

USGS National Hydrography Dataset Newsletter

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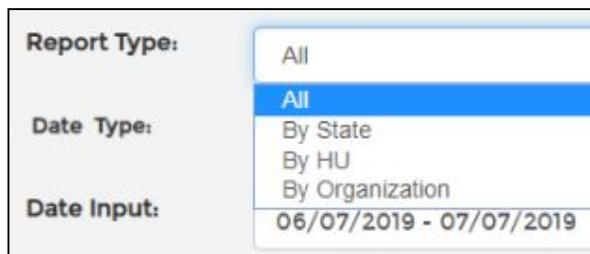
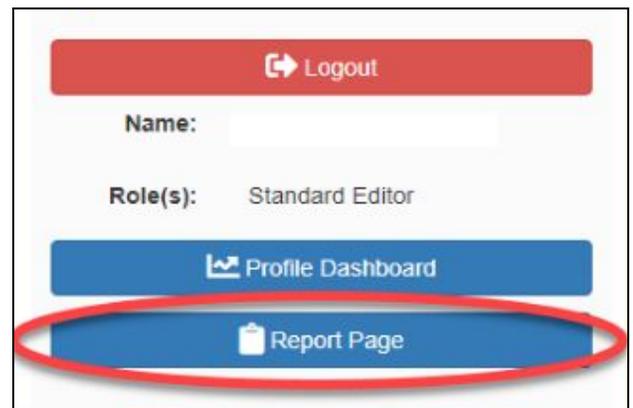
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Markup Application - New Report Page

Contact: Tatyana DiMascio (tdimascio@usgs.gov)

The Markup Application has a new Report Page that allows a user to generate summary tables for the markup data saved in the Markup database.

To access the Report Page, click on the Login tab. Then, click on the Report Page icon. You can generate summary reports for the entire country, states, hydrologic units, or reviewing organization. Each report can be created for a date range based on when markups were saved or when markups were reviewed/edited. Output results are broken down by hydro feature groups (NHD, WBD, or NHDPlus HR). You can view the summary numbers on the screen or download a CSV file with raw data for the specified parameters.



The User Guide for the Markup Application is expected to be updated in July to cover the Report Page. Until the User Guide is updated, you can request a copy of the instructions for the Report Page by sending a request to markup@usgs.gov.

Important Notice for all NHD/WBD Tool Users - Upcoming Transition to New Tool Versions

Contact: NHD Tools - nhd@usgs.gov, WBD Tools - Lily Niknami (lniknami@usgs.gov)

To deliver secure tools to our users, the USGS is excited to announce that new versions of the NHD Update Tool, NHD Utilities Tool, and NHD GeoConflation Tool are now available. The new tool versions are compliant with USGS mandatory security updates for the Transport Layer Security (TLS) protocol. The TLS protocol takes place when a partner uses tools that require a web service call to USGS. After July 1st, 2019, TLS 1.0 requests will no longer be valid. **All requests must use TLS 1.2.** We are asking all users to transition to these new tool releases as soon as possible as current tools may not function after July 1.

NHD Update Tool v6.7.1.0 Release

We have listened to your suggestions and are providing you with a new, improved and dynamic version of the NHD Update Tool that will enhance your editing experience. The NHD Update Tool has many important changes that require all users to transition to the new version of the tool as soon as possible, including being compliant with the TLS 1.2 protocol. Please note, the NHD Update Tool v6.7.1.0 is only compatible with ArcMap 10.5.1 and Windows 7 and 10. Also, users should complete all current NHD Update jobs prior to installing the new version of the tool.

With the new tool version, users will see an improved load time for the Open Job dialog, an easier process to deal with negative reach codes, an entire overhaul of the QC checks for performance improvements, and many other upgrades that make editing easier. Version 6.7.1.0 of the NHD Update Tool improves the editing workflow by:

- Reducing steps and time needed to assign reach codes by automatically assigning reach codes during the 'Save' operation within the NHD editor.
- Improving the QC Check runtime and workflow.
- Changing the severity of select QC Checks to align with their importance to Data Control.
- Including all relevant WBD layers with Job Checkouts and symbolizing those layers for easy reference.
- Removing password fields where they are no longer necessary, due to the transition to the Hydrography Maintenance Portal (HMP).
- Providing updated Metadata Templates used by the NHD Production Operations editors as examples of well-formed metadata.

A complete list of the changes to the tool are included in the Release Notes that accompany the zipped tool file, which is available on the [Hydrographic Data Community \(HDC\)](#). The Help document, also found on the HDC site, has been updated to reflect changes in functionality and new features. Please refer to the updated

Help, Release Notes, and Known Issues documents for any questions regarding changes made to the tool. For access to the HDC site, please contact Lily Niknami (lniknami@usgs.gov).

NHD Utilities v3.4.1.0 Release

Version 3.4.1.0 of the NHD Utilities tool is available. It is only compatible with ArcMap 10.5.1 and Windows 7 and 10. This tool release is necessary to meet TLS protocol updates to TLS 1.2; there are no changes in tool functionality. Please install this TLS compliant version as soon as possible.

NHD GeoConflation v3.4.1.0 Release

The latest version of the NHD GeoConflation tool version 3.4.1.0 is on the [GeoConflation Tools \(GCT\) and Documentation site](#) for production soft release. Access to the GeoConflation tool is restricted to users who have undergone both NHD Update and GeoConflation training. Although there have been multiple rounds of testing, there may still be a few issues with TLS 1.2 protocol that need to be addressed. USGS will be monitoring network traffic for the TLS layer and will alert users if any problems are detected.

All GeoConflation users are recommended to upgrade to this version at their earliest convenience. Users should complete all current GeoConflation projects started with a previous tool version prior to installing the new version. All new projects should use version 3.4.1.0.

The new version addresses several issues:

- Updated Transport Layer Security (TLS) 1.2 calls made by software.
- Removes the need for review of feature type (FType) changes along a migrated reach route and reassignment of reach codes due to FType changes. In other words, if a series of features matches a source reach code, that reach code will be assigned to all features regardless of the change in FType along the route. The reach routes may still require user review for other issues during the Queue Reviewer phase.
- Changes in handling of Underground Conduit, Connector, and Pipelines during conflation. These will not be treated differently based on underlying features, if they are matched to an existing reach code.
- Refinement of MATCH reach codes during the Queue Edit Review to transfer the reach. This will allow more reach codes to be maintained during the review process.
- Addition of SOURCE CITATION information to the metadata form and enforcement of the METADATA schema (character length).
- Capability to store METADATA and SOURCE CITATION templates for reuse in multiple projects, just like NHD Update tool. (Known issue: Upon initial use of the SAVE TEMPLATE, there is an error concerning an empty file, ignore and select okay to proceed).
- Confirmation for using LIVE reach codes to avoid accidental use of the reach code allocator. LIVE reach codes are single use only, some users have mentioned accidentally using live reach codes when testing.

- Additional updates to the Flowcheck process during preconflation to cleanup data during reruns.
- Geographic names and reach code transfers for non-standard features such as Ice Mass and SwampMarsh, which do not normally carry reach codes. The caveat here is that both the source and target features must be of the same FType in order to transfer this information.
- Automated backups after each step is completed, so the user does not need to do this manually.
- Addendum logging - logging for each step is stored in the \LOGS folder and backed up with each step. (Note: The tool will have a complete logging system added back into the software)
- Multiple other enhancements to improve processing speed.

The User Manual is undergoing revision and will be released shortly after the tool. The previous release of the User Manual is still relevant to this latest tool release, including for preconflation steps which have not changed.

The basic tool operations are mainly the same from the Project Form user interface; however, the tool responds much quicker during most steps. USGS has still not been able to approach the memory management issues inherent in ArcMap so there is still a size limit on the data being worked and there are still a few issues with the Queued Reviewer user interface when working at low resolutions.

USGS will be migrating to Windows 10 by the end of September, 2019, and will only support that environment moving forward. Testing for Windows 10 is currently underway and so far, this software version has shown no issues in relation to being installed in a Windows 10 environment.

If you have any comments or questions please contact David Anderson (danderson@usgs.gov or nhd-gct@usgs.gov)

WBD Update Tool v2.9.1.3 Release

The latest version of the WBD Update Tool v2.9.1.3 for ArcGIS 10.5.1 is now available for download. This version is compliant with the TLS 1.2 protocol and includes many bug fixes and enhancements. A complete list of these updates is included in the Release Notes that accompany the tool download. Access to the WBD Update tool is restricted to users who have undergone WBD training and have been approved by the WBD State Steward.

All WBD users are encouraged to upgrade to this version as soon as possible. Please contact Lily Niknami (lniknami@usgs.gov) with any questions or concerns.

NHD Training – July and August 2019

Contact Joel Skalet (jjaskalet@usgs.gov) or Bill Smith (wjsmith@usgs.gov)

NHD Training will not take place in July due to the July 4th holiday. NHD Update Toolbar Training will continue in August. You may check the Events Calendar on the Hydrography Data Community (HDC) site for details. Principal Stewards should be contacted for approval prior to submitting a request for training. The current training being conducted is using ArcGIS 10.5.1. The next available NHD Training will be NHD Basic Training on August 1, NHD Update Tool Training Part 1 on August 15, and NHD Update Tool Training Part 2 on August 29, 2019.

NHD Basics is a prerequisite class that all attendees are required to complete prior to moving to NHD Update Tool Training sessions. NHD Basic Training begins at 10:30 AM Eastern Time and runs for approximately two and a half hours. This session covers: Basic NHD Background – History of the NHD, NHD Stewardship, resolutions of the NHD, the NHD Model, important concepts in the NHD including: permanent Identifiers, reach codes, flow network, important NHD websites, supporting software, NHD User Guide, NHD National Hydrography Dataset User Account, NHD myUSGS Hydrographic Data Community, and checking out data for editing.

NHD Update Tool Training Part 1 begins at 10:30 AM Eastern Time and runs for five hours (breaks included). Part 1 will be a review of the entire editing process and a complete discussion of the NHD Update Toolbar, including loading data, initial QC, resolving 'Invalid Geometry', and using the tool to add geometry, modify geometry and attributes, and delete geometry.

NHD Update Tool Training Part 2 begins at 10:30 AM Eastern Time and runs for five hours (including breaks). Part 2 (follow up to Part 1) will be a review of the Quality Control (QC) process including reviewer table, a review of Initial QC, Severity 1 versus Severity 3 errors, discussion of the errors one might see in the NHD and how to resolve those errors. We will then discuss Final QC and uploading your edits to the NHD National Geodatabase.

For more information about this training please contact your Regional NHD POC: Tatyana Dimascio (tdimascio@usgs.gov, 303-202-4206), Joel Skalet (jjaskalet@usgs.gov, 608-238-9333 x152) or Bill Smith (wjsmith@usgs.gov, 573-308-3593).

NHD GeoConflation v3.4.1.0 Technical Exchange Meeting

Contact: David Anderson (danderson@usgs.gov)

USGS will hold a GeoConflation Technical Exchange Meeting on July 24th to discuss the changes in the GeoConflation tool, cover issues found after the soft release, and take questions concerning future activity of the GeoConflation tools.

Technical Exchange Meeting information:

<https://my.usgs.gov/confluence/display/hdc/Technical+Exchange+Meeting+%28TEM%29+Information>

Conference Lines:

From USGS/DOI locations, dial 703-648-4848

From non-DOI locations, dial toll free 855-547-8255

Screen sharing: <https://gstalk.usgs.gov/855694> (the best browser to use is Internet Explorer)

Meeting ID: 855694

You will enter your name and the meeting ID above to login. This may require a one-time download of the browser client.

Please contact David Anderson (danderson@usgs.gov or nhd-gct@usgs.gov) if you have any questions about the tools or the meeting.

NHD, WBD, and NHDPlus HR Status Updates

NHDPlus High Resolution Beta Production Status

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

In June, NHDPlus HR Beta was distributed for 2 hydrologic units (HU8) covering the Cook Inlet in Alaska. The map below provides an overview of NHDPlus HR availability. This status map is updated frequently on 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](#)

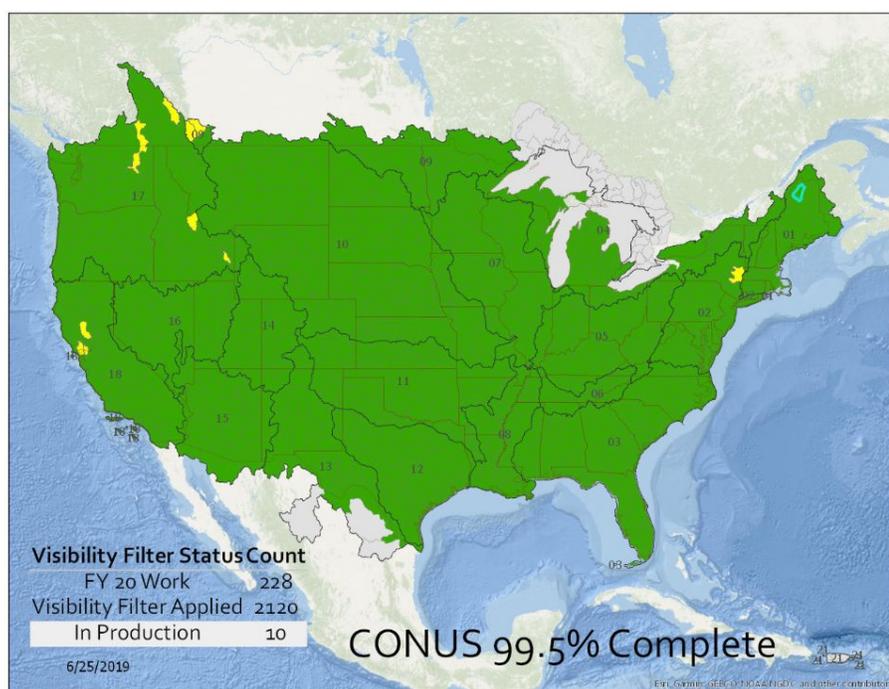
NHD and NHDPlus HR VisibilityFilter Cartographic Generalization Status

Contact: Travis Landauer (tlandauer@USGS.gov)

Population of the VisibilityFilter is nearly complete for CONUS! The VisibilityFilter attribute allows vector data features to be filtered to eight approximate map scales. A given VisibilityFilter coded-value indicates that the feature is appropriate for use at approximately the defined scale and at all larger scales. Two separate methods to display NHD features with the VisibilityFilter attribute for NHDFlowline, NHDWaterbody, NHDArea, and NHDLine feature classes are described on the [VisibilityFilter webpage](#).

The population of VisibilityFilter requires information on several climatic and physiographic variables that are not available in the same form outside of CONUS. Therefore, additional work will need to be accomplished before VisibilityFilter can be populated for Alaska, Hawaii, and the Territories.

VisibilityFilter population continues in the areas shown in yellow below:



VisibilityFilter Currently In Work

● Regions – 09 (2 HU8s), 18 (2 HU8s), 02 (1 HU8), 17 (1 HU8)

Future Work

● 04 - working with WBD on newly created HUCs around Great Lakes

WBD 4-digit Improvement Status

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

The WBD 4-digit Improvement Project is identifying and correcting 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.

WBD 4-digit Improvement - Work Completed

- Regions - 01, 02, 03, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 20
- Pilot areas - 0903, 041504, 190204, and 190205
- Mexico contributing hydrologic units in Region 13
- Region 19 - 19020301, 19020302, 19020202, 19020601, 19020602, and 19020800

WBD 4-digit Improvement - Currently In Work

- Region - 04
- Canada contributing hydrologic units in Region 04

WBD 4-digit Improvement - Future Work

- Regions - 19, 21 and 22

Photo of the Month

This photo is of the Corapeake Ditch in the [Great Dismal Swamp](#) (Reach Code 03010205040725) in southern Virginia, was taken by Alexander Jones.



We'd love to see photos of the hydrology near you or from your travels! Please send submissions to Alexander Jones (ajonesi@usgs.gov).

Hydrography Quiz

Email your answer to Becci Anderson (rdanderson@usgs.gov)

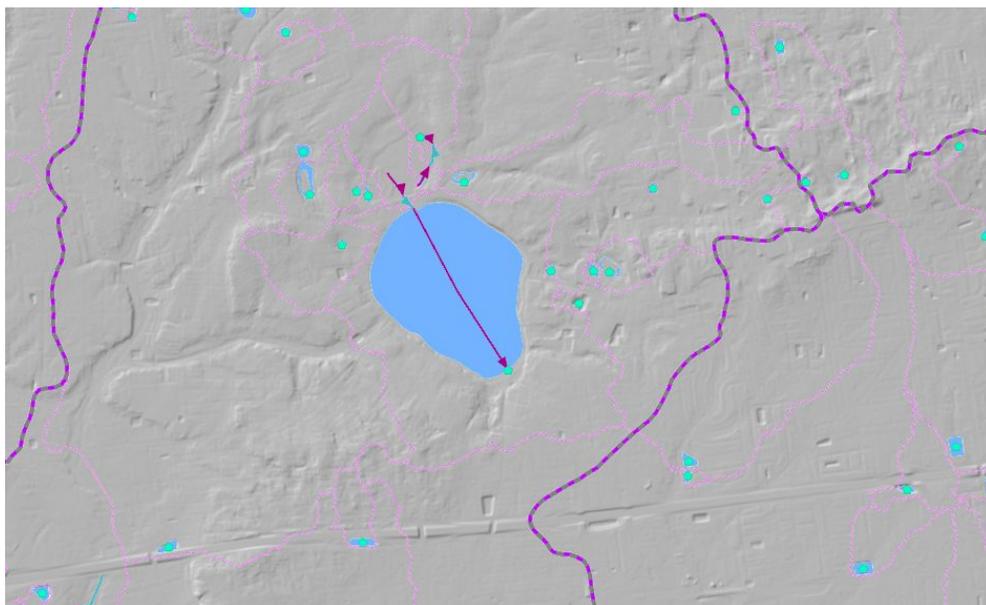
Barbara Rosenbaum won this month's quiz with the correct answer of **Ruby Lake** in Nevada. Barbara has been a contractor to the US EPA - for a long time - supporting a variety of EPA projects including the Office of Water's National Surface Water Surveys (statistically selected sampling locations from NHDPlus databases), supporting hands-on training in NHDPlus/NHDPlus V2 workshops, and the Office of Research and Development's EnviroAtlas application (which summarizes and displays national scale data using NHD Plus V2/WBD 12-digit HUCs). Currently, she is a member of the EPA's National Geospatial Support Team – assisting EPA's Geospatial community in all sorts of ways and providing application development support to EnviroAtlas.

Oh, and she really enjoys the useful Stream Order/Stream Calculator variables in NHDPlus, but, she may be biased... Well done, Barbara!

Thanks to everyone else who played along: Angie Southwold, Bryan Gonzales, Evan Hammer, David Asbury, Caleb Rennaker, and Dave Watkins.

This month's quiz (by Vanessa

Baez): This kettle lake was formed by ancient glaciers. It is the largest, and perhaps best known, freshwater lake on the longest and largest island in the contiguous United States and is an exclusive summer enclave for the wealthy and famous from the Big Apple. Portions of its irregular basin are unusually deep at 65 feet, but most of the lake is less than 15 feet deep. The Lake's native name, "Raconkamuck" translates as "the boundary fishing place" in the Algonquian language.



Hint: this lake is located approximately 30 miles Southeast of Sagamore Hill, the 26th president's summer home.

Upcoming USGS Hydrography Calls, Trainings, and Meetings

Date	Time	Event
Jul 23	1:00 PM ET	National Hydrography Advisory Call
Aug 1	10:30 AM ET	NHD Basic Training
Aug 14	12:00 PM ET	WBD Technical Exchange Meeting (TEM)
Aug 15	10:30 AM ET	NHD Update Tools Training (Part 1 - editing)
Aug 29	10:30 AM ET	NHD Update Tools Training (Part 2 - QC)

To be added to the NHD/WBD Advisory Call email list, please contact nhd@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:

Tatyana Dimascio, David Anderson, Joel Skalet, Bill Smith, Lily Niknami, Karen Adkins, Hayley Thompson, Kimberly Jones, Travis Landauer, Vanessa Baez, Alexander Jonesi, Al Rea, Sue Buto, and Becci Anderson.

Join Our Community!

For more information, to sign up for the newsletter, or to contribute, please contact Becci Anderson, Hydrography Management and Planning Lead, at rdanderson@usgs.gov.

Visit us anytime at usgs.gov/NatHydro and follow us on Twitter [@USGSNHD](https://twitter.com/USGSNHD)

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