

Report of the Federal Work Group on Extreme Storm Events (ESEWG)

The Federal Work Group on Extreme Storm Events (ESEWG) held three meetings: two research seminars: one on June 26, 2013; a second one on August 15, 2013; and a teleconference meeting on July 17, 2013. All three meetings used Webinar format to accommodate ESEWG members at remote locations. The SOH chair and vice-chair were invited to participate along with interested SOH members.

On June 26th, NRC hosted an ESEWG meeting and special NRC Research Seminar by Dr. Sanja Perica, Director, Hydrometeorological Design Studies Center (HDSC)/National Weather Service (NWS)/NOAA, at NRC's Office of Nuclear Regulatory Research offices in Rockville, Maryland. Her presentation was "NOAA Atlas 14 Precipitation-Frequency Atlas of the United States: Products and Methods." Her presentation topics included a background on the precipitation frequency methodology, NOAA Atlas 14 (with numerous volumes). The methodology is an AMS-based region-of-influence regional frequency analysis approach based on L-moment statistics. She demonstrated the NOAA Atlas 14 products (please see <http://hdsc.nws.noaa.gov/hdsc/pfds/index.html>) and methods (Precipitation Frequency Data Server (PFDS)). She explained the atlas's current methods being used; and enhancements for accounting for non-stationarity (climate change), and areal reduction factors (ARFs). Her slides are posted on the SOH Website. Her presentation slides provide URL sites of the NOAA Atlas reports, methods, products and technical details.

On August 15th, NOAA's National Weather Service in Silver Spring, Maryland hosted a seminar by Professor Bingzhang Lin, Director, Center for Applied Hydrometeorological Studies, Nanjing University of Information Science and Technology, in Nanjing, China. He also serves as Dean of the University's College of Hydrometeorology. Dr. Lin discussed techniques he has been using for developing Probable Maximum Precipitation (PMP) and precipitation frequency estimates in China including advances he is proposing. He focused on a technique that shows promise for estimating event frequencies that extend to an upper limit in the range of PMP; and a technique for quantitatively determining the impact of local terrain during storm transposition. Geoff Bonnin, NWS host will forward Dr. Lin's slides to Victor Hom, SOH vice-chair for posting on the SOH Website.

The July 17th teleconference focused on ESEWG's input to the ACWI reporting on the "Development of Strategy for a National Methodology for Estimating Extreme Storm Precipitation."..John England, Bureau of Reclamation, Denver, Colorado chairs the task force on this effort. The teleconference participants were: John England, Victoria Sankovich, Jason Caldwell, Bureau of Reclamation; Tom Nicholson, NRC; Geoff Bonnin, NWS; Mike Eiffe, TVA; Li Chuan-Chen, University of Maryland; Robert Mason, USGS; Chandra Pathak, USACE; John Weatherly, USACE-CRREL; Sam Lin, FERC; Claudia Hoeft, USDA; and Will Thomas, Michael Baker Jr., Inc. The discussions focused on what the ESEWG Federal agencies presently use for precipitation analysis estimates; their needs for precipitation frequency analysis tools and databases; and what interest they have in pursuing joint work on updating the NWS's HMRs on PMP estimates; NOAA Atlas 14; and the National Storm Catalog being developed by USACE. It was agreed to convene a two-day writing workshop to complete the proposal with details on its technical development and resource allocation needs. A workshop prospectus has been developed by John England and his BoR colleagues and distributed to the ESEWG members on August 15th along with draft minutes of the July 17th teleconference. The writing workshop is tentatively scheduled for January 14 – 15, 2014 in either Denver, Colorado or Washington, DC

or possibly both via Webinar due to anticipated travel funding limitations due to the Federal Sequestering.

Tom Nicholson scheduled the next ESEWG teleconference for August 28, 2013 @ 2:00 p.m. EDST. The teleconference topics will be: ACWI report on ESEWG activities; further develop the prospectus on the two-day writing workshop for the ACWI-requested proposal; and Doug Clemetson, USACE- Omaha District will talk about National Storm Catalogue and archiving of storm databases. Finally, the proceedings of the Probabilistic Flood Hazard Workshop held at the NRC have been sent to the publishers and should be available by mid-September 2013 with a URL link on the SOH Website to the published proceedings.