Guidance for reporting errors discovered in the National Hydrography Dataset and Watershed Boundary Datasets to the California State Steward

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Contact: Jane Schafer-Kramer, California State Steward at nhd_stewardship@water.ca.gov
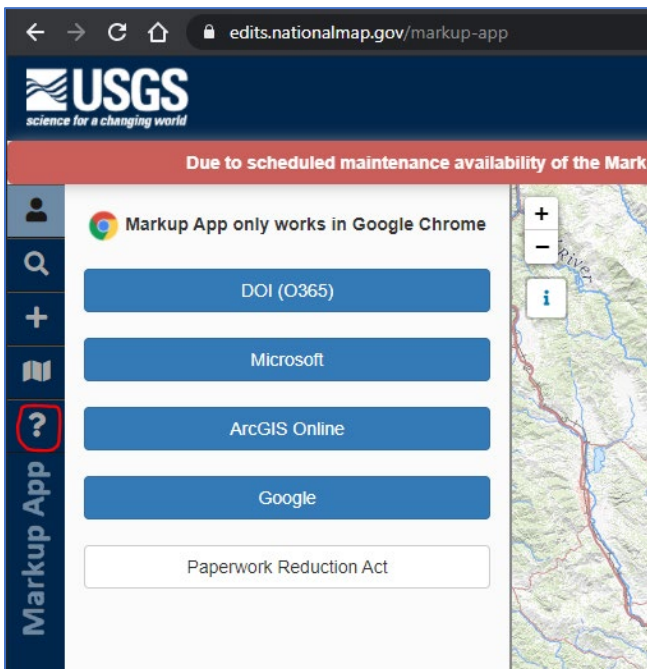
NHD Markup Application

Users of the National Hydrography Dataset (NHD) and the Watershed Boundary Dataset (WBD) may discover an error in these datasets now and then. When that happens, they are encouraged to report it using the **NHD Markup Application** which is found at https://edits.nationalmap.gov/markup-app. The Markup Application is a web-based mapping communication tool that allows users to suggest edits, or "markups," to the NHD, WBD, and NHDPlus HR.

Anyone with a Gmail, ArcGIS Online (AGOL), Microsoft email, or Department of Interior email account can suggest corrections and improvements to the data. The application has been designed to work in the Google Chrome Web Browser only.

Suggested edits will be reviewed by USGS and NHD state stewards before they are approved for incorporation into the NHD or WBD datasets and future NHDPlus HR Refresh products. Markup review and status changes will be handled through the Markup Reviewer tool, which is an ArcGIS Add-in tool available to NHD and WBD stewards and editors.

To get started, please review the instructions in the Help interface, accessed by clicking on the question mark on the left side, as shown in this screenshot.

The description field allows for 400 characters, please be as descriptive as possible and include links to online references if appropriate. This next part is not required, but will help us fix the error more quickly: After the

markup has been submitted, please send an email to the California state steward at nhd_stewardship@water.ca.gov with a brief description of the issue. Please include any additional information that would help us understand the issue. A zipped shapefile or file geodatabase containing the corrected feature(s) is extremely helpful. Photos (geotagged and dated) can be especially helpful if a change in the seasonality attribute is requested. This extra step will help expedite the resolution of the error by alerting the steward to review the markup and establishing a line of communication for further investigation.

If the user experiences a problem using the Markup App, the suggested edit may be reported directly to the steward at nhd_stewardship@water.ca.gov.

Update Timelines

Resolving the markups can take several months or more. The state steward endeavors to review the markups monthly. Our sub-stewards are updating the NHD and WBD on a maintenance schedule planned over a year in advance, and we may not have a qualified editor readily available to perform a quick fix. With some exceptions, the ongoing maintenance editing jobs are checked out for a three-to-four-month period and then checked into the national database. Occasionally we do have a qualified editor available check out a job for a quick fix and check it right back in, but as of this writing it is not the norm in the California stewardship process. The HU 8 units are refreshed monthly on the download site, but sometimes that process gets delayed by bugs in the tools, server maintenance and other USGS workflow issues. The user can check in their History in the Markup App for the status of the edit. If it is marked "Resolved" then the correction should be reflected in the staged products HU8 download. Please visit this "Access National Hydrography Products page at https://www.usgs.gov/core-science-systems/ngp/national-hydrography/access-national-hydrography-products for more information on the refresh cycle of the datasets, and the links to direct downloads.

If you have a questions or concern about your markup status showing as Submitted, In Progress, or Won't Fix, please contact the steward at nhd_stewardship@water.ca.gov .

The NHD in Other Products

The USGS Topographic Maps https://www.usgs.gov/core-science-systems/national-geospatial-program/topographic-maps use a snapshot of the NHD taken on a three-year refresh cycle. (Edits made and checked in my July 1, 2021, will be reflected in the US Topo Maps update to be performed in late 2021.)

The NHD Plus High Resolution (HR) dataset https://www.usgs.gov/core-science-systems/ngp/national-hydrography/nhdplus-high-resolution is built around a snapshot of the NHD, and the update cycle is more infrequent. NHD Plus HR was released in beta in late 2019, and an updated snapshot will be taken for the stable-release version expected in 2021 or 2022.

Names of Water Features

Names of water features in the NHD must match the names recorded in the **Geographic Names Information System (GNIS)** for the feature at that location. https://www.usgs.gov/core-science-systems/ngp/board-on-

geographic-names/domestic-names New names or name change proposals must be submitted to the US Board on Geographic Names as the first step towards getting it into the GNIS. https://geonames.usgs.gov/apex/f?p=132:LOGIN:9685980084324:::::

If an authoritative source such as a government agency or water district has a map or database showing a water feature name that is in common use but is missing from the GNIS and the NHD, contact the steward at nhd_stewardship@water.ca.gov. We may be able to help streamline the name submittal process.

Participation in California NHD Stewardship – Sharing Local Knowledge

The California NHD Stewardship Program welcomes new partners in the dataset improvement process.

Becoming a qualified editor requires attendance and successful completion of the homework assignments in the NHD Update Tool training class. The class is offered online over three non-consecutive days by USGS, and currently there is a waiting list for enrollment. Proficiency with editing in ArcGIS is a prerequisite. Presently the NHD Update Tool only works on ArcGIS version 10.7.1. Upon successful completion of this training, the student will be granted access to the NHD national database. The new editor must contact the state steward prior to checking out an editing job to avoid any conflicts with ongoing and planned work. We ask that editors observe the guidance presented in the current version of the *California Business Rules for Updating the National Hydrography Dataset*

https://data.cnra.ca.gov/dataset/national-hydrography-dataset-nhd/resource/e3191970-cc32-4c0f-8da5-7514487087c3

Editing the Watershed Boundary Dataset requires a separate training and certification process. Please contact the state steward for more information.

Another way to participate in the improvement of the NHD is to contribute reference datasets that would be used by our editors.

Statewide NHD Update - Local and Regional Reference Data Solicitation Summary

The Geographical Information Center (GIC) and The Center for Geospatial Science and Technology (CGST) are under contract with the California Department of Water Resources (CA DWR) to bring comprehensive updates to the National Hydrography Dataset (NHD) within the state of California. The initial round of updates to the California NHD was recently completed and the next refresh cycle is underway. This effort aims at making the NHD reflect current conditions to make it more reliable and accurate for end-users. While this process primarily uses the latest NAIP aerial imagery, it benefits from having additional supporting hydrographic data to be used as reference in the NHD update process. Accurate and vetted regional and local reference datasets can be useful in bringing comprehensive improvements to the NHD as they can provide additional detail that is not always accessible from publicly available datasets. While the use of reference data does not necessarily result in the integration/migration of the data into the NHD, it often time does allow for the transfer of local knowledge into the NHD, resulting in an even more valuable and vetted NHD. This solicitation aims to help identify and eventually, collect local and regional datasets for potential use in the California NHD update effort.

Hydrographic reference datasets with a scale of 1:50,000 or finer and the following specifications are desired:

- River/Streams
- Lakes/Ponds/Reservoirs
- Washes
- Swamps/Marshes
- Canals/Ditches
- Seasonality/Periodicity of Rivers/Streams
  - Perennial
  - Intermittent
  - Ephemeral

We are interested in datasets that have been updated within last 5 years.

Contact Information:

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About Us

The NHD Stewardship Program was established in 2016 in the Department of Water Resources. It is housed in the Technical Support and Integrated Data Branch of the Division of Planning. Visit our webpage at
https://water.ca.gov/Programs/All-Programs/National-Hydrography-Dataset-Stewardship

Additional resources, including derivative mapping products and the California Business Rules, may be discovered on the California Natural Resources Agency Open Data website at
https://data.cnra.ca.gov/dataset/national-hydrography-dataset-nhd

Reports on the progress of our program are delivered to the California GIS Council at their quarterly meetings. They are posted on the Hydrography Workgroup page of the Council's website:

http://cgia.org/cagiscouncil/workgroups/hydrography/

 Thank you for your interest!