

## Newsletter of the Subcommittee on Hydrology

available on-line at: <http://acwi.gov/hydrology/index.html>

### In this Issue:

[Welcome from the Chair . . . . 1](#)

[About the Subcommittee On Hydrology . . . . . 2](#)

[Work Group Reports . . . . . 2](#)

[Hydrologic & Hydraulic GIS Applications Work Group . . . . . 2](#)

[Task Force on Extreme Events . . . . 3](#)

[Hydrologic Frequency Analysis Work Group . . . . . 3](#)

[Satellite Telemetry Interagency Work Group . . . . . 3](#)

[Hydrologic Modeling Work Group . . . . . 3](#)

[News from Member Organizations . . . . 4](#)

[NHWC Conference Announcement . . . . 4](#)

[NOAA NWS Flood Inundation Maps for Southeast Texas . . . 4](#)

[ALERT Users Group . . . . . 6](#)

[Upcoming Conferences and Calls for Papers . . . 7](#)

[Special Report . . . 7](#)

[Editor's Corner . . . 8](#)

[Upcoming Meetings . 8](#)

[Back to Contents](#)

### Welcome from the Chair

The Subcommittee on Hydrology met on April 17, 2008 at the Main Interior Building in Washington, D.C. One of the highlights was a presentation by Jim Verdin, Deputy Director of the National Integrated Drought Information System (NIDIS). Jim provided an overview of the NIDIS and its functions.

The National Oceanic and Atmospheric Administration (NOAA) leads implementation of NIDIS. The NIDIS Program Office was established in 2007 at NOAA's Earth Systems Research Laboratory in Boulder, Colorado. Roger Pulwarty is the NIDIS Program Director.

The NIDIS implementation plan calls for:

- Developing the leadership and networks to implement an integrated drought monitoring and forecasting system at federal, state, and local levels;
- Fostering and supporting a research environment focused on risk assessment, forecasting, and management;
- Creating an "early warning system" to provide accurate, timely, and integrated information about drought;
- Developing interactive systems, such as the Web Portal, as part of an early warning system; and
- Providing a framework for public awareness and education about droughts.

One of NIDIS' initial focuses is development of the U.S. Drought Portal as part of an interactive system to:

- Provide early warning about emerging and anticipated droughts;
- Assimilate and quality control drought data and models;
- Provide information to agencies and stakeholders about the risk and impact of droughts;
- Provide information about past droughts for comparison in order to understand current conditions;
- Help plan for and manage the impacts of droughts; and
- Provide a forum for stakeholders to discuss drought-related issues

Additional information about NIDIS is available through the Drought Portal at: <http://www.drought.gov>

Jim's presentation can be viewed through the SOH web-site at:

<http://acwi.gov/hydrology/minutes/index.html>



*Jim Verdin USGS  
Deputy Director  
of NIDIS, USGS*

[continued on page 2](#)

[Back to Contents](#)

## About the Subcommittee on Hydrology

*The Purpose of the Subcommittee on Hydrology is "To improve the availability and reliability of surface-water quantity information needed for hazard mitigation, water supply and demand management, and environmental protection." All members who join the SOH share in and support this common purpose as a network to fulfill our mission as defined in the Terms of Reference.*

*The subcommittee is currently chaired by Steve Blanchard of the United States Geological Survey. Steve can be reached by phone at 703-648-5629 or by e-mail at: [sfblanch@usgs.gov](mailto:sfblanch@usgs.gov).*

*Detailed information about the subcommittee can be found at: <http://acwi.gov/hydrology/>*

*The Subcommittee on Hydrology reports to the Advisory Committee on Water Information that operates under the Federal Advisory Committee Act.*

[Back to Contents](#)

[continued from page 1](#)

In contrast to droughts, one big topic in the news right now is the extensive flooding in the Midwest USA. Many of our Subcommittee member organizations are heavily involved in monitoring and responding to the floods. One of the issues or questions that frequently arises in the media and through public comment is in regards to the recurrence intervals for floods. The term "500-year flood" is frequently heard to describe recent flooding in the Midwest.

Midwesterners remember that the Great Flood of 1993 was also said to be a 500-year flood. So the question "How can we have two 500-year floods in a 15-year period?" frequently comes up. Those of us in the hydrology profession know that recurrence interval is based on the annual likelihood of the degree of flooding. A 500-year flood magnitude has a 0.2 percent - 1 in 500 - of being exceeded in any one year. A 100-year flood magnitude has a 1 percent chance - 1 in 100 - of being exceeded in the same place, and so on. However, for the public, the terms "100-year flood" or "500-year flood" can be very misleading.

Several years ago the Hydrologic Frequency Analysis Work Group (HFAWG) developed answers to a set of Frequently Asked Questions (FAQ) about flood frequency. This FAQ list does a very good job of addressing the typical questions about flood frequency and can be found at:

<http://acwi.gov/hydrology/Frequency/B17bFAQ.html>.

I think, however, it is time for the Subcommittee to consider formal action through our parent organization (the Advisory Committee on Water Information) to recommend that Federal agencies discontinue using "100-year" or T-year flood terminology and start using "1 percent" or X-percent terminology. I believe this will go a long way toward clearing up the confusion about flood recurrence intervals with the general public.

The Subcommittee will be discussing this issue at our meeting on July 31, 2008 at 9:00 a.m. at the Main Interior Building located at 1849 C Street in Washington, D.C.

*Steve Blanchard  
Chair, Subcommittee on Hydrology  
Chief, USGS Office of Surface Water*

[Back to Contents](#)

## Work Group Reports

### Hydrologic and Hydraulic GIS Applications Work Group

<http://acwi.gov/hydrology/h2gisa/>

*For information on the Work Group or to become a member please contact Bill Merkel by phone at (301)-504-3956 or by e-mail at: [william.merkel@wdc.usda.gov](mailto:william.merkel@wdc.usda.gov).*

[Back to Contents](#)

## Work Group Reports (continued)

### **Task Force on Extreme Events**

At the April 17, 2008 meeting of the SOH, Tom Nicholson gave a brief presentation on the Task Force activities and plans to establish an Extreme Storm work group. Tom's presentation may be viewed at:  
<http://acwi.gov/hydrology/minutes/index.html>

*Information on the activities of this Task Group can be obtained from Tom Nicholson. He can be reached by email at: [Thomas.Nicholson@nrc.gov](mailto:Thomas.Nicholson@nrc.gov).*

[Back to Contents](#)

### **Hydrologic Frequency Analysis Work Group**

<http://acwi.gov/hydrology/Frequency/index.html>

*Information on the activities of the Work Group can be obtained from Will Thomas. He can be reached by e-mail at: [WTHOMAS@mbakercorp.com](mailto:WTHOMAS@mbakercorp.com).*

[Back to Contents](#)

### **Satellite Telemetry Interagency Work Group**

<http://acwi.gov/hydrology/stiwig/index.html>

At the April 17, 2008 meeting of the SOH, Ernest Dreyer made a presentation on the establishment of an Emergency Data Distribution Network to serve as a backup to the Wallops Island Facility for GOES data; including establishment of an emergency distribution system at USGS EROS Center in Sioux Falls, South Dakota.

To view Ernest's presentation, visit the SOH web-site at:  
<http://acwi.gov/hydrology/minutes/index.html>

*Meeting minutes and information on the activities of this Work Group can be obtained from Ernest Dreyer. He can be reached by phone at: (703) 648-5365 or by e-mail at: [sedreyer@usgs.gov](mailto:sedreyer@usgs.gov).*

[Back to Contents](#)

### **Hydrologic Modeling Work Group**

<http://acwi.gov/hydrology/Hydro-Modeling/index.html>

Proceedings from the 1998, 2002 and 2006 Federal Interagency Hydrologic Modeling Conferences are being linked to the Subcommittee on Hydrology website and the work is nearly complete.

Proceedings from the 1993 Hydrologic Modeling Needs Workshop will also be linked to the website. The proceedings are currently being scanned by Reclamation technicians.

[continued on page 4](#)

[Back to Contents](#)

## Work Group Reports (continued)

[continued from page 3](#)

The planned location for the next Joint Federal Interagency Hydrologic Modeling and Sedimentation conference is the Riviera Hotel and Casino in Las Vegas, NV. The conference is scheduled for June 27<sup>th</sup> to July 1<sup>st</sup>, 2010

The organizing committee for the 2010 conference is scheduled to meet the afternoon of June 26<sup>th</sup> and the morning of June 27<sup>th</sup> at the Bureau of Reclamation offices in Denver.

Telephone connections will be available for those committee members who are unable to attend in person.

*Teleconference minutes and additional information on the activities of the Work Group can be obtained from Don Frevert. He can be reached by phone at (303) 445-2473 or by e-mail at: [dfrevert@do.usbr.gov](mailto:dfrevert@do.usbr.gov).*

[Back to Contents](#)

## News from Member Organizations

### NHWC Conference Announcement

The 8<sup>th</sup> National Conference and Exposition of the National Hydrologic Warning Council (NHWC) will be held in stunning Vail, Colorado from May 18-21, 2009. The conference is the largest in the United States devoted specifically to real-time hydrologic warning systems, and how this technology assists local officials with storm readiness, drought preparedness,

emergency response and disaster recovery. A Call for Abstracts will be issued in mid-2008 for those wishing to make a presentation or provide a workshop at the conference.

*Submitted by Eugene A. Stallings, PE  
National Hydrologic Warning Council*

[Back to Contents](#)

### NOAA NWS Flood Inundation Maps for Southeast Texas

On Friday, June 30, 2008, National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) and National Ocean Service Coastal Services Center (CSC) introduced a set of operational flood inundation maps for portions of southeast Texas.

This set of maps complements the first set, introduced in October 2007, for several locations in eastern North Carolina onto NOAA NWS Advanced Hydrologic Prediction Service (AHPS).

Flood inundation maps are now available for the following locations in southeast Texas:

- Houston - Shepard Drive... On the Buffalo Bayou
- Piney Point Village...on the Buffalo Bayou
- Westfield...on Cypress Creek
- Houston – U.S. 59...on the Greens Bayou
- Humble...on the West Fork of the San Jacinto River

[continued on page 5](#)

[Back to Contents](#)

## News from Member Organizations (continued)

[continued from page 4](#)

The flood inundation maps and associated geospatial data (e.g., shapefiles) can be accessed through the AHPS web portal:

<http://www.weather.gov/ahps/>

Flood inundation maps provide information on the spatial extent and depth of flood waters in the vicinity of NWS river forecast locations. Users are able to display flood inundation maps for various levels ranging from minor flooding through the largest observed flood.

Flood inundation maps, combined with river observations and NWS forecasts, enhance the communication of flood risk and provide users additional information needed to better mitigate the impacts of flooding and build more resilient communities. The figure below shows

an example of the AHPS flood inundation map library interface. A complete list of flood inundation map locations is available at <http://www.weather.gov/ahps/inundation.php>

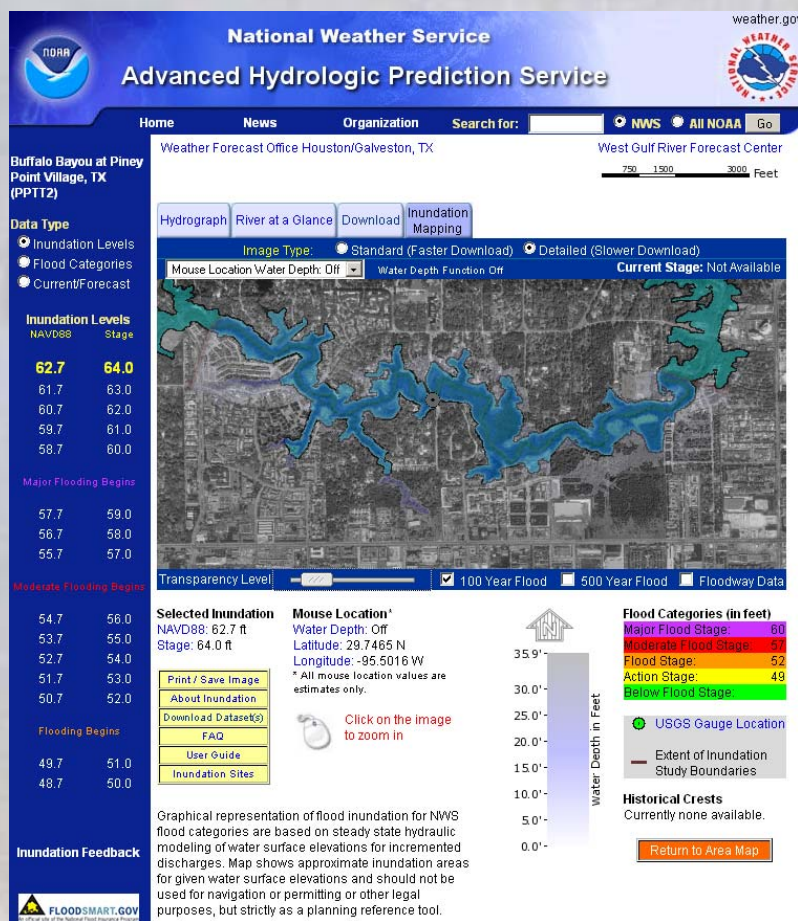
A user's guide for the flood inundation map web interface is available at [http://www.weather.gov/ahps/inundation/inundation\\_mapping\\_user\\_guide.pdf](http://www.weather.gov/ahps/inundation/inundation_mapping_user_guide.pdf)

*Questions or comments on the Advanced Hydrologic Prediction Service may be directed to Victor Hom, NWS, National Inundation Mapping Program Leader, by phone at 301-713-0006 ext. 173, or via e-mail to [victor.hom@noaa.gov](mailto:victor.hom@noaa.gov).*

*Submitted by Victor Hom, NWS*

[Back to Contents](#)

*Advanced Hydrologic Prediction Service (AHPS) flood inundation map library interface.*



**News from  
Member  
Organizations  
(continued)**

**ALERT Users Group**

The 22<sup>nd</sup> Conference and Exposition for the Automated Local Evaluation in Real Time (ALERT) was convened at Palm Springs, California on May 6-9, 2008. Well over 100 participants attended. Keynote speakers were Robert Hartman, Hydrologist in Charge, NOAA California – Nevada River Forecast Center and Gary Bardini, Chief of Hydrology and Flood Operations, California Department of Water Resources. Both speakers emphasized the need for partnerships and sharing of data. They also said “do not forget your customers”. The first day’s activities included Technical Workshops on ALERT equipment calibration and new protocol development for ALERT. These were followed by a Stream Flow Measurement Workshop sponsored by the U.S. Geological Survey.

The Session on Successful Cooperative Programs and Partnerships produced several interesting and informative presentations with a lot of follow-up questions.

A Conference highlight was the Session on the ALERT Users Group and the National Hydrologic Warning Council (NHWC)-past, present and future. The three subjects gave the audience the opportunity to find out how ALERT was formed and the subsequent history of the National Hydrologic Warning Council as it continues to grow in stature.

Gene Stallings' presentation gave a tribute to Franklin Snyder, who passed away in April. He was a pioneer in operational hydrology and the inventor of the Snyder Unit Hydrograph which is widely used throughout the world. His contributions to hydrology extended over five decades.

Achievement awards were presented at the ALERT Users Group Banquet. One honoree was Todd Mendell, NWS, for his many hydrologic radio frequency contributions over the years.

*Submitted by Eugene A. Stallings, PE  
National Hydrologic Warning Council*

[Back to Contents](#)

## Upcoming Conferences and Calls for Papers



ESRI  
28th Annual International  
User Conference  
San Diego, CA  
August 4-8, 2008  
<http://www.esri.com/uc>



Association of State  
Dam Safety Officials  
Dam Safety '08  
Indian Wells, California  
September 7-11, 2008

[http://damsafety.org/conferences/  
?p=8a505588-202e-4463-8fac-  
9b31475217ac](http://damsafety.org/conferences/?p=8a505588-202e-4463-8fac-9b31475217ac)

*Third Interagency Conference on  
Research in the Watersheds*  
Planning for an Uncertain Future:  
Monitoring, Integration, and  
Adaptation  
Estes Park, CO  
September 8-11, 2008 in Estes Park,  
Colorado  
<http://www.hydrologicscience.org/icrw/>



1<sup>st</sup> Call for Papers  
The 6th International Conference on  
Urban Watershed Management and  
Lake Eco-system Protection and  
Resource Utilization  
The 1<sup>st</sup> International Conference on  
Sustainable Development of the  
Poyang Lake Region  
Nanchang, China  
October 27-31, 2008  
<http://hjxy.ncu.edu.cn/icuwm/>



2008 International Low Impact  
Development Conference  
Seattle, Washington  
November 16-19, 2008  
[http://content.asce.org/conferences/  
lid08/](http://content.asce.org/conferences/lid08/)

[Back to Contents](#)

## Special Report: Integrating Multiscale Observations of U.S. Waters

The 2007 report, "**Integrating Multiscale Observations of U.S. Waters**" prepared by the National Academy of Sciences' Committee on Integrated Observations for Hydrologic and Related Sciences states that, "Effective water management requires tracking the inflow, outflow, quantity and quality of ground-water and surface water, much like balancing a bank account. Currently, networks of ground-based instruments measure these in individual locations, while airborne and satellite sensors measure them over larger areas. Recent technological innovations offer unprecedented possibilities to integrate space, air, and land observations to advance water science and guide management decisions. But to realize these possibilities, agencies,

universities, and the private sector must develop new sensors, test them in field studies, and help users to apply this information to real problems."

The 4-page brief also lists some recommendations for addressing integration of "...space, air and land observations to advance water science and guide management decisions."

The report brief may be viewed at:

[http://dels.nas.edu/dels/rpt\\_briefs/integrated\\_h20\\_obs\\_final.pdf](http://dels.nas.edu/dels/rpt_briefs/integrated_h20_obs_final.pdf)

*Submitted by Will Logan,  
National Research Council*

[Back to Contents](#)

## Editor's Corner

To submit articles, please contact either Mary or Claudia.

Chief Editor:  
Mary Greene – Office of Surface Mining,  
Denver, Colorado [mgreene@osmre.gov](mailto:mgreene@osmre.gov)  
(303) 293-5069

Associate Editor:  
Claudia Hoeft – USDA NRCS,  
Washington, DC  
[claudia.hoeft@wdc.usda.gov](mailto:claudia.hoeft@wdc.usda.gov)  
(202) 720-0772

[Back to Contents](#)

## Upcoming Meetings

### Subcommittee on Hydrology:

July 31, 2008; 9:00 a.m.  
Department of the Interior  
Main Building  
Washington, DC

[Back to Contents](#)