NHDPlus and BASINS 4.0

The U.S. Environmental Protection Agency's (EPA's) Office of Water developed BASINS (US EPA, 2004a) as a multipurpose environmental analysis system. As a multipurpose system, BASINS was designed to support watershed and water quality-based studies by facilitating examination of environmental information, by supporting analysis of environmental systems, and by providing a package to examine management alternatives.

BASINS 4.0 has been enhanced to include a feature to directly download NHDPlus datasets, preprocess them, and add them to a BASINS project. The BASINS Download Data tool downloads NHDPlus data from the NHDPlus server by USGS Hydrologic Unit (HUC8). The user may specify desired GIS layers from the NHDPlus dataset, including the Elevation, Flow Direction, and Flow Accumulation grids, and the Catchments, Hydrography, Hydrologic Units, and Streamgage Events shapefiles.

Once the NHDPlus data for a particular HUC8 is downloaded, it will automatically be clipped to the specified region if desired. The NHDPlus layers will be projected to match the BASINS

project projections, and the NHDPlus Value Added Attributes (VAAs) will be added to the shapefile attribute tables for catchments and flowlines.
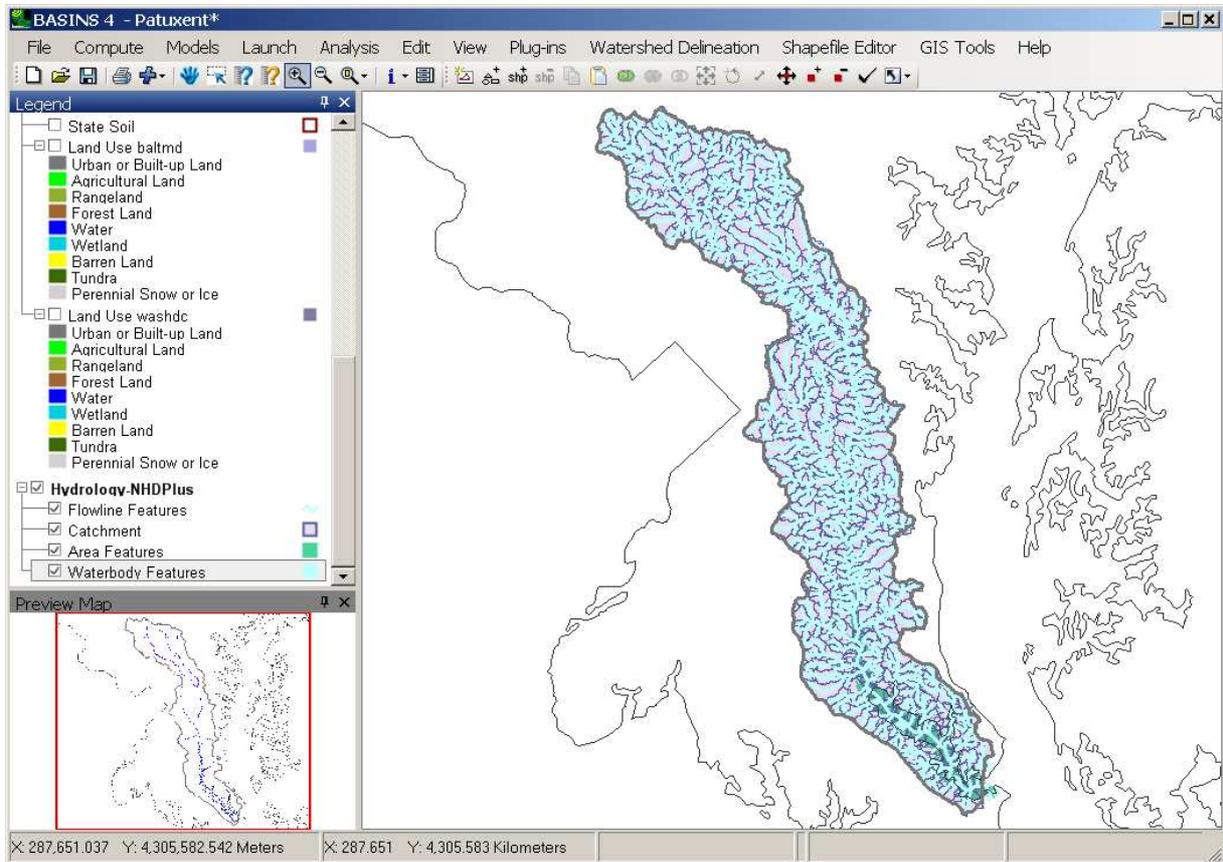
After the NHDPlus data have been downloaded, processed, and added to a BASINS project, the NHDPlus layers may be used through the BASINS watershed delineation tools as the basis for watershed modeling with HSPF and SWAT, and as individual units to be summarized in watershed characterization reports.

Related websites:

http://www.epa.gov/waterscience/basins/

For more information, contact:

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