Meeting Minutes of the Subcommittee on Disaster Reduction

10 July 2014, 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)
Margaret Davidson (NOAA)
Dennis Wenger (NSF)

OSTP Liaison
Tamara Dickinson (OSTP)

Designated Representatives

BLM *Edwin Roberson*
CDC *Mark Keim*
DHS Mary Ellen Hynes
DHS/FEMA *Roy Wright*
DHS/USCG *Robert Thomas*
DOD *Al Johnson*
DOE *Patricia Hoffman*
DOT *Sheila Duwadi*
EOP/OMB *Michael Clark*
EOP/OSTP *Tamara Dickinson*
EPA *Brendan Doyle*
Stephen Clark
FERC *Marsha Palazzi*
HUD Dana Bres
NASA *Craig Dobson*
NGA *Patricia Allen Aquinas*
NGB *TBD*
NIH Aubrey Miller
NIST *Steve Cauffman*
NOAA Margaret Davidson (T)
Christopher Strager
NPS Marcy Rockman
NSF Dennis Wenger
OPHS Estella Jones (T)
State *Fernando Echavarria*
USACE *Steven Cary*
Dimitra Syriopoulou
USAID *Sezin Tokar*
USDA *TBD*
USFS *Elizabeth Reinhardt*
Carlos Rodriguez-Franco
Matt Rollins
USGS David Applegate
USNRC *Steven West*

Other Attendees

BLM Ronald McCormick
DHS Mitch Erickson (T)
Mila Kennett
Meredith Lee (T)
DHS/USCG Tung Ly (T)
EOP/NSC Eric Letvin
EPA Keely Maxwell
Eli Walton
HUD Scott Davis
Josh Sawislak
NIST Terri McAllister
NOAA Caroline Corvington (T)
NSF Gregory Anderson
Robert O'Connor
USFS Everett Hinkley (T)
USGS Kiza Gates
USGS Bill Leith
Kris Ludwig (T)
USNRC Patrick Madden
STPI Mitch Ambrose
Anne Ressler
SDR Secretariat Bret Schothorst
Barbara Haines-Parmele

Agenda

10:00 Welcome and Introductions
10:05 Report from the Co-chairs and Approval of Minutes
10:20 Update: SDR Wildland Fire S&T Task Force Workshop
10:30 Briefing: HUD National Disaster Resilience Competition and Winners of the Rebuild by Design Competition
11:00 Briefing: Induced Seismicity in Oklahoma
11:50 Close and Next Actions

Handouts

- July Meeting Agenda
- Draft June Meeting Minutes
- Handout on the Conference on Gender Dimensions of Weather and Climate Services

I. Welcome and Introductions

National Science and Technology Council (NSTC) Subcommittee on Disaster Reduction (SDR) Co-chair David Applegate (USGS) called the July meeting to order at 10:01 a.m. in the Lincoln Room of the White House Conference Center (WHCC), and participants introduced themselves.

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

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

In the report from the Co-chairs, Applegate highlighted that the White House Innovation for Disaster Response and Recovery Demo Day will be held July 29, 2014, from 1:30 p.m. to 4:30 p.m. in the Eisenhower Executive Office Building (EEOB) in downtown Washington, DC. This event will bring together technologists, entrepreneurs, and members of the disaster response community to share and learn about tools that will make a tangible impact in the lives of survivors of large-scale emergencies. If SDR members would like to request an invitation to the event, please contact Brian Forde or Meredith Lee (disastertech@ostp.gov) by Monday, July 14. More information about the Demo Day can be found at: http://www.whitehouse.gov/blog/2014/07/07/announcing-white-house-innovation-disaster-response-and-recovery-initiative-demo-day.

Co-chair Dennis Wenger (NSF) encouraged SDR agencies to consider providing funding support to the University of Colorado Boulder's Natural Hazards Center to assist the institute with their mission to advance and communicate knowledge on hazards mitigation and disaster preparedness, response, and recovery and to foster information sharing and integration of activities among researchers, practitioners, and policymakers. Regular Federal contributors in the past have included: NSF, NOAA, DOT, DHS, FEMA, USGS, NASA, Army Corps, and the U.S. Forest Service. Please contact Wenger (dwenger@nsf.gov) for more information if interested in contributing to this important fundraising effort.

Wenger summarized the recent SDR-facilitated U.S. National Platform listening session on the post-2015 disaster risk reduction framework (HFA2+) that took place at the Natural Hazards Center annual workshop on June 22, 2014. The agenda for the two-hour listening session consisted of: 1) a background briefing on the SDR and its role as the U.S. National Platform to the UN International Strategy for Disaster Reduction (UNISDR); 2) a lead-in presentation by Ricardo Mena, head of UNISDR Office of the Americas, on the original Hyogo Framework for Action and recent HFA2+ developments; and 3) an open discussion by the stakeholders in attendance on their disaster risk reduction priorities for HFA2+. Wenger added that the multi-stakeholder comments from the roughly 75 attendees from the NGO community, academia, state and local officials, and the private sector will be taken into consideration as the U.S. develops positions for the upcoming first session of the Preparatory Committee of the Third UN World Conference on Disaster Risk Reduction that will be held July 14-15, 2014, in Geneva, Switzerland.

Caroline Corvington (NOAA) announced that that the World Meteorological Organization (WMO) is hosting an upcoming Conference on the Gender Dimensions of Weather and Climate Services that will take place November 5-7, 2014, in Geneva, Switzerland. The conference is bringing together a diverse mix of stakeholders who are leading work globally to address gender and empower women around weather and climate information services. It's an excellent opportunity to raise awareness about the importance of gender and also take some significant steps to advance the empowerment of women. The focus areas for the conference include health, water, agriculture and food security, and disaster risk reduction. DRR items for the conference are highlighted at: http://www.wmo.int/genderconference/Disaster%20Risk%20Reduction. For more information about the conference or to submit ideas for speakers or side events, please contact Corvington (caroline.corvington@noaa.gov), ideally in the next two weeks.

Keely Maxwell (EPA) noted that her agency is hosting an upcoming workshop to explore the environmental aspects of disaster resilience as they seek to develop a Community Environmental Resilience Index. The workshop (draft agenda attached) will be held July 22-23, 2014, at EPA's One Potomac Yard South Building in Arlington, Virginia, and is being sponsored by EPA's Homeland Security Research Program. To attend, please contact Maxwell (Maxwell.Keely@epa.gov) or RSVP at: https://www.surveymonkey.com/s/CERIJuly.

Steve Cauffman (NIST) invited SDR members via email to attend the second in a series of workshops organized by NIST to develop a community-scale approach to disaster resilience to be held July 30, 2014, at the Stevens Institute of Technology in Hoboken, NJ. Registration for this workshop is now open at: http://www.nist.gov/el/building_materials/resilience/2nd-disaster-resilience-workshop.cfm. To learn more about the NIST Community Disaster Resilience Program, go to http://www.nist.gov/el/building_materials/resilience/, contact Cauffman (stephen.cauffman@nist.gov), or email resilience@nist.gov.

III. Update: SDR Wildland Fire S&T Task Force Workshop

Matt Rollins (USFS) provided a short report-out on the recent SDR Wildland Fire Science and Technology Task Force three-day workshop held June 17-19, 2014 at the U.S. Department of the Interior. The primary objective of the workshop was to inventory current agency roles and responsibilities, learn more about each other's capabilities and requirements, establish a resource baseline related to wildfire activities, and identify opportunities for interagency coordination and cooperation. Agency presentations were made by DOI, USFS, FEMS, DHS, USGS, NASA, NOAA, DOD, NIST, and EPA, along with interagency presentations on the Joint Fire Science Program and the Cohesive Wildfire Management Strategy. Next steps for the group include crafting an executive summary of the workshop that will serve as an outline for the group's final report detailing interagency wildfire challenges and recommendations. The leadership of the Task Force plans to meet August 18-19, 2014, to move forward with its next actions. To engage in the Task Force's activities moving forward, please contact the SDR Secretariat (bret.schothorst@mantech.com).

IV. Briefing: HUD National Disaster Resilience Competition and Winners of the Rebuild by Design Competition

Applegate introduced Josh Sawislak and Scott Davis from HUD, who briefed the SDR on the upcoming National Disaster Resilience Competition and the winners of the post-Hurricane Sandy Rebuild by Design Competition. Sawislak is Senior Advisor to the Secretary for Infrastructure Resilience at HUD, while Davis is Director of HUD's Disaster Recovery and Special Issues Division in the Office of Community Planning and Development.

Sawislak briefly highlighted the National Disaster Resilience Competition announced by the President in June that will support innovative resilience projects at the local-level while encouraging communities to adopt policy changes that plan for the impacts of extreme weather and climate change and rebuild affected areas to be better prepared for the future. Sawislak stated that nearly $1 billion of Sandy supplemental funding has been made available for the competition through HUD's Community Development Block Grant Disaster Recovery Program, about $820 million of which will be available to all states and local governments that experienced a Presidentially-declared major disaster in 2011, 2012, or 2013. According to Sawislak, 48 states – excluding Nevada and South Carolina – and over 3,000 counties across the U.S are qualified to participate. States in the Hurricane Sandy-affected region will also be eligible to compete for the approximately $180 million of remaining funds. In response to a question from Mary Ellen Hynes (DHS S&T) and a comment from SDR Co-chair Margaret Davidson (NOAA), Sawislak mentioned that HUD plans to share information about best practices from the eventual competition winners with state and local organizations such as the National Governors Association and the National Association of Counties.

For more information on the upcoming National Disaster Resilience Competition, contact Sawislak (josh.sawislak@hud.gov) or visit: http://www.whitehouse.gov/the-press-office/2014/06/14/fact-sheet-national-disaster-resilience-competition.

Davis then provided a presentation on the winners of the post-Hurricane Sandy Rebuild by Design (RBD) Competition announced in June. Davis highlighted that Hurricane Sandy exposed complex, interdependent, and regional-specific problems throughout the urban Northeast: infrastructural, governmental, economical, ecological, and social. These complex problems required innovative solutions for smart recovery, and through innovation, RBD aimed to build to a new standard for rebuilding both on the ground and in policy design. Davis added that RBD was funded through support from a wide range of philanthropic organizations, an effort that was led by The Rockefeller Foundation. Regarding the competition, Davis stated that 148 teams competed from 15 countries that included team members from disciplines such as architecture, engineering, and science and technology. Of the 148 initial teams, 10 were selected to participate in the nine-month process of studying the New York-New Jersey region's coastal vulnerabilities to natural hazards. By meeting with area government and community leaders to identify novel rebuilding opportunities, teams worked to provide concepts for design solutions that push innovation while reflecting local, state, and regional priorities.

According to Davis, in April 2014 RBD unveiled the final 10 proposals generated from the design teams aiming to improve the physical, social, economic, and ecological resilience of communities throughout the Sandy-affected region. The teams developed these proposals in partnership with local stakeholder coalitions, incorporating research, analysis, and feedback from thousands of participants. Davis noted that the projects focused primarily on larger, urban community-level mitigation measures as opposed to ones for individual residential homes. Of these 10 proposals, six were chosen to receive roughly $920 million in funding to move from a conceptual idea to the project implementation phase:

1) The Big 'U' – A community driven, integrated protection system for the lower part of Manhattan, wrapping from West 57th Street down to The Battery and up to East 42nd Street;
2) Hunts Point: Lifelines – A look at jobs and food supply as critical resilience infrastructure and communities as integrators of economic, social, and ecological potential to strengthen the whole, rather than the water's edge alone;
3) Living Shorelines and Habitat Breakwaters in Staten Island and Raritan Bay – A stepping down of risk for coastal communities by pairing living breakwaters with absorptive shoreline edges, working with local communities and schools;
4) Living with the Bay: Resiliency-Building Options for Nassau – A collection of resiliency-building options ensure safety of residents during extreme weather events while also enhancing the quality of everyday life;
5) New Meadowlands Productive City and Regional Park – A resilient district combining an innovative urban mix of residential and logistics around a regional tidal park; and
6) Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken – A comprehensive flood strategy that both defends the entire city, and enables commercial, civic, and recreational amenities to take shape.

Aubrey Miller (NIH) applauded the differing approaches to highlighting co-benefits of green infrastructure and ecosystem services in the proposals, which he stated are critical in terms of encouraging communities to change patterns in public health practices and disease prevention measures. Miller added that it's also important to look at environmental, social, economical, and ecological vulnerabilities in addition to the physical vulnerabilities of communities, which RBD does an excellent job of doing. Wenger added that he was impressed with the comprehensive nature of the competition in mixing gray and green infrastructure elements, and he hoped that the proposals would factor in the socioeconomic dynamics of these targeted communities to help build their local-level capacity to withstand disasters.

Please contact Davis (Scott.G.Davis@hud.gov) with questions about his briefing. More information on the winning proposals in the RBD Competition is located at: http://www.rebuildbydesign.org/.

V. Briefing: Induced Seismicity in Oklahoma

Applegate introduced Bill Leith, who is Senior Science Advisor for Earthquake and Geologic Hazards at USGS. In this position, he oversees the Earthquake Hazards, Geomagnetism, and Global Seismographic Network Programs. He provided an update on a presentation he gave to the Subcommittee back in December 2013 on induced seismicity from energy development technologies, specifically in Oklahoma.

Leith underscored that recent increases in U.S. mid-continent seismicity in Kansas, Ohio, Colorado, Texas, and Oklahoma have been observed and are primarily linked to large-volume wastewater injection and disposal wells associated with wastewater produced from hydrofracturing and dewatering methods for hydrocarbon extraction. Oklahoma alone has seen a 50 percent increase in seismicity since last fall, and in 2014, its overall seismicity rate is expected to be higher than that of California. Leith also noted that Oklahoma has seen a significant increase in its probability for large earthquakes (greater than magnitude 5.5), going from 0.0003 percent likelihood for the 1970 to 2008 time period to an expected 0.23 to 0.53 percent possibility over the next 12 months.

According to Leith, Oklahoma's heightened earthquake activity since 2009 includes 20 magnitude 4.0 to 4.8 quakes, plus the largest earthquake in Oklahoma's history – a magnitude 5.6 event that occurred near Prague in November 2011. Leith underscored that the long-term average earthquake rate from 1978 to 2008 in Oklahoma was just two magnitude 3.0 or larger earthquakes per year. Leith noted that the USGS has partnered with the Oklahoma Geological Survey to conduct collaborative research quantifying the changes in earthquake rates in the Oklahoma City region, assessing the implications of this seismic "swarm" for a large earthquake hazard, and evaluating possible links between these earthquakes and wastewater disposal related to the ongoing oil and gas production activities in the region.

In Ohio, Leith outlined that 10 seismic events were detected by the Ohio Seismic Network (OhioSeis) from October 2-9, 2013, near three active fracking wells in Harrison County, Ohio. Magnitudes for the earthquakes were in the range of 2.0 to 3.0 and were large enough to be felt locally. Leith added that further research found 298 similar events as far back as September 8, 2013, during the same time period that hydraulic fracturing was conducted at the three wells. An additional 190 earthquakes were observed between October 2 and December 13, 2013, and using data from an array installed later by the Ohio Department of Natural Resources (ODNR), a cluster of 30 seismic events were found to have occurred directly below the three fracking wells. Due to these events, the ODNR halted fracking operations in the state and issued new permit guidance requiring all new drilling sites within three miles of a known fault or seismic activity of 2.0 magnitude or higher to install sensitive seismic-monitoring equipment. Leith mentioned that these earthquakes are the largest known fracking-induced earthquakes in the U.S.

In order to better understand these emerging seismic risks, Leith stated that the USGS is in the process of finalizing updates to its U.S. National Seismic Hazard Maps (http://pubs.usgs.gov/of/2014/1091/), which will reflect the best and most current understanding of where future natural and human-induced earthquakes will occur, how often they will occur, and how hard the ground will likely shake as a result. Leith noted that with an understanding of potential ground shaking levels, various risk analyses can be calculated by considering factors like population levels, building exposure, and building construction practices. These risk assessments are then used for establishing building codes and in the analysis of seismic risk for key structures. They can also help in determining insurance rates, state and local emergency preparedness plans, and private property decisions such as re-evaluating one's home and making it more resilient.

In response to a question from Eric Letvin (National Security Council) regarding the potential damage that could occur from magnitude 5.0 to 6.0 earthquakes, Leith stated that the 5.6 earthquake in Prague, Oklahoma in 2011 was felt broadly in multiple states but only resulted in minor damage because it occurred in a rural area. Leith noted, however, that wastewater injection-induced earthquakes in Oklahoma are beginning to occur more closely to urban areas with increased frequency and present a much greater risk. Keely Maxwell (EPA) and Aubrey Miller (NIH) noted that studies of the changes in risk perception of people in Oklahoma and other affected states due to these novel earthquakes could be valuable in understanding community behavior before and after these seismic events.

Robert O'Connor (NSF) noted the lack of earthquakes in Pennsylvania despite its extensive oil and gas operations, to which Leith replied that this is thought to be the case due to the fact that Pennsylvania does not allow the disposal of wastewater from its fracking sites within state limits. Leith added that there are additional areas in the U.S. with fracking wastewater injection and disposal well operations that do not experience large seismic events. According to Leith, there is a great deal of research ongoing funded by the USGS, NSF, and other agencies to look at the differences in geologic characteristics and injection practices in those areas with the hopes of one day being able to forecast seismic risk in advance as it relates to its connection with energy development technologies.

Reach out to Leith (wleith@usgs.gov) directly with any questions about his presentation.

VI. Adjournment

Applegate adjourned the SDR July meeting at 12:01 p.m.

VII. Future Meetings

Upcoming SDR meetings in 2014 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:

2014

- ✓ Thursday, September 4
- ✓ Thursday, October 2
- ✓ Thursday, November 6
- ✓ Thursday, December 4

VIII. 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 Bret Schothorst (bret.schothorst@mantech.com).

IX. Contact Information

SDR Leadership

David Applegate	Co-chair	703-648-6600	applegate@usgs.gov
Margaret Davidson	Co-chair	843-740-1220	margaret.davidson@noaa.gov
Dennis Wenger	Co-chair	703-292-8606	dwenger@nsf.gov
Tamara Dickinson	OSTP Liaison	202-456-6105	tdickinson@ostp.eop.gov

Secretariat

Bret Schothorst	703-388-0312	bret.schothorst@mantech.com
Barbara Haines-Parmele	703-388-0309	barbara.haines-parmele@mantech.com

X. Summary of July Actions

Action	Lead	By When
Contact Brian Forde or Meredith Lee (disastertech@ostp.gov) to request an invitation to the White House Innovation for Disaster Response and Recovery Demo Day set for July 29, 2014 at EEOB.	SDR Members and Federal Colleagues	July 14, 2014
Contact Keely Maxwell (Maxwell.Keely@epa.gov) to attend an EPA workshop devoted to developing a Community Environmental Resilience Index July 22-23, 2014, at EPA's One Potomac Yard South Building in Arlington, Virginia.	SDR Members and Federal Colleagues	July 18, 2014
Email Caroline Corvington (caroline.corvington@noaa.gov) with keynote speaker or side event ideas for the WMO Conference on the Gender Dimensions of Weather and Climate Services taking place November 5-7, 2014, in Geneva Switzerland.	SDR Members	July 25, 2014
Contact SDR Co-chair Dennis Wenger (dwenger@nsf.gov) if your agency is able to provide funding support to the University of Colorado Boulder's Natural Hazards Center.	SDR Members and Federal Colleagues	ASAP
Contact the SDR Secretariat (bret.schothorst@mantech.com) to participate in upcoming activities of the SDR Wildland Fire Science and Technology Task Force.	SDR Members	Standing
Please consider supporting the work of the SDR and its Secretariat through a contribution from your agency. Let SDR Co-chair David Applegate (applegate@usgs.gov) know if you need an Agency- or Department-specific request letter.	SDR Members	Standing
Email the SDR Secretariat (bret.schothorst@mantech.com) and OSTP Liaison Tammy Dickinson (Tamara_L_Dickinson@ostp.eop.gov) if willing to pilot an assessment of the progress of the short-, mid-, and long-term goals outlined in the SDR *Grand Challenges for Disaster Reduction* hazard-specific implementation plans.	SDR Members	Standing
Contact OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) if it would be helpful for OSTP to issue a letter to your agency or department requesting new (or re-affirmed) designation of official representatives. Ideas for other entities that should be represented on the SDR are also welcome.	SDR Members	Standing