

Drainage Area: CO, VPU: 14 - Release Notes

12/01/2018 – Updated and New Data

Time of Travel and Related Attributes: The new and updated data is included in new versions of the NHDPlusAttributes and EROMExtension components. Specifically,

EROM mean annual and mean monthly statistics have been re-computed with the following changes:

- Removal of upper and lower limits for reference gage regression adjustment,
- Correction of reference gage regression equation, and
- Reference gage regression included in all flow statistics.

PlusFlowlineLakeMorphology and PlusWaterbodyLakeMorphology tables have been updated based on the new EROM mean annual flows.

PlusFlowlineVAA mean annual time of travel (TOTMA) has been updated based on the new EROM mean annual flows. Path time (PathTime) attribute has been added and populated based on the updated TOTMA values.

05/10/2016 – Updated Components

The improved HUC12 downstream pointers from the February 2016 WBD Version were updated in the NHDPlus WBDSnapshot. When a correspondence between the two versions could be determined for both the HUC12 and the downstream HUC12, the downstream pointer was updated.

02/18/2016 – Updated Components

Several NHDFlowline features in the NHDSnapshot component were edited to eliminate errors when building a geometric network.

01/05/2016 – Updated Components

EROM Mean Annual and Mean Monthly flow estimates have been re-run to correct incremental flows to be the sum of the incremental flows upstream and on the flowline. EROM velocities were updated to provide velocity estimate only for flowing waters. EROM velocities are now set to -9998 (missing value) in all water bodies except swamp/marsh.

07/08/2015 – Updated Components

The WBDSnapshot was revised to correct the values in the Acres field. The NHDSnapshot and NHDPlusAttributes were revised to correct values in FType/FCode in a handful of features.

1/30/2015 – Revised Component

The VPUAttributeExtension has been updated to include accumulated mean annual and mean monthly runoff files.

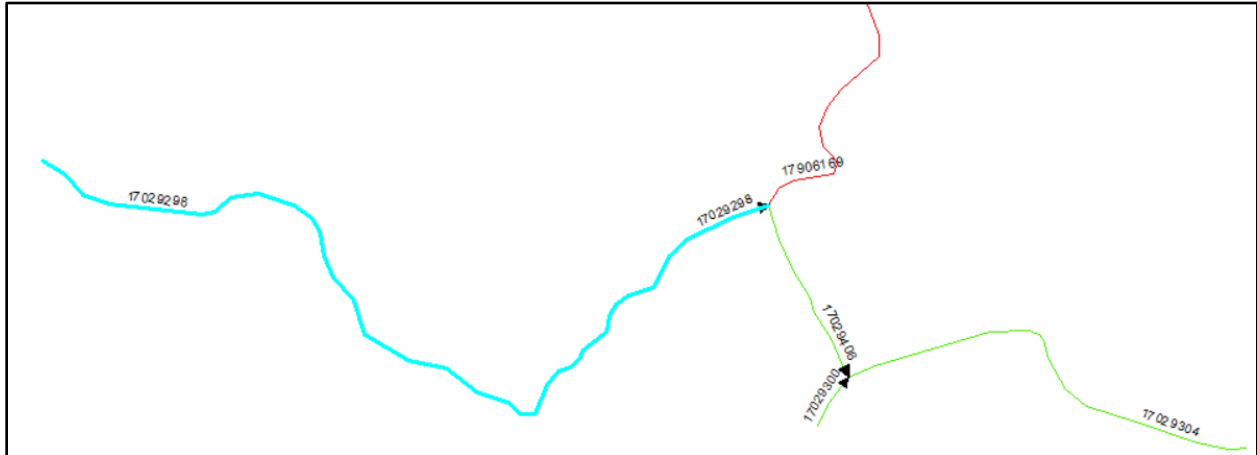
10/23/2014 – Known Data Problem and How to fix it locally.

It was recently discovered that there is a single flowline is duplicated in VPU13, where it belongs, and, incorrectly, in VPU14 (see image below). In addition, there is a flowline, flowing in the wrong direction, that connects VPU13 and 14 through the Continental Divide and should have been removed from the NHDPlusV2 network. This is a small error that unfortunately affects many NHDPlusV2 tables. A fix will be applied to the NHDPlusV2, as resources permit. In the meantime, if this issue is creating difficulties for a user application, it can be fixed in the user's local copy of NHDPlusV2 as follows:

1. In VPU 14, delete NHDFlowline comid=17029298
2. In VPU 14, delete comid=17029298 from
 - PlusFlowlineVAA.dbf,
 - PlusFlow.dbf where fromcomid = 17029298 or tocomid = 17029298,
 - CumulativeArea.dbf,
 - HeadwaterNodeArea.dbf,
 - ElevSlope.dbf,
 - BurnLineEvent.dbf,
 - CumTotTempMA.txt,
 - CumDivTempMA.txt,
 - CumTotPrecipMA.txt,
 - CumDivPrecipMA.txt,
 - EROM_MA0001.dbf, and
 - EROM_mm0001.dbf where mm = 01, ..., 12.
3. In VPU 14, set NHDFlowline comid=17029406 to FlowDir = "Uninitialized".
4. In VPU 14, delete comid = 17029406 from
 - PlusFlowlineVAA,
 - PlusFlow where fromcomid = 17029298 or tocomid = 17029298,
 - CumulativeArea,
 - HeadwaterNodeArea,
 - ElevSlope,
 - BurnLineEvent,
 - CumTotTempMA,
 - CumDivTempMA,
 - CumTotPrecipMA,
 - CumDivPrecipMA,
 - EROM_MA0001.dbf, and
 - EROM_mm0001.dbf where mm = 01, ..., 12.
5. In VPU 14, Update PlusFlowlineVAA for comid=17029304 to reflect a class-1 node at its upstream end:
 - UpHydroSeq = 760062105
 - Arbolatesu = 5.3550
 - StreamOrde = 1
 - StreamCalc = 1
6. In VPU 14, Update PlusFlowlineVAA for comid=17029300 to reflect a class-1 node at its downstream end:
 - StreamLeve = 8

- LevelPathI = 760038465

Note: FeatureIDGridCode table, Catchments, and all raster components of NHDPlus in VPU14 and VPU13 are correct.



Green = VPU14, Red = VPU13, Teal = flowline in both VPU13 and VPU14

4/03/2014 – Replacement Components

A new version of NHDPlusAttributes component was released due to an error in the carry-over values for pathlength from VPU 15.

1/21/2014 – New Data Release

The EROMExtension was enhanced to include mean monthly flow estimates. See NHDPlusV2 User Guide for additional information.

12/07/2012 – Replacement components

Three NHDPlusV2 components are replaced with new versions: NHDSnapshot, NHDPlusBurnComponents, and NHDPlusAttributes. These replacements represent some changes in NHDFlowline ReachCode values and the inclusion of an NHDReachCrossReference table that tracks ReachCode changes from NHDPlusV1 to NHDPlusV2.

9/21/2012 – Temporary Attribute Cleanup

During NHDPlusV2 processing and subsequent QA/QC, some temporary attributes were added. Some of these attributes were not deleted and were inadvertently included in the public release. These extraneous attributes do not affect the usability of the data, but they do violate the official data model and may cause issues with future NHDPlusV2 tools. Users are encouraged to download the new components. In this VPU, the replacement zip files are:

NHDPlusV21_CO_14_NHDSnapshot_02.7z

NHDPlusV21_CO_14_NHDPlusAttributes_02.7z

9/4/2012 – Initial Release Notes

Catchment/Burn Settings

NHDFlowline features in conflict with the WBD-defined VPU 14 boundary were set to “N” (no) for both Burn and Catchment attributes. These features were not used in the hydro-enforcement process as burn features, nor were catchments delineated for these features. This was done to avoid catchments for these features extending into adjacent VPUs.

Three pipeline features were reviewed and all had their Catchment attribute set to “N”. These features were used in the hydro-enforcement process to enable drainage connectivity in the HydroDEM and NHDPlus flow grids.

During the early stages of NHDPlus production, when the NHD was being enhanced, an effort was made to add detail to the networked NHDFlowline features by switching non-networked NHDFlowline features (FlowDir = “Uninitialized”) into networked features (FlowDir = “Uninitialized”). In VPU 14, this process inadvertently created new isolated networks when the features were not connected to the main network. These isolated networks were previously uninitialized features and are not closed systems (ie. they are headwater features that should be connected to the main network). Until resources permit the connection of these features, these isolated networks should have remained uninitialized; however the data condition was not discovered until late in the production process, therefore an interim solution was to set the catchment and burn attributes to “N” for these features.

BurnAddLine

There are several lines in BurnAddLine that represent NHDFlowline features in VPU 15 (VPU 14 flows into VPU 15). These flowlines were added to BurnAddLine to constrain the catchment delineations at the confluence with VPU 15 and to ensure proper drainage in the NHDPlus flow direction and accumulation grids. The GridCode, StreamLevel, and HydroSeq values for these BurnAddLine features are not the final values, because final values were not assigned until VPU 15 was processed.

Enhanced Unit Runoff Method (EROM)

See Appendix A of the “NHDPlus V2 User Guide” for a detailed explanation of the EROM parameters.

EROM Flow and Velocity estimates are for Mean Annual values.

The time period for these estimates is 1971 to 2000; the runoff, temperature and precipitation grids are for this time period.

For gage adjustment and Reference Gage Regression, gages must meet the following criteria:

1. A minimum of 20 of the 30 years (1971 to 2000) of complete flow records.
2. NWIS reported drainage area versus NHDPlus drainage area, for the gage, must be within 0.2 (+/- 20%).

Upstream gage drainage area proportion is 0.5 (50%).

Excess Evapotranspiration default coefficients are 0.3 and 0.5.

Gage sequestration proportion is 0.2 (20%).