

## Meeting Minutes of the Subcommittee on Disaster Reduction

1 February 2018, 10:00 a.m. to 12:00 p.m., White House Conference Center Lincoln Room

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Italics indicate absent members. "T" indicate members participating via teleconference.

### Co-chairs

David Applegate (USGS)  
Mary Erickson (NOAA)  
Jack Meszaros (OSTP)

### Designated Representatives

<b>ASPR</b> <i>Darrin Donato</i>	<b>EPA</b> Greg Sayles (T)	<b>State</b> Fernando Echavarria
<b>BLM</b> Georgette Fogle	<b>FERC</b> <i>Marsha Palazzi</i>	<b>USACE</b> Tony Niles (T)
<b>CDC</b> <i>Mollie Mahany</i>	<b>HUD</b> Dana Bres	<i>Dimitra Syriopoulou</i>
<b>DHS</b> Erin Walsh (T)	<b>NASA</b> <i>Craig Dobson</i>	<b>USAID</b> Sezin Tokar
<b>DHS/FEMA</b> <i>Roy Wright</i>	<b>NGA</b> <i>Kerri Dugan</i>	<b>USCB</b> <i>Laura Furgione</i>
<b>DHS/USCG</b> <i>Jim Small</i>	<b>NGB</b> Steve Mason	<b>USDA</b> <i>TBD</i>
<b>DOD</b> <i>Al Johnson</i>	<b>NIH</b> <i>Aubrey Miller</i>	<b>USFS</b> <i>Monica Lear</i>
<b>DOE</b> <i>Patricia Hoffman</i>	<b>NIST</b> <i>Steve Cauffman</i>	<i>Carlos Rodriguez-Franco</i>
<b>DOT</b> Sheila Duwadi	<b>NOAA</b> Mary Erickson	<b>USGS</b> David Applegate
<b>EOP/OMB</b> <i>Michael Clark</i>	<b>NPS</b> Marcy Rockman	<b>USNRC</b> <i>Edwin Hackett</i>
<b>EOP/OSTP</b> Jack Meszaros	<b>NSF</b> Greg Anderson	<b>USPHS</b> <i>Estella Jones</i>

### Other Attendees

<b>ASPR</b> Skip Payne	<b>NGB</b> Chester Guyer	<b>UCSD</b> Ramesh Rao (T)
<b>DHS/FEMA</b> David Maurstad	<b>NOAA</b> Adam Smith (T)	<b>USGS</b> Sophia Liu
Jacob Vawter	<b>NSC</b> Mark Fleming	Alice Pennaz
<b>EOP/OSTP</b> Guillermo Mendoza	Arthur Ray	<b>SDR Secretariat</b>
<b>EPA</b> Keely Maxwell	<b>STPI</b> Robert Rozansky	Aleeza Wilkins
<b>NASA</b> David Borges	Chris Clavin	
<b>NGA</b> Christina Roy	<b>USFS</b> Mike Cherry	
Matthew Jensen	Sirina Fugitt	

### Agenda

10:00 Welcome, Introductions, and Approval of Minutes  
10:05 Co-chairs Report  
10:20 Briefing: National Preparedness Policy Review  
10:35 Briefing: National Flood Insurance Program  
11:05 Briefing: Billion Dollar Weather and Climate Disasters  
11:20 Briefing: Emergency Alert and Warning Systems  
11:55 Close and Next Actions

### Handouts

- February Meeting Agenda
- Draft December Meeting Minutes

## **I. Welcome and Introductions**

National Science and Technology Council (NSTC) Subcommittee on Disaster Reduction (SDR) Co-chair David Applegate (USGS) called the December meeting to order at 10:00 a.m. in the White House Conference Center Lincoln Room, and participants introduced themselves.

## **II. Report from the Co-chairs and Approval of Minutes**

The draft of the minutes for the December monthly meeting was approved with no changes.

SDR Co-Chair Jack Meszaros (OSTP) announced that Mary Erickson (NOAA) has officially been named co-chair of SDR. Members welcomed Erickson and expressed appreciation of her leadership and willingness to serve in this capacity.

SDR Co-Chair Dave Applegate (USGS) relayed his experience testifying before the Senate Committee on Energy & Natural Resources on January 30th regarding volcanoes, earthquakes, landslides, tsunamis, and avalanches. The US Forest Service also testified as did two state geologists, a state seismologist, and the Mayor of Kodiak, Alaska, which experienced a middle-of-the-night, middle-of-winter evacuation following the Jan. 23 magnitude-7.9 earthquake offshore southern Alaska. Although the hearing was not specifically called to discuss legislation, several senators spoke in favor of moving ahead on authorization bills for interagency earthquake, volcano, and landslide programs.

Applegate also shared a figure from the *World Economic Forum Global Risks Report 2018*, which ranks global risks in terms of impact and likelihood. Natural hazard risks, including extreme weather and other natural disasters (e.g., earthquakes, tsunami, volcanic eruptions, geomagnetic storms), rank at the top of both risk sectors. The full report is available at [http://www3.weforum.org/docs/WEF\\_GRR18\\_Report.pdf](http://www3.weforum.org/docs/WEF_GRR18_Report.pdf).

Aubrey Miller (NIH) invited participation at the 5<sup>th</sup> annual Federal Interagency meeting, to be held on March 16<sup>th</sup>, 2018 from 12:30 p.m.-4:30p.m. This meeting will explore federal efforts for enhancing our collective ability to conduct timely health research in response to disasters and other time-critical situations. The discussion will focus on: 1) sharing information about recent activities, 2) learning about ongoing efforts and plans among federal partners, and 3) identifying opportunities for progress and collaboration in the coming year. The meeting will take place on the NIH Bethesda, MD campus in Room D in Building 45 (Natcher Conference Center). Questions and RSVPs should be directed to Betsy Eagin Galluzzo ([betsy.eagin@nih.gov](mailto:betsy.eagin@nih.gov)) by March 9<sup>th</sup>, 2018

The SDR International Disaster Risk Reduction Working Group was to meet right after the main SDR session with the agenda including a briefing from NOAA on the recent Global Science and Technology Advisory Group (STAG) meeting that took place in December. The group also discussed the upcoming State Department Summit of the Americas, which will take place April 13-14 in Lima, Peru. The working group's next meeting will take place on Thursday, April 1, 2018, at 1:00 p.m. in the Lincoln Room of the White House Conference Center.

## **III. Briefing on the National Policy Preparedness Review**

Mark Fleming (NSC) presented on the National Policy Preparedness Review. Fleming began by highlighting the December 2017 release of the U.S. National Security Strategy. The Strategy is comprised of four pillars:

1. Protect the American People, the Homeland, and the American Way of Life
2. Promote American Prosperity

3. Preserve Peace through Strength
4. Advance American Influence

Fleming noted that the second pillar, “Promote American Resilience,” is accomplished through improving risk management, building a culture of preparedness, improving planning, and incentivizing information sharing. More information may be found on page 14 of the National Security Strategy (<https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>).

Fleming co-chairs the National Preparedness Policy Review Sub-Policy Coordination Committee (PCC), which has identified gaps in preparedness policies and recommends changes to strengthen them. Emerging recommendations to the Domestic Resilience Group PCC are to clarify roles and responsibilities, foster integration between preparedness mission areas, enhance the use of risk management principles, foster continuous improvement through exercises and evaluations, and synchronize planning across all levels.

The first recommendation is to clarify roles and responsibilities. This includes providing clarity regarding the lead and supporting federal agencies for all non-Stafford Act Emergencies, defining the role of Sector Coordinating Councils during response and recovery operations and activities, and mapping out policies that currently have created overlapping missions and activities. Fostering integration between preparedness mission areas refers to the exploration of developing a National Resilience Strategy, improving the integration of national preparedness training and education systems, and identifying programs and investments that can foster recovery from disasters while mitigating potential future impacts. Enhancing risk management includes improving the Threat and Hazard Identification and Risk Assessment and process to produce a better understanding of national risks and hazards, as well as preparedness strengths and gaps across mission areas. Articulating how core capabilities are used to manage risk, as well as aligning risk management to performance of essential functions across mission areas both support this recommendation. Developing policy on national exercises, documenting evaluation methods, and providing a baseline of national preparedness training and education will foster continuous improvement through exercises and evaluations. It is also recommended that common planning assumptions be utilized to synchronize planning. Fostering common data dictionaries and information agreements and advancing stakeholders horizontally within communities and vertically at state and federal levels also support this goal.

#### **IV. Briefing on the National Flood Insurance Program**

David Maurstad (FEMA) delivered an update on the National Flood Insurance Program (NFIP). Maurstad differentiated the NFIP from FEMA’s Individual Assistance Program, the latter of which requires a presidential disaster declaration. The NFIP requires the homeowner to pay for coverage, which provides funds for repairs in the event of a flood and reduces reliance on the Individual Assistance Program. The mission of the NFIP is to educate American property owners about the risk of flood, accelerate recovery from flood damage, and reduce the personal and national costs of disaster. The NFIP is available in all 50 states and currently covers five million policyholders.

The NFIP is a public-private partnership, in which Congress authorizes funds for operation, FEMA sets actuarial rates and underwrites policies, and private insurance companies implement the program and handle claims. The NFIP identifies flood risks through scientific and engineering methods and maps hazards on Flood Insurance Rate Maps, which are used for floodplain management and risk communication. In addition to identifying flood risks, NFIP also funds mitigation projects and insures flood risk for property owners.

Though the majority of current policyholders are in high-risk flood areas, in 2017 half of all NFIP claims went to policyholders outside of the high-risk area. Maurstad elaborated on the severe impact the 2005 hurricane season had on the program's financial stability, and today, FEMA has goals to increase investment in mitigation by a multiple of four and double coverage by 2023. Ongoing efforts to transform the NFIP and its customer experience include developing a new suite of flood insurance products, redesigning risk rating, and addressing insurance affordability. More information is available at <https://www.fema.gov/national-flood-insurance-program>.

## **V. Briefing on U.S. Billion-dollar Weather and Climate Disasters of 2017**

Adam Smith (NOAA) presented on NOAA's billion-dollar weather and climate disasters activity (<https://www.ncdc.noaa.gov/billions/>). The National Centers for Environmental Information (NCEI) Center for Weather and Climate is the Nation's "scorekeeper" regarding the trends and anomalies for weather and climate events. Smith reported that extreme events included in this analysis were responsible for over 75% of the damage from all recorded U.S. weather and climate events. Smith noted that geophysical events, such as earthquakes and volcanic eruptions, are not incorporated into the analysis. Smith uses a broad array of public and private data sources in order to measure total, direct losses (insured, uninsured, and under-insured) for various assets, not including natural capital losses, healthcare-related costs, or the statistical value associated with loss of life.

In 2017, the U.S. experienced 16 separate \$1B-plus weather and climate disasters, with cumulative costs over \$300 billion and over 360 fatalities. The 2017 hurricane season was the most costly on record (\$265 billion), and Hurricanes Harvey, Irma, and Maria now join Katrina and Sandy in a new list of the top five costliest U.S. hurricanes on record. The 2017 wildfire season was also the most costly on record at \$18 billion, tripling the previous record season in 1991. At a cumulative cost of \$306 billion, the 2017 disaster year shatters any other cost on record. The previous U.S. annual record was set in 2005 at a cost of \$214.8 billion due to impacts from Hurricanes Dennis, Katrina, Rita, and Wilma.

Smith noted that of 219 cumulative events from 1980-2017, the 38 tropical cyclone events constitute over half of the total cost. On the other hand, severe storms are the most common type of event, but do not have a high cost impact due to their relatively small spatial footprints.

## **VI. Briefing on Emergency Alert and Warning Systems**

Ramesh Rao (UCSD) presented on the recently published National Academy of Sciences, Engineering, and Medicine report entitled "Emergency Alerts and Warning Systems: Current Knowledge and Future Research Directions." The committee represented academia, industry experts in relevant technologies and social sciences, and emergency managers, who reviewed the current knowledge of how to effectively deploy and use warning systems. The study found that a more cohesive and all-encompassing alert and warning system is needed that can 1) better integrate public and private communication mechanisms and information sources, 2) continue to provide information needed to preserve the health and safety of people, and 3) allow new alert-delivery technology to be adopted quickly.

The study recommends that the nation's alerting capabilities need to evolve as capabilities of smart phones and other devices improve, namely by integrating with third-party apps, such as Waze and Facebook. The study also advises that any evolution of the nation's warning systems must be informed by technical, social and behavioral science research. Rao noted the importance that messages should be presented in a way that reaches individuals with physical or cognitive challenges, as well as those who speak different languages or dialects. Regarding the challenge of community engagement, Rao mentioned the growing popularity of "gamification" in public education campaigns. Yet, in acknowledging the

challenges of the digital divide, Rao also stressed the continued importance of in-person social networks, sirens, and radios in emergency alerts. The full report may be found at [nap.edu/24935](http://nap.edu/24935).

**VII. Adjournment**

Applegate adjourned the SDR November meeting at 12:05 p.m. and noted that the Subcommittee’s next meeting will be held on Thursday, March 1, in the White House Conference Center Lincoln Room.

**VIII. SDR 2018 Meeting Calendar**

SDR meetings in 2018 will be held from 10:00 a.m. to 12:00 p.m. on the dates listed below in the Lincoln Room of the White House Conference Center unless otherwise noted:

**2018**

- ✓ Thursday, January 4
- ✓ Thursday, February 1
- ✓ Thursday, March 1
- ✓ Thursday, April 5
- ✓ Thursday, May 3
- ✓ Thursday, June 7
- ✓ Thursday, July 5\*
- ✓ Thursday, August 2\*\*
- ✓ Thursday, September 6
- ✓ Thursday, October 4
- ✓ Thursday, November 1
- ✓ Thursday, December 6

\* July meeting subject to change to avoid proximity to the Independence Day Federal holiday.

\*\* August meeting subject to cancellation.

**IX. Agenda Items and Other Communications with the Subcommittee**

Please send proposed agenda items and any other items intended for distribution to the full Subcommittee to the SDR Secretariat ([SDR@usgs.gov](mailto:SDR@usgs.gov)).

**X. Contact Information**

**SDR Leadership**

David Applegate	Co-chair	703-648-6600	<a href="mailto:applegate@usgs.gov">applegate@usgs.gov</a>
Mary Erickson	Co-Chair	240-678-2849	<a href="mailto:Mary.erickson@noaa.gov">Mary.erickson@noaa.gov</a>
Jack Meszaros	Co-chair	202-456-6020	<a href="mailto:Jacqueline_R_Meszaros@ostp.eop.gov">Jacqueline_R_Meszaros@ostp.eop.gov</a>

**Executive Secretariat**

[SDR@usgs.gov](mailto:SDR@usgs.gov)

**XI. Summary of February Actions**

Action	Lead	By When
The next SDR meeting will be held on Thursday, March 1, in the White House Conference Center Lincoln Room.	SDR Members	For Information

Contact Betsy Eagin Galluzzo ( <a href="mailto:betsy.eagin@nih.gov">betsy.eagin@nih.gov</a> ) to RSVP for the Federal Interagency meeting hosted at the NIH Bethesda, MD campus	Aubrey Miller	March 8, 2018
Send additional disaster-related priorities from your agency for consideration in the new Administration to the SDR Secretariat ( <a href="mailto:SDR@usgs.gov">SDR@usgs.gov</a> ) on a rolling basis.	SDR Members	Standing
Send Dave Applegate an email ( <a href="mailto:applegate@usgs.gov">applegate@usgs.gov</a> ) if you are interested in contributing to the work of the SDR and would like additional documentation or an agency-specific letter.	SDR Members	Standing
Email the SDR Secretariat ( <a href="mailto:SDR@usgs.gov">SDR@usgs.gov</a> ) to suggest external DRR stakeholder groups to invite to present at quarterly SDR meetings on behalf of the U.S. National Platform for UNISDR.	SDR Members	Standing