What is 3DHP?

3 user benefits:

        Easier to access

        Simpler model

        More attributes included

(Open usgs.gov/3dhp website and have ArcGIS Pro open)

Hello All, I'm going to briefly talk about the 3DHP today.

First off what is the 3DHP or 3D Hydrography Program?

3DHP is USGS's newer hydrography program. This is the first remapping effort for USGS since the 1990's. We hope to have the entire country remapped within the next several years. 3DHP will be more accurate than our previous NHD or NHDPlus datasets as 3DHP is built from elevation data.

(Scroll down to partnership map)

Like our 3D Elevation Program, 3DHP is built through partnerships as a community effort. If you would like to learn more about partnerships, please contact me. Here you can see our current 3DHP projects.

(Scroll to top of website)

One of the main focuses redesigning the hydrography program was making the program more user friendly.

(Click "Access 3DHP Data Products" from website)

One big transition for stakeholders was switching from smaller downloadable products to using a service or yearly national download.

(Click Web Service button)

We have two services a basic web map service or a Web feature service. I'm going to open the feature service in my local GIS please notice you can also open within AGOL.

1:20 (Copy URL Path – and paste into ArcGIS, Add Data from Path)
https://3dhp.nationalmap.gov/arcgis/rest/services/usgs_3dhp_all/FeatureServer   )

The web feature service allows the user to change the symbology as well as select and export the data for their specific AOI.

Since this is a national service, the data will only load once zoomed into a smaller resolution.

(Open service in Contents)

You can see in the Contents pane on the left the 3DHP data model is much simpler than our legacy datasets. We do still have point, line and polygon feature classes. But going from 107 flowline feature types within the NHD to 22 feature types greatly improves the user experience.

In July we released some new TN data so let's zoom and look at the data.

(zoom into bookmarked area)

In 2023, the now legacy NHD data was copied into 3DHP so we had an initial base dataset nationally.

As we have new elevation derived data it is ingested into 3DHP and released several times a year with service updates.

(3DHP can be rendering here)

(Zoom around to show how fast the service is)

Thirdly and maybe most importantly, 3DHP will also include more built in attributes providing less work for the user before their real work can begin.

3DHP will include catchments (almost one per flowline feature),

(zoom in further or go to bookmark and turn catchment layer on and off)

(Open flowline attribute table)

As well as a new mainstem attribute which is a geoconnex URL linking features with the similar paths. Specifically, from a headwater to outlet. Major connections can be viewed within using reference mainstems.

flow network derivatives similar to NHDPlus like streamorder, stream calc

(open flowline attribute table- scroll to the right)

I could talk about 3DHP and the benefits for the user much longer but will stop before I get the cowbell.

If you would like to find out how to get involved with 3DHP please reach out.

Thanks all!