LR-NHD in West Virginia
Monthly Report – December 2006

Status

Over the course of the last two months, significant progress has been made in the development of Local Resolution NHD in West Virginia. The following is a review of those accomplishments:

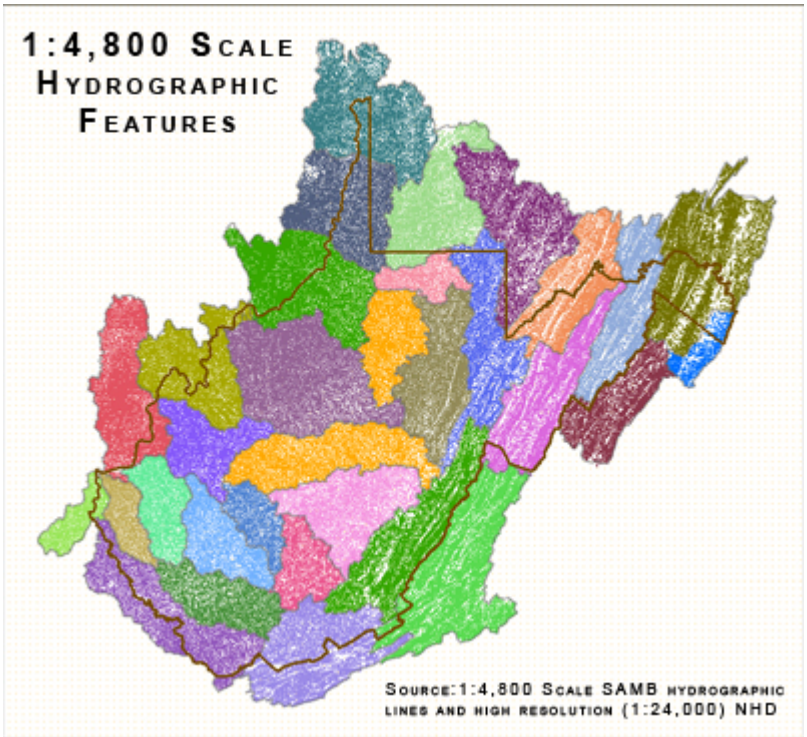
- Development of a new dataset, titled "1:4,800 Hydrologic Feature Geometry" has been completed and is available for download. This dataset contains all collected 1:4,800 scale hydrographic features collected by the Statewide Addressing and Mapping project as well as high resolution NHD features deemed necessary for inclusion. Features have been assigned basic attributes, broken into 8-digit Hydrologic Units, edge matched and topologically corrected. More information on the dataset can be found here: http://www.wvgis.wvu.edu/data/dataset.php?action=search&ID=265 This website contains summary and complete metadata as well as links to download the new datasets. The data can be downloaded as individual 8-digit HUCs or as one statewide dataset.
- Both the Natural Resource Analysis Center and the West Virginia GIS Technical Center, in conjunction with the US Geological Survey, have been engaged in pilot projects utilizing new software to develop local resolution NHD data. These projects are progressing and ongoing.
- The project website (http://www.wvgis.wvu.edu/stateactivities/lrnhd.html) has been updated to reflect recent project activities. All monthly reports, status graphics and other materials are available for download from this website.

We currently anticipate completion of both pilot conflation projects by the end of 2006. Once these pilot projects are completed and funding is secured, full production of local resolution NHD for the state of West Virginia will commence. We currently anticipate that this will begin in the Spring of 2007.

Funding

The project partners request continued funding to expedite the completion of the LR-NHD product in West Virginia.

ATTACHMENTS: 1:4,800 Hydrologic Feature Geometry Dataset summary metadata; LR-NHD Development Status Graphic



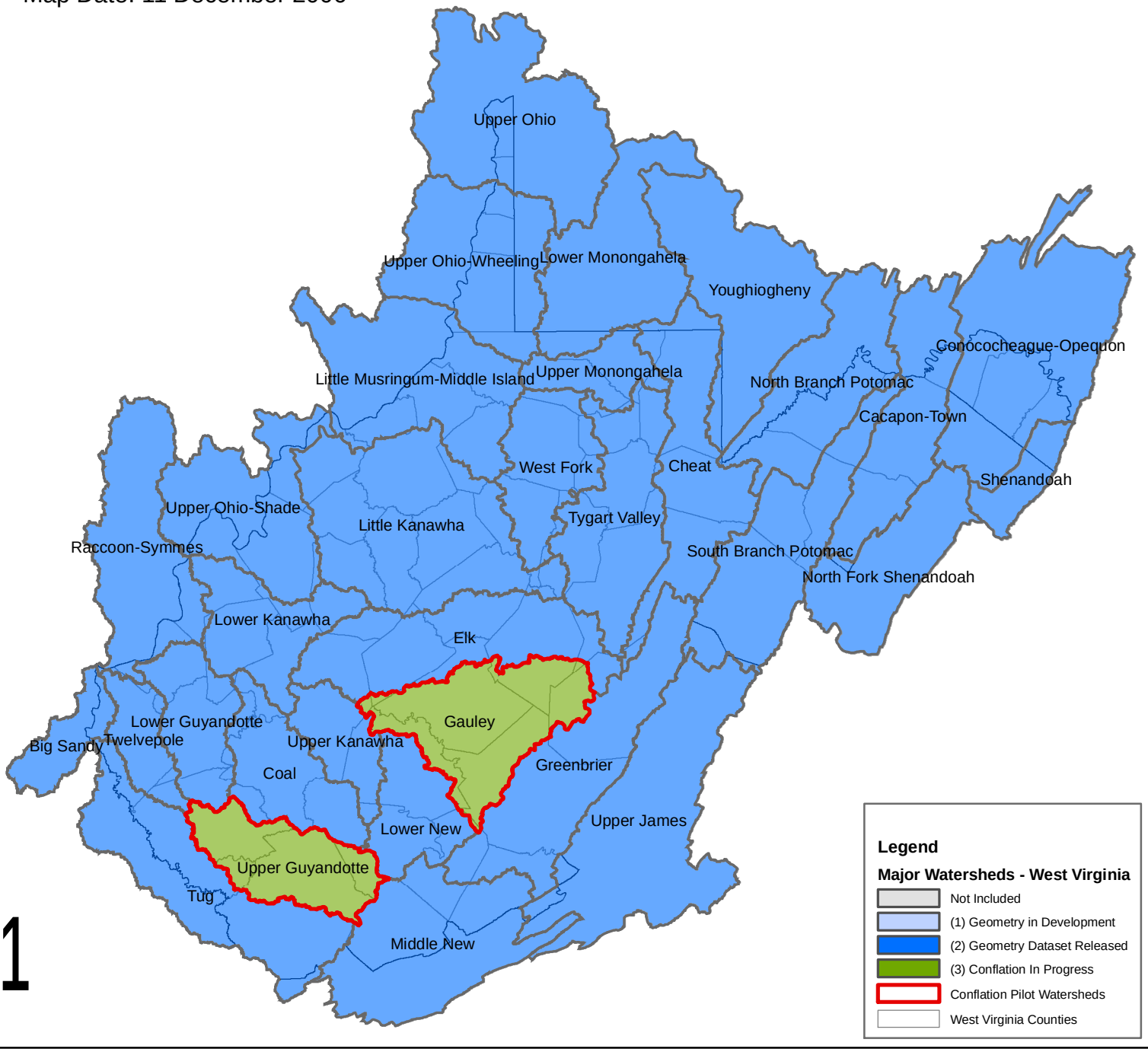
Summary Metadata

DESCRIPTION	The local resolution basic hydrography dataset is a hybrid dataset developed by the West Virginia GIS Technical Center as part of the effort to create local resolution NHD data for West Virginia. It primarily consists of lines and polygons collected as part of the West Virginia Statewide Addressing and Mapping project. As such, most of the data is current as of the year 2003. This dataset also contains features from the high resolution (24,000 Scale) NHD dataset. See data source Lineage (on this page) and Full Metadata for more information.
SCALE	1:4,800
LOCATION	Statewide
ATTRIBUTE INFORMATION	This dataset contains skeletal attributes. Each feature has two sets of major/minor DLG codes that describe the feature type. There is also a text field with a feature type description. Those lines included in the dataset from 1:24,000 NHD include those attributes as well - reach codes, names, etc. Each feature also contains a field called SCALE. This field contains one of two values - 4800 or 24000. Those lines included in the dataset from the high resolution NHD data have a value of 24000 and all other features have a value of 4800.
DATA SOURCE	As part of the West Virginia Statewide Addressing and Mapping Project,

LINEAGE	high resolution aerial photography was flown for the state of West Virginia in 2003. Several types of vector GIS data were extracted from the photography, including basic hydrographic feature lines and polygons. We visually compared the 4,800 and 24,000 scale lines to determine the completeness of the new data. These comparisons revealed that a significant portion of the streams represented in the high resolution NHD had no corresponding feature in the 1:4,800 scale dataset. To remedy these discrepancies, the WVGISTC compared the data statewide and, using ancillary data such as aerial photography and coal mine permit boundaries, we included those 24K arcs that were missing from the 4,800 scale data but appeared hydrologically unchanged. From here, using the existing attributes, we standardized the attribute information, topologically enforced the vector data, divided the data into 8-digit watersheds and edge matched all lines and polygons. The resultant datasets are available for download, but will be usurped by local resolution NHD when it becomes available.
COORDINATE SYSTEM	Lat/Long (NAD 83), map units in decimal degrees; UTM Zone 17 (NAD83), map units in meters
FILE FORMAT	Compressed ESRI shapefiles, broken into 8 digit watersheds. Be aware that linear hydrologic features frequently cross these boundary lines.

Development of the Local Resolution National Hydrographic Dataset in West Virginia

Map Date: 11 December 2006



The process to complete the Local Resolution NHD Project in West Virginia has been broken into three major steps. First, we visually compare the new 1:4,800 scale stream lines to existing 24K NHD lines. Areas where the new data underrepresents the existing lines are flagged and examined, and, if neccessary, new and old datasets are combined to create a complete dataset. General attributes are also added at this stage. In tandem with custom software developed by the USGS, this step prepares the data for the preconflation process. Preconflation is the second major step of the project, followed immediately by conflation, the third and final step. This map illustrates the current progress of the LR-NHD team.