



National Hydrography Dataset (NHD): Medium Resolution

The National Hydrography Dataset (NHD) is a vector database that maps stream and river networks, waterbodies such as lakes and marshes, flow paths, and more than 50 other types of surface water features like those found on U.S. Geological Survey (USGS) topographic maps. The medium resolution layer used for EnviroAtlas is based on the USGS 1988 1:100,000-scale Digital Line Graph (DLG) hydrography dataset.

The EPA and USGS have incorporated NHD into their [NHDPlusV2](#) dataset, which integrates useful features from the [National Hydrography Dataset \(NHD\)](#), the [National Elevation Dataset \(NED\)](#), and the [Watershed Boundary Dataset \(WBD\)](#).

NHD feature types such as rivers, flowlines, waterbodies, and surface water landmarks are useful for overlaying with other EnviroAtlas data (such as elevation or political boundaries) to create base maps for exploring other EnviroAtlas variables. In addition, because NHD uniquely identifies stream segments and relates them to other water resource attributes such as dams, point source dischargers, and stream gages, it serves as a powerful tool to facilitate water resources analyses. NHD's flow network, in conjunction with NHDPlus, allows for the directional tracking of water to trace possible impacts upstream or downstream.

Things to know before using these data:

Because this data layer was created at a resolution of 1:100,000, the level of detail shown is relative to the scale of the data. For this reason, smaller streams and waterbodies may not be shown.

A large and complex national dataset such as the NHD contains errors that are attributable to its sheer size, but also to the types of variables contained within it. For example, a stream's perennial status may change during drought cycles or the direction of flow of streams may be recorded in error because of water diversions. As a result, the NHD, along with the National Elevation and Watershed Boundary datasets, are constantly changing as portions are corrected and updated.

Because the NHD provides a nationally consistent framework for analysis, water quality information linked to



stream reach addresses by one organization can be shared with other organizations.

Where can I go for more information?

EPA's Watershed Assessment, Tracking and Environmental Results System ([WATERS](#)) integrates information from various EPA water programs by linking it to the NHD network.

The NHD uses an addressing system to link to information about specific reaches or waterbodies from other related data such as water discharge, water quality, or fish populations. This data architecture allows [analyses](#) of associations between upstream influences and downstream effects. Another website lists many [NHDPlus applications](#) submitted by various organizations.

The EPA and Horizon Systems Corporation have developed a NHDPlus Version 2 [User Guide](#) (January 2016), available online.

Click [here](#) to view NHDPlus metadata.

NOTE: The data described in this fact sheet have not been prepared or reviewed by the EnviroAtlas team; they are sourced from publicly available external web services and as such are prepared, stored, and managed by the organization listed above. With current technology, the EnviroAtlas team has no control over the way these data display in our application. Please go to the sources listed here for more information.