<u>LR-NHD in West Virginia</u> Monthly Report – June 2006

Introduction

The Local Resolution NHD project for West Virginia stepped up its efforts this summer, beginning with the hire of two full time summer employees. These employees, under the supervision of Evan Fedorko, are responsible for accomplishing many of the tasks as outlined in the document "LR-NHD Data Preparation Guide." Along with the preparation of this document and supervision of said employees, the project manager has been developing methodologies to take the LR-hydro data through preconflation, and eventually, the full NHD production process.

Status

The overall goal of the LR-NHD data preparation is to ensure the completeness and connectivity of the final LR-NHD dataset by comparing 1:4,800 scale hydrographic lines and polygons to existing 1:24,000 scale NHD. The "LR-NHD Data Preparation Guide" breaks the tasks to be completed up into 6 major sections, starting with visual comparisons of the two scales and ending with a geodatabase containing lines and polygons ready to be taken through the preconflation process.

All work is being completed on the basis of 8 digit watersheds, also known as subbasins. Broadly speaking, a technician is assigned an 8-digit watershed and they sequentially complete the tasks as outlined in the preparation guide. Thus far, task levels 1, 2 and 4 have been completed for all of the major 8 digit watersheds in West Virginia. For each 8 digit watershed completely or mostly within the state of West Virginia, the following has been completed:

- Level 1 Tasks
 - o Download all 24K NHD data
 - Divide into 8 digit watersheds
 - Download 4.8K hydro arcs and polygons
 - Divide into 8 digit watersheds
- Level 2 Tasks
 - Visual comparison of 4.8K and 24K data for omissions. Ancillary data includes: mining polygons, 4.8K SAMB photography. Attribute using comparison attributes: 0-4.
- Level 4 Tasks
 - Fix closure lines by matching with 24K
 - Create polygon features from 4.8K lines topological editing
 - Attribute lines and polygons with appropriate DLG codes, scale, etc.

Presently, technicians are engaged in Level 5 editing, which includes:

- Level 5 Tasks
 - Combine datasets in geodatabase
 - Create composite 24K-4.8K dataset topological editing

Simultaneously, the Natural Resource Analysis Center, a project partner in the LR-NHD process, is working to complete the level 3 tasks. This includes:

- Level 3 Tasks
 - Visual comparison of two line stream areas expand digitizing where necessary.

The project leader is performing QA/QC on each of the above watersheds and modifying tasks where necessary.

Following the completion of Level 5 tasks, each 8 digit watershed will start the full NHD production process, beginning with preconflation (Level 6). Currently, the project lead is engaged with a pilot project using the Upper Guyandotte watershed (05070101) to determine the methodology needed to prepare data for the USGS' new conflation toolset. Working in conjunction with USGS in Rolla, MO, the following has been completed as part of the Level 6 tasks, the preconflation pilot:

- Development of methodology to convert working geodatabase data to coverage format for use in preconflation tools.
- Obtained and installed all necessary software, including Arc View 3.3 and NHD Create v. 2.10
- Began initial attempts to use preconflation software. After experiencing errors, contacted USGS.
- USGS provided several AMLs to fix problems with the above conversion process. USGS also provided methodology to utilize AMLs and begin preconflation process.
- Project lead is currently engaged in the initial stages of the preconflation pilot project.

The goal of the project in this term (Summer 2006) is to complete comparison and editing of each major 8 digit watershed in West Virginia by October 1st such that each watershed will have a complete, combined geometry with DLG code attributes. In addition, we hope to complete the preconflation pilot project and have an established methodology to complete all preconflation by October, as well.

Funding

West Virginia University requests continued funding from USGS to expedite the completion of the LR-NHD product in West Virginia.