

**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 January 28, 2013**

Location: USACE-HQ 441 G Street,
Room 3K86 (3rd floor conference room)
Washington, DC. 20314-1000

Draft Summary of Meeting

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| 1. Welcome and Introductions | Richard Raione |
| 2. Review and Approval of Agenda | Richard Raione |
| 3. Approval of the Recap from October 2012 Meeting | Victor Hom |
| 4. Status of Action Items from October 2012 Meeting (See page 2) | Victor Hom |
| 5. Presentation: The 2011 Mississippi River Basin Flood - A Perspective on Forecasting, Water Management, and Flood Fight | Chandra Pathak |
| 6. Review of Work Group Reports and Q&A with Work Group Leads | |
| a. Hydrologic and Hydraulic GIS Applications Work Group | William Merkel |
| b. Extreme Storms Work Group | Tom Nicholson |
| c. Hydrologic Frequency Analysis Work Group | Will Thomas |
| d. Hydrologic Modeling Work Group | Chandra Pathak |
| e. Satellite Telemetry Interagency Work Group | Victor Hom |
| 7. Current Events within ACWI and the Hydrologic Communities | |
| a. Announcements | All |
| b. Business Reports from Member Organizations | All |
| c. "The SOH CONNECTIONS" Newsletter | Victor Hom |
| d. 2013 Probabilistic Flood Hazard Assessment Workshop | Tom Nicholson |
| e. Other | All |
| 8. Review New Action Items | Victor Hom |
| 9. Plans for Next Meeting | Richard Raione |
| • Tentative Monday, April 22, 2013 from noon to 3:00 pm EDT | |
| • Suggestions/Presentation Topics | |

ATTENDEES**Subcommittee on Hydrology and Workgroup Members**

Representative	Organization/Agency	<i>Participation</i>
Richard Raione	U.S. DOI Bureau of Land Management (BLM)	<i>(phone)</i>
Victor Hom	NOAA / National Weather Service	
Shemin Ge	National Science Foundation	
Samuel Lin	Federal Energy Regulatory Commission (FERC)	
Robert Mason	U.S. Geological Survey (USGS)	<i>(phone)</i>
Don Woodward	Global Ecosystem Center (GEC)	
Siamak Esfandiary	U.S. DHS, Federal Emergency Management Agency	
Will Thomas	Association of State Flood Plain Managers (ASFPM)	<i>(phone)</i>
Martin Becker	Becker	
William Merkel	U.S. Dept. of Agriculture, Natural Resources Conservation Service (NRCS)	
Benjamin Pratt	National Hydrologic Warning Council (NHWC)	<i>(phone)</i>
David Wells	US Environmental Protection Agency (USEPA)	<i>(phone)</i>
Claudia Hoeft	U.S. Dept. of Agriculture, Natural Resources Conservation Service (NRCS)	
Ted Engman	National Air and Space Administration (NASA)	<i>(phone)</i>
Chandra Pathak	U.S. Army Corps of Engineers (USACE)	

SUMMARY

1. Welcome and Introductions

Richard Raione

- *Special thanks to Dr. Chandra Pathak for hosting the January 2013 ACWI SOH meeting*
- *Due to the storm and difficult phone connections with Richard, Victor presided over the meeting.*
- *ACWI SOH welcomed Dr. Shemin Ge. Dr. Ge is the Hydrologic Sciences Program Officer working in the Division of Earth Sciences for the National Science Foundation. Her specialty is hydrogeology. Dr. Ge was filling in for Dr. Thomas Torgersen*

2. Review and Approval of Agenda

Victor Hom

3. Approval of the Summary Notes from October 2012 Meeting

Victor Hom

4. Status of Action Items from October 2012 Meeting (See page 2)

Victor Hom

- *Victor recognized Mr. Merkel work and will be working with Mr. Merkel to put the final report onto the ACWI SOH website.*
- *Victor also thanked the members for completing their actions as many of the assigned actions were closed prior to the meeting.*
- *Victor has also administratively close the action pertaining to encouraging open participation and new member ship.*

5. Feature Presentation:

The 2011 Mississippi River Basin Flood - A Perspective on Forecasting, Water Management, and Flood Fight

Chandra Pathak

- *Prior to the flood of 2011, the MR&T (an integrated system of flood control reservoirs, dams, levees, channels, locks, and floodways) was never tested in its entirety and challenged with the magnitude of widespread flooding ever before.*
- *The magnitude of the 2011 flood event exceeded 1927 and was comparable to the flood of 1936.*
- *As a result of the 1927 floods, the 1928 Flood Control Act authorized the construction of Mississippi River & Tributaries (MR&T) Project .*
- *The flood of 1927 flooded over 16.8 M acres, approximately 10M acres more than flood of 2011.*
- *Runoff in 2011 was 61.0 million acre-feet (MAF), 247 percent of normal and the highest runoff in 114 years.*
- *In 2011, the MR&T system was operated in accordance to its intent and performed as design.*

Highlights include:

- *No MR&T Levees failed nor overtopped.*
- *Three of the four floodways were used to bypass flood flows.*
- *despite being 89% completely built from its origin design, the MR&T was able to handle 80-85% of project design flood (PDF), so there is Room for Larger Floods.*
- *In summary, the MR&T was a success and the partnered efforts amongst the federal, state, and local officials were very commendable. The USACE is now working diligently to restore the floodways, perform infrastructural maintenance, and prepping for future floods. .*

6. Review of Work Group Reports and Q&A with Work Group Leads

a. ***Hydrologic and Hydraulic GIS Applications Work Group***

William Merkel

- *Mr. Merkel will work on a closing statement and recognize his team who contributed to the report.*

- *Mr. Merkel reminded us of the vast resources available to help address and inform the hydrologic community on the GIS and Water Resources needs*
 - *AWRA sponsored Conference Series on GIS and Water Resources, see link to. 2012 AWRA Spring Specialty Conference (<http://www.awra.org/meetings/Spring2012/index.html>)*
 - *Developer User Conferences such as ESRI National, Federal, and Local Conferences (see <http://www.esri.com/events>)*
- *Mr. Merkel reminded us of the need to continue in sharing and distributing related information amongst the SOH membership due to growing needs and challenges of the federal agencies to incorporate these applications into our practices.*

b. **Extreme Storms Work Group**

Tom Nicholson

- *Mr. Nicholson was busy putting the final touches to the 2013 Probabilistic Flood Hazard Assessment (PFHA) Workshop*
- *The interest of this workgroup will be prime subject material for the PFHA with members supporting the panel and making presentations pertaining to:*
 - *State-of-the-Practice in Identifying and Quantifying Extreme Flood Hazards*
 - *Extreme Precipitation Events.*

c. **Hydrologic Frequency Analysis Work Group**

Will Thomas

- *Mr. Thomas provided the official minutes from the HFAWG September 2012 to SOH.*
- *Mr. Thomas stated that the Testing Group has rerun the 82-station sample and the Monte Carlo simulations but the revised Testing Report was not finalized.*
- *Mr. Thomas provided the following five references which show continued and promising progress from HFAWG (see Hom's email on January 24th):*
 - *82 site list for HFAWG_10-15_12.xlsx – a spreadsheet developed by Nancy Barth, USGS, that provides the revised flood discharges using the **new** MGB test. The spreadsheet provides the flood discharges for EMA with the new MGB test, Bulletin 17B with the existing GB test, and Bulletin 17B with the new MGB test where different from the GB test.*
 - *New Q1%t est with new MGB test_19 sites-Graph3.xls – a spreadsheet developed by Nancy Barth, USGS, and modified by Jerry Stedinger that gives 1-percent chance discharges for the 19 sites where the old and new MGB test **identified a different number of low peaks**. The spreadsheet has text information that helps explain the data. The old MGB test is the one used in the March 8, 2012 Testing Report and the new MGB test is the one we recommended for use in the September 20, 2012 meeting.*
 - *FF Plots for 19 sites that changes w new MGB.pdf – frequency plots for the 19 stations with a different number of low peaks identified by the old and new MBG tests.*
 - *EMA_LowOutliers_submitted to WRR_Dec_2012.pdf – the revised paper on the MBG test that was submitted to the Water Resources Research journal in December 2012. This journal article describes the **new** MGB test.*
 - *Lamontagne Outliers To appear ASCE-EWRI May2013Proceeding.pdf – paper on the new MGB test that will appear in the Proceedings of the May 2013 ASCE-EWRI Congress in Cincinnati, Ohio in May 2013.*
- *Mr. Mason and Mr. Thomas provided the FTP website: <ftp://ftp.usbr.gov/jengland/HFAWG/software/> for downloading PeakFQ- Beta Version 7.0 software and documentation. The intent was for members to learn more about the new proposed techniques which included the Expected Moments Algorithm and Multiple Grubbs Beck test. This version does not include the new low outlier algorithm suggested in September 2012, so version 8.0 would be required.*

- The ACWI-SOH asked HFAWG for an implementation plan, schedule, and a non-technical one pager which shows the benefits of B17C.
- The ACWI-SOH members also asked HFAWG to gather public input on the final beta-version, as ACWI SOH would like to gauge the public reaction to the new proposed techniques before consideration of a vote. With an affirmative vote, ACWI SOH would then work with HFAWG and ACWI to coordinate Official Comment through the Federal Register.

d. **Hydrologic Modeling Work Group**

Chandra Pathak

- Please note the SEDHYD Call for Abstracts due March 2013.
- SOH members are encouraged to join and participate in a March 25th Planning meeting.

e. **Satellite Telemetry Interagency Work Group**

Victor Hom

- STIWG would like to pass along info pertaining to the 2013 Satellite Conference in College Park, April 8-12, 2013. See <http://satelliteconferences.noaa.gov/2013/>
- The theme of the conference is "Strengthening Partnerships to Enhance User Readiness, Reception, and Utility".
- This conference will consist of invited oral and poster presentations with emphasis on bringing together researchers, scientists, operational forecasters and broadcasters, and applications developers interested in better understanding and maximizing the use and impact of environmental satellite data, information and products.

7. **Current Events within ACWI and the Hydrologic Communities**

a. **Announcements**

All (See attached)

b. **Business Reports from Member Organizations**

All (See attached)

c. **"The SOH CONNECTIONS" Newsletter**

Victor Hom

d. **2013 Probabilistic Flood Hazard Assessment Workshop**

Tom Nicholson

e. **Other**

All

8. **Review New Action Items**

Victor Hom (See attached)

9. **Plans for Next Meeting**

Richard Raione

- Tentative Monday, April 22, 2013 from noon to 3:00 pm EDT
- Suggestions/Presentation Topics

Additional References:

- January 28th Presentation Abstract and Bio for Dr. Chandra Pathak (see email attachment from Hom on Sun, Jan 20, 2013)
- William Merkel's Final Report for the Hydrologic and Hydraulics GIS Applications Working Group (see email attachment from Hom on Wed, Jan 09, 2013)
- Will Thomas's Reference Documents related to Hydrologic Frequency Analysis Workgroup (see email attachment from Hom on Thu, Jan 24, 2013)
- ACWI SOH Newsletter: (http://acwi.gov/hydrology/Newsletter-SOH_Fall_2012-dec18-rev1.pdf)
- Probabilistic Flood Hazard Assessment Workshop Agenda/Abstracts (See: <http://acwi.gov/hydrology/mtsconfwksshops/PFHAWorkshopProgram.final.pdf>)

Announcements and Business Reports for FY13Q1/Q2

FEMA Announcements

- 1 Mr. Roy E. Wright was selected as FEMA's Deputy Associate Administrator for Mitigation, filling the position vacated by Dr. Sandra Knight.
- 2 Mr. Wright and Mr. Doug Bellomo, Director of the Risk Analysis Division, plan to lead FEMA Mitigation Directorate by focusing more on policy, best practices, and less rigid prescriptive guidelines and supporting appendices in the following order: 1) set program level standards, 2) set working level standards, 3) guidelines, and 4) best practices
- 3 FEMA is currently very active with the Hurricane Sandy Recovery efforts

FERC Business Report

1. In December 2012, Licensees, Consultants and OEP staff attended the FERC sponsored "Risk Informed Decision Making (RIDM) Level 1" Training in Chicago, Illinois. The workshop was held to keep the FERC dam safety community apprised of our progress in implementing RIDM and to provide an introductory training in risk concepts for dam safety. This workshop covered the principles of risk, including probabilistic loading, consequence estimation, risk analysis, and risk assessment. There also was opportunity for licensee and consultant feedback and participation in the development of the RIDM program.
2. In January 2013, FERC hosted the Federal Risk Management Guidelines Work Group meeting. This interagency work group is comprised of the major Federal dam safety agencies (FERC, US Army Corps of Engineers, US Bureau of Reclamation, Tennessee Valley Authority). The work group is working toward creating a joint set of federal dam safety risk management guidelines for use by the various Federal dam safety agencies.

NOAA NWS Business Report

1. On January 23rd, NOAA NWS launched the **Emerging Services Seminar Series**. The first meeting included presentations from agency partners in health (CDC, NIH), transportation (DOT), and infrastructure (USACE), who shared their collaborations with NWS in protecting the Nation from climate, water, and weather impacts. Each seminar is intended to be an open monthly discussions with partners on how NWS can better integrate new or previously under-utilized technologies and data to improve decision support services for our Agency partners. NWS hopes to discuss user needs, relay progress on current collaborations, and provide a platform for meaningful exchange for fostering a Weather-Ready Nation [<http://www.nws.noaa.gov/com/weatherreadynation/>].

2. This year’s National Flood Safety Awareness week will take place March 18 until March 22, 2013. The National Flood Safety Awareness Week is intended to highlight some of the many ways floods can occur, the hazards associated with floods, and what you can do to save life and property. If you would like to contribute and promote activities related to flood safety, please coordinate with Lora Wilson (<mailto:Lora.Wilson@noaa.gov>) or Victor Hom (Victor.Hom@noaa.gov).

3. Recently, NWS/OHD’s Hydrometeorological Design Studies Center (HDSC) conducted a peer review of preliminary precipitation frequency estimates for the midwestern states (NOAA Atlas 14, Volume 8) and southeastern states (NOAA Atlas 14, Volume 9). The results of the review are included in HDSC’s recent Quarterly Progress Report (http://www.nws.noaa.gov/oh/hdsc/current_projects.html). NWS plans to publish these two volumes in March 2013. NWS is interested in plans, which regulating agencies may have to update their regulations to refer to NOAA Atlas 14. Comments and inquiries are welcomed via e-mail at HDSC.questions@noaa.gov.

4. NOAA NESDIS would like to remind the ACWI SOH members that all transmitters to the GOES must be 300 or 1200 Bit per second no later May 31, 2013. On June 1, GOES will not be accepting data from 100 bit per second transmitters (<http://www.noaasis.noaa.gov/DCS/docs/HDRFlyer.pdf>)

4. Several feature articles about Hurricane Sandy, Post Sandy Response, and Coastal Hazards are available at http://www.noaa.gov/features/archives/themestory_archive12.html. Please check-out aerial images of Sandy’s destruction via NOAA National Geodetic Survey’s Image Viewer (<http://storms.ngs.noaa.gov/storms/sandy/>).

5. NWS AWARE Newsletter (<http://www.nws.noaa.gov/os/Aware/pdfs/13winter-aware.pdf>) and NWS Confluence (http://www.nws.noaa.gov/oh/confluence/Confluence_No3_Nov2012_Final.pdf) are made available to members to see other happenings in the NWS.

ACTIONS

<u>ACTION</u>	<u>NOTES</u>	<u>STATUS</u>
All members: Provide comments to William Merkel on Draft Report for Hydrologic and Hydraulics GIS Applications Workgroup.	Siamak to provide Bill a copy of FEMA disclaimer to be considered in the document that the document is a guideline and not a requirement.	Completed and Closed with H2GISA final report.

Robert Mason: Robert provided the link to a website which has been used to host research/development work for B17C and HFAWG. The link is to be used by ACWI members only.	Victor forwarded link on December 10 th .	Completed
Victor: Work with Chandra on presentation about the MR&T system for January 2013 meeting.	-	Completed
Victor: Work with Richard and Claudia to put a simple paragraph on ACWI SOH procedures to welcome guest to attend the ACWI SOH meetings	Add paragraph about membership and guests at the bottom of SOH Membership link based on TOR p. Section III. Membership and also Section IV. Meetings and Procedures D.	Completed
All members: Submit newsletter articles to ACWI SOH editors: Joe Giacinto.	Newsletter Published in December 2013	Completed
All members: Submit current events and business reports on FY13Q1 activities to Richard and Victor in preparation for January 2013 meeting.	-	Completed – FERC,NWS
Work Group chairs: Send Work Group status reports to Richard and Victor in preparation for January meeting.	-	Completed – H2GISA, HFAWG
All members: Provide suggestions to Claudia on Conference themes for the SEDHYM 2014 Conference	See Call for Papers	Completed
All members: Provide comments to William Merkel on Draft Report for Hydrologic and Hydraulics GIS Applications Workgroup.	Siamak provided Bill a copy of FEMA disclaimer to be considered in the document that the document is a guideline and not a requirement.	Completed and Closed with H2GISA final report.
NEW ACTIONS FROM MEETING		

SOH: Provide link to Dr. Pathak's presentation on the 2011 Mississippi Floods.	See SOH website: http://acwi.gov/hydrology/minutes/index.html	Completed
SOH: Provide link to USACE After Action Report and USGS Report on the 2011 Floods.	See website: http://water.usgs.gov/floods/events/2011/	Completed
SOH and H2GISA: Post Final Report and closing statement for <i>Hydrologic and Hydraulic GIS Applications Work Group</i> .	See SOH website: http://acwi.gov/hydrology/h2gisa/index.html	Completed
All members: Please consider attending the SEDHYM Planning meeting on March 25, 2013.	Victor and Claudia to send out Email.	Completed
SOH and HFAWG: Complete test for remaining 82 sites for the new low outlier technique and provide to SOH membership.	Will to forward to Victor for distribution	Ongoing
SOH and HFAWG: Update the PeakFQ Beta Version to include new low outlier techniques and associated documentation.	Robert Mason to work with USGS contractor on updates	Ongoing
SOH and HFAWG: Demonstrate the use of new PeakFQ to SOH membership	Future Meeting	Ongoing
SOH and HFAWG: Review the five HFAWG References provided by Will and forwarded to SOH by Victor on January 24.	Review HFAWG References and provide Comments to Will	Ongoing