

**MEETING OF THE  
ADVISORY COMMITTEE ON WATER INFORMATION'S (ACWI)  
SUBCOMMITTEE ON HYDROLOGY (SOH)**

**12:00 p.m. – 3:00 pm, Eastern Standard Time  
Monday August 19, 2013**

**Location:** NOAA Center for Weather and Climate Prediction (NCWCP)  
5830 University Research Court, College Park, MD 20740.

<b>I. Summary</b>
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1. **Welcome and Introductions (12:00 PM Eastern)** Richard Raione/Victor Hom
  - *NOAA NESIDS and NWS led a tour of the NCWCP*
  - *Special thanks to Kay Metcalf, Natalie Donoho, staff members from NESDIS Satellite Analysis Branch, WPC, and OPC for the warm welcome and informative briefings.*
  - *Victor provided a recap and responses to questions related to NCWCP products and guidance used in the NWS River Forecasts, Warnings, and Flash flood services.*
  
2. **Reminder - upcoming Vice Chair nominations** Richard Raione
  - *Nominations to be sent to Richard and Victor by September 4.*
  - *Richard and Victor will send nominees to SOH members for their vote.*
  - *The SOH members agreed to vote by mail, so that the new administration would be in place before the ACWI National Meeting tentatively planned in early FY14Q1.*
  
3. **Review and Approval of Agenda** Richard Raione
  
4. **Approval of the April 2013 Meeting Summary** Victor Hom
  - *SOH members to get back with Victor by Sept 4<sup>th</sup> on any changes*
  - *Victor will incorporate any changes and then have summary posted to SOH website*
  
5. **Status of Action Items from April 2013 Meeting** Victor Hom
  - *Victor reported many of the actions had been either addressed or closed.*
  - *There are few actions which Victor will need to coordinate with SOH members to close. Please see list of pending actions attached to the end of this summary.*
  
6. **Hydrologic Frequency Analysis Work Group (HFAWG) (12:15 – 2:15 PM)**
  - **Current Status and Recommendations** Will Thomas
  - **Questions/Answers/Discussion of HFAWG topics** All
  - **Advice from HFAWG Chairman** Will Thomas
  
  - *Will Thomas presented on the Status of the HFAWG Activities (see presentation posted at ACWI-SOH)*

- Will provided a brief history of the HFAWG and lead-up to this point
- Will discussed why new statistical procedures, like the Expected Moments Algorithm (EMA), are needed in Bulletin 17B
- Will discussed the recommended changes in Bulletin 17B as voted and proposed by the HFAWG
- Will noted the major points of the Minority Report
- Will provided some comparison of results for EMA and Bulletin 17B
- Will recommended the path forward – draft Bulletin 17C:

**BREAK (2:15 - 2:30 PM)**

**7. SOH Review of HFAWG Recommendations (2:00 - 2:45 PM)**

- Discussion of the majority and minority reports All
- Discussion on the path forward and any motions/votes All
- *The question was raised whether SOH members needed to go back to the individual organizations for a vote. Several agencies weighed-in but stated that the HFAWG motion being proposed forward is to draft the report. In addition, it was stated that agencies with a major stake in the work had been participating in the HFAWG meetings, data and test groups. When B17C is final, FEMA will be using B17C as guidance and expects the bulletin to go through additional public review.*
- *SOH members stated that the final testing report should include all analyses of the 82 sites, which was discussed in the HFAWG June 2013 meeting.*
- *SOH voted and approved the following motion: **SOH instructs the HFAWG to draft new guidelines for conducting flood frequency analysis based on the recommendations provided by the HFAWG Chair with additional considerations to (1) clarify the definition of PILFs (Potentially Influential Low Flows) and (2) provide computations of the 21 sites with low flow outliers using the 25% percentile as the threshold to start the PILF screening***
- *SOH members expressed the need for the reports and follow-up meetings so that agencies could better align with the recommendations. Some of the members would defer to the expertise of the USGS, USACE, and USBR, who would more experience with hydrologic flood frequency analyses; some would treat these as guidance or best practices,; others would require agency review before approving the use of B17C.*
- *All agree that more coordination with OFA, State, Local, and Consultants to collect input would be needed. Advance coordination amongst member agencies prior to the posting of the Federal Register would be helpful.*

**8. Quick Announcements and plans for next SOH meeting** Richard Raione

- *As customary, the vice-chair will move into the Chair after a two year term.*
- *SOH will provide nominees for Vice-Chair to Richard and Victor*

- *The goal would be to elect incoming Vice-Chair prior to next meeting, in preparation for the Annual ACWI meeting which had been rescheduled for the Fall of 2013.*
- *Brian Beucler volunteered to host the next meeting at Federal Highways Administration, which is scheduled for Monday October 28<sup>th</sup> from 12PM-3PM.*
- *SOH recommends that the Guest Speaker should be invited to discuss Climate Change and its impacts on Hydrology.*

9. Meeting Adjourn (3:15 pm)

**II. Attendees**

<b>Representative</b>	<b>Subcommittee on Hydrology Member Organizations</b>	<i>Participation</i>
Richard Raione	U.S. DOI Bureau of Land Management (BLM)	<i>(phone)</i>
Victor Hom	NOAA / National Weather Service	
Siamak Esfandiary	U.S. DHS, Federal Emergency Management Agency	
Samuel Lin	Federal Energy Regulatory Commission (FERC)	
Robert Mason	U.S. Geological Survey (USGS)	
Tom Nicholson	U.S. Nuclear Regulatory Commission (NRC)	
Quan Quan	U.S. Dept. of Agriculture, Natural Resources Conservation Service (NRCS) <i>For Claudia Hoefts</i>	
Will Thomas	Association of State Flood Plain Managers (ASFPM)	
David Wells	US Environmental Protection Agency (USEPA)	
Don Woodward	Global Ecosystem Center (GEC)	
Martin Becker	Becker	
Brian Beucler	Federal Highways Administration	
Benjamin Pratt	National Hydrologic Warning Council (NHWC)	<i>(phone)</i>
Jerry Webb	U.S. Army Corps of Engineers (USACE)	<i>(phone)</i>
David Goodrich	U.S. Dept. of Agriculture, Agricultural Research Service (ARS)	<i>(phone)</i>
Mike Eberle	U.S. Dept. of Agriculture, Forest Service (USFS)	<i>(phone)</i>
Ian Ferguson	U.S. Bureau of Reclamation	<i>(phone)</i>

Robert Boyd	U.S. DOI, Bureau of Land Management (BLM)	(phone)
Ted Engman	National Air and Space Administration (NASA)	(phone)
<b>SOH WG Members and Guests</b>	<b>Organization/Agency</b>	<i>Participation</i>
Kay Metcalf	NOAA NESDIS, <i>STIWG</i>	
Jerry Coffey	Office of Management and Budget (Retired), <i>HFAWG</i>	
Gerry Galloway	University of Maryland	
Lichuan Chen	University of Maryland	
John England	U.S. Bureau of Reclamation, <i>ESEWG and HFAWG</i>	(phone)
Tom Roberts	Commonwealth of Virginia, DCR Dam Safety	(phone)
Melissa Kohler	CA Division of Water Resources	(phone)
Karen Meetcham	US Environmental Protection Agency	(phone)
Ed Tomlinson	Applied Weather Associates	(phone)

**III. ACTIONS**

Pending ACTIONS FROM PRIOR MEETING	Notes	Current Status
<b>SOH and HFAWG:</b> SOH to be more informed by reviewing HFAWG meeting notes, references , and pending recommendations	All	Ongoing, SOH Membership Responses?
<b>FEMA NDSP:</b> FEMA to provide updated fact sheet on the Technical Mapping Advisory Council (TMAC)	Recommended by Siamak Esfandiary	Done - Fact sheet sent to members
<b>FEMA NDSP:</b> FEMA maintains the Federal Guidelines for Dam Safety Website ( <a href="http://www.fema.gov/federal-guidelines-dam-safety">http://www.fema.gov/federal-guidelines-dam-safety</a> ) which will contain new reports on 1) <i>Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures</i> and 2) <i>Selecting and Accommodating Inflow Design Floods for Dams</i> upon final completion	Recommended by Siamak Esfandiary.	Report has not been posted. Action is deferred.

<p><b>FEMA NDSP and SOH:</b> FEMA NDSP and SOH Membership should be aware of the potential value of National LIDAR Dataset which would provide enhanced topography data for future engineering scientific mapping analyses. The link to the National Elevation Assessment (<a href="http://nationalmap.gov/3DEP/nea.html">http://nationalmap.gov/3DEP/nea.html</a>)</p>	<p>Recommended by Dave Goodrich.</p>	<p>SOH members to review</p>
<p><b>NEW ACTIONS FROM RECENT MEETING</b></p>	<p>Notes</p>	<p>Current Status</p>
<p>Provide DOE report on U.S. energy section vulnerabilities to climate change and extreme weather <a href="http://energy.gov/sites/prod/files/2013/07/f2/20130716-Energy%20Sector%20Vulnerabilities%20Report.pdf">http://energy.gov/sites/prod/files/2013/07/f2/20130716-Energy%20Sector%20Vulnerabilities%20Report.pdf</a>.</p>	<p>Tom Nicholson</p>	<p>Completed</p>
<p>HFAWG to consult with DOE, LBNL and NOAA on U.S. energy section vulnerabilities to climate change (CC) and extreme weather and consider how to consider climate change into B17C.</p>	<p>Recommended by Tom Nicholson to HFAWG</p>	<p>HFAWG to consider CC impact to energy</p>
<p>HFAWG and SOH to reference President’s Climate Action Plan <a href="http://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf">http://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf</a>, in particular, the section in the Plan on “Providing a Toolkit for Climate Resilience”. It was noted that “One of ACWI’s other subcommittees (Hydrologic Frequency Analysis Workgroup of the Subcommittee on Hydrology) is updating Bulletin 17B but is not addressing climate change issues in this process. ACWI Climate Change Workgroup (CCW) suggested a follow-up to raise awareness of the technical work being out of step with Federal policy.”</p>	<p>Recommended by David Wells and Tom Nicholson</p>	<p>HFAWG and SOH to address CC in Flood Frequency Analyses and discuss with CCW.</p>
<p>B17B already has the capability to add data from historical floods. The new PeakFQ includes enhancements to this capability and member organizations would like more information and a tutorial on how to more appropriately use this feature to derive a practicable estimate of the flood frequencies.</p>	<p>Recommended by SOH</p>	<p>HFAWG to consider tutorial s.</p>
<p>HFAWG to finalize the Testing Report and post onto the ACWI-HFAWG web site. In addition, test results concerning the 25<sup>th</sup> percentile threshold will be provided to HFAWG members.</p>	<p>Recommended by SOH</p>	<p>Assigned to Will Thomas to complete testing report and post results</p>
<p>Link to AGU Water Resources Research Article entitled” A generalized Grubbs-Beck test statistic for detecting multiple</p>	<p>Recommended by John England</p>	<p>SOH members to</p>

potentially influential low outliers in flood series”, Cohn et al. <a href="http://onlinelibrary.wiley.com/doi/10.1002/wrcr.20392/abstract">http://onlinelibrary.wiley.com/doi/10.1002/wrcr.20392/abstract</a>		review
The link to the FEMA Climate Change Report is <a href="http://www.aecom.com/News/Sustainability/FEMA+Climate+Change+Report">http://www.aecom.com/News/Sustainability/FEMA+Climate+Change+Report</a>	Recommended by Siamak Esfandiary	SOH to review
SOH members to provide Vice-Chair Nominees to Richard and Victor	Two nominees received	Completed
Setup next ACWI-SOH October Meeting at Federal Highways Administration HQ.	SOH Members to mark their calendars : October 28 <sup>th</sup> .for next SO H meeting	Thanks, Brian Beucler and FHWA staff
Arrange guest speaker.	Members recommended ACWI <a href="#">WRACCW</a> (Climate Change Workgroup) to provide briefing and present at next meeting.	Completed – Mr Jeff Peterson will be presented and Mr. Paul Freedman will be online.

**IV. Workgroup Reports**

1. **Extreme Storms Events Workgroup (ESEWG)**
  - *The ESEWG recently 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.*
  - *On June 26<sup>th</sup>, Dr. Sanja Perica, Director, Hydrometeorological Design Studies Center (HDSC)/National Weather Service (NWS)/NOAA, made a presentation on “NOAA Atlas 14 Precipitation-Frequency Atlas of the United States: Products and Methods.”*
  - *On August 15<sup>th</sup>, Professor Bingzhang Lin, Director, Center for Applied Hydrometeorological Studies, Nanjing University of Information Science and Technology, in Nanjing, China discussed techniques for developing Probable Maximum Precipitation (PMP) and precipitation frequency estimates in China.*
  - *The July 17<sup>th</sup> teleconference focused on ESEWG’s input on the "Development of Strategy for a National Methodology for Estimating Extreme Storm Precipitation.”. 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.*
  - *From the teleconference, 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 drafted and to be posted on ACWI-SOH ESWEG Website.*

**2. Hydrologic Frequency Analysis Workgroup**

- *The ACWI\_SOH meeting was devoted to understand HFAWG. The HFAWG materials and presentation submitted in advance and posted on ACWI-SOH and HFAWG website serve as HFAWG report.*

**3. Hydrologic Modeling Workgroup**

- *The SEDHYD 2014 conference was postponed due to budget concerns expressed by members of ACWI.*
- *The rescheduled dates for SEDHYD 2015 are April 19 through 23, 2015, at the same venue, the Peppermill Hotel, Reno, NV.*
- *The announcement is posted on the conference web-site: <http://www.sedhyd.org>*
- *A general coordinating committee meeting is planned for October 2013 to (among other things) revisit them for the conference and any changes to topics and subtopics, finalize committee assignments, and consider policy on conference guests.*
- *It is expected that the call for papers for SEDHYD 2015 will go out December 2013.*
- *The majority of coordinating committee members are from SOS. SOH members are reminded that this is a joint conference hosted by both the SOS and SOH. SOH members are encouraged to take a more active role in participating in conference organization and planning.*

**V. Business Reports**

• **FERC**

· In May, FERC convened a conference call with a district to discuss proposed interim risk reduction measures and a monitoring plan for a project in CA. The project needs to be remediated to increase spillway capacity to safely pass the Probable Maximum Flood.

· In June, FERC conducted a workshop in DC on the incorporation of risk-informed decision making (RIDM) into the Commission's dam safety program. The workshop purposes are to keep the FERC dam safety community apprised of its progress in implementing RIDM and to provide an intermediate training in risk concepts for dam safety, including probabilistic loading, consequence estimation, risk assessment, etc.

· In August, currently a project in Michigan has inadequate spillway capacity to safely pass the design flood. A meeting was held to discuss the next steps for refining the inflow design flood study and for evaluating short term and long term risk reduction measures.

· In July, FERC participated in a Board of Consultants (BOC) meeting for the development of a statewide PMP Study for the State of Wyoming. Undertaking statewide PMP studies presents a challenge in the implementation of the Commission's Dam Safety Program when hydrologic

PMP values cross state boundaries. Currently, Ohio, Wyoming and Arizona are performing statewide PMP studies, and Nebraska has completed a statewide PMP study.

## **VI. Announcements**

- ESEWG is proposing a Workshop for Extreme Precipitation Analysis Products to be held on January 14-15, 2014 for Denver, CO and/or Washington, DC. See ACWI SOH HFAWG Website for more details.
- American Geophysical Union's (AGU) 46th annual Fall Meeting is scheduled to take place in San Francisco, California, 9-13 December. For more info, see: <http://fallmeeting.agu.org/2013/>
- ASCE-EWRI 9th Weather Radar and Hydrology International Symposium to take place in Washington, DC, 7-9 April 2014. : <http://content.asce.org/conferences/wrah2014/index.html>
- Next ACWI SOH Meeting 10/28/2013 (Federal Highways Administration HQ – DC) with Goto Meeting: <https://www1.gotomeeting.com/join/586666777> (Meeting ID: 586-666-777) and the conference call: 1-877-989-4696 Passcode: 1547347.