

USGS National Hydrography Dataset Newsletter  
Vol. 4, No. 2, December 2004  
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**WATERS – A Strategic Resource for Informed Decision-Making**

The Environmental Protection Agency held a forum titled “WATERS – A Strategic Resource for Informed Decision-Making” on December 7. The event showcased recent accomplishments of WATERS (Watershed Assessment, Tracking, and Environmental Results), a system that enables informed decision-making by the Nation. WATERS integrates water program data through linkages to the surface water drainage network within the National Hydrography Dataset. This year’s Forum highlighted the latest uses of this integrated framework (strategic measures, congressional reports), enhancements to the framework (data quality documentation, watersheds, stream flow volume and velocity), and connections to the EPA and Federal enterprise architectures (data exchange, services). You can find copies of the presentations at <http://www.epa.gov/waters/doc/2004forum.html>. For more about WATERS, see <http://www.epa.gov/waters>.

**Pennsylvania, New Jersey, and Connecticut Now Complete**

High-resolution coverage is now available border-to-border in Pennsylvania, New Jersey, and Connecticut. The Pennsylvania work was sponsored by the Department of Interior High Priority Lands Program within the U.S. Geological Survey, the Department of Agriculture Forest Service, and the Pennsylvania Department of Environmental Protection. Additional work on border areas was sponsored by West Virginia University, the Delaware Geological Survey, the New York Department of Environmental Conservation, and the State of New Jersey. The New Jersey work was sponsored by the State of New Jersey, the Delaware Geological Survey, and the USGS DOI Lands program. The Connecticut work was sponsored the Connecticut Department of Environmental Protection.

**NHD Status**

Be sure to check the status of the high-resolution NHD program at <http://nhdgeo.usgs.gov/viewer.htm>. Go to the right column and click on the NHD Status arrow, click the High (resolution) button and then redraw the map. Most of the country has been brought up-to-date with improved data on completion status as well as a number of new projects including new Forest Service projects. You will note that progress in Arizona, New Mexico, North Dakota, South Dakota, Nebraska, Georgia, Virginia, and Tennessee is making a strong impact. Also note that Idaho, Minnesota, Florida, New York, and Rhode Island have the remaining subbasins in-work. A new status symbol also appears. Subbasins that are complete (red) may also have a cross-hatch pattern, indicating that the completed NHD is undergoing some type of revision.

**Download Performance**

The downloading of NHD data has been taking longer than a lot of people would like. Cycle time (time between request and notification email) for personal geodatabase has been ranging between one-third to seven days with an average of two days in the past month. Cycle time for arc coverages has been averaging five days. The long cycle times are caused by competition for processing time. This is a result of high demand for NHD data, some massive requests by single users, and downloads by USGS to create pre-staged subregions. The download software was improved around Dec. 16 and since then, cycle time has been one-half day for both geodatabase and arc downloads. Currently, about 40 requests for geodatabase data are made per day. About two-thirds of these requests are for single subbasins. An average of 11 requests are made per day for arc data.

**Projecting the NHD**

Since a lot of the GIS analysis performed on the NHD is through the network, people often simply work in the original geographic coordinates. But sooner or later, particularly when making a map, it will be

necessary to project the data. Usually this will be done using the Albers Equal Area projection. When using the NHDinGeo, the basic procedure is to copy the NHDinGeo schema and data to a template geodatabase file with Albers Equal Area, or other projection, already set. This is done using the Disconnected Editing Tool. In the process, the network needs to be dropped, but you can rebuild the network later in an additional procedure. To get a copy of the Albers template, and step-by-step instructions, contact Paul Kimsey at [pjkimsey@usgs.gov](mailto:pjkimsey@usgs.gov).

### **The NHD and Titan Geospatial**

Titan Geospatial is continuing its partnership with the USDA Forest Service NRIS Water team for its fourth consecutive year. To date, the Titan Portland, Oregon GIS facility has completed over 165 subbasins for the Forest Service, and is under contract to nearly double that amount in the coming 12 to 18 months. The overall program falls into three tasks. Titan completed 136 subbasins in the first task. The second task continues this effort and will see the completion of an additional 50 sub-basins by early Spring 2005. The recently awarded third task will include an additional 100+ subbasins with a goal to complete the Forest Service NHD program. Numerous data formats are used in the creation of the 1:24,000-scale NHD subbasins. Local forest data is used where available and supplemented with existing vintage CFF and DLG files. Newly produced USGS TVH files fill in the gaps where no pre-existing data is available. The source material for the third task is just starting to be received by Titan for pre-processing. Keeping a balanced backlog of NHD work has allowed Titan to retain an experienced staff. This experienced staff is a key factor in the ISO 9001-2000 Quality System practiced at Titan. The partnership between the USGS, the Forest Service and Titan has been very successful and this will certainly continue through the completion of the program. For information concerning this effort, contact Baron Howe at Titan 503-794-1344 x110 [baron.howe@titan.com](mailto:baron.howe@titan.com) or Steve Gadd at NRIS Water 541-750-7161 [sgadd@fs.fed.us](mailto:sgadd@fs.fed.us).

### **High Resolution Subregions**

Last month's Newsletter discussed the pre-staged medium-resolution NHDinGeo data for immediate FTP download by subregion. The next step is to pre-stage high-resolution (1:24,000-scale) data by subregion. This process is underway, but will take some time to complete. Since the high-resolution NHD is still in production, there are many gaps in the subregion coverage. The pre-staged files will contain what is available at the time they are created. Then, when new data is added to the subregion, the FTP file will be automatically updated. As the files become available, they can be found at <ftp://nhdftp.usgs.gov/SubRegions/High>.

### **Upcoming NHD Workshops**

January 19, 2005, Hadley, Massachusetts. This half-day workshop is being planned for the morning of Jan. 19 to be held in conjunction with the U.S. Fish and Wildlife Service Northeast Region GIS Conference January 19-21, 2005. Contact Linda Schaffer from USFWS at [linda\\_schaffer@fws.gov](mailto:linda_schaffer@fws.gov) or 413-253-8292. Other NHD workshops will be held in New England around the same timeframe. For more information on these, see [http://nhd.usgs.gov/training\\_schedule.html](http://nhd.usgs.gov/training_schedule.html) in early January, or contact Lynn Bjorklund at [lcbjorklund@usgs.gov](mailto:lcbjorklund@usgs.gov) or 508-490-5074.

Other workshops planned include: April 18 - Pocatello, Idaho, and May 26 - Lincoln, Nebraska. Other possible workshops include Austin, Texas in the April 25-29 timeframe, and Anchorage, Alaska in the April-May timeframe. More details will be forthcoming.

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Thanks to Tommy Dewald, Baron Howe, Paul Kimsey, Jerry Ornelas, Melanie Hood, Lynn Bjorklund, and Sandy Piksa.

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