

**SUMMARY OF THE APRIL 30, 2015 MEETING OF THE
ADVISORY COMMITTEE ON WATER INFORMATION (ACWI)
SUBCOMMITTEE ON HYDROLOGY (SOH)**

1. Welcome

The April 30, 2015 meeting of the Subcommittee of Hydrology (SOH) was held at the Federal Highway Administration Turner Fairbank Highway Research Center in McLean, Virginia. Prior to the meeting, many of the SOH members and guest received a special briefing from Dr. Kornel Kerenyi, director of the Sterling Jones Hydraulic Lab, a brief tour of the facility, and a demonstration of some soil sampling and extracting instruments.

At 12:30 SOH Chairman, Victor Hom, called the meeting to order. Vic provided a brief overview of the Advisory Committee for Water Information (ACWI) and SOH. The purpose of the SOH is to help to improve the sharing of water information. The SOH meets on a quarterly basis. Its workgroups meet more frequently.

ACWI has 10 workgroups: (1) Groundwater, (2) SOH, (3) Sediment, (4) Spatial Water Data, (5) Water Resources Adaptation to Climate Change, (6) NAWQA Liaison, (7) Monitoring Methods Control Board (Water Quality), (8) Water Quality Methods Board (labs), (9) Sustainable Water Resources Roundtable, and (10) Monitoring Challenges.

The SOH has 4 active workgroup (WGs): Hydrologic Frequency Analysis Workgroup (HFAWG), Extreme Storms Estimation Workgroup (ESEWG), Hydrologic Modeling Workgroup (HMWG), and the Satellite Telemetry Interagency Working Group (STIWG).

Vic provided a summary of past SOH meeting feature presentations. The ACWI/SOH webpage provides a complete list.

2. Words from our Host

Kornel welcomed the group and provided the facilities orientation. He thanked those who attended the lab tour that he provided that morning. He extended an invitation for the SOH to meet at TF Lab once the new hydraulic flume has been installed.

Vic thanked Kornel on behalf of the SOH and complimented the lab staff their physical and computer models which they had demonstrated.

3. Roll-Call

Vic led the roll-call. Sixteen SOH members and guests attended the meeting in person and 10 attended it by phone. (See attendance matrix as attachment 1 below.)

4. Review and Approval of Agenda

Next Vic reviewed the agenda. Don Woodard moved that the agenda be approved and Claudia Hoeft seconded the motion. Without objection, the motion was approved.

5. Feature presentation

Guest Introduction -Vic introduced Brian Beucler, the featured speaker. Brian, the SOH representative for FHWA, presented an overview of two new FHWA publications related to highway design and maintenance in coastal and riverine environments. His presentation focused primarily on “HEC-25, Highways in the Coastal Environment: Assessing Extreme Events with a summary of plans to develop HEC-17, Highways in the Riverine Environment: Floodplains, Extreme Events, Risk and Resilience.

HEC-25 provides an overview of coastal issues, but not detailed guidance on accessing vulnerability. The new publication provides technical guidance and methods for extremes and incorporating climate change for highway planning and design. The document covers sea-level rise, storm surge, and wave action.

The document considers prospective from 4 regions (Gulf/South Atlantic; mid-Atlantic and New England, Great Lakes, Pacific.) Climate impacts include sea-level rise, wave, other shore line processes. New HEC-25 includes example of projecting sea-level rise. It is based on the USACE guidance document.

The document also provides an overview of coastal processes. It discussed storm-surge (with reference to ADCIRC, SLOSH, and ET-SURGE). It also includes wave considerations (based on WAM, STWAVE, and SWAN) and other coastal morphology process (with reference to EDUNE and SBEACH).

HEC-25 describes and reviews vulnerability as a function of facility exposure, sensitive to coastal processes, and adaptive capacity. Determining coastal flood-frequencies requires multiple model runs with variations of input, particularly storms-urge and waves characteristics, plus historical analysis and joint probability analyses.

There are different ways to look at climate impacts: the “bathtub approach”, site-specific modeling (to capture non-linear relationships between sea-level rise and storm surge depths)

HEC-25 envisions a climate adaption process that includes strategies of

managing damages, increasing redundancies, protecting critical infrastructure, accommodating occasional floods, erosion, and the resulting service interruptions, and relocation. There are three levels of effort in the analysis process; specific concepts are outlined for each region. The document includes several case studies for each “level of effort”

Brian also provided an overview of efforts to develop HEC-17 (2nd edition). The new document will provide methods for complying with Executive Order 13690. The development process includes: Peer exchange held on March 17; Reference Manual Outline completed April 20; 50% draft due mid August; Presentation at TRB/FHWA/FTA Resilience conference mid September; 100% draft late January 2016; Manual completion April 2016; the writing.

6. Review of previous meeting summary

Vic introduced the January meeting summary. Vic thanked Robert for providing the notes and asked the group to approve the summary. Dave Wells moved that the summary be approved and Ted Engman seconded the motion. Without objection, the motion was approved.

7. Status of Action Items From Prior Meetings

There were no action items from the previous meeting.

8. Announcements and Business Reports

Announcements

There are several upcoming conferences of potential interest to SOH members.

Business Reports

FERC –Sam

In March FERC participated in a meeting regarding the Island Lake Dam development of the St. Louis Hydroelectric Project located on the Cloquet River in St. Louis County, Minnesota. The licensee and their consultant presented the redesign of the spillway.

In April FERC conducted Dam Safety Inspections of the Nuclear Regulatory Commission’s (NRC) Farley Cooling Water Storage Pond Dam and the Squaw Creek Reservoir Dam near Dothan, Alabama.

In April FERC participated in the third review panel meeting for an ongoing statewide Probable Maximum Precipitation study for Virginia.

See FERC business report posted as attachment 3.

NWS –Vic Hom

NWS Business report provided in attachment 2 included three items of potential SOH member interest: 1) NWS completion of its reorg of HQ; 2) Links to new COMET MetEd training modules; and, 3) voluntary survey to help NWS expand GIS products and services

USDA –Claudia Hoeft

NRCS released a draft technical on post-fire hydrologic analyses for review. NRCS is developing this technical note as a reference to our engineers in the field, who may or may not be experienced hydrologists, but who are responsible for making hydrologic assessments of post-fire conditions.

Please see the national bulletin at: <http://directives.sc.egov.usda.gov/viewDirective.aspx?hid=37226> for full details. The draft technical note is attached to the bulletin as Attachment A (scroll to the bottom of the bulletin). You are not required to use the excel spreadsheet (Attachment B) referenced in the bulletin to compile comments. A marked up copy of the draft tech note (either electronically or pen/ink) or a list of comments in any format would be great. Any and all comments are welcome.

FHWA –Brian B.

FHWA has developed TEACR –series of case studies related to fires and hydrology.

NRC –Tom N.

NRC's Joe Kanney –would like to share with SOH the NRC detailed research plan for flood hazards. Tom has link for research plan

USDA –ARS –Dave Goodrich

BEAR tools for fire assessment tools

9. Workgroup Reports

- **HMWG**

Claudia delivered the HMWG report. The SEDHYD conference was held last week. The SOH cohosted the conference with SOS. It was the 10th Federal Interagency Sedimentation Conference and 10th Federal Interagency Hydrologic Modeling Conference.

The conference was a great success: 350 people attended; 240 tech papers and extended abstracts were presented. 11 short courses were at

or near capacity; 31 posters were presented; 2200 pages of proceedings will be distributed electronically. The authors are now making last edits.

The SedHyd site is active
(<http://acwi.gov/sos/pubs/3rdJFIC/index.html>).

Looking for to SedHyd 2019. Most of the membership of the conference committee is nearing retirement and will not be around to organize the next conference. The SOH participation was very limited this time and there is need for greater leadership from the group. Only three SOH members are on conference team.

Sam proposed that SOH to present a recognition award to Doug Glysson, Jerry Webb, and Claudia Hoeft for their major contributions to the SEDHYD conference.

Tom N suggested that the new conference committee look for another venue other than Reno and Los Vegas. He added that the agenda include topics related to flood assessments and precipitation (Tom also volunteered to help organize session on those topics.)

- **HFAWG**

Will Thomas (Baker, Jr.) presented the HFAWG report (see full report attached as appendix). Will had sent out new complete of B17C to HFAWG and scheduled meeting on May 7 with HFAWG. A ½ day on May 8th is reserved for writing team to begin addressing any revisions from may 7th meeting. The document will be published and done as a USGS T&M report. The team will wrap-up comments in late June. Will to brief SOH on July 23 and ACWI at national meeting tentative for August. Robert will work to arrange for public review after motions to move forward.

Will had submitted abstract on behalf of HFAWG for NHWC conference June 15-18.

Tom N asked that John England be recognized for his leadership.

Siamak asked for summary document of what has changed and why and that can be shared broadly.

Sam asked for list of expected follow-on plans and studies. Where is climate change? Will says that CC not included but will be included as follow-on.

- **ESEWG**

Vic initially presented the ESEWG report. (See appendix 2) and welcomed Marian Baker, who recently joined the group. She is looking at PMP and helping to draft ESEWG Report on Extreme Rainfall Product Needs. Currently, the Federal has considered various Probabilistic Flood Hazard Approaches whereas states want a National standard. The WG is now looking at the uncertainty in PMP Estimates and has organized a seminar on this subject on May 18, 2015.

- **STIWG**

Vic delivered the proposed STIWG TOR and summarized the changes with slides highlighting each. SOH membership had been asked to vote on acceptance of the TOR. Vic reported on the preliminary vote tally and asked in those who had not yet voted were prepared to do so. A number of members provided their votes at that point. The membership vote was 14 in favor of the new TOR. Three members did not vote (USACE, USFS, BLM), nor did 2 apparently inactive members (USBR, OSMRE). The number of “yeas” exceeded the necessary 2/3 and the new TOR's were adopted and will be forwarded to ACWI.

Robert reported that spectrum the STIWG has been concerned with the sell off of GOES DCS spectrum and that the SOH members should keep abreast of the situation as the loss of the spectrum to the Federal agencies could have a serious impact on agency data-collection activities and communications and dramatically increase the costs of those operations. Vic seconded Robert’s concern and presented a report based on Kay Metcalf’s email (see appendix 3)

10. Review Actions and Plans for next SOH meeting

Vic Hom

Martin asked about availability of testing report. Robert responded that the document had been circulated to reviewers and that the authors had responded to the comments and that those responses would be shared with the drafting team and the entire HFAWG before the HFAG meeting. Will Thomas reminded the group that the report drafts have been shared with the HFAWG.

Siamak Esfandiary brought up the issue of the need for the SOH to look into the community practices for evaluating “hydrologic risk”. He pointed out that OMB wants better analysis and management of risk data. Risk communications needs to be addressed. He proposed that SOH should consider a WG for hydrologic risk (involving the USGS, FEMA, BOR, Corps at least). Vic responded that SOH could do that, but that a more formal proposal needed to be developed and circulated. Claudia suggested that Siamack consider the issue and prepare a proposal with membership.

The group considered the time and place of the next meeting and agreed that it would be held at the USGS on July 23 from 12:30M to 3:30PM EDT. The principal topic would be B17C and the recommendations of the HFAWG.

Vic moved the group that his term as Chair was coming to a close in the fall. Robert Mason would become chair. A new vice-chair needs to be selected and he suggested that members be prepared to provide nominations at the July meeting.

Action items:

Update the Membership Roster: 1) connect with USBR for new representative to replace recent retirement and 2) connect with DOI OSMRE (which has not been active).

11. The Meeting Adjourned

Vic brought the meeting to a close.

Attachment 1. Roll call and attendance and vote on STWIG terms of reference.

	SOH Meeting In Person*	SOH Meeting via Telecon*	SOH STWIG TOR (Voted)
Robert Mason	✓		✓
Jack Sharp	✓		
Will Thomas	✓		✓
Sam Lin	✓		✓
Stephan A. Parker	✓		
David Goodrich		✓	✓
David Wells	✓		✓
Tye Parzybok		✓	
Claudia C. Hoeft	✓		✓
Don Woodward	✓		✓
Bill Kappel		✓	
Jesse Feyen	✓		
Victor Hom	✓		✓
Ben Pratt	✓		✓
Siamak Esfandiary	✓		✓
Brian Beucler	✓		✓
Jerry Coffey		✓	
Ted Engman	✓		✓

David Sutley		✓	
Martin Becker		✓	✓
Bill Merkel		✓	
Tom Nicholson		✓	✓
Kornel Kerenyi		✓	
Yan Jian		✓	
Dean Hubbard		✓	
Marian Baker		✓	

Attachment 2. NWS Business report

NWS Business Report January 2015

As of April 1, 2015, National Weather Service Headquarters is operating in a new [organizational structure](#). The reorganization allows the agency to be best positioned to fulfill its critically-important mission for NOAA and the nation, and to support the NWS field offices in providing environmental intelligence and associated services necessary to build a Weather-Ready Nation. NWS has realigned its headquarter into five new offices:

- Observations
- Central processing
- Analyze, forecast, and support
- Dissemination
- Science and technology integration and facilities.

Please see the [April 2015 AWARE edition](#) on the NWS Headquarters Reorganization. ACWI-SOH members may also want to understand the evolution of the [National Water Center](#) and NWS plans for enhancing Science and Engineering Development, Geo Intelligence, Social Intelligence, and Analysis and Prediction in its Water

Mission.

Recently, NWS and our worldwide colleagues have sponsored numerous new training modules available at COMET MetEd. SOH member organizations may have interest in accessing these recent modules: [Geodesy and Mapping](#), [Numerical Weather Prediction Essential Series](#), [Storm Surge and Datums](#), and [Introduction to Tropical Cyclone Storm Surge](#). Please see the [COMET MetEd website](#) for a full list.

The National Weather Service is working to increase the availability and usability of GIS products and services provided to the public. The results of this voluntary survey will help the NOAA's National Weather Service improve its products and services. Please take this [survey](#) to help us help you.

Attachment 3. FERC Business report

In March FERC participated in a meeting regarding the Island Lake Dam development of the St. Louis Hydroelectric Project located on the Cloquet River in St. Louis County, Minnesota. The licensee and their consultant presented the 100% design of the spillway upgrade of the North Dike. The design includes the construction of a reinforced concrete labyrinth spillway which will enable the project to safely pass its inflow design flood.

In April FERC conducted Dam Safety Inspections of the Nuclear Regulatory Commission's (NRC) Farley Cooling Water Storage Pond Dam and the Squaw Creek Reservoir Dam near Dothan, Alabama. The Squaw Creek Dam is located at the Comanche Nuclear Plant about 40 miles southwest of Fort Worth, Texas. To comply with the Federal Guidelines for Dam Safety the NRC has contracted with FERC to perform periodic inspections of their dams.

In April FERC participated in the third review panel meeting for an ongoing statewide Probable Maximum Precipitation study for Virginia. The meeting discussed the technical methods used in the study. Results of the study may be used at FERC regulated hydropower dams. In April FERC participated in the National Dam Safety Review Board (NDSRB) meeting and the Interagency Committee on Dams (ICODS) meeting. NDSRB focuses on the State dam safety offices and how the Federal dam safety agencies can assist and support the states in carrying out successful dam safety programs. ICODS focuses primarily on the Federal dam safety agencies and the collaboration and cooperation necessary to implement consistent programs.

Attachment 4. STIWG report

Report of the Satellite Telemetry Interagency Work Group to the SOH

The STIWG met in College Park, MD and discussed the activity to realign STIWG with the OFCM. STIWG is very happy to reconnect and feel OFCM can offer advocacy for the GOES DCS to NOAA and NESDIS management. Based on what had been disclosed about the new organizational structure, STIWG is optimistic that concerns will reach the appropriate audience with consideration being made for the role DCS plays in providing hydro-meteorological data that directly impacts the lives of nearly every individual in this country.

Attendees also discussed many technical activities, including the impact of present and future spectrum auctions on GOES DCS users and the requirement for the use of 2 way communications to enhance capabilities. The network will continue to evolve (e.g. 2-way communication with Integrated Intelligent Interference Mitigation - I3M, CS2 migration, LRIT, etc.) and events will occur (e.g. fire, flood, manmade disasters, etc.) but a lingering concern is encroachment on the GOES spectrum allocation which needlessly jeopardizes the integrity and effectiveness of the principal method for collecting invaluable telemetered data. Protecting life, health, safety and property is an essential tenet of this community and each agency's mission. The proliferation of wireless technology without regard for the GOES allocation threatens not only the mission but also that which we are sworn to protect.

Attachment 5. HFAWG report

Hydrologic Frequency Analysis Work Group (HFAWG) report to the Subcommittee on Hydrology (SOH) for the April 30, 2015 meeting

The Hydrologic Frequency Analysis Work Group (HFAWG) of the Subcommittee on Hydrology has compiled the first complete draft of Bulletin 17C, an update of Bulletin 17B, ***Guidelines For Determining Flood Flow Frequency***. The Bulletin 17C draft report was sent out to HFAWG members on April 20, 2015 for review and comment. The next meeting of the HFAWG will be on Thursday, May 7, 2015 at the office of Michael Baker International at 3601 Eisenhower Ave., Alexandria, Virginia. The objective of the meeting will be to give HFAWG members an overview of the document and discuss any review comments. On May 8 the group that drafted Bulletin 17C will meet for a half day to discuss any revisions that may be needed. The plan is to provide the draft Bulletin 17C report to the Chair and Vice Chair of the Subcommittee on Hydrology (SOH) in early June 2015 to be transmitted to SOH members for their review and comment. The recommendation is to discuss Bulletin 17C at the July 23, 2015 meeting of the SOH and make plans for further review. On a related item, an abstract on the update of Bulletin 17C was submitted and accepted for presentation at the annual conference of the National Hydrologic

Warning Council. This conference will be held June 15-18, 2015 in Indianapolis, Indiana.

Will Thomas
Michael Baker International
April 29, 2015