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THE NATIONAL FLOOD INSURANCE PROGRAM: REVIEWING THE RECOMMENDATION OF THE TECHNICAL MAPPING ADVISORY COUNCIL'S 2015 ANNUAL REPORT

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

SECOND SESSION

ON

EXAMINING THE TESTIMONY RELATED TO THE REAUTHORIZATION OF THE NATIONAL FLOOD INSURANCE PROGRAM AS WELL AS THE RECOMMENDATIONS IN THE TECHNICAL MAPPING ADVISORY COUNCIL'S ANNUAL REPORT

SEPTEMBER 13, 2016

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THE NATIONAL FLOOD INSURANCE PROGRAM: REVIEWING THE RECOMMENDATION OF THE TECHNICAL MAPPING ADVISORY COUNCIL'S 2015 ANNUAL REPORT

TUESDAY, SEPTEMBER 13, 2016

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:32 a.m., in room SD–538, Dirksen Senate Office Building, Hon. Richard C. Shelby, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN RICHARD C. SHELBY

Chairman SHELBY. The hearing will come to order.

Today, we will hear testimony related to the upcoming reauthorization of the National Flood Insurance Program, which expires next year.

Today's witnesses will discuss the recommendations in the Technical Mapping Advisory Council's annual report. The Council was created by the Biggert-Waters Flood Insurance Reform Act. Its job is to review matters related to the national flood mapping program and make recommendations to FEMA.

This year's report includes recommendations on how FEMA can better communicate flood risk which can form the basis for more accurate flood insurance rates. Flood insurance not only helps homeowners recover in the event of a flood; it also enables communities to reduce flood risk through the adoption of floodplain management standards. However, the program cannot be successful without accurate mapping and flood risk modeling.

For years, right here I have advocated for a Flood Insurance Program that uses the best science and data to map properties so that both the Government and the homeowners fully understand the risk of flooding.

Today, most homeowners do not understand the true flood risk to their property. This is due in part to the fact that FEMA's rate model was—and still is—based on limited data from the early 1970s and nearly half of FEMA's maps remain out of date.

The technology available today is better than ever before and will enable us to produce very detailed maps. Such maps, overlaid with historical flooding data and state-of-the-art modeling, would allow the National Flood Insurance Program to more accurately predict flooding risk and price flood insurance policies accordingly.

The U.S. continues to experience repeated and devastating flood disasters that have resulted in more than $51 billion in payments from the National Flood Insurance Program. $51 billion. In fact, the recent flooding in Louisiana is anticipated to cost more than $1 billion, making it the fourth largest disaster in the history of the program.

These record-breaking disasters have required the program to borrow $23 billion from the U.S. Treasury to pay claims. If we want to ensure the long-term viability of the NFIP without borrowing from the Treasury, flood insurance rates must accurately reflect risk. The basic Flood Insurance Program has not changed substantially since 1968.

I am hopeful that this report will spur the change that is long overdue.

Senator Brown.

STATEMENT OF SENATOR SHERROD BROWN

Senator BROWN. Thank you, Chairman Shelby, for calling this hearing today and for your always prompt beginning of the hearing.

Flooding is the most common and most costly natural disaster facing our country. With a growing population and a changing climate, our entire Nation—not just the coastal States—will continue to grapple with this issue. It will have a direct impact on Ohioans and other Americans who live in or near floodplains. It will also have an indirect impact on all taxpayers no matter where any of us live.

The people of Louisiana experienced historic, devastating flooding in August from a storm that dumped as much as 2 feet of rain in just about 48 hours. Thousands of homes and businesses were destroyed; at least 13 people died. The cost is so far very difficult to calculate.

Some homeowners and businesses had flood insurance policies to help their recovery. Many others did not, possibly because it was not required or because they assumed they were safe outside of the 100-year floodplain.

I hope to get an update from Deputy Associate Administrator Wright on how the NFIP is responding to the devastation in Louisiana.

In addition, given the significant concerns that have been raised around FEMA's claims process, I want to hear more about FEMA's "Transformation" effort to improve the NFIP following Superstorm Sandy and how that is working for policyholders in Louisiana.

I also view today's hearing as the first step in a comprehensive examination of the program leading up to its reauthorization in 2017.

The National Flood Insurance Program seeks to combat the effects of flooding through its three interrelated components:

One, flood insurance, to help property owners recover quickly after a flood and reduce the need for Federal emergency appropriations;

Two, floodplain management, to minimize damage to people and property through mitigation and local ordinances;

And, three, floodplain mapping.

By identifying and mapping flood hazards, floodplain mapping underpins both the insurance and the mitigation components of the program.

The subject of today's hearing goes to the heart of something both familiar and vital to us all: our homes and communities.

Just ask the people of Louisiana.

We need to focus on ways to keep people and property out of harm's way and help them bounce back when disaster does strike.

We also need to make smart investments in infrastructure and mitigation to make our communities more resilient and to save taxpayer dollars today and in the years ahead.

Accurate understanding and communication of the flood risks we face is critical to those decisions.

Congress recognized the importance of accurate maps in our 2012 NFIP reauthorization, when we authorized increased funding for FEMA's flood mapping and established the Technical Mapping Advisory Committee to provide expert advice on improving mapping for current and future conditions.

Our witnesses today will discuss TMAC's recommendations. I hope to gain an understanding of the time, resources, and any congressional actions that will be necessary to make them come about. I hope this hearing brings that to us.

Mr. Wright, I understand that the short notice of today's hearing did not permit you to submit advance written testimony as is called for in the rules of the Committee. I hope you will be submitting that testimony for the record.

Mr. WRIGHT. I will, sir.

Senator BROWN. Thank you.

With that, I welcome the witnesses, and I look forward to hearing the testimony of all three of you on this important topic.

Chairman SHELBY. First, we will receive the testimony of Mr. Roy Wright, Deputy Associate Administrator for Insurance and Mitigation for the Federal Emergency Management Agency.

Next we will hear from Mr. John Dorman, who serves as the Chair of the Technical Mapping Advisory Council. He is also the assistant State emergency management director for risk management for North Carolina.

Last, we will receive testimony from Mr. Scott Edelman, the Vice Chair of the Technical Mapping Advisory Council. Mr. Edelman is also the senior vice president for North America for AECOM Water Resources. Is that right?

We welcome all of you today. Your written testimony will be made part of the hearing record in its totality. We will start with you, Mr. Wright.

STATEMENT OF ROY E. WRIGHT, DEPUTY ASSOCIATE ADMINISTRATOR FOR INSURANCE AND MITIGATION, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. WRIGHT. Good morning, Chairman Shelby, Ranking Member Brown, and Members of the Committee. I am Roy Wright, and I serve as that Deputy Associate Administrator. Thank you for the opportunity to testify about FEMA's Technical Mapping Advisory Council—the "TMAC," as we will call it—the recommendations it

has provided to FEMA, and our progress addressing those recommendations.

As indicated by their name and clearly stated in the TMAC charter, the Council is an advisory board established to advise and make recommendations to the FEMA Administrator and the flood mapping program. The Council's recommendations aid FEMA in furthering our efforts to provide communities with the best available data and tools to make better informed decisions that reduce the risk and consequences of flooded across our Nation.

These recommendations in the mapping field complement our endeavors elsewhere in the National Flood Insurance Program. Mr. Brown asked about the transformation we are doing for the customer, experienced policyholders, really a generational leap forward that we are taking on our actuarial and claims underwriting processes; ensuring that policyholders, like those that we serve in Louisiana, get their claims paid accurately and quickly.

We can talk more about this, but I will highlight inside of the first 30 days, almost 29,000 claims have been filed, more than $300 million in advance and early payments have moved out to insured. This is a pace that has never been seen in the history of National Flood.

To the TMAC, FEMA fundamentally agrees with the intent of all 22 of the recommendations in the 2015 annual report. As I look at those recommendations, I kind of see them in three streams: there are those of a technical nature that can be addressed through our normal policy updates; a second group that are probably a stretch for our program, but they can be accomplished with current science and resource levels; and, third, a transformative set that requires the science to evolve and resource levels that may not exactly be knowable today.

Over the last several months, we evaluated each and every one of these recommendations to understand resource requirements and impacts to inform implementation, priority sequence, and investments.

Perhaps the most transformative recommendation made in the TMAC 2015 report is to transition from the 1-percent annual chance as the basis for flood insurance ratings to a structure-specific flood frequency determination. This recommendation will require an entirely new approach to insurance rating and underwriting, including new regulatory hazard and risk products. It could also have cascading effects on floodplain management standards in communities.

In January 2016, the TMAC also delivered its Future Condition, Risk Assessment, and Modeling report looking beyond today's risk. The recommendations there really have tried to push us in ways that drive past what is currently practiced, so putting our agency in a position to address and inform future building in the country.

This summer, the TMAC submitted the 2016 Flood Mapping Program Review as required under Section 17 of the Homeowners Flood Insurance Affordability Act of 2014. This report included a set of recommendations to further advance the program's credible flood hazard data into the future. Based on the advice from the TMAC and my recommendation, the Administrator has certified the flood mapping program as credible.

We have already begun implementing the technical recommendations that we can address through policy. We continue to make strategic investments like high-resolution topography, structure-specific data sets, and enhanced flood models; and are laying out the planning that we need to lay the foundation for this transformative work going forward.

Those transformative pieces, including the TMAC's recommendation to transition away from the 1-percent annual chance to provide the structure-specific risk information, will necessitate additional research and planning, internally and with our partners.

This said, to the Chairman's point, we need to meet these transformations in flood hazard analysis with complementary leaps forward in our actuarial and underwriting practices. I consider this new approach to insurance rating and underwriting crucial to the program. Simply, we need to set premiums that best reflect the risk.

While the flood risk analysis is essential, nothing is more powerful to communicate risk than a pricing signal. These initiatives and investments will be critical as FEMA assesses how we move away from being able to support kind of a big event understood to understand the whole manifold of events that can take place. We have got to move to structure-specific flood frequencies, and eventually we need to actually see the actuarial structure of the program fundamentally shift.

I appreciate the extraordinary time invested by the Technical Mapping Advisory Council. Their hard work and dedication will serve this program well. I am happy to address your questions, and thank you, Mr. Chairman.

Chairman SHELBY. Mr. Dorman.

STATEMENT OF JOHN DORMAN, CHAIR, TECHNICAL MAPPING ADVISORY COUNCIL, AND ASSISTANT STATE EMERGENCY MANAGEMENT DIRECTOR FOR RISK MANAGEMENT, AND DIRECTOR, NORTH CAROLINA FLOOD RISK MANAGEMENT PROGRAM

Mr. DORMAN. Thank you, Chairman Shelby, Senator Brown, and Members of the Committee for the opportunity to come and provide a perspective on the 2015 Technical Mapping Advisory Council. As noted, I am John Dorman. I am the North Carolina assistant State emergency management director for risk management—that is a mouthful—and also the director of the Flood Risk Management Program.

Necessity is the mother of all innovation. That is an English proverb that speaks well to the overall tenet of the TMAC recommendations. FEMA has diligently overseen the generation of the current flood maps that focus more toward the hazard. However, transformational strategies must be implemented to address the needs of the country and the program, such as insurance rates that reflect structure-anticipated flood loss; communication that focuses on financial loss as opposed to just an "in and out"; and homeowners' understanding of and confidence in the data used for flood hazard determination and insurance premiums.

For North Carolina, Hurricanes Floyd, Francis, Ivan, and Irene all demonstrated and compelled North Carolina to the need for im-

plementing transformational strategies. Thus, North Carolina has successfully implemented the ability to generate structure-based flood probability; structure-based flood risk assessments; structure-based real-time impact and warning; and structure-based, risk-based insurance rating. We are doing that. Recent events across the country have again shown a lack of accuracy and awareness of structure-specific flood risks that both large storms and localized flash flooding can present. With these needs ever apparent, I believe TMAC has constructed recommendations that, if implemented, will transform the program and improve the Nation's resiliency to flooding. While there are 22 recommendations, I would like to quickly speak to four of those that will be transformational.

First—and you have heard this before—fundamental to accurate flood hazard identification and risk assessment is accurate, high-resolution elevation data. Recent developments in data collection technologies offer the most accurate and efficient collection of ground elevation possible. Technology such as Geiger LiDAR sensors collect data at both a higher altitude and higher accuracy allowing for faster acquisition and a lower cost of acquiring and processing the data. This higher-resolution data also allows the opportunity to meet other needs of other stakeholders—such as the Department of Transportation and Utilities—that allow stakeholders to play a part in sharing the cost.

Second, the transition from a 1-percent or 100-year flood delineation and its elevation to a structure-specific annual chance frequency with elevation is critical for the awareness of every property that is in the flood zone, and it is, of course, interesting to note that 26 percent of all flood claims occur outside of the 100-year flood line. The recent events in Louisiana demonstrate the importance of altering our Nation's mentality that one is safe if they live outside of that line on to a raised awareness of flood prevention at the structure level.

Third, the transitioning to a focus of structure-based risk assessment. This increased level of detail that calculate structure-specific percent chance of flooding and estimated annualized damage calculations can inform mitigation decisions and create more accurate risk-based insurance premiums. This will directly result in mitigation actions to reduce losses, lessen the financial burden of the Federal Government to help communities recover from disasters, and create a more financially sound FIMA.

Finally, we must transition to a dynamic, queried display of data, models, maps, and risk assessments. I will just say I have seven children, and most of them are in the Millennial generation, and as we have seen, the Nation has changed in how it looks at and demands data. We must create a more robust database that enables data to be dynamically queried and displayed on the Web site. Floodplain modeling and mapping is an ever changing science, based largely on the statistics and the changes in land use and topography. We need to create an efficient methodology to quickly and efficiently update flood hazard and risk information and provide that at the fingertips of the end users on all types of devices.

I want to point out that all or some of the four recommendations I have just mentioned have been successfully implemented in four

States. These recommendations are not ideas or pie-in-the-sky. They are proven concepts that are operational today.

Thank you again for the opportunity to address the Committee on this important topic. I would be willing and happy to answer any questions you may have.

Chairman SHELBY. Mr. Edelman.

STATEMENT OF SCOTT K. EDELMAN, VICE CHAIR, TECHNICAL MAPPING ADVISORY COUNCIL, AND SENIOR VICE PRESIDENT, AECOM

Mr. EDELMAN. Good morning, Chairman Shelby and Members of the Committee. I am Scott Edelman, senior vice president of AECOM. I have spent my career solely focused on solving our Nation's water-related opportunities and challenges. I appreciate this opportunity to appear before the Committee on Banking, Housing, and Urban Affairs.

I have been involved with creating maps for FEMA since 1981, and I am privileged serving as Vice Chair on the Technical Mapping Advisory Committee established by the 112th Congress. We as a Nation have simply endured too much pain and suffering due to floods.

I believe that Roy Wright's strong support and encouragement of the TMAC has resulted in two reports that show a path to the next evolution of the NFIP. In the future, I believe that if the recommendations of the TMAC reports are supported by Congress and the Administration, we can make significant strides to reduce both the pain and suffering that our citizens are enduring at a record level and the burden these unprecedented events continue to drain resources from our U.S. Treasury.

Of the 29 recommendations contained in the TMAC 2015 reports, I believe that the three most important priorities and potential benefits are:

First, the reintroduction of a 5-year rolling plan, to allow leveraging of Federal dollars;

Second, the movement to structure-based risk assessments, to create a safer Nation;

Third, preparing the Nation for future conditions, to stop building new problems.

First, the reinstatement of the 5-year rolling plan allows the leveraging of local and State dollars. FEMA cannot make the Nation a safer place alone. The operating principles of FEMA's Whole Community doctrine is critical as applied to flood-related mitigation. Flood waters know no jurisdictional boundaries as they devastate lives and property, and, therefore, we need to fully engage local communities and make these shared responsibilities more apparent to all. When Congress funded Map Modernization in 2003, FEMA produced the Multi-Year Flood Hazard Identification Plan, MHIP. MHIP addressed every county in the Nation with when and how much anticipated funding would be available. The result was an enterprise-wide approach to maximize the return on Federal investments in which FEMA served as the chief risk officer to those investment in the studies, and communities felt strong local ownership of the studies and results. This approach better aligned FEMA with State and local efforts to reduce the loss of life and property.

Second is structure-based risk assessments. We must change the perception that if I am just on the other side of the 100-year flood line I am safe. Too much time is spent trying to justify the movement of the flood line by a few feet when in actuality the risk of flooding of the structure only has changed ever so slightly. Much of the problem is due to uncertainty of the line itself.

To my knowledge, this is the only product that engineers produce and communicate to the public that deals with averages and not what is safe.

We also have a great deal of uncertainty within the calculations. In all actuality, the current 100-year average line shown on the flood maps is probably closer to a safe design of a 10-year event.

Moving to a structure-based risk assessment begins to change the conversation from one focused on "in versus out" to one that starts to communicate levels of risk. We must also take into account affordability and grandfathering with sunset clauses to take into account our most vulnerable communities and constituents.

Third, we need to prepare the Nation for the future. GAO asked FEMA to evaluate the impact of future conditions on the National Flood Insurance Program. The report concluded that by the year 2100 on average our floodplains are going to increase by 45 percent, the number of polices we have are going to increase by 80 percent, and the average loss per policy in today's dollars will increase by 50 percent. This is an immense challenge to our country. We need to encourage local communities to adopt higher standards on a volunteer basis, understanding that the higher standards results in less loss of life. Many communities have done this, including Mecklenburg County and the city of Charlotte. Based on their adoption of future conditions elevations, Mecklenburg County has estimated savings from flood damages from a single 100-year event to be over $150 million. We need to stop building future problems so we can fully concentrate on mitigation of existing problems.

My passion is not solely on the science but the need to help the Nation with this longstanding challenge and the billions of tax dollars that are unnecessarily wasted because of poor land use decisions and the attempt to tame or ignore Mother Nature.

I want to again thank the Committee for this opportunity. I urge Members of the Committee to refer to the two TMAC reports for more detail as a formal part of our testimony.

I would be happy to answer any questions you may have.

Chairman SHELBY. I will ask all of you this: In your view, does the Flood Insurance Program accurately map, price, and communicate flood risk to homeowners in communities? Mr. Wright, does it or does it not?

Mr. DORMAN. I believe it does present it in a way that is consistent. I would tell you that there is so much more potential related to making it more precise. It can be actuarially sound for the 80 percent of the policies that are in that space, but there is significant ability for us to improve.

Chairman SHELBY. Mr. Dorman.

Mr. DORMAN. Sir, I believe the guidelines and standards that are being followed does allow for the making of appropriate maps. I do believe that the relationship between the individual and the insurance rater is the most important component to that, and I would

say that they would feel it is not adequate. But for the level of data that they currently have, I believe it is meeting its need.

Chairman SHELBY. Mr. Edelman.

Mr. EDELMAN. We have two challenges with the 100-year flood line, first as it deals with averages. As engineers, when we communicate numbers to the public, we deal in what is safe. If a 20-ton truck was going to go over a bridge that is supposed to be safe for 20 tons, you expect to put thousands of trucks over that every time and not have the bridge fail. The standard that we are using on the maps, though, is that every other truck would fail that bridge. So we are communicating that wrong.

Second is uncertainty. We are a very young Nation. We have gauge records of 20, 40, 60 years that are trying to predict something that is 100 years out. If I was going to do the engineering on the Nile River, I would probably have thousands of years of records I could use. This uncertainty creates a large unknown such that our elevations many times could be many feet higher or lower than what is shown on the maps.

Chairman SHELBY. The chance of flood determinations, Mr. Edelman, the report recommends that the National Flood Insurance Program move away from identifying the 1-percent annual risk to a structure-specific flood frequency determination and associated flood elevations. This 1-percent determination has been in place since the creation of the program. What are the specific differences between the two approaches? And how would the program change under the structure-specific determination methodology? And what is the downside here? Because a lot of the stuff we have today is not working.

Mr. EDELMAN. You are absolutely correct, Mr. Chairman. The problem that we have today is this in versus out mentality, that if you are just a few feet outside the 100-year line you are safe. What we are proposing is that all structures have some level of risk. If you are built on the top of a hill, your risk is going to be very low. But if you are just really close to that line, you still have risk. And we need to have a graduated system for moving through this.

The challenge that we are going to have is not so much on the technology. We can do this today. We know how to do this. The challenge will be with the implementation of how do we then move the program from the current position to this new world, and I believe we are going to have to do this with grandfathering, with sunset clauses that may take 10 or 20 years to fade on out to make this accurate.

Chairman SHELBY. Senator Brown.

Senator BROWN. Thank you.

Mr. Edelman, you used the phrase in your testimony, "We must change the perception," and I want to ask you and Mr. Dorman a couple of questions, and you can go first, about how we communicate flood risk to consumers. When most people think about flood risk, when they think about NFIP, they think about whether they are in or out of the 100-year floodplain, assuming they are not at risk if they are outside of that zone. You have both intimated that. What exactly does the notion of the 100-year floodplain obscure for consumers? And by that, you know, how do we better communicate

with people so that they understand better their flood risk and insure their properties appropriately? How do we communicate that? Mr. Edelman, if you would start on that.

Mr. EDELMAN. OK. We can identify that by being structure-specific. What people want to know is what is the risk of my property, of my building, not so much what is generally happening in my neighborhood or my town. So we have to be very structure-specific to do that, and by allowing people to use the latest technology to click on their individual house to see what that risk is.

Senator BROWN. Mr. Dorman.

Mr. DORMAN. Well, I can speak for North Carolina. What we have done is we have collected first-floor elevations for all properties in the 100-year flood zone. And when there is a flood and it starts flooding inside that property, there is a financial cost to them. At the current pace we have, all we know for homeowners is you are either in the 100-year or not, whether you are going to flood more frequently or whether you are not. So everyone at the current time sees either a 100-year event, it is going to happen to me or not.

So what we have done in North Carolina and I believe what the TMAC is proposing is that for each individual property we determine at the 100-year or different levels of frequency what the financial cost will be to the individual. That, from my perspective, speaks very clearly to an individual what they need to do to cover themselves.

Senator BROWN. Specifically, what Mr. Edelman said, you designate each structure with—attach the flood risk to each structure.

Mr. DORMAN. And the financial damage that will occur from that.

Senator BROWN. OK. Mr. Wright, NFIP came under fire for its management of the Sandy claims process. You talked about the good news of the unprecedented response to Louisiana. Tell me what lessons you learned from Superstorm Sandy and your response and what steps you have taken to improve it.

Mr. WRIGHT. So, clearly, there was the scale of Sandy, 144,000 claims, $8.5 billion that was paid out initially. And as this Committee's investigation pointed out, there were plenty of stumbles in terms of how that is done, and part of the charge that Administrator Fugate has given to me is to set that back to right. At this point, 97 percent of those files that requested review have been reviewed; 80 percent of those offers have been made; and we are wrapping that up here in the weeks to come.

But fundamentally for me, what it did was to force us to step back and say the relic of this program, much of which you can tie back to 1986 and 1999, had to change. So we saw this in what we did in Louisiana. I was on the ground very early. I have been down there twice. We have been in folks' homes. Folks, where they have an insurance policy, want to know that the money is coming. We push the money. Again, it does no change the overall claim amount, but get those dollars so that they can begin their own repairs, ensuring that they have an off ramp when they get frustrated and confused.

So I have been out in the press, and we have been pushing these things. If you are not getting the answer you want from the insurance company, do not wait until the end. Come to us. We have

added a tremendous amount of oversight in terms of quality control, tripled the amount that has historically been done in the program, far more transparency, not only about from the company's data but—in spite of the fact that the State insurance commissioner does not regulate my program, I volunteered to provide all of my information related to our performance to the State insurance commissioner. So if you have got problems, let us know.

Some of this is about simplification. This will be the first event that will be able to fully avail itself of our new appeals process. I think one of the big things I learned from Sandy is if we would have had a robust and fair appeals process, we could have addressed concerns as they came our way. The prior regime that was in place just was not credible enough. I could say more, but——

Senator BROWN. What did you mean when you said make sure that there is an off ramp when a homeowner is confused?

Mr. WRIGHT. When someone files a claim, we tell them to call their agent or their company, and we sell through 80 different companies that are out there, and that is the first place to go to file your claim. But this program is underwritten by the Federal Emergency Management Agency, and so if I have a customer or a policyholder who has been frustrated by their company, somehow something got dropped, this is my program at the end of the day. And what we have done is said, "You call me." And I am out there. You call 1–800–621–FEMA, and you push number 2 for flood insurance, and you get to someone so that we can resolve this. You should not have to wait.

Senator BROWN. Good. Thank you.

Thanks, Mr. Chairman.

Chairman SHELBY. Senator Scott.

Senator SCOTT. Thank you, Mr. Chairman. Good morning to the panel. Thank you all for being here. Mr. Wright, good seeing you again.

Just one quick question on the Sandy crisis. What percentage of homeowners had flood insurance in that area?

Mr. WRIGHT. So I do not have great insight into that. Give me a little moment to kind of explain. I know how many flood insurance claims I have. No question about that. But FEMA does not retain data on structures and properties across America. So we have approximate pieces.

I know at a hearing with both you and Mr. Vitter in July, we talked a bit about this, and one of the elements that I have worked on since then is, as part of our broader affordability work, we are going and doing some data matching with the Census Bureau, where we are taking our 5.1 million policies and bringing in some of the census data, because we need better answers to this question about how many structures are in versus out.

Senator SCOTT. So you have no clue on the percentage of homeowners——

Mr. WRIGHT. We have a series of studies that range——

Senator SCOTT. Mr. Wright, let me ask you a quick question.

Mr. WRIGHT. I apologize.

Senator SCOTT. Because, unfortunately, 5 minutes is not as long in Washington, DC, as it is other places. You do not have a clue at this point, and perhaps you can provide that to me, because here

is my point: My answer—I spent, as you know, 20 years in the insurance business, and so my assumption is that the answer is, "Not many." And because the answer is like, "Not many," when I look at my State and the flood insurance mapping that is going on right now, when we look in Horry County specifically—a 1,000-year flood just occurred in South Carolina. We know that most of it was in the middle of the State. Unfortunately, part of the consequences of the flood mapping and using the 100-year model is that there are places in Horry County that will now have to have flood insurance that did not flood even during a 1,000-year flood. Perhaps an additional 35,000 houses will need flood insurance even though they are not, according to the 1,000-year flood, in real danger, with an increased premium of around $6,000. Said differently, for the homeowner who has a mortgage, that could be about another $500-a-month in your mortgage premium. A substantial increase.

I know that there is no way that FEMA takes into consideration low-income houses and the impact that the mapping would have on their ability to keep their homes. It is probably impossible for that to be an expectation. What concerns me, however, is knowing that one of the worst disasters from a flood perspective occurred really outside of an area that anyone would anticipate flood insurance, it does lead to a logical conclusion that many folks who have flood insurance will be absorbing the price and the responsibility of flooding in places where you just cannot model it.

A part of that process has created much concern in Horry County because, while it is a 10-year remapping process, it is a 90-day appeal. And in those 90 days, you have to—according to my friends in Horry County, the community has to develop hydrology, hydrologic data and analysis, in order to appeal what took 10 years on one side, you only get 90 days on the other side. And, frankly, the information that we use to create pricing, according to my folks who did not experience flooding, is at best inconsistent with the realities that they have experienced for the last couple hundred years.

Mr. WRIGHT. So a couple of key points. All of the mapping efforts that you are discussing have been in motion for a number of years, most of them for less than 10 but for a number of years, and the event from last fall, we did not go back and redo the work, so it is based on the 1-percent annual chance from a prior cycle.

To the point about the price, in every instance, given the direction in the 2014 legislation that was passed and signed into law, anyone who is coming in is not getting the $6,000 price. They are actually coming in at a newly mapped rate. That average is between $300 and $500, depending on the level of coverage. They do escalate over time, but they are coming in at a much lower rate.

I think to the appeal question, I think it is very important. What I will assure you of is we have been sharing the data with the community throughout the process. They do not just get it at the end. In fact, they have a number of instances where the community gets a preview of it, and it says, "Do you want to give us additional information? Do you have things that would change it?"

The 90 days per se related to that appeal period is set in statute. And so what we have done very intentionally is work a long way

on the front side so there are no surprises, so that when the 90 days starts that is set in statute, folks are primed to play.

Senator SCOTT. I am out of time. I will just end my comments with one comment as opposed to a question, and Mr. Vitter made this point during our small business hearing when you were there to testify. I recognize that the average price of flood insurance is under $1,000. I have flood insurance at my home, and I am 30 miles outside of Charleston. I will tell you that in some areas—and I think one of the examples that you used was the flood insurance premium was somewhere over $25,000. So we are not talking about a $300 to $500 average premium. We are talking about the outliers that are becoming more of—less of an anomaly and more baked into the reality of many homeowners. And I do not know many homeowners who can afford what some will experience in Horry County—maybe not all, but more than a few—a $6,000 premium, which is going to be hard to absorb, and it would be great if we could find a way to take that into perspective and context as we think about flooding and disasters going forward.

Thank you.

Chairman SHELBY. Senator Tester.

Senator TESTER. Thank you, Mr. Chairman, and I want to thank you and Senator Brown for holding this hearing.

Before I get to the witnesses, I want to speak about a bill—and Senator Heller was here earlier—than Senator Heller and I have. We have been working on it. It is called the "Flood Insurance Market Parity and Modernization Act." It is an important bill that will offer consumers flood insurance options, and I think it will help NFIP remain viable over the long haul. It will introduce private insurance into the marketplace under the supervision of State insurance commissioners. It was introduced in the House by Murphy and Ross. It passed the House 419–0, which is an unusual thing for the House to do. But the fact is I think it speaks of the support of this bill, and I would love to see the Committee take this up because I think it is something that could help. I know that there are Members of this Committee who oppose it, but that is what hearings are about, hammering out the differences. And so I just bring that up because I think it is important.

You know, this hearing should be held in front of the Energy Committee. Things are changing. Here are some things that I heard in the testimony: a pace never seen before in National Flood, the growth; 26 percent of the claims are outside the flood lines; in 83 years, our floodplains are going to increase by 45 percent. And then I heard premiums need to reflect risk; otherwise, the taxpayer pays for it.

And, quite frankly, this puts us in a conundrum because, as Senator Scott said, we have—you know, we have got people who cannot afford these kind of claims. By the same token, if we want to talk about fiscal prudence, we cannot expect the taxpayers, as we see these claims go up and up and up and up and up and up and up, and billions and billions of dollars—I think the Chairman said Sandy was a billion bucks. That is probably going to be a cheap one next year. Who knows?

So I appreciate the work you do, and it puts us in a difficult situation because I think most of us believe the premiums need to re-

flect the risk, but we do not want to premium people outside their homes, which means we need to come to the realization that things are changing in our climate, and they are changing quickly, and more quickly than we can adapt to them in a reasonable way. And if we are going to continue in this body of the U.S. Senate to have policies in this country that promote climate change, we had better get the wallet out, and we had better expect the taxpayers and our next generations to pay a lot of money. That is my editorial comment.

Now I want to talk to you, Mr. Wright, about—by the way, could you give me some figures on what is happening— how long have you been with the agency?

Mr. WRIGHT. I have been with the agency for 8 years. I have been in this role for 15 months.

Senator TESTER. OK. So it would be unfair. I am going to ask your agency to see what FEMA's budget has done over the last 20 years. My guess is it has probably grown not just double but a hell of a lot more than that.

Mr. WRIGHT. There has been an up-and-down swing—we will get you some numbers—in both the Disaster Relief Fund as well as the base funding for the programs.

Senator TESTER. OK. Thank you.

We have an issue in Montana on levees. It used to be that the Army Corps would give FEMA information and—and correct me if I am wrong—they would accredit those levees. The Army Corps decided they were not going to do that anymore because they said they do not have the budget capability of doing these accreditations and, quite frankly, the liability is too high, which puts the communities in a position where they cannot afford to do the accreditation. And it puts you in a position that you cannot afford to make the decision as to whether it is a viable levee or not without that information.

Could you talk to me, is the relationship between FEMA and the Army Corps when it comes to levees, is that over with? Or are you still working with these guys? Can you work with them? Are they offering you information? Give me an idea what is going on.

Mr. WRIGHT. So we work very closely with the Army Corps of Engineers. I think if you go back 5, 6 years ago, I think that that relationship needed a tremendous amount of work, and we have repaired it in that period of time.

You point out their resourcing issues, so they have three different kinds of analysis that they do of levees. Their top tier one meets everything we need, but they do not do those very often. Their bottom tier one, which they do all the time, meets very little of the needs that we have.

And so under our regulations, the primary responsibility for levee certification belongs to the levee owner. In many instances, the Corps built them and then turned them over to the local sponsor.

There are a few changes that I have put in place. One of them is to work very closely with the local levee districts or authorities so that we can give appropriate credit for however much protection it does provide. Simply telling me that, you know, this levee has done very well for the last 40 years is not sufficient. In some in-

stances, I have spoken with levee board members, and I have said, "Have you drilled a boring in this in the last 40 years? Have you checked for safety?"

Senator TESTER. Right.

Mr. WRIGHT. And they go, "No." You know, that is one of those pieces that from a safety perspective is concerning to me.

Senator TESTER. Yes.

Mr. WRIGHT. And so what I have got to do is find the best kind of balance of how do we work with them, and we have made partial credit more feasible in terms of how it reflects, but there is a cost to that certification.

Senator TESTER. Well, I appreciate your work, Mr. Wright, and I appreciate the work of all the folks on this panel, and I appreciate your testimony even though I was focused more on Mr. Wright than the rest of you. But I would just say that if there is stuff coming down the pipe where you need help to make this happen—because it is not happening, and we are putting a lot more folks in the floodplain because of that—not in all cases. I should not make a blanket statement. You know what I mean, Roy.

Mr. WRIGHT. I do.

Senator TESTER. Thank you very, very much.

Mr. WRIGHT. Thank you.

Chairman SHELBY. Senator Vitter.

Senator VITTER. Thank you, Mr. Chairman. Thanks to all of you for your important work in this area.

I first want to underscore the significance of the recent Louisiana flooding. I think it was really, unfortunately, underreported in the national news for various reasons—a lot of other things going on, the Olympics, the Presidential race. And I think it is underappreciated in this body. We were away on the August recess. But by any metric, it was the most significant disaster since Sandy. Red Cross confirms that; FEMA confirms that.

There have been over 138,000 individual FEMA claims. That compares to flooding in northern and central Louisiana earlier this year. That was very significant, under 40,000. Flooding in South Carolina last year that was very significant, about 26,000. So it was literally a 1,000-year flood event. It was a big event. And, unfortunately, only about 22 percent of those flooded had flood insurance, not because they did not meet some requirement or some notion of what was the prudent thing to do; rather, they were way outside what was understood as any sort of flood zone.

Mr. Wright, thank you for your work and for FEMA's work. Do you want to make any quick comment on the significance of the event and also the percentage of those uninsured?

Mr. WRIGHT. Absolutely. As I look back at the last dozen years, this one is number four on the list. I have got Katrina, Sandy, and then Hurricane Ike from 2008. From a pure policy count number, it is number four in line. It is in a riverine area, more inland. And as I walked through some of the neighborhoods, and particularly in areas inside the special flood hazard area first, there were a tremendous number of rental homes by which the landlord presumably had it paid off, they did not carry flood insurance, and the renter did not flood insurance. There was one block where only one

out of eight of those homes had flood insurance, yet they were all inside.

I would then also speak to those beyond. So I look at some of the things—I always get in trouble when you call out parishes, but I looked particularly at East Baton Rouge and Livingston parishes where we saw a tremendous amount outside. Those folks clearly saw the 1,000-year event. And so as you see that structure—I look at the counts particularly in East Baton Rouge and the kind of concentration of that. This absolutely is a devastating event.

Senator VITTER. Thank you. I just want to underscore that because the Administration is going to properly make an emergency request. But, again, 78 percent of those affected, no flood insurance, not because they did something wrong but because the great majority of them were way outside what was identified as any sort of flood area.

To go to this mapping issue, Mr. Dorman, thank you for your work. You point out in your testimony the good work of North Carolina as well as Alabama and Virginia in their use to the Flood Risk Information System, and there are similar ways of going about obtaining that much greater level of clarity and accuracy. In layman's terms, what do other States and the Federal Government have to do to capture that level of real-time and property-specific understanding?

Mr. DORMAN. Well, I would say a couple things:

Efficient use of technology. This same set of LiDAR data can give you building footprints. North Carolina collected 5.2 million building footprints to know where the buildings are located. The LiDAR technology does that. It also gives you first-floor elevation.

Partnerships—partnerships where North Carolina has worked with our local governments to give us all the tax parcel information that we tie to the buildings.

So, Senator, I would say the data is out there. For the most part, the data is out there. It comes down to efficient use of technology and the efficient use of partnerships. And for North Carolina, we have been able to leverage up to $20 million of partnership leveraging with other entities in sharing that set of data that they have a vested interest on. I mentioned that a little bit. The Department of Transportation needs information for their road centerlines. The LiDAR data does that for them. Utilities need it for power lines, for transmission and distribution.

So we have not gone out and collected it ourselves. We have partnered and used technology to do that.

Senator VITTER. Great. Thank you.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman, and thank you for holding the hearing. I was very active with my colleagues in trying to create this organization back a few years ago, and thank you for your work, gentlemen, and collectively your colleagues.

We have set you with the task of updating flood maps, but that is a constant challenge, and it also requires resources. And I wonder, Mr. Edelman, can you comment? Because the annual report points out quite clearly how resources fell in 2011, and they are not

keeping up with the challenge, particularly as we see some of these ocean effects and flooding effects getting more dramatic. Can you comment on that?

Mr. EDELMAN. Yes, I can. It is really important for us to have a stable program, and this is one of the reasons behind trying to establish a 5-year plan. Perhaps if we could look at something more toward the way that the Transportation Improvement Program, the TIP, is done, it would allow for easier planning of activities so we do not have these whipsaws up and down and we can fully leverage everything.

The second part of your question there really goes down to the heart that as a Nation we need to get out in front of this problem and stop building new problems. What we really need to do is draw that line in the sand such that let us not create more problems. Let us put our hands around what we have, have new development occur responsibly, and then let us come back, and then we can start working away at our existing problems.

Senator REED. Well, thank you.

Now let me turn to Mr. Wright, and this, I think, is a good segue, because in Rhode Island we have a Coastal Resources Management Council. There is a lot of good work in terms of use of the seashore, and we have a lot of it. They are not formally engaged in making the maps and revising the maps, but they are a critical source of input for exactly the reason Mr. Edelman referred to.

Can you describe how FEMA is conducting research with these agencies, working with these agencies to provide a context for the map making?

Mr. WRIGHT. Absolutely. So I am looking for partners, particularly at a State level, anytime I can find them. I know that my staff met with some of the folks from the Rhode Island Coastal Commission just here this past summer. As we look at these pieces—because to John's point, there are plenty of other State agencies that are doing pieces of this. But for me, this more fundamentally gets down to the understanding of risk.

When we integrate these programs across a Federal, State, and local level, I think we do a more effective job to communicate the risk and bring the understanding that is necessary. It is not that you get seven different flavors of what is my flood risk from—the coastal commission has an answer, the local town council has an opinion, FEMA has an opinion. How do you bring those pieces together? That is what is going to best inform that homeowner.

Senator REED. Well, thank you very much. Again, I think your response illustrates another aspect of this, whereas there are generalized models of flooding that you have to use that have been validated, et cetera. Then there are the very localized conditions. And I wonder, and maybe Mr. Dorman can comment on this. Is there a tension here? Is it being effectively resolved between a generalized model versus some very specific conditions in a State or a locality?

Mr. DORMAN. Well, I think the generalized model should be utilized across the board. The question is: What inputs do you put into the model? If you put very specific localized inputs into the model, it gives you a much higher resolution of result, and that is why I believe the TMAC— and what I would suggest is going to

the structural level. You can define the 100-year flood zone with that model. But if you use that same model and apply the elevation of the building, you can actually come up with when does the water intersect and enter the building's foundation, and that is where that localized, more specific data applies.

Senator REED. Any other comments, Mr. Wright or Mr. Edelman, on this point about localization versus the generic model?

Mr. EDELMAN. Yes. Everything we need to do, we need to adapt to the local conditions. There are some studies that we work on that are more broad in general, and that is good to get an understanding of what are the overall future use losses or future expenses that the program may have. But when we are talking with the homeowners and the communities, everything we do has to be at the local individual level for it to be personal to them and to have defendability with the results.

Senator REED. Well, thank you very much, Mr. Wright, Mr. Dorman, and Mr. Edelman. Thank you.

Chairman SHELBY. Senator Menendez, finally. Thank you.

Senator MENENDEZ. Thank you, Mr. Chairman. I want to thank the panel. This is an incredibly important topic, but I want to focus my comments elsewhere.

Mr. Wright, as you know, the handling of Sandy flood insurance claims by FEMA and its contractors was an utter disaster, resulting in untold thousands of survivors being lowballed and unable to rebuild.

Now, I exposed this pattern of underpayment in hearings and press conferences more than 2 years ago and subsequently worked with your predecessor and with you to establish a virtually unprecedented opportunity for all policyholders to have their claims reviewed once again. And while FEMA should have gotten it right the first time, I do appreciate FEMA's acknowledging it made critical mistakes and attempting to remedy them.

Unfortunately, even the remedy has been fraught with hurdles and delays, with many Sandy victims still waiting 200, 300, or 400 days beyond the 90-day timeframe FEMA initially promised. But I want to focus on the present rather than the past and get New Jerseyans the funds they need to rebuild as quickly as possible.

On this front, I worked with you to speed the recovery by establishing a pilot program to get Sandy survivors the funds FEMA itself agreed it underpaid originally without jeopardizing the homeowner's right to appeal to a third-party neutral. If it taking so long to conclude the neutral hearings, why not pay the undisputed amount up front and let people get going?

So let me take a moment to give the Committee a real-world example of how this policy change made a tangible difference in people's lives.

Ms. Donna Amon, a woman from Bayville, New Jersey, took advantage of the pilot program and received her relatively modest interim payment without having to waive her right to an appeal. She had recently suffered an unimaginable tragedy when her husband was killed in an accident while at work. After working with her for several months, she wrote the following, after receiving her interim payment:

"I cannot thank you all enough. I finally received about $6,500 long-owed under my flood policy, and it could not have come at a better time as I was in a very tight financial bind after losing my husband as he was working on a boat that went down near the Tappan Zee Bridge and went in to save the other two crew members. First the Sandy storm, and then losing my husband. You feel so alone, and I really felt no one cared. My home was demolished in February, and 2 weeks after, I lost my husband, then the finances. Getting the money up front was so important for basic things. I am still pursuing the neutral because I feel I was underpaid even after the review found I should be owed $6,500. But I could not just wait 5 or 6 months for the neutral to conclude. This helps the little people so much. Please keep it going. Do not stop now. Other families need the same help that I have received. Sincerely, Donna."

Now, previously, Sandy survivors were faced with an almost impossible choice: either accept the offer from FEMA and waive your right to an appeal, or wait potentially for months on end without any payments until the neutral issues a determination and FEMA accepts it. Many survivors who know the FEMA offer was still less than they deserve were all but forced to accept the underpayment because they needed the funds immediately to keep their heads above water.

Now, unfortunately, I understand that FEMA now claims it does not have the authority to implement even these basic commonsense fixes. And I do not want to go into the debate over the Administrative Procedures Act or FEMA's regulatory authority. You know, I can go through a list of things FEMA refused to do at first but later their lawyer said, yes, you know, allow Sandy survivors to appeal their claim outside of the normal appeal process, outside of the court system, allow Sandy survivors who survived their proof of loss to nonetheless have their claim reviewed again, to have an independent third-party neutral outside of FEMA established and able to overturn a decision of FEMA. FEMA first said none of these things could happen, and then subsequently they did.

So I ask you, Mr. Wright, do you believe that Sandy survivors or, for that fact, anyone who faces this in our country should have to choose between exercising their right to appeal from a third-party neutral or receiving the undisputed amount FEMA acknowledges it owes them in a timely fashion? And do you believe it is fair to say that Sandy survivors who have waited nearly 4 years to get what they were entitled to have suffered an emotional and financial hardship?

Mr. WRIGHT. Mr. Menendez, I appreciate your leadership on this, and I, like you, am entirely focused on getting everyone the dollars that they are entitled to. And I think that I have demonstrated to you and your team over the last 15 months, I get to "yes" as much as anything. I have moved a lot of barriers out of the way, and the struggle I have had on this one, without going into particulars, the Administrative Procedures Act, is now I am stumbling through these pieces. So I have gone back to my team and said the outcome is speed to get these answers, and so I have to find more ways to speed this up, to get folks through the neutral, so we are at a point where 97 percent of the files are reviewed and 80 percent of the

offers are made, which has not been fast enough for me or for you. And so I have got to stay legal in these various parameters I have under the laws and regulations. I will do that and continue to push to get these payments done, because they are entitled to closure and they are entitled to the payments.

Senator MENENDEZ. Well, I want to—my time has expired. If the Chairman would indulge for another minute, here are the two questions I asked you: Do you believe that Sandy survivors or, for that fact, anyone else, should have to choose between exercising their right to appeal from a third-party neutral or receiving the undisputed amount FEMA acknowledges that it owes them in a timely fashion? That is not whether it is the law or not. Do you believe that as a proposition?

Mr. WRIGHT. So I have to run a consistent process. I have got more than 10,000 that have already been closed, and so as I have worked this with the legal side, I have got to find a way to hold that together so that I treat everyone——

Senator MENENDEZ. OK. So I cannot get a simple straight answer on a simple proposition. I am not talking about the legalistics of it. I am talking about the value here. Is it fair that someone has to ultimately give their right up for a third-party neutral in order to be able to accept the payment that is undisputed in the first place? Is that a fairness question?

Mr. WRIGHT. What I want to be able to do is give them the option for their dollars and give them the option for getting that neutral review if they choose to do that. We did agree to add that piece, and we are speeding up the pace of it. It has not gong fast enough.

I will continue to work to find a way to get payments in people's hands.

Senator MENENDEZ. Well, Mr. Chairman—and I know you have a great concern about this program and certainly its financial viability. But here is my point: If you for years—years—pay your flood insurance policy, meet your obligations, and then, God forbid, when the moment comes, the disaster comes, and you find yourself being arbitrarily and capriciously lowballed, contractors arranging to have lowballed amounts, and then you are forced by virtue of a process that makes you accept what you know is a lowball because you cannot wait to get your life together again, something is wrong with that.

Chairman SHELBY. I agree.

Senator MENENDEZ. So as we think about fiduciary responsibilities, which I share with the Chairman, I also think we have to think about these types of program changes.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Warren.

Senator WARREN. Thank you, Mr. Chairman, and thank you for holding this hearing. Many of us worked together to draft the bipartisan Homeowner Flood Insurance Affordability Act, which gave homeowners some relief on the dramatic increases for flood insurance. And I was glad to be part of that process, but I am still very concerned about the ongoing mapping.

Over 3 years ago, FEMA released many flood maps that our cities and towns knew were not accurate, and those mistakes have

caused real problems for Massachusetts communities. The city of Quincy, for example, was forced to appeal its flood maps, and the city was successful, and it lowered or eliminated the flood risk designation for nearly 2,000 properties. But that appeal cost the city about $650,000. That is money that Quincy could have used to hire more teachers or more firefighters or upgrade roads or programs for seniors. But they had to spend it on correcting FEMA's mistake.

And it is not just Quincy. Hull and Marshfield and Sitchuet and Duxbury and communities all around Massachusetts have had similar problems with flood maps. I understand it is a difficult process and that FEMA needs more resources, but this just is not working.

So, Mr. Wright, FEMA has acknowledged that there have been costly errors because of inaccurate maps, and some communities, like Quincy, can stretch their budgets and pay to have those errors corrected. But I want to know what happens to a community that cannot afford to hire costly engineering consultants to review their maps. What happens to them?

Mr. WRIGHT. So we work through a process that ultimately is to engage the community at a series of intervals, because I want to make sure that, to the degree that the community has information or things that FEMA's map developers need to know, we get that information. What I do see—and we will talk generally as opposed to a specific community in Massachusetts—is that there are times by which we have lower level people in a community that are attending those meetings that do not necessarily have the viewpoint that is broad. Key pieces in the Massachusetts elements dealt, yes, with some data elements, but also with alternative models that could be used to deal with waive transformation.

Senator WARREN. I am sorry, but the problem is the maps are wrong, and they were able to prove that ultimately. It is just that it cost them $650,000 for one town to prove that the maps were wrong. And that helped ultimately nearly—that changed the designation for nearly 2,000 properties. I am just asking the question. If a town believes the maps are wrong and it does not have the money to hire the very expensive engineering consultants the way Quincy did, what happens to those towns?

Mr. WRIGHT. What happens to those towns is we have to work with them through that process so that I do get them that piece. I understand the disconnect on this, ma'am. I truly do——

Senator WARREN. You are telling me that you would fix it and that Quincy did not need to spend $650,000 for the independent engineering reviews?

Mr. WRIGHT. So as we go through the mapping process, if they get us the information and those inputs along the way, we will change our products. In this instance—and there were some of the appeals that were successful for communities, others that were not successful along the Massachusetts——

Senator WARREN. All right. Look, we are just going to—I am going to keep saying the same thing. Challenging your maps is expensive.

Mr. WRIGHT. I understand.

Senator WARREN. And when it turns out that you were wrong, I want to know what happens to the people who cannot afford to

challenge, how they get reimbursement. Look, I pushed hard for communities to be reimbursed when they successfully appealed flood maps that turned out to be wrong. But, unfortunately, that provision was not included in the final bill.

Let me ask a different question. Will FEMA support such a provision in the upcoming reauthorization bill?

Mr. WRIGHT. So, Senator, I will commit to work with you and your office so that we can look at those specific elements as it goes forward.

Senator WARREN. All right. Look, I will just leave it there then. The accuracy of flood maps should not be based on whether a community can scrape together the money for a very expensive independent review. Our cities and towns deserve a process that is fair.

I want to ask about one other thing quickly, and that is, I am concerned that we are not doing enough to utilize local expertise. Cooperating technical partners, the CTPs, are composed of State agencies, regional agencies, participating communities that have the capability of becoming more active participants in the FEMA flood mapping program. And the Council's report indicates that FEMA is not bringing in communities and local partners up front.

So, Mr. Dorman, let me just ask you, what steps should FEMA take to collaborate with the cooperating technical partners and ensure that local communities are brought into this process earlier?

Mr. DORMAN. Well, Senator Warren, I will say for the State of North Carolina that partnership with FEMA has been very positive. After Hurricane Floyd, we created a cooperating technical partner relationship with FEMA. We created a cooperating technical committee in the State of North Carolina that brought all stakeholders to the table. And as we moved across the State, we updated the maps and leveraged from all agencies and local governments their information and data.

Senator WARREN. So I am glad to hear that it worked, as you put it, together. What I am really asking, though, is the question about additional steps that need to be taken where it is not—and I am out of time here, so I will just say the other place I would go is I understand that you are very stressed for resources to be able to do this and that this is a very expensive process.

I will be submitting more questions for the record here, and particularly questions on behalf of the towns of Marshfield and Sitchuet and Duxbury. It is clear that we still have a lot of work to do to verify the accuracy of the flood maps and not force towns and homeowners to have to pay to correct maps when they are erroneous, and that we also need to expand the role of our communities in beginning the flood mapping process right from the beginning.

Thank you, Mr. Chairman.

Mr. DORMAN. Thank you.

Chairman SHELBY. Mr. Wright, with all the new tools in mapping that we have, we map the world, so to speak.

Mr. WRIGHT. Right.

Chairman SHELBY. Why can't we in the U.S. map the flood zones? It is all based on identifying a risk, assessing the risk, as you talked about, and so forth, maybe mitigating it. But what is

the problem? We have been working on this for years. I have been on this Committee 30 years.

Mr. WRIGHT. Yes, you have.

Chairman SHELBY. And the Flood Insurance Program, we take a step forward and then a step backward. A lot of good questions have been asked here today. When somebody is not in a floodplain, never been there, and they have to pay for risk. Others do not. I understand all that. And there is mitigation involved. I know FEMA has tried to get people out of harm's way.

Mr. WRIGHT. We have.

Chairman SHELBY. But with the tools we have today of mapping, it seems that this could be done. Is it easy? No, it is not easy. But it could be done.

Mr. WRIGHT. It can be, sir, and one of the key linchpins for me on this, we mentioned the LiDAR, the elevation and structural pieces that are there, that technology has continued to evolve. The price points, while still very expensive—the three-dimensional elevation program, which is the interagency group across the civilian side of agencies that use elevation data and contribute so we do not duplicate anything, estimates that it would cost about $600 million to finish getting those data across the Nation.

Chairman SHELBY. Let me stop you a minute. But you have paid out billions of dollars over time, billions and billions of dollars.

Mr. WRIGHT. We have, and so, sir, what we have done is we are the largest contributor to that on an annual basis. This year alone, we are putting $20 million into it. Today——

Chairman SHELBY. But that is nothing compared to what you need, $20 million.

Mr. WRIGHT. I agree, and I think one of the game changers on this is we must have an elevation data layer across the Nation that is accurate and credible, and with that, we will start dealing with risk in some different ways related to the folks who are in versus out and some of the automated models. I tell you, in the riverine area, we see as many structures move in as move out each year. The people who move out do not sent thank-you notes. The people who move in call their friends, and they complain about, "How dare you move me in?"

We look at the issue in Louisiana. Those maps were updated in 2012 and 2014. The 100-year was marked, as well as the 500-year. It is very interesting to actually look that most of East Baton Rouge that was affected, outside the special flood hazard area, was mapped as part of the——

Chairman SHELBY. How long has it been since Baton Rouge flooded like that?

Mr. WRIGHT. I would always want to defer to locals on this, but my understanding is 1983 was the last time they had something of this magnitude. But the built environment was very different in 1983. This is a point that, as we look at it, yes, we have got to do the mapping, but Mr. Edelman referenced the report we did in terms of the next, you know, 80-some-odd years of our program. When they looked at it, climate variability has an element related to it. But more than 30 percent of the growth in our floodplain is because of new construction, new construction that today is probably directly adjacent, but because they put concrete and asphalt

down, the water is no longer absorbing, and it just conveys, and it is causing more floods.

Chairman SHELBY. Well, what is the answer? I mean, you know, this Committee here has been involved in this, and it seems like we are just treading water. You know, we are not going anywhere. We play with the program, but we have not had a comprehensive approach that will work, because what you are doing, you want a program that is accurate, right?

Mr. WRIGHT. Right.

Chairman SHELBY. You cannot say that this program is accurate, can you? Maybe in some areas.

Mr. WRIGHT. So I will tell you that we credibly can lay out the pieces of that, but there are levels of precision that are there. So you referenced our 56 percent that meet our standards today. That is resource-dependent. The standards are clear, and those are credible. But, Mr. Chairman, I would assert to you that the very point of this hearing today gets to the crux of it. Of all the dimensions of the program, I do think that the mapping element has a foundation of credibility and a clear way that with the resources would allow us to absolutely show the risk, and with that it must then become the launch point, and as I described, I must transform how we actually show risk in premiums then. I must look toward the future risk in this country related to land use. And then we get to this fourth dimension that is there, that, yes, it is about affordability or grants and the like, but there are difficult questions for those who cannot afford it.

While I am absolutely confident there is no silver bullet on that, I look forward to bringing to this Committee next year some framing as it relates to the data so that we can inform——

Chairman SHELBY. They may not be able to afford the premium. We understand some people just do not have the means. But, on the other hand, can they afford to continue to live there? That is a risk, too.

Mr. WRIGHT. So one of the things that was required in the 2014—there were elements of it in the 2012 bill, but it is very clear in the 2014 bill, it requires us to do the clear communication of risk. And so part of this evolution in my underwriting practices, we are re-underwriting a whole set of policies because my understanding of the direction in the statute is I must tell folks what their true risk is. I intend to do that with a pricing signal so that they understand the gap between what they are paying and what their full premium would be.

Chairman SHELBY. As people continue to build in a known flood area, prone to flooding, they have got to put a price, when they start doing that, on the likelihood that there is going to be a flood there.

Mr. WRIGHT. And so I think part of what we are——

Chairman SHELBY. How do you do that? Do you have to work with the zoning people?

Mr. WRIGHT. We do have to work with the zoning people on that. What I find—and this may be too broad of a generalization, but to the degree that someone is constructing something today, 2016, in the high-hazard area, they are building higher and stronger. They are required to do so. I have got two places of concern: the area

just outside the special flood hazard area who maybe the flooding extends in their direction, but far more problematic for me in an urban context particularly is the water that used to absorb into the water table upstream now is flowing down. The second piece of that then is there is so much of the Nation's housing stock that was built in the 1950s, 1960s, and 1970s. The homes that I was at in Louisiana were all constructed before 1980.

Chairman SHELBY. And a lot of them were built on slabs, were they not?

Mr. WRIGHT. Slab on grade.

Chairman SHELBY. And if they flood, they do not have to flood much to flood the house.

Mr. WRIGHT. Exactly. And I grew up in a slab-on-grade, 1,100-square-foot home. That is what so many Americans—that is what their experience is.

Chairman SHELBY. It is cheaper to build.

Mr. WRIGHT. It is much cheaper to build, and when someone is trying to do this—trying to have their own home, and so I look at the questions of understanding risk, how that evolves, as well as how to make it affordable, and part of where I am getting, Chairman Shelby, is: So how do we hold that against affordable housing in this country in a way—and do it explicitly? Because I think, unfortunately, in this program over the last few decades, we have allowed folks to have discounts and not know they had—and still complain about their price because they think it was too high, and then not take enough action to help people get out of harm's way. It has to be in a way by which there is still a place for normal Americans like my parents to live.

Chairman SHELBY. Senator Brown, do you have any questions?

Senator BROWN. Thank you. I thought that was a very good conversation back and forth. Thank you, Mr. Chairman. I think your initial question was: Can't the science figure this out? And I think the science, after listening to that discussion, clearly the science is simpler than the politics of people on the Ohio River or wherever in my State thinking their insurance is too high or that they should not have to buy it or why is the Federal Government forcing me to do this at this price and the difficulty of selling their house, who wants to buy that house then, even though homes along the Ohio River are pretty inexpensive. It is an area of the State, sparsely—depending on where, of course—populated, and so low home prices and higher insurance rates do not go together necessarily well. I think that is the complexity of this.

Mr. WRIGHT. And I would add one additional point to that. To the degree that the prices may be a bit less, they are often bought by a landlord who has the means to do so, and so we have renters. So I look across the 5.1 million policies; only 1 percent of them, 50,000 of them, are contents only, essentially a renter's policy. And so so many of those people that I interacted with in East Baton Rouge may or may not have fully understood their risk. They did not personally have a mandate. They were not the homeowner. Yet they lost tens of thousands of dollars worth of their life, and they have far less means available to them to go put that back together again. That policy is actually pretty reasonably priced.

Chairman SHELBY. How do you communicate that?

Mr. WRIGHT. Well, that goes to the point that Mr. Dorman highlighted, that we have got to get ourselves—one of the tools that we helped invest in, they have prototyped and proven the concept, is you got to show them pictures. You have got to show them three dimensions: here is my house, here is where the water is going to go, and here is the price tag of what happens.

Senator BROWN. Give us a range of what the price—I mean understanding you cannot be precise, but what the annual insurance would be in a modest rental to ensure the contents.

Mr. WRIGHT. Somewhere between—it depends on how some of the surcharges play out. That set aside for a moment, somewhere between $160 to $300. But $160 would be something that is a very reasonable amount of coverage. Now, depending on your means, that $160 could be still a substantial investment that would be a difficult choice for someone to make.

Chairman SHELBY. Is this a month or year?

Mr. WRIGHT. Per year, sir.

Senator BROWN. Per year.

Chairman SHELBY. That is pretty cheap.

Mr. WRIGHT. Right? And so I start——

Senator BROWN. For us.

Mr. WRIGHT. So I started looking at how then do we look at getting—honestly, if I had to hypothesize a bit about affordability, I think we are going to get a lot of some of these conversations, the people who really need the coverage that do not have, that may only need a few hundred dollars——

Senator BROWN. You said at least in your visit to Baton Rouge that it was 1 percent of renters that had that insurance? Or what did you say exactly?

Mr. WRIGHT. So nationwide, only 1 percent of my policies are a contents-only policy for a renter. And I am sure that——

Senator BROWN. Renters in floodplains or close to floodplains.

Mr. WRIGHT. Yeah.

Senator BROWN. And that is flood insurance, 1 percent, or content insurance generally? It is flood insurance?

Mr. WRIGHT. So it is flood insurance to cover contents. If you are a renter, you would not cover the structure, obviously.

Senator BROWN. No, but not other kinds of rental insurance——

Mr. WRIGHT. Correct.

Senator BROWN. ——to cover possessions. It is only—the flood insurance part of that is 1 percent.

Mr. WRIGHT. And, generally speaking, across the other perils, flood is excluded. You can only come to National Flood practically to get that coverage.

Thank you to both the Chairman and you.

I look forward to collaborating with the Committee as we move forward.

Chairman SHELBY. Thank you. The Committee is adjourned.

[Whereupon, at 11:55 a.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF ROY E. WRIGHT

DEPUTY ASSOCIATE ADMINISTRATOR FOR INSURANCE AND MITIGATION, FEDERAL EMERGENCY MANAGEMENT AGENCY

SEPTEMBER 13, 2016

Introduction

Good morning Chairman Shelby, Ranking Member Brown, and Members of the Committee. My name is Roy Wright, and I am the Deputy Associate Administrator for Insurance and Mitigation, responsible for directing FEMA's risk management, mitigation, and flood insurance programs. Thank you for the opportunity to testify about FEMA's Technical Mapping Advisory Council (TMAC).

Today, I will provide an overview of the TMAC and the reports and recommendations it has provided to FEMA since it was established in late 2014. I will also speak about FEMA's strategy for implementing the recommendations, which vary in complexity and level of effort required to address them, and well as the progress we have made to date. The Council's recommendations will aid FEMA in furthering our efforts to provide communities with the best available data and tools to make better informed decisions that reduce the risk and consequences of flooding nationwide.

TMAC Background

Under the Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), Congress established the TMAC and authorized specific statutory duties. The TMAC is tasked to provide recommendations on how to improve, in a cost-effective manner, FEMA's flood mapping program to ensure that Flood Insurance Rate Maps (FIRMs) reflect the best available science and utilize the best available methodologies for considering the impact of future development on flood risk. Consisting of Government and private sector experts from across the country and a diverse group of flood map stakeholders, in September 2014, the TMAC convened for its first public meeting. During its first year, the TMAC developed recommendations that it provided to FEMA through two reports in January 2016: a 2015 Annual Report and a Future Conditions Risk Assessment and Modeling Report. The TMAC annual report describe the Council's activities, evaluate FIRM activities, and summarize the Council's recommendations.

The Homeowner Flood Insurance Affordability Act of 2014 (HFIAA) requires FEMA to implement a flood mapping program, after a review by the TMAC. When the program is applied, it will result in technically credible flood hazard data in all areas where flood maps are prepared or updated. In July 2016, the TMAC submitted the TMAC 2016 Flood Mapping Program Review as required. This report included 14 recommendations to assist the agency to provide technically credible flood hazard data into the future. Based on this advice and my recommendation, the Administrator has certified the flood mapping program as credible.

Composition of the TMAC is defined in BW-12 and includes four designated members and 16 appointed members. The four designated members of the Council serve as regular Government employees (or the designees thereof) and consist of the FEMA Administrator, the Secretary of the Interior, the Secretary of Agriculture, and the Under Secretary of Commerce for Oceans and Atmosphere. The additional 16 members are appointed based on their demonstrated knowledge regarding surveying, cartography, remote sensing, geographic information systems, or the technical aspects of preparing and using FIRMs. To the extent possible, membership of the TMAC is balanced between Federal, State, local, tribal, and private sector members. There is also geographic diversity including representation from areas with coastline on the Gulf of Mexico, and from other areas identified by the FEMA Administrator as having a high risk for flooding.

I would like to thank the members of the TMAC for their hard work and dedication over the past 2 years. The Council formulated recommendations to improve the quality of flood mapping and to ensure that the best available science and methodologies are used when considering the impacts of sea level rise and future development on flood risk. I appreciate the tremendous amount of professional expertise and personal commitment that each member invested to convene as a council, conduct subcommittee discussions, and research and produce the Council's reports and recommendations. The Council's recommendations will aid FEMA in furthering our efforts to provide communities with the best available data and tools to make better informed decisions that reduce the risks and consequences of flooding nationwide.

As indicated by their name and clearly stated in the TMAC charter, the Council is an advisory board established to advise and make recommendations to the FEMA Administrator and the flood mapping program. Informed by the TMAC's reports and recommendations, FEMA will determine the appropriate path forward as we evolve

based on changes in customer needs, advances in technology, and the National Flood Insurance Program (NFIP) reform requirements.

TMAC's Reports and Recommendations

The TMAC's 2015 Annual Report contains 22 recommendations for FEMA's flood mapping program. The recommendations generally fall into three key themes: credible flood data, digital inventory and delivery, and customer-oriented products (including structure-level risk, and more options for targeted products and engagement). FEMA fundamentally agrees with all 22 of the recommendations in the 2015 Annual Report. Over the last several months, the Agency has been working to evaluate each recommendation to understand resource requirements and impacts to inform implementation priorities, sequencing, and investments.

Perhaps the most transformative recommendation made by the TMAC in 2015 is to transition from one percent (1 percent) annual chance as the basis for flood insurance ratings to a structure-specific flood frequency determination. This recommendation will require an entirely new approach to insurance rating and underwriting, including new regulatory hazard and risk products and potential impacts on floodplain management standards.

In January 2016, the TMAC delivered its Future Conditions Risk Assessment and Modeling Report. This statutorily mandated report includes seven overarching recommendations and numerous sub-recommendations. The first recommendation calls for providing future conditions flood risk products, tools, and information for coastal, Great Lakes, and riverine areas. It is the most substantial of the recommendations and the remaining recommendations are largely related to the details of how this could be achieved, with sub-recommendations providing even more details. By recommending that FEMA add future conditions assessments, modeling and mapping, TMAC is recommending that FEMA drive forward both the state of the science and the state of application of the science on a broad scale. Transitioning from an applied science agency, to an agency that also performs scientific research, is significant.

In July 2016, the TMAC submitted the TMAC 2016 Flood Mapping Program Review to FEMA. This report includes 14 recommendations to assist the agency to provide technically credible flood hazard data into the future. The report focuses on the findings of the TMAC's review of the flood mapping program, as required by HFIAA. The TMAC reviewed the mapping program's structure, process, outputs, quality management, and metrics and concluded that FEMA's mapping program, when applied as designed, results in technically credible flood hazard data in areas where flood insurance rate maps are prepared or updated.

The TMAC is currently working on its 2016 Annual Report. We anticipate that the TMAC will submit this report to FEMA in early 2017, and that it will include additional recommendations, as well as further guidance and insight into its previous report recommendations.

FEMA's Implementation Strategy

Addressing the TMAC recommendations has been and will continue to be one of the top priorities for the National Flood Mapping Program. Today, I want to summarize for you our strategy for implementation, and talk about some of the priorities and investments the Agency focused on this year. Our implementation strategy can generally be summarized as follows:

1. Address several technical recommendations through FEMA's consistent, routine approach to maintain and enhance national mapping policies.
2. Engage internal and external stakeholders and partners as FEMA determines the appropriate sequence of program changes that will support the implementation of the transformative mapping reforms recommended by the TMAC.
3. Continue to make strategic investments (e.g., high resolution topography, structure-specific datasets, enhanced flood models) while engaging in strategic, long-term planning to lay the foundation for transformative new mapping polices, products and regulations.

The reports submitted by the TMAC include some technical recommendations that address our ongoing program delivery, seeking refinements or improvements to what we already do and how we operate. Just as we did with the BW-12 legislative mandates for the mapping program, we are using existing program mechanisms to implement those changes to the extent possible. Through our regular Guidelines and Standards cycle, several of the TMAC's 2015 recommendations will be implemented in November 2016, and an additional set of TMAC recommendations are scheduled for implementation in November 2017.

Over the last few years, the Agency has continued to enhance the Cooperating Technical Partners (CTP) program within the flood mapping program. We are using established CTP coordination mechanisms to address the TMAC's CTP-related recommendations. In many ways, the work we've been doing to enhance the CTP program is already addressing much of what is in the recommendations. Similarly, we are using our Flood Risk Products Integrated Project Team (IPT) to start addressing the recommendations from the 2015 Annual Report about understanding user needs for our flood risk products.

Other recommendations are transformative and can't simply be assigned to an existing team or process to address. Those include the TMAC's recommendations for transitioning away from mapping the one percent (1 percent) annual chance flood hazard, providing structure-specific risk information, digital delivery of our products, and most of the future conditions recommendations. These recommendations necessitate extensive research, planning, and strategizing, both internally and with our partners.

These engagements are ongoing, but in the meantime we know what some of the foundational elements are to enable delivery on these recommendations in the future. In FY17, one of our focus areas in Risk Management is to deliver flood risk data that is useful for risk-based decisions. This year we will continue to make targeted investments, in coordination with the United States Geological Society (USGS) and the 3DEP program, that continue to move the Nation toward a national high-resolution topographic dataset. We will continue to invest in enhanced modeling and multi-frequency returns. Being able to evaluate the frequency of flooding at a structural level using high resolution topographic data is an essential step toward structure-specific risk rating and delivery of a redesigned risk rating for the NFIP. We are also making strategic technological investments and changes, not just to improve digital delivery of the mapping products, but to ensure that enhancements of FEMA mapping products are interoperable with insurance rating mechanisms, mitigation planning initiatives, and floodplain management.

FEMA is also exploring a more comprehensive approach to addressing future conditions mapping and the future conditions recommendations provided by the TMAC. The TMAC's Future Conditions Recommendation 6, which directs the completion of pilot studies, provides a way to plan for and develop an initiative that can accomplish the objectives set forth in the future conditions recommendations and can be performed in a way that addresses the majority of the other recommendations and sub-recommendations found in the Future Conditions report.

Addressing the research, development, program planning, and implementation questions through a series of demonstration projects will lead to an efficient and effective strategy to provide future conditions flood risk products, tools, and information. The TMAC was clear in its future conditions recommendations to FEMA that future conditions should be reflected in non-regulatory products at this time, and not on the regulatory Flood Insurance Rate Maps (FIRM).

FEMA has already been conducting sea level rise pilot studies. We are working to identify the specific remaining research gaps to be able to design additional future conditions demonstration and pilot projects to address those gaps and inform how FEMA establishes and resources future conditions mapping initiatives.

FEMA has emerging efforts that complement and are informed by the TMAC's recommendations, such as an ongoing initiative to redesign risk rating for the NFIP. FEMA considers a new approach to insurance rating and underwriting crucial for the program, and has already started identifying the technical considerations for implementation. FEMA leadership has incorporated progress on this recommendation into performance plans. FEMA is currently assessing this recommendation in conjunction with the ongoing initiative to analyze technologies, data sources, and trends for flood risk quantification toward a long-term goal of developing a redesigned risk rating system for the program. These initiatives and investments will be critical as FEMA assesses how to move from being able to support the assessment of structure-specific flood frequencies, to eventually delivering actuarial structure-specific flood insurance ratings in the future.

To support a mindful, meaningful transformation, in FY17 we will begin implementation of the 2015 Annual Report's Recommendation 2 which calls for a national 5-year operations plan. Our national plan will be informed by Regional 5-year plans to support appropriate flexibility and variance at the regional level while providing consistency at the national level. This 5-year plan will become a rolling plan that will help us bridge operations from our current status to where we want to go as we transform. The development of a 5-year operations plan will be supported by the implementation of Annual Report's Recommendation 3, which calls for the development of program goals and metrics that will help drive investments and behaviors needed to transform the delivery of our flood mapping program.

The timing is right for the transformation of the National Flood Mapping Program, however we need to account for and learn from the investments we've already made—especially in the program's evolution to Risk Mapping, Assessment, and Planning (Risk MAP). The status of the mapping inventory currently varies from Region to Region. FEMA's Regional offices flood mapping investments each reflect unique circumstances, and accordingly, the Regions have varying degrees of readiness for implementing TMAC recommendations. We also have a significant number of projects already in process that utilize current policies and standards, so we need to take those projects into account as we plan our implementation of and investments in the transformational changes.

Conclusion

We value the work of the TMAC, and will continue to work with the TMAC and Congress to continually evolve the flood mapping program to meet the needs of individuals and communities to understand their flood risk and provide the foundation for actuarial rate setting in the NFIP.

Again, thank you for the opportunity to testify today. I look forward to any questions the Committee may have.

PREPARED STATEMENT OF JOHN DORMAN

CHAIR, TECHNICAL MAPPING ADVISORY COUNCIL, AND ASSISTANT STATE EMERGENCY MANAGEMENT DIRECTOR FOR RISK MANAGEMENT, AND DIRECTOR, NORTH CAROLINA FLOOD RISK MANAGEMENT PROGRAM

SEPTEMBER 13, 2016

Chairman Shelby, Ranking Member Brown, and Members of the Committee on Banking, Housing, and Urban Affairs; good morning and thank you for the opportunity to appear before you and provide my perspective on the 2015 Technical Mapping Advisory Council (TMAC) recommendations. I am John Dorman, North Carolina Assistant State Emergency Management Director for Risk Management, and Director of the North Carolina Flood Risk Management Program. I am currently serving as the Chair on the Technical Mapping Advisory Council.

The English proverb "Necessity is the mother of all innovation" speaks well to the overall tenet of TMAC recommendations. FEMA has diligently overseen the generation of current flood hazard focused data and products. However, transformative strategies must be implemented to address needs of the program: insurance rates that reflect structure-anticipated flood loss; communication focused on financial loss as opposed to an "in or out" focus; and, homeowner's understanding of and confidence in the data used for flood hazard determination and insurance premiums.

For North Carolina, Hurricanes Floyd, Francis, Ivan, and Irene all demonstrated and compelled the need to implement these transformative strategies. Thus, North Carolina has successfully implemented the ability to generate structure-based flood probability; structure-based risk assessments; real-time structure-based flood impact and alert; and, structure-specific risk-based insurance rating. Recent events across the Country have again shown a lack of accuracy and awareness of structure-specific flood risks that both large storms and more localized flash flooding can present. With these needs ever apparent, I believe TMAC has constructed recommendations that, if implemented, will transform the program and improve our Nation's resiliency to flooding. Below are four recommendations of the TMAC that I believe are key to transformative improvements:

First, fundamental to accurate flood hazard identification and risk assessment, is accurate, high-resolution ground elevation data. Recent developments in data collection technologies offer the more accurate and efficient collection of ground elevation data. Technology like the Geiger LiDAR sensors collect data at both a higher altitude and higher accuracy allowing for faster acquisition time and reduced costs of acquiring and processing LiDAR data. This higher resolution data also allows the opportunity to meet the needs of other stakeholders so that cost sharing objectives can be achieved.

Second, the transition from a 100-year floodplain delineation and flood elevation to a structure-specific annual chance flood frequency is critical to raise awareness that every property has some level of flood risk—26 percent of flood damages are on properties outside the 100-year floodplain delineation. The recent events in Louisiana demonstrate the importance of altering our Nation's mentality that one is safe if they live outside of the line depicted on a map and raise awareness of flood probability at the structure level.

Third, the transitioning focus to structure-based risk assessment. This increased level of detail that calculates structure-specific per cent annual chance of flooding

and estimated annualized damage calculations can inform mitigation decisions and create more accurate risk-based insurance premiums. This will directly result in mitigation actions to reduce losses, lessen the financial burden on the Federal Government to help communities recover from disasters and create a more fiscally sound FIMA.

Finally, we must transition to a dynamic, queried display of data, models, maps, and risk assessments. The way we communicate as a Nation is changing, and we need to create a more robust database that enables data to be dynamically queried and displayed on a Web page. Floodplain modeling and mapping is an ever changing science, based largely on statistics and changes in land use and topography. We need to create an efficient method to quickly and efficiently update flood hazard and risk information and provide that information at the fingertips of end users on all types of digital devices.

It is important to note that all or some of the four transformative recommendations have been successfully implemented in four States. These recommendations are not just ideas but proven concepts in production today.

Thank you again for the opportunity to address this Committee on this important topic. I am honored to be able to provide testimony based on our experience with the FEMA and with the NFIP as the Committee considers the most efficient methods to prevent or reduce flooding losses.

I would be happy to answer any questions that you may have.

TMAC 2015 Goal & Recommendation
Implementation Framework

Goal 1: Accurate data, models, and risk assessments

- **Recommendation 2:** Develop National program 5-year plan
- **Recommendation 3:** Develop National program goals and metrics
- **Recommendation 4:** Work with partners to ensure topo data is collected to Federal standards
- **Recommendation 5:** Document H:V accuracy of topo data
- **Recommendation 6:** Review updated statistical models (Bulletin 17C)
- **Recommendation 7:** Develop guidance for selection and use of riverine and coastal models
- **Recommendation 8:** Develop guidance related to coastal 2D storm surge modeling
- **Recommendation 9:** Update coastal event-based erosion methods

- **Future Condition 1:** Provide future conditions flood risk products using standardized timeframes
- **Future Condition 2:** Identify and quantify accuracy and uncertainty of data
- **Future Condition 3:** Provide flood hazard products for coastal areas that includes erosion and SLR using scenario approach
- **Future Condition 4:** Provide flood hazard products for riverine areas that includes future conditions
- **Future Condition 5:** Generate future conditions data to frame and communicate messages
- **Future Condition 6:** Perform demonstration projects
- **Future Condition 7:** Future conditions should be consistent with existing conditions analysis and future conditions scenarios

Goal 2: Time and cost efficient generation of data

- **Recommendation 11:** Update MIP to add greater flexibility
- **Recommendation 12:** Determine cost impact due to new program requirements
- **Recommendation 13:** Integrate process for mass LiDAR-based LOMA

Goal 3: Utilization of efficient technologies

- **Recommendation 16:** Transition to database-derived, digital display environment

Goal 4: Integrated flood risk management framework

- **Recommendation 10:** Transition to structure-specific flood frequency determination
- **Recommendation 14:** Transition to structure-specific risk assessment

Goal 5: Awareness of flood hazard and risk data

- **Recommendation 1:** Implement process to assess needs of users
- **Recommendation 15:** Communicate messages that consider long-term resilience strategies

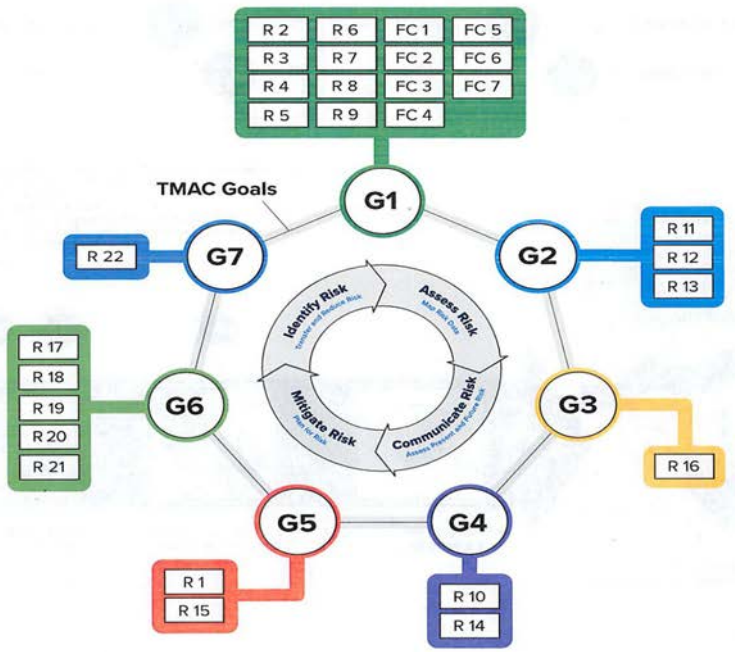
Goal 6: Added value partnering and leveraging

- **Recommendation 17:** Consider NAPA recommendations on agency cooperation and federation
- **Recommendation 18:** Partner to ensure availability of accurate water level and stream flow data and enhance the NHD
- **Recommendation 19:** Implement strategies to incentivize stakeholders to increase partnerships
- **Recommendation 20:** Develop measures to evaluate CTP capabilities and competencies, and increase responsibilities
- **Recommendation 21:** Establish National Flood Hazard Risk Management Coordination Committee

Goal 7: Permanent, substantial program funding

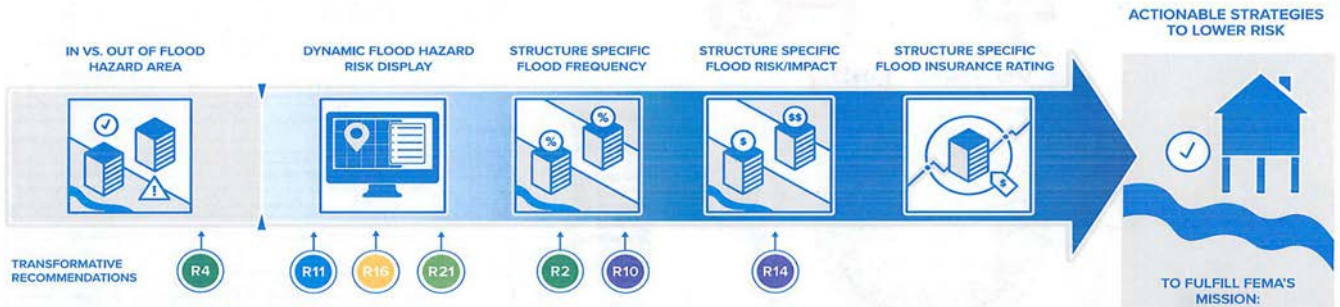
- **Recommendation 22:** Define financial needs to implement recommendations

September 13, 2016



Recommendation Timeline

Implementation of transformative recommendations will result in credible products, efficient production, stakeholder awareness as well as acceptance, effective leveraging and financial stability.



CHALLENGE OF TODAY

Does not account for risk associated with flood events other than the 1% annual chance frequency, which may lead to miscalculating the risk and related insurance premium based on expected damage from more frequent flood events, flood events greater than the 1% annual chance frequency or unique floodplain flooding characteristics.

TRANSFORMATIVE RECOMMENDATIONS

- Recommendation 2: Develop National program 5-year plan
- Recommendation 4: Work with partners to ensure topo data is collected to Federal Standards
- Recommendation 10: Transition to structure-specific flood frequency determination
- Recommendation 11: Update MIP to add greater flexibility
- Recommendation 14: Transition to structure-specific
- Recommendation 16: Transition to database-derived, digital display environment
- Recommendation 21: Establish National Flood Hazard Risk Management Coordination Committee

TO FULFILL FEMA'S MISSION:

Support our citizens and first responders to ensure that as a nation we work together to build, sustain and improve our capability to prepare for, protect against, respond to, recover from and mitigate all hazards.

ANTICIPATED NEEDS

- Executive-Level Sponsorship
- Technology Enhancements
- Legislation Changes
- Partnerships
- Program Resources
- Management-Level Ownership
- Additional Data (e.g. LiDAR)
- Program Specialist Support

September 13, 2016

PREPARED STATEMENT OF SCOTT K. EDELMAN

VICE CHAIR, TECHNICAL MAPPING ADVISORY COUNCIL, AND SENIOR VICE PRESIDENT, AECOM

SEPTEMBER 13, 2016

Good morning Chairman Shelby, and Members of the Subcommittee. I am Scott Edelman, Senior Vice President of AECOM. I have spent my career solely focused on solving our Nation's water related opportunities and challenges. I appreciate this opportunity to appear today before the Committee on Banking, Housing, and Urban Affairs.

I have been involved with creating maps for FEMA since 1981, and am privileged to be serving as Vice Chair on the Technical Mapping Advisory Committee established by the 112th Congress.

We, as a Nation, have simply endured too much pain and suffering due to floods.

I believe that Roy Wright's strong support and encouragement of the TMAC has resulted in two reports that show a path to the next evolution of the NFIP. In the future, I believe that if the recommendations of the TMAC reports are supported by Congress and the Administration, we can make significant strides to reduce both the pain and suffering that our citizens are enduring at a record level, and the burden these unprecedented events continue to drain resources from our United States Treasury.

Of the 29 recommendations contained in the TMAC 2015 reports, I believe that the three most important priorities and potential benefits are:

1. The reintroduction of a 5-year rolling plan—to allow leveraging of Federal dollars;
2. The movement to structure-based risk assessments—to create a safer Nation; and
3. Preparing the Nation for future conditions—to stop building new problems.

First, the reinstatement of a 5-year rolling plan allows the leveraging of local and State dollars. FEMA cannot make the Nation a safe place alone. The operating principals of FEMA's Whole Community doctrine is critical as applied to flood-related mitigation. Flood waters know no jurisdictional boundaries as they devastate lives and property, and therefore we need to fully engage local communities and make these shared responsibilities more apparent to all. When Congress funded Map Modernization in 2003, FEMA produced the Multi-Year Flood Hazard Identification Plan, MHIP. MHIP addressed every county in the Nation with when and how much anticipated funding would be available. The result was an enterprise-wide approach to maximize the return on Federal investments in which FEMA served as the Chief Risk Officer to those investment in the studies, and communities felt strong local ownership of the studies and results. This approach better aligned FEMA with State and local efforts to reduce losses of life and property.

Second is structure-based risk assessments. We must change the perception that if I am just on the other side of the 100-year flood line I am safe. Too much time is spent trying to justify the movement of the flood line by a few feet when in actuality the risk of flooding the structure only has changed ever so slightly. Much of the problem is due to uncertainty of the flood line itself.

- To my knowledge, this is the only product that engineers produce and communicate to the public that deals with averages and not what is safe.
- We also have a great deal of uncertainty within the calculations. In all actuality, the current 100-year average line shown on the flood insurance maps is perhaps closer to a safe design level of a 10-year event.

Moving to a structure-based risk assessment begins to change the conversation from one focused on "in vs. out" to one that starts to communicate levels of risk. We must also take affordability and grandfathering with sunset clauses into account for our most vulnerable communities and constituents.

Third, we need to prepare the Nation for the future. GAO asked FEMA to evaluate the impact of future conditions on the National Flood Insurance Program. The report concluded that by the year 2100 on average our floodplains will increase by 45 percent nationally, the number of polices will increase by 80 percent and our average loss per policy will increase by 50 percent based on today's dollars. This is an immense challenge to our country. We need to encourage local communities to adopt higher standards on a volunteer basis understanding that the higher standards results in less loss of life. Many communities have done this including Mecklenburg County and the City of Charlotte, NC. Based on their adoption of future conditions flood elevations, Mecklenburg County has estimated savings from flood

damages from a single 100-year event to be over $150 Million. We need to stop building future problems so we can finally concentrate on mitigation of existing problems.

My passion is not solely on the science but the need to help the Nation with this long-standing challenge and the billions of tax dollars that are unnecessarily wasted because of poor land use decisions and the attempt to tame or ignore Mother Nature. I want to again thank the Committee for this opportunity. I urge Members of the Committee to refer to the two TMAC reports for more details as a formal part of our testimony.

I would be happy to answer any questions that you may have.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR TOOMEY FROM ROY E. WRIGHT

Q.1. In July 2013, FEMA issued new mapping procedures for non-accredited levees. I was pleased to see that some non-accredited levee systems would be recognized as reducing flood hazard. Unfortunately, I still hear from frustrated Pennsylvanians who feel that local flood control structures are either completely ignored or treated unfairly by FEMA.

What progress has FEMA made on including non-accredited levees in its FIRMs?

How has FEMA informed communities of its new policies towards non-accredited levees?

How can communities protected by non-accredited levees ensure that FIRMs accurately reflect the flood hazard reduction those levees offer?

A.1. Answer not received in time for publication.

Q.2. I understand that FEMA is in process of updating its claims appeals process.

Can you provide an update on where that stands?

A.2. Answer not received in time for publication.

Q.3. Besides claims appeals, my office receives a steady volume of request for help in appealing FIRMs. This may be because the highly technical nature of the appeals process can be difficult and confusing.

Are any efforts underway to improve mapping appeals? If so, what issues are being considered, and when can we expect to see changes implemented?

A.3. Answer not received in time for publication.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MENENDEZ FROM ROY E. WRIGHT

Q.1. As I mentioned above, FEMA's systems and oversight over its Write Your Own insurance companies and other contracts were severely lacking in the aftermath of Superstorm Sandy. From insurance companies lowballing Sandy survivors, to a broken appeal process that was a virtual black hole for policyholders, the claims process after Sandy exposed fundamental problems with the NFIP that demand a comprehensive overhaul.

As you know, I've worked for the past several years to first expose and then address the most egregious shortcomings.

Can you give the Committee a sense of the reforms that have been made since the aftermath of Sandy and if they are adequate to prevent another debacle like we saw after Sandy?

Should the people of New Jersey be confident that they won't have to go through the same ordeal they did after Sandy when the next storm strikes?

A.1. Answer not received in time for publication.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR WARREN FROM ROY E. WRIGHT

Q.1. Will FEMA allow attenuation of wave setup in back-bay or inland areas to be guided through the use of high water marks (HWMs) that are available for the Blizzard of 1978 storm in the Towns of Scituate, Marshfield, and Duxbury? This historical storm has been shown to produce storm surge levels at or above the 1 percent-annual-chance stillwater level for these areas. The HWMs would be used (with judgment) to assess the hydrodynamics and propagation of surge into the enclosed estuarine areas. This is the same method that was used for the successful appeals of the Preliminary 2013 FIS study for the Towns of Scituate, Marshfield, and Duxbury.

A.1. Answer not received in time for publication.

Q.2. The U.S. Army Corps of Engineers (USACE) was authorized by Congress in January 2013 in the Disaster Relief Appropriations Act of 2013 (Public Law 113-2) to conduct the North Atlantic Coast Comprehensive Study (NACCS). A core component of the NACCS study was a numerical modeling effort that produced updated storm surge and wave annual-exceedance probabilities for extreme coastal storm events for the Mid- to North-Atlantic region, from Virginia to Maine. The NACCS study provides a characterization of both synthetic tropical storms and historical extratropical storms that can contribute to probable coastal flood hazards in the New England area. The NACCS study also makes use of two-dimensional (2-D) hydrodynamics and wave models to capture the spatial variability in storm surge and wave conditions along the complex coastline of Massachusetts. Modeled 1 percent annual chance water levels and wave heights from the NACCS study represent an improvement to the methodologies used by FEMA to produce the Nov. 4, 2016 Flood Insurance Rate Maps (FIRMs) for the Towns of Scituate and Marshfield, and the Cape Cod Bay shoreline of Duxbury. Will FEMA allow the use of 1 percent annual chance SWELs and significant wave heights from the NACCs study to be used as input conditions for the WHAFIS and wave run-up analyses?

A.2. Answer not received in time for publication.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SCHUMER FROM ROY E. WRIGHT

Q.1. Mr. Wright, as you are aware, New York City has submitted a technical appeal disputing FEMA's Preliminary maps and I know that—FEMA has set up an independent review board to review the City's appeal.

First, can you provide an update on the status of the independent review board's analysis? Where do things stand and when do you expect to for the board to make a determination?

Second, is FEMA prepared to revise the New York City maps accordingly if it is determined by the board that the preliminary maps are not as accurate as they should have been?

A.1. Answer not received in time for publication.

Q.2. Mr. Wright, I have asked that you take steps to ensure that FEMA has and exercises the necessary authority to properly oversee the WYO carriers, third-party service providers and any firms that they may all hire.

I was pleased to see that you acted quickly in responding to the New York AG's investigation and recommended that the engineering firm HiRise be disbarred from participating in the program.

However, do you plan to seek to disbar any WYOs or firms they may have hired based on their actions in the aftermath of Sandy?

What information or developments are necessary for FEMA to take such action?

What is the timeframe for making such a determination with regard to seeking disbarment of WYOs or other firms?

Further, what about the legal counsel hired by the WYOs to represent their interests in cases filed by Sandy victims? Do you plan to seek to prohibit any of these firms from being able to handle future litigation matters on behalf of the WYOs based on their actions in handling cases that arose from Sandy?

A.2. Answer not received in time for publication.

Q.3. Mr. Wright, can you provide me an update on the Sandy Claims Review Process?

Additionally, I'd like to know more about one specific piece of the process. It has been raised with my office that FEMA adjusters in the Sandy Claims Review Process are relying on the original engineering reports from suspect engineering firms, like HiRise, as a basis for determining what homeowners should be paid through this re-review process.

First, is that true?

Second, has FEMA gone back to see if these engineering reports were ever changed or manipulated to alter the conclusions made regarding the actual damage sustained in Sandy?

Third, can you tell me what is FEMA doing to ensure that the engineering reports used as a basis for making determinations in the Sandy Claims Review Process are based on accurate reviews of the damage to these homes? Finally, have any of the WYOs that hired these suspect engineering firms been asked to or required to pay for new engineering reports to be filed? Are any of them doing so?

A.3. Answer not received in time for publication.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR KIRK FROM ROY E. WRIGHT

Q.1. The NFIP rate plan is outmoded and does not reflect insurance industry best practices. For example, the Institute for Business and Home Safety (IBHS), as well as catastrophe modelers, have pointed out the differences between riverine flooding and storm surge. Since riverine flooding is generally inland and storm surge is generally coastal, most experts believe there is an unjustified disparity in the rates charged to policyholders in the 30 zones across the country, not to mention the disparity created by the significant subsidization of premiums charged to many policyholders.

Are some policyholders paying too much while others are paying too little, independent of the subsidies built into the program?

How do your propose modernizing the NFIP rate plan to eliminate this disparity?

A.1. Answer not received in time for publication.

Q.2. Reinsuring NFIP exposure can transfer risk from taxpayers to the private market, provide financial stability, and facilitate private market competition. There has been much discussion about how robust and competitively priced the catastrophe risk market is at this time, but the price and availability of reinsurance changes with the weather and other market conditions, resulting in year-to-year volatility. This volatility could place the NFIP in jeopardy, and private carriers could be discouraged from entering the market. Longer-term reinsurance arrangements not only limit volatility, but can also facilitate more robust data analytics and pricing sophistication for the flood events that are most challenging for the private market.

How do you perceive the role of reinsurance as a tool to reduce the Federal Government's exposure to loss, and to encourage private insurers to write direct flood coverage?

I understand that you are currently negotiating reinsurance coverage for the coming year. Are you investigating the availability and potential benefits of longer term reinsurance coverage?

A.2. Answer not received in time for publication.

Q.3. Presumably Congress will reauthorize the NFIP next year and the NFIP will continue to be the primary flood insurance market for homeowners and businesses. In the meantime, FEMA can take important steps to improve the program with its existing authority. For example, FEMA should look to industry best practices to improve customer communications so there is better public understanding of the underwriting and rating processes, and up-front clarity on which losses are covered and which losses are not. FEMA also has the authority to issue bulletins and other guidance so that FEMA's claim handling and engineering investigation requirements are objective and transparent. By meeting customer needs and expectations, and by providing clear guidance to insurance companies participating in the NFIP, there will be less policyholder frustration, fewer complaints and less litigation.

What is FEMA doing to make the program more customer-centric and how is FEMA communicating with the Write Your Own carriers to improve the customer experience?

A.3. Answer not received in time for publication.

Q.4. FEMA recently proposed removing the Write Your Own (WYO) Financial Assistance/Subsidy Arrangement from the Code of Federal Regulations (CFR) so FEMA can negotiate individual contracts with the insurance companies that serve as FEMA' s agents for the sale and administration of flood insurance policies.

Do you believe that some WYO companies perform better than others and, if so, what measures will you take when negotiating new contracts to make sure that better performing companies remain in the program?

Since you will be negotiating individual contracts, are you concerned that contracts with different companies on different terms could create competitive imbalances?

A.4. Answer not received in time for publication.

Q.5. You have stated that the Arrangement would be removed from the CFR, but will continue to be available on the FEMA website. Your WYO partner companies currently rely on the fact that their contractual relationship with FEMA under the Arrangement conforms to Federal law, which makes clear that the Federal Government assumes liability for losses under NFIP policies.

Why would the Arrangement continue to be accessible if a new and presumably different contract is to be negotiated with each WYO carrier? Will the current Arrangement apply in any way to the new individualized contracts and, if so, are there any legislative or regulatory changes necessary to ensure that the new contracts conform to federal law so the essential nature of the WYO relationship is not disrupted?

A.5. Answer not received in time for publication.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

FEMA—"TECHNICAL MAPPING ADVISORY COUNCIL OVERVIEW"

Technical Mapping Advisory Council (TMAC)

Overview for U.S. Senate Committee on Banking, Housing and Urban Affairs

September 12, 2016

FEMA

Disclaimer

- The Technical Mapping Advisory Council (TMAC) is a federal advisory committee that was established to make recommendations to the FEMA Administrator pursuant to the Biggert-Waters Flood Insurance Reform Act of 2012
- Individual members of the TMAC have no authority to speak for the Department of Homeland Security, the Federal Emergency Management Agency, or the Council as a whole during this meeting, but the members may speak about their personal observations regarding their service on the Council
- The TMAC slides and discussion for today are taken from and summarize existing public TMAC reports – and do not espouse viewpoints that have not already been disclosed by the Council

Mapping and Flood Insurance Reforms, including TMAC – Luis Rodriguez

Mapping and Flood Insurance Reforms

- Recent flood insurance reform legislation included several mapping-related provisions:
  - Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12)
  - Homeowner Flood Insurance Affordability Act of 2014
- Mapping requirements include:
  - Enhanced coordination and outreach with communities before and during mapping activities
  - Providing monthly updates to Congress on flood mapping activities
  - **Establishing a Technical Mapping Advisory Council**

The TMAC was established in 2014 to provide recommendations to the mapping program

The TMAC is charged with reviewing the national flood mapping activities authorized under the law and has prepared recommendations to the FEMA Administrator.

Federal Members and Representatives (6)

- FEMA Administrator, or designee
- Secretary of Interior, or designee
- Secretary of Agriculture, or designee
- Undersecretary of Commerce of Oceans and Atmosphere, or designee
- United States Geological Survey representative
- United States Army Corps of Engineer representative

FEMA Administrator's appointed members (14) from the following professional organizations:

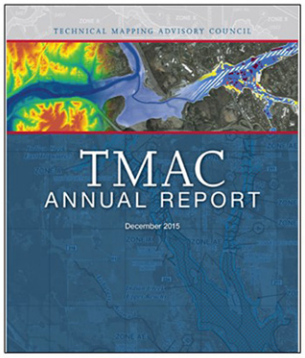
- Surveying
- Mapping
- Engineering
- Flood Determination
- Storm Water Management
- State Geographic Information
- State NFIP Coordinator
- 2 State Cooperating Technical Partners
- 2 Local Cooperating Technical Partners
- Floodplain Management
- Risk Management
- State Mitigation Officer

Mapping requirements from legislation

- FEMA has made significant progress implementing the mapping-related provisions of BW-12 and HFIAA

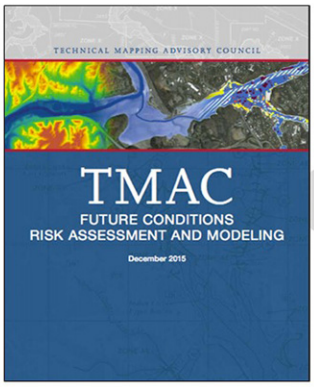
Completed (Some require on-going reporting or regulatory cleanup)	§215 TMAC §217 Scope of Appeals §218 Scientific Review Panel §219 Limitation on state contributions for updating maps §220 Budget Crosscut and Interagency Coordination §226 Flood Protection Structure Accreditation Task Force §229 Local data requirement §231 Study and Report on graduated risk §19 Flood Protection Systems §22 Exemption from fees for certain map change requests
In Progress	§216, §27 and §30 National Flood Mapping Program §246 and §18 Reimbursement of certain expenses §17 Certification

The TMAC's 2015 Annual Report includes 22 recommendations



- Credible Flood Data
- Digital Delivery and Inventory
- Customer Oriented Products

The 2015 Future Conditions Report includes 7 recommendations and many sub-recommendations



Assessment of the TMAC 2015 Recommendations

- The recommendations vary significantly in estimated level of effort and required resources for implementation
- Some recommendations are addressable via standard operations, such as the guidance and standards maintenance update, and others will require transformative change
- The recommendations helped inform the 2016 Mapping Priorities

2016 Mapping Priorities

New, Validated, and Updated Engineering

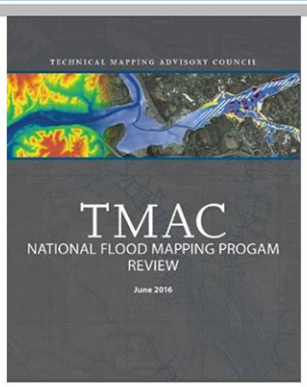
Increase LiDAR purchases

Increase assessment of flood hazard miles

Modernize paper map inventory

Large scale automated engineering

TMAC National flood mapping program



- TMAC reviewed the flood mapping program to inform the Administrator as he considers certification of the mapping program in accordance with HFIAA Section 17
- Structure, Process, Outputs, Quality Management, and Metrics focus
- Includes 14 recommendations

TMAC finds the National Flood Mapping Program, when applied as designed, supplies technically credible flood hazard data in areas where Flood Insurance Rate Maps are prepared or updated.

DEPARTMENT OF HOMELAND SECURITY
FEMA

LETTER SUBMITTED BY TOM SALOMONE, 2016 PRESIDENT, NATIONAL ASSOCIATION OF REALTORS®

NATIONAL ASSOCIATION of REALTORS®

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September 13, 2016

The Honorable Richard Shelby
Chairman
Senate Banking, Housing & Urban Affairs Committee
304 Russell Senate Office Building
Washington, DC 20510

The Honorable Sherrod Brown
Ranking Member
Senate Banking, Housing & Urban Affairs Committee
713 Hart Senate Office Building
Washington, D.C. 20510

Dear Chairman Shelby and Ranking Member Brown:

On behalf of 1.1 million members of the National Association of REALTORS® (NAR), thank you for holding this important hearing to review technical mapping recommendations to the National Flood Insurance Program (NFIP). Accurate flood mapping is the cornerstone of a strong NFIP, and a top priority for NAR members. As the Committee considers broader program reform and mapping issues in particular, NAR would like to take this opportunity to identify several shorter term opportunities that could strengthen the program. NAR will have additional recommendations for the long-term reauthorization bill but in the interim, offers the following recommendations in order to provide some interim relief from inaccurate NFIP rate increases and also to help Congress gather necessary data which could be help inform decision making next year.

Private Market Options

REALTORS® urge the Committee to take up and pass H.R. 2901, the Flood Insurance Market Parity and Modernization Act. Earlier this year, this modest bipartisan legislation passed the House of Representatives by an unprecedented 419-0 vote. It has been the subject of extensive hearings and pro-consumer amendments since the Senate voted on an earlier version of the bill.[1]

The bill would now clarify that the federal mandatory purchase requirement may be satisfied with private flood insurance only if it covers at least the amount of the mortgage loan *and* complies with state insurance regulations. It also further strengthens consumer protections by a) enabling NFIP policyholders to move to and from the private market without jeopardizing their grandfathered status, b) providing important disclosures, and c) preserving Fannie Mae/Freddie Mac's authority to review the financial strength of private insurance companies without preempting state authority.

The Senate could pass this reform measure today and offer some near-term relief for some NFIP policyholders who are currently being overcharged by the NFIP. Linked below is a summary of NFIP insurance rate research which highlights the extent of the overcharges and was conducted by independent actuaries with Milliman.[2] The combination of private market options and a strong NFIP will also ensure that flood insurance remains available in all markets at all times.

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[1] See S.Amdt 2700 to S. 1926 offered by Senators Heller and Tester during the 113th Congress.
[2] For more information on the NFIP rate research, please see:
http://www.narfocus.com/billdatabase/clientfiles/172/4/2733.pdf

LiDAR Elevation Data

As the National Research Council (NRC) reported,[3] the most effective improvement to FEMA's flood maps would be to acquire high-resolution, high-accuracy elevation data using Light Detection and Ranging (LiDAR) technology. (Many of the technical mapping recommendations build on NRC's.) Currently, FEMA relies on 10- or 30-meter national elevation dataset (NED) for many of the maps. As a result, FEMA must rely on communities and property owners to make corrections by supplying more accurate elevation data using expensive and time consuming surveys.

NAR notes that the state of North Carolina, on the other hand, has taken over mapping for the state and moved away from survey-based mapping. Instead, North Carolina uses Geiger-mode LiDAR to obtain quality level two data representing a 1,000 percent increase in resolution over the NED.[4] Using this method, North Carolina is also able to pinpoint first floor property elevations statewide which would obviate the need for FEMA to go property by property and collect elevation certificates, each of which can cost anywhere from hundreds to thousands of dollars.

NAR would like to work with the Committee and Congress to estimate the costs of a North Carolina style program for mapping the entire country or pilot this technology in the most cost-effective areas. Based on our current research, it appears that money currently within the system could be put to better use by focusing on advanced technologies. According to the MAPPS Association, it would cost $750 million to collect LiDAR elevation data for the entire nation. It would cost considerably less if Congress decided to start with 5 major NFIP states such as Florida, Louisiana, Texas, New York and New Jersey. NAR believes that with LiDAR data, FEMA could produce more accurate maps and minimize the number of property owners filing expensive appeals. This data would also help inform decision making next year as Congress works to develop the broader NFIP reauthorization and reform package.

Proactive Mitigation

REALTORS® also support taking proactive action to mitigate against flooding. According to FEMA, one million NFIP-insured properties are not yet paying full-cost rates, and some could again be facing unaffordable rates in less than five years.[5] The more of these properties that are flood-proofed, elevated, relocated or otherwise strengthened against the flood risk, the lower NFIP rates will be and the less that taxpayers will be exposed to future NFIP borrowing. Congress already provides significant funding toward property mitigation programs. However, most of this funding is not accessible until after flooding occurs. Also FEMA does not collect the data needed to determine how many of the one million properties will face affordability issues.

NAR would like to work with the Committee to determine the extent to which FEMA can prioritize and redirect existing mitigation resources (without another act of Congress) to address property owners facing unaffordable flood insurance in the next 5-10 years. For example, Congress included a provision in the 2004 Flood Insurance Reform Act specifically directing FEMA to grant access to Increased Cost of Compliance funds before there is substantial flooding; yet, more than a decade later, these changes still have not been implemented. NAR would also request that the Committee provide FEMA with the necessary direction to implement these changes and also to collect and expedite the LiDAR data needed before the reauthorization debate begins next year. With this data, Congress could determine the scope of the affordability challenges in the program and if necessary, expand on existing mitigation resources in order to head off any issues before they reach crisis proportions.

Conclusion

Thank you for the opportunity to submit these comments. NAR greatly appreciates the Committee's work in this area. REALTORS® look forward to working with you and the Senate on these and other issues before the current authority for the NFIP expires on September 30, 2017.

Sincerely,

Tom Salomone
2016 President, National Association of REALTORS®

cc: Senate Banking, Housing & Urban Affairs Committee

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[3] National Research Council. 2009. *Mapping the Zone: Improving Flood Map Accuracy*. Washington, DC: The National Academies Press.
[4] Presentation to NAR's Insurance Committee by John Dorman, Director of the N.C. Flood Mapping Program and Chair of Technical Mapping Advisory Council, August 2016.
[5] FEMA Presentations to the Association of State Floodplain Managers Conference, June 2016.

LETTER SUBMITTED BY CHAD BERGINNIS, EXECUTIVE DIRECTOR, ASSOCIATION OF STATE FLOODPLAIN MANAGERS

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Testimony for the Record

Concerning the Hearing on September 13, 2016 Entitled:
The National Flood Insurance Program: Reviewing Recommendations of the Technical Mapping Advisory Council's 2015 Annual Report

Submitted to:
Senate Committee on Banking, Housing and Urban Affairs

Submitted by:
Chad Berginnis, Executive Director, Association of State Floodplain Managers

The Association of State Floodplain Managers (ASFPM) is pleased to have the opportunity to comment on the Recommendations of the Technical Mapping Advisory Council's 2015 Annual Report. ASFPM is a non-profit association of state and local officials as well as engineers, planners and other professionals who support those officials. The ASFPM has 17,000 members nationwide and 36 chapters that represent 41 states. The mission of ASFPM is the reduction of loss of life and property due to flooding.

As you may be aware, ASFPM had a representative on TMAC who contributed heavily to the annual report – Ms. Sally McConkey, head of the flood mapping program in the State of Illinois. ASFPM applauds the important work of the TMAC and is impressed by the amount of work it has accomplished in the past two years. Today we are writing to provide ASFPM's perspective on the 2015 Annual Report.

Overall Comments on the Annual Report

Overall, ASFPM agrees with and supports most of the TMAC recommendations. However, there are a few recommendations that we are concerns with respect to their focus, intent, and relative priority among other recommendations.

The Importance of Program Goals and Metrics

Under Section 100216 of the 2012 Biggert-Waters NFIP Reform Act, the National Flood Mapping Program (NFMP) specifically requires FEMA to review, update, maintain, and publish maps with respect to all populated areas and areas of possible population growth within the 100 and 500-year floodplain; areas of residual risk and areas that could be inundated as a result of failure which are protected by levees, dams and other flood control structures; and the level of protection provided by such structures. There is a further requirement in the legislation to "establish or update flood risk zone data in all such areas with respect to rates of probable flood caused loss for the various flood risk zones for each area" that could be viewed as a requirement to undertake an refinement of the insurance rating. Finally there is a requirement to include relevant information which may be recommended by TMAC.

Recommendations #2 and #3 focus on the overall mapping program goals, priorities and metrics. ASFPM was disappointed that a clear path forward as to how FEMA's mapping program, RiskMAP, could be transformed to more closely implement the required mapping elements of the NFMP authorized by Congress in 2012. Rather than a true transformation of the mapping program, Recommendations #2 and #3 focus on the vision, goals and metrics of FEMA's previous and current mapping initiatives as well as an expanded vision on the use of risk assessments. While TMAC clearly has the authorization to make recommendations as to inclusions into the

NFMP, we think that recommendations addressing the basic requirements identified by Congress under the NFMP are significantly lacking. There is a failure to clearly articulate the mapping program's goals, priorities and metrics. At a minimum, ASFPM believes that there should be program goals and metrics related to achieving the required mapping elements under the NFMP such as the total number of stream miles mapped in the nation.

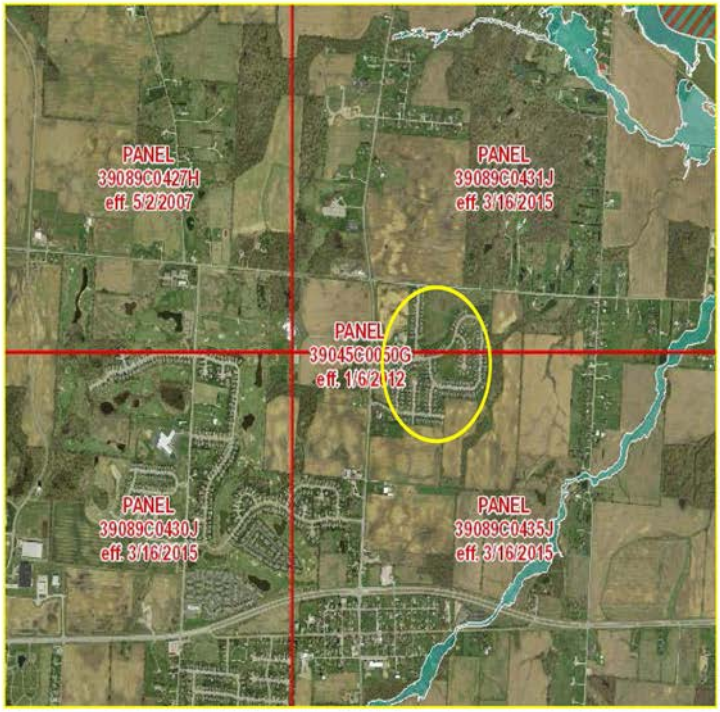
The Priority and Importance of Hazard Identification

ASFPM appreciates the discussion (p. 4-25) of unmapped areas which identifies the need to still map 1.4 million miles of streams in addition to the over 650,000 miles of unverified and unknown miles that FEMA has previously mapped to some extent but that need evaluation and update. Also, ASFPM notes and appreciates a key finding of TMAC: "The method used to develop the deployment metric is easily misunderstood and can lead policymakers to believe that more of the Nation's population is covered by modern flood maps than is actually the case. This over counting can lead to a belief that more of the Nation's flood risk has been identified than is the case." (p. 4-32). We note that the 2015 TMAC Future Conditions Report elaborates on this point further indicating: "If the metric is changed to be more reflective of the streams studied within a census block group, then it may more realistically illustrate that the country has flood hazard areas defined for only somewhere between 16 percent and 22 percent of all streams."

The importance and necessity of providing accurate flood hazard information nationwide cannot be understated. Today unmapped floodplains are everywhere – from urban communities like Chicago where stomwater inundation areas are not mapped, to rapidly urbanizing suburbs where FEMA floodplains are not identified in places where new subdivisions are being built, to rural county areas where FEMA flood mapping usually doesn't begin until a stream has 5-10 square miles of drainage area, to residual risk and failure inundation areas around levees and dams. They are not limited to remote areas with few inhabitants. ASFPM notes that Congress required the mapping of all areas of current and possible future population growth. From a land use perspective, areas of possible future population growth can exist anywhere where an owner has a legal right to develop. ASFPM further notes that TMAC, in its Future Conditions report, indicates that for the riverine environment the 100-year floodplain is projected to grow by about 45%, with 70% of the total growth due to climate change. Clearly the flood risk is changing and growing, even where flood hazards are currently mapped.

Consider the following real world scenario.

Cameron Chase is a 211 lot residential subdivision on 87.6 acres (circled in yellow below) in rapidly urbanizing western Licking County, Ohio. The subdivision is only 17 miles east of downtown Columbus, Ohio which has a metro area population of 2 million. A small creek with a drainage area approx. 766 acres (or less than 2 square miles), bisects the tract of land, flowing generally from the west to east. The problem, as can be seen below is that the FEMA identified floodplain doesn't even begin until several thousand feet further downstream when the creek empties into another, larger creek. Luckily the county has regulatory standards above the NFIP minimums that require mapping of any watercourse on a tract of land being developed. The resulting floodplain (which was developed before any development could occur) had a maximum width of nearly 280 feet, and a maximum floodway width of over 100 feet.



The critical point is that there are thousands of subdivisions like Cameron Chase nationwide – developments that have recently occurred or will occur on small creeks and streams that FEMA has not identified because under the current mapping program they are a low priority as uninhabited cow pastures or corn fields. As a result, we are not mapping these areas, not getting ahead of development, and actually creating tomorrow's flood problems.

Other impacts of not prioritizing the mapping these areas include:

- No application of land use, building or development standards to make buildings or other development safer
- Higher risk of inadequately sized infrastructure such as bridges or culverts that actually increase flood elevations
- No requirement to purchase flood insurance
- Homeowners and local officials frustrated when maps are later updated and showing a flood zone on them when, in fact, the flood risk already existed but was not identified

The priority for hazard identification is missing from the TMAC report. Instead language such as the following is included: "The suggestion is not that FEMA allocate a significant portion of its limited resources to studying and mapping stream miles across the Nation that are not currently mapped using modern methods but rather that

FEMA develop a goal to address these areas." ASFPM strongly disagrees with such a statement and believes that the most important priority of FEMA's current and future mapping program should be an accurate and comprehensive identification of the flood hazard accomplished by completing flood mapping for nation which includes converting (using engineering and not digitization) the remaining paper map inventory into modernized updated flood maps. This priority should be followed closely by reassessing already mapped areas.

The Role of Flood Risk Assessments

There are two primary recommendations that focus on flood risk assessments: Recommendation #10 which suggests the transition from identification of the 1% chance floodplain and BFEs for insurance rating purposes to a structure specific flood frequency determination and associated (multiple) flood elevations, and Recommendation #14 which suggests the transition to a flood risk assessment focus that is structure specific.

In both Recommendation #10 and #14, the implication is to transition from some current state, giving the reader the impression that we should no longer identify and map the 1% chance floodplain. Risk assessments cannot be performed without identifying the flood hazard and identifying the extent of the floodplain. In fact, a sub-bullet under Recommendation 14 indicates that "a necessary prerequisite for accurate flood risk assessments is detailed flood hazard identification. . ." In other words, we must continue with and prioritize hazard identification activities including updating the un-modernized inventory of mapped areas and identify areas that are not mapped as the foundation for any risk assessment.

It is easy to confuse the issue of structure based risk assessment with insurance rate setting. These are different issues. Accurate flood hazard information is the basis for insurance rate calculations, and ASFPM supports improvements in the process. What, then is the role and priority of FEMA or the federal government in risk assessment? In the case of Recommendation #10, as a provider of flood insurance, FEMA should overhaul its insurance rating system to be more precise for actuarial rating, possibly including new rating zones (such as a set of new zones for levees) and incorporating multi frequency hazard data that is generated by new flood studies. In the case of Recommendation #14, beginning role for FEMA is to ensure that data generated by its partners is can be readily incorporated in risk assessment tools. State, tribes and communities can and should participate in development of the data (this is in fact recommended on p. 4-71). However, the mapping program should not necessarily prioritize funding the of risk assessments until all of the hazard identification work has first been done the study area.

Bottom line, the flood hazard must be identified within reasonable accuracy parameters nationwide. This provides the foundation for improved insurance ratings and risk assessments. This should be the top priority and advance with a vision to improve insurance rating and risk assessment.

Thank you for considering the views of the Association of State Floodplain Managers. We would be glad to respond to any questions. Please contact Chad Berginnis, ASFPM Executive Director at cberginnis@floods.org or at 608-828-3000.

LETTER SUBMITTED BY CHAD BERGINNIS, EXECUTIVE DIRECTOR, ASSOCIATION OF STATE FLOODPLAIN MANAGERS AND JAMES M. DRINAN, JD, EXECUTIVE DIRECTOR, AMERICAN PLANNING ASSOCIATION

September 12, 2016

Honorable Richard Shelby
Chairman
Senate Committee on Banking and Urban Affairs
Washington D.C. 20510

Honorable Sherrod Brown
Ranking Minority Member
Senate Committee on Banking and Urban Affairs
Washington D.C. 20510

Dear Chairman Shelby and Ranking Member Brown,

The Association of State Floodplain Managers (ASFPM) and the American Planning Association (APA) have some significant concerns with legislation introduced in the Senate and passed in the House to facilitate development of a private market for flood insurance (S. 1769 and H.R. 2901). Together, our membership includes 55,000 floodplain managers and planners who work in states and communities nationwide. We are unable to support the legislation unless some modifications are made. We do understand and support the interest in development of more private flood insurance options. As presently written, however, these bills could undermine the stability of the National Flood Insurance Program and its role as a comprehensive flood risk management program. We strongly urge that the Committee consider the legislation in the context of reauthorizing the NFIP in 2017.

Maintaining the basic structure and availability of the NFIP is important. The NFIP is not just an insurance program, but is also a flood risk identification (mapping) and flood risk reduction (hazard mitigation and floodplain management) program. Flood maps support many other local activities such as land-use and emergency management planning. Local floodplain ordinances associated with participation in the NFIP guide development to avoid or reduce flood risk resulting in over $1.7 billion in avoided losses annually. Mitigation activities funded through the NFIP have resulted in funds to reduce flood risk for 1,850 buildings annually between 2010 and 2014 by doing things such as elevating, flooproofing, acquiring or relocating them.

We have many concerns about provisions and potential impacts of the private flood bill. While private insurance companies benefit from the flood risk maps, local

floodplain management, technical assistance and hazard mitigation activities that are funded by NFIP policy fees and premiums, private policies are not required to support such programs and activities through either equivalent fees or coverages. Nor does the private flood bill even require a community to participate in the NFIP. Private market calculations can lead companies to pull out of certain areas. Private policies would not be required to have similar coverages, exclusions or deductibles so we are concerned about property owner and community impacts if property owners purchase a property only to find out the deductible is too high or exclusions do not provide coverage similar to a NFIP policy.

Since private companies are already moving into the flood insurance market, there is no urgency to pass this legislation without first understanding the long-term impact on the NFIP. We suggest that there are some modifications to the private flood insurance legislation which would preserve the important functions of the NFIP while encouraging private market development.

ASFPM and APA urge that no action be taken on S. 1769 and H.R. 2901 until the bills can be considered in the broader context of the future of the NFIP. We look forward to working with the Congress on comprehensive NFIP reauthorization and on ways that private flood insurance can complement, not destabilize the NFIP.

Thank you for considering our thoughts, concerns and recommendations.

Very sincerely,

Chad Berginnis	James M. Drinan, JD
Executive Director	Executive Director
Association of State Floodplain Managers	American Planning Association

Cc: Members of the Senate Committee on Banking and Urban Affairs

JOINT LETTER SUBMITTED BY AMERICAN BANKERS ASSOCIATION, AMERICAN INSURANCE ASSOCIATION, COUNCIL OF INSURANCE AGENTS AND BROKERS, FINANCIAL SERVICES ROUNDTABLE, THE INDEPENDENT INSURANCE AGENTS AND BROKERS OF AMERICA, NATIONAL ASSOCIATION OF MUTUAL INSURANCE COMMITTEES, NATIONAL ASSOCIATION OF PROFESSIONAL INSURANCE AGENTS, AND PROPERTY CASUALTY INSURERS ASSOCIATION OF AMERICA REGARDING THE PRINCIPLES FOR FLOOD INSURANCE REAUTHORIZATION

September 12, 2016

Dear Chairman Shelby and Ranking Member Brown:

The undersigned organizations respectfully submit the attached Joint Trades' Principles for Flood Insurance Reauthorization and request that this letter and the attached Principles be included in the official record for your September 13, 2016, hearing entitled, "The National Flood Insurance Program: Reviewing the Recommendations of the Technical Mapping Advisory Council's 2015 Annual Report."

The attached Principles for Flood Insurance Reauthorization represent more than a year's work to identify and build broad support around basic ideas deemed essential to any reauthorization of the National Flood Insurance Program (NFIP). As such the Principles underscore the primary importance of long term reauthorization of the NFIP before the September 30, 2017, reauthorization deadline.

In addition to singling out the importance of timely NFIP reauthorization, the principles identify legislative and regulatory reform proposals to: (1) improve the customer experience for NFIP participants; (2) enhance and foster private market solutions for flood risk management in the United States; (3) maintain and improve flood risk mitigation; including (4) support for improved flood risk mapping to enable consumers, communities and the private sector to accurately evaluate, mitigate and price flood risk.

The undersigned organizations look forward to working with you and your colleagues to assure that the NFIP is reauthorized and reformed in advance of the September 30, 2017, reauthorization deadline.

Sincerely,

American Bankers Association
American Insurance Association
Council of Insurance Agents and Brokers
Financial Services Roundtable
The Independent Insurance Agents and Brokers of America
National Association of Mutual Insurance Committees
National Association of Professional Insurance Agents
Property Casualty Insurers Association of America

JOINT TRADES COALITION FLOOD REAUTHORIZATION PRINCIPLES

THRESHOLD ISSUES – Any public policy discussion of flood risk management in the United States should include: (1) solutions designed to increase the percentage of property owners who purchase flood insurance, and (2) long-term reauthorization of the National Flood Insurance Program (NFIP) before the September 30, 2017 expiration.

In keeping with the above noted principles, legislative/reform proposals that merit consideration fall within four broad categories

(1) **Improving the Customer Experience:** Enhancing the Write Your Own (WYO) program with a focus on improving the overall NFIP customer experience. Areas for inclusion include:

a. Improving Disclosures

b. Policyholder education

c. Simplified underwriting

d. Simplified claims handling (appeals process credibility, and litigation data reform)

e. Reimbursement rate reaffirmation

(2) **Enhancing and Fostering Market Oriented Solutions:** A discussion of the development of private sector opportunities to encourage greater take-up rate for flood insurance and reduce taxpayer exposure should include:

a. Explore making better, broader coverage available to consumers at rates that reflect risk

b. Explore utilizing cat bond/ILS/Reinsurance market to lessen taxpayer obligation

c. Access to government held claims data for underwriting purposes

d. Repeal of WYO non-compete clause

(3) **Mitigation Issues:** Encouraging more policyholders to purchase flood insurance should include a conversation on issues surrounding mitigation. Topics for consideration should include:

a. Property buy-out for SRLPs

b. Continued NFIP supported mitigation efforts

c. Continued availability of NFIP policy fees for mitigation

(4) **Mapping.** Reauthorization legislation should include a provision that ensures adequate mapping funding to enable consumers, communities and the private sector to accurately evaluate, mitigate and price flood risk.