

USGS National Hydrography Dataset Newsletter
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Hydrography Stewardship Conference

Stewardship 2009, the bi-annual NHD/WBD Stewardship Conference, will be held April 14, 15, and 16, 2009 at the Sheraton Hotel, 360 Union Blvd. in Lakewood, Colorado. Workshops associated with the conference will be held April 13 and 17. See attached preliminary agenda. The conference is free and everyone who works with geospatial data is welcome, particularly those who work in hydrography. Register as soon as you can. The deadline for registration is April 9. To register, see <http://spreadsheets.google.com/viewform?key=pDjAhIUqWbeMe5rTTG--fQ&hl=en>.

Why You Should Attend the Conference

If you work with hydrography data this conference is for you. Or even if you work with any other type of geospatial data you will find this conference valuable. The conference will provide a comprehensive overview of the National Hydrography Dataset and the Watershed Boundary Dataset from the standpoint of data stewardship. Now that good solid national coverage of these data are available, we must now turn our attention to the continuous maintenance and ongoing evolution of these data in terms of resolution, content, currentness, accuracy, access, and functionality. This will not be easy. The demand for improvement outpaces the resources that are available. Pooling the resources of the community of users using a stewardship approach is the best, and perhaps only, solution. This conference is the opportunity to bring this community together to address the issues faced.

Sheraton Hotel

The Sheraton Hotel is holding a block of rooms for the Stewardship Conference at the standard government rate of \$149.00. The deadline for reserving a room is April 3. If you miss the deadline you can still contact the Sheraton, or if rooms are sold out, contact Ariel Bates at atbates@usgs.gov. <http://www.starwoodmeeting.com/StarGroupsWeb/booking/reservation?id=0902108120&key=D1CBB> This site has links to useful information about Denver attractions, transportation, directions and more.

Breakfast at the Conference

A free continental breakfast will be provided to conference attendees at 7:15 AM prior to the start of the Tuesday, Wednesday, and Thursday sessions. This will be in the conference room area. Be sure to come early enough to be ready to go for the 8:00 AM start time of the conference.

Conference Posters

All participants in the conference are encouraged to bring a poster to share your work in hydrography with your colleagues. The subject can be anything hydrography related, but the more posters dealing with stewardship, the better. Everyone who brings a poster to share and checks the poster box on their on-line registration will receive a free map of their choice from the maps section at <http://store.usgs.gov>.

Stewardship Conference Workshops

Be sure to attend one of the conference workshops offered the Monday before or the Friday after the main conference. Please register ahead of time, but if you have not registered there will be sign-up sheets for

the Friday sessions at the conference. If you are attending the Monday workshop, you will be sent information on access to the Denver Federal Center prior to the conference.

Tips on Using the NHDGeoEdit Tool – April 13, 1:00 - 4:30PM and again April 17, 8:00 – 11:30 AM.

NHDPlus Developments and Applications - April 17, 8:00 – 11:30 AM.

Hydro Event Management Tool for Linking Data – April 17, 8:00 – 10 AM.

Minnesota Exchange Process for Improved Data Handling – April 17, 10:00 – 11:30 AM.

National Hydrography Dataset Overview – April 17, 8:00 – 10:00 AM.

Watershed Boundary Dataset Overview – April 17, 10:00 – 11:30 AM.

Rides from and to the Airport

There are four basic options to get from the airport to the Sheraton. (1) Rent a car, (2) Ride with someone who has a car, (3) Use Super Shuttle, or (4) Use the city bus. Renting a car is on your own. If you want to get a ride with someone, note it on the registration form and we'll create a ride board. If you choose to use Super Shuttle see the Sheraton conference site (URL above). The cost is \$29.00 each way. The city bus (RTD) route AF (actually a nice motor-coach) runs between the passenger pick-up area at the airport and the Cold Springs Park and Ride one block from the Sheraton (after stopping downtown). The cost is \$8.00 (be sure to have exact change). For more information see the Sheraton site. Buses run every half-hour (:27 and :57) until 6:27 PM then run hourly.

State Stewardship Reports Available for Review

Colorado, Indiana, and Missouri have each produced comprehensive reports on NHD stewardship in their states. These will be discussed at the Stewardship Conference. You can obtain the Colorado report at: ftp://nhdftp.usgs.gov/Workshops/State_Reports/CO_NHD_Stewardship_Recommendations.pdf. The Indiana report at: ftp://nhdftp.usgs.gov/Workshops/State_Reports/IN_IGIC_NHD-FINAL_REPORT_081228.pdf. The Missouri report at: ftp://nhdftp.usgs.gov/Workshops/State_Reports/MO_NHD_Report_final.pdf.

Mapping the Zone: Improving Flood Map Accuracy

A new study has just been published by the National Academies: "Mapping the Zone: Improving Flood Map Accuracy" <http://www.nas.edu/morenews/20090123.html>. It contains many recommendations already well known to all working in the FEMA program (e.g. need of elevation updates). One is of particular interest to those who work with the NHD. Page 4 of the report brief states: http://dels.nas.edu/dels/rpt_briefs/improving_flood_maps_final.pdf. "Database Linkage Needs FEMA's Map Modernization Program produced a large amount of geospatial data and models that represent the most comprehensive digital description of the nation's streams and rivers ever undertaken. However, these data are stored on a county by county basis and there is no requirement that map information be consistent from one county to the next. Another enormous data collection is the USGS National Hydrography Dataset, a seamless, connected map of the nation's streams, rivers, and coastlines. It is feasible to link FEMA's data with the National Hydrography Dataset using a technique called linear referencing. This linkage would enable FEMA flood data to be accessed as an integral part of the nation's hydrologic information infrastructure." The full text can be found in page 29 of report http://www.nap.edu/catalog.php?record_id=12573.

AWRA Conference – Call for Abstracts

The American Water Resources Association's popular series of conferences on GIS & Water Resources continues with its sixth GIS & Water Resources conference, this time in Orlando, FL in March of 2010. The Call for Abstracts will be online in May 2009. Planning is underway for this important GIS event coming to the southeastern United States. Presentations will cover a broad range of subjects on integrative geospatial hydrologic technologies. Plan to submit an abstract and join us to network and experience what your colleagues are doing with GIS and Water Resources. Meet the leaders of geospatial and hydrologic technologies using and applying their skills in the sessions, exhibit hall, Opening Reception, luncheon, workshops, field trip, and networking events. AWRA's Spring Conference will be packed with opportunities for you to learn more, network, and be entertained. Visit <http://www.AWRA.org> for the latest information!

USGS Reports Available on Perennial Streams

A new report is available from the USGS: Estimating Locations of Perennial Streams in Idaho Using a Generalized Least-Squares Regression Model of 7-Day, 2-Year Low Flows (Prepared in cooperation with the Idaho Department of Environmental Quality and the Bureau of Reclamation) by Molly S. Wood, Alan Rea, Kenneth D. Skinner, and Jon E. Hortness <http://pubs.usgs.gov/sir/2009/5015/>. The abstract reads in part: "Many State and Federal agencies use information regarding the locations of streams having intermittent or perennial flow when making management and regulatory decisions. For example, the application of some Idaho water quality standards depends on whether streams are intermittent. Idaho Administrative Code defines an intermittent stream as one having a 7-day, 2-year low flow ($7Q_2$) less than $0.1 \text{ ft}^3/\text{s}$. However, there is a general recognition that the cartographic representation of perennial/intermittent status of streams on U.S. Geological Survey (USGS) topographic maps is not as accurate or consistent as desirable from one map to another, which makes broad management and regulatory assessments difficult and inconsistent. To help resolve this problem, the USGS has developed a methodology for predicting the locations of perennial streams based on regional generalized least-squares (GLS) regression equations for Idaho streams for the $7Q_2$ low-flow statistic. Using these regression equations, the $7Q_2$ streamflow may be estimated for naturally flowing streams in most areas in Idaho. The use of these equations in conjunction with a geographic information system (GIS) technique known as weighted flow accumulation allows for an automated and continuous estimation of $7Q_2$ streamflow at all points along stream reaches. The USGS has developed a GIS-based map of the locations of streams in Idaho with perennial flow based on a $7Q_2$ of $0.1 \text{ ft}^3/\text{s}$ and a transition zone of plus or minus 1 standard error. Idaho State cooperators plan to use this information to make regulatory and water-quality management decisions."

Also available is: Estimated Perennial Streams of Idaho and Related Geospatial Datasets (Prepared in cooperation with the Idaho Department of Environmental Quality and the Bureau of Reclamation) by Alan Rea and Kenneth D. Skinner <http://pubs.usgs.gov/ds/412/>. The abstract reads in part: "The perennial or intermittent status of a stream has bearing on many regulatory requirements. Because of changing technologies over time, cartographic representation of perennial/intermittent status of streams on U.S. Geological Survey (USGS) topographic maps is not always accurate and (or) consistent from one map sheet to another. Idaho Administrative Code defines an intermittent stream as one having a 7-day, 2-year low flow ($7Q_2$) less than 0.1 cubic feet per second. To establish consistency with the Idaho Administrative Code, the USGS developed regional regression equations for Idaho streams for several low-flow statistics, including $7Q_2$. Using these regression equations, the $7Q_2$ streamflow may be estimated for naturally flowing streams anywhere in Idaho to help determine perennial/intermittent status of streams. Using these equations in conjunction with a Geographic Information System (GIS) technique known as weighted flow accumulation allows for an automated and continuous estimation of $7Q_2$ streamflow at all

points along a stream, which in turn can be used to determine if a stream is intermittent or perennial according to the Idaho Administrative Code operational definition.”

New WBD Stewardship Point of Contact

The USGS is happy to welcome Mr. Stephen Daw to the position of Vector Point-of-Contact (Emphasis on Watershed Boundary Dataset) within the National Geospatial Technical Operations Center Hydrography Program. Stephen will have oversight over loading WBD into the new NHD/WBD geodatabase and will provide quality assurance of the results - linking the WBD and NHD; processing WBD stewardship transactions; assisting stewards in WBD maintenance similar to NHD POC positions; and assisting in implementing WBD into *The National Map*. Stephen has worked in the GIS field for eighteen years, beginning his career with NOAA in 1991 as a Cartographer constructing digital terrain maps. He held the position of State GIS Coordinator in South Dakota from 2005-2007 where he managed all GIS projects within State Government. He then moved on to serve as Senior GIS Consultant for HTNB from 2007-2008. Most recently Stephen worked as a GIS Business Analyst for Tyler Technologies where he: developed software requirements for the GIS portion of County software suite; worked with clients to improve GIS products; marketed GIS services; managed and lead all GIS related projects; and assisted clients with setup and management of GIS databases and web-servers. Stephen's academic achievements include a Bachelor's degree in Geography from Brigham Young University and a Program Management Certificate from Collin County Community College.

February Hydrography Quiz / New March Quiz

Al Rea, USGS Hydrologist in Idaho, was the first to correctly guess the hydrography quiz <ftp://nhdftp.usgs.gov/Quiz/Hydrography44.pdf> as Fort Peck Lake in eastern Montana on the Missouri River. However, James Seay, Kentucky Division of Water, was the first non-USGS person attending the NHD/WBD Stewardship Conference in Denver to guess the quiz right. So James will be provided an upgraded suite for the conference, compliments of the Sheraton hotel. James has worked for the Kentucky Division of Water (DOW) since March of 2003, as their Geoprocessing Specialist. His primary duties are to maintain GIS data, establishing quality control guidelines for the same, and provide GIS support for various programs DOW oversees. DOW uses NHD data in a variety of programs (ex. FEMA flood map modernization program, various programs under the Clean Water Act).

Fort Peck Lake is impounded by Fort Peck dam started by the WPA in 1933 using 10,000 workers and completed with the last load of dirt on Oct 11, 1940. The dam was authorized in Oct 1933 and work started with just 10 days of planning. The dam was once the largest earth filled dam in the world, standing 250.5 feet tall and 3.8 miles long. It's concrete spillway can handle 250,000 cfs. It is one of six major dams along the Missouri River. The dam is just upstream of the Fort Peck Indian Reservation and is best known for being in the famous photography taken by Margaret Bourke-White for the cover of the first issue of Life Magazine. The area surrounding Fort Peck was first charted by Lewis and Clark in 1804. Fort Peck Dam now serves as one of six multipurpose main stem dams that operate as part of a system managed for flood control, hydroelectric power generation, navigation, fish and wildlife conservation, recreation, irrigation, public water supply and improvement of water quality. Lots of cool photos and facts at <http://www.fortpeckdam.com>.

Others who identified the area were (in order received): Janel Day, Steve Shivers, Dave Greenlee, Rich Stein, Joanna Wood, Katy Hattenhauer, David Straub, Duane Lund, Juliane Brown, Jennifer Campbell-Allison, Jim McDonald, Ann Fritz, Ken Koch, Joel Skalet, Richard Patton, Brian Sanborn, John Lynam, Angela Redmond, Duane Lund, Sally Timp, Elaine Blok, David Asbury, and David Fetter.

This month's hydrography quiz can be found at <ftp://nhdftp.usgs.gov/Quiz/Hydrography45.pdf>. When completed in 1926 this 44,000-acre reservoir located in the Southeast with 750 miles of shoreline was the largest manmade waterbody in the world. Send your guess to jdsimley@usgs.gov. The first person to win the quiz that is staying at the Sheraton for the Stewardship Conference, and doesn't work for the USGS, will have their hotel room upgraded compliments of the Sheraton.

Upcoming NHD Geo Edit Tool Training

April 7-9, Augusta, ME. Contact David Anderson at danderson@usgs.gov, or Anji Redmond at anji.redmond@maine.gov

Upcoming NHD Applications Training

April 27, 2009, Snowbird, Utah, BLM/USFS Geospatial '09, see <http://fsgeodata.fs.fed.us/geoconference/>

April 27, Jacksonville, FL - 2009 Southeast Regional User Group (SERUG) Conference, Contact Lou Driber at ldriber@usgs.gov.

April, 2009, Michigan, contact Steve Aichele at saichele@usgs.gov

May 19, Harrisburg, PA - Pennsylvania GIS Conference (Presentation), Contact David Terrell at dterrell@usgs.gov

June 24, Harrisburg, PA - Pennsylvania State University, contact David Terrell at dterrell@usgs.gov

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The NHD Newsletter is published monthly. Get on the mailing list by contacting jdsimley@usgs.gov.

You can view past NHD Newsletters at http://nhd.usgs.gov/newsletter_list.html

Jeff Simley, USGS, assumes full responsibility for the content of this newsletter.