Meeting Minutes of the Subcommittee on Disaster Reduction

04 April 2013, 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 (T)
DHS Bruce Davis (T)
DHS/FEMA *Roy Wright*
DHS/USCG *Austin Gould*
DOD *Al Johnson*
DOE *Patricia Hoffman*
DOT *Sheila Duwadi*
EOP/OMB *Grace Hu*
EOP/OSTP Tamara Dickinson
EPA Peter Jutro
Stephen Clark
FERC Marsha Palazzi (T)
HUD *Dana Bres*
NASA *Craig Dobson*
NGA *Paul Lewis*
NGB *TBD*
NIH *Allen Dearry*
NIST Marc Levitan
NOAA Margaret Davidson (T)
Christopher Strager
NPS Marcy Rockman
NSF Dennis Wenger
OPHS *Estella Jones*
State Fernando Echavarria
USACE *Steven Cary*
Dimitra Syriopoulou
USAID Sezin Tokar
USDA *TBD*
USFS *Elizabeth Reinhardt*
Carlos Rodriguez-Franco
USGS David Applegate
USNRC Steven West

Other Attendees

BLM Nancy Dean
Ronald McCormick
DHS Mary Ellen Hynes
DHS/FEMA David Kaufman
Rachel Sears
Andrew Slaten
EOP/CEQ Jamie Pool
Susan Ruffo
EOP/OSTP Allan Manuel
EPA Brendan Doyle
Eric Koglin (T)
EPA Paul Kudarauskas
Keely Maxwell
Jayne Michaud
NASA Craig Dobson (T)
Michael Goodman
Lindley Johnson
NOAA Matthew Austin (T)
Nell Codner
David Helms (T)
Maria Honeycutt (T)
Kevin Werner
NSF Morris Cohen
OPHS Elvira Hall-Robinson (T)
State Rajan Sen
USCG Tung Ly (T)
USGS Kristin Ludwig
USNRC Brett Rini
USDA Glenn Bethel
STPI Christopher Clavin
Kimberly Mueller
Secretariat Bret Schothorst
Barbara Haines-Parmele

Agenda

10:00 Welcome and Introductions
10:05 Report from the Co-chairs and Approval of Minutes
10:10 Report from the OSTP Liaison
10:15 Presentation: NASA Near-Earth Object (NEO) Program
10:45 Discussion: FEMA Strategic National DRR Policy Recommendations
11:15 Discussion: Post-Sandy S&T Lessons Learned White Paper and Support to Sandy Rebuilding Task Force Science Coordination Working Group
11:55 Close and Next Actions

Handouts

- April Meeting Agenda
- Draft March Meeting Minutes
- Hazards Data Project Plan Proposal
- Background Document on FEMA's Report to Congress on Reducing Disaster Costs
- Terms of Reference for Sandy Rebuilding Task Force Science Coordination Working Group
- Revised SDR Post-Sandy Lessons Learned White Paper

I. Welcome and Introductions

National Science and Technology Council (NSTC) Subcommittee on Disaster Reduction (SDR) Co-chair David Applegate (USGS) called the April meeting to order at 10:02 a.m., and participants introduced themselves.

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

The March meeting minutes were approved with no changes.

Applegate noted that a portion of next month's May SDR meeting will be devoted to a roundtable discussion of the impacts that budget sequestration cuts have had on agencies' S&T disaster reduction activities in FY 2013 as well as an outlook of the President's FY 2014 budget – released on Wednesday, April 10, 2013 – on Federal government disaster operations in the coming year. SDR members were encouraged to please consider developing brief talking points in advance of the meeting if their agency wishes to participate.

Co-chair Dennis Wenger (NSF) reminded members that the SDR International Working Group (IWG) will continue to meet in 2013 on the first Thursday of every month from 1:00 p.m. to 2:30 p.m. in the WHCC's Lincoln Room. At the working group's April meeting, the IWG will: 1) discuss details and logistics of the upcoming UNISDR Global Platform meeting in Geneva, Switzerland, May 19-23, 2013; and 2) brainstorm ideas for the working group's draft white paper on U.S.-Japan bilateral disaster risk reduction issues and challenges.

III. Report from the OSTP Liaison

In the monthly report from the SDR's Office of Science and Technology Policy (OSTP) Liaison, Tammy Dickinson (OSTP) reported that the activity of OSTP's Big Earth Data Initiative is underway and in the preliminary phases of ramping up an open hazards data project aimed at improving the interoperability, accessibility, and readability of federally-held, high-impact hazards data sets through advanced metadata applications. David Helms (NOAA) is assisting Peter Colohan (OSTP) with gathering and tagging initial targeted hazards data sets – specifically from FEMA, NOAA, USACE, and USGS – that were uncovered during last year's National Earth Observing Assessment process, and he noted that he will brief the Subcommittee regularly over the next few months on his progress and to ask SDR members for assistance as needed as the initiative moves forward.

On point of interest that was brought up by Allan Manuel (OSTP) during the OSTP Big Data Initiative discussion was the classification (and declassification) of federally-derived data – specifically geospatial imagery data sets – during disasters and how their availability to Federal partners can be impacted by this decision-making process. Peter Jutro (EPA) and Paul Kudarauskas (EPA) noted that there has been some question within agencies as to which entity in the Federal government is responsible for the classification decisions for remote sensing and satellite imagery data in the immediate aftermath of an event. Specific questions raised during the discussion included: 1) what are the correct Federal channels for the flow of sensitive and classified information; and 2) are those channels are functioning optimally. Jutro stated that this process once fell under the purview of the Civil Applications Committee (CAC) – which is an interagency committee that coordinates and oversees the Federal civil use of classified collections – but now lies within DHS. Bruce Davis (DHS S&T) noted that the Interagency Remote Sensing Coordination Cell (IRSCC) within the DHS Intelligence and Analysis Directorate often takes the lead on these issues in conjunction with the CAC following an incident and is an interagency body of remote sensing experts and capabilities that enable the primary Federal emergency responder to coordinate, analyze, and disseminate situational knowledge during a disaster. According to Davis, the IRSCC widely distributes many declassified derived imagery data products to Federal agencies and may be an excellent resource to answer these questions and to brief the SDR at a future meeting.

IV. Presentation: NASA Near-Earth Object (NEO) Program

Applegate introduced Lindley Johnson (NASA), who is assigned to NASA Headquarters Science Mission Directorate in the Planetary Science Division as Program Executive for the Near-Earth Object (NEO) Program and the Lead Program Executive for the Discovery Program of Mid-Class Solar System Exploration Missions. Johnson briefed the SDR on the basics of NASA's NEO Program and provided information on the potential threat NEOs pose to Earth.

To begin his presentation, Johnson covered some general background about NEOs. NEOs are any small space body – comet or asteroid – passing within 1.3 astronomical units (AU) of the Sun (one AU is the distance from Earth to the Sun, or roughly 150 million kilometers). Potentially hazardous objects (PHOs) are NEOs that have the potential risk of impacting the Earth at some point in the future and pass within 0.05 AU of Earth's orbit, or about 8 million kilometers (20 times the distance to the Moon). Johnson added that PHOs appear to be about 20 percent of all NEOs discovered based on an analysis of their orbital path after a period of observation. In 1998 testimony to the U.S. House of Representatives Committee on Science, NASA committed to finding at least 90 percent of NEOs greater than one kilometer in size, which have an average impact interval to Earth of every one million years. While that goal was achieved in 2011, Johnson noted that smaller NEOs greater than about 30 meters in size also pose a significant threat as they can penetrate Earth's atmosphere enough to cause extensive damage to the surface. They impact Earth, on average, every 250-500 years.

Johnson outlined that, per the NASA Authorization Act of 2010 and similar legislation, Congress tasks NASA to coordinate NEO detection, tracking, characterization, and threat information from all organizations within the Federal NEO observation community to: 1) reduce the risk of harm to humans from an unexpected impact on our planet; and 2) identify potentially resource-rich planetary objects. Johnson added that the NASA Authorization Act of 2005 provides additional direction in that the current primary objective of the program is to identify 90 percent of all NEOs equal to or greater than 140 meters in diameter within 15 years by 2020. Program funding in the Fiscal Year 2012 budget increased five-fold over previous levels in order to achieve this goal. The appropriation request stated that this additional funding will improve and increase its efforts to detect Earth approaching asteroids and comets that may provide resources for our exploration of the inner solar system, or could become potential impact hazards to Earth. It will also expand efforts to characterize their nature, both to better understand their composition and provide information for study of potential hazard mitigation techniques.

According to Johnson, NEOs are low-probability events but can be high-consequence threats as demonstrated by the impacts of Russian air-burst events in Tunguska in June 1908 and, more recently, Chelyabinsk in February 2013. The NEO that impacted Chelyabinsk, injuring more than 1,200 people, was approximately 17-20 meters in size and released the energy equivalent upon impact to Earth to 440-470 kilotons of TNT explosives. Johnson stated that an essential first step in the continued enhancement of efforts to detect NEOs and PHOs is to identify potential impact hazards early and provide as much advanced warning of the threat as possible to enable more mitigation options – like civil and planetary defense mechanisms such as a kinetic impactor, a gravity tractor, or a nuclear device – to change the hazardous object's orbit and reduce the risk of any potentially devastating impacts to Earth. Current and former NEO search and observation space satellites in operation by NASA to identify PHOs in orbit include NEO-WISE, LINEAR, Pan-STARRS, and the Catalina Sky Survey as well as Earth-based planetary radar systems located in Goldstone, California and Arecibo, Puerto Rico.

Johnson then outlined U.S. mitigation strategies for NEO threats, underlining that upon the notification from NASA of an impending NEO hazard impact to U.S. territory, FEMA is tasked with taking the lead to notify appropriate Federal, state, and local authorities and emergency response institutions utilizing existing resources and mechanisms, activate the NEO National Warning System, and facilitate post-

impact event disaster emergency and relief efforts. For NEO threats beyond U.S. territory – recognizing the vital role of leading U.S. efforts in NEO detection activities – the U.S. Department of State will facilitate international notifications bilaterally through diplomatic channels to potentially affected countries in an effort to minimize loss of human life and property and convey offers of disaster relief and technical assistance. Johnson stated that in potential NEO mitigation and deflection scenarios, NASA will take the lead to conduct foundational analysis and simulation and an assessment of applicable technologies in close coordination with DOD, FEMA, and other relevant Federal departments and agencies. NASA also will conduct outreach to relevant private sector stakeholders to leverage related work and engage other nations and multilateral forums to explore opportunities for international cooperation and full transparency. NASA projects such as the Space Surveillance Telescope, the Asteroid Terrestrial-Impact Last Alert System (ATLAS), the Large Synoptic Survey Telescope (LSST), the space-based NEOStar Concept, and the B612 Sentinel Project highlight this preparedness and are designed to reduce the potential risk of NEO impacts to Earth. Agency representatives interested in more information on NASA's NEO Program should reach out to Johnson (lindley.johnson@nasa.gov) directly.

V. Discussion: FEMA Strategic National DRR Policy Recommendations

Applegate introduced David Kaufman (FEMA), who is Associate Administrator for Policy, Program Analysis and International Affairs and Acting Assistant Administrator of the Grant Programs Directorate at FEMA within DHS. Kaufman sought input and considerations from SDR representatives on FEMA's effort to develop strategic national disaster risk reduction policy recommendations as called for in the Sandy Recovery Improvement Act of 2013.

The Sandy Recovery Improvement Act of 2013 is congressional legislation passed in the aftermath of Hurricane Sandy that requires FEMA to submit a report to Congress within 180 days of the enactment of the law with recommendations for the development to reduce costs, loss of life and injuries from extreme disaster events in vulnerable areas of the U.S. that: 1) respects the constitutional role and responsibilities of Federal, state, local, and tribal governments and the private sector; 2) considers the vulnerability of the U.S. to damage from flooding, severe weather events, and other hazards; 3) analyzes gaps and duplication of emergency preparedness, response, recovery, and mitigation measures provided by Federal, state, and local entities; and 4) includes recommendations on how to improve the resiliency of local communities and states.

Kaufman noted that FEMA plans to explore the recommendations around cross-cutting themes and will consider both programmatic issues and opportunities to inform non-emergency management decision processes that can reduce disaster risk exposure, potentially including but not limited to: 1) aligning incentives; 2) enabling resilient recovery; and 3) supporting disaster risk reduction nationally. Regarding aligning incentives, FEMA will potentially consider the following objectives: the relationship between participation in the NFIP and eligibility for post-disaster assistance; an examination of alternatives to declaration criteria and reimbursement approach (e.g., deductible model); an examination of regulatory and other pressures that have the effect of reducing resiliency in critical systems; incentives for adopting code-plus building standards; and mechanisms for more cost-effective funds management before, during, and after large-scale disasters.

With regards to enabling resilient recovery, Kaufman stated that FEMA will keep in mind the following key points: encouraging more hazard-resilient and sustainable rebuilding (vs. replacing what was there before); enabling mitigation of critical public functions to higher standards; and leveraging full range of Federal authorities and programs when resourcing recovery from major events. Concerning supporting disaster risk reduction nationally, FEMA will potentially consider the following goals: developing approaches that better consider future disaster risk in programmatic processes; tools and analysis that provide better understanding of true risk exposure over time (and who bears that risk) to inform land-use

planning, flood plain management, and development decisions; and a study of the efficacy of alternative approaches to hazard insurance.

To close his briefing, Kaufman invited SDR members and their Federal colleagues to attend a follow-on interagency discussion regarding these recommendations on Thursday, April 11, 2013, from 9:00 to 11:00 a.m. at FEMA HQ (500 C Street SW, Washington, DC – Suite 633, Room 623, Blue Room 1 & 2). SDR members interested in engaging in this effort but are unable to attend the meeting in-person or via teleconference can submit comments and input in writing to Kaufman (David.Kaufman@fema.dhs.gov) and Andrew Slaten (Andrew.Slaten@fema.dhs.gov) on a short turnaround over the next two to three weeks.

VI. Discussion: Post-Sandy S&T Lessons Learned White Paper and Support to Sandy Rebuilding Task Force Science Coordination Working Group

Applegate introduced Kevin Werner (NOAA), who is on detail to HUD as the Science Liaison for the Hurricane Sandy Rebuilding Task Force. Werner briefed the SDR on the activities of the Task Force, specifically its effort to spin up a Science Coordination Working Group.

According to Werner, the six primary goals of the working group are to: 1) respond to and/or identify important scientific information needs of decision-makers on the ground and in agencies within the Task Force effort; 2) ensure that rebuilding efforts are informed by the most recent and relevant scientific advice to improve resilience and preparedness; 3) ensure consistent communication about agency scientific activities relevant to the purpose and functions of the Task Force; 4) provide strategic advice and input to the Task Force Strategy Report; 5) provide coordination of agency scientific activities to avoid unnecessary overlap, identify opportunities for collaboration, increase the utility of scientific products, and ensure information quality standards; and 6) provide efficient access to scientific information by the Task Force, state and local governments, and the public.

Werner noted that other critical objectives of the Hurricane Sandy Rebuilding Task Force Science Coordination Working Group will be to liaise with FEMA and its Joint Field Offices, integrate science input from the National Disaster Recovery Framework agencies, and engage with FEMA's recent effort to develop strategic national disaster risk reduction policy recommendations as called for in the Sandy Recovery Improvement Act of 2013. Werner added that Dickinson will chair the working group, and SDR members interested in volunteering to help co-lead or participate in the group's initiatives should contact Werner (kevin.werner@noaa.gov) and Dickinson (tdickinson@ostp.eop.gov) during the next few weeks while the group ramps up its collaborative efforts with the Task Force.

As part of this Hurricane Sandy discussion, Dickinson also briefly reviewed the draft white paper of the SDR ad hoc working group focused on post-Sandy S&T lessons learned and future research opportunities for the coordination of interagency Federal S&T planning and investment in the wake of the disaster. While the document is nearing completion, more engagement is needed and agencies are encouraged to provide comments and edits to the ongoing report by contacting the SDR Secretariat (bret.schothorst@mantech.com) and copying our OSTP Liaison (tdickinson@ostp.eop.gov).

VII. Adjournment

Applegate adjourned the SDR March meeting at 12:00 p.m.

VIII. Future Meetings

SDR meetings in 2013 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:

2013

- ✓ Thursday, May 2
- ✓ Thursday, June 6
- ✓ Thursday, July 11 (to avoid proximity to the Independence Day Federal holiday)
- ✓ Thursday, August 1
- ✓ Thursday, September 5
- ✓ Thursday, October 3
- ✓ Thursday, November 7
- ✓ Thursday, December 5

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

X. 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

XI. Summary of April Actions

Action	Lead	By When
Develop brief talking points for the May SDR meeting roundtable discussion on the impacts that budget sequestration cuts have had on agencies' disaster reduction activities in FY 2013 as well as an outlook of the President's FY 2014 budget on Federal government disaster operations in the coming year. Please submit these to the SDR Secretariat (bret.schothorst@mantech.com).	SDR Members	Wednesday, May 1, 2013
Reach out to Kevin Werner (kevin.werner@noaa.gov) and OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) to engage with the Hurricane Sandy Rebuilding Task Force Science Coordination Working Group to identify important scientific information needs of decision-makers on the ground and in agencies within the Task Force effort.	SDR Members and Federal Colleagues	ASAP
Contact the SDR Secretariat (bret.schothorst@mantech.com) and OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) to provide comments or edits to the SDR ad hoc working group's white paper focused on post-Sandy S&T lessons learned and future research opportunities in the wake of the disaster.	SDR Members	ASAP

Reach out to NSTC Infrastructure Subcommittee Co-chairs Mary Ellen Hynes (MaryEllen.Hynes@dhs.gov) and Allan Manuel (Allan_K_Manuel@ostp.eop.gov), copying the SDR Secretariat (bret.schothorst@mantech.com) and the OSTP Liaison (tdickinson@ostp.eop.gov), to engage with the ISC's effort to develop an Executive Order focused on *Federal Leadership in Infrastructure Resilience and Renewal*.	SDR Members	Standing
Email OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) and the SDR Secretariat (bret.schothorst@mantech.com) to assist in drafting a white paper to consider the advisability of implementing OSTP and SDR taskings related to multi-agency and multi-hazard coordination laid out in pending Congressional legislation.	SDR Members	Standing
Email the SDR Secretariat (bret.schothorst@mantech.com) and OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) if willing to pilot an assessment of the progress of the short-, mid-, and long-term goals outlined in an SDR Grand Challenges for Disaster Reduction implementation plans.	SDR Members	Standing
Contact OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) and the SDR Secretariat (bret.schothorst@mantech.com) to participate in the initiative to incorporate natural hazards data sets to the Safety Data Community.	SDR Members and Federal Colleagues	Standing
Email OSTP Liaison Tammy Dickinson (tdickinson@ostp.eop.gov) and the SDR Secretariat (bret.schothorst@mantech.com) to participate in a small working group or task force to discuss a disaster reduction- or community resilience-focused grand challenge or incentive prize highlighting Federal interagency programs, partnerships, and collaborations.	SDR Members and Federal Colleagues	Standing
Please consider supporting the work of the SDR and its Secretariat through a contribution from your agency. Let Co-chair David Applegate (applegate@usgs.gov) know if you need an Agency- or Department-specific request letter.	SDR Members	Standing
Contact 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	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