

NHD Stewardship in West Virginia

West Virginia GIS Technical Center (WVGISTC)
Natural Resource Analysis Center (NRAC)
West Virginia Office of GIS Coordination

The High Resolution National Hydrographic Dataset, a spatial dataset of streams, lakes and other hydrologic features, is a crucial base layer dataset for West Virginia. As is the case in many parts of the country, the NHD in West Virginia is badly in need of immediate maintenance and long term stewardship. A successful stewardship program will require extensive interagency cooperation as well as creative solutions to challenging problems.

The WV Office of GIS Coordination is the designated principal steward of NHD data in West Virginia. The WV GIS Technical Center is the technical lead and will be managing the actual editing of the NHD. Leadership of the stewardship program will be a joint effort between the two entities. Figure 1 diagrams the general stewardship arrangement in WV.

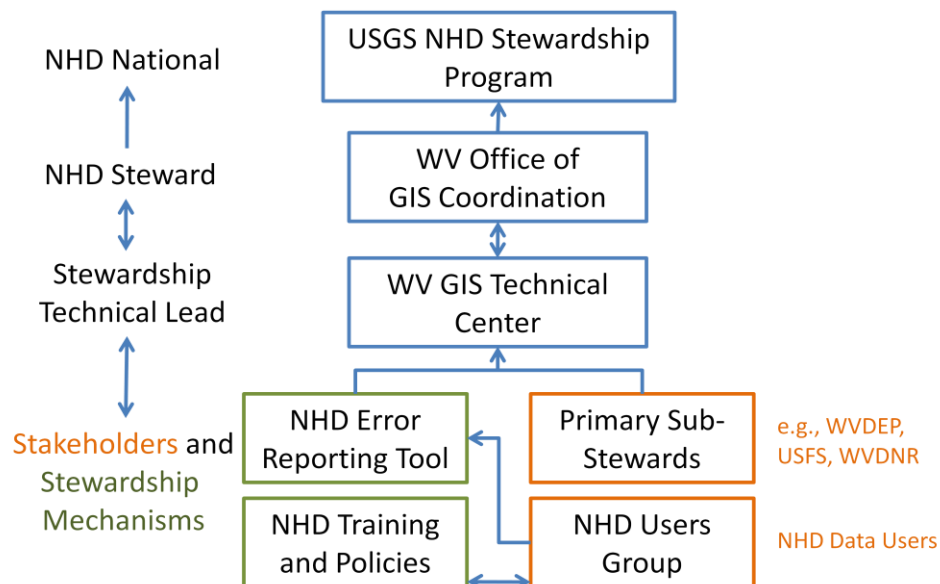


Figure 1. General organization of WV's NHD Stewardship Program

Need for Stewardship

In West Virginia, the High Resolution or 1:24,000 scale NHD (HR-NHD) is the most commonly utilized hydrographic dataset. It is estimated that the geometry of HR-NHD has not been updated in over 30 years. Many users are concerned about the currentness and accuracy of this dataset, particularly when compared with current aerial photography. This is especially true in areas of high change, such as areas of urban development and areas of intense coal mining, where these activities have rendered significant portions of the HR-NHD obsolete (Figure 2). NHD users are unified in their support of developing an NHD stewardship program for West Virginia.

October 2009

<http://www.wvgis.wvu.edu/resources/resources.php?page=dataProductDevelopment/nhdPortal>

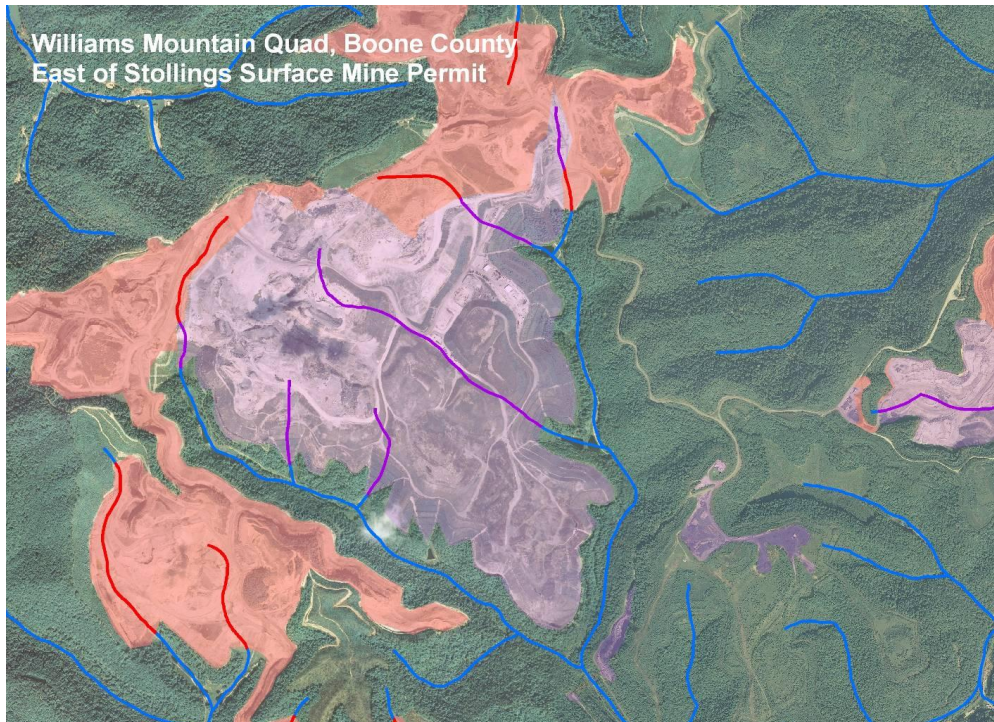


Figure 2. High change areas, such as this surface mine permit, have resulted in intense alterations to hydrographic features, none of which are currently reflected in the NHD. Purple lines indicate stream alterations prior to 2003, red lines indicate alterations 2003-2007.

Streams and water bodies are a major subject of environmental regulation. As regulatory agencies implement more GIS technology into their business plans, quality spatial data becomes more crucial to their success and effectiveness. The problems within the high resolution NHD data in West Virginia hamper the efforts of agencies wishing to transition to these newer technologies. In addition to state and federal agencies with a role in management of aquatic systems, the NHD is also a key data layer for many local communities, non-profit agencies, and citizen watershed groups.

An effective NHD Stewardship program in West Virginia will benefit users of the dataset at all levels – from the National Map down to local watershed groups. The proposed NHD Stewardship program for West Virginia is an important step forward.

Funding

The state of West Virginia is currently seeking funding to:

1. Initiate a stewardship program for High-Resolution NHD.
2. Repair known errors within the HR-NHD as they are discovered or reported.
3. Update stream delineations in areas which have undergone dramatic, man-made change and develop a system by which high change areas can be targeted for frequent maintenance.
4. Develop an information exchange mechanism by which NHD errors can be reported and data that will support the repair of those errors can be shared.
5. Improve the delineation of manmade drainage feature for inclusion in the HR-NHD.

October 2009

<http://www.wvgis.wvu.edu/resources/resources.php?page=dataProductDevelopment/nhdPortal>