

IRMA'S PEAK RAIN WAS OVER CUBA

Hurricane Irma, meanwhile, set a record for its sustained intensity.

"Irma was a complete standout: 185 mph and stayed there for a day and half," Kossin said. "These storms do not stay there that long."

This intensity was matched with a firehose of rain, dumping water at 10.8 inches an hour, reaching depths of 20 inches in Cuba and 15.8 inches in Florida.

The downpour led to flooding from 23 rivers and creeks in Central and North Florida, forcing highways to close. The state reported at least seven deaths from drowning.

In Cuba, Irma's storm surge overtopped the Havana seawall, while unrelenting rain turned the capital's streets into rivers, killing at least 10 people.

MARIA TOOK DIRECT AIM AT PUERTO RICO AND THEN REGAINED STRENGTH

With tropical force winds reaching 230 miles from its center, Hurricane Maria completely engulfed Puerto Rico as it bisected the 100-mile wide island, picking up steam again one it was clear.

Satellite measurements already show that it poured as much as 6.44 inches of rain per hour and has left Puerto Rico shrouded in darkness.

The Cordillera Central mountain range that forms the spine of the island of Puerto Rico acted as a juicer for Hurricane Maria, Huffman explained.

Perhaps the worst blow from Maria was the 150 mph winds that knocked down 80 percent of the island's power transmission lines and 85 percent of its cellphone towers, leaving people in the dark and struggling to contact each other. But the flooding from rainfall has been a hazard too, including threatening to breach Guajataca Dam in the Western part of the island, forcing hundreds to evacuate.

At least 18 fatalities have been reported in Puerto Rico so far, including two police officers who drowned.

THE CLIMATE SIGNAL IN DELUGES LIKE THESE IS EMERGING

No single weather event—even an extreme one—can be "caused" by climate change, as Vox's David Roberts has explained in detail. And when talking about hurricanes, researchers are quite hesitant to even estimate how much climate change is to blame. Huffman said he's not yet sure if this storm season is "unprecedented" in its ferocity.

However, rising average temperatures are definitely an important element of huge storms like Harvey, Irma, and Maria.

Warmer temperatures are driving sea level rise, which is increasing risks from the storm surges that often herald hurricanes.

Increasing heat is also warming up the ocean, and hotter air holds onto more moisture, increasing the available energy for hurricanes.

And independent of cyclones, extreme rainfall events are on the rise.

Kapnick noted that even individual rain storms can be overwhelming, like storm that drenched Baton Rouge last year with 31.39 inches of rain and three times the volume of water of Hurricane Katrina throughout Louisiana in 2005.

As the chart below shows, the amount of rain from a once-in-every-30-years rainstorm like the one that immersed Baton Rouge has gone up due to warming:

"In this region where we have known precipitation extremes, we have been able to detect an increase in precipitation extremes due to a warming climate," Kapnick said.

And scientists are getting better at figuring out when the torrential downpours are coming.

"If you pay attention, we've had a really remarkable series of forecasts," said Huffman. "For Irma, we knew four to five days in advance that there would be a sharp right turn. Twenty years ago, you wouldn't have dreamed of doing that."

"Everything we see is consistent with what we expect climate change to do," Kossin said.

INSTRUMENTS SOMETIMES CAN'T STAND UP TO THE EXTREME WEATHER THEY'RE TRYING TO MEASURE

Huffman explained that researchers aim to combine different instruments to get a robust handle on rainfall.

"The gold standard is rain gauges because they physically collect the rain," said Huffman.

The next option is ground-based radar, which covers a wider swath of the weather than rain gauges, but less directly measures rain.

But take a look at what happened to a weather radar station in Puerto Rico:

This illustrates part of the challenge of attaching numbers to extreme weather events. Many of the systems used to track them are also vulnerable to them, leaving only indirect figures and estimates.

What's more, both rain gauges and ground-based radar have limited ranges, leaving vast stretches of ocean where hurricanes spend most of their existence unmeasured. And when a hurricane does make landfall, gales can knock them down.

"We don't really have anything on the surface [of the ocean] to tell us the details," said Huffman. "When the chips are really down, sometimes satellites are the only choice."

That means the full accounting for the rainfall from Harvey, Irma, and Maria could take months to deliver as meteorologists piece together their models with the measurements they have.

However, scientists are eagerly waiting for the dust to settle so they can confirm their suspicions about the record-breaking storms this year. The American Geophysical Union added a last-minute session for researchers to present their findings on Harvey and Irma at their December meeting.

"There's going to be a tremendous amount of research coming out in the next few months," Kapnick said.

HONORING HELEN SMITH, POW ADVOCATE, ON HER 91ST BIRTHDAY

The SPEAKER pro tempore (Mr. HIGGINS of Louisiana). Under the Speaker's announced policy of January 3, 2017, the Chair recognizes the gentleman from Virginia (Mr. GARRETT) for 30 minutes.

Mr. GARRETT. Mr. Speaker, I yield to the gentleman from Texas (Mr. GOHMERT), my colleague.

Mr. GOHMERT. Mr. Speaker, I thank the gentleman from Virginia for yielding.

Mr. Speaker, it is indeed an honor to speak on behalf of a person I have come to know and love. In fact, the First District of Texas has been blessed to be the home of many remarkable individuals who have gone above and beyond to serve others in Texas and throughout the world.

It is indeed a privilege to honor a woman from Longview, Texas, who has dedicated her life to serving and providing comfort for our Nation's vet-

erans, particularly our prisoners of war. Her name is Helen Smith, and October 5 of this year marks her 91st birthday.

Helen's caring for our Nation's POWs began with her husband, Gordon Smith, a survivor of the Bataan Death March in 1942 and a POW until the end of World War II.

Throughout her long and happy marriage to Gordon, Helen gained a personal understanding of the struggles many of our veterans and former POWs endure; but armed with the knowledge of what our veterans and former POWs face on a daily basis, Helen set out into the world to help as many of our veterans as she possibly could. She spent countless hours in VA facilities ensuring veterans, young and old, got the care they so desperately needed and deserved.

Helen has walked the Halls of Congress advocating for our veterans and former POWs throughout her life. She is a driving force and was behind Public Law 97-37, which improved VA benefit programs for former POWs.

Helen is not slowing down even at her age. At 90, Helen would head over to the Longview Community Based Outpatient Clinic every morning at sunrise. She would make a pot of coffee and spend her day talking to veterans, giving them a sympathetic ear and helping them through the VA process.

It is a distinct privilege to recognize such a remarkable woman, to thank her for her tireless service to our veterans and former POWs, and to wish her a very happy 91st birthday.

Her accomplishments are recorded in the CONGRESSIONAL RECORD, which will endure as long as there is a United States of America.

I do thank my friend from Virginia for yielding.

□ 2115

Mr. GARRETT. Much has been said recently about the First Amendment to the Constitution of the United States, and specifically how in this land of the free we have the prerogative to do as we choose in matters that manifest themselves, as communication that we can speak freely even when that speech is objectionable to some.

And many people who have been fortunate enough to be amongst the 1 in 1,300 high school football seniors to take the field on a Sunday at an NFL stadium have availed themselves of this right that was given to them by people greater than themselves, perhaps who shed their very lifeblood that they might make a decision not to stand for the anthem that embodies the gratitude for that sacrifice.

Brian Tracy once said: "Develop an attitude of gratitude and give thanks for everything that happens to you, knowing that every step forward is a step towards achieving something bigger and better . . ."

More recently, an individual said: "If you were successful somebody along

the line gave you some help. There was a great teacher somewhere in your life. Somebody helped to create this unbelievable American system that we have that allowed you to thrive."

Later in that speech, President Obama said, "So if you have a business, you didn't build that," someone did it for you. And he was roundly excoriated, but at some level he acknowledged the sacrifice of so many that compels me to stand here today to ask that when the national anthem of the United States of America is played, that you demonstrate some semblance of gratitude for the sacrifice that has been given by untold millions before you that allows you the prerogative not to stand.

And so should you choose not to stand, I support that right. I believe that right is fundamental to what makes us Americans, but I implore you to learn the history of our Nation that allows you the right not to stand, for, to be certain, there are places in the world, North Korea, where choosing not to stand when the anthem is played might lead to a horrible demise.

Gilbert Chesterton once said: "One sees great things from the valley; only small things from the peak." And the French political philosopher Alexis de Tocqueville said: "The greatness of America lies not in her being more enlightened than any other Nation, but rather in her ability to repair her faults."

And so when a slaveowner named Jefferson wrote the Declaration of Independence, he talked about how all people were created equal, despite his inherent flaw or flaws, and when the preamble to the Constitution was hammered out, the Founders suggested that we should strive not to be a perfect union but a more perfect union by acknowledging that, in fact, where there are humans in charge, we will never achieve perfection.

Tonight, I ask your indulgence, if you tuned in at home completely by accident, for a moment to learn about how lucky we are, regardless of the circumstance of our birth, compared to our peers across the globe, to have the opportunity to live in this, the greatest Nation in the history of mankind, and how standing for an anthem that honors an imperfect nation that continually strives for perfection is not only the right thing to do, it is the only thing to do if you understand the scope of the sacrifice of those who came before us.

Imperfect people like Thomas Jefferson gave us near perfect documents. And so tonight, as my vehicle to discuss why we should stand for our anthem, I will choose the district that I am honored to have the opportunity to serve, Virginia's Fifth District. I will say, in all humility, that while I am ordinary, the district is great; that the Fifth District of Virginia is, in my humble opinion, without hyperbole, the greatest congressional district in the country. And I will give you ten rea-

sons why I hope the next time the anthem is played you will stand and think with reverence upon those who made sacrifices that gave us the opportunity to live in the greatest land humanity has ever seen.

In 1743, born in the Fifth District of Virginia was this very man, Thomas Jefferson. An imperfect man who had a thirst for knowledge and said, "I cannot live without books," and continually sought to understand what might be perfected as it related to government amongst men, and in the Declaration created a document which was the first message that a fledgling nation held out to the world to say: This is who we are.

And he said, in that document, that all people were created equal; a concept that this Nation did not arrive at in reality by virtue of slavery and things like the failure to grant women suffrage for some 150 years, nearly, later.

However, a charge to work towards a more perfect union, that was contained in the document, the Constitution, overseen by James Madison also of the Fifth District of Virginia.

And so while we were imperfect, we were given the greatest and most noble of goals, and that is to strive to be more perfect.

So the vision of Jefferson outlined in the Declaration and expanded upon James Madison in the Constitution, and later articulated in this town, Washington, D.C., by Dr. King when he said that we should judge individuals based not on the color of their skin but on the content of their character, it was borne in the hearts and minds of imperfect people from the Fifth District of Virginia who gave us near perfect documents.

In 1819, another of Mr. Jefferson's visions came to fruition with the foundation of the University of Virginia, a leading public research university and the source of incredible scholarship on things like human rights and individual liberty and natural law and the freedoms that individuals are bestowed by virtue of the Nation in which we live, again, in the Fifth District of Virginia.

Fast forward to 1865, the end of the bloodiest era in our Nation's history internally, a conflict as we moved towards a more perfect union, in which if you count disease and dysentery and starvation, along with combat deaths, over a million Americans gave their lives as we worked to become a more perfect union. And we know but a small fraction of a percentage of those people's names.

And we know that Abraham Lincoln took a bullet by someone who was not willing to accept that progress meant acknowledging that Jefferson's words were true, as they were later manifest by Dr. King, once again, 53 years ago in August in this city.

Fast forward to 1933 and the 21st Amendment repealing prohibition, Franklin County, Virginia, dubbed the

wettest county in America. And as we watched as jobs left the Fifth District of Virginia and opportunity seemingly left with them, we saw a wellspring of opportunity and economic development in the form, ironically, of wineries and distilleries and breweries. So when Burlington and Broyhill and Bassett and Lane and Dan River Mills left, distilleries and breweries and wineries crept in. It started in Franklin County, Virginia.

Fast forward to 1944, Bedford, Virginia, June 6. The Allied invasion at Normandy, D-day. The Town of Bedford lost more of her sons per capita than any other town in the United States—19 in one day, more than decimating an entire graduating class and removing the best and brightest from that small Virginia locality.

Notably, three other young men from Bedford died later in the Normandy campaign, bringing the total Bedford KIA during Normandy to 22. And ironically, these men died serving in the Blue-Gray 29th Infantry Division, so named because it honored the fact that it brought soldiers from both sides of the Mason-Dixon line together to fight and bleed and die to free foreign women and men whom they had never met.

Fast forward to 1951, Prince Edward County, Virginia, the hamlet of Farmville. Barbara Johns, a high school student, had an uncle who was a scholar, who discussed with her and her family over the dinner table the ideas expanded upon by Jefferson and the Declaration, and suggested that, indeed, all people were created equal. And this manifests itself through Barbara Johns in action. This teenage girl looked at the school that she attended, the Moton High School, and looked across the county to the all-White new high school and understood that if all people were, indeed, created equal, as her uncle had suggested as was written by Jefferson, then it was unfair that court cases like *Plessy v. Ferguson* that any law that said that separate but equal was anything close to a possible theoretical reality must be struck down.

Now, I have passed by other residents of the Fifth District of Virginia. Patrick Henry, for example. John Marshall, for example. But back to Henry. Henry stood before the American Revolution and said: "I know not what course others may take; but as for me, give me liberty or give me death." And from the back of the room someone shouted: Treason. And Patrick Henry responded, "If this be treason, make the most of it," acknowledging that to do something great that he believed in he might need to die.

Barbara Johns did that very same thing on April 23, 1951, when she led a walkout of Moton High School demanding an end to separate but equal segregation in Virginia, thus sparking the civil rights movement in Virginia that also can look to its forbearers and see Booker T. Washington, a civil rights leader amongst the last generation of

African-American leaders born into slavery. His vision began to culminate when Johns led the student walkout in Prince Edward County that led to desegregation at the very risk of her life.

Now, I like to liken Johns to Patrick Henry, both of whom are heroes of mine, as two people who were willing to stand up and do what they thought was right regardless of the fact that it, quite literally, might cost them their lives. They might die. But I tell people when I speak to them, the difference between Patrick Henry and Barbara Johns is Patrick Henry was a 37-year-old attorney trained to speak in front of people, and Barbara Johns was a teenage girl, and this happened in America as we worked to become a more perfect union.

Fast forward to Pittsylvania County, where Deborah Coles, another hero of mine, was born one of eight children to a tobacco sharecropper. Growing up in a Virginia where racism was far too evident and common, Deborah Coles bucked the odds, learned a work ethic from her mother and father, became the first in her family to attend college, attending Virginia State University, and later going on into public education where she was and is an educator and an administrator in the small town where I went to high school and where she had undoubtedly touched the lives of innumerable thousands of students over the decades—finding ways to say yes, finding means to encourage thought, finding ways to stimulate young minds. And she did this despite the ridiculous challenges faced by her forbearers, and she did it here as we worked to become a more perfect union in America.

Fast forward to the 21st century. Servicemembers, not unlike their brethren from Bedford who fell on June 6 at D-day, just a handful of the sacrifice from the Fifth District of VA, 1-435th of our Nation.

Humayun Khan, a graduate of the aforementioned University of Virginia, who, at risk to himself, moved his soldiers away and sought to determine whether or not a vehicle approaching the point where he was working was a threat, and ultimately, in protecting those with whom he served, gave his life wearing the uniform of a nation to which his parents had immigrated.

□ 2130

Sergeant Andrew Crabtree, a Special Forces soldier who served multiple tours defending America in the global war on terror and recently passed to the next life from a cancer deemed to have been service-related.

And Seaman Dakota Rigsby, the son of working class folks from Fluvanna County, Virginia, in the Fifth District, who tragically perished while wearing the uniform of this Nation, defending that which is worth defending, aboard the *USS Fitzgerald*.

Then, moving to today, and reason number 10, although, to be fair, Booker T. Washington, Patrick Henry, and

John Marshall could make this 13 if I counted them separately, and that is the families of Pastor Hassan and Abdumawla, Christians from the Republic of Sudan, who, after about 9 months of work on our part and about 18 months of imprisonment on the part of the two gentlemen I named, have now moved to Buckingham County, Virginia, where they have an opportunity to experience a land where they are free to stand or sit when the anthem is played, where they are free to worship or not worship as they feel compelled, and where no dream is too big.

I would wager that, having lived in a foreign land and not having been amongst those 1 in 25 or 26, roughly, fortunate enough to have been born here in this imperfect land perpetually seeking to be a more perfect Union, I would wager that, when our national anthem is played, these newest residents of Virginia's Fifth Congressional District will choose to stand. I hope, when you think of the sacrifices made by millions who came before us, that you will, too.

Mr. Speaker, I yield back the balance of my time.

RECOGNIZING THE RESILIENCE OF FLORIDIANS AND FIRST RESPONDERS AFTER HURRICANE IRMA

The SPEAKER pro tempore. Under the Speaker's announced policy of January 3, 2017, the Chair recognizes the gentleman from Florida (Mr. Rutherford) until the hour of 10 p.m.

Mr. RUTHERFORD. Mr. Speaker, I rise today to commend the resilience of my fellow Floridians, to thank our men and women in uniform, including our State and local first responders, and to recognize our State and local leaders for the tremendous aid and direction they gave to all of our fellow Floridians during their response to Hurricane Irma.

We normally think of men and women in uniform as those who defend our country abroad, but they also deserve our recognition and thanks for their service on the homefront as well.

The Florida Army National Guard, the United States Coast Guard, the Navy, and many others aided our State before, during, and after the storm. In fact, I witnessed National Guard units from various States working together with the Florida National Guard to rescue citizens of northeast Florida.

Mr. Speaker, the United States Coast Guard did an incredible job carrying out hundreds of rescues, and I commend U.S. Coast Guard Commandant Zukunft, Captain Wiemers of Port Jacksonville, and all of their men and women who risked their lives to save others during and after the storm.

I also want to recognize all of the first responders, police, and firefighters who responded quickly and saved so many lives. As an example, the Jacksonville Sheriff's Office, in 1 day, rescued more than 350 of our citizens.

I also want to commend Governor Rick Scott and our State agencies for the advanced planning that they did leading up to Hurricane Irma and the recovery efforts that are still going on.

In northeast Florida, we experienced, historic flooding, levels not seen since 1846. That is the year after Florida became a State.

In St. Johns County, small businesses were flooded and homes literally toppled over into the ocean. Many more still threaten to fall into the ocean, undermined by severe beach erosion.

In Nassau County, here, a week after the storm, areas of the county were still not accessible due to heavy flooding, and shelters were still open.

But throughout all of this, Mr. Speaker, I spoke with many local volunteers who had damage to their own homes but were out helping rescue other families. I even spoke with a retired coastguardsman who traveled to Nassau County from Virginia to serve with the Red Cross.

Mr. Speaker, the Florida delegation in this House is now unified to ensure that Floridians receive the Federal support they need to recover from this horrible natural disaster, Hurricane Irma.

I especially want to recognize Senator MARCO RUBIO and Florida Representatives AL LAWSON, NEAL DUNN, TED YOHO, RON DESANTIS, STEPHANIE MURPHY, VAL DEMINGS, and DARREN SOTO for coming to see, firsthand, the damage to our First Coast community.

I also want to thank the congressional leaders from around the country for coming to northeast Florida. Speaker PAUL RYAN, Appropriations Chairman RODNEY FRELINGHUYSEN, and Chairman JOHN CARTER all personally toured our damaged communities, leaving us with a promise to do all they can to assist in Florida's recovery. I thank them for the support, and I am grateful for their work to quickly provide emergency aid to help hurting Floridians.

We are all also heartbroken that, now, Puerto Rico and the U.S. Virgin Islands are enduring incredibly devastating damage from Hurricane Maria. We believe it is important that we share resources with our neighboring islands.

As you know, Mr. Speaker, the Port of Jacksonville is ground zero for getting shipments of needed goods to Puerto Rico and the Virgin Islands. In fact, the American Maritime Partnership and the entire U.S. maritime industry are, in fact, first responders in times of emergency like Irma and Maria when they strike Puerto Rico and the Virgin Islands.

I am proud of what the American maritime industry has accomplished. They have been working tirelessly around the clock to get goods to those who are in need. Almost immediately, there were 10,000 containers delivered; 35,000 pounds of cargo, were delivered by TOTE and Crowley of Jacksonville.