been held accountable (or seriously investigated) for a remarkably suspicious pattern of water monitoring results reported to the state. In brief, discharge monitoring reports submitted after the April 1, 2010 announcement by the EPA of a

new guidance on conductivity levels allowable in the discharge from coal mines (shaded red in the chart below) showed a remarkable drop from levels reported before the EPA announcement (shaded green). In fact, standard statistical tests showed that the chance that these trends could be explained by random transcription errors or natural variation was nearly one in a googol (that's a 1 with a 100 zeros after it). After our lawsuit led the state to require companies to use new labs to monitor their mine discharge, the reports from these new labs (shown in blue), revealed even more stunning changes from the previous measurements (see below):



To date, neither state nor federal regulators have taken action to hold these coal companies to account for these suspicious results, and the state of Kentucky went so far as to write them off as "transcription errors." This experience makes clear why Appalachian Voices and our allies saw the need for an independent source of water quality monitoring through the ACE Project.

Example 3: SoutheastCoalAsh.org

Unlike previous examples, the SoutheastCoalAsh.org website is not managed by Appalachian Voices, but rather by our partners at the Southern Alliance for Clean Energy. Nevertheless, I bring it up as an example because, like the previous examples, it represents an innovative use of technology to inform and engage stakeholders around environmental regulations and fills in a gap left by under-resourced state regulatory agencies.

The site exists to inform residents of the Southeast about a silent danger to their waterways and public health: coal ash impoundments, or "lagoons." As this committee knows well, coal ash is the waste left over after coal is burned to generate power and it contains high concentrations of toxic chemicals and heavy metals like lead, mercury, arsenic, chromium, and selenium, which are hazardous to human health and to wildlife.

The Southeast is home to 40% of the nation's coal ash impoundments, with nearly 450 impoundments across the region containing 118 billion gallons of toxic waste. These impoundments, which often have no liners to prevent heavy metals from getting into drinking water, are typically located near major waterways, posing a threat to the water nearby residents rely on for drinking, fishing and recreation. Under current rules, these impoundments are subject to less stringent rules than everyday household garbage.

The Southern Alliance for Clean Energy, on behalf of a coalition of regional organizations that includes Appalachian Voices, created SoutheastCoalAsh.org when it became clear that it was nearly impossible for residents of most southeastern states to access information about coal ash

lagoons near their homes and track down the results of groundwater testing at the sites. This is a particular concern for residents of states like North Carolina, where more than half of households rely on wells for their drinking water and where all 14 of the sites with coal ash impoundments have been found to be leaking toxic chemicals and heavy metals into groundwater and/or nearby waterways.

The website is designed to make it easy for visitors to find maps of impoundments near their homes, determine their size, EPA hazard and condition ratings, and find recent groundwater test results at the facility.

As momentum to establish safe regulations on storage of and discharge from coal ash impoundments builds at the EPA and, in the case of North Carolina, state level, SoutheastCoalAsh.org has become an invaluable resource for citizens who want to engage in rulemaking, permitting and legislative processes. However, its maintenance relies on private foundation funding that may or may not be available a year from now. The site is an excellent example of the kind of resource that a "modernized" regulatory agency would provide to the public to facilitate their participation in environmental regulation and protection.

Limitations of Technology For Modernizing

While there is a clear role for technology in modernizing environmental regulation and protection, it is by no means a panacea, or even the most important tool available to regulatory agencies charged with protecting the environment. For instance, many homes in the rural mining communities of Central Appalachia do not have access to high-speed internet or mobile phone

service, so any initiatives to streamline public participation in environmental regulation that rely on these services will do nothing to engage those who have the most at stake in any rulemaking or permitting decision.

There are other particular considerations that agencies have a poor track record of taking into account when it comes to engaging people in communities where coal is mined. In particular, public hearings in these communities tend to be intimidating for people who are more concerned with protecting their homes and families' health than approving more mine permits. Coal companies have a unique ability to communicate messages and turn out large numbers of their employees (often on the clock) at public hearings and they have every incentive to use this ability to create an atmosphere of fear and intimidation for those who oppose their agenda.

Any effort to "modernize" environmental regulation in Appalachia should seek to address and work around this dynamic at public hearings in the region and seek to ensure that people whose health and well-being are most impacted by agency decision-making are heard. While resource intensive, an effort by state regulators to speak directly with people whose homes, streams and wells are threatened by new mine permits would be one way to accomplish this goal.

A second limitation of technological solutions to the problem of modernizing environmental regulation is that there is no replacement for "boots on the ground" when it comes to monitoring compliance with environmental rules. As I showed in previous examples, the modern – and perhaps historic – practice of some coal companies is to report false and potentially manipulated water quality reports to state agencies. If those agencies do not have the resources to actually

review these reports and conduct random independent testing to detect fraud then they simply are not contending with the modern realities of the industry they regulate, regardless of any technological approaches they use to increase efficiency or steps they take to streamline the permitting process.

The approach North Carolina has taken to reduce costs and create a more business friendly environment for polluting industries at the state's Department of Environment and Natural Resources (DENR) is a perfect demonstration of how not to "modernize" a regulatory agency. As my colleague Amy Adams wrote last December in an op-ed in the Raleigh News and Observer, shortly after leaving her job as a regional supervisor at DENR:

> *"The General Assembly's legislation reorganizing DENR results in deep cuts to staff and resources. The Division of Water Quality staff, for example, will likely be 24 percent smaller by March than it was in early 2011. "Do more with less" has become the mantra of upper management, but we in the ranks heard the message loud and clear: 'Do less. Period.'*
>
> *"There are simply too few employees with too much territory to cover, and the repercussions are real.*
>
> *"Staff are increasingly tasked with duties for which they have no previous experience, such as reviewing complex technical pollution-control permit applications.*

Because state law requires DENR to issue permits within a tight deadline, staffers are under great pressure to essentially trust the industry's word that everything is in order."

The repercussions of these deep cuts to DENR became very real for many North Carolinians last February when Duke Energy spilled nearly 40,000 gallons of coal ash slurry into the Dan River. The agency's lackadaisical response to the disaster and focus on protecting Duke Energy from lawsuits at other coal ash disposal sites were widely panned by media, environmental watchdogs and elected leaders across the state.

A third limitation of technology for modernizing environmental regulation is that it does nothing to address the problem of "agency capture," whereby regulated industries develop a too-cozy relationship with regulators and wield disproportionate influence over their decision making.

The framers of the National Environmental Policy Act, which led to the formation of the EPA, were keenly aware of the potential for agency capture and recognized that state regulatory agencies are more vulnerable to this phenomenon than federal agencies as a result of the powerful political influence a large corporation or industry is able to wield over all levels of state government. Creating a regulatory model that is resistant and resilient to the problem of agency capture was one of the justifications for the formation of an EPA with broad regulatory powers and the model of "cooperative federalism" that underlies many key environmental laws.

I will close a quote from North Carolina Representative Pricey Harrison's testimony to this committee that she delivered in February of last year:

"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."

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Mr. SHIMKUS. Thank you, and now we will begin our opening statements. And just, Mr. Wasson, I would say you are correct in the market debate of what is going on in West Virginia and the coal, but I will tell you, thanks for the challenging of the lower coal seams, coal mining in Southern Illinois is increasing, and that helps our economy in Southern Illinois. So we understand the economic reality. We welcome these jobs in Southern Illinois.

Director Darwin, I was curious. You mentioned the word customers. Who are your customers?

Mr. DARWIN. Mr. Chairman, our customers really depend on the product or service that we are delivering. And we define customers as the end-user of the product or service. So an end-user could be the permitee that has applied for a permit and ultimately going to have to comply with the permit, understand the permit, implement the terms of the permit. If we are developing a Web service of some sort that is available to the public, the public being the end-user of that Web service would be the customer in that context.

So customer doesn't always mean the regulated community. It could also mean the general public so long as the service that we are providing or the part that we are delivering has them as the end-user.

Mr. SHIMKUS. Could it also mean public interest groups like the NRDC or the Sierra Club or Appalachian Voices if they were—if Appalachia were a part of your State, which it is not? I know that.

Mr. DARWIN. Certainly, that would be the case. Like I said, so long as whatever we are delivering as a product or service has them being one of the end-users and because they are a member of the public and we serve the public, a lot of the things that we do have the end-user, the general public, in mind.

Mr. SHIMKUS. Mr. Cash, I also was very interested in your opening statement and also the phrase low environmental protection value. How did you make a determination—I mean, sometimes we have our debates here, and we never get to that point because anything mentioned environmentally is high. We can't even classify that in our debate on chemicals sometimes. Obviously you did that. Talk me through how you did that, and did you have public involvement? Did you have the private sector? Did you have the, you know, obviously the nongovernmental organizations? Did you have the public as a whole? How did you do that, make that determination.

Mr. CASH. Thank you very much, Chairman. It is a great question. And when we were faced with the declining budgets, it became very clear that there were multiple interested parties that were concerned about steps forward. Certainly you had the environmental community that was concerned that environmental protection would become more relaxed, and that was of grave concerned to our agency as well. And then you had the regulated community that was concerned that permitting times would take longer, it would become a more complex kind of endeavor moving forward. And so I think the real answer to your question is that we had a very robust stakeholder process and an advisory group that was formed that wasn't just an ad hoc, one-time meeting. This was—these were people from the regulated community, environmental communities, municipalities, other State agencies who are

engaged in this long-term discussion about, how do we do more in a more budget-constrained environment? How do we continue to protect the environment? How do we continue to allow the regulated community to have the certainty and timeliness that it needs?

And so we had very difficult conversations about where there might be places that we could reduce the efforts that we did. Now, some of these were relatively easy where we found places where there were multiple redundant permits, State and local permits that regulated the same kind of wetlands but forms had to be filled out for all three, et cetera. That was relatively easy. But an example of what you are talking about those kinds of environmental values that we felt like in a real budget-constrained environment, what could we focus on less. One, for example, was docks and piers, small docks and piers, which underwent basically the same kind of resources for large coastal or wetlands projects, and here in agreement in this advisory committee we said, you know what? We could put a little less resources into the evaluation of these kinds of permits.

So the real answer is that it was through these conversations that we had collectively, and there was not consensus everywhere, of course, but everybody had a stake at the table. And as we changed our regulations, each of those regulations then went through another, the official public process with public hearing.

Mr. SHIMKUS. Thank you. And if I can, I want to follow up with you on that, and maybe there is a process by which we can adapt here to help us move forward.

Mr. CASH. Absolutely.

Mr. SHIMKUS. And Ms. Marks, also since I am from a large rural area—I represent 33 counties. There are 102 counties in the State of Illinois—your debate on your tablet issue, I want you to highlight it again. Based upon from my understanding, the travel time of the investigators using technology, explain how that is especially in a rural area where the investigators have to go out and travel long distances.

Ms. MARKS. Well, I certainly think that the time saved, resources saved for both the regulated community and the department have been great with the use of the tablets, particularly as you said in the rural areas. We have nine field offices across the State, but before we began the use of the tablets, our tank inspectors used to go out and they would have a clipboard, and they would make notes on their clipboard. And they would come back to the field office, and they would enter the information into the computer, and it would go into the main system. And then a letter would be sent to the owner-operator telling them the results of the inspection and what needed to be fixed, and then we would go from there on seeing how those repairs were done. It was just a time-consuming process.

Now when our inspectors go out, they have a portable printer in their trucks. They have their tablets that have the forms loaded onto them for the inspections. They walk around with the owner-operator who is right there beside them, and they do the inspection with them present. They tell them, you know, what they see. They will point out to them where the problems are exactly. And then

once they go over the report with them after the inspection is over, the owner-operator signs the report, which seals the report. It cannot be changed after that. And then they print it out there and give them a hard copy, or they will email to them, whichever they prefer. And that has made compliance much more rapid with those types of issues because the owner-operator for one thing is aware of what the report is going to say immediately, and it increases our credibility with the regulated community because they know we can't change that report when we get back.

Now, indeed if the main office looks at the report and finds out there is some problem, there might be some mistake, something that was done wrong, we have to do an addendum. We can't change that report.

So it begins with the regulated community knowing immediately what is going on and what they need to improve so they can get started on that immediately. And oftentimes it is taken care of within a few days.

Mr. SHIMKUS. Thank you. My time has well expired. The Chair now recognizes Mr. Tonko for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair, but I am going to yield to the gentleman from California who has a conflict, another hearing.

Mr. SHIMKUS. The gentleman from California is recognized for 5 minutes.

Mr. WAXMAN. Thank you, Mr. Chairman and Mr. Tonko, for allowing me to ask my questions. Dr. Wasson, your testimony covers a number of important environmental problems including disturbing health trends in communities around mountaintop removal sites. But I would like to ask about your work to address coal ash contamination, an issue that has been a major focus of this subcommittee.

What are some of the problems you have seen from unsafe coal ash disposal?

Mr. WASSON. Thank you, Congressman Waxman, for that question. The Appalachian Voices, my organization, does work—a lot of our time is spent trying to address the problem of unsafe coal ash practices in North Carolina and other States around the Northeast, or the Southeast. And certainly the most dramatic problem we have seen recently was the Dan River coal ash spill when 40,000 gallons of toxic coal ash spilled into the Dan River, an entirely avoidable accident.

In North Carolina we have 14 sites where coal ash is stored. In every site, these are being stored in unlined impoundments that have been shown to be leaking, leeching toxic and heavy metals into groundwater as well as seeping contaminants into nearby surface waters. These are all built directly adjacent to large waterways, many of which provide drinking water for millions for North Carolinians.

Mr. WAXMAN. Well, we have heard repeatedly people on this committee tell us that the States are doing a good job of regulating coal ash, but your testimony tells a different story.

Mr. WASSON. That is right. I don't think that many people in North Carolina, certainly many elected officials of both parties, and the media have complained very loudly about the poor state of regulation of coal ash in the State. The fact that these impoundments

were leaking and leeching into the nearby surface waters was not discovered by the State, by any of the State regulators until environmental groups went out and actually did the monitoring and discovered some of these problems and filed suit. And then eventually the State stepped in, but as you probably know, the State is actually under a criminal investigation around how the State agencies have handled——

Mr. WAXMAN. Which State is that?

Mr. WASSON. North Carolina.

Mr. WAXMAN. North Carolina. So if we rely on the States to do this without Federal backup of any sort, there is a lack of transparency, a lack of enforcement, a lack of necessary safeguards. It seems like a lack of even trying to understand what is happening with the coal ash. How are your organizations and others using technology to fill in some of the gaps in Federal and State efforts to ensure safe disposal?

Mr. WASSON. So we work with a coalition of groups led by the Southern Alliance for Clean Energy based out of Knoxville that has provided online tools so that people can understand where these coal ash impoundments are, if they are living next to them and actually obtain information about what—the ground water testing that is happening there so that they have a sense of what is going into their groundwater. Again, in a State like North Carolina, 50 percent of the residents rely on wells for their drinking water. So this is a very big concern.

Mr. WAXMAN. Well, if you are monitoring data and other information and it becomes accessible on the Internet or through cell phones, how do we make sure that those who don't have access to that technology get the information they need?

Mr. WASSON. And that is the excellent question and is why I think technology is very limited in its ability to help with some of these problems. Certainly in coal mining regions in Appalachia, access to high-speed Internet like DSL or cable or even cell phone reception seems like a distant dream in many of these communities. It requires very resource-intensive, boots-on-the-ground kind of efforts in order to engage folks who are living with the greatest threat.

Mr. WAXMAN. I had argued for the last several years that strong Federal coal ash regulations are needed to protect public health and the environment from toxic elements, including arsenic, lead, mercury and selenium. Will State action be enough or do you think we need a strong Federal regulation for coal ash? And EPA is finalizing their coal ash rule. Can citizen participation play an important role in highlighting the need for strong enforceable Federal standards?

Mr. WASSON. I think the situation in North Carolina is one of the best arguments I can provide for why we do need, we absolutely do need, a strong Federal rule in coal ash regulation. It is going to be a disaster I think if we leave most of that up to the States.

Mr. WAXMAN. Thank you, Mr. Chair.

Mr. SHIMKUS. The gentleman's time is expired. The Chair now recognizes the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTA. Well, thank you very much, Mr. Chairman, and thanks very much to our panel for being with us today. I really ap-

preciate your testimony. A little background. I know the members of this subcommittee have already heard me say this, but I represent a district with 60,000 manufacturing jobs, and right along the same line I also represent the largest agriculture district in the State of Ohio. So dealing with regulations and complying with them are one of the things that I hear from my constituents the most. And a couple of years ago the SBA had come out and said that we have $1.7 trillion of regulations here in this country, and unfortunately, it was updated this year to $1.9 trillion.

So interesting enough, when I spend time out in my district, going through hundreds and hundreds and hundreds of different plants and businesses across my district, the number one issue I always hear about is regulations.

And if I could start with Mr. Kovacs, I found it interesting, your testimony, because I think that it is also always interesting to remember these things. On page 5 of your testimony you state that the Hoover Dam was built in 5 years, the Empire State Building took 1 year and 45 days, the Pentagon less than 18 months, the New Jersey Turnpike 4 years from inception to completion. Then you fast forward to 2014. The Cape Wind needed over a decade just to receive the necessary permits to build an off-shore wind farm. And it is interesting that you point these things out because as you look at where we have gone from start to finish and how fast these regulations have kicked in, you know, it is like I hear from the businesses, but I have never heard any of my businesses ever out there ever say this, that they are not for clean air or clean water. They want to make sure that is happening. But it is really the over-burdensome regulations that they have to comply with.

But if I could, you also show on page 5 of your testimony on the time required for processing your permit to drill on Federal versus State lands, and you point out that the Institute for Energy Research testified that it currently takes more than 300 days to process a permit to drill for oil and gas on Federal lands on shore while it takes less than 1 month to process a permit for the same drilling activities on State and private lands. And also you point out in your graph on page 5 that Ohio in particular is one of the fastest permit-processing States. Would you agree that Ohio's efficiency does not make them less environmentally protected?

Mr. KOVACS. I would agree with that, certainly.

Mr. LATTA. Now, why would you agree with that?

Mr. KOVACS. Well, when you understand the permitting system, to just even start a permit you have to do a whole series of things. You have to do engineering drawings. You have to do testing of the air, the water. You have to do site plans. All of that must be done in order even to file for a permit. And so when they review it, the agency reviews the technical data, and the technical data is going to be almost virtually the same in Ohio or with the Federal. The difference between the two programs is that in the Federal program, if there is any Federal nexus at all, the program moves into an area where there is no coordination. By that I mean there is really no one running the show. There are no time limits on when the permit has to be reviewed. And anyone can jump into the permitting process at any time, and you can go into a conflict between

State, the environmental impact statements, and Federal, even if they have the same laws.

So when you go under State law, you are getting a much faster process because you just don't have as many ways in which to stop the problem, and it is managed closer to a business which I believe someone had talked about. And the approach that we have been arguing and the House has been forward on and the Senate is, put someone in charge of the program. We are not telling them what to do. Give them a role as a lead agency and to coordinate. Give everyone time limits in which to participate. If they don't want to participate in the time limits, then they don't have to, but then they are out of the program, and make a decision. And that is really what the key—we are not talking substance here. We are talking process.

Mr. LATTA. So is this how—when you, in your testimony, also state about improving and streamlining the process—is that how you go about it, or other ways you see it?

Mr. KOVACS. No, that is how we would go about it.

Mr. LATTA. OK. Thank you very much, Mr. Chairman. I yield back.

Mr. SHIMKUS. The gentleman yields back his time. The Chair now recognizes the ranking member of the subcommittee, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair. I am very interested in today's testimony about ways to improve our environmental monitoring through better technology at the State level and through greater public participation. Obviously the sooner pollution is detected, the faster it can be contained and remediated. For example, an inspection of the tank that leaked in West Virginia could have prevented widespread harm, but inspections require resources, both from the regulatory agency and the regulated entity.

With that being said, Mr. Slesinger, you testified that EPA is planning to reduce the number and frequency of inspections it conducts. Is that correct? Did I hear that correctly?

Mr. SLESINGER. Yes, in their strategic plan there is a substantial reduction in the amount of enforcement action, civil actions, inspections going forward, mainly because of the reduction in budget.

Mr. TONKO. Do you have concerns about the impact that that shift would have on compliance?

Mr. SLESINGER. We are very concerned. As Ms. Marks mentioned, the key to compliance in her State was walking around. It is with a new, high-tech gadget that makes it much more efficient, but the key is getting someone to do the walking around. And as you mentioned in the spill in West Virginia, it had been I think decades before someone from the State had been on that site.

So if you are going—yes, if you use these high-tech technology, you can probably do more with less, but when the less is so much less that you are doing significantly less, feet on the ground, going to sites, helping people get in compliance, you are going to have more problems.

Mr. TONKO. Well, I had served in our State Legislature in New York for 25 years, and I know that we have a sound track record with the environment. But I would have to agree that all States

do not play the same degree of intense role in enforcing many environmental regulations.

Dr. Wasson, can you briefly describe some of the problems you have seen in State enforcement of environmental regulations? I know you mentioned some, but can you share some other scenarios with us, please?

Mr. WASSON. Sure. I think what it boils down to time and again is it takes us filing a lawsuit or entering in some sort of proceeding to get the States to act. They are not doing it on their own. That is true in North Carolina. That is true in Kentucky in the examples I gave in my written testimony. It is true in other States that we worked in.

And so I think you have a lot of hard-working and very well-intentioned State regulators that are strapped for the resources to do their jobs effectively. And that is, you know, what it really boils down to. In the State of North Carolina, we just cut the funding by as much as I think 25 and then on top—more than 25 percent for our State agency. They just can't do the job that we mandate them to do with the resources that are available to them, and I really think that that is the underlying problem.

Mr. TONKO. Right. I know that a number of States and organizations have indicated that doing more with less has now become doing less——

Mr. WASSON. That is exactly right.

Mr. TONKO [continuing]. With less. What role can informed citizens play in your view in informing environmental regulation?

Mr. WASSON. Well, it is informed citizens, you know, in the cases that I gave of, you know, fraudulent water quality monitoring in Kentucky or the leaking coal ash impoundments in North Carolina. It is engaged citizens that are entirely responsible for why we have any enforcement actions at all.

So it is our job as environmental advocates to get more citizens engaged. I liked very much what Ms. Marks had to say, citizens being the eyes and ears of the State agencies. We also very much see it that way, and I think that there is a role to play for citizens when the State agencies just are not able to fulfill their mandate.

Mr. TONKO. And what are some of the steps that your organization has taken to empower citizens to monitor and enforce environmental laws?

Mr. WASSON. The Appalachian Citizens Enforcement Project that I spoke about in my written testimony is one example where we are actually going out and we are training people to monitor the water quality in streams near their homes. We are providing them with the equipment to do that as well as some expert consulting to help answer questions and help them do something with that information. It is one thing to find that the water across the, you know, road from your house is polluted. It is another to actually take action on that and get that problem corrected.

And so, you know, it takes a lot of hand-holding, honestly, for regular citizens to be able to engage at that level, but it is possible, and we are proving it is possible. We are working with groups all across Appalachia that are every day proving that it is possible to get people engaged in this.

Mr. TONKO. And I know my 5 minutes have expired, so I will yield back.

Mr. SHIMKUS. The gentleman yields back his time. And the Chair now recognizes the gentleman from West Virginia, Mr. McKinley, for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman. In light of some of the testimony that has been given, I would like to ask unanimous consent that this article by Dr. Borak be included in the file.

Mr. SHIMKUS. Let me—I am sure we will accept it, but let me make sure the minority has taken a look at it. And you can go ahead, and we will make that request.

Mr. MCKINLEY. I think what Dr. Borak says in light of some of the comments that have been made here is that I think we have heard once again there seems to be an attack on the coal industry on West Virginia. I thought we were having a panel on modernization and how we work, but this has turned into a little bit on the part of some of the folks one more attack on our coal miners in the industry. And what Borak goes on—his report says coal mining is not per se an independent risk factor for increased mortality in Appalachia. Appalachians suffer disproportionately poor health and significantly higher mortality rates than the rest of the nation. The Appalachian counties with the poorest health are also the most economically depressed, least educated and those with limited access to social and medical services.

So to try to connect that to mountaintop mining is a stretch. There may be a connection. I am not going to dispute that. But I think we have to take other things into consideration. Smokeless tobacco or tobacco use. I didn't see that on the chart to see whether or not that. I didn't see a chart about diabetes. Could that be affecting health and cancer issues with that?

So I think we have to be fair when we are doing these kinds of reports that we have an—try to be more unbiased than what I have heard in this testimony so far.

Also Dr. Wasson, in your report you talked about how the sports fishing industry creates more jobs than the surface coal mining. And maybe it does. Maybe it does. But I tell you, the coal mining jobs that are being paid $50,000 and $70,000 a year are far better than the sports fisherman that may be in the $25,000 job. If we are trying to get these people out of poverty, we need to have good-paying jobs, and once more, an attack on the coal industry because we have got counties in West Virginia and Eastern Kentucky that just simply don't have other alternatives. That is what they say. They are economically depressed, and to take away something that is a good-paying job is really a threat to their livelihood.

So I think we have to be careful about jumping to conclusions. I wish one of the proponents that were here today to continue on with this discussion instead of skipping out. But you also raise a good point, Dr. Wasson, about Yarmuth. Yarmuth's bill is interesting, and I hope it does get a hearing. I think we need to have those kind of—we can't be afraid in Congress to talk about tough subjects. But at the same time it was announced earlier today that we have 321 bills sitting over in the Senate, not being acted on.

So I would say that perhaps maybe that is a good trade. If we are going to take up Yarmuth's bill, then maybe other body ought

to take up some of the bills that we have sitting over there that have to do with jobs, healthcare, coal mining and the like.

Let me touch just closing again with your issue about the fly ash because I think your group and some of the groups that you represent were opposed to the fly ash bill as passed out of the House four times. It is one of those bills that is sitting over—the 321 that is sitting over there in the Senate without action. It would have addressed all of the problems that you have talked about, all the leakage. The fly ash bill, the legislation of the coal ash bill took care of impoundments. It took care of dam safety. It took care of water leakage. All those issues were taken—but yet groups that you are engaged with opposed the legislation. I think it is hypocritical that you are coming here and telling us that we need to do it when we have done that. We have passed that, but the Senate, the other body, won't take those bills up.

I hope that you can be more fair in your assessment in the future, all of you, as we address these issues of modernization. Let us stay to the subject matter.

So are you telling me that Randy Hoffman, the DEP, is incapable of handling issues in West Virginia on DEP?

Mr. WASSON. I do not in any way mean to impugn Mr. Hoffman and——

Mr. MCKINLEY. But you have used the——

Mr. WASSON [continuing]. And his ability to do his job.

Mr. MCKINLEY [continuing]. Freedom Industry's tank. You have talked about the surface mining. All of those issues come under his purview, and you are denigrating him. You are running him down. Is that fair?

Mr. WASSON. I am saying the facts on the ground show that the goal, the environmental outcomes that we would expect, are not being achieved. The health of people——

Mr. MCKINLEY. Should he be fired?

Mr. WASSON [continuing]. In those counties——

Mr. MCKINLEY. Should he lose his job?

Mr. WASSON. That is—I do not have a position on whether or not Mr. Hoffman should have his job. I am simply observing that if we look at just the science, just the environmental outcomes that we see on the ground in West Virginia, they are not being achieved, what we should expect. When people in Southern West Virginia counties have the same life expectancy of somebody in Iran or Syria or Vietnam, there is something——

Mr. MCKINLEY. I have run over my time, but I would sure like to see it because I think that who has in Vietnam—is age 36, 37 in Vietnam? I think the life expectancy is very much greater than 36 and 37 in Southern West Virginia. And I am sorry that I have run over my time, Mr. Chairman.

Mr. SHIMKUS. The gentleman's time has expired. I did consult with the minority, and without objection, I would ask for the article authored by Jonathan Borak be accepted into the record. Without objection, so ordered.

[The information follows:]

ORIGINAL ARTICLE

Mortality Disparities in Appalachia

Reassessment of Major Risk Factors

Jonathan Borak, MD, Catherine Salipante-Zaidel, MEM, Martin D. Slade, MPH, and Cheryl A. Fields, MPH

Objective: To determine the predictive value of coal mining and other risk factors for explaining disproportionately high mortality rates across Appalachia. **Method:** Mortality and covariate data were obtained from publicly available databases for 2000 to 2004. Analysis employed ordinary least square multiple linear regression with age-adjusted mortality as the dependent variable. **Results:** Age-adjusted all-cause mortality was independently related to Poverty Rate, Median Household Income, Percent High School Graduates, Rural–Urban Location, Obesity, Sex, and Race/Ethnicity, but not Unemployment Rate, Percent Uninsured, Percent College Graduates, Physician Supply, Smoking, Diabetes, or Coal Mining. **Conclusions:** Coal mining is not per se an independent risk factor for increased mortality in Appalachia. Nevertheless, our results underscore the substantial economic and cultural disadvantages that adversely impact health in Appalachia, especially in the coal-mining areas of Central Appalachia.

The Appalachian region, as currently defined by the Appalachian Regional Commission (ARC), is comprised of 420 contiguous counties in 13 states stretching from New York to Mississippi.[1] (The numbers of ARC counties has increased from an initial 360 as a result of periodic acts of Congress. There were 399 counties in 1991, 406 counties in 1998, 410 counties in 2002, and 420 counties since 2008.) Encompassing an area of 205,000 square miles, the region overlaps and extends beyond the less sharply demarcated cultural region known as Appalachia. It is home to about 25 million people. For research and other purposes, the region is often divided into five geographic subregions of relatively homogeneous characteristics (eg, topography; demographics) as shown in Fig. 1. Appalachian Regional Commission, a regional economic development agency, was created in 1965 by Congress in recognition that Appalachia suffered disproportionately poor socioeconomic conditions.[2]

It is also well recognized that Appalachians suffer disproportionately poor health and increased risks of adverse health outcomes compared with the rest of the nation.[3,4] For example, the Appalachian region suffers higher rates of total and premature mortality (mortality in persons aged 35 to 64 years),[4,5] heart disease and cardiac mortality,[6–8] cancer incidence[9] and cancer mortality,[10] stroke mortality,[11] chronic pulmonary disease,[5] obesity,[12] and diabetes.[12–14] In the view of many epidemiologists and public health researchers, Appalachia is characterized by "increased chronic disease burden, limited access to health care, and elevated rates of behavioral risks."[15]

Significant health disparities have also been documented within the region, with deficits most consistently found in central and southern Appalachia. Figures 2 to 5 show the regional distributions of county-level premature mortality due to all causes, cancer, heart disease, and stroke. High rates of all-cause mortality are concentrated in eastern Kentucky, southern Ohio, western Virginia, southern West Virginia, northern Alabama, and Mississippi.[4] Cardiac-related death rates are generally higher in rural areas,[8] with highest rates of premature mortality in central and southern Appalachia, particularly eastern Kentucky.[5] Premature cancer mortality is dominated by high rates in the Appalachian counties of Kentucky, Ohio, and West Virginia.[5] In eastern Kentucky, mortality rates for total cancer, lung cancer, and cervical cancer are up to 36% greater than overall Appalachian rates and up to 50% greater than corresponding US rates.[10]

Such disparities impose enormous burdens on the people of Appalachia and their health care and social service systems. As discussed later, a variety of risk factors (eg, age, sex, race, income, and education) have been associated with specific outcomes, but those factors do not fully explain the disparities. It has been proposed that health disparities in Appalachia are due to "highly localized" factors: "health disparities ... result from a combination of factors that are unique to each local area."[4] The public health policy implications of such localized factors are potentially much different from those that apply to more systematic barriers to health.

A recent series of ecological studies by researchers at West Virginia University (WVU) has suggested that age-adjusted Appalachian county mortality rates are independently related to the presence of coal mining, but the nature of that relationship was uncertain.[16–18] Increased mortality rates were apparently not due to occupational exposures and observed mortality patterns differed between Appalachian coal-mining counties and coal-mining counties outside Appalachia. For example, county-level lung cancer mortality was elevated in Appalachian, but not in non-Appalachian coal-mining areas.[18] The WVU authors proposed that observed health disparities in residents of Appalachian mining areas might be attributed to a "coal mining–dependent economy,"[16] or to "pollution" and the "environmental impacts of Appalachian mining,"[17,18] or to "additional behavioral or demographic characteristics not captured through other covariates."[18]

To better understand these possibilities, particularly the role of coal mining as an independent risk factor for disparate mortality rates, we undertook a reanalysis of those published studies. Our objective was to determine the predictive value of coal mining and other potentially relevant risk factors for explaining differences in mortality rates across the Appalachian region.

BACKGROUND

A variety of economic measures illustrate how badly the Appalachian region lagged behind other parts of the US in 1965, the year that ARC was founded, and how that status has improved. At that time, 1 in 3 Appalachians lived in poverty, 295 of 360 counties were categorized as "high poverty" (poverty rate >1.5 times US average), and 223 of 360 counties were classified as "economically

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The study was supported by the National Mining Association. The results presented here represent the conclusions and opinions solely of the authors. Its publication does not imply endorsement by the National Mining Association. The study sponsor had no role in the study design, analysis or interpretation of the data, or in the writing, preparation, or submission of the manuscript, which was not provided to the sponsors prior to its submission for publication.

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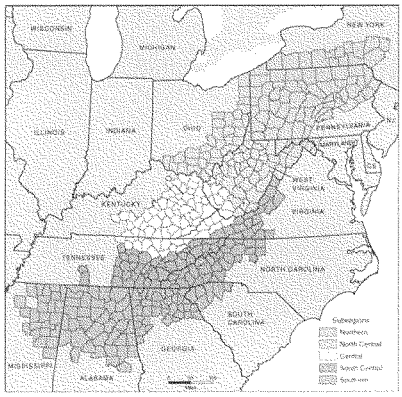

FIGURE 1. Geographic subregions in Appalachia. Appalachian counties divided into five geographic subregions of relatively homogeneous characteristics (eg, topography, demographics, economics). Reproduced, with permission, from the Appalachian Regional Commission, November 2009.

distressed."[1,a] By 2008, the poverty rate had declined to 18%, the number of "high poverty" counties had fallen to 116 of 410 counties, and 78 of 410 counties were classified as "distressed." Despite such improvement, however, Appalachian per capita personal income remains about 20% lower than the US average and the region has "fared far worse than the nation" during the recent recession.[19]

Significant economic disparities occur within the region. For example, incomes are relatively high in northern and southern Appalachia, but relatively low in central Appalachia. In 2008, per capita market income for the region overall was 75% of the US average, but only 51% in central Appalachia. Likewise, 57 of the 82 Appalachian counties classified as economically distressed in 2011 were located in the contiguous areas of three central Appalachian states: eastern Kentucky; northern Tennessee; and southern West Virginia.[19] As summarized by ARC, "the central Appalachian region in particular still battles economic distress, with concentrated areas of high poverty, unemployment, poor health, and severe educational disparities."[19] Such economic disparities seem to parallel the characteristic Appalachian landscape: "counties classified by ARC as 'distressed' tend to be the mountainous and isolated counties that most people consider to be Appalachia."[14]

As expected, poorer health status in Appalachia is associated with lower economic status. High rates of premature all-cause mortality, cardiac mortality, and cancer mortality have each been associated with low income, high poverty, high unemployment, and a high percentage of people without health insurance.[5] Similar associations are found when counties are classified by economic status. As a group, economically distressed Appalachian counties had the highest mortality rates from heart disease and stroke.[11] Likewise, prevalence of diabetes increases as economic status declines. In 2007, the prevalence of diabetes was 13% in "economically distressed" Appalachian counties, more than twice the 6% rate in Appalachian "economic attainment" counties; the corresponding national and regional rates were 8% and 10%, respectively.[14]

Education is also strongly linked with health status; limited education is regarded as a "precursor to poor health."[3,20,21] The region has long been characterized by "severe educational disparities," which persist in some areas.[19] In 2000, the proportion of adults without high school diplomas or equivalents exceeded the US average in 11 of the 13 Appalachian states, and the proportion of those with a college degree was substantially lower. While 24.4% of US adults had college degrees, only 17.7% of Appalachian adults and only 10.2% of those residing in economically distressed Appalachian counties were college graduates.[22–24] Only 18 of 410 Appalachian counties had a higher percentage of college graduates than the national average; most were the homes of large universities. In general, the counties with lowest educational attainment were "concentrated in central Appalachia, especially in the mining regions," where health status is generally worst.[23]

In addition, unhealthy behaviors are more common in the region than in the rest of the nation.[15,25,26] For example, Appalachians have a higher prevalence of tobacco use than does the US population.[25] Five Appalachian states rank among the eight highest for smoking prevalence,[27,28] and smoking rates are higher in the Appalachian counties and Labor Market Areas than the non-Appalachian counties and Labor Market Areas of those five states.[4,29,b] High rates of smoking cluster in central Appalachia, notably in eastern Kentucky and West Virginia where smoking rates are the nation's highest.[4,9,27] In those areas, high smoking rates coincide with the nation's highest lung cancer rates, with similar patterns seen for other tobacco-related cancers.[9,30,31]

Lack of physical exercise and poor eating habits are two other behaviors that adversely impact regional health. Compared with the US population, residents of southern and central Appalachia are less likely to engage in recommended levels of physical activity and more likely to have no physical activity during leisure time.[25,32] Residents of rural Appalachia are also more likely to consume less nutritious, more energy-dense diets.[14,25] Because inactivity and poor diet are risk factors for obesity, and because inactivity, poor diet, and obesity are all risk factors for diabetes, it is not surprising that obesity and diabetes are more prevalent in Appalachia. Likewise, physical inactivity, poor diet, and obesity are risk factors likely to contribute to the increased incidence of cancer in rural Appalachia.[26,33]

In 1997, the prevalence of obesity (body mass index >30kg/m^2) in Appalachian counties ranged from 10.2% to 27.6% among men and 7.8% to 25.3% among women. High rates of obesity clustered in eastern Kentucky, southern West Virginia, north-central Pennsylvania, and southeast Ohio.[34] In 2007, the highest prevalence rates of obesity and diabetes in the United States were mainly found in the Appalachian counties of West Virginia, eastern Kentucky, and northern Tennessee.[12]

Nevertheless, such risk factors, at least as measured by traditional epidemiologic variables, seem insufficient to fully explain the region's health disparities. For example, after accounting for a variety of covariates (eg, age, sex, race, education, income, smoking, obesity, and physical activity), residents of economically distressed counties in Appalachian had a statistically significant 33% greater risk of having diabetes than did residents of non-Appalachian counties; by contrast, risks did not differ between non-Appalachian counties and the Appalachian counties not classified as distressed.[14]

[a]According to ARC, a county is "economically distressed" if it ranks in the worst 10% of US counties for three-year average unemployment rate, per capita market income, and poverty rate. By contrast, a county has achieved "economic attainment" if it ranks in the best 10% of US counties.[7]

[b]The US Department of Labor defines Labor Market Area (LMA) as "an economically integrated geographic area within which individuals can reside and find employment within a reasonable distance or can readily change employment without changing their place of residence." In Appalachia, non-metropolitan LMAs are generally identical to counties.[72]

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Some of the health disparities not accounted for by the traditional risk factors may be attributed to the geographic isolation that characterizes rural Appalachia. Such isolation adversely impacts regional health status by creating logistical barriers to health care access and by limiting employment opportunities, thus contributing to poverty and lack of health insurance.[25] For such reasons, residents of rural Appalachia generally utilize fewer preventive health services such as routine cancer screening.[26,35–38] Geographic isolation, which leads to fewer local medical and other support resources, is also a likely explanation for the increased mortality rates from coronary heart disease in rural versus metropolitan Appalachian communities.[8] Other data suggest that rural Appalachians with cancer have less access to comprehensive diagnostic and treatment services.[39] And by limiting access to health care services and producing physician shortages, the rural geography has seemingly caused an adverse impact on Appalachia's "diabetes problem."[40]

Cultural and social factors associated with residence in distressed areas are also likely to adversely impact health. Factors suggested as relevant include "Appalachian cultural beliefs such as fatalism," which reinforces poor health behaviors and discourages seeking of early health intervention and medical advice. In addition, high rates of smoking lead to increased exposure to second-hand smoke.[14,18] Local social conditions also influence dietary habits, and thereby health. Rural Appalachia is distinguished by a relative lack of full-service grocery stores and fruit-and-vegetable markets; residents of such "food deserts" tend to shop in stores with fewer nutritional choices and have less nutritious diets.[14,34,41,42]

METHODS

Design

This study retrospectively investigated all-cause mortality rates for residents of Appalachia during the years 2000 to 2004. Mortality and covariate data were obtained from publicly available databases. The time period considered and the data utilized were selected to allow for analyses that closely resembled those described in the WVU studies.[16–18] Data were collected to represent the same time period (2000 to 2004) as much as possible given data availability, but the actual time periods corresponding to specific variables were not identical. Because the WVU analyses differed from study to study, we choose to incorporate the least complex of those alternative approaches for our basic model. The following discussions of Data and Analysis explain that process in detail.

Data

Mortality

Mortality data were obtained from the Centers for Disease Control and Prevention.[43] Reported data described county-level mortality rates age adjusted to the 2000 US standard population. We utilized all-cause mortality for all age groups.

Demographic Data

We obtained county-level demographic data from the 2005 Area Resource File.[44] The percent men population was calculated as the arithmetic mean for the years 2000 to 2003. The percentages of the population who were white, African American, Native American, non-white Hispanic, and Asian American were determined for the year 2000.

Economic Status

Four measures of economic status have been associated with mortality rates in Appalachia: median household income; poverty rate; unemployment rate; and rate of health insurance.[5] Each was considered in at least 1 of the 3 WVU analyses. We obtained county-level economic data from the Area Resource File.[44] Median Household Income and Poverty Rate were determined as the arithmetic means for the years 2000 to 2002. Unemployment Rate (persons aged ≥16 years) and Percent Uninsured were obtained for the year 2000.

Education

County-level rates of high school graduates and college graduates were calculated using ARC data for the year 2000.[45] The number of persons with a high school diploma or higher (Percent High School Graduates), and the number of persons with a college diploma or higher (Percent College Graduates) were each divided by the number of persons aged 25 years or older.

Location

The location type of each county was characterized using the US Department of Agriculture (USDA) nine-point rural–urban classification scheme, which codes metropolitan and nonmetropolitan counties by degree of urbanization, adjacency to metro areas, and population size of urban areas.[46] (For example, "Code 1" = "counties in metro areas of 1 million population or more"; "Code 5" = counties with "urban population of 20,000 or more, not adjacent to a metro area", and "code 9" = counties that are "completely rural or <2500 urban population, not adjacent to a metro area".) We obtained county-specific rural–urban continuum codes from the Area Resource File.[44] We divided the USDA rural–urban continuum codes into three categories: Metropolitan (codes 1 to 3), Micropolitan (codes 4 to 7), and Rural (codes 8 to 9).

Access to Health Care

County-specific physician supply was used as a measure of access to health care. Data for the number of active medical doctors (MDs) and osteopathic doctors (DOs) per 1000 population were obtained from the Area Resource File.[44] Two of the WVU studies used "number of active MDs and DOs per 1000 population,"[17,18] whereas the third included "physician supply" not otherwise defined.[16] In our analyses, Physician Supply indicates the number of active MDs and DOs per 1000 population.

Smoking

Rates of current smokers were obtained from the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System (BRFSS)[28] supplemented with smoking rates available from state public health department Web sites. County-level data were available for 54 Appalachian counties, of which 9 were reported at the level of metropolitan statistical areas. For the other 366 counties, smoking rates were available as the means for each of 84 subgroups of contiguous counties. When available, we used rates averaged for the years 2002 to 2004; otherwise, we used data for the year(s) closest to that time period. (Smoking data were available for the following years for each state: Alabama: 2009–10; Georgia: 2000–03; Kentucky: 2002–04; Maryland: 2000–02; Mississippi: 2004; New York: 2003; North Carolina: 2002–04; Ohio: 2002; Pennsylvania: 2002–04; South Carolina: 2002–04; Tennessee: 2005; Virginia: 2007; West Virginia: 2001–05.)

Obesity and Diabetes

We obtained county-level data for obesity and diabetes from the National Diabetes Surveillance System for the year 2004.[47] Obesity Rate indicates the proportion of adults aged 20 years or older with body mass index 30 kg/m^2 or more. Diabetes Rate indicates the proportion of adults aged 20 years or older with diagnosed diabetes.

Coal Mining

County-specific coal production data were obtained from the Energy Information Administration.[48] In our analyses, we divided

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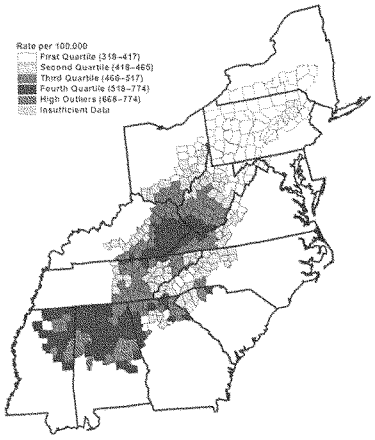

Figure 2. All-cause premature mortality (1995– 2001).

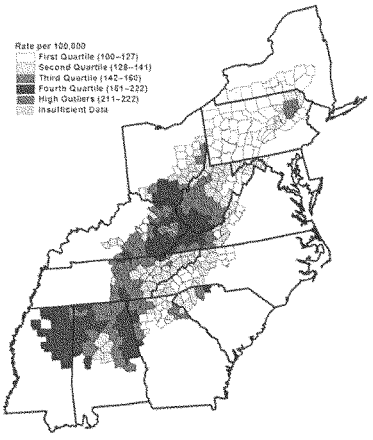

FIGURE 4. Heart disease premature mortality (1995–2001).

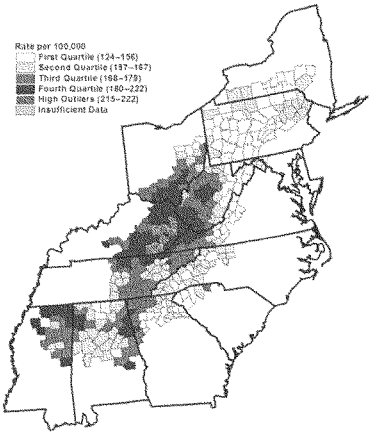

FIGURE 3. All-site cancer premature mortality (1995–2001).

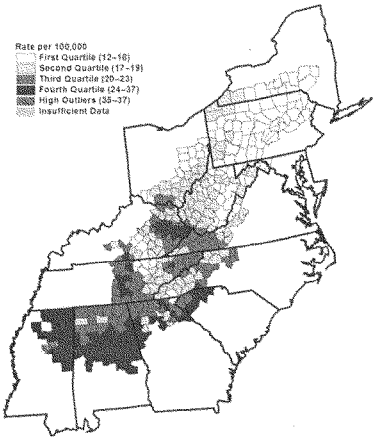

FIGURE 5. Stroke premature mortality (1995–2001).

FIGURES 2–5. Premature mortality in Appalachia (1995–2001). These four maps show the distribution of county-level premature mortality rates for 1995–2001, standardized to 2000 census. "High Outlier" identifies counties with death rates greater than the 75th percentile plus 1.5 times the interquartile range. Adapted from Halverson and Bischak[5]; reproduced, with permission, from the Appalachian Regional Commission.

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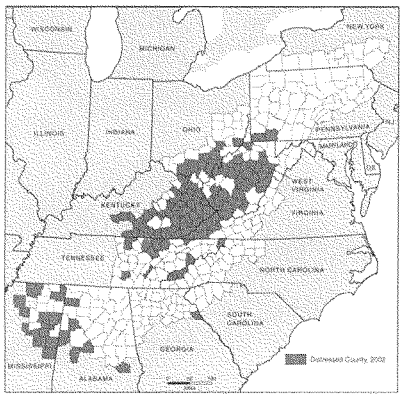

FIGURE 6. Appalachian Regional Commission–designated distressed counties (2002). A county is designated as "economically distressed" if it ranks in the worst 10% of US counties for 3-year average unemployment rate, per capita market income, and poverty rate. Reproduced, with permission, from the Appalachian Regional Commission, June 2002. Data sources: US Bureau of Labor Statistics, LAUS, 1997–1999; US Bureau of Economic Analysis, REIS, 1998; and US Census Bureau, STF3A, 1990.

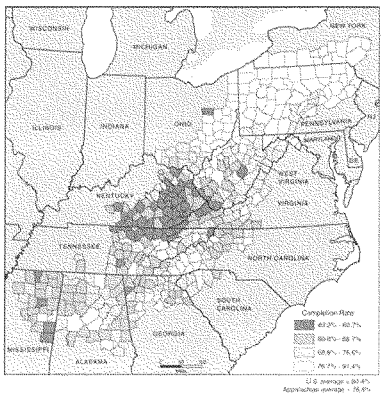

FIGURE 8. High school completion rates in Appalachia (2000). County-level percentages of adults, 25 years and older, completing 12 years or more of school. Reproduced, with permission, from the Appalachian Regional Commission, October 2008. Data source: US Census Bureau, 2000 Census, SF3. Data classification scheme: Natural Breaks.

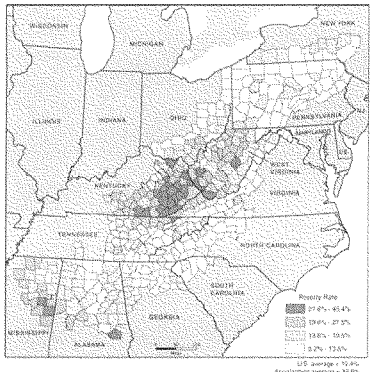

FIGURE 7. Poverty rates in Appalachia (2000). County-level ratios of the persons below poverty level to the total number of persons for whom poverty status has been determined. Reproduced, with permission, from the Appalachian Regional Commission, October 2008. Data source: US Census Bureau, 2000 Census, SF3. Data classification scheme: Natural Breaks.

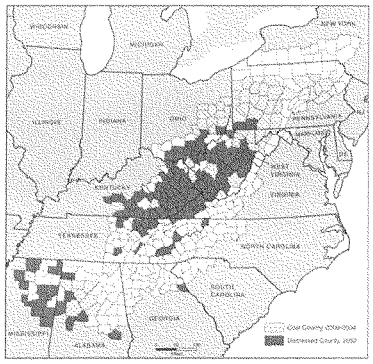

FIGURE 9. Appalachian Regional Commission–designated distressed counties (2002) and coal-producing counties (2000–2004). Counties were designated as "coal producing" if any amount of coal was mined during 2000–2004. Reproduced, with permission, from the Appalachian Regional Commission, September 2011. Data sources: US Department of Energy, EIA, 2011; US Bureau of Labor Statistics, LAUS, 1997–1999; US Bureau of Economic Analysis, REIS, 1998; and US Census Bureau, STF3A, 1990.

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Appalachian counties into two groups based on whether they produced coal during 2000 to 2004 and we also grouped coal-producing counties into those above (High) and below (Low) the median coal production level for Appalachian counties during that time period.

Analysis

The data were analyzed using SAS 9.2 (SAS Institute, Cary, NC).[49] We conducted ordinary least square multiple linear regression with age-adjusted mortality as the dependent variable. Our basic regression model ("Basic Model") paralleled the WVU analyses, but we considered only the 420 Appalachian counties, and we did not include coal mining–related variables or the "dichotomous Southern variable . . . created to capture regional effects that partially overlap with Appalachia."[18] The model included the following independent variables:

- Percent Men
- Race/Ethnicity Rates
- Poverty Rate
- Percent High School Graduates
- Percent College Graduates
- Rural–Urban Category
- Physician Supply
- Smoking Rate

Next, we added additional independent variables into the basic model and evaluated their explanatory power by means of partial F tests. Partial F tests are used to determine whether the addition of one or more variables to an already specified model significantly decreases the unexplained variance of the model.[50] When that occurs, addition of the variable is said to have significantly improved the model's fit to the observed data. The partial F test is also known as Type 3 test for fixed effects when the addition of only one more variable is contemplated.

Additional variables were added one at a time to the Basic Model, regression analyses were performed, and the results compared with the regression results for the Basic Model without that additional variable. If partial F tests indicated that inclusion of the variable led to significantly improved model fit, the variable was retained in an "Expanded Model." Alternatively, if including a variable did not significantly improve the model, it was excluded. This process was repeated using Expanded Models in place of the Basic Model, until all variables had been evaluated. The following is a list of the additional independent variables that were tested in this way, listed in the order in which they were added:

- Median Household Income
- Unemployment Rate
- Percent Uninsured
- Obesity Rate
- Diabetes Rate
- Coal Mining (Yes/No)
- Coal Mining (High/Low/None)

RESULTS

The results of ordinary least squares multiple linear regression analysis of the Basic Model are presented in Table 1. These findings indicate that higher age-adjusted all-cause mortality rate was independently related to Poverty Rate, Percent High School Graduates, Rural–Urban Location, and Demographic variables including Sex and Race/Ethnicity rates. Mortality Rate was not significantly related to Percent College Graduates, Physician Supply, or Smoking Rate.

We then evaluated whether inclusion of additional variables would significantly reduce the unexplained variance of the Basic Model, thus improving its fit to the age-adjusted mortality data. Table 2 presents the results of this sequential testing, indicating F score, P value, and conclusions for each of the seven variables. Inclusion of Median Household Income significantly improved the Basic Model ($P < 0.0001$) and it was retained in an "Expanded Model." Likewise, Obesity Rate significantly improved the Expanded Model ($P = 0.0022$), and it was retained in a "Further Expanded Model." By contrast, no improvements resulted from the addition of Unemployment Rate ($P = 0.6852$), Percent Uninsured ($P = 0.3036$), Diabetes Rate ($P = 0.3704$), Coal Mining: Yes/No ($P = 0.6003$), or Coal Mining: High/Low/None ($P = 0.1047$), and they were excluded.

Table 3 presents the results of ordinary least squares multiple linear regression analysis of the Further Expanded Model. The variable Coal Mining: Yes/No has been included to demonstrate its lack of statistical significance when added to the model. These findings indicate that higher age-adjusted all-cause mortality rate was independently related to Poverty Rate, Median Household Income, Percent High School Graduates, Rural–Urban Location, Obesity Rate, and Demographic variables including Sex and Race/Ethnicity rates. The relationship between Mortality Rate and Percent College Graduates was nearly significant ($P = 0.0814$), but Mortality Rate was not significantly related to Physician Supply, Smoking Rate, or Coal Mining: Yes/No.

We also performed regression analyses of the Further Expanded Model after adding each of the excluded variables (Unemployment Rate, Percent Uninsured, Diabetes Rate, Coal Mining: Yes/No and Coal Mining: High/Low/None). First, we added a variable and ran the model, and then we removed that variable and added the next variable and repeated the process so that all variables were individually tested. Then we included all variables in the model at one time (but only one of the Coal Mining variables was included at any time). Adding each or all of those excluded variables did not significantly change the model's parameter estimates or their P values (data not shown); hence, all inferences remained the same.

DISCUSSION

Appalachians suffer disproportionately poorer health and significantly higher mortality rates than the rest of the nation.[3–5] In general, the Appalachian counties with poorest health are also the most economically distressed, the least educated, and those with the most limited access to social and medical services. In addition, residents of those counties demonstrate generally higher rates of risky behaviors, for example, higher smoking rates, more prevalent obesity, less physical activity, less nutritious diets, and less use of preventive health services. Notably, these often rural, isolated counties include many of the most productive coal-mining areas in Appalachia.[51]

Earlier efforts to understand and address the sources of such health disparities have identified a number of independent risk factors associated with specific health outcomes, but have not fully explained the disparities. Some have proposed that health disparities in Appalachia are due in part to factors "unique to each local area."[4] A recent series of ecological studies has suggested that the presence of coal mining is such a "local" factor, which is independently related to age-adjusted mortality rates, although the nature of that relationship is uncertain.

To better understand that relationship, we studied all-cause mortality rates for Appalachian residents during 2000 to 2004. Mortality and covariate data were selected to create a Basic Model that closely resembled the models employed in the UWV ecological studies, but did not include coal mining. As seen in Table 1, the regression analysis of that Basic Model indicated that increased mortality rate was significantly associated with greater poverty, lesser educational

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TABLE 1. Basic Model: Ordinary Least Squares Multiple Linear Regression Model; Age-Adjusted All-Causes Mortality Rate

		Basic Model		
Data Category	**Variable**	**Coefficient**	**SE**	***P***
	Intercept	5179.71	1101.18	***<0.0001***
Economic status	***Poverty Rates***	7.99	1.28	***<0.0001***
Education	***Percent High School***	−497.87	87.92	***<0.0001***
	Percent College	−174.43	117.46	0.1383
Location	***Rural–Urban Category***	−30.54	5.97	***<0.0001***
Access to health care	MDs and DOs per 1000	2.56	2.61	0.3285
Smoking	Smoking Rate	90.31	100.38	0.3688
Demographics	***Percent Men***	−805.75	320.29	***0.0123***
	Percent White	−35.49	11.00	***0.0014***
	Percent Black	−35.67	10.98	***0.0013***
	Percent Asian	−41.35	14.71	***0.0052***
	Percent Native American	−33.70	11.94	***0.0050***
	Percent Latin	−20.48	6.72	***0.0025***

Bold and italicized indicates statistically significant variables.
DO, osteopathic doctor; MD, medical doctor.

TABLE 2. Explanatory Power of Additional Independent Variables, With Sequential Addition of Significant Variables to the Basic Model, as Evaluated Using Partial F Test

Comparisons	**Numerator *df***	**Denominator *df***	**F Score**	***P***	**Conclusion**
(1), Basic Model					
(1) vs (2) [Basic Model + Income]	1	406	15.220	0.0001	**Retain income in model**
(2) vs (3) [Basic Model + Income + Unemployment Rate]	1	405	0.165	0.6852	Unemployment Rate does not improve model; **Exclude**
(2) vs (4) [Basic + Income + Percent Uninsured]	1	405	1.065	0.3036	Percent Uninsured does not improve model; **Exclude**
(2) vs (5) [Basic + Income + Obesity]	1	405	9.483	0.0022	**Retain Obesity in model**
(5) vs (6) [Basic + Income + Obesity + Diabetes]	1	404	0.804	0.3704	Diabetes Rate does not improve model; **Exclude**
(5) vs (7) [Basic + Income + Obesity + Mining (Yes/No)]	1	404	0.275	0.6003	Mining (Yes/No) does not improve model; **Exclude**
(5) vs (8) [Basic + Income + Obesity + Mining (High/Low/None)]	2	403	2.269	0.1047	Mining (High/Low/None) does not improve model; **Exclude**

attainment, rural location, and demographic factors including sex and race. No significant associations were seen for smoking or physician supply.

We then expanded that Basic Model. First, we considered the inclusion of three additional economic measures (Median Household Income, Percent Unemployed, and Percent Uninsured) as independent variables. Those three measures, along with Poverty Rate, are generally correlated, but they are nonidentical and reflect different aspects of socioeconomic status and economic distress.[5,52,53] All four have been independently associated with Appalachian mortality rates.[4,5] The WVU model did not include Median Household Income, Percent Unemployed, or Percent Uninsured.

The inclusion of Median Household Income significantly improved the model's fit to the observed data and it was included in an Expanded Model. By contrast, neither of the two other economic variables significantly reduced the unexplained variance of the Expanded Model (ie, Basic Model plus Median Household Income); hence, neither was retained in the model.

We next considered whether adding Obesity Rate and Diabetes Rate would improve the Expanded Model's explanatory power. Both are important risk factors for mortality. The World Health Organization has determined that "overweight and obesity" is the fifth leading risk factor for deaths worldwide,[54] and Centers for Disease Control and Prevention recognizes diabetes as the seventh leading cause of death in the United States.[55] Obesity is also seen as a more important risk factor for chronic disease than either smoking or poverty.[56,57] Neither Obesity Rate nor Diabetes Rate was included in the WVU analytical models.

In our analyses, addition of Obesity Rate significantly improved the Expanded Model and it was retained in a Further Expanded Model (ie, Basic Model plus Median Household Income plus Obesity Rate). By contrast, adding Diabetes Rate to that model yielded no significant improvement and it was excluded.

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TABLE 3. Further Expanded Model: Ordinary Least Squares Multiple Linear Regression Model; Age-Adjusted All-Causes Mortality Rate. Coal Mining (Yes/No) Has Been Included for Demonstration Purposes, but Is Not a Component of the Model

Data Category	Variable	Coefficient	SE	*P*
	Intercept	4977.06	1076.63	**<0.0001**
Economic status	***Poverty Rates***	10.96	1.90	***<0.0001***
	Median Household Income (per $1000)	4.86	1.27	***0.0001***
Education	***Percent High School***	−510.44	90.52	***<0.0001***
	Percent College	−222.60	127.42	0.0814
Location	***Rural–Urban Category***	−20.55	6.17	***0.0010***
Access to health care	MDs and DOs per 1000	2.98	2.59	0.2500
Smoking	Smoking Rate	52.67	98.61	0.5935
Obesity and diabetes	***Obesity Rate***	5.96	1.97	***0.0027***
Demographics	***Percent Men***	−931.40	316.61	***0.0035***
	Percent White	−36.39	10.74	***0.0008***
	Percent Black	−37.23	10.71	***0.0006***
	Percent Asian	−41.38	14.38	***0.0042***
	Percent Native American	−35.06	11.65	***0.0028***
	Percent Latin	−21.96	6.56	***0.0009***
Coal mining	Coal Mining (Yes/No)	4.68	8.92	0.6003

Bold and italicized indicates statistically significant variables.

Finally, we considered the effects of including either of the two measures of coal mining in the Further Expanded Model. Neither Coal Mining: Yes/No nor Coal Mining: High/Low/None significantly improved the explanatory power of the model. The findings of this analytical model argue that coal mining is not per se an independent risk factor for increased mortality in Appalachia. By contrast, we found that increased mortality was significantly associated with greater poverty, lower median household income, fewer high school graduates, rural location, obesity rate, and demographic factors including sex and race. Lower college graduate rate was nearly significant. Moreover, we found no significant associations for smoking, physician supply, and diabetes.

It seems surprising that smoking rate was not significantly associated with mortality, given that smoking causes about 20% of US deaths,[58] but similar results were reported in WVU studies.[16,59] This is likely due to limitations of the available data. BRFSS determines current smoking status, not quantity or duration (The relevant BRFSS questions are "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes every day, some days, or not at all?."[28]), thus BRFSS data do not capture the substantial dose–response gradient linking smoking and mortality.[60] Also, smoking data were available for only 54 of 420 individual Appalachian counties; for the other 366 counties, the available smoking rate were mean values calculated for each of 84 subgroups of contiguous counties. Thus, Smoking Rate is almost certainly biased by non-differential misclassification, a particular concern in light of evidence that smoking rates are increased in coal-mining areas.[17,18,59] To the extent that such misclassification "biases toward the null", the link between smoking and mortality would be differentially reduced in high-smoking counties. The available data are not adequate to evaluate whether smoking might act synergistically with other environmental pollutants.

Likewise, we were surprised that Diabetes Rate failed to improve the model, but this is likely explained by two factors. First, obesity is a critical risk factor for diabetes and the two are well correlated. Risk of diabetes, for example, was increased up to 11-fold in Medicare recipients with a history of midlife obesity.[61] Thus Diabetes Rate may add little explanatory value not associated with Obesity Rate. Second, BRFSS self-reported diabetes status is likely to misclassify a substantial proportion of the population because more than 27% of adults with diabetes in the United States have "undiagnosed diabetes."[62] Such misclassification would likely have greatest impact in the economically distressed Appalachian counties where reported diabetes rates are generally higher and utilization of preventive services generally lower than in other counties. Thus, in those counties apparent associations between diabetes and mortality are probably understated.

Lack of a significant association between Physician Supply and mortality rate is also notable. One explanation is that the number of physicians is "just one factor within complex environments," which include other health care workers and a variety of health care delivery systems: "Higher physician supply per se does not amount to better access, quality, or outcomes."[63] Some studies report that an increased supply of primary care physicians, but not specialists is associated with reduced mortality.[64] Reanalysis of their data, however, suggested that benefits were region-clustered and less likely to occur in rural populations.[65] Finally, there is no standard approach to quantifying the supply of primary care providers using secondary data sets; it is likely that some specialists will be misclassified, while nurse practitioners and physician assistants are ignored.[65]

We doubt that the differences between our findings and those of the WVU studies are due to the ways in which covariates were selected and defined. We chose time periods, variables, and data to closely resemble those studies. In three cases, the WVU studies incompletely or inconsistently defined their covariates. In those cases, we chose the least complex alternative for our model; thus, we used covariates that were similar, but not necessarily identical. For example, the WVU studies defined Physician Supply as the number of active MDs and DOs per 1000 population. Some results were also reported for "primary care physicians," a category not specifically contained in the 2005 Area Resource File and

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no explanation was given as to how "primary care physicians" was defined. We defined Physician Supply as the number of active MDs and DOs per 1000 population; we did not differentiate "primary care physicians."

A second case involves the rural–urban continuum. Two WVU studies included the nine-point USDA continuum scale,[16,17] while the third study, citing concerns for nonlinearity, recoded the scale into three categories ("metropolitan," "micropolitan," and "rural").[18] Nevertheless, that study did not actually define the categories. To understand how these categories were structured, we reviewed other studies by those researchers who included the USDA scale, but found the scale used in still other ways. One study defined only two categories, "metropolitan" (codes 1 to 3) and "nonmetropolitan" (codes 4 to 9), but then treated "rural" and "nonmetropolitan" as equivalent terms: "The terms rural and nonmetropolitan will be used interchangeably in this study."[66] A second study coded "metropolitan" status as a "five-level variable," but no further details were provided.[67] A third[68] included "rural–urban setting" as a covariate that was not defined. Our analyses included three explicitly defined categories that seem consistent with the USDA scheme and the least complex of the WVU approaches.[18]

The third case involves coal mining. The WVU studies each defined different coal-mining categories. One defined coal-mining areas as "counties with any amount of coal mining" during 1994 to 2005; some analyses also grouped coal-mining counties into those above and below the median production level.[16] A second study defined three groups of counties based on total 2000 to 2004 coal production: more than 3 million tons; less than 3 million tons; and no production.[18] For some analyses, counties with more than 3 million tons of production were compared with all other counties combined and "per capita coal production" (calculated relative to the 2000 census) was also included in those analysis. The third study also defined three groups of counties on the basis of total 2000 to 2004 coal production, but groups were defined differently: more than 4 million tons; less than 4 million tons; and no production.[17] Our approach was similar to the first of those WVU studies, but we considered the time span considered in the latter two studies. Our analysis divided counties into two groups based on whether any amount of coal was mined during 2000 to 2004, and coal-producing counties were further grouped into those above and below the median production level for Appalachian counties during that time period.

Our Expanded Model indicates that coal mining is not per se the cause of increased mortality in rural Appalachia. On the contrary, our results underscore the substantial economic and cultural disadvantages that adversely impact the health of many area residents. Particularly in the coal-mining areas of central Appalachia, there is a potent combination of greater economic distress, lesser educational attainment, decreased access to health care, limited availability of nutritious foods, higher rates of behavior-related risks such as obesity and smoking, and decreased use of preventive health services. The conjunction of such factors and their adverse effects can be seen by comparing Figs. 2 to 5, which show the geographical distributions of various county-level mortality rates, and Figs. 6 to 9, which show the distributions of county-level poverty rate, economic distress, percent high school graduates, and coal mining.

Such overlapping risk factors and mortality rates illustrate how difficult it can be to disentangle the effects of the cultural environment from those of the physical environment, a difficulty made greater because the two interact. For example, the physical isolation of the mountainous counties that characterize rural Appalachia poses barriers to industrial diversification and broadening of employment options, and also contributes to lower incomes, reduced access to health care services, reduced availability of nutritious foods, and so forth.[14,25] The interplay of geographical isolation, kinship, and health-related behaviors further complicates matters. Rural Appalachia is distinguished by tight-knit social networks, "cohesive, extended, and geographically connected" kinships, which often extend beyond biological families.[15,69] Such networks can exert significant influence on the behaviors and health of their individual members, as recently documented in the Framingham Study. In that well-studied New England community, risks of becoming obese (ie, the "induction and person-to-person spread of obesity") were predicted by the closeness of social relationships, not by "common exposure to the local environment."[70] Thus, the physical environment (eg, geographical isolation) can foster cultural practices (eg, tight-knit kinships) that promote adverse health outcomes (eg, obesity).

Accordingly, coal mining in Appalachia, an industrial activity associated with rural, mountainous areas, is likely to be geographically associated with a variety of economic and cultural health risk factors. And, for similar reasons, mining is also likely to be geographically associated with a variety of adverse health outcomes. Although our results indicate that mining is not the direct cause of those outcomes, they do not rule out the possibility that mining contributes to the development of the social environments and cultural practices that adversely impact health. This possibility seems most likely in those specific areas where mining is the principal industry. Likewise, our analyses do not rule out the possibility that some specific mining methods may have greater adverse effects than others on the physical environment.

Ultimately, the issue of greatest concern is that Appalachians suffer disproportionately poor health and increased risks of adverse health outcomes compared with the rest of the nation.[3] During the past 50 years, ARC and others have overseen substantial improvements in the well-being of regional residents. Nevertheless, significant shortfalls persist. To eliminate health-related disparities, substantial efforts must be directed at the region's underlying economic and social disparities. To the extent that coal mining is a factor in defining the cultural fabric and socioeconomic environment of Appalachian communities, the coal-mining industry must play a role in efforts to increase economic diversity, develop job-creation programs, ensure access to appropriate heath care services, improve educational opportunities, and facilitate access to nutritious foods and diets.

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Mr. SHIMKUS. The Chair now recognizes the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. GREEN. I would like to thank you, Chairman, and our Ranking Member Tonko for holding today's hearing and welcome our distinguished panelists for joining us.

I want to turn to a law that this subcommittee passed in 2012 with strong bipartisan support, the Hazardous Waste Electronic Manifest Establishment Act finally gave the EPA the authority and the resources it needed to develop an e-Manifest system for hazardous waste shipping. This law is a prime example of how technology can improve environmental protection outcomes while providing measurable burden reductions for the States in the regulated community. Although still in the works, the States and industry are expected to save $75 million under this new electronic system for waste shipment manifest.

Ms. Marks, do you expect your department and the regulated entities in your States to benefit from the new e-Manifest system?

Ms. MARKS. Yes, sir. I think certainly that that is something that will benefit the States in our attempts to regulate. There are always instances where you need to know if there are things that are on the regs in your States that you need to be mindful of. It certainly helps to have that transparency for the public, too. It is just reassuring to the public to know that there is nothing that anybody is trying to cover up in that regard.

Mr. GREEN. Mr. Cash, what about Massachusetts?

Mr. CASH. Yes, we approach this in the same kind of way as Ms. Marks. We are all on board with this. We think it creates the kind of transparency and tracking of these kinds of materials. It is critically important.

Mr. GREEN. Mr. Darwin, Arizona is kind of like Texas. We have a lot of cross border. Do you expect benefits in reduce burdens in Arizona?

Mr. DARWIN. Yes, sir, I do. I think any time you can transfer resources from shuffling paper to analyzing data, it benefits everyone.

Mr. GREEN. OK. Do you think that the experience with e-Manifest can serve as an example for other E-Enterprise projects?

Mr. DARWIN. Mr. Green, I think that the only thing that I would suggest be different between what EPA has done with the e-Manifesting system and what they are doing with the E-Enterprise system is involving States in the design of the system. I think EPA has recognized—and I applaud them for recognizing—the role the States play in implementing environmental regulations throughout this country. And I am hopeful that in implementing their E-Enterprise system—and the proof is that they have been doing that so far—is that they will involve the States more heavily in the development of future systems.

Mr. GREEN. Obviously I agree because I joke in Texas it must be in our DNA that we disagree with the EPA generationally. But again, the partnership makes it much more easier.

Mr. Slesinger, you worked closely on e-Manifest for many years and continue to follow its implementations. What lessons should we in Congress and regulators at the State level learn from e-Manifest for other E-Enterprise initiatives?

Mr. SLESINGER. I think there are quite a few lessons I think that can be learned, but I think the most important one and I think E-Enterprise has taken that on and that is to work very closely with the States. When you try to uniform a system, like manifest reporting, you already may have a lot of different programs already under way in the different States. So getting the States to work with the Federal Government together and everyone agreeing to compromise because it is really hard for Connecticut to say, well, we need a uniform system that looks exactly like Connecticut, and Tennessee and Arkansas have a somewhat similar view about how there has to be uniform—so keeping the States involved early and consistently and everyone compromising a little is really key.

Mr. GREEN. For each of your States, would it be better for—would you be better served if the US EPA had greater resources to work with that, with each State, to make sure it is coordinated?

Mr. DARWIN. The basic answer is yes. The more resources and assistance that we get from EPA at this point, the better. As was seen in my testimony, we have had cuts in the order of 30 percent over the last 8 to 10 years, and it becomes increasingly difficult to do the kinds of compliance, permitting and enforcement that we need to, and assistance from EPA, particularly on these issues in which there is cross-State transfer of, in this case, hazardous waste, it is something that we would like to partner with EPA on.

Mr. GREEN. Mr. Chairman, I am almost out of time. It seems that we have a lot of opportunities to build on the success of our e-Manifest and improve the process of regulated entities and get better outcomes, and I would like to thank you and the ranking member holding the hearing. I yield back.

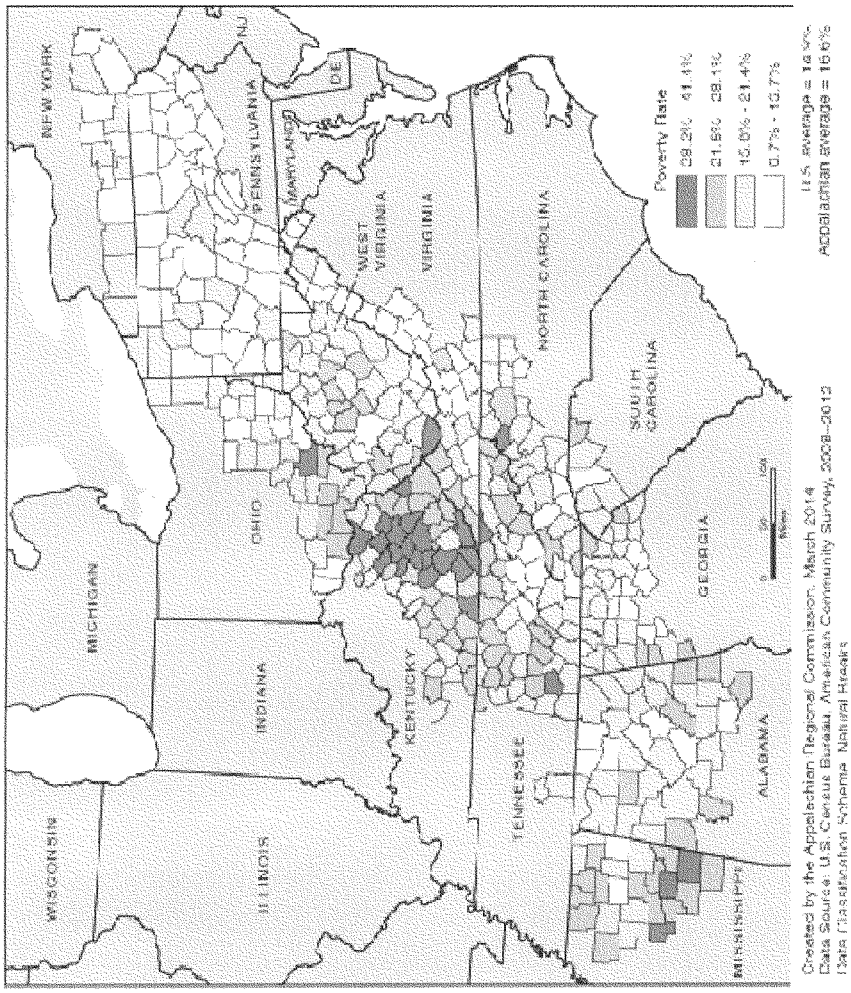
Mr. SHIMKUS. The gentleman yields back his time. I have got a question for the gentleman. Do you remember who were the sponsors of the e-Manifest legislation? Do you remember who moved that through the House? I think it was a Mr. Green and a Mr. Shimkus who were the original authors, but my memory doesn't serve me well. It didn't end up that way. It ended up a John Thune bill in the Senate after they mashed it up. But I thought you were being very humble in those questions.

The Chair now recognizes the gentleman from Pennsylvania, Mr. Murphy, for 5 minutes.

Mr. MURPHY. Thank you, Mr. Chairman. Good to have you all with us today. I first want to bring to the attention of Mr. Slesinger and Dr. Wasson, when I was in college in West Virginia, I spent a lot of time in Appalachian areas that were affected by a lot of poverty and a lot of coal problems out there. And I have spent my time also in doing everything from the Buffalo Creek gob pile disaster I believe before you were born, sir. But it was brutal, the things that happened down there.

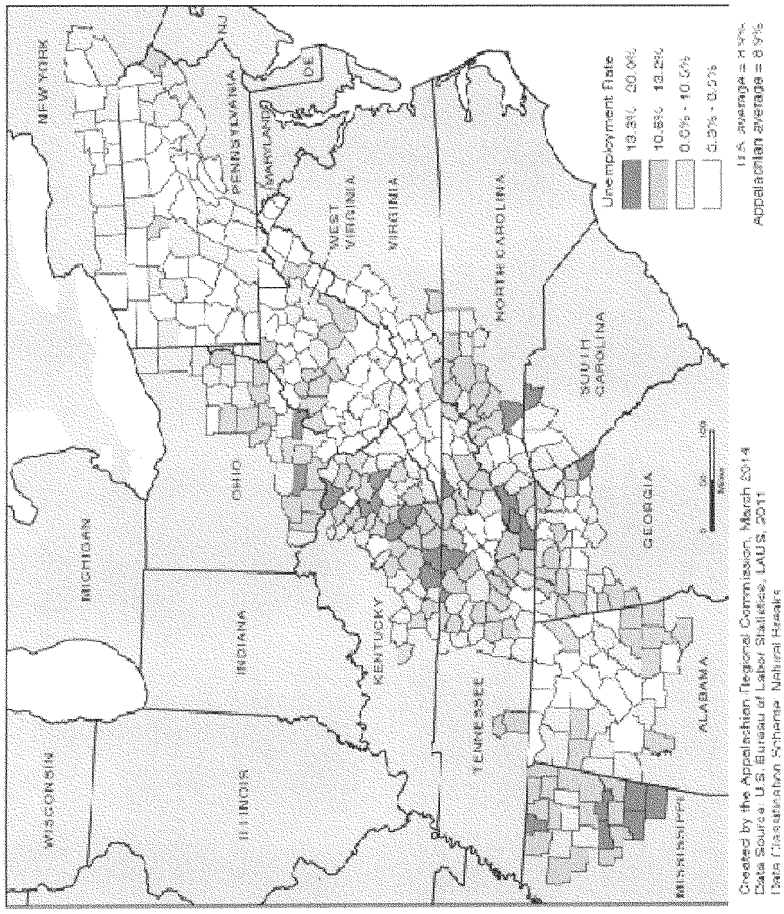
But one of my concerns we have sometimes with environmental groups is misleading data. I want to—you showed us a couple maps of lifespan and cancer, and I think you were trying to relate that to mountaintop mining. Let me show you a map here first of—I believe this is poverty rates in Appalachia.

[The information follows:]


NEW YORK
NJ
DE
PENNSYLVANIA
MARYLAND
WEST VIRGINIA
VIRGINIA
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
ALABAMA
MISSISSIPPI
TENNESSEE
KENTUCKY
OHIO
INDIANA
MICHIGAN
WISCONSIN
ILLINOIS
Poverty Rate
U.S. average = 14.9%
Appalachian average = 16.6%
Created by the Appalachian Regional Commission, March 2014
Data Source: U.S. Census Bureau, American Community Survey, 2008–2012
Data Classification Scheme: Natural Breaks

Mr. MURPHY. It is the same. Now let me show you the next map, unemployment.

[The information follows:]



Mr. MURPHY. The problem is people don't have jobs, and when you have issues of people unemployment and don't have jobs, you have a number of health effects, increased asthma, increased cancer, depression, mental health problems, shorter life expectancy associated with that. It is when people aren't working. And much of that not working is we have a lot of closed mines, abandoned mines, closed coal-fired power plants. I really hope that the environmental groups can work with us in finding solutions and unleashing the vast brilliance of American technology to find solutions for this different from shutting it down. And I welcome any opportunity to discuss that with you folks there because the poverty in those parts of the country, particularly Eastern Kentucky where you have some of the—and parts of Western Virginia, we have a 40-percent unemployment rate. Forty percent and eight times the national rate of substance abuse. It is brutal.

And parts of my district, however, are saved even though in Green County, something like 30 percent of their income is dependent upon coal. Thank goodness they have Marcellus shale because that is something they can have for some income there. To which case I then turn my attention to Ms. Marks and talk about Arkansas a little bit which my family is from. You may have heard of Murphy Oil?

Ms. MARKS. Yes, sir.

Mr. MURPHY. I am not from that side of the family.

Ms. MARKS. I am sorry.

Mr. MURPHY. We went into healthcare, but from the El Dorado Murphys and the Springdale Murphys out there and part of that Fayetteville shale is out there, but we went to healthcare.

But I want to ask about the role of the Department of Environmental Quality. How does that—what is their role in the regulation of natural gas exploration in Arkansas?

Ms. MARKS. We actually share that role with the Oil and Gas Commission. We would like to say that we deal with the service facilities, and they deal with the drilling facilities.

We have a memorandum of understanding with them that they deal with the actual drilling process itself, the construction of the wells, those kinds of things. They permit those. We deal with the ponds on site, the water issues, all of those types of things.

Mr. MURPHY. And how many State regulators do you have that monitor all these in the State?

Ms. MARKS. I can't speak for the Oil and Gas Commission. They have a number of inspectors that go out on site. We have in our water division, which is where we are involved most closely with Oil and Gas, we have 17 inspectors, and we also have four inspectors that are dedicated solely to natural gas issues. We were able to partner with the Oil and Gas Commission and get money from them through a memorandum of agreement that allows us to do joint inspections with them.

Mr. MURPHY. And how many regulators does EPA have in Arkansas to deal with the same thing?

Ms. MARKS. They don't have any regulators actually located in Arkansas. Dallas is the closest one.

Mr. MURPHY. Now, you have moved toward electronic reporting in Arkansas. So how has this affected the speed of time in moving forward in the thoroughness of reviewing permitting?

Ms. MARKS. It has been a great help, and it will be much more of a help when we actually get it fully implemented. But the fact that we don't have to deal with paper copies and uploading information into a database that then goes to EPA has saved a tremendous amount of time for both us and the regulated community.

Mr. MURPHY. Do you also maintain records of chemicals used for fracking in natural gas——

Ms. MARKS. The Oil and Gas Commission does. That is on their Web site, and it is open to the public.

Ms. MARKS. And it is required they have to file full disclosure in Arkansas?

Mr. MURPHY. They have to file disclosure. I am not sure of the actual specifics of that law, but they do have to disclose the materials in fracking fluids in Arkansas.

Mr. MURPHY. Also with regard to ponds there, do you maintain public records with regard to content in those ponds and any leaks in them or any environmental hazards associated with them so the public can also review those?

Ms. MARKS. Yes, sir. We have certain requirements. Our ponds are permitted on the basis of a permit by rule, and those ponds have to have a certain—they have to have below a certain level to be able to be put in those outside ponds and they have to be lined a certain way, constructed a certain way.

Mr. MURPHY. EPA has told us that there are not necessarily problems with those. Have you found problems with regard to any leaks or problems with groundwater contamination of any kind with those?

Ms. MARKS. Not so much with groundwater contamination. Surface water contamination we have. You know, you have sometimes ponds are going to fail, and sometimes you have people that don't follow the right construction process. And we will have contamination with adjacent waterways but nothing that has been, I would say, completely horrible. I mean, we have had leaks that we have had to address. We have had some minor fish kills, but that is about—that is rare, but it has happened.

Mr. MURPHY. OK.

Mr. SHIMKUS. The gentleman's time has expired. Just to let people know, the committee rules are that the committee and the subcommittee get to ask questions first and then guests, like Mr. Yarmuth, will get a chance at the end once all the committee members have asked their questions. And so with that, I will turn to Congressman Johnson from Ohio. He is recognized for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. I appreciate that. Director Darwin, in your review of processes that required improvement, what activities constituted the places most in need of reform or elimination in your view?

Mr. DARWIN. Thank you, Congressman Johnson. It is a great question, and the fact of the matter is that what we have found is that there is no process that couldn't use some sort of improvement. Studies have shown that whenever you review a process, about 80 percent of the process is wasteful from a document sitting

on someone's desk from a document transferring from one desk to another, from errors that have occurred within the document.

So as an agency, we have been reviewing every single one of our processes for whether or not it warrants improvement or not. We have done everything from the long lead-time permits that we issue, those permits that take the longest. I think the chairman mentioned that we have seen a 60 percent reduction in that timeframe. We have reduced the time it takes for a public records request by 80 percent, for us to respond public records request by 80 percent over the past 2 years as well. The time we see from us identifying a violation from it being corrected, that period of time is reduced by over 50 percent over the same period of time.

So as an agency, we have been reviewing every single one of our processes, acknowledging that every process can be improved and prioritizing them based upon their impact to the environment.

Mr. JOHNSON. OK. Well, you indicated in your written testimony that there is a, and I quote, "a lot of wasted effort imbedded in the current process and that it invites error and delay in evaluating adherence to environmental requirements. Can you give us some examples, specific examples?

Mr. DARWIN. Absolutely. You know, most environmental protection programs rely heavily on self-monitoring reporting. We heard a lot about that today. This means that the entity must collect data and report the data to the responsible Government entity, and they largely do this via paper. This is despite the fact that the rest of the business world is reporting on the things that they do, even we do, electronically. Think of our online bank accounts that we have and how we have demanded as a public that we have access to the information that our banks have electronically.

If we choose to follow a pure paper operation, it results in slow transactions and they are wrought with human error. Electronic reporting, on the other hand, is much quicker. It contains less error and allows for almost immediate feedback about whether or not there is a need for corrective action. When we receive electronic information from those who we regulate, we can give immediate feedback of whether or not they are complying with environmental requirements, and they can take corrective action to resolve those issues.

Mr. JOHNSON. Do you see similar issues at the Federal level?

Mr. DARWIN. Absolutely, and I think that it is imperative that we understand that the Federal Government has acknowledged that as well through the e-Manifesting system they have developed, through the eDMR system under the Clean Water Act that they are also looking into, and then this E-Enterprise program that they have been partnering with the States is really their acknowledgment that they are dealing with the same issues the States are on needing to transfer their operations into the 21st century.

Mr. JOHNSON. OK. Please explain for us how confidential business information will still be protected with information technology sharing like—and I hope I am pronouncing this right—MyDEQ? Is that how you say that?

Mr. DARWIN. Absolutely.

Mr. JOHNSON. Are developed and used.

Mr. DARWIN. Yes, sir. This is a concern that we have heard from our business community in Arizona, and what I respond to them and I will respond to you in the same way is that there are certain laws within Arizona that protect confidential business information, and those laws remain unchanged regardless of how we receive the information. The fact of the matter is though that the information that we are receiving, even if it is not confidential business information, still may be subject to public records laws. And so as we are receiving this electronic information, our—disseminating that information and making that information publically available is something that we have to work with our regulated community to make sure that we are fulfilling their expectations and also our obligations in our public records laws.

Mr. JOHNSON. OK. Final question for you. How does the fee-for-service model and having a significant portion of Arizona's DEQ's budget from fees and other revenue from the regulative community improve compliance and environmental protection in Arizona?

Mr. DARWIN. Congressman Johnson, I am sure you are referring to the fact that my agency was taken off the general fund 3 years ago. That means that our budget is made up of 85 percent fees from our regulated community and 15 percent from the Federal Government through grants from EPA. What this has caused us to do is to become much more responsive to our regulated community. It only makes sense. They are paying for 85 percent of our budget. They deserve some additional attention from us. And the fact of the matter is when I was going before our legislature and asking for the ability to increase fees to fund my agency, I had to make commitments to the regulated community to get their support. And the commitment that I made to them was that I would issue permits to them quicker so they could do the business that they were asking to perform in Arizona quicker as well.

So I fulfilled that commitment by becoming more responsive to them because of the fact that they are now 85 percent of my budget.

Mr. JOHNSON. OK. Thank you, Mr. Chairman. I yield.

Mr. SHIMKUS. The gentleman yields back his time. And the Chair now recognizes the gentleman from Florida, Mr. Bilirakis, for 5 minutes.

Mr. BILIRAKIS. Thank you, Mr. Chairman. I appreciate it. I have one question for Mr. Kovacs. Arizona removed the budget for the Department of Environmental Quality, and I know you referred to it just now, another witness did, from the general fund in favor of fee-for-service model. Does the Chamber support such a move like that for the States?

Mr. KOVACS. Well, it is certainly an interesting concept, and I would like to see more data about it. But I think—I am sorry. No, I think it is on. And I would like to see more data, but——

Mr. SHIMKUS. Just pull it a little bit closer and I think that will be—make the——

Mr. KOVACS. You know, it is a fascinating concept. The States overall receive roughly about 60 percent of their budget I think, 45 to 60 percent, from fees anyway. And on the fee issue, in some States, I believe even like California for an example, for an environmental impact statement, the developer actually pays.

I don't think anyone is asking—because they pay, that doesn't mean they get any special treatment. What it means is is that they have paid for a service. If you buy a book on Amazon, you expect the book. If you pay for a filing fee for a hazardous waste facility or solid waste facility, you expect that the State will review it. You still have to comply with all the same tests. You still have to comply with the engineering drawings, the zoning requirements, all of the—anyone who wants to sue can still sue. All of that is still in place, and if the State makes a mistake or there is a violation, the State has enforcement authority or they deny the permit. But what the business community never asks for is special treatment. They ask for the service that they would be paying for, and I think that on States like Arizona, I think that you have got a, you know, a good laboratory.

Mr. BILIRAKIS. Very good. Anyone else wish to comment on the fee-for-service model?

Mr. SLESINGER. I would, Congressman. We believe it is not the best way for the Government to operate is that the regulated control the budget of the regulator. The example though as just mentioned, that the State had to agree to be faster with approving permits as a prerequisite to get the needed fees to run I think is a bad precedent. Shouldn't the priority be possibly something else that is more protective of the general public and protecting the environment and public health as opposed to speeding up the processes for a permit.

As I said in my testimony, the propriety of environmental agencies should be enforcing the environmental laws. Making the paperwork system work better is a very nice secondary. But when that secondary group is essentially controlling and having the impact to say what the budget and priorities are going to be is a very bad way to go.

Mr. SHIMKUS. Would the gentleman yield, Mr. Bilirakis?

Mr. BILIRAKIS. Yes, I will.

Mr. SHIMKUS. I would just point out that the NRDC in the pesticide regulation obviously endorsed obviously the stakeholders paying into the system for identifying and then application and approval process.

I would also say that we do that a lot in the drugs and devices world that we deal with all the time. The user-fee system has been very successful in trying to force the bureaucracy to move rapidly to—in a timely manner to get a decision. It could be a yes, it could be a no. But at least when you have a period of time where you don't know when a final decision will be made, that is problematic.

Mr. SLESINGER. That—

Mr. SHIMKUS. Actually I want to ask my colleague from Florida if I can finish up and ask another question.

Mr. BILIRAKIS. Absolutely.

Mr. SHIMKUS. And I need to go to Mr. Cash just for this issue. Can you provide more details on why the E-Enterprise for Environment Initiative between the States and the EPA is important for Massachusetts?

Mr. CASH. Yes. As I had mentioned before, implied before, there are many different programs that we have that overlap with EPA that we do in collaboration with EPA, and we don't want to be in

a situation as we move to an electronic system, as we are in Massachusetts, as many other States are, in which we replicate the kind of different layers of regulation that we have on a paper system. We don't want to do a similar kind of system electronically. We don't want to be in a situation where our permittees are applying online in Massachusetts and then have to do a similar thing on a different system for EPA.

And so it is really important that we coordinate these things across the different levels, and that is one of the reasons we have been so engaged in this.

Mr. SHIMKUS. Thank you very much.

Mr. TONKO. Mr. Chair? Can I ask Mr. Slesinger to respond to that? I believe he——

Mr. SHIMKUS. It is the gentleman from Florida's time. Mr. Bilirakis, do you want to yield the remainder of your time to——

Mr. BILIRAKIS. Yes. Yes, I will.

Mr. SHIMKUS. Then yes.

Mr. BILIRAKIS. One second.

Mr. SLESINGER. Thank you, Mr. Bilirakis. I think the difference with pesticides in the funding of that program and approval, was that was an additional delta. It did not come as it did in the other case that was mentioned out of the base budget. You are not going to get your base budget unless you took care of this priority first, whereas a pesticide add-on, which is a fee, is a delta on top of the normal EPA budget.

Mr. SHIMKUS. And I would just say, that is a credible debate, but it is also a credible point to be made that the user fees have been successful throughout the Government operations as far as streamlining and getting accountability.

I would like to now recognize a very patient gentleman from Kentucky, Mr. Yarmuth, for 5 minutes.

Mr. YARMUTH. Thank you, Mr. Chairman. I appreciate the courtesy of the subcommittee. Thanks to all the witnesses. Thank you for your service.

Dr. Wasson, I was pleased that in your testimony you said it is important that we eliminate duplication and streamline our regulatory processes. That makes total sense. But that the foundation of any effective and efficient regulatory process is scientific evidence and knowledge of how certain practices impact the health and well-being of our citizens.

We hear a lot about the economic burden of regulation on coal operators, but we also know there is a personal cost paid by those families who live near coal mining sites. As you have mentioned, a number of peer-reviewed studies have shown that there are higher rates of cancer and mortality of those living near mountaintop removal sites. I think there are more than 20 of those studies. So would you kind of elaborate in light of Mr. McKinley and Mr. Murphy's statements about other factors what you are talking about when you are talking about higher rates of cancer and mortality and the evidence of them?

Mr. WASSON. Sure. I am very familiar with the study that Mr. McKinley entered into the record, and there is one study they used different statistical methods to come to their conclusions. I think what is so impressive about the literature that shows health issues

near mountaintop removal mines just the sheer number of different independent sources of data that point in that direction.

So, you know, maybe there is some debate over some statistical methods over some of those studies, but taken as a whole, if you look at the entire body of evidence, it is really pretty stunning. And again, it is independent. There are almost 40 different researchers that have published on these—you know, among these 21 different studies. And so I think that that is really the biggest factor.

And again, the tools that I talked about in my written testimony where we provide information about, you know, these maps that I showed, we also have the poverty information. That could have been in our maps as well. And the scientists control for those factors. And so when they do a study, they are looking at smoking rates and poverty rates and education rates and factoring those into their analysis.

And so yes, many of the things that other members have said are true, but that does not in any way discredit the studies we are talking about.

Mr. YARMUTH. Right. Now, you spend a lot of time in Appalachia and I have spent some time there. I am sure you have seen this before. That is water that came from the drinking well of the Urias family in Eastern Kentucky. That is U-r-i-a-s for the recorder. Those of you who think that is not dramatic, there is a contrast with normal water. And you know, I think they don't need a Web site in their neighborhood, in their community, to know that there is a health problem associated with that water. If that were the drinking water here in Congress, we not only wouldn't drink it, we would not stand for it. And yet, people in Appalachia, for those people, the Federal Government has yet to conduct a single study examining the health impact of coal mining on the communities that it inhabits. And that is exactly the point that I think all of us agree on, Mr. McKinley, Mr. Murphy. We need that kind of information, scientific information, to determine what the impact on the health of these citizens is, and the ACHE Act, which you mentioned and Mr. McKinley may want to co-sponsor, if you want to ask him, basically does that. It says we have to—the Federal Government has to conduct a study on the health impact of mountaintop removal before it issues anymore permits.

So can you tell me what the impact of such a law would be, if it passed, on the health of the citizens of Appalachia?

Mr. WASSON. Well, the study itself, it is a great start, and it is long overdue. There is just no question about it. There is too much information showing health problems to continue to ignore. The other obvious impact is—a moratorium on issuing the mountaintop removal permits is an excellent idea, and I don't think that we need any more studies. The health studies aside, just the water quality impacts, the rich scientific literature about the water quality impacts of mountaintop removal, would justify such a moratorium right now, today. And so, you know, I think that that study as well as the moratorium would be an excellent start.

Mr. YARMUTH. I thank you very much. Once again, Mr. Chairman, thank you very much for your courtesy.

Mr. SHIMKUS. The gentleman yields back his time. And seeing no other members present wishing to ask questions, we really want to

thank you. I think it was very—a little broader on some of the issues, but I think as the chairman of the subcommittee in trying to deal and reconcile and really talking to a lot of Environmental Council of the States which you all are kind of memberships and understanding the good work that they are doing, understanding Federal role and setting standards as the ranking member of the full committee keeps reminding me. How can we continue to work together?

And the last point I will just make is that we have a budgetary crisis, and we are always going to have that. And our problem is mandatory spending, which keeps eating away at the discretionary budget, and the discretionary budget eats away at the EPA's budget. So until we do Medicare, Medicaid, Social Security, interest payments on our debt—and I would encourage people, if they want the Federal Government to do more, they need to help, engage, start talking about reforming the entitlement programs.

So with that I would like to adjourn. Thank you again, and adjourn the hearing.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

Opening Statement of the Honorable Fred Upton
Subcommittee on Environment and the Economy
Hearing on "Modernizing the Business of Environmental Regulation and Protection"
July 23, 2014

(As Prepared for Delivery)

Thank you, Mr. Chairman, for holding this hearing to explore what EPA, the states, and the regulated community are doing to modernize environmental regulation and compliance.

In 2012, members of this committee worked together to authorize the E-manifest program so that EPA and the states could, for the first time, develop and implement a system for electronic tracking of hazardous waste. While the basic idea was simple, moving it through the legislative process was harder than it looked. We had to navigate budget protocols in two bodies of Congress and sort out user fees for the regulated community. But at the end, the bill we negotiated in this committee passed both the House and Senate without dissent and was signed into law by the president.

Today we will hear first-hand how the states and regulated community are also working to modernize their environmental enforcement and compliance systems. While our witnesses today from Arizona, Arkansas, and Massachusetts will share on-the-ground success stories, we know that all our states are innovating practical, often technology-based improvements to make environmental protection faster, more efficient, and less costly.

An important benefit of many of these modernization steps is that when non-compliance is detected, regulated entities are brought back into compliance sooner. This is good news for the environment, and good news for all entities who take pride in their reputations as environmentally friendly businesses.

What most of these modernization steps have in common is improved communication – people understanding each other more quickly and clearly. I'm hoping this hearing will give other states and us in Congress a chance to discover and apply best practices for improving productivity. But today's hearing will not be the end of the story. These innovations are continually being developed and refined, and I know states will continue to exchange ideas and information so that all can benefit.

And if there are any more commonsense innovations like E-manifest that need federal legislation to implement, I'd like EPA, the states, and the regulated community to point them out so we can work together to make them possible.

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E-Enterprise for the Environment Business Strategy
Office of Chief Financial Officer
U.S. Environmental Protection Agency
Modernizing the Business of Environmental Regulation and Protection
Subcommittee on Energy and Power
Committee on Energy and Commerce
U.S. House of Representatives
July 23, 2014

Introduction

E-Enterprise is a common-sense 21st Century business strategy governed jointly by the States and EPA (and soon Tribes) to improve the performance of our shared environmental enterprise. We closely coordinate the identification of opportunities for program modernization and then coordinate our implementation. The changes improve environmental protection for the American public while reducing cost and the impact of environmental regulations on regulated entities and co-regulators (States, Tribes, and Territories).

A cornerstone of the E-Enterprise business strategy is the joint governance body established between EPA and its co-regulators, the E-Enterprise Leadership Council (EELC). The EELC leads and oversees E-Enterprise implementation and directly addresses inefficiencies. The implementation of environmental programs have been based on 1970s techniques of reporting and record-keeping, with processes and data systems that are now outdated and, in many cases, a challenge for regulated communities. These processes need to be modernized. With joint governance, we avoid the inefficiencies of separately implemented work by States and EPA to improve these programs. Together, there is opportunity for significant burden reduction and cost savings thereby increasing the overall cost-effectiveness of environmental protection.

Through the EELC, the E-Enterprise business strategy applies LEAN management principles to programs, improving business processes and modernizing data flows. Regulations are streamlined, the States and EPA share information reporting approaches, and all move from paper-based to electronic reporting. Program modernization opportunities also include the use of technology advances in pollution monitoring and information systems. These efficiencies can be measured in saved time and resources both for the regulators and for the regulated community.

Burden Reduction

The agency has made a commitment to one million hours of burden reduction as one of its FY 2015 Agency Priority Goals. Examples of burden reduction and cost savings estimated for key projects already underway under the E-Enterprise strategy include the following:

- Safe Drinking Water Information System (SDWIS Prime Component: Drinking Water Compliance Monitoring Data Portal for labs and water systems to report data directly to states) - 900,000 hours of burden reduction for States, annually, 80,000 hours for Public Water Systems and Labs, annually.
- National Pollutant Discharge Elimination System (NPDES) e-reporting Rule - annual net savings of $28.7 million for states and $1.2 million for regulated entities.

The Hazardous Waste e-Manifest is another example of modernizing reporting that will result in reduced burden. EPA estimates that the fully operational system will yield a burden hour reduction of 370,000 to 700,000 hours for regulated entities, which, after the initial investment (to be recovered by user fees), could deliver more than $75 million of savings annually in reporting costs to industry.

Each project is designed as a stand-alone effort that provides a positive return on investment in the form of burden reduction, avoided or reduced costs, increased transparency, and other benefits. As a result, EPA and the States can invest in one or more E-Enterprise projects with each completed project delivering value for the regulated community, the taxpayer, and the public. EPA and the States will manage these projects in an integrated manner to maximize development efficiencies and return on investment. Technological developments over the last few decades have provided the opportunity to substantially improve the efficiency and effectiveness of environmental protection. While E-Enterprise leverages select information technologies, E-Enterprise is a broader model for conducting the businesses of environmental protection. The EELC expects improved environmental performance and better decision making will be possible as a result of greater access to more accurate and integrated data.

EELC-Selected Proposals for Streamlining and Modernization

In addition to burden reduction that will be realized from the existing projects cited above, in the spring of 2014, the EELC sent out a request for proposals for streamlining and modernizing programs from states and EPA programs and received 84 proposals. The large number of ideas that were submitted illustrate the

need for and potential of the E-Enterprise business strategy. The EELC chose five projects to scope and conduct a return on investment analysis for potential development beginning in FY2015:

- *Integrate and streamline air emissions reporting:* Emissions inventory reports are now submitted to EPA and the States by the regulated entities through four programs. There are also some State programs which require similar information on different schedules. This project will result in a single regulated entity submission which would meet the needs of all programs concurrently.

- *Promote availability and use of water data for water resource protection:* Water data from citizens groups, academia, industry and others are currently scattered on various federal, state and private databases or spreadsheets. This project would consolidate these data and begin to incorporate remote autonomous monitoring, which will increase the efficiency and the transparency of water quality protection.

- *Investigate business process improvements and smart mobile technology tools to support state and EPA inspectors:* This project would consolidate efforts completed or underway at the state and federal level to develop tools and systems that streamline and modernize the inspection process. This could allow for real-time consultation with facility owners and regulators.

- *Develop a "smart pesticide label" to improve the accuracy and effectiveness of the label in promoting safe pesticide use:* This project would develop a "smart label" for pesticide products that can be used by regulated entities, the states, and EPA. Changing from a paper based system to an electronic system will result in a savings for regulators and more accurate information to ensure safe use by the public.

- *Pilot a community service tool for local governments.* This project would develop a pilot Community Service Portal to facilitate the access of tools by local governments and will help them maintain public services, such as clean drinking water. It will also provide insight and understanding of system performance for small community governments and provide a consistent means for communication between regulators, system operators, and community leaders.

State Support

Some states are already engaging in E-Enterprise efforts. For example, Ohio EPA launched its electronic Discharge Monitoring Report Submission (eDMR) system, which uses electronic reporting to allow permittees to report their discharge measurements quickly and easily online. This method of reporting has increased data quality (errors have dropped from 50,000 per month to 5,000), while also saving significant time and resources. A positive ROI was achieved within two years. Massachusetts has also conducted an ROI analysis of similar investments, showing positive returns beginning in year five of its project (which includes six state governmental departments).

Because of these experiences and the potential that E-Enterprise offers, this strategy has full backing from the Environmental Council of States (ECOS). In fact, in September 2013, ECOS adopted by consensus a resolution in support of E-Enterprise.

Outreach to the Public and Regulated Community

The EELC has developed a communication plan and we continuously solicit feedback from industry, non-governmental organizations, academics and the public. The first example of this is the development of the E-Enterprise Public Portal, which will provide a customized interface for all seeking access to environmental data.

E-Enterprise does not change existing delegation and operating agreements. Any regulatory or policy changes resulting from E-Enterprise use existing mechanisms, such as full notice and comment procedures under the Administrative Procedures Act when regulatory changes are needed.

Conclusion

E-Enterprise will improve the coordination and integration of environmental protection activities that are shared among EPA, states, the regulated community and the public, by using a 21st century business strategy of streamlining and modernizing program implementation. The E-Enterprise business strategy will result in greater efficiencies and ultimately, in improved environmental outcomes for the country as a whole.

