USGS National Hydrography Dataset Newsletter
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Fourth Year of NHD Newsletter
This Newsletter marks the start of the fourth year of the National Hydrography Dataset (NHD)
Newsletter, providing those interested in the Nation's hydrography program with useful news on NHD
and NHD-related activities. An issue has been distributed every month for the past 36 months to a list of
professionals that now numbers over 200, and reaching an even larger audience as the Newsletter is then
forwarded to others. Please forward the Newsletter to colleagues that can benefit from it. If you wish to
subscribe directly, contact jdsimley@usgs.gov. You can find an archive of NHD Newsletters at
http://nhd.usgs.gov/newsletter_list.html.

Stewardship
As more and more NHD becomes available, there is ever-increasing interest in data stewardship. The key
to implementing stewardship is the availability of an editing tool that can deal with the unique
characteristics of NHD data. It will allow stewards to upgrade the NHD while preserving the integrity of
the model and the geometric network, something out-of-the-box tools cannot do. This tool, known as
NHDGeo Edit, is being developed by the U.S. Forest Service and should be ready for initial use in
January. The stewardship program will then be phased-in slowly in order to verify that procedures are
working correctly. At first, the USGS will use the tool to fix a number of known NHD problems and then
transmit these transactions to the NHD geodatabase. This experience will allow the development of
training courses and materials to initially train a small set of stewards. Once these stewards become
operational and any problems solved, a series of training courses will be offered to expand the
stewardship program. As the program grows, it will need to be organized and managed to delegate
authority to a limited set of principal stewards who can oversee and take responsibility for adjudicating
issues regionally. Typically this will be at the state level. Ideally, existing state mapping organizations
will become the foundation of a distributed system of stewardship. They may enlist a subset of
organizations to carry out localized work. Federal land managers may be a part of this subset. Such
locally produced edits may or may not be passed through the principal steward depending on local
arrangements, but in any case, the principal steward will always coordinate activities. In some parts of
the country, Federal land managers may take the principal role. Exact arrangements will vary according
to interest and capabilities. The NHD stewardship program should kick-off in January. You can be kept
informed of progress through this Newsletter and at the NHD website http://nhd.usgs.gov/webcoop.html.

New NHD Status Data
The system used for the past three years to record the status of each subbasin has been replaced with a
better and more automated system. The old system had an error rate of about 1%. The new system is
designed to make the status information as error-free as possible. While the user interface is the same, you
should now get more accurate data as well as added information. To see NHD status, go to
http://nhd.usgs.gov/data, click on the NHD Viewer, then click on NHD Status and choose the appropriate
resolution using the Visible button. By making the layer active, you can use the identify key to get more
information about the subbasin of interest. Program managers are reviewing the data and the system
should be fully up-to-date by mid-December.

StreamStats
Have you ever needed to know how much water flows at a particular point on a stream? StreamStats may
be your answer. StreamStats is a web interface Geographic Information System (GIS) that allows the
user to obtain estimated streamflow statistics at any point along a stream, not just at gaging stations. For
gaging stations and other data-collection stations, the user clicks on the station in the map display, then
the system supplies information from a database of previously published descriptive information, basin

and climatic characteristics, and streamflow statistics. For ungaged sites, StreamStats determines the drainage boundary for the site, measures basin and climatic characteristics from digital map data, and then processes this data through regression equations for estimating the streamflow statistics. Calculating such estimates is a well-established practice performed by hydrologists, but bringing this to a publicly available web site with "point-and-click" simplicity is a major development. StreamStats provides a variety of estimates, such as annual mean flow, 100-year flood, and flows exceeded 80 percent of the time for a given month, as measured in cubic feet per second, and also provides various indicators for the reliability of those estimates. The statistics that are available vary from state to state. An initial StreamStats prototype has been developed for Idaho and work is underway to implement the application for several states, with a goal of eventual nationwide implementation. Several states will be phased-in over the next couple of years, with the implementation schedule driven by funding and availability of input data. StreamStats uses the NHD as the framework for the stream system. Medium or high resolution NHD is being used in the implementation, depending on availability of NHD and other needed datasets for the individual states. To get more information, give the Idaho StreamStats Prototype a try, and keep up-to-date on StreamStats refer to http://streamstats.usgs.gov. This web site is undergoing enhancements, so be sure to check back periodically for the latest information.

Medium Resolution Subregions
Medium-resolution NHDinGeo data can now be downloaded directly from an FTP site. This pre-packaged data is organized into hydrologic subregions ready for use in ArcGIS complete with the flow network. To obtain medium-resolution coverage, it is no longer necessary to make a custom request on the NHD web site and wait for a reply, although you can still do that for custom needs. There are 213 subregions covering the United States and its territories with the exception of the State of Alaska. The zipped data uses a filename with a NHDM prefix followed by the four-digit subregion number. The first two digits of this number designate the region while the second pair designates the subregion within the region. The typical subregion is about 20 megabytes and contains an average of 30,000 flowlines. This maximizes the geographic coverage while preserving ArcGIS performance. You can link to the data at http://nhd.usgs.gov/data where you will find the link ftp://nhdftp.usgs.gov/SubRegions/Medium.

Watershed Boundary Data
The hydrologic unit boundaries developed for the United States are used as the basis for organizing the NHD. Although not strictly a part of the NHD, they are a useful reference dataset. The source for these boundaries comes from a variety of methods. A Nationwide program known as the Watershed Boundary Dataset is now providing a definitive set of boundaries for hydrologic units extending down to the sixth level. As this data is officially certified, it is provided with the NHD download in a separate feature type. Certified WBD data is now served as a reference theme in the NHD for Wyoming, Utah, Illinois, Ohio, Georgia, South Carolina, Massachusetts, New Hampshire, Puerto Rico, and Virgin Islands. You will therefore find fifth-level watersheds, and sixth-level subwatersheds subdividing each NHD fourth-level subbasin when viewing the Hydrologic Units feature type. Do not rely on this NHD feature type as the official source of the Watershed Boundary Data, but rather go to: http://www.ncgc.nrcs.usda.gov/branch/gdb/products/watershed/index.html.