

Drainage Area: CA, VPU: 18 - 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.

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.

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.

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.

9/4/2012 – Initial Release Notes

Catchment/Burn Settings

The following describes unique settings of Burn and Catchment attributes in BurnLineEvent.

- 1) Many Canal/Ditch NHDFlowline features and some streams that connect with these Canal/Ditch features were set to “N” (no) for both Catchment and Burn attributes. These features were observed to conflict with the WBD drainage system.
- 2) Some NHDFlowline Pipeline features have Catchment and Burn attributes set to “N”, while others had “N” values for just the Catchment attribute.
- 3) A NHDFlowline pipeline feature (ComID 20292037), leading from Eagle Lake, connects a WBD HUC 12 closed basin (HUC_12 = 180800030307) with another WBD HUC 12. The pipeline was set to “N” for Catchment and Burn attributes. All NHDFlowline features upstream of and connecting to the pipeline were set to “Y” for Catchment and Burn attributes. In the HUC 12, a manual sink was created and placed within Eagle Lake at the end of an NHD artificial path feature. Because this pipeline may actually provide an outlet of overflow from this lake, the NHD network still connects the lake, but the flow direction and accumulation grids will have this area isolated as a closed system.
- 4) A stream feature (ComID 22227020), draining directly to the coast, was omitted from the catchment delineations because this feature is outside the boundary of VPU18 as defined by the WBD. The adjacent VPU17 had already been through the NHDPlus production process and this stream was not in the VPU17 data.

San Francisco Bay

Enforcement of San Francisco Bay was applied to the HydroDEM for point-based watershed delineation at the outlet of the Bay using the flow direction grid. The bay area enforcement feature can be found in the LandSea feature class as an “estuary” polygon. Centerline features within the bay area are in the BurnAddLine feature class. The centerlines form the basis of channeling water within the bay to these lines in the HydroDEM and derivative grids (fdr, fac). To delineate a watershed for the bay using the ArchHydro tools and the flow direction grid, select a location along these centerlines.

Mexico contributing drainage

Contributing drainage area from Mexico to U.S. waters is accounted for in the NHDPlusV2 data. These areas are represented in the HydroDem where harmonized WBD and high-res NHD stream lines were used as drainage enforcement, along with NED data that extends into Mexico. The added drainage lines from Mexico hydrography are included in the BurnAddLine feature class.

BurnAddWaterbody notes

Additional closed lake features from high-res NHD were added to BurnAddWaterbody to enforce, as isolated closed systems, these lakes and their drainage areas.

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%).