Drainage Area: SA, VPU: 03N - 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.

09/21/2017 – Updated Components

The NHDPlusAttributes has been updated. Various VAAs in PlusFlowlineVAA for Coastline features have been standardized.

09/20/2016 – Updated NHDSnapshot

Corrected a handful of incorrect FType/Fcode values and WBAreaCOMID values.

05/10/2016 – Updated Components

The improved HUC12 downstream pointers from the February 2016 WBD Version into 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.

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.

07082015 – 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.

12/15/2014 – New Data Release

The NLCD VPU Extension was re-released to correct missing NLCD categories in the data.

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.

9/12/2012 – Initial Release Notes

Catchment/Burn Settings

NHDFlowline features in conflict with the VPU3N boundary defined by the WBD were set to "N" (no) for both Burn and Catchment attributes to avoid catchments for these features extending into adjacent VPUs.

There are three NHDFlowline features in BurnLineEvent for VPU03N that should have been included with VPU03S. No attempt was made to move these 3 features (ComIDs 6325475, 6321927, and 632216) from VPU03N into VPU03S and the Burn and Catchment attributes were set to "N".

There are four features in VPU03N coded as Pipelines. Three of these had both Catchment and Burn attributes set to "N".

A CanalDitch feature which was a secondary divergent path (ComID 11562792) was set to "N" for both Burn and Catchment attributes. This feature crosses a WBD HUC12 divide with a reverse coordinate ordering of flow that conflicts with topographic contour information.

BurnAddLine Notes

There are several lines added to BurnAddLine that represent features from adjacent NHDPlus2 VPUs 02 and 03S. These lines constrain the catchment delineations at coastal VPU connection points between these VPUs. The GridCode and HydroSeq values in BurnAddLine are temporary values assigned for processing VPU03N. Refer to the VPU02 and VPU03S Value Added Attributes for the permanent values.

Lines were added to breach the WBD wall features for four HUC12s that contained no NHDFlowline features. This ensures that these HUC12s drain to the correct next downstream HUC12. The lines were digitized using information from aerial photos and topographic maps.

WBD Snapshot Note

The WBD VPU03N snapshot contains a HUC12 (030701060504) that connects VPU03S and VPU03N. This HUC12 should be redefined in the WBD. This HUC12 is included in the WBD snapshots for both VPU03N and VPU03S.

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%).

Reference gages (those gages determined to have minimal impact from human activities) are generally found on smaller streams with lower mean annual flow. Currently, the Reference Gage Regression step adjusts all flows in a VPU regardless of mean annual stream flow. In several VPUs, the Reference Gage Regression step (step 3) will "over-adjust" larger mean annual flows. In these cases, the resulting Reference Gage Regression flow estimates will be worse than the Runoff/Excesses ET flow estimates (step 2). Note that this issue exists on the larger rivers, which are most likely to have flow gages on them. Consequently, Gage Adjustment step (step 5) will "re-adjust" the flow estimates to better match the expected mean annual flow conditions. Below is a list of the VPUs that appear to be affected by an over adjustment during the Reference Gage Regression and an approximate flow value above which this issue applies:

03N: > 2,000 cfs

03S: > 4,000 cfs

03W: > 15,000 cfs

07: > 3,000 cfs

10L: > 10,000 cfs

11: > 5,000 cfs

12: > 3,000 cfs

16: > 1,000 cfs

17: > 10,000 cfs