**Meeting Minutes** **of the Subcommittee on Disaster Reduction**

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

Italics indicate absent members. “T” indicate members participating via teleconference.

**Co-chairs**

David Applegate (USGS)   
Mary Erickson (NOAA)

Jack Meszaros (OSTP)

**Designated Representatives**

# ASPR *Darrin Donato*

# BLM *Georgette Fogle*

# CDC Mollie Mahany

# DHS *Erin Walsh*

# DHS/FEMA *Roy Wright*

# DHS/USCG *Jim Small*

**DOD** *Al Johnson*

**DOE** *Patricia Hoffman*

**DOT** Sheila Duwadi

**EOP/OMB** *Michael Clark*

**EOP/OSTP** Jack Meszaros

**EPA** Greg Sayles (T)

**FERC** *Marsha Palazzi*

# HUD *Dana Bres*

# NASA *Craig Dobson*

**NGA** *Kerri Dugan*

# NGB *Steve Mason*

# NIH *Aubrey Miller*

**NIST** Steve Cauffman

**NOAA** *Mary Erickson*

**NPS** Marcy Rockman

# NSF *Greg Anderson*

**State** *Fernando Echavarria*

**USACE** Tony Niles

*Dimitra Syriopoulou*

**USAID** *Sezin Tokar*

**USCB** *Laura Furgione*

**USDA** *TBD*

**USFS** *Monica Lear*

*Carlos Rodriguez-Franco*

**USGS** David Applegate

**USNRC** *Edwin Hackett*

**USPHS** *Estella Jones*

**Other Attendees**

**BLM** Dee Lloyd **DHS/FEMA** Chad Council (T)

Jacob Vawter

Alex Yesnik

**DOI** Mark Bathrick

**EOP/OMB** Jody Barringer

**EPA** Keely Maxwell

**NASA** David Green

Gertrude Pavur

**NGA** Valerie Connolly Vuyovich

Christina Roy

**NIH** April Bennett

**NSC** John Ferris

**STPI** Katherine Kowal

**USACE** Kathryn McIntosh

**USGS** Tom Duke

Charles Mandeville

Bruce Quirk

**USPHS** Kyle Lyons (T)

**USFS** LuAnn Grover

Everett Hinkley (T)

Karen Kufta

**USNRC** John Nakoski (T)

**SDR Secretariat**

Alice Pennaz

Aleeza Wilkins

**NOAA** Phillip Hall (T)

Joe Pica

**Handouts**

* July Meeting Agenda
* Draft June Meeting Minutes

**Agenda**

10:00 Welcome, Introductions, and Approval of Minutes

10:05 Co-chairs Report

10:10 Briefing: Use of Unmanned Aircraft Systems in Disasters

11:25 Briefing: The National Exercise Program

11:55 Close and Next Actions

1. **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 10:01 a.m. in the White House Conference Center Lincoln Room, and participants introduced themselves.

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

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

SDR co-chair Dave Applegate (USGS) introduced Joe Pica (NOAA), the Director of the National Weather Service’s Observations Portfolio, who sat in for SDR co-chair Mary Erickson. Pica announced that the restoration of the weather radar in Puerto Rico is nearly complete, after it was severely damaged by Hurricane Maria.

SDR co-chair Jack Meszaros (OSTP) shared that a SDR work plan is currently under review by the leadership of the Committee on National & Homeland Security, which is the National Science & Technology Council entity under which the SDR now resides. Meszaros also announced that the National Security Council is commencing two new activities, including a Risk Assessment and a National Resilience Strategy. Contact Meszaros or John Ferris (NSC) if you would like to serve -- or know who from your agency is serving -- on the National Resilience Strategy sub-PCC.

Applegate announced the afternoon meeting of SDR’s international working group, which was to include discussions on the recent Regional Platform of the Americas meeting and Sendai monitoring framework reporting.

Applegate noted two July meetings that may be of interest to SDR members:

1. Pew Charitable Trusts is holding an event on state disaster spending, titled “What Do States Spend on Natural Disasters? Experts discuss the need for complete data and strategies for improvement.” The briefing and discussion will take place the morning of July 25th in Washington, DC.

2. Registration is still open for the OGC Disasters CDS Workshop on July 24-25, but seating is limited. The workshop will take place at the NOAA Auditorium in Silver Spring, MD.

Jake Vawter (FEMA) shared that the US Chamber of Commerce is hosting a conference to build resilience through public-private partnerships on July 24-25.

Applegate also thanked Aleeza Wilkins for her continued detail to the SDR Secretariat since October 2017, and announced that Alice Pennaz (USGS) has come on board to manage the Secretariat function. As before, you can reach Secretariat staff via [sdr@usgs.gov](mailto:sdr@usgs.gov" \t "_blank).

1. **Presentation on the Use of Unmanned Aircraft Systems in Disasters**

The United States is at a tipping point in terms of the increased number of natural hazard applications of Unmanned Aircraft Systems (UAS). SDR members heard from several agencies regarding applications of UAS and potential barriers and policy issues which SDR and OSTP may investigate further in the future. Presenters also described their agency’s current plans for addressing privacy concerns.

Philip Hall, Director of the NOAA UAS Program and the first NASA-qualified Global Hawk pilot, described NOAA research applications of UAS. Small systems deliver multiple benefits, including cost-savings, miniaturized payload suites, and ease of operations through trained field staff. Key points:

* The NASA Global Hawk flies up to 65,000 feet—above hurricanes and other weather systems—for up to 26 hours to mitigate the loss of GPS and satellite capabilities, while improving hurricane intensity and track forecasts.
* The Coyote UAS is an expendable aircraft, launched at low altitudes (~5,000 feet) for up to two hours in order to measure storm intensity at the most dangerous areas of the storm.
* A current NOAA/NASA study is investigating the use of UAS to improve fire weather models through the incorporation of nighttime flights to existing satellite observations.
* A pilot project is using UAS to conduct aerial storm damage assessments such as estimating tornado strength based on tree fall patterns.

Bruce Quirk, the UAS Liaison for the USGS National Land Imaging Program, shared that one of the first USGS applications of UAS technology was to monitor Mount St. Helen’s eruptive activity in 2004. Subsequently, a National UAS Program office was established in 2008. Quirk added that the multiple benefits of UAS flights include quick data collection and repeatable coverage, especially in unsafe zones or areas with sensitive flora or fauna. He then shared four use cases:

* During the 2013 DeBeque Canyon Landslide in Colorado, the USGS and partners collected UAS imagery to monitor the landscape and ground movement on a centimeter scale for the creation of Structure-from-Motion digital terrain models.
* A UAS mission acquired low-altitude high-resolution imagery of flooding caused by an ice jam in New Hampshire, which was crucial for situational awareness and emergency response activities. The data was collected, processed, and delivered within the same day of the request.
* The USGS and partners acquired both fire intensity and emissions data during prescribed burns with the research goal of reducing the harmful effects of smoke.
* The ongoing eruption of Kilauea Volcano is being monitored with UAS-mounted gas sensors, thermal sensors, cameras, and other instruments during day and night flights, including lava flow mapping and tracking changes at the summit caldera. Much of this work is FEMA mission assigned.

Mark Bathrick, the Director of the Department of the Interior’s Office of Aviation Services, shared that the DOI UAS Program is second only to DOD in size, scope, and reputation. The program has flown over 14,000 successful flights, with zero accidents and zero complaints from the public. Key points:

* For wildland fire applications, small UAS’s give crews the ability to have their own aircraft for hotspot and escape route detection.
* Although significant amounts of data can be collected from UAS missions, people and processes are required to transform data into information, knowledge and action.
* Optionally Piloted Aircraft (OPA) have the potential to triple the time in action of currently piloted aircraft to include nights and smoke covered days. This increase in coverage could significantly decrease costs of suppression and numbers of acres burned, without significantly increasing costs.

Needs include: 1) funding to complete transition of OPA technology for wildland fire missions, 2) FAA certification criteria for heavier UAS for suppressant, retardant, supplies, and emergency extraction missions, and 3) Executive attention to encourage continued development and adoption of UAS and OPA technology across the interagency community.

Chad Council, FEMA’s GIS Coordinator for Region I, shared that FEMA’s vision is to integrate the unique capabilities of UAS into all areas of emergency management and all levels of government, which will require interoperability and standardization of data collection, storage, and sharing. Key points:

* The FEMA Urban Search and Rescue system is being evaluated for tactical use, and would have extensive applications, including an overhead view for mission assignment and tracking and reconnaissance of inaccessible areas. In 2017, FEMA deployed 19 DOI pilots in support of Hurricane Harvey urban search and rescue.
* FEMA is supporting partners through training courses and National Incident Management System typing (“Remote Pilot in Command,” “Technical Specialist,” and “UAS Team”).
* FEMA has utilized large UAS’s with Customs and Border Patrol during Hurricane Irma and ice jam cases, and has recently begun leveraging small UAS’s during the South Carolina floods and Hurricane Harvey.
* Policy considerations include authorities for approving mission assignments, adherence to the Privacy Act, and agency liability when operating its own aircraft.

1. **Presentation on The National Exercise Program**

Alex Yesnik, the Branch Chief for FEMA’s National Exercise Division, presented an overview of FEMA’s National Exercise Program (NEP), which has the unique mission of managing exercises across DHS and the interagency, as well as supporting NSC and state and local exercise activities. After communities have assessed local risks posed by threats and hazards, and have identified their current capabilities to meet these threats and hazards, the National Preparedness System (NPS) helps communities validate whether or not their solutions and capabilities are robust enough to meet the previously identified threats. NPS data and after-action reports inform the Principals’ Objectives, which in turn guide the NEP two-year cycles of exercises.

The 2017-2018 Principals’ Objectives are:

1) Intelligence and information sharing

2) Lead federal agency coordination

3) Multidisciplinary response options

4) Cyber coordination

5) Recovery coordination

6) Infectious disease and biological incidents

7) Catastrophic incidents

For each Principals’ Objective, FEMA has created exercise starter kits for communities containing scenarios and discussion questions ([preptoolkit.fema.gov](https://preptoolkit.fema.gov/welcome" \t "_blank)).

The National Level Exercise (NLE) serves as the culminating event of the two-year NEP cycle and is required to address either weapons of mass destruction or catastrophic incidents. The NLE 2018 examined the ability of all levels of government, private industry, and nongovernmental organizations to protect against, respond to, and recover from a major Mid-Atlantic hurricane. NLE 2018 had 12,000 participants, including 160 private sector companies, 91 government departments and agencies, and was used by 450,000 individuals to prepare for the 2018 hurricane season.

NLE 2020 will consider an adversary-based threat, potentially focused on one of the following (in no particular order):

* Operational coordination and communication
* Cybersecurity,
* Protection and restoration of critical services,
* National security emergencies,
* Public health emergencies,
* Community recovery and economic resilience,
* Mass care and housing,
* Safety of schools and other soft targets, or
* Operational resilience

1. **Adjournment**

Applegate adjourned the SDR July meeting at 12:02 p.m. and noted that as per longstanding tradition, the Subcommittee will not meet in August. The Subcommittee’s next meeting will be held on Thursday, September 6, in the White House Conference Center Lincoln Room.

1. **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.

1. **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)).

1. **Contact Information**

**SDR Leadership**

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| --- | --- | --- | --- |
| David Applegate | Co-chair | 703-648-6600 | applegate@usgs.gov |
| Mary Erickson | Co-chair | 240-678-2849 | Mary.erickson@noaa.gov |
| Jack Meszaros | Co-chair | 202-456-6020 | Jacqueline\_R\_Meszaros@ostp.eop.gov |

**Executive Secretariat**

SDR@usgs.gov

1. **Summary of July Actions**

|  |  |  |
| --- | --- | --- |
| **Action** | **Lead** | **By When** |
| The next SDR meeting will be held on Thursday, September 6, in the White House Conference Center Lincoln Room. | SDR Members | For Information |
| Contact Jack Meszaros ([jaqueline\_r\_meszaros@ostp.eop.gov](mailto:jaqueline_r_meszaros@ostp.eop.gov" \t "_blank)) regarding any UAS regulatory issues with which your agency or program needs assistance. | Jack Meszaros | TBD |
| Contact Jack Meszaros ([jaqueline\_r\_meszaros@ostp.eop.gov](mailto:jaqueline_r_meszaros@ostp.eop.gov" \t "_blank)) or John Ferris ([john.p.ferris@nsc.eop.gov](mailto:john.p.ferris@nsc.eop.gov" \t "_blank)) if you would like to serve--or know who from your agency is serving--on the National Resilience Strategy sub-PCC. | Jack Meszaros John Ferris | TBD |
| Register for the Pew Charitable Trusts State Disaster Spending event in Washington, DC on July 25, 2018 at [https://goo.gl/FAY5cc](https://goo.gl/FAY5cc" \t "_blank).  Register for the Disasters CDS Workshop in Silver Spring, MD on July 24-25, 2018 at [http://www.opengeospatial.org/ogcevent/180724noaacds](http://www.opengeospatial.org/ogcevent/180724noaacds" \t "_blank) .  Register for the Chamber of Commerce Private-Public Partnerships Conference in Washington, DC on July 24-25, 2018  at [https://www.uschamberfoundation.org/event/7th-annual-building-resilience-through-private-public-partnerships-conference](https://www.uschamberfoundation.org/event/7th-annual-building-resilience-through-private-public-partnerships-conference" \t "_blank) | SDR Members | July 23rd, 2018 |
| Send additional disaster-related priorities from your agency for consideration in the new Administration to the SDR Secretariat (SDR@usgs.gov) on a rolling basis. | SDR Members | Standing |
| Send Dave Applegate an email (applegate@usgs.gov) 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 (SDR@usgs.gov) 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 |