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NWA Keynote Speech
The Weather-Ready Nation and Forecast, Warning,
and IDSS Successes Including for Hurricane Dorian
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In joining the National Weather Service in 1989, I left the Research Community, a community that I was proud to be part of, to join an organization which had a mission I believed in, and an ongoing modernization I wanted to be part of.

What I quickly learned was that I joined an organization whose entire workforce demonstrated

an amazing commitment to service and a dedication to the Mission of saving lives and property.

And, I also saw the Scientific & Engineering INTEGRITY that the NWS workforce brings to their jobs every day, especially as it relates to sustaining the scientific integrity of the forecast process.

24 years later, when I took the job as the Director of the National Weather Service, I did so with an unshakeable commitment to our mission, and

because of the dedication of our people who make this a great agency.

And, I also took this job because of the accepted Strategic Vision of Building a Weather-Ready Nation – which I believed was essential to UP OUR GAME. To go beyond forecasts and warnings – to link our forecasts and warnings to decision makers at every government level.

I wanted to lead this fundamental change in the way the National Weather Service operates to ensure every community is ready – responsive – resilient in

the face of the increasing vulnerability of this country to extreme weather, water and climate events.

What I can say today is that the employees of the NWS have exceeded my wildest expectations for where that vision has taken us.

So, today, the National Weather Service:

- 1) Embraces the Weather-Ready Nation

Vision.

- 2) Embraces Impact based Decision Support

Services

3) And uses IDSS to connect observations, forecasts, and warnings to decision makers at every government level, including Tribal governments, Pacific Territorial Islands, and Alaska Natives, recognizing that over 90% of decisions that directly relate to public safety are made at the local level.

And we have adopted the Practice, Practice, Practice mantra— to build up the trust between the NWS and our core emergency management partners, a trust that is essential to ensure our partners are “ready” and “responsive” when using our information, and even able to factor in the forecast uncertainty into

their risk assessment and decision matrix. And today, the local, state, and Federal emergency management community trust us enough to do their job of saving lives and mitigating property loss, even in the face of the forecast uncertainty that we still are confronting.

What I observe now, especially from the morning stand-ups and from interactions at Emergency Management conferences, is that the field is leading the way in carrying us all forward – toward what has become THEIR goal of building a Weather Ready Nation,

And as we move forward, the National Weather Service is:

- 1) finding efficiencies in the forecast process while maintaining the scientific integrity;
- 2) adopting a Whole Office Concept for everyone to find their role in this effort –
- 3) And collaborating across all forecast offices and Centers to ensure consistency that our core partners demand as they make their decisions to take the actions that save lives.

The success of this effort is seen in the statement by Eric Waage, Director of Emergency Management of

Hennepin County, Minnesota: **“Partnership with the NWS has revolutionized the EM community from one that reacts to events to one that proactively prepares and stays ahead of extreme events.”**

We now see this everyday across the country – Fires in California – Severe Weather such as what occurred in Kansas and Ohio in May of this year – the January 2016 Blizzard in the Northeast – Flooding events – Hurricanes over the past several years really stand out – And get this: we are seeing that the ocean shipping lanes are now completely

vacated in the predicted path of an incoming hurricane!

And we see it in testimonials like the one from Mike Crews the Christian County Emergency Manager and Taylorville, Illinois Fire Chief. On December 1, 2018, a long-planned evening Christmas parade in Taylorville was canceled in the morning due to a severe weather threat forecast for that late afternoon. As the evening approached, an EF-3 tornado ripped through the town center where the parade would have been occurring.

Mike Crews later wrote:

“To be clear, my decisions were heavily based on the conversations I had with the NWS Central Illinois office leading up to the storm impact.

Having the NWS staff readily available to discuss the likely impact and timeline was crucial. In my view, the entire decision support program you have long promoted, worked flawlessly. It’s clear from all the positive feedback we have received since the December 1st tornado event, that other emergency managers, elected officials, media and the community at large share that belief.”

So now, let's talk about Dorian.

Slides from the Dorian event

Comparison wrt Floyd which ends with the
“models are better now than in 1999” from the
Tampa Bay Times.

(Louis spoke from these slides, providing
comments which are available on the recording
of the presentation.)

But it is more than the model improvements.

There was an incredible range of activities behind
the scene that contributed to the focused evacuations
for Dorian:

- 1) 100s of Collaboration Calls with the NWS forecast offices and national centers, many led by the NHC
- 2) NWS Staff were “surged” from across the NWS to offices in the affected areas.
- 3) About 20 NWS employees were embedded in Federal, state, and local Emergency management offices
- 4) 100s of chat sessions that included many people inside the NWS and external partners in the media and Emergency Management community were held throughout the event before forecasts and warnings were issued or

updated to make for more consistent messaging to public safety officials within affected areas.

- 5) Launching extra sondes from stations throughout the Eastern third of the country and all the way up into Canada that appears to have stabilized the model predictions after August 31st.
- 6) Keeping the Infrastructure robust before, during and after the event: The tracking of critical information every day to sustain 99.99% reliability of our communication, central computing, and the observation infrastructures.

And all forecast offices collaborating internally to insure the best National Weather Service forecast was provided to the EM Communities in the eastern third of the US.

We are already hearing the testimonials up and down the East Coast – where they had to evacuate and take action and further inland where they didn't.

So, let's talk about Birmingham.

First: Some background

On March 3rd – The Birmingham WFO county warning area experienced a vicious tornado outbreak.

Despite the model forecasts and efforts by the Storm Prediction Center, the WFOs, and the state and local emergency management offices, and despite – extended range severe weather outlooks and great watch verifications and extended warning lead times – 23 people died.

Two things to keep in mind for the March 3rd Case:

- 1) The MIC Chris Darden and the SOO Kevin Laws, accompanied the first responders into the rural areas hardest hit. They saw the carnage. And were deeply impacted as anyone could be.
- 2) The day after, on March 4th, Eddie Hicks and other Alabama Emergency Managers stopped at the NWS Headquarters on their way to the Hill to see how we conduct our morning stand-up and then to meet with the NWS Leadership Team. Their first comment to us at the meeting was that the Birmingham office did everything right – everything they could have done, was done.

By mid morning on March 4th, Southern Region Headquarters and John Murphy (the NWS Chief Operating Officer) were telling us that the office was devastated and the employees were very hard on themselves— that they replayed the event over and over, looking for any extra insight that would have increased the warning lead time, anything that may have made a difference.

On March 23rd, I paid the Birmingham office a visit. And What I experienced from this office visit was profound.

- Their pain was still there; Kevin Laws was still wracked by this experience and cried on my shoulder
- They talked about exercising speed in the warning process – and to the connection to IDSS – without sacrificing the physical and social science basis for the information they needed to deliver

So, let's move forward to Dorian – when the phones and the social media lit up around 10 AM Central time on September 1st.

They did what any office would do, with an emphasis they deemed essential to shut down what they thought were rumors:

They quickly acted to *reassure* the partners, the media, and the public with strong language that there was No Threat of a Tropical Storm affecting the state and local communities at that time.

- And they did that based on past experiences to ensure clarity and impact
- They did that with one thing in mind: public safety
- And they responded NOT knowing where this information was coming from.

Only later when the retweets and politically based comments came into their office, did they learn the sources of this information.

Nevertheless, they were correct in clarifying that the threat was very low. Furthermore, the State and Local emergency managers and public safety officials made their decisions accordingly and praised the office for their quick actions.

So let me be clear:

- 1) The Birmingham office did this to stop public panic; to ensure public safety – the same goal as all the NWS Offices were working toward.
- 2) The system worked as designed and based, in part, on best practices and lessons learned from both physical and social science principles, especially from prior events.
- 3) The integrity of the forecast process was maintained by Birmingham across the NWS, and the entire enterprise, including the local media.

I would like to close by asking the SOO Kevin Laws and the Birmingham employees that are present to stand and be recognized.

And, now, let me ask all the NWS employees in attendance to stand to be recognized for your contributions to prepare our country for this storm and other extreme events.

I am proud of the NWS employees and am honored to serve them as their Director, and as a steward of an agency that Joe Friday called a National Treasure back in 1998, and still is today.

Thank You

