

## Newsletter of the Subcommittee on Hydrology

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

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### Welcome from the Chair

It is hard to believe that 2008 is over and we are beginning a new year already. From a hydrologic perspective, 2008 was a very eventful year. We had persistent flooding in the Midwest for most of the year; the droughts in the southeast continued, and several major hurricanes (Gustov, Hanna, Ike) significantly impacted coastal and inland areas of the U.S. In addition, there is the ongoing focus of how climate change is going to affect the hydrologic cycle and impact water resources availability throughout the U.S. The Subcommittee on Hydrology and its member organizations continue to work to promote collaborative partnerships to address these types of hydrologic issues as they arise and to improve the availability and reliability of information needed for hazard mitigation, water supply and water use management, and environmental protection.

During the past year the Subcommittee on Hydrology has focused on the need to coordinate studies and databases for reviewing and improving methodologies and data collection techniques used to develop design precipitation estimates of large storm events up to and including the Probable Maximum Precipitation (PMP). This type of information is critical because extreme storm hydrometeorology studies impact extreme flood estimates and assessments for dams, nuclear power plants, levees, and other high-hazard structures within the United States.

Without these studies, engineering planning and design costs will increase due to the need for site-specific studies because generalized approaches are outdated. To address this need, the Subcommittee established an Extreme Storms Working Group. The Work Group will promote cooperation among agencies on development of design storm studies and facilitate information transfer amongst the agencies and to the public. The initial effort will be a review of extreme storm event data since 1972, and to update hydrometeorological reports (HMRs) for the U.S. east of the 105<sup>th</sup> Meridian. At my request, Dr. Tom Nicholson of the Nuclear Regulatory Commission, agreed to serve as the interim Chair of the Work Group. Dr. John England of the Bureau of Reclamation, volunteered to serve as Work Group Vice-Chair. The Work Group held their first meeting on September 4, 2008 with the second meeting held on December 16 in conjunction with the Fall AGU meeting in San Francisco. The Work Group presented a poster at the AGU meeting titled: “*Extreme Storm Assessments for Nuclear Facilities and Dam Safety*”. Additional information about the Work Group and its activities is available on the Subcommittee web page at: <http://acwi.gov/hydrology/index.html>.

I would like to thank Tom Nicholson for the excellent leadership he provided in guiding the formation of this Work Group.

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## 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.

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Lastly, I would like to point you to the note in this newsletter about the retirement of Don Frevert (Bureau of Reclamation). Don has been a very active participant and leader of the Subcommittee on Hydrology and has made many significant contributions to the Committee over the years.

Thanks Don for investing so much of yourself into the Committee and for the major role you played in helping to make the Committee a success. We wish you the best!

*Steve Blanchard  
Chair, Subcommittee on Hydrology  
Chief, USGS Office of Surface Water*  
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## Highlights from October 2008 Meeting

### Featured Speaker

David A. Moser, Ph.D., Chief Economist with the United States Army Corps of Engineers, gave a presentation entitled, "Risk Terminology and Communicating Flood Risk." Through this presentation he described current risk assessment, risk management and risk communication issues within the Corps of Engineers; with the focus on the communications aspect and how to

best communicate risk in order that such information can be used as a decision making tool.

Dr. Moser's presentation can be viewed on-line at:  
[http://acwi.gov/hydrology/minutes/Hydrology\\_Risk\\_Terminology\\_&\\_communication-compressed-1.pdf](http://acwi.gov/hydrology/minutes/Hydrology_Risk_Terminology_&_communication-compressed-1.pdf)

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## Work Group Reports

### Task Force on Extreme Events

A report on the Subcommittee on Hydrology's proposed new Work Group on Extreme Storms will be presented to the ACWI at the February meeting.

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).

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### 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).

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### Satellite Telemetry Interagency Work Group

<http://acwi.gov/hydrology/stiwg/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).

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## **Hydrologic and Hydraulic GIS Applications Work Group**

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

A Work Group teleconference was held on November 5, 2008. The purpose of the teleconference was to address building a list of GIS applications in H&H and contacts. Members discussed applications currently being developed and used within their own agencies.

Since the members of this workgroup do not have all the information available for the various applications, a questionnaire to distribute and request information will be written. Fourteen applications have been identified and ten completed questionnaires have been returned. Information such as web link, contact person, short summary, and data requirements is included. A hydrologic and/or hydraulic model should be linked to GIS, be public domain, have user documentation, and be available on the web. Progress is being made towards adding this list to the Texas A&M University Hydrologic Model Inventory.

The Work Group plans to be involved at the upcoming Federal Interagency Hydrologic Modeling Conference in Las Vegas June 2010. Possible involvement may include a session on hydrologic and hydraulic applications using GIS, poster presentations, computer demonstrations, and/or short course.

Representatives of federal agencies, state agencies, and others are invited to participate in the Work Group. The next teleconference will be held January 7, 2009. More detailed information on the Work Group can be accessed from the web site:

<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).*

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## **Hydrologic Modeling Work Group**

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

Don Woodward volunteered to serve as technical chair of the 2010 Federal Interagency Hydrologic Modeling Conference after Steve Markstrom had to step down. Don served as the technical co-chair of the 1998 Federal Interagency Hydrologic Modeling Conference.

The call for papers for the 2010 Joint Conference is being distributed among member organizations, the academic community, the private sector and appropriate international contacts. The call for papers will be linked to the SOH website.

Nine short courses are being considered

for the hydrologic modeling portion of the 2010 conference, including five dealing with groundwater. A final decision on which short courses will be offered will be made at the July, 2009 planning meeting in Las Vegas.

The next Work Group conference call is scheduled for Tuesday, January 13<sup>th</sup> at 3:00 pm Eastern Time.

*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) 989-4270 or by e-mail at [dkfrevert@netzero.net](mailto:dkfrevert@netzero.net)*

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## News from Member Organizations

### **National Hydrologic Warning Council**

[www.hydrologicwarning.org](http://www.hydrologicwarning.org)

#### **National Hydrologic Warning Council Annual Conference**

The National Hydrologic Warning Council (NHWC) is pleased to announce the 2009 NHWC Conference in beautiful Vail, Colorado, May 18-21, 2009. This is a unique opportunity for training your field technicians and hydrologists, meeting colleagues from around the world and seeing the newest instrumentation and equipment from numerous vendors.

Staff hydrologists will learn from others in the field of flood warning, drought monitoring, and hurricane preparedness. Program managers will find out ways to build hydrologic monitoring systems through partnership development and technology integration. For additional information concerning the Conference, please visit [www.hydrologicwarning.org](http://www.hydrologicwarning.org).

*Submitted by:*

*Eugene A. Stallings, PE*

*Washington Area NHWC Consultant*

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### **USDA – Natural Resources Conservation Service**

[www.nrcs.usda.gov](http://www.nrcs.usda.gov)

#### **Mary Greene Joins NRCS**

Mary Greene, Newsletter Chief Editor and Vice-Chair of the Subcommittee on Hydrology recently left the Department of the Interior's Office of Surface Mining, and joined USDA's Natural Resources Conservation Service (NRCS).

Mary has taken a position with NRCS' National Water and Climate Center (NWCC) as Leader of the Water and Climate Services (WCS) Branch.

Located in Portland, Oregon, the NWCC is responsible for oversight of the Snow Survey and Water Supply Forecasting Program (SS/WSF) managed by the NRCS, including collection and management of data, and forecast development. WCS is staffed by forecast hydrologists who are

responsible for developing Water Supply Forecasts throughout the Western United States.

Mary will continue to serve on the SOH and fulfill the duties for which she volunteered and for which she was selected until such time as those obligations are satisfied.

Contact information is provided below.

Mary Greene

Leader, Water and Climate Services  
USDA – NRCS – National Water and Climate Center

1201 NE Lloyd Blvd, Suite 802

Portland, OR 97232

Phone: 503-414-3058

e-mail: [mary.greene@por.usda.gov](mailto:mary.greene@por.usda.gov)

*Submitted by:*

*Claudia C. Hoeft, NRCS*

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## **US Army Corps of Engineers**

[www.usace.army.mil](http://www.usace.army.mil)

### **USACE Infrastructure Conference in July in Cleveland, OH**

The U.S. Army Corps of Engineers (USACE) is holding the 2009 Infrastructure Systems Conference (ISC) at the Cleveland Convention Center, Cleveland, OH, from 20-24 July 2009. The theme of the Conference is "Building National Technical Competency." This conference, co-sponsored by the Society of American Military Engineers (SAME), is open to all interested parties including federal agencies, the private sector and academia.

Plenary session and technical breakout session topics include construction, dam and levee safety, electrical engineering, geospatial, geotechnical engineering, hydrology and hydraulics, survey and mapping, materials engineering, mechanical engineering and structural engineering. Additionally, there will be workshops and sessions for individual

Community of Practice (CoP) meetings. All sessions offer Professional Development Hours (PDHs).

The ISC is vital to maintaining the continuing professional technical competency of the Corps and presents attendees with an excellent opportunity to exchange ideas, knowledge, and experiences within the Engineering and Construction Community. The Conference web site, <http://www.USACEISCCConf.org/2009>, provides schedule, agenda, abstract submittals, on-line Conference registration, hotel information, etc.

ABSTRACT DEADLINE is Friday, Jan. 23, 2009. Abstracts must be submitted online through the automated system; be 200 words or less; and contain an estimated presentation delivery time.

*Submitted by:*

*John W. Hunter, P.E.*

*Headquarters, USACE*

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## **United States Geological Survey**

[www.usgs.gov](http://www.usgs.gov)

### **Introducing USGS StreamStats Version 2!**

A new version of the U.S. Geological Survey StreamStats application is now available for Massachusetts and Utah. All existing state applications will be converted over to this new version as quickly as possible, and all new state applications will be implemented using this version. StreamStats is a Web-based Geographic Information System (GIS) application that was created by the USGS, in cooperation with Environmental Systems Research Institute, Inc. (ESRI), to provide users

with access to an assortment of analytical tools that are useful for water-resources planning and management. StreamStats allows users to easily obtain streamflow statistics, basin characteristics, and descriptive information for USGS data-collection stations and user-selected ungaged sites.

A USGS Fact Sheet publication describing the StreamStats Application is available at:

<http://pubs.usgs.gov/fs/2008/3067/>.

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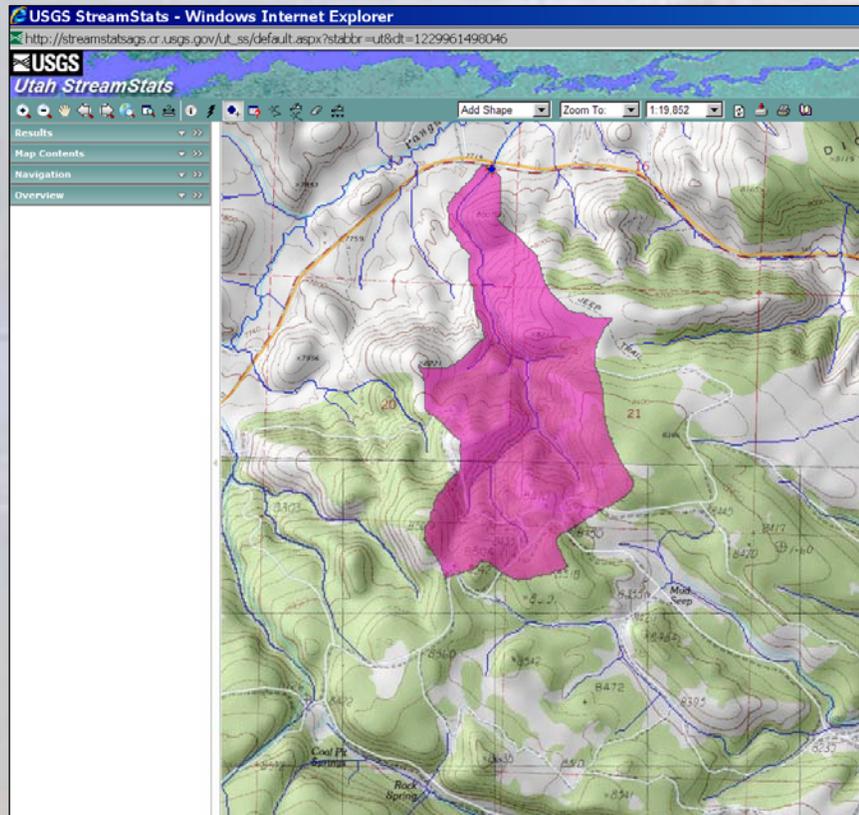
StreamStats state applications are available at:

<http://water.usgs.gov/osw/streamstats/index.html>

StreamStats Version 2 features a new user interface and added functionality, including the ability to (1) search upstream, downstream, or both from user selected sites to identify and obtain information for water related activities, such as dams and point discharges, that may affect water quantity or quality at the user-selected stream location, (2) estimate streamflow statistics at user-selected stream locations based on the flow per unit area for upstream or downstream streamgaging stations, and

(3) edit the basin characteristics measured by StreamStats to obtain revised regression-equation-based estimates of streamflow statistics for user-selected stream locations. The new functionality available in individual state applications will vary initially as programming and datasets needed to make the full functionality available are added. The News on the StreamStats web-page will announce when changes have been made to individual applications. Other links to the left of this page provide documentation for using the new version. Links to the left side of the introductory pages for each state provide access to the documentation for the version of StreamStats that is operating for that state.

*Submitted by:  
Steve Blanchard, USGS*



[MoreUSGS news page 7](#)

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## New Duration Hydrographs tool added to USGS WaterWatch

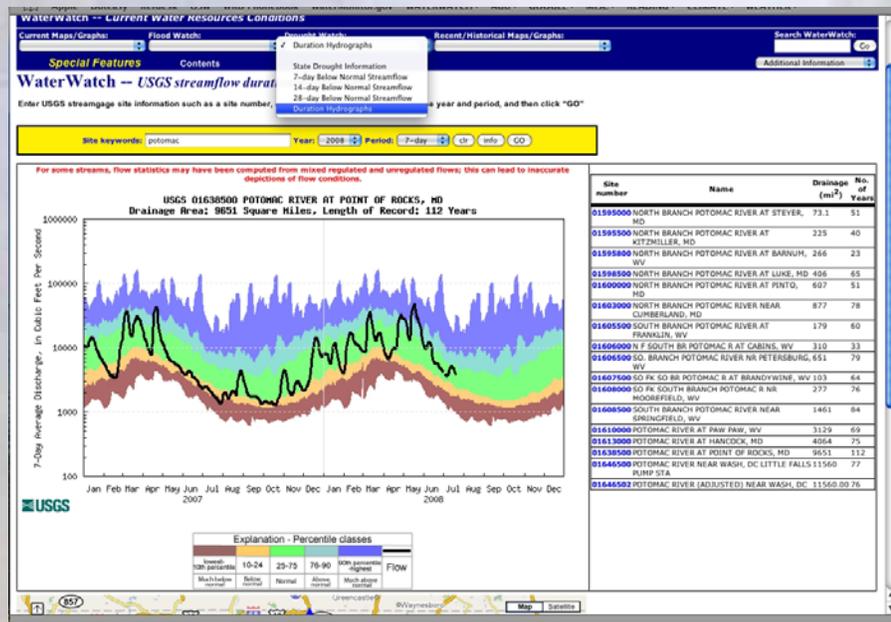
A new tool has been added to the USGS WaterWatch web data interface at <http://water.usgs.gov/waterwatch/> for aiding in the assessment of hydrologic drought. This new feature, entitled "Duration Hydrographs," can be accessed using the **Drought Watch** pull-down menu on the main WaterWatch page.

This new feature will generate a plot for the past two years that depicts the daily maximum, minimum, and 90th, 75th, 25th, and 10th percentiles for the period of record, along with the daily mean flow for each USGS real-time station having at least 20 years of record. At the present time, the algorithm that generates the plots does not differentiate between gage periods having mixed regulated and unregulated flows, although this is a capability that we anticipate adding in the future. For the time being, a cautionary note is included above the hydrograph indicating that, for streams where mixed regulated and

unregulated flows exist, the depictions may be inaccurate.

The Duration Hydrographs tool has a flexible interface that enables the user to acquire plots by typing into a search window an 8-digit streamgage station number (or part thereof), a river name, county name, or two-letter state abbreviation. Plots can be generated for 7-, 14-, or 28-day averaging periods, and historical plots are available back to 2004. After entering the station number, river name, county name, or state abbreviation, WaterWatch returns the requested duration hydrograph; a table containing the station numbers, station names, drainage areas, and number of years of record; and a Google map depicting the location of the stations. When multiple stations are listed in the table and on the map, users get a duration hydrograph for a station of interest by clicking on the hotlinked station number in the table or the station symbol on the map.

*Submitted by:  
Steve Blanchard, USGS*



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## Upcoming Conferences and Calls for Papers



American Meteorological Society (AMS)  
89th Annual Meeting  
Phoenix, AZ  
January 11-15, 2009  
<http://www.ametsoc.org/MEET/annual/index.html>



Advancing Geography in Partnership with You

Association of American Geographers (AAG)  
2009 Annual Meeting  
March 22-27, 2009  
Riviera Hotel, Las Vegas  
<http://www.aag.org/annualmeetings/2009/index.htm>



Western Snow Conference  
2009 Annual Meeting  
April 20-23, 2009  
Canmore, Alberta, Canada  
<http://www.westernsnowconference.org/2009.html>

Call for Abstracts:  
Abstract Submission Deadline:  
January 15, 2009



American Water Resources Association  
2009 Spring Specialty Conference  
Managing Water Resources and Development in a Changing Climate  
Anchorage, Alaska  
May 4-6, 2009  
<http://www.awra.org/meetings/Anchorage2009/index.html>



American Water Resources Association  
2009 Summer Specialty Conference  
Adaptive Management of Water Resources II  
Snowbird Ski and Summer Resort  
Snowbird, Utah  
June 29-July 1, 2009  
<http://www.awra.org/meetings/SnowBird2009/>

Call for Abstracts:  
Abstract Submission Deadline:  
January 26, 2009



US Army Corps of Engineers  
Infrastructure Systems Conference  
Building National Technical Competency  
Cleveland, Ohio  
July 20-24, 2009  
<http://www.usaceisconf.org/2009/>

Call for Abstracts:  
Abstract Submission Deadline:  
January 23, 2009

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## For your information

### New Journal from AMS

American Meteorological Society (AMS) announces a new journal: Weather, Climate, and Society  
<http://www.ametsoc.org/pubs/journals/wcs/index.html>.

"Weather, Climate, and Society, a quarterly journal of the American Meteorological Society, publishes scientific research and analysis on the interactions of weather and climate with society. The journal encompasses economic, policy, institutional, social, behavioral, and international research, including mitigation and adaptation to weather and climate change. Articles may focus on a broad range of topics at the interface of weather and/or climate and society, including the socioeconomic, policy, or technological influences on weather and climate, the socioeconomic or cultural impacts of weather and climate, ethics and equity issues associated with weather, climate, and society, and the historical and cultural contexts of weather, climate, and society. Because of the interdisciplinary subject matter, articles that involve both natural/physical scientists and social scientists are particularly encouraged."

Taken from  
<http://www.ametsoc.org/pubs/journals/wcs/index.html>

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### RSS FEEDS - Keeping up with the (atmospheric, meteorological, hydrologic, and other water-related) news

RSS stands for "Really Simple Syndication." RSS allows publishers to use a standard XMS file format for gathering and distributing frequently updated works, including newspapers, magazines and blogs, from sources across the Web. This allows them to easily create and distribute news feeds including features such as links headlines and summaries and to syndicate automatically.

Users subscribe to these feeds and receive updates as soon as they are posted, as well as aggregate feeds from many different locations into a web-based or desktop based "feed reader."

The American Meteorological Society offers several RSS feeds accessible through the following web-site:

<http://www.ametsoc.org/rss.html>

The American Water Resources Association also provides access to a number of feeds from its web-site:

<http://www.awra.org/news/index.html>

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### "Curve Number Hydrology, State of the Practice" Report Available through the American Society of Civil Engineers (ASCE)

The Environmental and Water Resources Institute (EWRI) of ASCE has just released a report prepared by the Curve Number Hydrology Task Committee. The Task Committee was formed jointly under the Watershed Management Technical Committee and the Surface Water Technical Committee in the Water Resources Engineering Division (now EWRI) of ASCE, to address awareness of the role and limitations of the Curve Number (CN) method.

The Task Committee investigated the origin, development, role, application and current status of the CN method. Topics include introduction to CN hydrology, findings and developments, the nature of the equation and current uses and recommendations. One of the major recommendations is to have someone or agency to serve as the central source for information and updates. This may be a major reference in the future of small agricultural watershed hydrology.

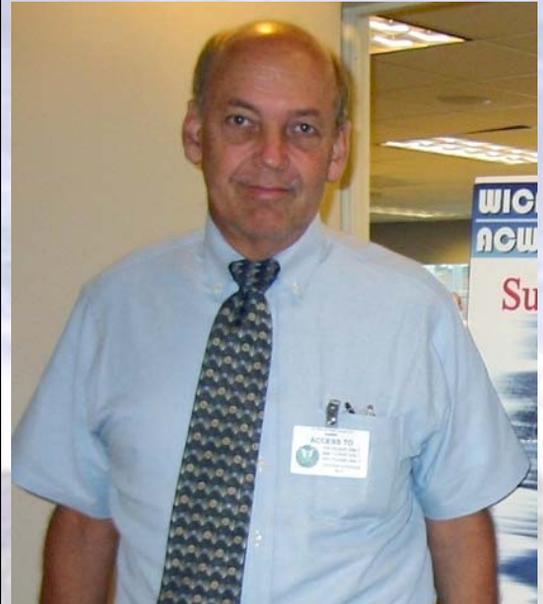
Copies of the report may be ordered from ASCE by visiting the ASCE Publications web-site at:  
<http://www.pubs.asce.org/>

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## Congratulations and a Special Thanks to Don Frevert

Don Frevert of the Bureau of Reclamation (BOR) is retiring in January 2009 after 31 years of Federal Service. Don has been a long time member and active participant in the Subcommittee on Hydrology (SOH) and will be greatly missed. He served as both the Vice Chair (2002-2003) and Chair (2003-2005) of the SOH. Don also served as the Chair of the Hydrologic Modeling Work Group for many years; and has played a critical role in the Federal Interagency Modeling Conferences (FIHMC) as Chair of the 3rd FIHMC and as Co-Technical Chair of the 1st and 2nd FIHMCs. Don will continue to serve as the Chair for the upcoming 4th FIHMC following his retirement.

In addition to his service to the SOH, Don had an outstanding career with the Bureau of Reclamation. After completing his Bachelor's Degree in Hydrology / Earth Sciences at the University of Arizona, Don went on to pursue a Masters Degree in Hydrology and Water Resources and a PhD in Irrigation and Drainage at Colorado State University. While completing his PhD, Don was offered and accepted a position as an Hydraulic Engineer at the Bureau of Reclamation. During his career with the BOR, Don had the opportunity to be a part of the development and implementation of the water resources decision support systems that are used to operate a number of Reclamation facilities including Hoover Dam and Glen Canyon Dam.



In 2003 Don was recognized with the Department of the Interior's Superior Service Award; and in 2006 he received the Excellence in Leadership Award for serving two years as the chair of the Subcommittee on Hydrology. In 2007 Don was elected a Fellow in the American Society of Civil Engineers; a prestigious honor held by fewer than 6 percent of ASCE members.

As current Chair of the SOH, I personally want to thank Don for his many years of excellent service to the SOH. Please join me in wishing him the very best in his retirement, congratulating him on his long and successful career, and thanking him for his commitment and many contributions to the SOH.

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

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## Editor's Corner

Thank you to all who submitted items for this newsletter. As a reminder, we can always use articles, meeting notices, ideas you might have, or other information for the newsletter.

To submit items, please contact either Mary Greene or Claudia Hoeft.

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## Upcoming Meetings

**Subcommittee on Hydrology:**  
January 29, 2008; 9:00 a.m.  
Department of the Interior  
Main Building  
Washington, DC

**Advisory Committee on Water  
Information**  
February 10-11, 2009  
Location: Herndon, VA  
<http://www.acwi.gov>

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