

USGS National Hydrography Dataset Newsletter

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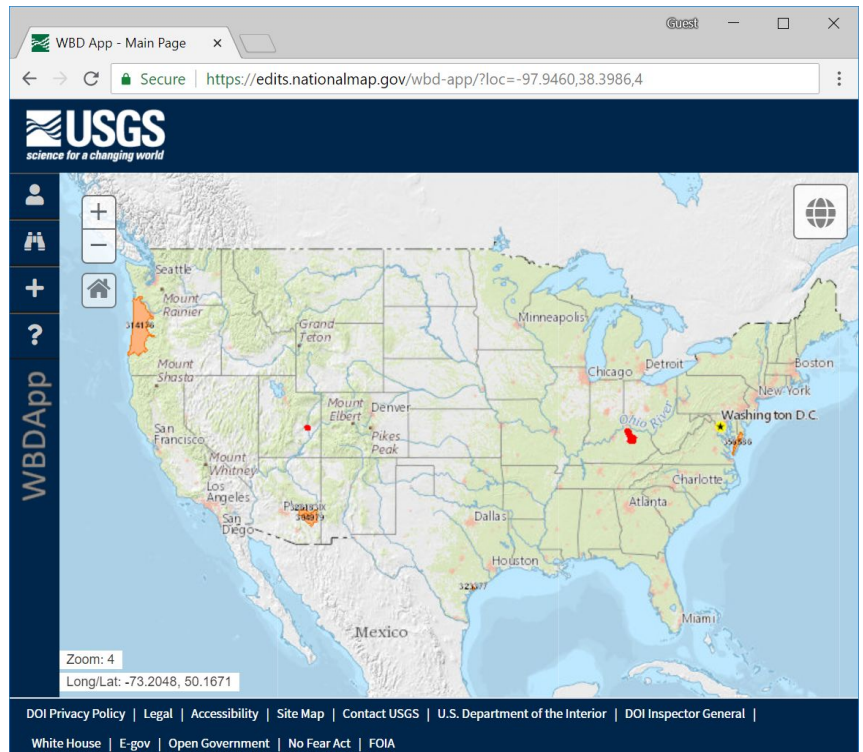
Official Release of the WBD Web Edit Application

Contact: Lily Niknami (lniknami@usgs.gov)

The USGS Watershed Boundary Dataset (WBD) Team is pleased to announce the release of the WBD Web Edit Application!

The WBD Web Edit Application gives the stewardship community the ability to update the WBD outside of the desktop environment using a simplified editing workflow that maintains both the attribute and topological integrity of the WBD.

The current authentication options for the application are Google and ArcGIS Online. Improvements and new developments to the application will continue in FY 19, but we encourage the WBD Stewardship Community to begin using the new interface for minor geometry and attribute updates in the meantime.



WBD Stewards and editors can register and begin exploring the application by visiting <https://edits.nationalmap.gov/wbd-app/>.

For questions about the application, or for more information, please contact Lily Niknami (lniknami@usgs.gov).

ArcGIS Pro, Geometric Networks, and the NHD

Contact: Al Rea (ahrea@usgs.gov)

The USGS National Hydrography program has received a number of questions from National Hydrography Dataset (NHD) users about support for the NHD Geometric Networks in ArcGIS Pro. We have been in contact with Esri about this, and here's what we know right now: ArcGIS Pro does not support Geometric Network functionality such as Upstream/Downstream trace.

A new data structure called the Utility Network is available in ArcGIS Pro. This new data structure promises better performance on large geodatabases, however NHD data will need to be brought into that structure, which will require a data model change for NHD. Additionally, it is our understanding that this functionality may require additional Esri extension licensing. Currently, no additional extension licenses are required to use the Geometric Network data structure that supports network tracing on NHD. We will continue to seek more information on this topic, and will include what we learn in future NHD Newsletters.

What Have Markup App Users Been Up To?

Contact: Tatyana Dimascio (tdimascio@usgs.gov)

The [Markup App](#) for hydrography was [released in April 2018](#). The application is a web platform that allows users to suggest edits, or "markups," to the NHD, WBD, and NHDPlus High Resolution (NHDPlus HR). Anyone with a gmail account can suggest corrections and improvements to the data.

Over the last three months, the hydrography user community has been taking advantage of the application. A total of 862 markups have been submitted nationwide so far. Twenty-seven states covering 18 Hydrologic Regions, have at least one markup submitted. Region 03 and Region 17 have over 300 markups each, with the highest concentrations within boundaries of New York and Washington states. Forty-five users have created at least one markup since the Markup App was released. Layers receiving markups are NHDArea, NHDFlowline, NHDLine, NHDPoint, NHDWaterbody, HU8, HU12, and WBDLine. NHDFlowline layer received the largest number of markups, totalling over 700 records.

Training events will be scheduled for this tool in the future. The schedule will be provided through HDC Blogs and the NHD Newsletter. A User Guide can also be found on the left sidebar of the Markup Application. To request a training or demo, please contact Tatyana Dimascio at tdimascio@usgs.gov.

NHDPlus HR Beta QC

Contact: Tatyana Dimascio (tdimascio@usgs.gov)

Benefits of NHDPlus HR Beta QC

NHDPlus HR is built from three component datasets: the high resolution National Hydrography Dataset, the 3D Elevation Program (3DEP) 10-meter seamless digital elevation models (DEMs), and the Watershed Boundary Dataset. NHDPlus HR is built and distributed initially as a “Beta” product. The Beta datasets undergo quality control (QC) review by users to identify issues or errors in the component datasets that need to be addressed prior to creating the first post-Beta NHDPlus HR product. NHD and WBD datasets are also improved through this process. QC efforts primarily focus on improving network connectivity by identifying missing features and incorrect connections in the NHD, but they also may address other data issues like missing sinks or misaligned WBD boundaries.

Needs for NHDPlus HR Beta QC volunteers

USGS is seeking volunteers to perform NHDPlus HR Beta QC in Regions 03, 07, 09, 10, 11, 17, and in WBD hydrologic unit (HU) 1902. The Beta QC opportunity is ideal for users with previous NHD, WBD, or NHDPlus experience, and most importantly, local hydrographic knowledge. There is no minimum requirement for the time or area commitment. Interested partners are able to sign up for an area of interest that they have availability to complete. On average, the review of a single state may take from several hours to several days. If you are interested in volunteering, please either fill out the [NHDPlus High Resolution QC Interest form](#) or contact Kit Dwyer (kdwyer@contractor.usgs.gov), Tatyana Dimascio (tdimascio@usgs.gov), or your National Map Liaison.

Thank You Previous NHDPlus HR Beta QC Volunteers!

NHDPlus Beta QC efforts have been completed in Regions 01, 02, 06, 12, 14, 15, and 16. Thank you to all the volunteers who helped performed QC in these regions. Your efforts are greatly appreciated by the USGS and the entire user community, as it will result in the improved future NHD, WBD, and NHDPlus HR products. The list of volunteers includes: **Drew Decker, Scott Hoffman, Katharine Kolb, David Ladd, Ricardo Lopez-Torrijos, Brian Newman, Jeremiah Poling, Jane Schafer-Kramer, Eric Schmidt, James Seay, Becky Shaffner, Pete Steeves, Silvia Terziotti, Liz Zeiler.**

NHDPlus High Resolution Beta Production Status Update

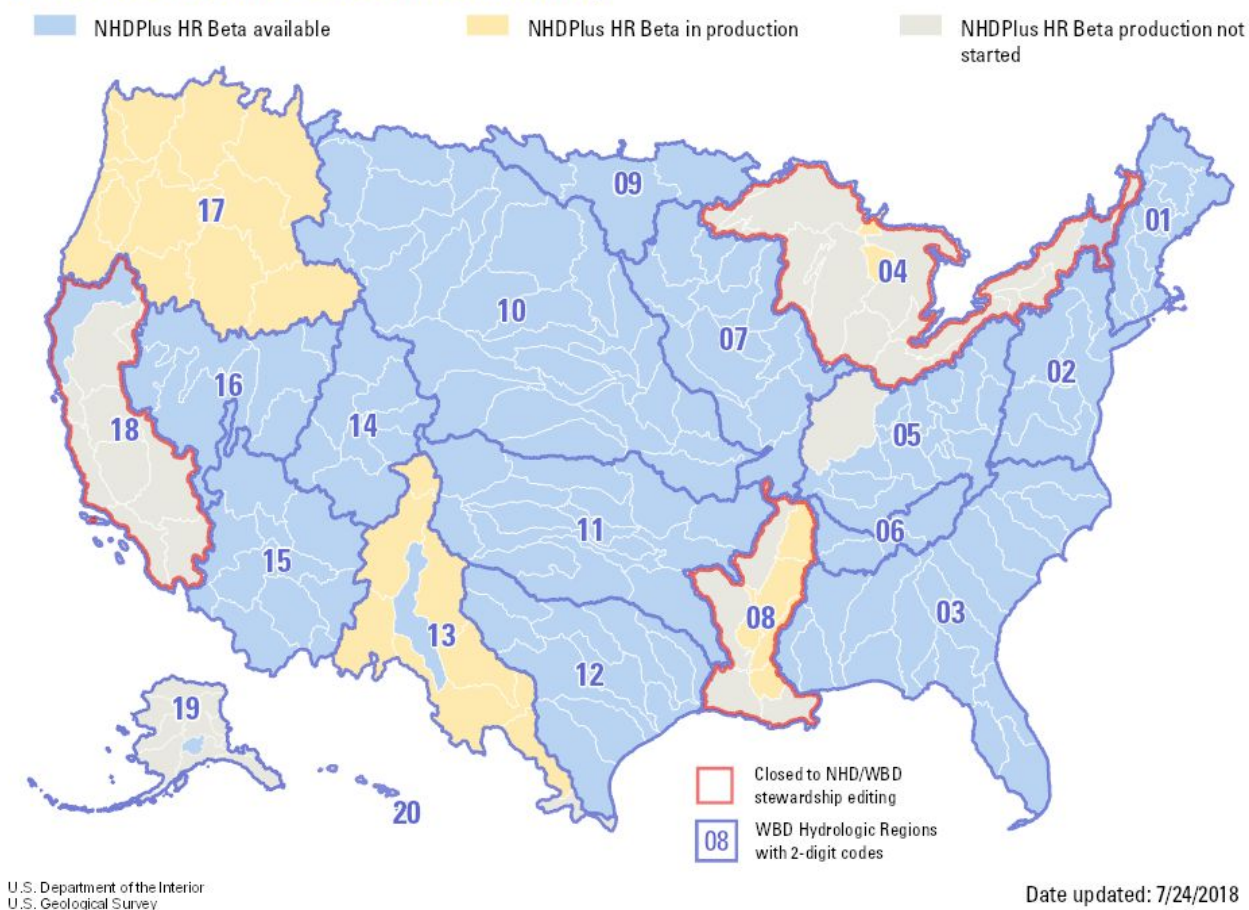
NHDPlus HR Availability

Contact: Karen Adkins (kadkins@usgs.gov), Hayley Thompson (hnthompson@usgs.gov)

The map below provides a general overview of NHDPlus HR availability. This status map is updated frequently on the “Where is NHDPlus HR Available?” section of the [NHDPlus HR webpage](#).

- **Blue areas** - NHDPlus HR Beta is currently available and Beta QC is either in process or completed for these areas. Please see the [NHDPlus HR Beta QC](#) section of the [NHDPlus HR webpage](#).
- **Yellow areas** - The NHDPlus HR Beta is in production and the USGS is currently seeking volunteers for the upcoming Beta QC for these areas. Please see the [NHDPlus HR Beta QC](#) section of the [NHDPlus HR webpage](#) for more information. Please contact the [NHD/WBD Point of Contact](#) in your area for more information on the status of NHD and WBD editing in these areas.
- **Gray areas** - NHDPlus HR Beta will be produced at a later date. Please see the general processing schedule on the [NHDPlus HR webpage](#) for more information. These areas are currently open for NHD and WBD editing.
- **Red outline** - These areas are currently closed to NHD and WBD editing. Please contact the [NHD/WBD Point of Contact](#) in your area for more information.

NHDPlus High Resolution Availability



NHDPlus HR Component Dataset Status Updates

NHD Network Improvement Project

Contact: David Anderson (danderson@usgs.gov), Hannah Boggs (hboggs@usgs.gov)

The Network Improvement Project identifies and corrects network and data quality issues in the NHD dataset. One of the key drivers for this work is to provide data ready for the production of NHDPlus HR. Coordination

with appropriate NHD Points of Contact (POCs) will begin prior to onset of work. *Please Note: For all areas listed below, all new data will go through the QA/QC process as it becomes available.*

Work Completed

- Regions - 01, 02, 03, 05, 06, 07, 09, 10, 11, 12, 13, 14, 15, 16, and 17
- Pilot areas - 0903, 041504, 1902, 1801

Current FY18 Work

- Regions - 04, 08, 18, 19 (Cook Inlet), 20, 21 and 22

Future Work

- Region - 19, 04 (Great Lakes), 08 (Lower LA)

NHD Alaska Image Integration

Contact: David Anderson (danderson@usgs.gov), Hannah Boggs (hboggs@usgs.gov)

The Alaska Image Integration project identifies and corrects locational data for NHD network and polygons within Alaska drainage areas that are expected to be used in US Topo products and have not been maintained by the Alaska State Steward. Many of the areas in Alaska have not been updated in decades and required some improvement. This project also affects the Network Improvement process by identifying changes that could affect NHDPlus HR Value Added Attributes (VAAs). A total of 82 8-digit HUs are complete with an additional 12 possible or in-work for FY18.

Potential FY18 Work

- 19030403, 19030406, 19030407, 19030501, 19070402, 19070403, 19080301, 19090107, 19090109, 19090202, 19090203, 19090205

WBD 4-digit Improvement Project

Contact: Kimberly Jones (kjones@usgs.gov), Lily Niknami (lniknami@usgs.gov)

The WBD 4-digit Improvement Project identifies and corrects hydrologic unit boundary issues in the WBD at the 4-digit level in support of NHDPlus HR production. Instances where the NHD and WBD intersect are being reviewed and invalid intersections are being addressed when appropriate. All proposed major updates to the WBD will be coordinated with the appropriate WBD state steward prior to implementation.

Work Completed

- Regions - 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17 and 18
- Pilot areas - 0903, 041504, 190204, and 190205
- Mexican contributing hydrologic units in Region 13

Currently In Work

- Canada contributing hydrologic units in Region 04
- Region 19 - 19020301, 19020302, 19020601 and 19020602

Future Work

- Regions - 19, 20, 21 and 2
-

Hydrography Photo of the Month

This month's photo, by [Jon Becker](#), is of [‘Akaka Falls](#) which is part of the Kolekole Stream on the Big Island of Hawaii. Check out the area on [The National Map Viewer](#).

Jon also sent in an interesting note about the falls is the life cycle of a goby there:

The [‘o‘opu ‘alamo‘o](#) is an endemic Hawaiian species of [goby](#) fish that spawns in stream above the waterfall, but matures in the sea. These fish have a suction disk on their bellies that allows them to cling to the wet rocks behind and adjacent to the waterfall. Using this disk, they climb back up to the stream when it is time to spawn.

We'd love to see photos of the hydrology near you or from your travels! Please send submissions to Becci Anderson (rdanderson@usgs.gov). Check out current and past photos on the [Photo of the Month webpage](#).



Hydrography Quiz

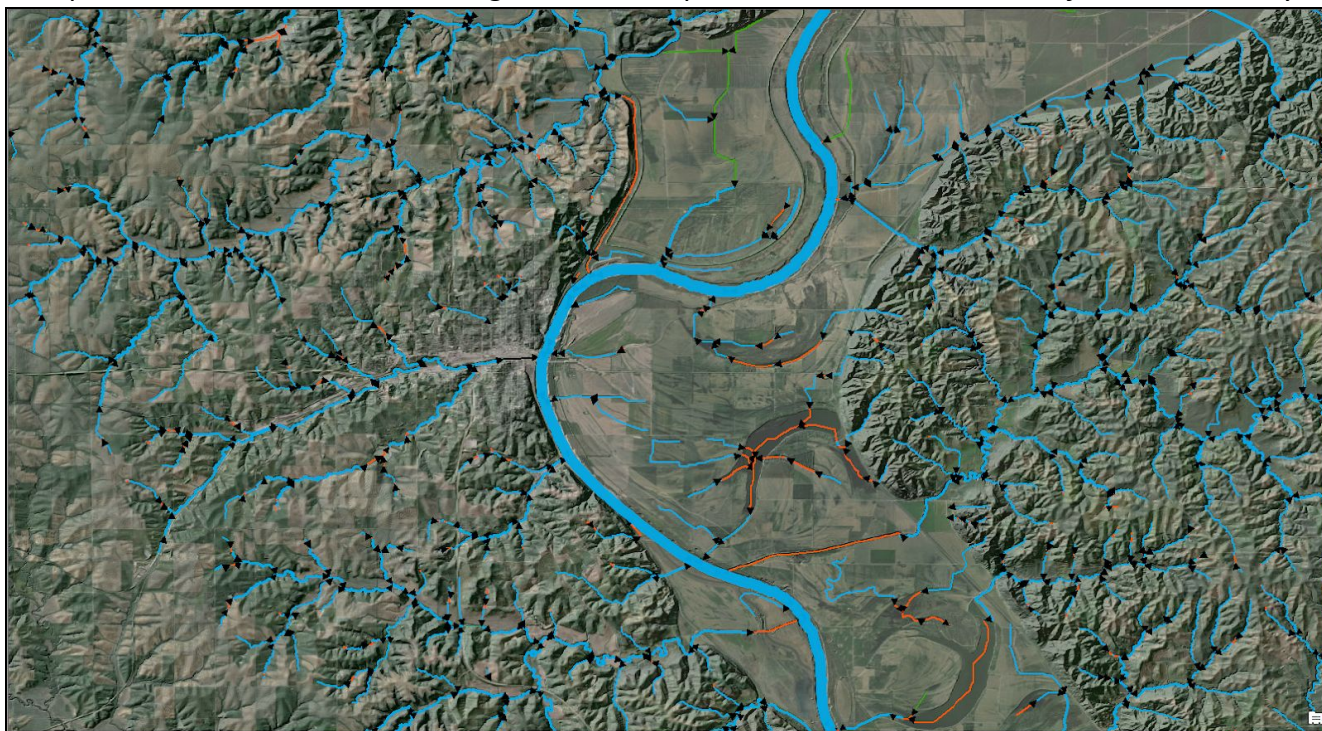
Congratulations to **Dan Button** as the first to respond to last month's quiz with the correct answer - the **Mississippi River**! Dan is a Physical Scientist at the USGS Ohio-Kentucky-Indiana Water Science Center and has been with the NAWQA (National Water-Quality Assessment) program at some capacity for over 20 years. Dan currently manages extensive amounts of data for the NAWQA Regional Stream-Quality Assessment team across 29 States from the Midwest, Southeast, Pacific-Northwest, Northeast, and recent sampling in California. Dan is interested in the impacts of toxics and nutrients on lake and stream ecosystems, serves on the Lake Erie Lakewide Management workgroup, and is a member of the USGS Water-Quality Users Group. This group maintains and advises the proper entry and management of discrete water-quality data in NWIS (National Water Information System). Dan's NAWQA project utilizes the NHD to identify stream reaches and calculate land-use percentages in stream buffers. He relies on the NHD Newsletter to keep informed of digital hydrology activities influencing the interpretation of water-quality data collected for NAWQA.

And, thanks to **Jon Becker**, our only other respondent this month, for playing along!

This Month's Quiz

Contact: Alex Kaufman (akaufman@usgs.gov)

Question: This river flows near the hometown of one of the most influential pilots. This pilot's career included multiple world record transoceanic flights. **Hint:** *The pilot's death is still a matter of interest to many...*



Send your answers with an email subject including the phrase “Hydro Quiz” to Becci Anderson (rdanderson@usgs.gov). Happy hydro hunting!

Upcoming USGS Hydrography Calls, Trainings, and Meetings

Date	Time	Event
Aug 1	12:00 pm ET	NHD Technical Exchange Meeting
Aug 2	10:30 am ET	NHD Basic 101 Training
Aug 8	12:00 pm ET	WBD Technical Exchange Meeting
Aug 9	10:30 am ET	NHD Update Toolbar Training - Toolbar Functionality
Aug 23	10:30 am ET	NHD Update Toolbar Training - Quality Control
Aug 28	1:00 pm ET	NHD/WBD Advisory Call

To be added to the NHD/WBD Advisory Call email list, please contact Becci Anderson (rdanderson@usgs.gov). For more information on technical exchange meetings and trainings, please see the [Hydrographic Data Community \(HDC\)](#) site. For access to the HDC site, please contact Lily Niknami (lniknami@usgs.gov).

Thank you to this month’s USGS National Hydrography Dataset Newsletter contributors:

Lily Niknami, Tatyana Dimascio, Karen Adkins, Hayley Thompson, Hannah Boggs, David Anderson, Kimberly Jones, Alex Kaufman, Joel Skalet, Jon Becker, Al Rea, Susan Buto, and Becci Anderson.

Join Our Community!

For more information, to sign up for the newsletter, or to contribute, please contact Becci Anderson, USGS National Hydrography Co-Lead, at rdanderson@usgs.gov.

Visit us anytime at nhd.usgs.gov and follow us on Twitter @USGSNHD

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