NHDPlus Update

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Shepherdstown, WV
National Hydrography Products: Current

- National Hydrography Dataset (NHD)
- Watershed Boundary Dataset (HUC12)
- NHDPlus
NHDPlus

| 1:100,000 resolution product (*original*) |
| 2.7 million catchments |
| Developed by EPA and USGS |
| widely used for modeling |
| connects landsurface activities to downstream effects |
| upstream/downstream navigation |
| flow volume and velocity, time of travel |
| “NHDPlus V2” in 2013 (V1 in 2006) |
NHDPlus V2 Data

Introducing NHDPlus High Resolution (HR)

- Same data model and methods as original NHDPlus
- Improved spatial resolution 1:24,000 or greater
- 30 million features
- Version 1.0 released in 2022
- EPA Snapshot available now
Download NHDPlus High Resolution EPA Snapshot 2022 Data

National:

- Esri File Geodatabase (39.4 GB)
- OGC GeoPackage (72.7 GB)

State and State-Equivalent:

Alabama

- Esri File Geodatabase (562 MB)
- OGC GeoPackage (1.3 GB)

Release notes and metadata forthcoming.
EPA Activities Vary in Spatial Resolution

EPA National Programs
Water, Research and Development, Pesticides, Compliance, Others
national level monitoring, modeling, tracking, reporting, etc.

EPA Regional Offices

EPA State and Tribal Partners
County, Municipal Partners, Public
Permitting, field visits, compliance, emergency response

CWA Jurisdictional Determinations
NHDPlusVFGen

- Based on new NHDPlusHR
- Pruned back to 1:100,000 network
- Regenerates all Value-Added Attributes (VAAs)
- Retains all crosswalk information
- Available in beta now
NHDPlus High Resolution or NHDPlus HR

Newly populated **VisibilityFilter** attribute

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</table>
VFGen: VisibilityFilter

\[\geq 1:100,000\]

GREEN \[\geq 1:24,000\] (HR)

BLUE \[\geq 1:100,000\] (VFGen)

RED VFGen Catchments

HR and VFGen have same data model but VFGen has an extra table.
Moving Forward...

- NHDPlusV2
  Updated 2015

- NHDPlusHR
  Released in 2022*

- NHDPlusVFGen
  Release in 2023
NHDPlus and ATTAINS

• ATTAINS transitioned to NHDPlus High Resolution in 2022
  • Involved reprocessing all state and tribal data through the Catchment Index Process (CIP) tool
  • All reprocessed data was QA’ed
• ATTAINS uses hexagons for Alaska and ocean catchments
• Measures use high resolution catchment area
NHDPlus and ATTAINS (cont.)
Future of Hydrography: LIDAR derived Hydrology
Hydrography: New Direction

- NHD, NHDPlus, and WBD maintenance* is ending
- NHD data model to be retired
- EPA will maintain a snapshot of NHD, NHDPlusHR, and WBD
  *EPA geofabric*
- USGS will continue to maintain access to data and services
<table>
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<th><strong>Funding constraints</strong></th>
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<tr>
<td>Moving away from NHD data model to HY Features</td>
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<td>New model in development with estimated completion by Dec. ‘23</td>
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<td>No test data or pilots yet</td>
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<td>New model to streamline attributes, mainly fcode</td>
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<td>Applications that depend on data model will break</td>
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<td>Upstream/downstream navigation will change</td>
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To Summarize

- USGS is proposing big changes in hydrography
- These changes will take years to implement
- Office of Water will maintain working versions of hydrographic data
- Office of Water will monitor and track interoperability
- Office of Water will participate in any testing opportunities
Questions?

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