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Committee on Environment and Public Works Washington, D.C.

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## MODERNIZING OUR NATION'S INFRASTRUCTURE

Wednesday, February 8, 2017

United States Senate

Committee on Environment and Public Works

Washington, D.C.

The committee met, pursuant to notice, at 10:03 a.m. in room 406, Dirksen Senate Office Building, the Honorable John Barrasso [chairman of the committee] presiding.

Present: Senators Barrasso, Carper, Inhofe, Capito, Boozman, Wicker, Fischer, Moran, Rounds, Ernst, Sullivan, Cardin, Sanders, Whitehouse, Gillibrand, Booker, Duckworth, and Harris.

STATEMENT OF THE HONORABLE JOHN BARRASSO, A UNITED STATES  
SENATOR FROM THE STATE OF WYOMING

Senator Barrasso. Good morning. I call this hearing to order.

President Trump has made improving our Nation's infrastructure a top priority. Infrastructure is critical to our Nation's prosperity.

The Senate Environment and Public Works Committee has jurisdiction over our Nation's highways and roads, its locks and dams, and its ports. These things allow for American goods to go from the heartland to the coasts, and even overseas. They allow for flood protection for both rural and urban communities that save lives.

In addition, our Committee has jurisdiction over the environmental laws that impact the modernization of infrastructure. Doesn't matter whether the setting is urban or rural; rules and regulations can halt and delay the modernization of infrastructure, and the impact is particularly counterproductive if they are applied without understanding the difference between urban and rural.

Our Committee has members from both urban and rural areas. The members of this Committee represent New York City and Newport, Rhode Island, Nebraska City, Nebraska, and Natchez, Mississippi, Wheatland, Wyoming, and even the Town of Wyoming,

Delaware. The diversity of these cities and towns makes it clear that solutions to address and pay for fixing our Nation's crumbling roads, bridges, and dams cannot be one-size-fits-all. What works for Baltimore, Maryland might not work for Baggs, Wyoming.

Big ticket projects on the scale of the Big Dig in Boston that cost billions of dollars or even projects that cost hundreds of millions of dollars are rare in rural and small States. Funding solutions that involve public-private partnerships, as have been discussed by Administration officials, may be innovative solutions for crumbling inner cities, but do not work for rural areas, as today's testimony will show.

As was stated in the written testimony submitted today on behalf of Wyoming, Idaho, Montana, North Dakota, and South Dakota, "Public-private partnerships and other approaches to infrastructure investment that depend on a positive revenue stream from a project are not a surface transportation infrastructure solution for rural States."

This Committee has a number of members who represent small rural States: Delaware, Alabama, Alaska, Iowa, Nebraska, Rhode Island, Vermont, just to name a few. We didn't forget West Virginia. I want to ensure that the voice of these States is not lost in the overall discussion of how to fix our Nation's

infrastructure. I want to work with my colleagues to address issues important to our States, while also not ignoring the legitimate needs of large metropolitan areas, as well.

Stated in the written testimony submitted by the five Western States that I referenced earlier, Federal highways in our rural States enable "agriculture, energy, and natural resource products, which largely originate in rural areas, to move to national and world markets." This is true. It makes no sense that to simply fix the roads and ports in our urban areas, while ignoring the roads and inland ports in our rural areas that allow for products from Wyoming, Nebraska, or Iowa to get to the world markets.

As testimony today will demonstrate, rural water systems also have unique challenges. They have been inundated by regulations from the EPA which harms their ability to modernize and to function. Rural water systems are challenged by the same regulations that big city water systems face, yet do not have the same resources to comply.

Any infrastructure solutions this Committee considers should help address rural challenges. These challenges include funding. Like their road project counterparts, these systems are not the best candidates for loans. It is important to note written testimony today from Mike McNulty, the General Manager of Putnam Public Service District in West Virginia. He states,

"Due to a lack of economies of scale and lower medium household incomes in rural America, water infrastructure is often less affordable, a much greater cost per household. This means that a water infrastructure project poses a greater financial risk compared to the metropolitan project, and very importantly," he says, "requires some portion of a grant, not just a loan, to make the project feasible. The higher the percentage of grants required to make a project work results in less money repaid to the infrastructure funding agency and a correlating diminution of the corpus fund."

So we are going to have to find new ways to help pay to modernize these important rural projects. It is my hope that this Committee will work to find solutions that not only work for urban America, but rural America as well. I urge my colleagues to work with me in a bipartisan way to find these solutions.

With that, I turn to the Ranking Member for his statement.

[The prepared statement of Senator Barrasso follows:]

STATEMENT OF THE HONORABLE THOMAS R. CARPER, A UNITED STATES  
SENATOR FROM THE STATE OF DELAWARE

Senator Carper. Thanks so much, Mr. Chairman. Thank you for bringing us together for an important and, I think, invigorating hearing.

I just want to say to our guest from Oklahoma, West Virginia, Wyoming, the other Wyoming, and from Colorado by way of Delaware, and from Delaware, welcome. We are delighted that you are here.

Mr. Chairman and colleagues, I say this to our guests. These folks have heard me say this more times than I want to remember, but my dad taught me, born in West Virginia, grew up in Virginia, my dad taught my sister and me that things that are worth having are worth paying for. That is what he said. Things that are worth having are worth paying for. And he used to say, if you owe somebody money, work three jobs until you can pay that off, but you ought to take responsibility for your obligations.

The other thing my dad used to say to my sister and me, we would have chores to do, jobs to do around our house and garden, so forth, and he always said if a job is worth doing, it is worth doing well. From that I took the idea that everything I do I can do better. I think that is true of all of us. I think that is also true of every Federal and State program,

infrastructure, roads, highways, bridges, water, wastewater, all of those things.

So my hope today is you will help us sort of think outside the box a little bit on how do we pay for this stuff. It is easy to come up with ideas on how to spend the money, but it is always hard to figure out how we are going to raise that money. So we need some help there and then some help in figuring out how we get better results maybe for less money or for the same amount of money.

Now my statement. For the record, I have something I want to ask unanimous consent that a couple documents, Mr. Chairman, be submitted for the record. I hold them in my hand.

Senator Barrasso. Without objection.

Senator Carper. Thank you. Thanks so much.

[The referenced information follows:]

Senator Carper. As I think most of us know, our new President has raised the issue of America needing to modernize and rebuild aged infrastructure. As a point of concern, Democratic Senators, some of us here in this room, recently released a blueprint for addressing infrastructure challenges at large; not just roads, highways, bridges, but much more broader than that, including water and wastewater. I believe that members on both sides of the aisle are supportive of addressing this problem. This can be one of those issues that actually unites us, and at this point in time in our Nation's history, we could use a few of those, so this is important for more reasons than not.

As a recovering governor, I look at most legislation through a particular lens, and the lens that I look at it through is how does a particular investment make for a more nurturing environment for job creation, job preservation. That is what I think about all the time. And in this case they got a bunch of factors that impact on a nurturing environment for job creation. I just want to mention a couple of them.

We don't think about this, I don't think, that much: quality of our workforce, the skills that they bring to the workplace is important; affordable energy; safety, public safety; the idea of having access to capital, access to foreign markets; research and development, investing in the right things

that actually generate job creation opportunities; tax policy; common sense regulations; access to decision makers; clean air, clean water; predictability. Businesses need predictability.

In 2013, an outfit, an arm of McKinsey, the big consulting company, called Global Institute, issued a report they called Game Changer in which it analyzes how the U.S. could dramatically transform and expand our economy. And one of the top game changers that they gave us was infrastructure investment, and here is what they said. The report showed that we need to invest between \$150 billion and \$180 billion more in infrastructure every year just to make up for years of underinvestment and to enable robust future growth. They said, the Global Institute told us in their report that if we invested at this level, it would add somewhere between 1.4 percent and 1.7 percent to GDP every year. Almost double GDP for the last quarter, if you will. It would create some 1.8 million new jobs by 2020.

For a lot of people that are, frankly, on the sidelines, would like to go to work, need to go to work, this would be a great place for them to go to work, working on these projects.

In the same report they found that one of the best ways to invest and get the most from our dollars is to maintain our existing infrastructure. Not just to do big, fancy, new projects, but to maintain our existing infrastructure.

Infrastructure investment is critical for the economy in part because the direct jobs that we create in construction, restoration work, and displaced workers that we can help get back into the workforce, which we need to do. But just as important is the fact that modern infrastructure helps people in businesses move more efficiently.

Last year, the average commuter, we are told this by Texas A&M, every year they give us a new update. They told us we wasted 42 hours per person sitting in traffic, not moving. Not moving anywhere. And that is sort of a typical, I think that is like a work week for a lot of people, just sitting doing nothing.

More modern infrastructure would mean less time, pure resources wasted unproductively. Our Nation's health, our wealth, and security rely on production and distribution of goods and services. Every day people and goods move across an array of physical systems which are collectively known as our critical infrastructure. The critical infrastructure of our Country, however, is aging and in need of significant capital investments, we all know that, to help our economy continue to grow.

The 2013 infrastructure report card issued by the American Society of Civil Engineers, some of them are here today, they gave us for roads, dams, drinking water, wastewater a D. D.

They graded our inland waterways and levees with a D minus. The ports received a C; bridges received a C plus.

As we hear testimony, I am particularly interested in hearing the witnesses' thoughts in three key areas. The first is that while financing techniques are a tool that may be appropriate for some kinds of projects, financing by itself will not solve all infrastructure needs, regardless of whether we are a rural or urban State.

The second area I hope to hear more about is the need for broad investment strategy. And while traditional forms of infrastructure like roads and ports are essential to our economy, I feel we need more investments to protect our natural infrastructure as well, including our shorelines, our dune systems, our ecosystem restoration. Without these protections, risks to manmade infrastructure significantly increases and in many cases becomes unmanageable.

Finally, I am interested in hearing how the Federal Government, I think we are interested in hearing how the Federal Government can be more efficient, as I said earlier, with our current funding streams and get the most out of every dollar of Federal investment. Infrastructure is a shared responsibility with State and local governments, and in some cases with the private sector, and I want to ensure that we are helping State and local governments with this shared burden, while giving them

the flexibility that they need. I also want to know how we can make sure that we are prioritizing the most critical investments and working to maintain the assets we have first, before building new assets that we can't afford to maintain.

Finally, I must say no one-size-fits-all approach will work to solve this challenge. We have to work in a bipartisan manner to really address these concerns. Build consensus on a path forward for the shared State-Federal-local government responsibility to our economy.

Lastly, Mr. Chairman, colleagues, there are a couple of people here before us I know pretty well. We welcome all of our witnesses, but I especially want to introduce Tony Pratt, current Administrator of the Shoreline and Waterway Management Section within the Delaware Department of Natural Resources & Environmental Control. The current president, I call him Mr. President, of the American Shore & Beach Preservation Association for our Nation. He will be discussing a wide range of water infrastructure-related issues and why protecting our natural infrastructure is as important as restoring our roads and bridges.

Shailen Bhatt, to our right, to Tony's left. Shailen comes to this hearing as the current Executive Director for the Colorado Department of Transportation, stolen from the State of Delaware, where he was the Secretary of the Department of

Transportation. There he led a response to two hurricanes, introduced performance management to the agency, reduced agency debt by 30 percent while delivering \$2 billion of infrastructure improvements.

I wrote one more note here. I said we are not blue States. This is for all of us. We are not blue States, we are not red States; we are the United States. We got States that are largely rural; States that are more urban in nature. The needs that we have in our rural States, whether it is water or if is transportation, will differ from maybe what we have in our more places like where Ben and I come from and represent. But we have to look out for each other. We have to look out for each other. And if we do that, we will all be ahead in the game.

Thank you so much. Welcome, everybody.

[The prepared statement of Senator Carper follows:]

Senator Barrasso. Thank you, Senator Carper.

Senator Inhofe, would you like to welcome your Oklahoma witness?

Senator Inhofe. Yes, I would. And let me mention, for the benefit of our witnesses and anyone else who might be interested, the Commerce Committee and this Committee have nine members that are on both, and they are meeting at exactly the same time, so if you see members going back and forth, we are doing double duty this morning. I think we can do a better job of coordinating those committees.

Anyway, I want to introduce the good looking witness we have.

Senator Carper. I already introduced Tony.

[Laughter.]

Senator Inhofe. No, I am real pleased to introduce one of our witnesses because I have known Cindy Bobbitt for a long period of time. She is a Commissioner of Grant County, Oklahoma. She was elected to the Grant County Board 13 years ago and currently serves as Chairman of the Board. She has been actively involved for the past eight years with the National Association of Counties, serving in many different capacities, including Vice Chair of the National Transportation Steering Committee. Furthermore, she serves on the Technical Oversight

Working Group with the Federal Highway Administration Office of Safety.

As you can imagine, Commissioner Bobbitt is passionate about our Nation's infrastructure needs, and her experience makes her an incredibly well qualified and informed witness for this Committee.

Grant County is an extremely rural agricultural county in the north central part of Oklahoma that relies heavily on proper infrastructure and has many infrastructure needs. In fact, they say that Grant County has as many bridges as they do people.

Commissioner Bobbitt knows the issues that rural businesses face, as she and her husband run a farm growing wheat, feed grains, alfalfa, and cattle. They have deep roots in Oklahoma, as their farm has been in their family since the Land Run of 1893. Commissioner Bobbitt grew up in rural life, driving a tractor at age 9, and she bought her first piece of land when she was 16 years old. She knows firsthand the importance of agricultural industry to Oklahoma's economy and the needs of getting those goods to market.

Commissioner Bobbitt, I want to thank you for being here and for coming all the way from Grant County to Washington, D.C.

Senator Barrasso. Thank you, Senator Inhofe.

Senator Capito, could I invite you to please introduce your witness?

Senator Capito. Thank you, Mr. Chairman. It is a great pleasure for me to introduce my friend, Mike McNulty, who is the General Manager of the Public Service District of Putnam County, West Virginia. He's testifying on the behalf of Putnam County, but also the West Virginia Rural Water Association and the National Rural Water Association.

Mike is known as an expert in our State and really throughout the Nation in this area. He received a Bachelor of Science from West Virginia Tech and he has a Master's from Marshall University. He served as the General Manager since 2004 and he was previously the Director of the West Virginia Rural Water Association.

Rural communities, everybody has referenced this, have had particular challenges. In West Virginia, not only do we have rural communities, but we have some tough terrain that pose significant challenges for the deployment and the maintenance and operation of drinking water and wastewater infrastructure.

But you know what? Mike has found a way, very creatively, in his area to work with the regulatory compliance and leveraging the Federal dollars to extend a lot of municipal water to a lot of people, and we talked just yesterday. There are still some people left that we can't forget about, and we won't forget about, but I know he will bring valuable insight to this Committee.

Mike, thank you for coming from West Virginia and the others from West Virginia Rural Water Association. Thank you.

Senator Barrasso. Thank you, Senator Capito.

And I would also like to introduce Bill Panos, who is the 17th Director of the Wyoming Department of Transportation, since October of 2015. He is a graduate of California State University, where he studied both physics and forensic science. His previous work has included engineering and leadership positions with the TRW Corporation, the Commonwealth of Massachusetts, the State of Washington, and a number of local governments.

Immediately prior to heading WYDOT, he was the Director of Wyoming's School Facilities Department for two years.

We will now hear from our witnesses, and we will start with Bill Panos, Director of the Wyoming Department of Transportation.

I do want to remind the witnesses that your full written testimony will be made part of the official hearing today, so please keep your statements to five minutes so that we may have some time for questions. I look forward to hearing all the testimony today, beginning with Mr. Panos.

Please proceed.

STATEMENT OF WILLIAM T. "BILL" PANOS, DIRECTOR, WYOMING  
DEPARTMENT OF TRANSPORTATION

Mr. Panos. Thank you, Chairman Barrasso, Senator Carper, and members of the Committee. I am Bill Panos, Director of the Wyoming Department of Transportation. Today I am presenting a statement from my own State of Wyoming and the Transportation Departments of Idaho, Montana, North Dakota, and South Dakota.

As Congress considers surface transportation infrastructure investment, we hope that our comments will enhance understanding of transportation challenges facing rural States. Let me again get right to our key points.

Federal transportation investment in rural States benefit the Nation. Highways in our rural States enable truck movements between the West Coast and the large cities of the Midwest and the East. They benefit people and commerce at both ends of the journey. Our highways enable significant agricultural, energy, and natural resource products to move from their rural points of origin to national and world markets. Our highways enable tens of millions of visitors each year to reach scenic wonders like Yellowstone National Park and Mount Rushmore, so those highways ensure that tourism dollars are spent in America, furthering national economic goals.

So there is a national interest, and plenty of good reasons for the Nation to invest in surface transportation in rural

States. There are needs for surface transportation infrastructure investment in rural States as well as in all States.

If Congress advances the surface transportation infrastructure initiative, the initial funds would be put to good use promptly in Wyoming and other States. They would create jobs and provide safety, economic efficiency, and other short- and long-term benefits to the Nation.

Next, we have some thoughts on providing some of those benefits.

Public-private partnerships and other approaches that depend on a positive revenue stream are not a surface transportation infrastructure solution for rural States. The traffic volumes on projects in rural States are low and almost never feasible for revenue generation, so rural States are unlikely to attract investors for those projects, even if any project revenues are supplemented by tax credits. Also, with sparse populations and extensive road networks, the costs per capita of paying off principal and interest is high in rural States, a deterrent to borrowing for those projects.

Now, we do not oppose a role for P3s in improving the Nation's transportation network, but they are unlikely to result in meaningful surface transportation investment in rural States.

Any surface transportation initiative should strongly emphasize formula funding. Using the predominantly formula-based FAST Act approach to distribution would ensure that both rural and urban States are participating substantially in a surface transportation initiative. Any surface transportation infrastructure initiative should continue the current approximate four to one ratio between Federal Highway Program funding and Federal Transit Program funding.

Also, we would have particular concern if any surface transportation infrastructure initiative, any non-formula elements were structured in a way that made rural State participation unrealistic. New program elements limited to extremely expensive projects likely would not be accessible by our States, at least in a substantial way. That type of initiative may very well lack urban rural balance.

Strengthening the Highway Trust Fund is a very important objective. The Highway Trust Fund and the programs it supports are critical to maintain and improve America's surface transportation infrastructure. We appreciate that in the FAST Act Congress provided financial support to the Trust Fund and its programs through fiscal year 2020. Yet, without legislation, after 2020, the Highway Trust Fund will not be able to support even FAST Act Highway and Transit Program levels, much less meet needs that will grow as the economy grows. So

strengthening the HTF, the Highway Trust Fund, is worthy of consideration and action.

While our focus today is on funding and financial issues, we also encourage Congress to take steps to increase Federal program flexibility and to simplify and expedite program and project delivery. We want each program dollar to deliver more benefits.

Before closing, I will briefly mention that our rural States face significant transportation funding challenges. We are geographically large. We often include vast tracts of Federal land and cannot be taxed or developed. We have extensive highway networks and have low population densities. This means that we have very few people to support each lane mile of Federal highway. Yet, rural States contribute to this effort significantly. Nationally, per capita contribution to the highway account of the Highway Trust Fund is approximately \$111. Per capita contribution to the highway account attributable to Wyoming is three times as much, at approximately \$319.

So any surface transportation initiative Congress develops should be crafted in a way that takes into account funding challenges facing rural States.

In conclusion, Mr. Chairman, those are some of our key points, and thanks again for the opportunity to be here today.

[The prepared statement of Mr. Panos follows:]

Senator Barrasso. Thanks so much, Mr. Panos, for joining us.

Mr. McNulty, welcome and please begin.

STATEMENT OF MICHAEL McNULTY, GENERAL MANAGER, PUTNAM PUBLIC SERVICE DISTRICT, WEST VIRGINIA

Mr. McNulty. Thank you. Good morning, Chairman Barrasso and members of the Committee. My name is Mike McNulty and I am the General Manager of the Putnam Public Service District, a State-chartered drinking water and wastewater utility located just outside of Charleston, West Virginia.

On behalf of West Virginia and National Rural Water Associations, we are grateful that you have included a voice for rural America at this hearing.

Before I begin my remarks, I would like to say thank you to our State's junior Senator, Shelley Moore Capito, for her assistance in improving West Virginia's rural water infrastructure. In my county, we were able to construct a new \$16 million wastewater utility expansion that allowed us to extend service to 400 homes and businesses. This is a very important project for Putnam County, and your assistance, Senator Capito, was essential. Thank you.

When thinking about national water infrastructure proposals, please remember that almost all of our Country's community water utilities, both drinking water and sewer, are small. Small and rural communities have more difficulty affording public water service due to the lack of population density and economies of scale.

In many States, the great majority of community water systems serve fewer than 10,000 people. For example, in West Virginia, it is 444 of the 468 community water systems; in Wyoming it is 300 of the 319 systems; and in Delaware it is 196 of the 213 community water systems.

While we have fewer resource, we are regulated in the exact same manner as a large community.

In 2017, there are rural communities in America that still do not have access to safe drinking water or sanitation due to the lack of population density or funding, some in my county. If rural and small town America is not specifically targeted in legislation to fund new water infrastructure initiatives, the funding will bypass rural America and be absorbed by large metropolitan systems.

Small community water infrastructure projects are more difficult to fund because they are smaller in scale. Numerous complicated funding applications have to be completed and approved compared to one large project. This is compounded by the reality that some small communities lack the administrative expertise to complete the necessary application process and perhaps lack the political appeal of some large cities.

Secondly, the lack of customer density in rural America compounded with lower median household incomes means water infrastructure is often a much greater cost per household. This

means that a water infrastructure project poses a greater financial risk compared to a metropolitan project and, even more importantly, requires some portion of grant funding, not just loan dollars, to make the project feasible.

In the last 10 years, my district has borrowed over \$50 million from the Federal Government for projects that were essential to our sustainability and expansion. We could not have secured this funding from the commercial markets and kept the rates affordable for our customers.

My water utility provides a good example of what water infrastructure development means to rural America. Since its early development in the 1960s, our water utility infrastructure has expanded rapidly, regionalizing or interconnecting with other smaller communities to provide and extend water and sewer service, and become the engine for economic development in our county.

One of our utility partners, the Town of Buffalo, was able to finance the sewer expansion that was needed to serve a new Toyota plant with funding from the Clean Water State Revolving Fund and our State's Infrastructure and Jobs Development Council. Without the expansion of our infrastructure, we would not have been able to service the Toyota manufacturing plant.

In southern West Virginia, much of our water infrastructure was built over 100 years ago by coal companies and is now

failing and deteriorating. We have areas in my county with failing septic systems that need to be serviced by extending sewer lines. We still have pockets of people with no drinking water at all, and they rely on hauling water to their home's cisterns.

Rural communities are in need of economic stimulus. For example, in West Virginia and Wyoming, the recent declines in the energy sector have resulted in massive losses of jobs, State revenue, and the corresponding decrease in State infrastructure funding. A new infrastructure initiative targeted toward rural communities would be a welcome economic stimulus in rural America.

In closing, Mr. Chairman, every rural and small community in the Country thanks you and this Committee for the numerous opportunities this Committee has provided rural America.

[The prepared statement of Mr. McNulty follows:]

Senator Barrasso. Thank you, Mr. McNulty. Thanks for joining us. Thanks for your testimony.

Ms. Bobbitt.

STATEMENT OF CINDY R. BOBBITT, COMMISSIONER, GRANT COUNTY,  
OKLAHOMA

Ms. Bobbitt. Thank you, Senator Inhofe, for the very warm welcome.

Chairman Barrasso, Ranking Member Carper, and distinguished members of the Committee, thank you for holding today's Committee hearing on modernizing our Nation's infrastructure, inviting me to testify on behalf of the National Association of Counties.

Infrastructure is important to our Nation's 3,069 counties because we build and maintain 45 percent of the public roads, 40 percent of the bridges, and a third of the Nation's transit and airports.

My name is Cindy Bobbitt, and I serve as Chair of the Grant County, Oklahoma Board of Commissioners.

Grant County is rural and serves a population of approximately 4,500, and our local economy is largely based on agriculture and natural resources. We are responsible for 92 percent of over 1,900 public road miles in the county. We also have the most bridges or bridge-like structures, over 3,500. Think about that. That is almost one bridge for every resident.

While this infrastructure was ideal for transporting livestock and crops 70 years ago, it is inadequate to support today's heavier trucks, increased traffic, and higher operating

speeds. And Grant County is not alone. Roughly two-thirds of the Nation's counties are considered rural and face similar infrastructure challenges.

Today I will highlight some of these challenges and provide recommendations for ways Congress can help us tackle these issues.

First, rural counties are facing numerous challenges that strain our local funding options. Forty-two States limit the ability for counties to raise or change property taxes, and only 12 States authorize us to collect our own local gas taxes. We often have to choose between investing in infrastructure or in funding our emergency services, courthouses, and health departments, just to name a few.

Second, rural counties are experiencing increasing demands on our transportation infrastructure, which can no longer accommodate our agriculture and our energy needs. While local governments can do all we can, and we are trying to, according to the Federal Highway Administration, 40 percent of county roads are inadequate for current needs, and nearly half of our rural bridges are structurally deficient.

Third, counties are facing high costs of infrastructure projects. Based on the American Road and Transportation Builders Association, the cost of construction materials and labor for highway and bridge projects increased 44 percent

between 2000 and 2013. Just a few years ago, in Grant County, we could budget for a road reconstruction project at less than half a million dollars. Today that same project would cost about \$1 million per mile.

With these challenges in mind, we have some recommendations to strengthen our Nation's infrastructure.

First, Congress should make more Federal highway dollars available for locally owned infrastructure. County roads, bridges, and highways serve as a lifeline for our citizens and are critical to the movement of freight and other goods and services to market. While more financing options are available in urban areas, rural areas do not often attract that same interest from the private sector. Now more than ever we need a strong Federal-State-local partnership to remain competitive.

Second, increased Federal funding to bridges, particularly off-system bridges, is vital. We must build for the future, not the present. Twenty years ago we were building our bridges 18 to 20 feet wide. Today we are building our bridges 24 to 26 feet wide. But that is not going to be wide enough to accommodate our larger and heavier equipment. According to USDOT, to eliminate the Nation's bridge deficient backlog by 2028, we would need to invest \$20 billion annually, well above the \$12.8 billion invested today.

Third, an increased focus on safety and high-risk rural roads will help our communities and help reduce the number of fatalities we see each year.

And, finally, we urge Congress to increase the role of counties in statewide planning and project selection processes. We recognize that there are more infrastructure needs than there are funds available. However, counties have the ability to provide input on potential projects and can help maximize the effectiveness of Federal infrastructure dollars.

In closing, as Congress considers ways to modernize our Nation's infrastructures, counties stand ready to work with our Federal partners to achieve our shared goals of strengthening transportation networks, improving public safety, and advancing our economic competitiveness.

Thank you, Mr. Chairman and members of the Committee, for the opportunity to testify today.

[The prepared statement of Ms. Bobbitt follows:]

Senator Barrasso. Thank you, Ms. Bobbitt. Thank you for your testimony.

Welcome, Mr. Pratt. We look forward to hearing from you.

STATEMENT OF ANTHONY P. PRATT, ADMINISTRATOR, DELAWARE  
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL AND  
PRESIDENT, AMERICAN SHORE & BEACH PRESERVATION ASSOCIATION

Mr. Pratt. Thank you. I appreciate the time to address the Committee today and I want to thank Ranking Member Carper for recognizing something a little bit out of the box. We are not talking about roads in this testimony, we are talking about green infrastructure, particularly coastal infrastructure.

I am Tony Pratt. I am the Administrator of Shoreline and Waterway Management for the State of Delaware, and also the President of ASBPA, which is a national nonprofit organization advocating for beaches through science and good public policy.

Infrastructure, obviously, from our panel members, is something which we talk about in terms of roads and bridges and man-built infrastructure, but the green infrastructure that I am talking about, particularly beaches, dunes, and wetlands, are incredibly important in a number of factors or a number of facets: the safety that they provide during storms, the recreational opportunities, and the great number of jobs that come with those components.

I want to talk a little bit about the kind of jobs, first of all, that come from beaches. Of course, construction of beach nourishment projects is something that provides opportunity for engineers and planners and economists to do a

lot of planning work. It is an opportunity for dredge companies with a tremendous amount of employment to come and do work. We think about beaches, and Delaware is a good example; Rehoboth Beach, that many of you may have attended and had some good times in Rehoboth Beach. We think about the primary jobs that come from beaches: restaurant help, cooks, chefs, wait staff. We think about hotels and motels and the employment there. We talk about people who are lifeguards and retail sales and real estate sales.

But there is another facet of jobs that we don't talk about very much, and that is plumbers, electricians, roofers, builders, any number of trade jobs; hotel and motel management folks up and down the seaboard; but also these construction jobs and travel corridor jobs that we have not considered much of, which is if you drive from Washington to Rehoboth Beach or Ocean City, Maryland, you are going to go past a number of stores that are there primarily because of the recreational attraction of the coastline.

Dr. James Houston, who is from ERDC, the research laboratory from Vicksburg, Mississippi, indicated in work that he has done in the past that beaches get more recreational use in the U.S. than all of our national parks combined, which is a pretty stunning thought. This adds up to a major economic

impact. Beaches help generate \$2.25 billion annually to the national economy.

In 2012, according to Dr. Houston, for every \$1 invested by the Federal Government, the Federal Government returned \$570 in annual tax revenues from beach tourism. One dollar spent and \$570 returned. It is a very good investment, we believe.

Estuarine research over by the eastern seaboard in the Gulf has indicated that for every \$1 million invested, approximately, in estuary recovery, that there are 30 jobs created.

Coastal infrastructure is a wise investment. You either pay now or you pay later. We have found in numerous storms, Katrina and Ike and Sandy, many storms that have hit the Gulf and Atlantic Coast, and now the West Coast is suffering some severe winter weather, that the impacts are tremendous.

Sixty-five billion dollars was allocated for the States primarily from Massachusetts to North Carolina, and concentrated on about Maryland to Massachusetts. Sixty-five billion dollars was allocated to restore from that and recover from that. If we took a third of that, about \$20 billion, and had invested in that over the Nation over the last 20 years, it would have been about a \$1 billion investment. We have found that in Sandy, where there were good beaches and dunes in place, \$1.9 billion was saved because of that investment.

We believe that if we had done that \$20 billion over 20 years for the entire Nation, about \$1 billion a year, that number would have been far higher and that \$65 billion need would have been much greater reduced.

Beaches and dunes provide many benefits. We talk a little bit about jobs; we talk about the protection they afford. But they are also the dividing line between open water, gulf coast, ocean coast, and estuarine waters, which are highly productive, producing jobs for fishermen, for recreational tourism.

In Delaware we had an example of the Department of Interior investing \$38 million in recovery of a national wildlife refuge. Had we spent about \$2 million to \$3 million in restoring the beach prior to the damage being occurred and all the damage of the wetlands happening and loss of forest, we would have probably avoided that \$38 million investment. It is wise for a lot of factors, for jobs and for protection and for estuarine waters.

In my summary statement, we believe, from my organization and from my State of Delaware, that a higher investment in our coastal infrastructure that protects man-built infrastructure, that provides jobs, that provides protection for our Nation's productive habitats, is a wise investment. We are advocating for something in the order of \$5 billion over the next 10 years. I know that there is probably justification for a higher number

than that, but I think that is a modest request when the current funding is about \$75 million to \$100 million a year. We think that that number should be much higher.

And I thank you for your time today.

[The prepared statement of Mr. Pratt follows:]

Senator Barrasso. Thank you very much for your testimony,  
Mr. Pratt. We appreciate hearing from you.

Now I would like to go to Mr. Bhatt. Thank you very much  
for being with us. Please begin.

STATEMENT OF SHAILEN P. BHATT, EXECUTIVE DIRECTOR, COLORADO  
DEPARTMENT OF TRANSPORTATION

Mr. Bhatt. Thank you, sir. I want to thank you, Chairman Barrasso, and Ranking Member Carper and members of the Committee. I also want to recognize another neighbor in Senator Inhofe and thank him for his efforts to pass the reauthorization for transportation.

In the interest of time, I will summarize my testimony. In addition to serving as the Secretary of Transportation in Delaware and as the Executive Director of Colorado Department of Transportation, I also served as the Deputy Executive Director for the Kentucky Transportation Cabinet and at the Federal Highway Administration, so I am keenly aware of the balance of urban and rural needs in the Country and how it is not a one-size-fits-all solution.

Colorado is a large, diverse State with rapidly growing metropolitan areas, experiencing increasingly constrained mobility, and vast rural areas that rely on an effective and well-maintained transportation system to move agricultural and energy products to market.

I am going to tell a quick story that I used a couple years ago in testimony before the Senate Finance Committee prior to passage of the FAST Act. And I tell this story because I think it is indicative of the challenges that we face.

When I first began as the Executive Director of the Colorado DOT, I took an 1,100-mile trip around Colorado. The first traffic jam I got into was in a pretty rural part of the State, up near Fort Collins, on I-25. I-25 is the major north-south artery not just for passenger traffic, but also an important freight corridor that connects Canada and Mexico. Freight is an incredibly important part of our job in the transportation world.

When we got outside of Denver, where I anticipated the traffic, we headed north. We got to a four-lane section, two lanes in each direction, which is similar to a lot of the interstate that is present in many rural areas. It was a Thursday morning, well after rush hour, so I assumed that there was an incident ahead because the traffic reminded me of the Beltway during rush hour. My regional engineer informed me that there was no incident, that that was just how traffic flowed on I-25 on a regular basis.

So when I asked what the plan was to add capacity, I was told that the plans on the books were for that section of I-25, a 45-mile section, to be widened in 2070 based on current funding level. So a 16-year-old who got their driver's license could have anticipated that road being widened when they turned 70 years old; and that is just unacceptable. And that is not an

urban problem; that is not a rural problem. That is a problem for the State of Colorado and for commerce.

Like the rest of the Nation, funding for transportation in Colorado is at a crossroads. Our primary source of funding, both the State and the Federal gas tax, have not increased in nearly 25 years.

Now, in order to advance these important improvements to the I-25 corridor, we have cobbled together State, local, and private funds with toll-back bonds and a \$15 million TIGER grant to construct just a 14-mile first phase from Loveland to Fort Collins. But there remains over \$1 billion, just in this corridor alone, in unfunded needs.

Now, we have an annual budget of \$1.4 billion, the vast majority of which goes to asset management, which we don't even fund fully. We are short \$1 billion a year to meet the currently identified transportation needs throughout the State. In fact, in the next decade we have \$10 billion in unmet funding needs for highway and transit projects across Colorado.

We are working to address the severely deficient section of I-25 south of Denver, between Colorado Springs and Denver. These are the two largest cities in the State. The interstate is still in its original configuration. We are working towards having that project ready to go in 18 months, but we lack \$400 million to \$500 million to make the initial improvements.

In another example, we are poised to move forward in 2018 with improvements to Central 70 corridor in Denver, but we are short about another billion dollars on that project. Every year we delay that project goes up.

We take advantage of financing tools such as TIFIA and public-private partnerships and toll-back bonds, but financing alone does not solve our funding challenge in transportation. We have been challenged to do more with less. We are trying to do that. We have implemented cash management to flush out any cash reserves. Where it makes sense, we are using tolling and public-private partnerships. And, finally, we are embracing technology. I believe that connected vehicles, autonomous vehicles, vehicle-to-vehicle infrastructure and vehicle-to-vehicle technologies will help us operate the system much more efficiently, but that does not change the need that we have a significant need for investment in the system.

To conclude, I would respectfully thank this Committee for their attention and care, and say that the timing is right for additional revenues to States through the existing funding formulas for us to invest in our infrastructure. The economy continues to recover and significant new investment will be necessary to sustain and expand on that economic growth. We stand ready to partner with the Federal Government to make

significant investments in our transportation system for the benefit of all Americans.

I am happy to answer any of your questions. Thank you very much.

[The prepared statement of Mr. Bhatt follows:]

Senator Barrasso. Well, thank you very much for your testimony, Mr. Bhatt. We appreciate you being here.

We are going to turn to questions, and I will start with Director Panos.

In your testimony, you discuss Build America Bonds program that was part of the 2009 stimulus package. You note that it doesn't work for rural States who want to build roads and bridges. I looked at that list of projects funded by Build America Bonds on the Treasury Department website. When you look at it, our State of Wyoming had six projects; the State of Delaware had six projects; the State of Vermont, Senator Sanders, a member of this Committee, had four projects; West Virginia had two projects; Rhode Island had only one project. In contrast, New York had 59; California, 158; Illinois, 245.

Could you explain to the Committee why these sorts of bond programs don't really work for some of the smaller States?

Mr. Panos. It is a great question, Mr. Chairman. You know, my response really is limited to surface transportation, and the explanation really relies on the characteristics, the fundamental characteristics of rural States.

As I said in my written testimony, we have low population densities and we have very extensive road networks, so paying back the principal and interest involves a high cost per capita, and it discourages borrowing for transportation in rural States.

In fact, after talking with a State treasurer this last week, Wyoming has never borrowed for a road project, a surface transportation project in the State of Wyoming.

So that is how I would at least briefly respond to the question.

Senator Barrasso. Okay. And never borrowed in 120-some years. So never borrowed.

Mr. Panos. That is correct.

Senator Barrasso. Am I correct in assuming that all things being equal, that if additional resources are provided, that you would rather have these resources go to your departments, because you provided testimony for a number of different States, for five different States, it would go to your departments so that the States could decide where to apply the funds rather than to receive specific directives from Washington on how the money is spent?

Mr. Panos. Absolutely, Mr. Chairman.

Senator Barrasso. And as I say, you are here representing the interests of the transportation departments in five different States. What would you say is the principal concern of the rural States in developing the surface transportation programs within the framework as prescribed by the FAST Act?

Mr. Panos. So first it is important to note that the FAST Act struck a very good balance with respect to rural and urban

interests, and I want to thank Congress for that. They did a great job of moving the FAST Act through and balancing urban and rural interests.

There is also a concern, and I think it is not just in rural States, but I think it is in a number of different States, about the stop-and-go of the Federal actions, and the FAST Act, as you know, runs through 2020, which provides, and commendably provides, more stability than other recent authorizations. Yet, as to the appropriations, I think we are operating under a full year now of a continuing resolution which restricts our ability, actually, to plan for future projects. In our State, we are working with our State legislature now and needed to ask for twice the amount of borrowing authority than we would have otherwise to be able to cover some of those costs, cash flow needs for the projects as it relates to the continuing resolution.

So that is our State, but in other States advanced construction and borrowing against State funds, if available, keep highway projects on schedule until the Congress completes its appropriation process. So that is one thing, the continuing resolutions.

The second really is flexibility, program flexibility; and delivering programs and projects is fairly complex, and planning and programming requirements sort of keep multiplying, and the

performance management rules recently put forward also add to that.

So developing some ideas, like we are doing here today, in areas to improve program flexibility and improve project delivery I think will help a great deal. So those were just a couple of observations, the continuing resolution, stop-and-go, and then program delivery improvements which would help our State and others.

Senator Barrasso. Thank you.

Mr. McNulty, if I just could visit with you a little bit about the testimony where you mentioned that almost all the water systems in West Virginia, as well as Wyoming, serve populations I think you said fewer than 10,000 people. Like larger water systems, these small systems still need to comply with complex Federal regulations, with less administrative and technical expertise than the larger counterparts do.

So could you talk a little bit about what steps, because we all want to make sure we don't want to sacrifice safety, what steps Congress could take to simplify compliance?

Mr. McNulty. I believe Congress could allocate more funds for technical assistance in training to help the smaller communities and the operators and administrators to ensure that they are able to be up on all the regulations that come out of the EPA and so forth, and I believe that would really be the

biggest benefit, to have more dollars to go to technical assistance.

Senator Barrasso. Thank you.

Senator Carper.

Senator Carper. Thanks so much.

Mr. Panos, when was the last time Wyoming raised their gas tax?

Mr. Panos. Not very long ago.

Senator Carper. In 2013, right? Three or four years ago?

Mr. Panos. Yeah.

Senator Carper. They raised it by what, 10 cents?

Mr. Panos. We did.

Senator Carper. Did everybody who voted for that get thrown out of office?

Mr. Panos. No.

Senator Carper. Why not?

Mr. Panos. The State and the citizens there saw a need for it.

Senator Carper. Is there a lesson there for us in the Congress?

Mr. Panos. I am sorry?

Senator Carper. Is there a lesson for us in the Congress?

Mr. Panos. Certainly in our State, in our particular State, it was necessary because of the changing economy in our

State. Our State went through, and continues to go through, an economic shift that is not repeated in many States, but my friend to the left here, in West Virginia, has had that as well with the energy economy and other things. The State legislature saw that coming and they were able to support certain transportation projects by moving that forward. It was very difficult in the State legislature to move that forward, but Wyoming was very aware of its impending future and were proactive at being able to support that.

Senator Carper. We are scheduled to run out of money in the Federal Transportation Trust Fund in 2020, and I just remind my colleagues it is three years from now, but it is just around the corner. Thank you.

West Virginia, Mr. McNulty, former congressman from New York State with whom I served. Actually, it is another Michael McNulty, but we are glad you are here. Abraham Lincoln used to say the role of government is to do for the people what they cannot do for themselves. The role of the government is to do for the people what they cannot do for themselves. What is the role of the Federal Government with respect to addressing the drinking water needs and the wastewater needs of States like my native West Virginia?

Mr. McNulty. Thank you, Senator. The Federal Government, I see it as the obligation to ensure that the funds are

available for any mandate that comes down the pipeline, for additional testing and water quality standards. I believe it is certainly the Federal Government's obligation to make sure that communities receive the funds in order to comply. No unfunded mandates.

Senator Carper. Good.

Mr. Bhatt, I am going to ask you to answer for the record, not here because I don't have enough time. But the request I am going to ask you to answer for the record. In fact, I will ask all of you to do this. Better results for less money. What are some things that we need to do? I think we tried to do that in the FAST Act, to provide the opportunity to get better results for less money. What are some other things that we can do, should do between now and, say, 2020 to enable you and us to get better results for less money. So I will ask all of you. You don't have to answer that now, but you know that if I had the time I would ask you to answer that on the record.

I would just ask for Tony and for Shailen, it is great to see you guys. Thank you so much for your service to our State and to, really, the United States. We have a road in Delaware that is called State Route 1, and you can pick it up, you come to it on I-95. You come between Wilmington and Newark, Delaware, the northern part of the State, and you pick up State Route 1, which takes you to Dover, Dover Air Force Base, and on

down to our beaches. We are proud that we have more five-star beaches than any State in America. If you stay on State Route 1, it goes on into Delmarva, to Ocean City, Maryland and on down into Virginia.

There is a bridge that goes over an inlet. There is an inlet that comes, it is called Indian River Inlet, and it is just north of Bethany Beach, and it flows east-west with the tides. And there is a big bridge built over it, several bridges were build there over time, and we had to eventually replace the bridge because of scouring that was going on in the inlet. When Hurricane Sandy came to town, it had a very adverse effect on the bridge there, and I just wanted to ask Tony and Shailen, just take a minute, talk to us about the intersection of shoreline protection, dune protection, and an infrastructure, major infrastructure investment of over \$100 million. How do they intersect there?

Mr. Bhatt. I will start, since I was responsible for that bridge during Hurricane Sandy, and I was actually driving towards Route 1 and I got a call from the governor saying that on CNN he had seen that our new \$250 million bridge had washed away. So instead of turning left, I turned right, got down there.

It turns out that the new bridge had not washed away; the old bridge had washed away, which I think was a pretty good

justification for us for replacing the old bridge. You know, those hurricanes, I remember when I first became the secretary in Delaware. Three weeks after that, Hurricane Irene showed up, and everybody told me that hurricanes don't come here; you know, they often veer off or they go somewhere else. And in my four years there we had two hurricanes, so something changed around that. The infrastructure is so critically important. What I was so struck by was once that land link was lost, how incredibly impacted those communities were; and people trying to get out, get back in, their kids get to school.

So I would just say that it just draws home the importance of investment in infrastructure, and it is so incredibly important that we do make intelligent investments.

Senator Carper. My time has expired. Thank you for that.

I would just say to my colleagues we spent a fortune on that bridge, new bridge, and the next hurricane that comes along, it could further undermine that bridge if we don't invest in the dune protection and in the beach protection. So one hand sort of washes the other. That is an important point I wanted to make. Thank you.

Senator Barrasso. Thank you, Senator Carper.

Senator Inhofe.

Senator Inhofe. I have to tell you, Mr. Bhatt, when the tornadoes veer off, they come to Oklahoma.

[Laughter.]

Senator Inhofe. First of all, I have something to submit for the record, Mr. Chairman. This is the largest coalition I have seen. This is a letter to President Trump from over 500 organizations through almost everything in America. So there is the level of popularity and I want to ask that that be made a part of the record.

Senator Barrasso. Without objection.

[The referenced information follows:]

Senator Inhofe. Ms. Bobbitt, you have had a little bit of an advantage because you have had a lot of advice and counsel with Gary Ridley. And I am sure, Mr. Bhatt, you and Mr. Panos both are friends of Gary Ridley. He has actually served as a witness before this Committee more than anyone else in the history of this Committee because he knows the subject. We have been able to pass a lot of good things and I think we have done some pretty creative things.

Now, Commissioner Bobbitt, it is unique the challenges that you face in a very rural, rural, Oklahoma, and you have had to be creative from time to time. Could you expand on the funding challenges and give an example or two of how you have gotten projects over the finish line with the limited funds in your county?

Ms. Bobbitt. Thank you for that question. Yes, Grant County is very rural, 4,500 people. While we have the most bridges and the fifth highest number of road miles in the entire State of Oklahoma. Yet, our funding is 63rd out of 77 counties. So we definitely have a challenge.

But one unique thing that we have done in the past, as counties, we worked as a partnership with the Oklahoma Department of Transportation, Gary Ridley, and we came across, when they were going to deconstruct the I-40 cross-town bridge, there were a lot of used beams there. Now, beams that we could

have our engineers inspect and look at, and we recycled them. So we took ownership, counties took ownership of all those 2,000 beams and we brought them back to our counties.

Grant County received over 100 of those beams, more beams than any other county. We have more bridges than any other county. Successfully, we have already built 10 new bridges, and we have more beams to put in place as soon as we get the funding. And that talks about how important a partnership is. That was a State and local partnership. We also would like to have that same partnership with the Federal Government to help us bring home projects.

Senator Inhofe. As you know, the President has talked about the public-private partnerships. Is there any comment you can make about how you have been successful in doing that in your area?

Ms. Bobbitt. The partnerships, the private partnerships will probably work really good for Oklahoma and Tulsa County, but the partnerships might not work so well for our very rural county. But what we can do is we have municipal bonds that are tax exempt that we really need to protect because we do use those types of financing to help us move our projects forward.

Senator Inhofe. Well, during the FAST Act, and I have had the advantage of dealing with these issues for 22 years in the Senate and then 8 years before that in the House on the

Committee, so I have been here for all of those reauthorizations that we have had. One of the problems we had, and people forget about this, up until the middle 1990s, the biggest problem we had with the Highway Trust Fund is we had too much surplus. And we know what happened to that and we know now that we are in a crisis.

But one of the things we have done has been more, and you addressed this, Mr. Bhatt, a little more creative on things that we could do in the bill in giving more power to the States and giving them options, for example, on the enhancement percentages, say from State to State. In California they may have different ideas than we have in Oklahoma and how to use those, so we gave different States that option.

What do you think about giving States more of those types of options and how you can stretch your dollars a little bit more? Mr. Panos?

Mr. Panos. Senator, I think anything that we can do to reflect the conditions in rural States through those kinds of adjustments are very, very helpful to rural States.

Senator Inhofe. Mr. Pratt, do you agree with that?

[No audible response.]

Senator Inhofe. This is a trend that we have started, and we want to continue with this, giving more of the options to the

States. Do you all pretty much agree that that is moving in the right direction?

Mr. Bhatt. Thank you, Senator. Yes, I would say that one of the best parts of the FAST Act, in addition to the certainty, was the flexibility; and I think it is incumbent upon States to work with locals and others to make really good decisions. We pass on and we interact very closely with our local partners to make sure that it is a Colorado or a Delaware or a Oklahoma solution.

Senator Inhofe. Thank you, Mr. Chairman.

Senator Barrasso. Thank you, Senator Inhofe.

Senator Duckworth.

Senator Duckworth. Thank you, Mr. Chairman.

This question is for Mr. Pratt. The Flint water crisis tragically taught our Country a new lesson of the dangers of old infrastructure. In allowing our water infrastructure to crumble, millions of families find themselves in real danger of drinking lead-contaminated water. Not every community is satisfied with this dangerous status quo.

In Madison, Wisconsin, local officials demonstrated leadership in throwing away Band-Aid fixes. They actually, at the local level, committed to a decade-long infrastructure project that culminated in fully replacing every service line, every lead service line in Madison.

Now, when my constituents learn about the infrastructure initiative completed in Wisconsin, they don't understand why the children of Wisconsin deserve greater protection than the children of Illinois or of Delaware. There is no good answer, and I think that is why this Congress needs to act swiftly and decisively to provide States and local governments with direct funding support, far greater than our efforts to date, to jumpstart vital water infrastructure projects.

As a State official, Mr. Pratt, who must struggle daily in balancing the needs to address fiscal challenges and meet the needs of your residents, would you concur that States such as Delaware both needs and would put to good use direct Federal investments in critical infrastructure such as safe drinking water?

Mr. Pratt. I will answer that from the perspective of somebody who handles beach management and wetlands management, not water supply management. But certainly the overarching theme is that we have not invested as we should have as a Nation in that infrastructure. I would welcome any other comments from the panel, but it is not my world of expertise on water supply, but certainly the stories we hear from around the Nation are compelling stories about how I think that the overarching issue is that we have an appetite for construction of new and not much of an appetite as a Nation for maintenance of what we have built

in the past, or improvement of what we have built in the past, and that is a philosophical point I think that needs to be change. But I am not an expert on water supply issues, but thank you for the question anyway.

Senator Duckworth. Well, not necessarily just water supply. You know, the people of Illinois sent me to the Senate with a clear message. Americans are ready, willing, and eager to start rebuilding our Nation at all levels, all infrastructure. When I travel across Illinois, from rural communities to suburban neighborhoods to urban centers, there is a unifying call on Congress: please work to modernize our Nation's infrastructure. Make it a priority. Whether it is roads, rail.

Simply put, Illinoisans want Congress to place a big bet on America and they want their tax dollars invested in American workers and in American companies to rebuild and modernize American infrastructure, and we must go beyond road, rail, and bridges. We should be wise in making sure our investments prepare us to succeed in the 21st century. This includes investments in broadband to empower every family to access high-speed Internet. In fact, you know, I have parts of Illinois where our kids can't do their homework because they don't have access to broadband. We can't track businesses to rural

communities because there is no broadband. So it is not just about the water or the bridge or the road; it is all of it.

And I do think that there is a role here to play for the Federal Government to come in and provide those resources in partnership with local and States. I just don't want us to fall into the trap that we think, oh, Madison replaced all of their own lead water supply, so that is what every State should do. To each their own. And anyone on the witness panel can certainly talk to this, but how important is the role of Federal Government coming in with Federal dollars to help you be able to do this?

Mr. Pratt. I will answer that from my perspective, too. In the world I work in, it is very imperative that the Federal Government take an involved position. Home rule indicates that local communities will develop their own land use plan and will develop as they see is best for their community. That is across the board of residential and industrial and recreational areas and commercial areas.

And when that fabric of community is built, if there is anything that is imperiled, it is usually the Federal Government that has to come and bail out the aftermath. If there is a complete breakdown of waters of life, there is a tornado, if there is a forest fire, if there is an earthquake or if there is a coastal storm, it is the Federal Government that responds and

has to respond after the suffering has occurred, whether it is pollution of water and no water supply for a community or it is a community that has no roads left after a storm or a tornado has wiped out a community in Oklahoma. It is the Federal Government that will have to come out and put the dollars up there.

Investment ahead of time, before the disaster, before the crisis has occurred, is an important turning point we need to make, and I believe absolutely the Federal Government has a tremendous amount to save by that investment.

Senator Duckworth. I thank you for those comments.

Anybody else from the panel? On the end?

Mr. Bhatt. I would just say that 70 percent of our construction dollars for transportation in Colorado come from the Federal Government, so it is incredibly important that there is a strong Federal role in transportation investment. And on the broadband comment, Governor Hickenlooper has directed us to work with the economic development folks to provide broadband. I believe that broadband are the new highways of the 21st century and it is incredibly important for us in Colorado as well.

Senator Duckworth. I am out of time. Mr. Panos, you will have to respond on the record. Thank you.

I yield back, Mr. Chairman.

Senator Barrasso. Thank you, Senator Duckworth.

Senator Capito.

Senator Capito. Thank you, Mr. Chairman.

And thank all of you.

A couple of things. I would like to start with Mr. McNulty. First of all, I would like, for the record, to thank you, as a resident of Charleston, West Virginia who was affected by the chemical spill into our primary water source. Putnam County Water District really came to the rescue for a lot of folks who were without water. So I don't know if you want to just take a couple seconds and say some of the things that you did as a regional resource to try to help people who were without water in a crisis.

Mr. McNulty. Thank you, Senator. Our water utility, we immediately were in contact with the governor's office, Governor Tomblin, and we worked with his staff to make sure that they could start bringing in tankers. We do have a fuel station located at our water treatment facility. And we also helped local folks that came in with their own containers and filled those containers and so forth. So we did play an active role, and so did many other rural utilities surrounding Kanawha County and so forth. A lot of folks helped out.

Senator Capito. Well, your help was very much appreciated and everybody's help. I think West Virginia and rural

communities around the Country are known for neighbors helping neighbors, and certainly in that instance you all definitely helped us.

I would like to kind of pivot off of something that Mr. Pratt mentioned. In your experience at Putnam, in Putnam County, are you looking more at extending new or replacing old? Where is the push-pull there in terms of water infrastructure?

Mr. McNulty. Both, actually. We are expanding. As I mentioned earlier in my testimony, we just finished up a large sewer expansion to existing homes and businesses. But we are also very well aware of the maintenance that has to be done and upkeep of our system. So we have expanded our water treatment plant, as you know and have been there to see it. So we are still in that balance of doing both.

Senator Capito. Is it easier to get funding for one or the other?

Mr. McNulty. I haven't had a difficult time obtaining funding for either one.

Senator Capito. Okay. Okay. The other thing, in your testimony you mentioned the WIFIA. We passed the bill, the WRDA bill, last year as we were leaving, and in that is WIFIA, which is a water infrastructure financing method similar to TIFIA for the waterways and for water projects. Now, in my view, this holds great promise, I feel as though, for another funding

mechanism for rural America and rural American water systems. You have expressed some skepticism for that. Would you like to speak about that?

Mr. McNulty. Yes, ma'am. The WIFIA will not really benefit the smaller rural communities because you have to have larger projects to qualify. And, of course, our greatest concern is that we do not want to see any of the funds from the Drinking Water SRF or the Clean Water SRF go to fund WIFIA; we want to make sure those funds stay intact.

Senator Capito. I think the intention of WIFIA is to use those as a jumping point; not intending to decrease their value or decrease their amounts, but to use them as a leverage point. I am wondering if it would be possible for local, smaller projects to band together for a WIFIA project. I don't know if that is within the boundaries of the law. Do you know that?

Mr. McNulty. I really don't know. We would have to do some research and get back to you, Senator.

Senator Capito. Okay.

I would like to ask you, Mr. Panos, on the transportation issue. You mentioned in your statement that the PPPs don't work for rural areas. We have had a couple in actually Mike's backyard, Route 35, that has been a PPP project that I honestly don't think, we are on the verge of getting it completed now, could have gone on if we hadn't had the ability for our State

DOT to use the PPP projects. Why is that not working in rural America; is it the scale or what?

Mr. Panos. Thank you for the question. Generally, in the rural States we just don't have the revenue generation or the volumes that would support a public-private partnership concept. Certainly other systems, as well, other financing systems we could look at, but direct funding works best for us through the formulaic system; it has been worked out over a number of years and at least for rural States it works very, very well for us. Again, it is based on the volumes that we have and then the expansive nature of our surface transportation system.

Senator Capito. Can your State, like, sell bonds to begin paying on a payback so you can get the project done earlier? They are called GARVEE bonds we have in West Virginia, but don't ask me what GARVEE is the acronym for, I couldn't tell you.

Mr. Panos. Senator, we have used GARVEE bonds on a very limited basis. Again, our primary source is from the Federal Government through the formulaic system. The comment earlier I think was made about the 10 cent fuel tax I guess that was passed some four to five years ago. That only pays about less than 20 percent of the cost of surface transportation; the vast majority comes from the Federal Government through the formulaic system.

Senator Capito. Thank you very much.

Mr. Panos. Thank you.

Senator Barrasso. Senator Fischer.

Senator Fischer. Thank you, Mr. Chairman.

Like many of my colleagues, I believe in the importance of funding our surface transportation infrastructure, and reliable infrastructure does represent a critical investment in advancing our safety and commerce. The Highway Trust Fund has served to equitably distribute funds to all States, rural and urban, and is the linchpin of our transportation system.

As many here are aware, the Congressional Budget Office projects that the Highway Trust Fund will face a deficit of well over \$100 billion in the five years following the FAST Act expiration. So that is why I have introduced the Build USA Infrastructure Act, which would address the near-term solvency of the Highway Trust Fund without raising taxes on hardworking Americans.

I would like to ask our State DOT directors, Mr. Panos and Mr. Bhatt, how important is certainty in the formula funding to your States' transportation systems? And when it comes to maintaining our roads and bridges, is there really any substitute for this critical apportionment funding?

Mr. Bhatt, would you like to start, please?

Mr. Bhatt. Thank you so much, Senator. Funding certainty is everything. You know, I do conservative talk radio once a

month; I just go on the show. And it is not always a love fest, but I think it is important for government to go out and talk to all of our constituents. And somebody said why did you stop this project at point X? Any fool could see that all you had to do was continue it on down another 20 miles. But, unfortunately, we have to have logical termini that are based on the transportation need and the financial need.

So one of the best parts about the FAST Act was getting us out of that cycle of continuing resolutions around funding. If we have certainty around funding, then we can make better plans, and it costs States and all taxpayers less money when we have certainty.

Senator Fischer. And Mr. Panos?

Mr. Panos. For Wyoming and surface transportation, I think that certainly the idea of certainty in funding, Federal funding is very, very important to us. We are very conservative in terms of how we look at financing our system. Our system is not being expanded as we speak; it is being preserved. So we are just getting in enough money to preserve the system that we have now, our 2,000 bridges and 7,000 miles of roads. So, for us, we take a very conservative role.

So the proposal that you are referring to I think identifies a couple of things. One, it identifies that the Highway Trust Fund is not going to be a consistent source of

funding after 2020, and that is critically important to us because we are not expanding, we are just preserving what we have there; the investment has already been made by the Federal Government. And the second is that it really looks at the process, the regulatory review of the projects and looks at how time-consuming that is and the need to improve that. So we support both of those things. Those are things that I think not only Wyoming, but other rural States would agree with. So it is good that you stepped up and put some of those ideas front and center for us to look at. How we go about that, obviously, we will work with Congress over the next few months to develop, but I think they are solid ideas. But we, like Colorado, are looking for consistency.

Senator Fischer. Thank you for your compliment of the proposal. I think it is really important to identify a consistent revenue source without raising taxes at the Federal level to be able to fund beyond maintenance, because we all need to make sure we have that capacity in the future as well.

And you mentioned a second part of my proposal that really addresses the critical delays that projects are faced when they have to wait for that Federal Government approval, and I can tell you that my State has spent time and money on those burdensome Federal Highway Administration processes that really don't change any outcomes moving forward.

For example, we are looking at upgrading a substandard Dodge Street S-Curve project in Omaha, and that has seen costs grow by \$3 million because of these burdens that are out there.

Again, this idea that is in the Build USA Infrastructure Act is based on a proposal that I was able to get advanced in the State of Nebraska that has proved successful, and hopefully we will be able to have a conversation on that here.

But I would ask you both, Mr. Panos, you address part of it, but I believe a greater State authority over this approval process is going to, because we have shown that it is going to move that approval process forward without really taking shortcuts. We are still going to meet the requirements that are there, but I think it is a better system to put in place and a better use of taxpayer dollars.

Would either of you like to address that, just on the delays you have faced with going through the Federal Highway Administration?

Mr. Bhatt. Thank you, Senator. I am quite torn on the answer that I give you, and I say this with all respect. I, as a director of DOTs, have fought with the Federal Highway Administration to try and expedite projects over the years when we were ready to go on something, so on the one hand expediting projects is very good. We have a big project, a \$1.2 billion viaduct replacement in Denver right now that is about over a

decade in the planning process, and some people would say, well, that took 13 years to get to construction, how ridiculous. There is a school that is right beside that project. If my children went to that school, I wouldn't want a State DOT to come in and just say, hey, we are moving the road right beside you. We are taking 63 homes in the process of that, and one of the Federal requirements that we have to follow is there are certain rules and regulations; when we take property, we have to show a burden and we need the property, and we have to follow rules around relocating people.

So, as the State DOT person, I would love for there to be fewer regulations. As someone who is impacted by the project, I think that some of those Federal regulations do serve a purpose.

Senator Fischer. And I wouldn't disagree with you on that, but I think if we can expedite, that would always be a saving.

I apologize, I am over my time. Thank you, Mr. Chairman.

Senator Barrasso. Thank you very much, Senator Fischer.

Senator Rounds.

Senator Rounds. Thank you, Mr. Chairman.

It isn't very often that we have the opportunity in a Committee like this to talk about what we want to see in the future. You have heard the President suggest that infrastructure is critical. You are hearing members on both sides of the aisle saying that the time is now to actually start

discussing how we do infrastructure development in the United States coming up.

I want to take this at a different level than simply asking about rules and regulations and so forth. My friend, the Ranking Member here, as a former governor in his home State, recognized that they could make good decisions there about what their needs were. They see major issues that we don't see in South Dakota. They are concerned about rising water levels in their neck of the woods.

In South Dakota, we are concerned about things like our rural development of the basic infrastructure of simply delivering rural water. In fact, we have rural water programs in South Dakota that the States fully funded their share of it and yet the Federal Government hasn't got enough money in it to actually pick up their share, and the cost is going up and we have people that don't have that water available. We have other rural water systems in the State that basically they don't have enough money to even do some of the maintenance on some areas, and they haven't quite filled them out yet.

Just for a minute, what I would like to do is, as individuals that have a clear understanding from the State and local level, the opportunities and the capabilities that you have, I want to reach out a little bit here. Let's make a couple of assumptions that perhaps a lot of people in this

Country would say will never come true. Some people would say we are talking about la-la land or fairy land, but let's assume, number one, that Republicans and Democrats actually agreed on a need for an infrastructure bill.

Number two, let's agree, just take the assumption, and keep the snickers down, okay, but let's agree that Congress actually agreed on a funding bill and that Congress actually agreed differently than in the past, they actually agreed on how they were going to pay for the funding bill. And then let's agree that we actually agreed on how we would distribute a significant part of those funds back to States and local units of government.

And let's say that we actually had the foresight to talk not just about roads and bridges, but about water development and about broadband, which is clearly important, and perhaps give some opportunity for States and local units of government to have some flexibility in what they saw as needed economic development. And let's just say they actually had the foresight to make a deal with the States where the States actually had some skin in the game and had a match, similar to what we have in the Highway Fund.

Now, I know I am making some major stretches here, but let's say that we also said that we expected that a number of different projects could be made available, whether you talk

about ports of entry along the borders, whether you are talking about ports along our coasts, airports, road bridges, water development and so forth.

This is your opportunity to just expand in terms of what your capabilities are and what the limitations are that the Feds currently put in place, what we do to hamstring you, but also the things that you think you are capable of doing. Can I just each of you, and I don't care in which order, can I ask you to just share a few seconds about what you see as your capabilities and what you could do with the resources if you had that shot? What could you do to make it better for the people that live in your area? Yes.

Mr. Panos. Senator, if I could start, for us in Wyoming, certainly, with surface transportation, which I am speaking about today, we would implement more safety projects. Safety is our number one issue. And if we can develop additional safety projects and put them on the ground, whether that be construction of additional lanes or other kinds of safety systems, we would. We are maintaining what we have, and that is what we have dollars for right now.

We have a great relationship with the Federal Highway Administration, a great relationship with our Federal partners.

Senator Rounds. Could you start it fairly quickly?

Mr. Panos. We could. And we have plans to put in place because of our great relationship with the Federal Highway Administration and others. So, from a surface transportation, we would focus on safety. That is our number one issue, and we are a safety agency. Probably more than we are a transportation agency, we are a safety agency. So we would focus on that.

Thank you, Senator.

Mr. McNulty. We would expand water distribution systems and wastewater collection systems and build facilities for treatment, as well. For instance, we have a project in our home county, Putnam County, West Virginia, we have 56 homes without potable water. These folks have to haul their water back to their home cisterns. Our county commissioners have applied for a small cities block grant for the last five years for \$1.5 million, and for the last five years they have been turned down. And that project is designed. It would be ready to go the day after the funding got in place.

Senator Rounds. Thank you.

Ms. Bobbitt. Thank you, Senator. We would probably look at our off-system bridge systems, because we want to make sure that we have safe bridges for our school buses, our emergency services, ambulances, fire departments. We would want to make sure that those routes were brought up to standards. And, yes, we could do that pretty quick. We have engineering on several

bridges; we just don't have the funding. So we have shovel-ready projects ready to go. Thank you.

Senator Rounds. Sir?

Mr. Pratt. My perspective, of course, is very different. I am not a highway transportation planner, but looking at it out of the box because of the scenario you present is very dizzying, so I will be dizzy.

Senator Rounds. I know. It is what I call a fairy tale; quick, get it done.

Mr. Pratt. -- any of those things would happen, but if we did, I think, first of all, the very first thing we need as a Nation is a better informed discussion as to how we invest in a decadal sense. We are doing investments, I think, in short-term very much. I hate to say it. I was an elected official in Delaware, in a small town, and we tend to make decision on a two- and four- and six-year kind of term frame so we can bring something home to our constituents. We really want the decadal planning, understanding where the population trends are, where the vulnerabilities are, and the value of the return on the investment. If we did a better job of that, we would know how to utilize the funds that were available if they were untethered. So I think we need a much better information in the decision-making process informed by those factors.

Mr. Bhatt. We lost 35,092 Americans on roadways last year. Safety is our number one issue. We are going towards zero debts and we are going the other way, 10 percent increase the last couple of years. So I would say safety would be our number one priority. We have literally dozens of projects that are ready to go but for funding, so funding, if there was a way to find bipartisan agreement, would go a long way to saving American lives.

Senator Rounds. Thank you.

Thank you, Mr. Chairman.

Senator Barrasso. Thank you, Senator.

Senator Whitehouse.

Senator Whitehouse. Thank you, Chairman.

I appreciate very much our guests here from Wyoming and West Virginia and Oklahoma and Colorado, but you all fail to share one of Rhode Island's attributes, which is a coastline. You are all landlocked. So I would like to address our guest from Delaware, who, like Rhode Island, shares a coastline.

In Rhode Island we have sewage treatment plants that have, as we face rising seas along our shores, moved first into the flood zone and now into velocity zones for storms. After a major storm, I, far too often, have to go and talk to a family who is looking at the remnants of their home that has been torn into the sea by the storm activity.

We have coastal roads that are at risk of either destruction or flooding, and in many cases the coastal road is the access to a community, which creates very significant emergency services risks. And as we are mapping more effectively where storm and sea level will be intruding, we are finding more and more that the emergency services are on the wrong side of the flooding area. I think people remember the scenario in Senator Booker's State of New Jersey, where they couldn't bring the fire equipment in during Sandy because of the flooding, and neighborhoods burned with nobody to fight the fire. So, you know, we have those concerns.

I have seaside restaurants, places like Tara's and the Ocean Mist, two wonderful bars right side-by-side on the sea, that not long ago had 100 feet of beach, and people would play volleyball and sun on the beach; and now they are up on pilings and the ocean washes under their buildings. State beach facilities are similarly compromised and having to be moved backwards as we yield more and more of our coastline to the shore.

And, of course, in a really major storm, something equivalent to the hurricane of 1938, which gave Delaware a pretty good hit, but really nailed Rhode Island, the 10 inches of sea level rise we have already seen, the 9 feet of sea level that our State and Federal experts tell us to expect by the end

of the century, plus we get about 2 feet, if the wind conditions are right, in added tide, plus we get about 2 feet in added tide when the moon and the stars all line up, so you get an astronomical King tide, we are really planning for some very serious disruptions.

So I hope that my colleagues, as we consider what our next infrastructure investments should be, will understand that in our coasts we not only get all the other effects of climate change, but we get this rising sea level and then the worsening storm surge that compromises our coastlines.

Let me turn it over to you to comment, because I know Delaware has actually, I think you have even lower elevation than we do, and a lot of these similar coastal problems. I visited there with Senator Coons to hear from your experts, and I know he is aware of Rhode Island's, because his dad, who, sadly, just passed away, was the head of the Rhode Island Fisheries Association for a while.

So, with that, I leave it to you to talk about coastal infrastructure.

Mr. Pratt. No, your points are well made and I appreciate the opportunity to address it. I am from the Boston area originally; I know the New England coastline. You have a lot better topography in Rhode Island than we have in Delaware. We

are very flat. We are very much a remnant of a higher sea millions of years ago.

That said, one foot of rise in sea level can be exponentially hundreds of feet of intrusion in a landward direction. So what do we do? Number one, I think you hit on it. The NFIP is producing much better maps that inform us as to where the risks are going to be, where the risks are today and where they are going to be, and we can begin to utilize those in the local communities to begin to plan how we can remove critical infrastructure to better places.

I think the best indication of what sea level will be in the future is when we have a high tide in its form, when the tide is 2 to 3 or 4 feet above the predicted, we see where the water goes and we certainly map where those intrusion areas are. We have to do a better job, and that is part of the discussion I think we are doing here today, which is looking at how we manage the coastlines so that they provide the protection they have provided for a long time; optimize what we learned in Sandy. There is a comprehensive plan that has been developed by the Corps of Engineers for the northeastern States. I think if we expand that out to the southeast, the Gulf Coast, and eventually the west coast, that kind of systems thinking.

And one of the things that I think ties into my colleagues here is we have, particularly in the eastern seaboard, in the

more urbanized area, we have a tremendous stress on our highways for congestion and also a tremendous number of 18-wheel tractor trailers that are on roadways. New Jersey has just taken a lot of money to separate, on the Jersey Turnpike, truck traffic from pedestrian or automobiles for other use, and I think that is a way that is coming to the future. I think we are going to have to look at how the waterways of this Nation have to be returned as a means by which we get better transportation of goods and services around the coastal area, and that means port management, which would produce sediment if dredging has to occur to accommodate larger ships and more ships and more boats; and sediment should be utilized in all cases for benefit of restoring beaches, restoring wetlands as much as we possibly can. And we have some institutional blockades to that which we have to take on, but I am kind of running out of time here.

Senator Whitehouse. I appreciate it.

With the Chairman's leave, if I could make one more point to the Committee.

Senator Barrasso. Yes.

Senator Whitehouse. This isn't a question that requires an answer.

One of the things that we have discovered in Rhode Island, as we have tried to develop the tools to be able to anticipate what storm surge and rising seas present by way of risks to us,

is that the FEMA mapping of this has been, frankly, outright defective; and that as we look at it, we find that FEMA is unable to replicate, when it has to go back and do it again, the results that it claims are solid. If you can't go back and replicate a result, it is probably not very solid. We see them making premise decisions in their mapping that don't make any sense. We see them operating off of facts that are provably not accurate.

And the result is that very often we find people put into flood zones that aren't really going to be flood zones, in which case they have to buy insurance that may not be necessary. But, far worse, you find people who are not being told that they are in a flood zone. And the discrepancies between what our university and our coastal resources center are doing and what the FEMA maps show are really considerable, and I hope that at some point some of our more coastal folks might join together in taking a hard look at that because a lot of people are going to be really disappointed by being let down by defective and erroneous flood mapping.

Senator Barrasso. Thank you, Senator Whitehouse.

Senator Ernst.

Senator Ernst. Thank you, Mr. Chairman, and thanks for our panelists for being here today. This really has been a helpful

discussion. We have a number of members that come from those coastal areas and it is a great discussion.

What I want to point out in my question, and I will start with you, Mr. McNulty, is that a Federal Government one-size-fits-all approach simply doesn't work. I come from Iowa. I am landlocked. I don't have oceanfront property. And let me dig into why I think there needs to be a little bit of difference in the Federal Government.

One of Iowa's top infrastructure priorities is flood mitigation. We have heard a little bit about flood mitigation here. Our second biggest city in Iowa went through two major flood events, 2008 and 2016; and to date they have not received any construction funds, despite being authorized in the 2014 WRDA bill and again mentioned as a priority in the 2016 WRDA bill.

A few months ago I had a meeting with the head of the Corps and we had a conversation about the process. The Corps and the Office of Management and Budget used to budget for flood mitigation projects. I expressed to him that communities like Cedar Rapids, Iowa and States like Iowa will likely never see Federal assistance from the Corps because they lose out every time to larger States that have higher property values and, thus, higher economic benefit.

I am really interested in improving these metrics so our rural communities have a fighting chance at tapping into Corps expertise, because if the only metric the Corps uses to determine the economic benefit of a project is property value, then it is hard for me not to conclude that the Corps considers building beaches in front of multimillion oceanfront homes to be a higher priority than protecting the people that live in Iowa.

It was also suggested to me in my meeting with the Corps that because Iowans have a pick yourself up by the bootstraps attitude and we work very well together in our communities to properly mitigate, we move farther down the list of priority and we are basically being penalized for being proactive.

So my question for you, Mr. McNulty, is how can we work together to improve or broaden the metrics the Corps uses to give our rural communities a fighting chance at Federal funds?

Mr. McNulty. Perhaps my colleague, Mr. Pratt, might be able to answer that just a little better than I can when it comes to flood mitigation.

Senator Ernst. Okay. I am willing to listen. Thank you.

Mr. Pratt. Well, certainly, I am coming from one of those States that has rich valuable oceanfront properties, and I certainly understand the position you are coming from. I will say this. In my dealings with the Corps, even from the State of Delaware with oceanfront, there is a lack of funding to do even

a lot of the work we have to do. I mean, it sounds like we do get a lot of money and, as my testimony indicated, there is a tremendous return on that investment. And I don't think that the Corps' metrics right now take into account the full range of benefits in any front of flooding, whether it is ocean or Gulf Coast or whether it is riverine or it is snow pack melting in the Sierras this coming spring.

I don't think the metrics are there. I don't think the Corps has the ability to give an informed discussion to anybody as to the full range of benefits. There could be recreational benefits. My understanding of the Corps process and what they have been doing in Delaware is that they look at not the personal property value, but they look at the infrastructure at risk, the density of infrastructure, the utilities, the roads, the waterways, the electrical delivery system, and what the overall effect is if that fails during a storm.

And we have, as the Senator indicated, we have not only still water flooding, we also have velocity water, and that was certainly the case in Sandy. Had we only had still water rising issues, that would have been one thing in New Jersey and New York, it is a totally different thing when you have waves 3 foot, 5 feet, 6 feet washing through structures, and one structure falls into the next to the next to the next.

So I think the Corps certainly needs a liberalization of its analytics on how the benefits accrue and inform the discussion. I don't know your State's needs, but I certainly think that that is something that nationwide the Corps' process of deliberation and how they develop the benefit-cost ratio, because that is what they predicate their spending on, is the higher the benefit-cost ratio. And if you are at the high tipping end of that, then you are going to get some funding; and if you are at the lower tipping rate of that, then you are not going to get any funding. And that is what we have to uncover, is what goes into that benefit side.

I have often stated all costs, up to the penny, of all Corps projects are calculated right down to the penny. The benefits we probably leave 50 to 80 percent of them on the table. I think we need better information.

Senator Ernst. I think so. I think the one-size-fits-all approach isn't working because every community is different. If we see all the Federal funding going to areas on the coasts, it is really hard for me to go back home and justify why the safety of the people in Cedar Rapids is not as important as the safety of people and livelihood of people that live on the coasts. So thank you very much.

Thank you, Mr. Chair.

Senator Barrasso. Thank you very much, Senator Ernst.

Senator Booker.

Senator Booker. Thank you very much, Mr. Chairman.

I want to thank this panel, too. I concur with my colleague and friend from Iowa; this is a very valuable discussion and I really, really do appreciate it.

I have really big concerns about our Nation's water infrastructure, especially as it affects rural areas in America, as well as some of the poor areas. It is the kind of thing that a lot of the natural private sector incentives don't often provide for us being built out, and as a result of that you see real challenges for families around this Country about getting access to clean, safe water.

So maybe I will start with Michael McNulty. You talked in your testimony that we have families in many parts of this Country, and I believe in West Virginia as well as New Jersey, that lack the proper facilities. And according to the Census Bureau, when it comes to these water facilities, they say that 500,000 homes around the Country lack access. Five hundred thousand in America, the richest Country on Planet Earth, lack access to hot and cold running water or a bathtub or a shower or a working, flushing toilet.

Now, that, to me, is astonishing data. It includes about 11,000 homes in New Jersey and portions of rural Alabama that are home to low income, predominantly black communities. Less

than half of the population is connected to a municipal water system.

Many of these families, septic systems fail and they are forced to dump sewage behind their homes, which brings up a lot of very serious health problems.

In addition to tainting the water supply in general and harming the local environment, this is a leading spread of intestinal parasites such as hookworm. A lot of these parasites are really not thought to even exist in the United States of America, but still exist in a lot of these communities in rural areas.

So I was a former mayor, and these were issues that I was dealing with all the time, and it can be difficult, very difficult for cash-strapped cities, municipalities, rural and urban, to fund projects based off of only loans, which are essentially just low interest debt, especially in a lot of these lower income rural areas and urban areas that don't have the kind of high revenue streams or tax base that can support the kind of work.

I believe the answer has to be more grants and grant programs. As you know, currently a State can use no more than 30 percent of the total amount that it receives from the Clean Water State Revolving Fund on direct grants, and I am wondering would you support removing that 30 percent cap and letting

States provide more clean water grants to communities with demonstrated financial need?

Mr. McNulty. Absolutely. Let's remove those restrictions.

Senator Booker. And if we were able to remove that restriction, can you just give an idea of what impact that would have for these struggling rural and urban cash-strapped communities?

Mr. McNulty. You know, in West Virginia, as many folks know, we have a \$500 million deficit in our budget coming up, and with the decline in the economy, especially with their coal severance tax, so communities no longer have the funds to contribute towards projects like they once did. By removing that restriction and possibly even lengthening the time that the loan could be paid back, communities could do so much more. We wouldn't have to rely on local partners much, where they are cash-strapped. So it just would add tremendous benefit across the Country.

Senator Booker. Somaybe on that point, because I do know that for me, when I was mayor and trying to manage things, even lowering the cost of loans really helped us to do a lot of projects.

But perhaps for you in my last question, Bill Panos, there is a lot of talk about a \$1 trillion infrastructure package right now. My worry is if that is much more about low interest

loans and not about direct grants. And the thing that I know, for those of us who are concerned about debt and deficits, that we have to understand that investments in infrastructure actually create a multiplier effect in economic growth.

So I just want to know, maybe for the last 20 or so seconds that I have, would you just comment on the power of having an infrastructure package that did include direct Federal investments, not just loan programs? Is that something that you would say is important to have, a balance in that infrastructure of direct Federal investments, especially in areas that can't afford even the low interest loans that would need some Federal resources invested in their communities?

Mr. Panos. Speaking for service transportation in rural States, yes, direct investment does help, especially with States that have, rural States like Wyoming, that have low volumes and don't have the kind of revenue generation that other States do. So, yes.

Senator Booker. Thank you very much.

Mr. Chairman, thank you.

Senator Barrasso. Thank you, Senator Booker.

Senator Boozman. Thank you, Mr. Chairman, and thank you and the Ranking Member Senator from Delaware for having this very, very important meeting.

We appreciate you all being here.

Ms. Bobbitt, as one of Arkansas's largest industries, agriculture is crucial to the State's economy. Arkansas is home to 44,000 farms, generating an economic benefit of \$20 billion a year and employing one out of every six Arkansans. I believe investing in infrastructure will help create jobs, keep commodity prices low, and help us remain competitive on the global stage.

Can you explain how a reliable and efficient infrastructure system helps industries such as the agricultural industry remain competitive?

Ms. Bobbitt. Thank you for that question. Excellent question.

Senator Boozman. We like you unless we are playing you at something.

Ms. Bobbitt. Yes, I agree.

Senator Boozman. As your neighbor.

Ms. Bobbitt. You are right.

Yes. If you think of the United States map and consider it a puzzle, and each piece of the puzzle is a county, and that is 3,069 pieces in that puzzle and it connects, and if you take a piece out of that puzzle, it is not complete. Well, it is the same thing with our roads and our bridges, and we all have to connect because while we grow the agriculture products in our States or in our rural counties, it has to be delivered to the

urban areas. So it is very important that we all work as a partnership and make sure that we can deliver our foods and our fiber to the urban area. It is not rural versus urban; we are in this together. We are one piece of the puzzle.

Senator Boozman. Right.

Ms. Bobbitt. Thank you.

Senator Boozman. And the second part was going to be what is the repercussions of the fix-as-it-fails strategy that we are using now. And as you point out, you can have great roads in Oklahoma or great inland waterways or whatever, but if you can't get there or get out of there, it really does all go together.

Ms. Bobbitt. Again, that is correct. We don't have blue roads and we don't have red roads; we have roads and bridges. So it is a partnership and it does need to be. The same trucks that come down the interstates and the highways get off on our county roads, and we have to get our food and fiber off the rural area and into the counties or into the urban areas.

Senator Boozman. Right, especially as you look to what the futurists tell us that America is going to have to do as far as feeding the world 20, 25 years as we go forward.

Mr. McNulty, according to a recent Michigan State report, water prices across the Country have risen by about 41 percent since 2010, which really is an amazing statistic. If this particular trend continues, it is estimated that 35.6 percent of

American households will not be able to afford water services within the next five years. In your professional opinion, what kind of effect will rising water prices have on a rural State such as Arkansas?

Mr. McNulty. It will be hard. It will be hard for the citizens because they will begin to cut back their use of potable water. But that will not change the debt service requirements that are on those systems. So you are in a Catch-22; folks are thinking, well, I will reduce it and save money, and then the water system is like, well, I can't make my debt payment, so we are going to have to continue to raise rates. So I think it will be a very challenging time for rural water systems.

Senator Boozman. So tell me about, in the next infrastructure bill that we do, do you feel like it is important, then, to address affordability?

Mr. McNulty. Absolutely. Affordability has to be one of the primary factors when considering when you are funding a project in this Country. What can people afford? You know, we talk about folks that already have potable water and sanitation, then the folks that do not have any at all, no access. So those folks are typically going to be in rural America, much lower income.

Senator Boozman. So we are really kind of in a Catch-22 situation, as you mentioned. Again, the EPA, sometimes rightfully so, sometimes very, very aggressively trying to get the last little bit out that is so expensive as far as our point sources and things. That raises rates, as you make it such that you remedy that. But then, as you point out, you are in a situation where people actually don't use as much water, so then that raises rates further.

Mr. McNulty. It certainly can.

Senator Boozman. Very much.

Thank you, Mr. Chairman.

Senator Barrasso. Thank you, Senator Boozman.

Senator Cardin.

Senator Cardin. Thank you, Mr. Chairman. I want to thank all of our witnesses. To me, this is one of the most important subjects we have to deal with as an area where we can get Democrats and Republicans working with this Administration to get things done.

As Senator Carper pointed out in his opening comments, we are not proud of the fact that we get a D on infrastructure. When you go to any other country, just about, certainly in the industrial world, and see the way that they deal with transportation versus the way we do, we need to invest more. I

think the number is \$1.6 billion the American Society of Civil Engineers said we need in regards to our surface transportation.

Mr. Chairman, I just really want to underscore the point that you made in your opening statement about rural areas versus urban areas. In Maryland, I can tell you the Appalachia Highway System program now, which has been rolled into the overall surface transportation programs, is absolutely vital for job creation in western Maryland. The north-south highway, which is important for the people of West Virginia, Pennsylvania, and Maryland, is critical to their economic future, and it doesn't come without a cost. There is an initial cost, but you get it back by economic growth.

So, yes, I-81, which is very important for the Washington County part of western Maryland, is a vital link which we are trying to get some fast lane grants for, but we need more money. And with Senator Carper on the eastern shore of Maryland, I think he would agree with me that a lot of people want to get to our beaches, and there is a real issue of safety in getting through the eastern shore of Maryland and Virginia and Delaware, and they are expensive to do these highway projects and we need to do it.

In the urban areas we have our challenges. I live in one of the most congested corridors in the Country, one of the most congested corridors literally in the world, the northeast

corridor, and we need to invest in ways to deal with this. I want to get Senator Carper down here easier than his Amtrak ride every day. We could make that a little faster for him if we had modern high-speed rail.

It was interesting. I had my staff go back, and it was Senator Moynihan who advocated as a member of this Committee back in the 1990s for inclusion of MAGLEV in the highway bill. MAGLEV has been here for a long time. Japan has a system that carries many thousands of passengers at world-record speeds of 361 miles per hour, and Japan is now planning another 300 miles of MAGLEV route between Tokyo and Osaka to carry 100,000 passengers.

I mention that because that is what other countries are doing, and we are still stuck in technology that is really kind of old. So we do need the capacity to modernize our infrastructure system.

I know that Prime Minister Abe will be here this weekend, and he is going to talk to President Trump about partnerships that could be done with Japan to advance MAGLEV technology that could help our northeast corridor in dealing with some of these issues, so there are real opportunities here.

But let me just take my remaining time with Mr. Pratt to go over the water issues. I agree with Senator Boozman, affordability is the key issue on our water. Our water

infrastructure needs, the number I have is about \$655 billion over the next 20 years in order to modernize our wastewater and clean water supplies. We have 240,000 water main breaks a year, costing literally billions of dollars in waste. So a more efficient system would help everybody.

But if you are talking about affordability, then you need support, public support to deal with the water infrastructure. If you put it all in the rates or you look for public-private partnerships, which I am for, but there is going to be a cost to the consumer in the public-private partnership if you can make money off the project. So we really need a stronger commitment for the basic programs, the revolving funds, etcetera, so that we can modernize our water infrastructure, make it more efficient without an excessive burden on the ratepayers who are middle income families who can't afford it.

I would like to get your experiences that you have seen.

Mr. Pratt. Of course, I am coming at this from a perspective of a natural resource manager, but certainly it is within the realm of what my sphere of exposure is involved in. I think it is an overarching issue that the public is not aware, sometimes, of the risks of ignorance that we have put ourselves in, and that is at the Federal and State level. We have ignored problems we have known about for a long time, whether it is a coastal hazard, as Senator Booker was talking about earlier and

others. We have exposure to a number of risks, certainly water supply, water distribution, transportation systems, the infrastructure that protects those.

I don't think we have informed the public well enough. The imperative is not out there to the degree that it should be to get a public movement behind that investment, and I think we have to tell the story better. My reaction is basically we need to be very gut-honest about how impoverished we have been in maintaining our infrastructure systems and how much more work we have to do in an every-increasing population with demands on limited resources.

Senator Cardin. I thank you for that answer. I will point out that this Committee will hear a great deal from me on the Chesapeake Bay and what we need to do, and I appreciate Delaware's leadership on that. How we deal with wastewater is very much a critical factor in how we deal with the Chesapeake Bay, and dealing with shorelines and the way erosion takes place is very much a part of this overall strategy. So I thank you for your answer.

Senator Barrasso. Thank you, Senator Cardin.

Senator Sanders.

Senator Sanders. Mr. Chairman, thank you very much, and thank you for holding this really important meeting in an increasingly contentious political environment in the Senate and

around this Country. I would hope very much that on this issue there could be a coming together to address what almost everybody understands is a national crisis. So thank you very much for holding the hearing, and I look forward to working with you.

Let me just talk about Vermont for a second. Vermont's roads need an additional investment of \$700 million a year to get into a state of good repair. Vermont, small State. The only reason Vermont is now in 28th place in the Nation for road condition is because we had to rebuild after Hurricane Irene, which knocked out a lot of our bridges and our roads. So we invested a lot. But I would hope we can go forward in rebuilding our crumbling infrastructure not as a result of disasters, but being proactive in it.

We are the richest Country in the history of the world. We used to, Mr. Chairman, lead the world in cutting edge infrastructure. We were number one. That is no longer the case; we are now behind many, many other countries. And the result of that is loss of productivity, the result of that is the loss of safety. Too many accidents occur because of a crumbling infrastructure. And the result of that is the loss of economic potential in jobs.

So when we talk about rebuilding our crumbling roads and bridges and water systems and wastewater plants, I had the

opportunity to be in Flint, Michigan a year or so ago, and what I saw there made me disbelieve that I was living in the United States of America. But it is not only the water in Flint, Michigan; we have failing water systems all over this Country.

We used to lead the world in terms of our rail. Today we are behind Japan, behind China, behind many, many other countries.

So, Mr. Chairman, I think that there is bipartisan agreement that we have not invested in our infrastructure and I think there is bipartisan understanding that when we invest we create jobs.

Now, a couple of years ago I brought forth legislation called the Rebuild America Act, and I proposed a \$1 trillion investment, and at that point that was thought, by Republicans and Democrats, to be a wild and crazy idea. But I am glad I think there is an understanding that given the depth of the problem, given what the American Society of Civil Engineers tells us in terms of a need to invest \$1.6 trillion above current spending levels, that \$1 trillion is in fact a reasonable amount of money.

And when we do this not only do we create a Nation that is more productive and safer; we also create up to 15 million jobs, and jobs in areas where we need them, and one of the areas certainly in rural America has to do with broadband.

So, Mr. Chairman, I want to put in a plug for broadband as part of our infrastructure, with the understanding that any small town in Wyoming or a small town in Vermont, you are not going to attract businesses. Kids are not going to be able to do well in school unless we have access to high-quality broadband. So this is a proposal that makes sense on many levels and I think there is bipartisan support.

Where the difference of opinion is going to come, I think, which is outside of the jurisdiction of this Committee, is how we fund the trillion dollars. I am not sympathetic to giving huge tax breaks to Wall Street or the large multinational corporations who invest in our infrastructure. That is not the way we should be going, in my view. I think interest rates are very low now. I think it is appropriate that in a Nation which is spending \$650 billion on the military, yes, that over a 10-year period we can invest \$1 trillion in rebuilding our infrastructure, which will pay for itself by job creation and increased tax revenue.

So I would just like to ask, and I apologize for not hearing any of your comments, but somebody, maybe the gentleman from Wyoming, about the needs of rural America. Wyoming is different from Vermont, but we are both very rural States.

Where would you like to see infrastructure investment going?

Mr. Panos. I can speak for surface transportation in Wyoming and say that any proposal that brings forward something that we can take advantage of as a rural State is a positive thing. P3s and other kinds of borrowing doesn't work in Wyoming, doesn't work in rural States, because we simply do not have the revenue generation to be able to support that kind of thing. So any proposals that move forward are helpful.

The second thing I would say is the existing formula system, the formulaic system for delivering those dollars, those Federal dollars to rural States works; and, yes, there could be improvements in project deliver, yes, there could be improvements in having flexibility for States, but those systems do work. So enhancing monies to those existing delivery systems would be very positive for rural States like Wyoming.

Senator Sanders. Thank you, Mr. Panos. Let me ask you this. In Vermont, with a few exceptions, and we are expanding it a little bit, if you live in a more rural area and you want to get to work in a more urban area -- I use those in quotes because our largest city is 40,000 -- the only way to do it by an automobile. And I think we need to build up our rural bus system as well. Do you have problems with that in Wyoming? Can people get to work in other ways than through an automobile?

Mr. Panos. Through our Federal funding programs, we do have a transit program through the Department of Transportation

that connects us, the State government, with our local governments, counties and cities, to provide senior transportation, to provide --

Senator Sanders. Just senior. But if I am a worker in an area and I want to get to work other than by automobile, in Vermont it is pretty hard to do. Is that the case in Wyoming as well?

Mr. Panos. It is hard, but not impossible. We also have private sector agreements with some of our largest energy producers that also have transportation for their workers to come from cities. So we have some of that in Wyoming as well. But it is different than needs in some of the other States that are not like Vermont and Wyoming. It is different than the needs in New York or some other places.

Senator Sanders. Absolutely. Thank you.

Thank you, Mr. Chairman.

Senator Barrasso. Thank you, Senator Sanders.

We are going to go to a second round, just a couple of quick questions that we have.

From a Colorado and Wyoming standpoint, the testimony mentions the need for direct Federal investment in highways. I agree. I was chairman of the Transportation Committee in the Wyoming State Senate before getting elected to this position.

Before Congress increases funding, I think it is critical that we show the American people we are actually being efficient with the current levels of funding, so are you aware, from a Colorado-Wyoming standpoint, of any actions that Congress could take to make the projects less costly to ensure that the current spending is efficient as possible? There are unnecessary burdens and expenses that you have to deal with that we could just get more bang for the buck?

I don't know, Mr. Bhatt, if you would like to start, and then Mr. Panos.

Mr. Bhatt. Thank you, Senator, and thank you for your career work in this transportation field. I think that I hear this a lot from folks, you know, what can the Federal Government do, what can State governments do, what can locals do, what can we do better. Maybe it would be useful to have a cost-benefit analysis done by Congress to come in and, from a non-partisan viewpoint, just say what are the costs that are imposed by some of these regulations or by some of these processes and what are the benefits, because I think that some people view costs and benefits very differently, and I think it would be useful to understand where there are necessarily benefits and where there are actual costs that are slowing down the system. And then, at the end of that, everybody just says, okay, it was bipartisan,

so in a bipartisan way we will implement it. I think that might be a useful exercise.

Senator Barrasso. Mr. Panos?

Mr. Panos. Mr. Chairman, I would say that reduced program delivery would be helpful for us. I will give you an example. We have a project in the northern part of our Town of Sheridan, City of Sheridan, called the North Sheridan Project, it is an interchange project. Fourteen years for us to develop the planning, permitting, and program delivery, about two years to complete. And this is a safety project for our commercial traffic that is moving through that part of our State. So anything that we can do to deliver projects quicker, that is a good thing.

Improving States' flexibility and also improving our flexibility in the use of some of our infrastructure. Let me give an example. The Senator had talked about broadband, and one of the things that we do in Wyoming is we are engaged in a broadband infrastructure project, as the Chairman knows, and we use our rights-of-way along the sides of our highways to run our broadband lines. That single decision has created an accelerated broadband infrastructure throughout the State of Wyoming. So that single decision, that single flexibility allowed us to do more things with the existing infrastructure that the Federal Government is funding in our State.

Senator Barrasso. And then a final question that follows up with what Senator Sanders was talking about about rural States, could you talk about how Federal investment in transportation projects in rural States also can benefit urban States?

Mr. Panos. Yes. There are a couple of things. One is sort of the national connectivity benefit. Truck traffic through Wyoming starts in the West Coast and goes to Chicago or goes to East Coast cities. This is a national benefit. The idea that we invest in those interstate highways will help commerce at both ends of the trip.

The other is, again, as I think we stated in my written testimony, these highways in rural States bring product to market; they bring agricultural products, they bring forest products, they bring energy products to markets that they need to go to. So there is a strong benefit there to urban areas by investing in rural States.

Finally, as I stated in both my opening statement and in my written testimony, I mentioned tourism. These roads bring millions of visitors to Yellowstone National Park and Mount Rushmore every year. These are dollars that are spent in America, tourism dollars that are spent in America, and not in Europe or Canada or some other place; and the reason is they can get there and they can home safely. And the only way that they

can get there, as the Senator had pointed out from Vermont, is a highway, is by car. So investing in rural States helps urban areas and the Nation in those respects.

Senator Barrasso. Thank you, Mr. Panos.

Senator Carper.

Senator Carper. Thank you very much.

I had a special interest in that question and your answer. I thank you. I will just scratch that one off my list.

We have a history in this Country of a user pay approach; those who use roads, highways, bridges pay for them, directly or indirectly. Is that an approach that we should generally stick with or move to something else, Mr. Panos?

Mr. Panos. In Wyoming, with our surface transportation --

Senator Carper. Very brief. Very brief.

Mr. Panos. -- we have a mix of user fees, registration driver's license fees, and what you had referred to earlier, the tax. All of that adds up to only about 30 percent. The other 50 percent comes from the Federal Government, and then the other 20 percent or so comes from a variety of different sources.

Senator Carper. I didn't ask you for the mix. I asked is the idea of user fee approaches, something we have done forever, is that something we should move away from? We can borrow money to do all this; we repatriate money from overseas for multinational corporations. Should we stick with the user fee?

Mr. Panos. I apologize for answering with a mix. Yes, moving towards user fees is helpful.

Senator Carper. Thank you.

I know you are water, but any thoughts on user fees, user pays? I realize in some places it is a hardship, especially in very poor communities.

Mr. McNulty. Well, Senator, we are certainly doing that now through rates, so that is the approach we have across the Country. You know, it is not just 100 percent grant funded in many cases; and even if it is you still have to have user rates to pay for O&M.

Senator Carper. Okay, thanks.

Same to you.

Ms. Bobbitt. Thank you, Senator. Yes, we definitely support user fees. In Oklahoma we had gas taxes, as we do on the Federal, and in our wisdom in the dirty thirties, they robbed our transportation funds and used it for other things, and now we can't support it. But user fees, people are always willing to support user fees. Thank you.

Senator Carper. Thank you.

Tony, I know this is not really up in your alley, but any comments before I go to Shailen?

Mr. Pratt. Well, I do have one thing, if I could.

Senator Carper. Very briefly.

Mr. Pratt. The Highway Maintenance Trust Fund is a good example of a user fee that is not being applied to what it would be used for, and that would be something else to keep in mind in this discussion.

Senator Carper. Thank you.

Shailen?

Mr. Bhatt. Yes on user fees, and I would say that users are already paying higher taxes in an unintelligent fashion because they are sitting in congestion, they are paying more for goods, and so the user is --

Senator Carper. Paying for repairs of their personal vehicles.

Mr. Bhatt. Yes.

Senator Carper. Another follow up, if I could, for you, Mr. Secretary, Secretary Bhatt. Colorado, one of the fastest growing States in the Country in terms of population. I am told your population is expected to increase by nearly half in the next 25 years. And much of the population growth is anticipated to be in the greater Denver area, but also the urban centers. What challenges do growing urban areas face in Colorado and other places? How are you planning to ensure mobility for a larger population there?

Mr. Bhatt. Thank you, Senator Carper. We have an infrastructure that was designed in the 1950s, built in the

1960s, for a population of 3 million people in Colorado. We are at million people now. We are going to 8 million people in the next 20 years, and I can't build my way out of congestion in Denver.

Senator Carper. What do you think, contraception?

[Laughter.]

Mr. Bhatt. Possibly.

Senator Carper. That would be a unique use of the Transportation Trust Fund.

Mr. Bhatt. Yes, planned transportation is where we need to go. But you used the word mobility. I think that whether it is in a car, in ride sharing, in transit, in multi-modal, I think that in the urban areas. I can't widen I-25 to the 15 lanes that it needs because we will just never do it. If we don't have the money, we won't have the environmental clearance. So it is not just about widening roadways in our urban areas, but in our rural areas. It is just not a one-size-fits-all, as Senator Ernst talked about.

Senator Carper. All right, time has expired.

Mr. Chairman, great hearing. Great panel. Thank you all so much.

Senator Barrasso. Thank you very much, Senator Carper.

Senator Sanders.

Senator Sanders. Thank you, Mr. Chairman.

There are some people who think that we are looking at a looming water crisis in this Country in terms of being able to deliver clean water to the people of America. Are they right in their concerns? Can somebody comment on the situation of making sure we get clean water to people in this Country?

Mr. Pratt. I am the closest person for that. It is not my bailiwick, but I will say that we look at water resources across the Nation. There were some questions earlier today using problems we have had around the Nation already, in Madison and other locations, and I think we have an aging infrastructure in the water delivery system, as well. Water pollution from septic systems is polluting our bays. Senator Cardin mentioned about the Chesapeake Bay problems.

And the simple answer, Senator, is yes, we do have a looming problem. I think it is something we need to look into and inform the public as to what the risks are. I have heard it referred to as patching holes with gum and tape as best we can, but we need to do a lot better, and it should very much be a part of this discussion.

Senator Sanders. Further discussion on water? Anyone want to comment on it? Sir?

Mr. Bhatt. I would just say in Colorado water is everything, you know, where it comes from, how it gets disbursed. So while I do transportation for a living, I think

that a lot of our growth that we talked about, if there is not clean water and water supply in Colorado and the rest of the Country, then why are we doing any of this?

Senator Sanders. Right.

All right, next question is rail. When we look at infrastructure, is it appropriate to look at rebuilding an aging rail system, which now, in many ways, lags behind other major countries around the world? Am I right on that or wrong on that? Yes.

Mr. Bhatt. Sir, prior to serving in my current role, I was the Secretary of Transportation in Delaware, served on the Northeast Corridor Commission. Senator Carper, a long advocate for rail. I think it is ridiculous that in the U.S. we don't have the rail as an option in urban areas where we have the density that is similar to that in Japan or other urban networks in Europe.

The efficiency is there; there is transit-oriented development that comes out of it. We have a lot of sprawl caused by a car culture that needs to be addressed. Some urban centers are doing it, but there are certainly corridors in this Country that could benefit, whether it is through new technologies like MAGLEV or Hyperloop, but rail investment is certainly something that is lagging in this Country.

Senator Sanders. And in terms of climate change, keeping trucks off the road and investing in cargo moving through rail would also be of help, would it not?

Mr. Bhatt. I think one of the best commercials I have ever seen was one of the freight commercials that said we move a ton of freight with a gallon of diesel. I forget. I am butchering that completely.

Senator Carper. It is a ton of freight from D.C. to Boston, one gallon of diesel fuel.

Mr. Bhatt. I set that up nicely for you, sir.

[Laughter.]

Mr. Bhatt. So, yes, from a climate impact statement, it just makes a lot of sense. We talk a lot about passenger, both cars and moving people around, but freight is an incredibly important part of that, and passenger rail can help solve a lot of that problem as well.

Mr. Pratt. If I could just add one thought to that. I worked on the Regional Sediment Management Plan for the Delaware Bay and Estuary, and in that capacity worked with a colleague from the State of New Jersey, a transportation planner, and he and I had a lot of private conversations and he talked about New Jersey being a particularly congested State that the highway system is already obsolete. As best as they can try to stay ahead of it in the very urbanized corridor of the Route 95

corridor, and we have to go back to relying upon a tri-modal transportation surface system, which includes obviously rail, waterway, and roads.

So if we don't embrace that, if we don't embrace all three options -- and I know a previous secretary of transportation, Anne Canby, who was there before Secretary Bhatt, talked about we have a lot of chicken going out of Delmarva and empty cars coming back, and we have coal comes down and we have chicken cars going back, how we can utilize these cars a lot better on rail tracks.

Senator Sanders. All right. As somebody who believes we should move aggressively to wind and solar and sustainable energies, do we have an electric grid capable of supporting the movement to sustainable energy? Anyone want to comment on the state of our electric grid? Any thoughts on that? No? Okay.

All right, Mr. Chairman, thank you very much.

Senator Barrasso. Thank you very much, Senator Sanders.

I would mention that Bill Gates, this past year, has his reading list, and one of the books that he recommends reading is The Grid. He has met in the past with members of some of --

Senator Sanders. I thought you were going to say he was going to read my book.

[Laughter.]

Senator Barrasso. I didn't see your book on his list of the best. There was one called String Theory, but I don't think that was your book. No, thank you. Would you like to plug the book shamelessly right now?

[Laughter.]

Senator Barrasso. Well, if there are no further questions, members may submit follow-up questions for the record. The hearing record will be open for two weeks.

I want to thank all the witnesses today for being here, for your time, your testimony. I think it was very helpful.

The hearing is adjourned.

[Whereupon, at 12:18 p.m. the committee was adjourned.]