LR-NHD in West Virginia

Monthly Report

October, 2007

Status and Accomplishments

Presently, the LR-NHD partners (The WV GIS Technical Center and the Natural Resource Analysis Center) are engaged in two major phases of the development of the Local Resolution National Hydrography Dataset for West Virginia. In October of 2007, we received $50,000 in funding from the United States Geological Service (USGS) through the Great Lakes-Northern Forest Cooperative Ecosystem Studies Unit to aid in the completion of these phases.

Geoconflation Tools and Pilot Watersheds

First and foremost, in conjunction with our partners at the USGS, we are working steadfastly towards the completion of our two pilot watersheds – the Upper Guyandotte (05070101) and the Gauley (05050005). USGS is in the process of developing new conflation tools and the LR-NHD partners are filling the role of beta testers of this new software. As such, we are in close contact with the NHD technical staff in Rolla, Missouri. Simultaneously, we are using the tools to conflate high resolution NHD information to the new, 1:4,800 scale local resolution NHD. Presently, 11 of 18 processing steps have been completed for each watershed. The most recent work involved intensive manual checking of results of automated NHD reach code transfers from the source datasets (completed 1:24k NHD, high resolution) to the target datasets (raw 1:4800 linework). Once completed, these watersheds will be incorporated into the USGS NHD database.

While the close relationship we have established with USGS technical experts has helped all parties involved deal with problems as they arise, the work has been slowed down somewhat. We expect that, in the future, the pace of production will be increased as kinks are worked out of the software. To further expedite production, the LR-NHD partners are actively creating and editing documentation for the new geoconflation tools. Given the complexity of the process, quality documentation will be crucial.

NHD Stewardship in West Virginia

Secondly, the LR-NHD partners are developing a business plan for stewardship of the NHD in West Virginia. In April of 2007, several people from West Virginia University and the West Virginia Department of Environmental Protection attended the first annual NHD Stewardship Conference, held in Denver, Colorado. The conference provided an opportunity for NHD stewards and stakeholders from around the country to meet one another and trade ideas about developing and maintaining NHD data. The USGS envisions a day in which maintenance and update of the NHD is taken care of almost entirely at the state or local level. The USGS would provide technical support, training and software to state and local data stewards and house all of the data. In West Virginia, the LR-NHD partners hope to develop a single-point of access NHD update system that allows for all stewards and users of the data to easily add, update or change local resolution stream data. The USGS Geospatial Liaison for West Virginia, Craig Neidig, is developing a stewardship agreement between the proposed NHD steward and the USGS. The liaison is also engaging neighboring states in order to assess their local resolution hydrographic data holdings.

Preparing for Production

In preparation for large scale NHD production, the LR-NHD partners have been critically examining high resolution (1:24,000) NHD data for errors. Among the many comments we have received

in regard to a new, local resolution NHD dataset, many reflect a trend among stakeholders of concerns that errors in the 24K data will be propagated to the 1:4,800 scale data. The LR-NHD partners are undergoing thorough investigations of the 24K data and will continue to contact other NHD data users in the state for information about potential errors in the 24K NHD. In addition, the LR-NHD partners are responding to stakeholder concerns in regard to multiple datasets and resolution. It is our understanding that USGS and cooperating partners are pursuing solutions to the "generalization problem." Based on stakeholder response, we believe established generalization methodologies will be a key element in the speedy adoption of local resolution data.

Next Steps

In the next month, we will:

- Continue testing of new geoconflation tools as they are developed
- Continue development of two pilot watershed datasets
- Work in close conjunction with USGS to facilitate the speedy development of the new geoconflation tools
- Aid in the authoring and editing of documentation for geoconflation tools
- Meet with personnel at the West Virginia Department on Environmental Protection and take the first steps towards a long term stewardship arrangement for the NHD in West Virginia
- Continue intensive review of 24K NHD data in preparation for full scale LR-NHD production
- Schedule a conference call that includes key participants

Funding

As state above, the LR-NHD partners received $50,000 from the United States Geological Service (USGS) through the Great Lakes-Northern Forest Cooperative Ecosystem Studies Unit. We are actively pursuing more funding in order to complete data production and establish a stewardship system.

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