

USGS National Hydrography Dataset Newsletter
Vol. 8, No. 4, February 2009
by Jeff Simley, USGS

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.

To register, see <http://spreadsheets.google.com/viewform?key=pPdJAhIUqWbeMe5rTTG--fQ&hl=en>.

Why You Should Attend the Conference

Maintaining and upgrading the National Hydrography Dataset and Watershed Boundary Dataset will take a considerable amount of work. Both the resources and knowledge to do this can best be addressed using the same community of users concept that was successfully used to build the datasets in the first place. This will ensure that the datasets evolve to best meet the demanding requirements of the people that actually use the data. The concept of data stewardship can be very successful, but it will take a lot of participation by the community. It will not be an easy task. The datasets are at the upper end of complexity in GIS data. It's that complexity that gives the data the power to be so successful. Being a part of data stewardship and participating in this conference will reinforce your role as a part of a successful stewardship community, whether you actually edit data or not. GIS data stewardship is a new and powerful concept. Its ultimate success will be rooted in the effectiveness of the nation's hydrography, GIS, water science, and resource management communities to work together and apply their resources and expertise.

Sheraton Hotel

The Sheraton Hotel is holding a block of 100 rooms for the Stewardship Conference at the standard government rate of \$149.00. The deadline for reserving a room is March 23. To date 30 rooms remain available. It would be a good idea to make a reservation soon. If you miss the deadline, or rooms are sold out, contact Ariel Bates at atbates@usgs.gov. Find out more by going to

<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.

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>.

Conference Workshops

Tips on Using the NHDGeoEdit Tool – Editing of the NHD uses a special tool built on top of the ArcMap editor that maintains the change management tables in the data and uses special checks and rules to ensure the edits meet dataset requirements. This class will offer practical tips on how to effectively edit the NHD and provide updates on the latest capabilities. It will be assumed that you have had some NHDGeoEdit Tool training. The class is offered April 13 at 1:00 PM and again April 17 at 8:00 AM.

NHDPlus Developments and Applications - This workshop will focus on introducing the attendees to the NHDPlus data content and access, usage techniques and methodologies, new tools and applications, and creating and maintaining linkages (events) to water databases such as the EPA's Assessment, TMDL tracking and Implementation System (ATTAINS), and USGS's National Water Information System (NWIS). Due to time limitations, hands-on training will not be offered, however the presentation will include demonstrations of the GIS and analytical capabilities supported by NHDPlus and its associated tools. The workshop will include a discussion about the potential for a high resolution NHDPlus including the tools and stewardship activities that may lead to such a product. This class is offered April 17 at 8:00 AM.

Hydro Event Management Tool for Linking Data – This tool is a capable and user-friendly method for utilizing the linear referencing capabilities of the NHD. This is one of the major capabilities of the NHD used to link data about water, called events, to the dataset. It is highly flexible and perfect for network analysis. Recently the Bureau of Land Management released a public version of the tool. This class will review the capabilities of the tool that will allow you to start creating events when you get back to your office on Monday. This class is offered April 17 at 8:00 AM.

Minnesota Exchange Process for Improved Data Handling – A process developed by the USEPA for the secure exchange of scientific information has been implemented by the state of Minnesota and the USGS to exchange NHD data. This is a prototype for the future that will eventually be used more and more in the stewardship environment. This class will teach you about the methods and tools used and lessons learned. You will also learn about USEPA programs that can help your organization set up and get started. This class is offered after the Hydro Event Management Tool class on April 17 and starts at 10:00 AM.

National Hydrography Dataset Overview – If you are new to the NHD or need a refresher, this class will provide a good foundation in how the NHD works and how it is applied in science and resource management. Find out exactly what it is about the NHD that makes it such an excellent resource in GIS. You will see how surface water data can be represented by a geospatial data model and how its design can facilitate better science. You will also see how many agencies across the country have utilized this to advance the way they do GIS. This class is offered on April 17 at 8:00 AM.

Watershed Boundary Dataset Overview – Likewise, if you are new to the WBD or need a refresher, this class will provide a good foundation in how the WBD works and how it is applied in science and resource management. You will learn about the WBD method of nesting hydrologic areas and the criteria used to define hydrologic boundaries. This involves the analysis of many types of geospatial information that yields a consistent method of subdividing the landscape on hydrologic characteristics. This is an excellent opportunity for NHD stewards to better understand the new role of the WBD in their programs. This class is offered after the NHD class on April 17 and starts at 10:00 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.

January Hydrography Quiz / New February Quiz

Once again, Steve Shivers, the USGS NSDI liaison to South Dakota and North Dakota, was the first to correctly guess the hydrography quiz <ftp://nhdftp.usgs.gov/Quiz/Hydrography43.pdf>. This quiz shows the Great Salt Lake, which many people recognized, but the main feature of interest is the huge waterbody to the west - a waterbody that existed when the 1980's era 1:100,000-scale based medium-resolution NHD was created, but no longer exists today. This is the West Desert Pumping Project. In the 1940's through the 1960's everybody thought the Great Salt Lake was going to dry up. But this was just a cycle of drought. In the 1970's the lake started to rise and by the early 1980's it had reached a crisis situation when the major east-west Interstate 80 and the busy transcontinental railroad were threatened to be cut off. After several alternatives were studied, it was decided to pump the excess Great Salt Lake waters into the west desert and allowed to evaporate. Three large pumps with a combined capacity of 1.5-million gallons per minute eventually pumped 2.73-million acre-feet of water into the desert known as the Newfoundland Evaporation Basin. By 1989 the pumps stopped as the lake was no longer rising. The large waterbody referenced in the quiz is the Newfoundland Evaporation Basin. The cut off feature was caused because that particular base map pre-dated the Newfoundland Evaporation Basin. This entire area was inundated following the Wisconsin Ice Age by melting glacial waters forming the Lake Michigan sized Lake Bonneville. Lake Bonneville drained in a cataclysmic break of a natural dam some 16,000 years ago and what was left evaporated down to the remnant Great Salt Lake.

Others who identified the area were (in order received): Dave Greenlee, Jim McDonald, Roger Barlow, Ken Koch, David Straub, David Asbury, Melinda McGann, and Richard Patton.

This month's hydrography quiz can be found at <ftp://nhdftp.usgs.gov/Quiz/Hydrography44.pdf>. Again the quiz uses medium-resolution NHD, but this waterbody is definitely still there today. Where is this reservoir with 1,520 miles of shoreline created by damming a major river in the heart of the continent? 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 Conflation Training

March 24 – 26, Iowa City, IA, Contact Bob Lemen at rlemen@usgs.gov, Tim Hines at thines@usgs.gov, or Calvin Wolter Calvin.Wolter@dnr.iowa.gov, Iowa DNR/GSB

Upcoming NHD Geo Edit Tool Training

March 10-12, Madison WI. Contact Elizabeth McCartney at emccartney@usgs.gov, Dick Vraga at dvruga@usgs.gov, Richard Winstead, US Forest Service, rwinstead@fs.fed.us, or Ann Schachte, WI DNR, Ann.Schachte@Wisconsin.gov

Upcoming NHD Applications Training

April 27, 2009, Snowbird, Utah, BLM/USFS Geospatial '09, see <http://fsgeodata.fs.fed.us/geoconference/>
April, 2009, Michigan, contact Steve Aichele at saichele@usgs.gov
June 24, Harrisburg, PA - Pennsylvania State University, contact David Terrell at dterrell@usgs.gov

Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Thanks to Tommy Dewald, Ariel Bates, and Terry Higgins.

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.