

# NHD\_Flowline\_18

## Shapefile



## Tags

FWHydrography, Hydrography, Stream / River, Lake / Pond, Canal / Ditch, Reservoir, Spring / Seep, Swamp / Marsh, Artificial Path, Reach Code

## Summary

The NHD is a national framework for assigning reach addresses to water-related entities, such as industrial discharges, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network, much like addresses on streets. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities--and any associated information about them--can be analyzed using software tools ranging from spreadsheets to geographic information systems (GIS). GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help understand and display their respective effects upon one another. Furthermore, because the NHD provides a nationally consistent framework for addressing and analysis, water-related information linked to reach addresses by one organization (national, state, local) can be shared with other organizations and easily integrated into many different types of applications to the benefit of all.

\*\*\*\* NOTE \*\*\* September 24, 2018, MARIS staff downloaded the statewide geodatabase for MS NHD. We clipped the data sets using a 100 meter buffer of the official MDEQ state border. Staff then projected from lat/long into the MSTM (3814) projection \*\*\*

## Description

The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD data was originally developed at 1:100,000-scale and exists at that scale for the whole country. This high-resolution NHD, generally developed at 1:24,000/1:12,000 scale, adds detail to the original 1:100,000-scale NHD. (Data for Alaska, Puerto Rico and the Virgin Islands was developed at high-resolution, not 1:100,000 scale.) Local resolution NHD is being developed where partners and data exist. The NHD contains reach codes for networked features, flow direction, names, and centerline representations for areal water bodies. Reaches are also defined on waterbodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria established by the Federal Geographic Data Committee.

## Credits

See dataset specific metadata.

## Use limitations

None. Acknowledgment of the originating agencies would be appreciated in products derived from these data.

## Extent

**West** -91.737492 **East** -88.094807  
**North** 35.006344 **South** 30.162409

### Scale Range

**Maximum (zoomed in)** 1:5,000  
**Minimum (zoomed out)** 1:150,000,000

### ArcGIS Metadata ►

### Topics and Keywords ►

\* CONTENT TYPE Downloadable Data

*Hide Topics and Keywords ▲*

### Citation ►

\* TITLE NHD\_Flowline\_18  
PUBLICATION DATE 2018-08-15 00:00:00

PRESENTATION FORMATS \* digital map

*Hide Citation ▲*

### Citation Contacts ►

RESPONSIBLE PARTY  
INDIVIDUAL'S NAME Steve Walker  
ORGANIZATION'S NAME MARIS  
CONTACT'S ROLE distributor

#### CONTACT INFORMATION ►

PHONE  
VOICE 601 432-6149

ADDRESS  
TYPE  
CITY Jackson  
ADMINISTRATIVE AREA MS  
POSTAL CODE 39211  
E-MAIL ADDRESS swalker@mississippi.edu

*Hide Contact information ▲*

*Hide Citation Contacts ▲*

### Resource Details ►

DATASET LANGUAGES \* English (UNITED STATES)

SPATIAL REPRESENTATION TYPE \* vector

\* PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.5.1.7333

#### CREDITS

See dataset specific metadata.

#### ARCGIS ITEM PROPERTIES

\* NAME NHD\_Flowline\_18  
\* SIZE 675.176  
\* LOCATION file:///\\DESKTOP-TP9LNVL\F\$\DATA\00\_HYDROLOGY\NHD\_2018\_High\mstm\_shapefiles\NHD\_Flowline\_18.s  
hp  
\* ACCESS PROTOCOL Local Area Network

[Hide Resource Details ▲](#)

## Extents ►

#### EXTENT

##### VERTICAL EXTENT

\* MINIMUM VALUE -1.640400  
\* MAXIMUM VALUE 0.000000

#### EXTENT

##### GEOGRAPHIC EXTENT

##### BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching  
\* WEST LONGITUDE -91.737492  
\* EAST LONGITUDE -88.094807  
\* NORTH LATITUDE 35.006344  
\* SOUTH LATITUDE 30.162409  
\* EXTENT CONTAINS THE RESOURCE Yes

#### EXTENT IN THE ITEM'S COORDINATE SYSTEM

\* WEST LONGITUDE 318561.227753  
\* EAST LONGITUDE 651090.732525  
\* SOUTH LATITUDE 1042361.125120  
\* NORTH LATITUDE 1577952.340621  
\* EXTENT CONTAINS THE RESOURCE Yes

[Hide Extents ▲](#)

## Resource Constraints ►

#### CONSTRAINTS

##### LIMITATIONS OF USE

None. Acknowledgment of the originating agencies would be appreciated in products derived from these data.

[Hide Resource Constraints ▲](#)

## Spatial Reference ►

#### ARCGIS COORDINATE SYSTEM

\* TYPE Projected  
\* GEOGRAPHIC COORDINATE REFERENCE GCS\_North\_American\_1983  
\* PROJECTION NAD\_1983\_Mississippi\_TM  
\* COORDINATE REFERENCE DETAILS  
PROJECTED COORDINATE SYSTEM  
WELL-KNOWN IDENTIFIER 102609  
X ORIGIN -5122200  
Y ORIGIN -12297100  
XY SCALE 450339697.45066422  
Z ORIGIN -1074.5620235000019  
Z SCALE 4194304001953.124  
M ORIGIN -1024.1859235000006  
M SCALE 4194304001953.124  
XY TOLERANCE 0.001  
Z TOLERANCE 0.001  
M TOLERANCE 0.001  
HIGH PRECISION true  
LATEST WELL-KNOWN IDENTIFIER 3814  
WELL-KNOWN TEXT  
PROJCS["NAD\_1983\_Mississippi\_TM",GEOGCS["GCS\_North\_American\_1983",DATUM["D\_North\_American\_1983",SPHEROID["GRS\_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Transverse\_Mercator"],PARAMETER["False\_Easting",500000.0],PARAMETER["False\_Northing",1300000.0],PARAMETER["Central\_Meridian",-89.75],PARAMETER["Scale\_Factor",0.9998335],PARAMETER["Latitude\_Of\_Origin",32.5],UNIT["Meter",1.0],AUTHORITY["EPSG",3814]]

REFERENCE SYSTEM IDENTIFIER

\* VALUE 3814  
\* CODESPACE EPSG  
\* VERSION 6.17.1(10.0.0)

[Hide Spatial Reference ▲](#)

## Spatial Data Properties ►

VECTOR ►

\* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME NHD\_Flowline\_18  
\* OBJECT TYPE composite  
\* OBJECT COUNT 601322

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME NHD\_Flowline\_18  
\* FEATURE TYPE Simple  
\* GEOMETRY TYPE Polyline  
\* HAS TOPOLOGY FALSE  
\* FEATURE COUNT 601322  
\* SPATIAL INDEX TRUE

\* LINEAR REFERENCING TRUE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

## Geoprocessing history ►

### PROCESS

PROCESS NAME

DATE 2018-09-25 13:25:00

TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Analysis Tools.tbx\Clip

COMMAND ISSUED

Clip NHDFlowline stbnd\_100\_buff

F:\DATA\00\_HYDROLOGY\NHD\_2018\_High\MS\_NHD\_Flowline\_18.shp #

INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

[Hide Geoprocessing history ▲](#)

## Distribution ►

### DISTRIBUTOR ►

AVAILABLE FORMAT

\* NAME Personal GeoDatabase Feature Class

### TRANSFER OPTIONS

ONLINE SOURCE

\* LOCATION

file:///igskbthisusy01\nhdgeo\oracle\_export\GDBExtractServer\Template\NHD\_File\_Template\_High\_92v210.gdb

\* ACCESS PROTOCOL Local Area Network

\* DESCRIPTION Downloadable Data

[Hide Distributor ▲](#)

### DISTRIBUTION FORMAT

\* NAME Shapefile

### TRANSFER OPTIONS

\* TRANSFER SIZE 675.176

[Hide Distribution ▲](#)

## Fields ►

### DETAILS FOR OBJECT NHD\_Flowline\_18 ►

\* TYPE Feature Class

\* ROW COUNT 601322

FIELD Shape ▶

- \* ALIAS Shape
- \* DATA TYPE Geometry
- \* WIDTH 0
- \* PRECISION 0
- \* SCALE 0
- \* FIELD DESCRIPTION  
Feature geometry.
  
- \* DESCRIPTION SOURCE  
ESRI
  
- \* DESCRIPTION OF VALUES  
Coordinates defining the features.

*Hide Field Shape ▲*

FIELD FDate ▶

- \* ALIAS FDate
- \* DATA TYPE Date
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

*Hide Field FDate ▲*

FIELD Resolution ▶

- \* ALIAS Resolution
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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0

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CanalDitch (336)

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0

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Pipeline (428)

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0

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Underground Conduit (420)

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0

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StreamRiver (460)

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0

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Connector (334)

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0

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Coastline (566)

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0

- \* DOMAIN NAME Resolution
- \* DESCRIPTION
- \* TYPE Coded Value
- \* MERGE RULE Default value
- \* SPLIT RULE Duplicate

*Hide Field Resolution ▲*

FIELD GNIS\_ID ►

- \* ALIAS GNIS\_ID
- \* DATA TYPE String
- \* WIDTH 10
- \* PRECISION 0
- \* SCALE 0

*Hide Field GNIS\_ID ▲*

FIELD GNIS\_Name ►

- \* ALIAS GNIS\_Name
- \* DATA TYPE String
- \* WIDTH 65
- \* PRECISION 0
- \* SCALE 0

*Hide Field GNIS\_Name ▲*

FIELD LengthKM ►

- \* ALIAS LengthKM
- \* DATA TYPE Double
- \* WIDTH 19
- \* PRECISION 0
- \* SCALE 0

*Hide Field LengthKM ▲*

FIELD ReachCode ►

- \* ALIAS ReachCode

- \* DATA TYPE String
- \* WIDTH 14
- \* PRECISION 0
- \* SCALE 0

[Hide Field ReachCode ▲](#)

FIELD FID ►

- \* ALIAS FID
- \* DATA TYPE OID
- \* WIDTH 4
- \* PRECISION 0
- \* SCALE 0
- \* FIELD DESCRIPTION  
Internal feature number.
- \* DESCRIPTION SOURCE  
Esri
- \* DESCRIPTION OF VALUES  
Sequential unique whole numbers that are automatically generated.

[Hide Field FID ▲](#)

FIELD FlowDir ►

- \* ALIAS FlowDir
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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0

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CanalDitch (336)

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Pipeline (428)

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0

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Underground Conduit (420)

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0

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StreamRiver (460)



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Connector (334)

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Coastline (566)

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0

- \* DOMAIN NAME HydroFlowDirections
- \* DESCRIPTION
- \* TYPE Coded Value
- \* MERGE RULE Default value
- \* SPLIT RULE Duplicate

*Hide Field FlowDir ▲*

FIELD Permanent\_ ►

- \* ALIAS Permanent\_
- \* DATA TYPE String
- \* WIDTH 40
- \* PRECISION 0
- \* SCALE 0

*Hide Field Permanent\_ ▲*

FIELD FType ►

- \* ALIAS FType
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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558

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CanalDitch (336)

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336

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Pipeline (428)

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428

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Underground Conduit (420)

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420

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StreamRiver (460)

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460

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Connector (334)

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334

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Coastline (566)

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566

- \* DOMAIN NAME HydroFlowDirections
- \* DESCRIPTION
- \* TYPE Coded Value
- \* MERGE RULE Default value
- \* SPLIT RULE Duplicate

*Hide Field FType ▲*

FIELD FCode ►

- \* ALIAS FCode
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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55800

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CanalDitch (336)

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33600

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Pipeline (428)

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42805

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Underground Conduit (420)

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42000

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StreamRiver (460)

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46006

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Connector (334)

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33400

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Coastline (566)

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56600

- \* DOMAIN NAME Coastline FCode
- \* DESCRIPTION
- \* TYPE Coded Value

- \* MERGE RULE Default value
- \* SPLIT RULE Duplicate

*Hide Field FCode ▲*

FIELD **WBArea\_Per** ▶

- \* ALIAS WBArea\_Per
- \* DATA TYPE String
- \* WIDTH 40
- \* PRECISION 0
- \* SCALE 0

*Hide Field WBArea\_Per ▲*

FIELD **MainPath** ▶

- \* ALIAS MainPath
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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CanalDitch (336)

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Pipeline (428)

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Underground Conduit (420)

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0

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StreamRiver (460)

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0

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Connector (334)

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0

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Coastline (566)

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0

- \* DOMAIN NAME MainPath Domain
- \* DESCRIPTION
- \* TYPE Coded Value
- \* MERGE RULE Default value

\* SPLIT RULE Duplicate

[Hide Field MainPath ▲](#)

FIELD [InNetwork ▶](#)

- \* ALIAS InNetwork
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

SUBTYPE INFORMATION

- \* SUBTYPE NAME (SUBTYPE CODE)

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ArtificialPath (558)

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1

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CanalDitch (336)

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1

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Pipeline (428)

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1

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Underground Conduit (420)

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1

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StreamRiver (460)

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1

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Connector (334)

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1

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Coastline (566)

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1

- \* DOMAIN NAME NoYes Domain
- \* DESCRIPTION
- \* TYPE Coded Value
- \* MERGE RULE Default value
- \* SPLIT RULE Default value

[Hide Field InNetwork ▲](#)

FIELD [Visibility ▶](#)

- \* ALIAS Visibility
- \* DATA TYPE Integer
- \* WIDTH 10
- \* PRECISION 10
- \* SCALE 0

[Hide Field Visibility ▲](#)

FIELD Shape\_Leng ▶

- \* ALIAS Shape\_Leng
- \* DATA TYPE Double
- \* WIDTH 19
- \* PRECISION 0
- \* SCALE 0

[Hide Field Shape\\_Leng ▲](#)

[Hide Details for object NHD\\_Flowline\\_18 ▲](#)

DETAILS FOR OBJECT NHDFlowlineToMeta

- \* TYPE Relationship

OVERVIEW DESCRIPTION ▶

ENTITY AND ATTRIBUTE OVERVIEW

The National Hydrography Dataset is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of water, paths through which water flows, and related entities. The information encoded about features includes a feature date, classification by type, other characteristics, a unique common identifier, the feature length or area, and (rarely) elevation of the surface of water pools and a description of the stage of the elevation. For reaches, encoded information includes a reach code. Names and their identifiers in the Geographic Names Information System, are assigned to most feature types. The direction of flow is encoded for networked features. The data also contains relations that encode metadata, and information that supports the exchange of future updates and improvements to the data. The names and definitions of all feature types, characteristics, and values are in the Standards for National Hydrography Dataset: Reston, Virginia, U.S. Geological Survey, 1999. The document is available online through <http://mapping.usgs.gov/standards/>.

ENTITY AND ATTRIBUTE DETAIL CITATION

The names and definitions of all feature types, characteristics, and values are in U.S. Geological Survey, 1999, Standards for National Hydrography Dataset High Resolution: Reston, Virginia, U.S. Geological Survey. The document is available online through <http://mapping.usgs.gov/standards/>. Information about tables and fields in the data are available from the user documentation for the National Hydrography Dataset at <http://nhd.usgs.gov>. The National Map - Hydrography Fact Sheet is also available at: <http://erg.usgs.gov/isb/pubs/factsheets/fs06002.html>.

[Hide Overview Description ▲](#)

[Hide Fields ▲](#)

## Metadata Details ►

- \* METADATA LANGUAGE English (UNITED STATES)
- \* METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA \* dataset

SCOPE NAME \* dataset

\* LAST UPDATE 2018-09-25

### ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

METADATA STYLE FGDC CSDGM Metadata

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2018-09-25 14:17:22

LAST MODIFIED IN ARCGIS FOR THE ITEM 2018-09-25 14:22:16

### AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2018-09-25 14:18:30

[Hide Metadata Details ▲](#)

## Thumbnail and Enclosures ►

### THUMBNAIL

THUMBNAIL TYPE JPG

[Hide Thumbnail and Enclosures ▲](#)

## FGDC Metadata (read-only) ▼

### CITATION

#### CITATION INFORMATION

ORIGINATOR U.S. Geological Survey in cooperation with U.S. Environmental Protection Agency, USDA Forest Service, and other Federal, State and local partners (see dataset specific metadata under Data\_Set\_Credit for details).

PUBLICATION DATE See dataset specific metadata.

PUBLICATION TIME Unknown

#### TITLE

NHD\_Flowline\_18

GEOSPATIAL DATA PRESENTATION FORM vector digital data

#### PUBLICATION INFORMATION

PUBLICATION PLACE Reston, Virginia

PUBLISHER U.S. Geological Survey

#### ONLINE LINKAGE

\\igskbthisusy01\nhdgeo\oracle\_export\GDBExtractServer\Template\NHD\_File\_Template\_High\_92v210.gdb

### DESCRIPTION

#### ABSTRACT

The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the

nation's surface water drainage system. NHD data was originally developed at 1:100,000-scale and exists at that scale for the whole country. This high-resolution NHD, generally developed at 1:24,000/1:12,000 scale, adds detail to the original 1:100,000-scale NHD. (Data for Alaska, Puerto Rico and the Virgin Islands was developed at high-resolution, not 1:100,000 scale.) Local resolution NHD is being developed where partners and data exist. The NHD contains reach codes for networked features, flow direction, names, and centerline representations for areal water bodies. Reaches are also defined on waterbodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria established by the Federal Geographic Data Committee.

#### PURPOSE

The NHD is a national framework for assigning reach addresses to water-related entities, such as industrial discharges, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network, much like addresses on streets. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities--and any associated information about them--can be analyzed using software tools ranging from spreadsheets to geographic information systems (GIS). GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help understand and display their respective effects upon one another. Furthermore, because the NHD provides a nationally consistent framework for addressing and analysis, water-related information linked to reach addresses by one organization (national, state, local) can be shared with other organizations and easily integrated into many different types of applications to the benefit of all.

\*\*\*\* NOTE \*\*\* September 24, 2018, MARIS staff downloaded the statewide geodatabase for MS NHD. We clipped the data sets using a 100 meter buffer of the official MDEQ state border. Staff then projected from lat/long into the MSTM (3814) projection \*\*\*

#### TIME PERIOD OF CONTENT

##### TIME PERIOD INFORMATION

##### SINGLE DATE/TIME

CALENDAR DATE REQUIRED: the year (and optionally month, or month and day) for which the data set corresponds to the ground.

##### CURRENTNESS REFERENCE

See dataset specific metadata.

##### STATUS

PROGRESS In work

MAINTENANCE AND UPDATE FREQUENCY Irregular

#### SPATIAL DOMAIN

##### BOUNDING COORDINATES

WEST BOUNDING COORDINATE -200

EAST BOUNDING COORDINATE -56.8344239

NORTH BOUNDING COORDINATE 143.165576

SOUTH BOUNDING COORDINATE 0

#### KEYWORDS

##### THEME

THEME KEYWORD THESAURUS U.S. Department of the Interior, U.S. Geological Survey, 1999, Standards for National Hydrography Dataset (<http://mapping.usgs.gov/standards/>)

THEME KEYWORD FWHydrography

THEME KEYWORD Hydrography

THEME KEYWORD Stream / River

THEME KEYWORD Lake / Pond  
THEME KEYWORD Canal / Ditch  
THEME KEYWORD Reservoir  
THEME KEYWORD Spring / Seep  
THEME KEYWORD Swamp / Marsh  
THEME KEYWORD Artificial Path  
THEME KEYWORD Reach Code

PLACE

PLACE KEYWORD THESAURUS U.S. Department of Commerce, 1977, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions (Federal Information Processing Standards 10-3): Washington, D.C., National Institute of Standards and Technology.

PLACE KEYWORD US

ACCESS CONSTRAINTS

None.

USE CONSTRAINTS

None. Acknowledgment of the originating agencies would be appreciated in products derived from these data.

POINT OF CONTACT

CONTACT INFORMATION

CONTACT ORGANIZATION PRIMARY

CONTACT ORGANIZATION Earth Science Information Center, U.S. Geological Survey

CONTACT VOICE TELEPHONE 1 888 ASK USGS

CONTACT ELECTRONIC MAIL ADDRESS [ask@usgs.gov](mailto:ask@usgs.gov)

HOURS OF SERVICE 0800-1600 Eastern Time

CONTACT INSTRUCTIONS

In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: [http://mapping.usgs.gov/esic/esic\\_index.html](http://mapping.usgs.gov/esic/esic_index.html)

DATA SET CREDIT

See dataset specific metadata.

NATIVE DATA SET ENVIRONMENT

Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.3.1.1850

[Hide Identification](#) ▲

ATTRIBUTE ACCURACY

ATTRIBUTE ACCURACY REPORT

Statements of attribute accuracy are based on accuracy statements made for U.S. Geological Survey Digital Line Graph (DLG) data, which is estimated to be 98.5 percent. One or more of the following methods were used to test attribute accuracy: manual comparison of the source with hardcopy plots; symbolized display of the DLG on an interactive computer graphic system; selected attributes that could not be visually verified on plots or on screen were interactively queried and verified on screen. In addition, software validated feature types and characteristics against a master set of types and characteristics, checked that combinations of types and characteristics were valid, and that types and characteristics were valid for the delineation of the feature. Feature types, characteristics, and other attributes conform to the Standards for National Hydrography Dataset (USGS, 1999) as of the date they were loaded into the database. All names were validated against a current extract from the Geographic Names Information System (GNIS). The entry and identifier for the names match those in the GNIS. The association of each name to reaches has been interactively checked, however, operator error could in some cases apply a name to a wrong reach.



This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

#### LOGICAL CONSISTENCY REPORT

Points, nodes, lines, and areas conform to topological rules. Lines intersect only at nodes, and all nodes anchor the ends of lines. Lines do not overshoot or undershoot other lines where they are supposed to meet. There are no duplicate lines. Lines bound areas and lines identify the areas to the left and right of the lines. Gaps and overlaps among areas do not exist. All areas close.

#### COMPLETENESS REPORT

The completeness of the data reflects the content of the sources, which most often are the published USGS topographic quadrangle and/or the USDA Forest Service Primary Base Series (PBS) map. The USGS topographic quadrangle is usually supplemented by Digital Orthophoto Quadrangles (DOQs). Features found on the ground may have been eliminated or generalized on the source map because of scale and legibility constraints. In general, streams longer than one mile (approximately 1.6 kilometers) were collected. Most streams that flow from a lake were collected regardless of their length. Only definite channels were collected so not all swamp/marsh features have stream/river delineated through them. Lake/ponds having an area greater than 6 acres were collected. Note, however, that these general rules were applied unevenly among maps during compilation. Reaches codes are defined on all features of type stream/river, canal/ditch, artificial path, coastline, and connector. Waterbody reach codes are defined on all lake/pond and most reservoir features. Names were applied from the GNIS database. Detailed capture conditions are provided for every feature type in the Standards for National Hydrography Dataset available online through <http://mapping.usgs.gov/standards/>.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

#### POSITIONAL ACCURACY

##### HORIZONTAL POSITIONAL ACCURACY

##### HORIZONTAL POSITIONAL ACCURACY REPORT

Statements of horizontal positional accuracy are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For horizontal accuracy, this standard is met if at least 90 percent of points tested are within 0.02 inch (at map scale) of the true position. Additional offsets to positions may have been introduced where feature density is high to improve the legibility of map symbols. In addition, the digitizing of maps is estimated to contain a horizontal positional error of less than or equal to 0.003 inch standard error (at map scale) in the two component directions relative to the source maps. Visual comparison between the map graphic (including digital scans of the graphic) and plots or digital displays of points, lines, and areas, is used as control to assess the positional accuracy of digital data. Digital map elements along the adjoining edges of data sets are aligned if they are within a 0.02 inch tolerance (at map scale). Features with like dimensionality (for example, features that all are delineated with lines), with or without like characteristics, that are within the tolerance are aligned by moving the features equally to a common point. Features outside the tolerance are not moved; instead, a feature of type connector is added to join the features.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

##### VERTICAL POSITIONAL ACCURACY

##### VERTICAL POSITIONAL ACCURACY REPORT

Statements of vertical positional accuracy for elevation of water surfaces are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps.

These maps were compiled to meet National Map Accuracy Standards. For vertical accuracy, this standard is met if at least 90 percent of well-defined points tested are within one-half contour interval of the correct value. Elevations of water surface printed on the published map meet this standard; the contour intervals of the maps vary. These elevations were transcribed into the digital data; the accuracy of this transcription was checked by visual comparison between the data and the map. This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

LINEAGE

PROCESS STEP

PROCESS DESCRIPTION

The processes used to create and maintain high-resolution NHD data can be found in the table called "NHDMetadata". Because NHD data can be downloaded using several user-defined areas, the process descriptions can vary for each download. The NHDMetadata table contains a list of all the process descriptions that apply to a particular download. These process descriptions are linked using the DuuID to the NHDFeatureToMetadata table which contains the com\_ids of all the features within the download. In addition, another table, the NHDSourceCitation, can also be linked through the DuuID to determine the sources used to create or update NHD data.

PROCESS DATE Unknown

PROCESS STEP

PROCESS DESCRIPTION

Dataset copied.

SOURCE USED CITATION ABBREVIATION

\\F880\oracle\_export\GDBExtractServer\Template\NHD\_Template\_High.mdb

PROCESS STEP

PROCESS DESCRIPTION

Metadata imported.

SOURCE USED CITATION ABBREVIATION

D:\Workspace\v107\Metadata\nhdflowline.xml

PROCESS DATE 2010-04-21

PROCESS TIME 16:52:09

PROCESS STEP

PROCESS DESCRIPTION

Dataset copied.

SOURCE USED CITATION ABBREVIATION

\\IGSKBTHIWS531\D\ExtractTest\oracle\_export\GDBExtractServer\Template\NHD\_File\_Template\_High\_92v200.gdb

PROCESS DATE 2010-05-20

PROCESS TIME 16:12:19

PROCESS STEP

PROCESS DESCRIPTION

Dataset copied.

SOURCE USED CITATION ABBREVIATION

\\igskbthisusy01\nhdgeo\oracle\_export\GDBExtractServer\Template\NHD\_Template\_High\_92v210.mdb

PROCESS DATE 2012-02-21

PROCESS TIME 13:58:25

[Hide Data Quality](#) ▲

HORIZONTAL COORDINATE SYSTEM DEFINITION  
GEODETIC MODEL

HORIZONTAL DATUM NAME North American Datum of 1983  
ELLIPSOID NAME Geodetic Reference System 80  
SEMI-MAJOR AXIS 6378137.000000  
DENOMINATOR OF FLATTENING RATIO 298.257222

VERTICAL COORDINATE SYSTEM DEFINITION  
ALTITUDE SYSTEM DEFINITION  
ALTITUDE DATUM NAME National Geodetic Vertical Datum of 1929  
ALTITUDE RESOLUTION 0.000025  
ALTITUDE DISTANCE UNITS meters  
ALTITUDE ENCODING METHOD Explicit elevation coordinate included with horizontal coordinates

*Hide Spatial Reference ▲*

DETAILED DESCRIPTION  
ENTITY TYPE  
ENTITY TYPE LABEL NHD\_Flowline\_18

ATTRIBUTE  
ATTRIBUTE LABEL Shape  
ATTRIBUTE DEFINITION  
Feature geometry.  
ATTRIBUTE DEFINITION SOURCE ESRI  
ATTRIBUTE DOMAIN VALUES  
UNREPRESENTABLE DOMAIN  
Coordinates defining the features.

ATTRIBUTE  
ATTRIBUTE LABEL FDate

ATTRIBUTE  
ATTRIBUTE LABEL Resolution

ATTRIBUTE  
ATTRIBUTE LABEL GNIS\_ID

ATTRIBUTE  
ATTRIBUTE LABEL GNIS\_Name

ATTRIBUTE  
ATTRIBUTE LABEL LengthKM

ATTRIBUTE  
ATTRIBUTE LABEL ReachCode

ATTRIBUTE  
ATTRIBUTE LABEL FID  
ATTRIBUTE DEFINITION  
Internal feature number.  
ATTRIBUTE DEFINITION SOURCE Esri  
ATTRIBUTE DOMAIN VALUES  
UNREPRESENTABLE DOMAIN  
Sequential unique whole numbers that are automatically generated.

ATTRIBUTE  
ATTRIBUTE LABEL FlowDir

ATTRIBUTE

ATTRIBUTE LABEL Permanent\_

ATTRIBUTE

ATTRIBUTE LABEL FType

ATTRIBUTE

ATTRIBUTE LABEL FCode

ATTRIBUTE

ATTRIBUTE LABEL WBArea\_Per

ATTRIBUTE

ATTRIBUTE LABEL MainPath

ATTRIBUTE

ATTRIBUTE LABEL InNetwork

ATTRIBUTE

ATTRIBUTE LABEL Visibility

ATTRIBUTE

ATTRIBUTE LABEL Shape\_Leng

DETAILED DESCRIPTION

ENTITY TYPE

ENTITY TYPE LABEL NHDFlowlineToMeta

OVERVIEW DESCRIPTION

ENTITY AND ATTRIBUTE OVERVIEW

The National Hydrography Dataset is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of water, paths through which water flows, and related entities. The information encoded about features includes a feature date, classification by type, other characteristics, a unique common identifier, the feature length or area, and (rarely) elevation of the surface of water pools and a description of the stage of the elevation. For reaches, encoded information includes a reach code. Names and their identifiers in the Geographic Names Information System, are assigned to most feature types. The direction of flow is encoded for networked features. The data also contains relations that encode metadata, and information that supports the exchange of future updates and improvements to the data. The names and definitions of all feature types, characteristics, and values are in the Standards for National Hydrography Dataset: Reston, Virginia, U.S. Geological Survey, 1999. The document is available online through <http://mapping.usgs.gov/standards/>.

ENTITY AND ATTRIBUTE DETAIL CITATION

The names and definitions of all feature types, characteristics, and values are in U.S. Geological Survey, 1999, Standards for National Hydrography Dataset High Resolution: Reston, Virginia, U.S. Geological Survey. The document is available online through <http://mapping.usgs.gov/standards/>. Information about tables and fields in the data are available from the user documentation for the National Hydrography Dataset at <http://nhd.usgs.gov>. The National Map - Hydrography Fact Sheet is also available at: <http://erg.usgs.gov/isb/pubs/factsheets/fs06002.html>.

[Hide Entities and Attributes ▲](#)

RESOURCE DESCRIPTION Downloadable Data

STANDARD ORDER PROCESS

DIGITAL FORM

DIGITAL TRANSFER INFORMATION

FORMAT NAME ArcGIS Geodatabase  
FORMAT VERSION NUMBER 8.3  
FILE DECOMPRESSION TECHNIQUE tar and uncompress

*Hide Distribution Information ▲*

METADATA DATE 2010-05-20  
METADATA CONTACT  
CONTACT INFORMATION  
CONTACT ORGANIZATION PRIMARY  
CONTACT ORGANIZATION Earth Science Information Center, U.S. Geological Survey  
CONTACT PERSON REQUIRED: The person responsible for the metadata information.  
CONTACT ADDRESS  
ADDRESS TYPE mailing address  
ADDRESS 507 National Center  
CITY Reston  
STATE OR PROVINCE VA  
POSTAL CODE 20192  
COUNTRY UNITED STATES

CONTACT VOICE TELEPHONE 1 888 ASK USGS.  
CONTACT ELECTRONIC MAIL ADDRESS [nhd@usgs.gov](mailto:nhd@usgs.gov)  
CONTACT INSTRUCTIONS

In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: [http://mapping.usgs.gov/esic/esic\\_index.html](http://mapping.usgs.gov/esic/esic_index.html)

METADATA STANDARD NAME FGDC Content Standards for Digital Geospatial Metadata  
METADATA STANDARD VERSION FGDC-STD-001-1998  
METADATA TIME CONVENTION local time

*Hide Metadata Reference ▲*