

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

January 12, 2006

**Rm. 3M-3, FERC Building
888 First Street, NE, Washington, DC 20426**

AGENDA

1. Welcome and Introductions
2. Review and Approval of Agenda
3. Approval of Minutes from Last October 20's Meeting
4. Action Items from Last October 20, 2006 Meeting
5. Update of Roster and Subcommittee Membership
6. Update on Hydrologic Frequency Analysis Work Group
7. Update on Hydrologic Modeling Work Group and Joint FIHMC-FISC Conference
8. Update on Satellite Telemetry Work Group
9. Announcements and Business Reports from Member Organizations
10. Upcoming Meeting of ACWI
11. Other Business
12. Plans for Next Meeting

Adjournment

Post-Meeting Activity (12:00 PM)

The meeting was followed by a presentation on the subject, "USACE's Recovery Effort and Ongoing Activities in the Post-Hurricane Katrina Assessment." The presenter was the USACE principle H&H engineer Jerry Webb for a half to an hour presentation.

SUMMARY OF MEETING
(Prepared by Stephen Blanchard)

PARTICIPATING

Don Woodward, American Forests
Will Thomas, Association of State Floodplain Managers (ASFPM)
Don Frevert, Bureau of Reclamation (BOR) (*by phone*)
Martin Becker, Defenders of Property Rights (DPR)
David Wells, US Environmental Protection Agency (EPA)
Sam Lin, Federal Energy Regulatory Commission (FERC)
Joe Krolak, Federal Highway Administration (FHWA)
Gene Stallings, National Hydrologic Warning Council (NHWC)
Tom Nicholson, Nuclear Regulatory Commission (NRC)
Tom Donaldson, National Weather Service (NWS)
Jerry Webb, US Army Corps of Engineers (USACE)
Steve Blanchard, US Geological Survey (USGS)
Stan Brua, US Army Corps of Engineers (USACE)
Douglas James, National Science Foundation (NSF)
Mary Greene, Office of Surface Mining (OSM)
Bob Swain, Bureau of Reclamation (BOR)
Claudia Scheer, Natural Resources Conservation Service (NRCS)
Tim Cohn, US Geological Survey (USGS)
Jerry Coffee, Formerly Office of Management and Budget (OMB)
Ken Bullard, Bureau of Reclamation (BOR) (*by phone*)
Charlie Walthall, Agricultural Research Service (ARS) (*by phone*)

MEETING HIGHLIGHTS

Sam Lin called the meeting to order at 9:30 a.m. EDT.

1. Welcome and Introductions

A total of 21 participated – 18 in person and 3 by conference call. A total of 14 active member organizations were represented.

Sam Lin expressed his appreciation for the opportunity to serve this subcommittee. He encouraged all members to continue integrating their efforts in maintaining the SOH as the excellent committee it has become. As an essential, integral part of this group, the SOH needs everyone to bring forth innovative ideas that will help propel this subcommittee to newer heights.

2. Review and Approval of Agenda

The meeting agenda was approved as listed above.

3. Review of Summary and Action Items from July's working Meeting

The minutes of the July 18, 2005 subcommittee working meeting have been posted on the subcommittee's website below. The minutes of the October 20, 2005 meeting were approved.
<http://water.usgs.gov/wicp/acwi/hydrology/minutes/index.html>

4. Action Items from Last October 20, 2006 Meeting

Will Thomas reported under item #6 the status of the proposed Bulletin 17B restudy.

5. Update of Roster and Subcommittee Membership

The Nuclear Regulator Commission (NRC) requested membership in the SOH.

DECISION: The SOH unanimously approved NRC joining the SOH.

Mary Greene, Office of Surface Mining, attended to observe the meeting in consideration of becoming a member of SOH.

An organization may become a member of SOH by submitting a letter requesting membership two weeks before a meeting and then the SOH votes on the request. (See III B of the SOH' Terms of Reference)

Claudia Scheer newly representing NRCS was welcomed aboard.

An updated roster is attached

6. Update of Hydrologic Frequency Analysis Work Group (HFAWG)

Will Thomas described the plans of the HFAWG for potentially revising Bulletin 17B, "Guidelines for Determining Flood Flow Frequency". The Hydrologic Frequency Analysis Work Group (HFAWG) met in Alexandria, VA on November 14-15, 2005 to discuss possible improvements in Bulletin 17B. The plan was sent out to the SOH prior to this meeting and Will Thomas went over the plan in detail. Because the proposed revisions are rather significant, they are proposing a new Bulletin 17C. The existing Bulletin 17B is not available in an electronic form that can be easily revised. So part of the efforts will be to get the entire Bulletin into a new electronic format.

There was considerable discussion about the proposed plan to restudy Bulletin 17B; comments included:

- There needs to be broad participation and buy-in on a step by step basis for this project;
- B17B only looks at instantaneous peaks for unregulated streams; the restudy of B17B will do the same;
- Uncertainty and confidence intervals will be addressed;
- B17B described a list of future research needs and this proposal is consistent with that list;
- Make clear that the revisions to Bulletin 17B will not address issues like watershed changes, deforestation, climate change, etc.,
- Clarify why we are investigating the Expected Moments Algorithm (EMA) rather than other techniques like Maximum Likelihood;
- Need to make sure that the original 50-60 gages used to evaluate the methods have the full range of extremes; if not, you may need to add gages and some paleoflood data
- Is the skew map going to be revised? Answer – not part of this study;

- Suggest consider looking at what other countries are doing;
- Should list situations when the method does not apply;
- Explain more clearly why we are not investigating other issues like ungaged watersheds, other frequency distributions, mixed populations, etc.,
- Proposal should describe full set of research topics and issues that need to be address and then describe which of those will be handled by this project; As a result of this comment an action item was established for HFAWG to send out a write up of possible future work that should be done related to B17B.
- A request was made for the HFAWG to send out a copy of House document 465; HFAWG agreed to do so.
- Develop an Executive Summary that describes the bigger picture of needed research and clearly identifies why we are limiting our scope of work

The HFAWG is asking for approval from the SOH to investigate the proposed revisions. If the SOH agrees that this is a worthwhile effort, then the plan would presented to the Advisory Committee on Water Information (ACWI) at their January 18-19, 2006 meeting in Herndon, VA and ask for their concurrence to investigate revisions in Bulletin 17B.

DECISION: The SOH approved the plan for the B17B restudy as presented and will inform ACWI at their meeting later in the week of our intent to pursue the project. The USGS, Corps of Engineers, and Bureau of Reclamation agreed to commit staff to work on the project. We are still waiting to hear back from FEMA regarding their role in the project. All agreed that FEMA was an important agency to be involved in the project.

ACTION: HFAWG will send a write up of possible future work that should be done related to B17B to the members of the SOH.

ACTION: HFAWG will send a copy of House Document 465 to the members of the SOH.

In preparation for the Advisory Committee on Water Information (ACWI) meeting in Herndon, VA on January 18-19, 2006, Will Thomas added an executive summary to the proposed plan as suggested at the SOH meeting. This plan was handed out at the ACWI meeting on January 18, 2006.

Finally, the HFAWG will continue our work on developing guidance for regulated watersheds. This work will continue in parallel with the proposed attached revisions to Bulletin 17B

7. Update on Hydrologic Modeling Work Group and Joint FIHMC-FISC Conference

The Federal Interagency Hydrologic Modeling Conference is scheduled for April 2nd to 6th at the Silver Legacy Hotel in Reno, NV. The format will be a combined conference with the Federal Interagency Sedimentation Conference. Hotel and logistical arrangements are now complete.

There will be approximately two hundred fifty technical papers presented - about half on hydrologic modeling and half on sedimentation. Two poster and demonstration sessions are planned. A total of ten short courses will be offered - five on Sunday, April 2nd and five on Thursday afternoon April 6th. Four field trips will also be offered.

The plenary session of the conference will be on Monday morning, April 3rd. It will include welcoming remarks by Commissioner John Keys of the Bureau of Reclamation (subject to his availability) followed by a series of four presentations on Hurricane Katrina including the meteorology and hydrology of the event as well as the sedimentation and water quality aspects.

The registration web page is now up and running at URL: <http://www.jfic.org/>

8. Update on Satellite Telemetry Interagency Work Group (STIWG)

Stan Brua, USACE, who is currently the chair of STIWG reported on the work groups activities. The US Forest Service will be assuming the chair of the workgroup in FY06. STIWG last meet in November 2005 in Baltimore MD. Major activities for STIWG in FY05 include:

- Presented concerns for the GOES-DCS system at a NOAA Stakeholders meeting in March.
- Developed a funding agreement template to enable STIWG agencies to fund the DOMSAT component of the GOES-DCS, in light of new funding requirements.
- Coordinated funding from OFCM to pre-pay the DOMSAT contract through FY 08.
- Continued to investigate the needs for a DCP with 2-way satellite communication capabilities. This would enable isolated land and marine based DCP's to be programmed remotely. A SBIR proposal to conceptually develop a low cost, low power and reliable DCP transceiver was submitted by NOAA/NOS and approved. The GOES-R satellite requirements for these DCP's were also investigated and identified.
- STIWG member agencies invested considerable effort and resources toward the "cooperative" development of a web-based Emergency Data Distribution Network (EDDN) to resolve many of STIWG's GOES-DCS backup concerns. The EDDN would enable users to receive DCP data on a short-term basis during non-satellite related GOES-DCS outages at Wallops. The EDDN would utilize networked Direct Readout Ground Stations (DRGS's) and central data repositories operated by STIWG agencies.
 - Successful prototype was developed by COE. Interagency firewall issues still need to be addressed.
 - An inventory of suitable STIWG agency DRGS's was conducted.
 - A joint USGS/NESDIS project to develop full DRGS capabilities at USGS's EROS facility in Sioux Falls, SD has been proposed and is currently being evaluated.
- STIWG members continue to be concerned about the future of the GOES-DCS program, in light of a NOAA RFI to the private sector soliciting input for a "new approach" and, more recently, a recommendation by NOAA to examine the transitioning of its own observing networks to commercial satellite. A document is currently being prepared for submittal to STIWG parent committees to (1) address the criticality of the GOES-DCS for member agencies and others, (2) present STIWG concerns, and (3) request guidance on ways to strengthen relationships with NOAA and become more involved in NOAA's budgeting and strategic planning processes.

9. Announcements and Business Reports from Member Organizations

Army Corps of Engineers – Jerry Webb

1. USACE continues to support the recovery efforts associated with Hurricanes Katrina and Rita: Summary as of 28 December 2005:

- Corps personnel deployed: 1,734
- FEMA mission assignments: \$4,401,167,000
- Temporary roofs : 209,211 completed
- Water; 4,979 truckloads ordered/distributed
- Ice: 5,276 truckloads ordered/distributed
- Generators installed: 910 (Kat & Rita); de-installed: 910
- Debris: 33, 066,429 CY removed; 51,240,000 CY estimated.

A presentation of the USACE Recovery Mission was provided following the meeting.

2. USACE has prepared draft policy guidance on levee certification procedures. This policy will be issued to the field in the near future. FEMA is reviewing the proposed policy and will provide comments to USACE within the next few days. A meeting of the FEMA Levee Policy Review Task Committee is scheduled for 24 February 2006 and this will be an agenda item. The policy guidance will require risk based analysis of the engineering aspects of levees before they can be certified by USACE.

EPA – David Wells

EPA's emergency response personnel continue to work with FEMA and other state and local agencies in the Hurricane Katrina recovery efforts. EPA is the lead Agency for the cleanup of hazardous materials (including oil) and is monitoring debris removal, landfill operations and burn sites. EPA is working with State and local Agencies to sample air, flood water, surface water, soil, and sediments for contaminants. In addition, the states of Alabama, Mississippi and Louisiana, along with the FDA, EPA, and NOAA, have analyzed hundreds of samples of fish and shellfish from the waters affected by Hurricanes Katrina and Rita. To date, the data show no reason for concern about consuming seafood from the Gulf region due to the hurricanes.

FERC – Reported by Sam Lin

On Dec. 14, 2005, near Lesterville, Missouri the FERC regulated Taum Sauk pump-storage project's upper dam breached 600 feet at 5:20 a.m. CST due to overtopping caused by over pumped flows from the lower reservoir. Approximately 4,300 acre-feet of stored water, or more than 1 billion gallons, flowed through the Johnson's Shut-Ins state park and into the East Fork of the Black River. The flood destroyed a park superintendent's home and injured his three children.

The 470-megawatt pumped storage facility is owned and operated by AmerenUE. The high hazard potential upper dam was built in 1963. The dam is a continuous hilltop dike 6562 ft long forming a 55-acre upper reservoir. The dike is a concrete-faced dumped rock fill dam with a maximum height of 84 ft above reservoir floor.

The FERC's team of dam safety engineers with the assistance of a panel of outside experts has been engaged in a fact-driven forensic engineering examination to determine what factors contributed to the dam breach for further action. The outside experts will work independently of Commission staff to assure that no facts or failure mechanisms are overlooked.

The Taum Sauk video is provided at:

http://www.ksdk.com/news/news_article.aspx?storyid=89355.

Office of Surface Mining - Mary Greene

Good Morning, Sam Lin asked me to introduce myself to you. I am happy to be with you this morning and thank you for your warm welcome. I am Dr. Mary Greene from the Office of Surface Mining in Denver, Colorado. I serve as the Hydrology Program Manager for the TIPS – Technical Innovations and Professional Services National Team. The team is organized in the Training and Technology Transfer Branch (TTTB) of the Technical Management Division (TMD) of the Western Region Center (WRC) under Billie Clark. TIPS provides Computer software and technical support and training for all the OSM offices and State and Tribal counterparts engaged in SMCRA activities involving surface coal mining, permitting, reclamation, and AML related activities. As the TIPS Hydrology Program Manager, I am responsible for providing the hydrology related software programs, training, technical support, data, and program direction. I am visiting with you this morning to learn more about your Subcommittee and its related activities as OSM considers pursuing membership on the Subcommittee. OSM is currently under the direction of Acting Director, Brent Wahlquist, in place of Jeffrey Jarrett, who was confirmed by the U.S. Senate as assistant secretary for fossil energy at the Department of Energy. Mr. Wahlquist will serve until President Bush nominates and the Senate confirms a new OSM director. I look forward to speaking with as many of you as possible following the meeting.

Bureau of Reclamation – Bob Swain

On November 18, 2005 Reclamation received Secretarial approval to reorganize the leadership of the Washington and Denver Offices. The reorganization created a new Deputy Commissioner, Policy, Administration and Budget. The following offices report to this Deputy Commissioner: Security, Safety and Law Enforcement; Program and Budget; Program and Policy Services; and Administration. Larry Todd was selected as Deputy Commissioner, Policy, Administration and Budget.

Several other executive and senior level positions were also established. The newly established Director, Technical Resources (Maryanne Bach) will report to the Deputy Commissioner, Operations with the Technical Service Center, Research and Development Program; Power Liason; and Dam Safety and Design, Estimates and Construction reporting to the Director, Technical Resources. Michael Gabaldon was selected as the Director, Technical Service Center. Michael Roluti will serve as the Power Liason, working with the U.S. Army Corps of Engineers and Tennessee Valley Authority on hydropower issues.

Reclamation and the Department of Interior are also supporting the U.S. Army Corps of Engineers and the Federal Emergency Management Agency with recovery efforts following hurricanes Katrina and Rita. The Department has 184 people currently deployed of which 58 are from Reclamation.

National Hydrologic Warning Council – Gene Stallings

Progress continues on the National Hydrologic Warning Council Report on economic benefits with the US Geological Survey gaging networks. The Phase I portion is under review. Work is ongoing on Phase 2 now. My first draft on reservoir optimization and flood warning systems has

been presented to David Ford Consulting Engineers, Inc., the prime contractor for the project. I am waiting for their review comments before proceeding to reviews by the NHWC Group.

The Flood Warning Systems, Technologies and Preparedness Conference is scheduled for May 9-12, 2006 at Tenaya Lodge at Yosemite Fish Camp in California. This Conference provides a unique forum for public and private agencies to meet and share the latest developments in the flood warning field.

National Science Foundation – Doug James

The Graying of Federal Hydrologists - Annual Meeting of the American Institute of Hydrology

At the annual meeting of the AIH in Baton Rouge May 22 & 23, the 25th anniversary of the organization, at the recommendation of Pat Leahy (USGS) a symposium will be held on what AIH has accomplished and on developing an even more effective role for the future. One topic that will be developed with help from Darryl Davis and Jerry Webb of the Corps is that governmental agencies are facing a "graying" of their professional hydrologists. People are retiring faster than new expertise is coming into many of our organizations. The discussion will focus on assessing the extent of this issue and the problems that it causes for the agencies. Hopefully the brainstorming will lead to ideas on what can be done to improve the situation. How best can AIH support the Federal agencies in the education, recruitment, and in-house training of hydrologists? Please pass your thoughts on to Jerry Webb or Douglas James.

US Geological Survey – Steve Blanchard

The USGS is still operating under the leadership of Acting Director Pat Leahy. The Department of Interior had initially indicated after Director Groat resigned in June that they want to fill the Director's position by the first of the new year; that has not happened.

The USGS received \$5.3 M supplemental funds for Hurricanes Katrina/Rita. The appropriations language says *"The funds are for facility and equipment repair and replacement needs, including stream gage repair and replacement, at Survey sites in the Southeast that were damaged by Hurricanes Katrina and Rita."*

Federal Highway Administration – Joe Krolak

The new transportation bill - SAFETEA-LU has been passed by Congress and signed by the President in August. The bill was delayed 22 months (they normally take effect for 5 years).

Katrina and Rita efforts - The lost bridges failed as a result of wave impact & uplift (and some buoyancy) forces knocking the spans off the bents. Scour failure was a contributing factor in at a few piers. Barge and vessel impacts contributed to other damages. The I-10 (Pontchartrain), US 90 (Bay Saint Louis), and US-90 (Biloxi) structures will be totally replaced and new designs will be rebuilt using 100% Federal (FHWA) contributions. FHWA has developed interim guidance to allow consideration of higher return periods than the 50-year used in typical bridge design practice. The guidance ties such use to our existing regulatory requirements for using risk analyses or risk assessments. Part of this guidance requires affected State DOTs to conduct several modeling studies to determine surge and wave elevations. FHWA has been working with representatives of USACE, USGS, FEMA, and others during this effort. Total FHWA emergency relief (ER) funds have (or will) exceed several billion dollars.

Nuclear Regulatory Commission – Tom Nicholson

The Inter-Agency Memorandum of Understanding (MOU) on Multimedia Environmental Modeling is scheduled to expire in July 2006. Another MOU is in the process of being established.

Agricultural Research Service - Charlie Walthall

Dr. Ghassem Asrar is the new ARS Deputy Administrator for Natural Resources and Sustainable Agricultural Systems. Dr. Asrar will oversee ARS National Program Staff in charge of ARS water resources research.

Dr. Dale Bucks retired from the ARS National Program Staff in January as Program Leader for Irrigation and Water Quality. A search is underway to fill the position.

The ARS Water Resources Program has completed a first draft of the new Project Plan outlining research for the next 5 years. The project plan was developed following a workshop attended by stakeholders, ARS scientists, ARS National Program Staff, and management representatives. Research Project Plans from ARS scientists will be undergoing review by outside panels convened by the ARS Office of Scientific Quality Review (OSQR). Research plans will be finalized by fall, 2006 for implementation during FY2007.

National Resources Conservation Service – Claudia Scheer

Claudia Scheer introduced herself as the new National Hydraulic Engineer for NRCS

Defenders of Public Property – Martin Becker

Nothing new to report

American Forests – Don Woodward

Nothing new to report

National Weather Service – Tom Donaldson

Nothing new to report

Association of State Floodplain Managers – Will Thomas

Nothing new to report

10. Upcoming Meeting of ACWI

The next ACWI meeting is scheduled for January 18-19, 2006 in Herndon VA. Sam Lin will present a summary of the SOH activities for the past year. Will Thomas will present the plan for conducting a restudy of B17B and the decision by the SOH to proceed with it. Jerry Webb will present the report for STIWG activities during the past year.

11. Other Business

Sam Lin, on behalf of the former chair Don Frevert, presented Stan Brua with a Certificate of Appreciation for his service as chair of STIWG in the past year.

12. Plans for Next Meeting

The next meeting will be held in conjunction with the Joint FIHMC-FISC Conference in Reno, NV and will be on March 31, 2006 starting at 12:30 PM east coast time (9:30 AM Reno time). For those who will not be in Reno, you may participate through conference call by dialing (FTS) 303-445-3940 or (non-FTS) 888-808-5102; the pass code is 0711.

13. Adjournment

The meeting was adjourned at 12: 00 p.m. EST.

Post-Meeting Activity (12:00 PM)

The meeting was followed by a presentation on the subject, "USACE's Recovery Effort and Ongoing Activities in the Post-Hurricane Katrina Assessment." USACE principle H&H engineer Jerry Webb presented for about an hour.