Charted Waters

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Florida National Hydrography Dataset Stewardship Team

The Florida NHD Stewardship Team continues their hard work updating the database.

With about 52,000 edits to the NHD from November 2015 through February 2016, the team focused on reviewing and updating feature names and also comprehensive revision based on aerial imagery.

Latest Edits

The NHD Stewardship team continues to review and update the NHD using aerial imagery.

Almost 52,000 edits were performed from November 2015 through February 2016.

These edits are available in the May 2016 statewide release of the NHD on the Florida DEP GIS ftp site (Open Data Portal), on DataMiner, and in the DEP mapping application, MapDirect.

Subbasins with edits November 2015 — February 2016

Edits took place in the following subbasins:

Big Cypress Swamp
Escambia
Lower Choctawhatchee
Lower Ochlockonee
St. Andrew-St. Joseph Bays
St. Marys
Upper St. Johns
Waccasassa
Western Okeechobee
Inflow

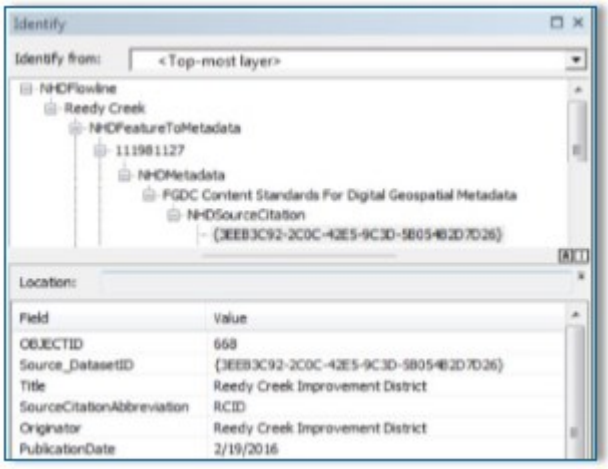
The USGS downloaded more than 30 subbasins for attribute updates, connectivity checks and updating m-values.

Feature Level Metadata

The NHD contains feature level metadata. What does this mean, you ask? Well, the dataset has metadata like you would expect to see with any dataset that describes the data contained within it (data about data).

But, during the editing and updating process, information about each editing session is stored within tables that are housed in the database. They are linked through relationship classes via the unique identifier of each feature in the database, and can be viewed when you identify a feature and click on any '+' signs associated with the identified feature.

These tables contain information about why the features were edited and the sources used to determine the edits.



Source Citation linked to Reedy Creek Flowline

Sources can be local professionals' first hand accounts or auxiliary data such as aerial imagery.

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Featured Feature — Reservoir

The USGS NHD Feature Catalog describes as reservoirs as:

> A constructed basin formed to contain water or other liquids. Reservoir also exists as an NHDPoint. May be a named feature. Elevation may be set for Reservoir features, but must use NGVD 1929 in meters as the vertical datum. Elevation is only used on features where a dam controls the elevation of the water.

Reservoirs can be further classed by how they are constructed or their use. The following table details the distinct reservoir options in the NHD and their associated FTypes.

FTYPE	DESCRIPTION
43600	Feature type only: no attributes
43601	Reservoir Type - aquaculture
43603	Reservoir Type - decorative pool
43604	Reservoir Type - disposal-tailings pond; Construction Material - earthen
43605	Reservoir Type - disposal-tailings pond
43606	Reservoir Type - disposal-unspecified
43607	Reservoir Type - evaporator
43608	Reservoir Type - swimming pool
43609	Reservoir Type - treatment-cooling pond
43610	Reservoir Type - treatment-filtration pond
43611	Reservoir Type - treatment-settling pond; Construction Material - unspecified
43612	Reservoir Type - treatment-sewage treatment pond
43613	Reservoir Type - water storage; Construction Material - nonearthen
43614	Reservoir Type - water storage; Construction Material - earthen; Hydrographic Category - intermittent
43615	Reservoir Type - water storage; Construction Material - earthen; Hydrographic Category - perennial
43617	Reservoir Type - water storage
43618	Reservoir Type - unspecified; Construction Material - earthen
43619	Reservoir Type - unspecified; Construction Material - nonearthen
43621	Reservoir Type - water storage; Hydrographic category - perennial
43623	Reservoir Type - evaporator; Construction Material - earthen
43624	Reservoir Type - treatment
43625	Reservoir Type - disposal
43626	Reservoir Type - disposal; Construction Material - nonearthen

Local knowledge is the best way to accurately describe a reservoir. In absence of local knowledge, we use whatever resources we have available to help determine the best FType to assign a reservoir. Over the course of reviewing the NHD, an editor may come across a water body that doesn't currently exist in the database. Often this waterbody is rectangular. Not too many lakes are naturally rectangular; it's a good sign that the water body is a reservoir. Also, not many lakes were missed during the land survey work that went into the original 1:24,000 topographic maps. If it isn't on the topo maps, chances are that it is a reservoir.

As the NHD moves to local resolution, that may not be the case. Meanwhile, it's a good rule of thumb. So, at minimum, reservoirs can be coded as 43600. That's not ideal, but it's a step in the right direction. From here, editor experience, available auxiliary data, and clues from the surroundings on the aerial imagery may lead to a more concise classification of the reservoir.

Did you know?

The layer file used to symbolize the NHD on the DEP's DataMiner and MapDirect not only depicts the color and transparencies of the features, but also contains many other customized options.

Scale and feature size dependent labels, hyperlinked GNIS names, hyperlinked NWIS data, and html driven popup box information on GNIS data are some of the customizations done to make the layer more beneficial to the end user.

This layer file is now available for download on the DEP NHD website here:

http://www.dep.state.fl.us/water/watersheds/nhd.htm

An uncommon reservoir; the aerial view of a gypsum stack about 40 miles east of Tampa, FL.

Gypsum stacks form as the acidic mineralized water byproduct of phosphate mining evaporates and forms a continuously growing stack of waste material.

Before and After

Editing based on the latest aerial imagery can mean great changes to the NHD. Construction of new subdivisions may mean completely re-engineered waterways, additional storm water reservoirs and manipulated wetlands. However, often there are more subtle changes that take place. Below is a "Before and After" example of some edits that took place in the fall of 2015. Notice the additional reservoirs and swamps that weren't originally in the database, as well as modified boundaries of the existing features.

Before Editing, Fall 2015

After Editing, Fall 2015

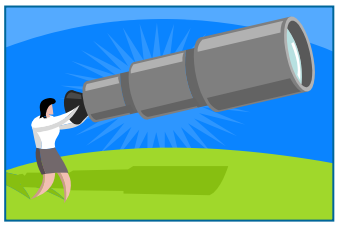
Looking Forward

The Florida NHD Stewardship team has long been recognized by the USGS as one of the most active in the nation.

Few stewardship programs have staff and resources dedicated full time to maintaining and updating the NHD. DEP dedicated these resources because we use the NHD as an essential information resource for the state's surface water modeling, mapping and water quality assessments.

Full subbasin editing, using aerial imagery, will continue to be the focus of the editing team as well as isolated updates based on feedback from the end users of the NHD.

GNIS names issues collected during the editing process will continue to be addressed and submitted as applicable to the USGS Board on Geographic Names.



The Florida NHD Stewardship Team

The Florida NHD Stewardship team currently consists of Jeneane Carter, Maria Rivera, Param Maharaj and Edwin Abbey. These talented GIS professionals work collectively to update the 24K High Resolution National Hydrography Dataset.

Using aerial imagery, elevation and other digital resources, the team reviews portions of the database and updates it based on the best information we have available.

Development, natural and manmade changes have greatly altered the original documented hydrography of the state.

Maintaining the database serves a multitude of users; whether it be for having accurate cartographic representation or having proper delineation and network connections for environmental analysis and decision making.

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