USGS National Hydrography Dataset Newsletter
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by Jeff Simley, USGS

National NHD Stewardship Conference

The U.S. Geological Survey will host a nationwide conference on the stewardship of the National Hydrography Dataset at the Denver Federal Center in Denver, Colorado, April 24-26, 2007. The conference is free and all who are interested in data stewardship are welcome and encouraged to attend. If you plan on attending, please notify Jeff Simley at jdsimley@usgs.gov and put NHD Stewardship Conference in the subject line. Also let your USGS Geospatial Liaison know that you would like to attend. For a list of these liaisons, see http://nmcatalog.usgs.gov/crreps/faces/crreps.jspx. The agenda is posted at ftp://nhdftp.usgs.gov/Stewardship/Stewardship_Agenda.doc and will be continuously updated as speakers are confirmed. For a list of hotels see ftp://nhdftp.usgs.gov/Stewardship/Hotels.doc. A block of special rate rooms are available ftp://nhdftp.usgs.gov/Stewardship/USGS_Stewardship_Conference.pdf. Rides to the conference from this hotel and perhaps other hotels should be available. If you want to avoid renting a car, shuttles from the airport can be found at http://www.gwcommuter.com/. A Denver Federal Center map can be found at ftp://nhdftp.usgs.gov/Stewardship/DFC_Map.doc.

Perennial/Intermittent Stream Classification Techniques

The U.S. Geological Survey recently published a report that documents an automated procedure for mapping intermittent and perennial streams. The study was a cooperative effort between the U.S. Geological Survey and the Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Wetlands and Waterways Program. The report describes the development of a logistic regression equation for estimating the probability of a stream flowing perennially in Massachusetts. The report also documents an automated procedure for mapping intermittent and perennial streams and provides a case study of the procedure for the Shawsheen River Basin in northeastern Massachusetts. The automated procedure requires several processing steps of the NHD and supporting tools. The automated procedure steps through a selected basin by first determining all starting (headwater) stream reaches. The program then uses a search process in batch mode to find the points along the stream reaches where the flow status changes from intermittent to perennial. The report documents significant mapping improvements of intermittent stream designations when comparing the logistic regression equation results (which are based on observed stream status during low flow conditions and related basin characteristics) to topographic maps. The study was published by the USGS Massachusetts-Rhode Island Water Science Center as Scientific Investigations Report 2005-5031, "A Revised Logistic Regression Equation and an Automated Procedure for Mapping the Probability of a Stream Flowing Perennially in Massachusetts" by Gardner C. Bent , Peter A. Steeves, and Jennifer R. Hill (http://pubs.usgs.gov/sir/2006/5031/). Those interested in these techniques should read pages 35-42 of the report and then contact Pete Steeves at psteeves@usgs.gov.

NHD Stewardship Team Additions

Three people have joined the NHD stewardship team. This group acts in an advisory role to help states implement their stewardship of the NHD. Carl Nelson, Paul Kimsey, Bill Smith, and Tim Hines currently make up this team. Joining them will be Hank Nelson, Pete Steeves, and Steve Char. Hank's involvement with the NHD goes back to the start of the program several years ago. He has been working the past few years as the key figure in the loading of NHD into the database. In that role he is keenly aware of NHD quality issues and as a result will be an important asset to NHD Stewardship. Pete is a hydrologist with long-time experience in the application of the NHD in hydrology. Pete also has valuable experience in the classification issues of perennial and intermittent streams, and has been a key member

of the USGS StreamStats team. He is also keenly aware of NHD quality issues. Pete will likely focus on NHD issues in New England and New York. Steve works in the Colorado Water Science Center where he has been working on GIS system support of water resource investigations including reservoir volume and sedimentation. He has also been involved with the preparation of data for StreamStats.

Completion of the High Resolution NHD

Progress on the completion of the 1:24,000-scale high resolution NHD has been slowed the past nine months by impacts in the throughput of data in the database loading process. Efforts are underway to improve the situation. Be aware that some subbasins are taking longer to load than they have in the past. To see a status map of the current situation, go to ftp://nhdftp.usgs.gov/NHD_Status/Feb_08_Status.pdf.

New Software Helps Track the Path of Toxic Spills

OLYMPIA, Wash. (Ivanhoe Broadcast News) -- If our drinking water supply is contaminated, accidentally or intentionally, a spill response team goes to work, getting the situation under control as quickly as possible. New computer software is now helping make the response even quicker -- all across the country. The IC Water Tool can get the information to first responders anywhere in the country making our drinking water safer, quicker. The database covers more than 300 types of potential water contaminants. The software has maps of anywhere a contaminant can enter the water system and each location of where drinking water comes from nationwide. The Department of Defense is distributing the tool. See a video clip of this story at http://www.ivanhoe.com/science/story/2006/12/225a.html or http://www.aip.org/dbis/stories/2006/15252.html

NHD Documentation to be Improved

Documentation related to the National Hydrography Dataset has remained fairly unchanged for a couple of years. Now thanks to the USEPA an initiative is underway to upgrade the documentation to make it current. The documents will include: Standards for National Hydrography Dataset – High Resolution – This document will be finalized from its draft form and then frozen with no further editions and will serve a largely historic purpose. It will be supplemented by new revision document. Best Practices for the Revision of the National Hydrography Dataset – This is a new document to serve as a guide for revision. It is an evolution of the Standards document above, and is designed to replace it as the principal guidance document for NHD features in the future. The National Hydrography Dataset Concepts and Contents - This document will be updated based on current NHD models. Introducing the NHDinGeo – This document will provide a good introduction to the philosophy of the NHD to understand its design for analytical studies. Stewardship of The National Hydrography Dataset – This is a guide describing the essential elements of the NHD stewardship program. The next edition of the NHD Newsletter will provide a link to these documents to allow review before being finalized.

Answer to January Hydrography Quiz / New February Quiz

Calvin Meyer of the USGS National Geospatial Technical Operations Center in Rolla, Missouri, was the first to correctly guess last month's hydrography quiz ftp://nhdftp.usgs.gov/Quiz/Hydrography20.pdf as the confluence of the Chattooga and the Tugaloo rivers in Georgia where the movie Deliverance was filmed. The movie featured the song was 'Dueling Banjos'. Calvin has worked at the USGS as a cartographer since 1984. He is currently a member of the Catalog Support Team that provides public access to partner data and other critical infrastructure through *The National Map* catalog http://mcmcweb.er.usgs.gov/catalog/ and viewer http://nmviewogc.cr.usgs.gov/viewer.htm. The catalog database is an inventory of web map services (WMS) that contribute to *The National Map*. They harvest WMS into the catalog to support base foundation layers necessary for building the next generation of

USGS topographic maps http://erg.usgs.gov/isb/pubs/factsheets/fs20063107/. Calvin has worked on the NHD since 2000 when he supervised medium resolution (1:100,000-scale) production then moved to supervision of high resolution (1:24,000-scale) NHD production. Later, he was responsible for updating documentation of procedures and provided technical support to customers, investigated problems, and coordinated maintenance. The Chattooga River, where Deliverance was filmed in Georgia, was given the fictional name of the Cahulawassee River. For an interesting write-up on the book and movie, go to http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-969

Others with the correct answer were: Joanna Wood, Jim Robinson, Keith McFadden, Bill Samuels, M. Butler, and Robin Fegeas. Keith adds: "The rivers are Chattooga & Tallulah, w/ Tugaloo Lake at the 'Y' and Yonah lake below which form the Tugaloo R. which flows into the Savannah at Lake Hartwell downstream. The Tallulah flows through the Tallulah Gorge (just NE of the 'Y'), where the Great Walenda once did his high-wire walk over the gorge. It is also where parts of the movie were filmed. The gorge itself was a very popular tourist destination during the early 20th century when the railroad came to the area. But the gorge (most of it) was dammed to provide electric power for Atlanta's streetcar system which pretty much doomed the tourist industry. That dam formed Tallulah Falls Lake which is the narrow lake in the NE part of the map. A small portion of Lake Rabun is also visible. It has been only recently that the area around the gorge was turned over the State for the Tallulah Falls State Park. Of course the Chattooga remains un-dammed and is now a Wild-and-Scenic River (the first?) - probably saved in part by the publicity generated by the movie".

For the February quiz look at ftp://nhdftp.usgs.gov/Quiz/Hydrography21.pdf. Can you identify where this is? It's another famous piece of American hydrography. In 1947 its name was changed. The blue polygon is a lake, the cyan polygon is a river, the brown lines are pipelines, the black lines are connectors, and the magenta lines are artificial paths. Send your guess to jdsimley@usgs.gov.

Upcoming NHD Geo Edit Tool Training

Little Rock, Arkansas – April, 2007. Contact Tim Hines thines@usgs.gov or Bill Sneed wsneed@usgs.gov
Anchorage, AK - Spring, 2007 (Possibility). Contact Paul Kimsey or Carl Markon markon@usgs.gov

Upcoming One-Day NHD Application Workshops

Indianapolis, Indiana – March 13 2007. Contact Dave Nail at dnail@usgs.gov
Donnely, Idaho – April 2 and 3, 2007. Contact Frank Roberts at fmroberts@cdatribe-nsn.gov. See http://www.intermountaingis.org/conference_2007.html
Champaign, Illinois – April 30, 2007. Contact Shelley Silch at ssilch@usgs.gov
Kalamazoo, Michigan – May 7, 2007. Contact Steve Aichele at saichele@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.