

USGS National Hydrography Dataset Newsletter
Vol. 4, No. 5, March 2005
by Jeff Simley, USGS

Minnesota High Resolution is Done!

Minnesota now has border-to-border coverage of the high-resolution National Hydrography Dataset. This data was produced in partnership between the U.S. Geological Survey, the U.S. Forest Service, the Minnesota Land Management Information Center, the Minnesota Pollution Control Agency, and the Spatial Analysis Research Center at St. Cloud State University. The USGS and the USFS partially funded the three Minnesota organizations to do much of the production work. Production work was also performed by the USGS Mid-Continent Mapping Center in Rolla, Missouri and its contractor/partners SAIC and Sanborn Colorado, LLC, as well as at the USGS Minnesota Water Science Center in Mounds View, Minnesota. The overall effort was managed by the Mid-Continent Mapping Center. The NHD data is used in a variety of applications including the mapping of impaired waters in cooperation with the Environmental Protection Agency. The USGS and the EPA are now working with the State of Minnesota to implement a stewardship program to keep the NHD current and accurate. You can find out more about the NHD in Minnesota by contacting Ron Wencl at rwencl@usgs.gov.

The NHDGEOinSHP Now Available

It is now possible to download complete subbasins as shapefiles in a new format called NHDGEOinSHP. Previously, it was only possible to download a shapefile from the rectangular view in the NHD Viewer or to convert from the NHDGEOinArc. This new capability will make it easier for shapefile users to directly access the NHD and use it in mapping applications. The shapefile structure is basically the same as the NHDinGEO, with five themes patterned off the five feature classes in the NHDinGEO. The same fields are used, containing the same type of data, including reach codes. Notably missing is the Hydro_Net_Junction feature class found in the NHDinGEO and used for the geometric network. Thus it is not possible to use the ArcMap Utility Network Analyst for navigation. However, there is a flow table for those who wish to tackle working with a logical network. In fact, most of the object classes found in the NHDinGEO are provided with the NHDGEOinSHP in a .dbf format. Also noteworthy is that the NHDFlowline theme is provided as a route with m-values using the PolylineZM shape. This makes it possible to use ArcMap linear referencing with the NHDGEOinSHP format. To download the NHDGEOinSHP, identify and extract the subbasins of interest in the NHD Viewer, choose the appropriate resolution, and then select the shapefile option.

The NHD GEO Edit Tool Update

One of the most important capabilities needed for the NHD program is a tool that will allow the user community to make corrections and revisions to the NHD based on their first-hand knowledge of the hydrography in their area. The U.S. Forest Service is developing such a tool called NHD GEO Edit that will be made available to users working in a stewardship capacity. This much-anticipated tool has been slow in coming, but now there is light at the end of the tunnel. The all-important updating of the tracking tables is now working fairly well. This has been a stumbling block for quite some time. This leaves a manageable list of minor issues to complete, giving hope to imminent availability. Documentation will also need to be completed. Then some testing of the software and training of USGS and USFS is needed. Taking all of this into consideration leads the development manager to believe that we might see the tool become available in June. Once this happens, a schedule for training will be issued. Both the USGS and USFS will hold cross-organizational courses to maximize the amount of training that can be provided.

Upcoming NHD Workshops

The following workshops provide general information on how to use the NHDinGEO (except as noted) in GIS applications. They present (1) overview of NHD applications around the Country, (2) NHD data structure, (3) using the NHD in mapping, (4) navigating the flow network, (5) linear referencing of events, and (6) analysis of event relationships. A separate set of workshops will be available on stewardship using the NHD GEO Edit tool. Look for upcoming announcements.

April 18, 2005, Pocatello, Idaho – Intermountain GIS Conference at the University of Idaho <http://www.intermountaingis.org/>. All-day session with lecture/demonstrations in the morning and hands-on workshop in the afternoon. Contact Stuart Challender at stuartc@bridgergeoplan.com.

April 26, 2005, Austin, Texas – Texas GIS Forum at the J.J. Pickle Research Center <http://www.tnris.state.tx.us/forum2005/>. All-day hands-on workshop. Contact Charles Palmer at Charles.Palmer@twdb.state.tx.us.

May 3, 2005, Raleigh, North Carolina – Upper Neuse Training Session. All-day hands-on workshop using ArcView 3.x. Contact Mary Giorgino at giorgino@usgs.gov.

May 4, 2005, Raleigh, North Carolina – North Carolina Stream Mapping Committee. Morning lecture/demonstration. Contact Steve Strader at sstrader@usgs.gov.

May 5, 2005, Baltimore Maryland – Maryland Department of the Environment <http://www.mde.state.md.us/AboutMDE/Directions/index.asp>. All-day lecture/demonstration. Contact Kevin Wagner at kwagner@mde.state.md.us.

May 11 and 12, 2005, Anchorage, Alaska – U.S. Fish and Wildlife Service. Two duplicate all-day hands-on workshops. Contact A.C. Brown at acbrow2@usgs.gov.

May 26, 2005, Lincoln, Nebraska – 2005 Nebraska GIS Symposium. All-day lecture/demonstration. http://www.gislis.org/2005_symposium.htm. Contact Josh Lear at jlear@dnr.state.ne.us.

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 Ron Wencil, Paul Wiese, Terry Higgins, and Sandy Piksa.

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

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