

Question and Answers

Indiana:

Exploring the Development and Maintenance of Indiana's Local-Resolution National Hydrography Data

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Participant Questions:

What is the basis for identifying the data as 1:2400 scale or even 1:1200?

The Horizontal Resolution and Accuracy of the source Imagery & Lidar: 1:2,400 scale NHD accuracy based on 1-foot pixel ortho base map, and 1:1,200 scale NHD accuracy based on 6-inch pixel ortho base map source.

I believe 10 ft DEMs were used?

50' DEMs were used to generate the initial 6 Acre "guide" streams and catchments for the local-resolution NHD, whereas 10' DEMs were used to generate the initial WBD boundaries for the more recent Lake Michigan area WBD updates. However, the final NHD features were visually digitized from Orthos using DEM only as a general extent guide.

Can you expand on how you improve names in NHD? In our experience NHD only allows names to be added where they exist in the GNIS. Did you add names to the GNIS, and if so, is this an extensive process?

We are doing the GNIS names through the GNIS process. The names being added are already valid, but for some reason they did not get into the dataset before being submitted, the maintenance team can use the NHD tools to add, validate and/change where needed. We do have an Indiana Board of Geographic Names that works with USGS to review any new names submitted, but that's a laborious and long process.

In NYS, we have a similar approach and having local resolution for waterbodies, it is a concern of ours that with EDH that waterbodies imported into EDH share same specs as 3DEP, so any waterbodies under 2 acres without a hydro breakline will not be included. Do you share a similar concern?

Since 3DEP was not in place when we were completing our project, we didn't have that particular concern. For future projects, yes we would need to consider the 3DEP specs, and USGS and their partners need to consider the needs of EDH in 3DEP, and vice versa.

Can you elaborate on the business drivers for the project - how did you build and maintain support for the project?

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The immediate drivers for the project were the resource agencies within the state (DNR and IDEM mainly) that needed higher resolution stream network data for their program areas. This was also identified as a critical need in various spatial data needs assessments by both IGIC

and the GIO's office. Since the data has been available widely it is used by all sectors of the GIS user community, and while we haven't completed a user survey with the newer data sources, I would anticipate that we can gather support for further development.

Interview Questions:

What would you now do differently?

With the newer specifications for 3DEP and EDH, we would have to approach any future efforts differently based on those specs. Creating such a large dataset did create some problems with attribution and USGS ingesting the data sets. We did not foresee some of the attribution problems we ran into, and we would strongly consider a joint NHD and WBD project if we could find sufficient funding to do so.

Without the benefit of the drainageway feature types at the time, we assigned many of the hydro features with a generic stream/river FType and FCode. However we still need a method to more accurately classify the new drainage features vs assignment of a default value.

What surprised you?

The sheer number of features that were generated at the 6 acre level for the local-resolution NHD.

What resources, other than the data (e.g. tool, document, online resource, etc.) did you find of most value to the process?

USGS' staff was an extremely valuable resource during both the NHD and WBD projects - they were very knowledgeable and helpful when we had questions and/or when issues arose. Additionally, working with Indiana's Waters Workgroup made the process much easier since there was a wealth of technical and local knowledge within that group as well.

What resource(s) would you recommend for development to assist the derivation of hydro?

Recent and accurate base data - LiDAR and orthos in particular. I'd also recommend having clearly defined hydro collection specifications (to the greatest extent possible) and performing a pilot project to confirm those specs before starting any large-scale hydro projects.