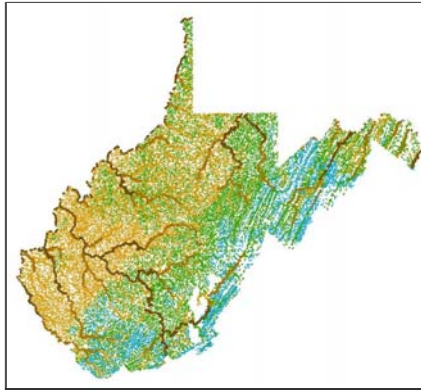


West Virginia Aquatic Habitat Classification

File Geodatabase Feature Class



Tags

State Wildlife Action Plan, Conservation, Aquatic Habitat

Summary

This data set represents aquatic habitats used for the 2015 revision of West Virginia's State Wildlife Action Plan (West Virginia Division of Natural Resources 2015).

Description

The foundation for this classification was NHDPlus (enhanced National Hydrography Dataset) as attributed by Olivero and Anderson (2008) for the Northeast Aquatic Habitat Classification (NEAHC). WVDNR Staff extracted all streams within WV boundaries and exported these to a new layer. New fields were created to collapse attributes by combining classes to a more simplified model that fit WV's locality more appropriately than the regional models.

Classes Used:

Stream Size (n=4) Headwaters and Creeks; Small Rivers; Medium Rivers; Large Rivers

Stream Segment Slope (Gradient) (n=3) Low; Moderate; High

Temperature (n=3) Cold; Cool; Warm

Staff abandoned "Geology" as a classification for water quality, consolidating all classes into a single uniform water quality class. The NEAHC class was used as a surrogate for water quality and it lacked utility for describing the water quality features at the scales necessary for the State Wildlife Action Plan (SWAP). Water quality in WV is more of a local condition than one that can be modeled at the landscape scale. Poor correlation was noted between the modeled condition and known local conditions at the stream reach scale.

Staff combined the new classification used for the SWAP into the field "D_CL_4_3_2". A Definition Query was then applied to select the desired category from the field and symbolized to a line width adjusted to an appropriate scale for visual acuity in the digital and print maps.

The eighteen classes of aquatic stream habitats are generally congruent to the NEAHC classes, defined in their text based on 4 size classes, 3 slope/gradient classes, and 3 temperature classes, with geology removed. Two notable exceptions are the Medium Gradient categories within the Medium Rivers and Large Rivers. These two classes are only observed in WV among the states included in the NEAHC. The reaches described by these categories are hydrologically and ecologically significant in WV and needed to be addressed accordingly in the WV SWAP.

Literature Cited:

Olivero, A. P., and M. G. Anderson. 2008. Northeast Aquatic Habitat Classification System. The Nature Conservancy, Boston, MA.

Credits

West Virginia Division of Natural Resources, Elkins Operations Center, PO Box 67, Elkins, WV 26241, Ph: (304) 637-0245.

Use limitations

Although these data have been processed successfully on a computer system at the West Virginia Division of Natural Resources, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. The West Virginia Division of Natural Resources shall not be held liable for improper or incorrect use of the data described and/or contained herein. Please check sources, scale, accuracy, currentness and other available information. Please confirm that you are using the most recent copy of both data and metadata. Acknowledgement of the WVDNR would be appreciated.

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE biota, environment

PLACE KEYWORDS West Virginia

PLACE KEYWORDS Northeast United States

PLACE KEYWORDS United States

THEME KEYWORDS Aquatic

THEME KEYWORDS Planning

THEME KEYWORDS State Wildlife Action Plan

Hide Topics and Keywords ▲

Citation ►

TITLE West Virginia Aquatic Habitat Classification

CREATION DATE 2015-10-30 00:00:00

PUBLICATION DATE 2015-10-30 00:00:00

PRESENTATION FORMATS digital map

Hide Citation ▲

Citation Contacts ►

RESPONSIBLE PARTY

ORGANIZATION'S NAME West Virginia Division of Natural Resources

CONTACT INFORMATION ►

PHONE

VOICE (304) 637-0245

FAX (304) 637-0250

ADDRESS

TYPE

DELIVERY POINT Elkins Operation Center, PO Box 67

CITY Elkins

ADMINISTRATIVE AREA WV

POSTAL CODE 26241

HOURS OF SERVICE M-F, 8:30 AM to 4:30 PM

[Hide Contact information ▲](#)

[Hide Citation Contacts ▲](#)

Resource Details ►

DATASET LANGUAGES English (UNITED STATES)

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE vector

PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; ESRI ArcGIS 10.0.5.4400

CREDITS

West Virginia Division of Natural Resources, Elkins Operations Center, PO Box 67, Elkins, WV 26241, Ph: (304) 637-0245.

[Hide Resource Details ▲](#)

Extents ►

EXTENT

VERTICAL EXTENT

MINIMUM VALUE 0.000000

MAXIMUM VALUE 0.000000

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

WEST LONGITUDE -82.702883

EAST LONGITUDE -77.661531

NORTH LATITUDE 40.637332

SOUTH LATITUDE 37.161853

EXTENT CONTAINS THE RESOURCE Yes

[Hide Extents ▲](#)

Resource Maintenance ►

RESOURCE MAINTENANCE

UPDATE FREQUENCY as needed

[Hide Resource Maintenance ▲](#)

Resource Constraints ▶

CONSTRAINTS

LIMITATIONS OF USE

Although these data have been processed successfully on a computer system at the West Virginia Division of Natural Resources, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. The West Virginia Division of Natural Resources shall not be held liable for improper or incorrect use of the data described and/or contained herein. Please check sources, scale, accuracy, currentness and other available information. Please confirm that you are using the most recent copy of both data and metadata. Acknowledgement of the WVDNR would be appreciated.

[Hide Resource Constraints ▲](#)

Spatial Reference ▶

REFERENCE SYSTEM IDENTIFIER

VALUE 26917
 CODESPACE EPSG
 VERSION 7.4.1

[Hide Spatial Reference ▲](#)

Spatial Data Properties ▶

VECTOR ▶

LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

OBJECT TYPE composite
 OBJECT COUNT 30720

[Hide Vector ▲](#)

[Hide Spatial Data Properties ▲](#)

Distribution ▶

DISTRIBUTION FORMAT

NAME File Geodatabase Feature Class

TRANSFER OPTIONS

TRANSFER SIZE 0.000

[Hide Distribution ▲](#)

Fields ▶

DETAILS FOR OBJECT AquaticStreamClassificationWVSWAP2015 ▶

FIELD OBJECTID ▶

FIELD DESCRIPTION

Internal feature number.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

[Hide Field OBJECTID ▲](#)

FIELD Shape ▶

FIELD DESCRIPTION

Feature geometry.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Coordinates defining the features.

[Hide Field Shape ▲](#)

FIELD COMID ▶

FIELD DESCRIPTION

common identifier of a NHD feature or relationship; from NHD+ (example record = 8420522)

[Hide Field COMID ▲](#)

FIELD FDATE ▶

FIELD DESCRIPTION

feature currency date; from NHD+ (example record = 8/1/2004)

[Hide Field FDATE ▲](#)

FIELD RESOLUTION ▶

FIELD DESCRIPTION

always "Medium"; from NHD+

[Hide Field RESOLUTION ▲](#)

FIELD GNIS_ID ▶

FIELD DESCRIPTION

Geographic Names Information Systems ID for the value in GNIS_Name; from NHD+

[Hide Field GNIS_ID ▲](#)

FIELD GNIS_NAME ▶

FIELD DESCRIPTION

Name as found in the Geographic Names Information System

[Hide Field GNIS_NAME ▲](#)

FIELD REACHCODE ▶

FIELD DESCRIPTION

Reach Code assigned to feature or reach on which an event is located; from NHD+ (example record = 02070001000796)

[Hide Field REACHCODE ▲](#)

FIELD FLOWDIR ►

FIELD DESCRIPTION

Flow direction is "With Digitized" or "Uninitialized"

[Hide Field FLOWDIR ▲](#)

FIELD WBAREACOMI ►

FIELD DESCRIPTION

ComID of an NHD polygonal water feature through which an NHD "Artificial Path" flowline flows; from NHD+ (example record = -9999)

[Hide Field WBAREACOMI ▲](#)

FIELD FTYPE ►

FIELD DESCRIPTION

NHD feature type; from NHD+ (example record = StreamRiver)

[Hide Field FTYPE ▲](#)

FIELD FCODE ►

FIELD DESCRIPTION

numeric code that contains the feature type and its attributes as found in the NHDF code lookup table; from NHD+ (example record = 46003)

[Hide Field FCODE ▲](#)

FIELD NESZCL ►

FIELD DESCRIPTION

Northeast Stream Size Class: 1a: Headwaters 0<3.861 sq.mi., 1b: Creeks >=3.861<38.61 sq.mi., 2: Small Rivers >= 38.61<200 sq.mi., 3a: Medium Tributary Rivers >=200<1000 sq.mi., 3b: Medium Mainstem Rivers >=1000<3861 sq.mi., 4: Large Rivers >=3861<9653 sq.mi., 5: Great Rivers >=9653 sq.mi. (example record = 1a)

[Hide Field NESZCL ▲](#)

FIELD D_NESZCL ►

FIELD DESCRIPTION

description of the northeast size class (example record = Headwaters:0<3.861 sq.mi.)

[Hide Field D_NESZCL ▲](#)

FIELD NETEMPCL ►

FIELD DESCRIPTION

Northeast Temperature Class: 33:Cold, 31:Cool-warm, 13:Warm-cool, 11:Warm; from complex rules based on CART analysis (example record = 33)

[Hide Field NETEMPCL ▲](#)

FIELD D_NETEMPCL ►

FIELD DESCRIPTION

description of the northeast temperature class; from complex rules based on CART analysis (example record = Cold)

[Hide Field D_NETEMPCL ▲](#)

FIELD NESLPCL ►

FIELD DESCRIPTION

Northeast Class for Slope or Gradient along length of comid: 1: <0.02%, 2: >= 0.02 < 0.1%, 3: >= 0.1 < 0.5%, 4: >=0.5 < 2%, 5: >=2 < 5%, 6: >5% (example record = 6)

[Hide Field NESLPCL ▲](#)

FIELD D_NESLPCL ►

FIELD DESCRIPTION

description of northeast stream reach slope class (example record = >5%)

[Hide Field D_NESLPCL ▲](#)

FIELD NENORTCL ►

FIELD DESCRIPTION

Northeast Class for Local Norton Geology of comid: 1: 100<200 Low Buffered, Acidic; 2: >= 200 <300 Moderately Buffered, Neutral; 3: >= 300 Highly Buffered, Calc-Neutral (example record = 2)

[Hide Field NENORTCL ▲](#)

FIELD D_NENORTCL ►

FIELD DESCRIPTION

description of northeast norton geology class (example record = Moderately Buffered)

[Hide Field D_NENORTCL ▲](#)

FIELD FULL_CL4 ►

FIELD DESCRIPTION

(399 unique combinations) Concatenation of NESZCL, NETEMPCL, NESLPCL, NENORTCL (example record = 1a_33_6_2)

[Hide Field FULL_CL4 ▲](#)

FIELD MOD_CL4 ►

FIELD DESCRIPTION

(124 unique combinations) Concatenation of SIMP_SZ, NETEMPCL, SIMP_SLP, SIMP_NORT (example record = 1_33_4_2)

[Hide Field MOD_CL4 ▲](#)

FIELD MOD_CL3 ►

FIELD DESCRIPTION

(60 unique types) Concatenation of SIMP_SZ, NETEMPCL, SIMP_SLP (example record = 1_33_4)

[Hide Field MOD_CL3 ▲](#)

FIELD SIMP_CL4 ▶

FIELD DESCRIPTION

(96 unique combinations) Concatenation of SIMP_SZ, SIMP_TEMP, SIMP_SLP, SIMP_NORT (example record = 1_3_4_2)

Hide Field SIMP_CL4 ▲

FIELD SIMP_CL3 ▶

FIELD DESCRIPTION

(48 unique combinations) Concatenation of the SIMP_SZ, SIMP_TEMP, SIMP_SLP (example record = 1_3_4)

Hide Field SIMP_CL3 ▲

FIELD SIMP_SZ ▶

FIELD DESCRIPTION

simplified 4 size classes: For size, recombine the 4 northeast size classes as follows 1 = 1a + 1b, 2, 3 = 3a + 3b, 4 = 4 + 5 (example record = 1)

Hide Field SIMP_SZ ▲

FIELD D_SIMPSZ ▶

FIELD DESCRIPTION

description of simplified size classes (example record = Headwaters/Creeks)

Hide Field D_SIMPSZ ▲

FIELD SIMP_TEMP ▶

FIELD DESCRIPTION

simplified 3 temperature classes: combine Warm-Cool and Cool-Warm categories into a single "Transitional category, keep Cold and Warm categories as they were in NETEMPCL (example record = 3)

Hide Field SIMP_TEMP ▲

FIELD D_SIMPTEMP ▶

FIELD DESCRIPTION

description of the simplified temperature classes (example record = Cold)

Hide Field D_SIMPTEMP ▲

FIELD SIMP_SLP ▶

FIELD DESCRIPTION

simplified slope/stream gradient classes: Different Rules for Low/Mod/High/Very High Gradient based on size class of stream. For size class 1 streams: lump northeast gradient class 1+2 into modified simple gradient class 1: low gradient, make northeast gradient class 3 into modified simple class 2: Moderate Gradient, make northeast size class 4 into modified simple class 3: High Gradient, combine northeast gradient class 5+6 into modified simple class 4: Very High Gradient. For size class 2+ rivers: leave northeast gradient class 1 as simple class: Low Gradient, leave northeast gradient class 2 as simple class Moderate Gradient, leave northeast gradient class 3 as simple class: High gradient, and lump northeast gradient classes 4+5+6 into a new modified simple class 4: Very High Gradient. (example record = 4)

[Hide Field SIMP_SLP ▲](#)

FIELD D_SIMPSLP ▶

FIELD DESCRIPTION

description of simplified slope/stream gradient class (example = Very High Gradient)

[Hide Field D_SIMPSLP ▲](#)

FIELD SIMP_NORT ▶

FIELD DESCRIPTION

simplified norton geology class: only record the geology for size class 1 and 2 rivers (no local geology influence on larger river sizes; example value = 2)

[Hide Field SIMP_NORT ▲](#)

FIELD D_SIMPNORT ▶

FIELD DESCRIPTION

description of simplified norton geology class (example record = Moderately Buffered)

[Hide Field D_SIMPNORT ▲](#)

FIELD COMID_1 ▶

FIELD DESCRIPTION

legacy field from joining tables (can be removed)

[Hide Field COMID_1 ▲](#)

FIELD GNIS_NAM_1 ▶

FIELD DESCRIPTION

legacy field from joining tables (can be removed)

[Hide Field GNIS_NAM_1 ▲](#)

FIELD D_CL_4_3_2 ▶

FIELD DESCRIPTION

West Virginia SWAP 2015 simplified classification - 4 size classes: headwaters and creeks, small rivers, medium rivers, and large rivers; 3 slope/gradient classes: low, moderate, high; ALL streams classed as NEUTral water quality; 3 temperature classes: cold, cool, warm. (example record = 1.HW_CR | 3.HI | NEUT | 1.COLD)

[Hide Field D_CL_4_3_2 ▲](#)

FIELD SUBWATERSH ▶

FIELD DESCRIPTION

USGS/EPA HUC8 (4th level Hydraulic Unit Code) or Subwatershed (example record = 02070001 South Branch Potomac)

[Hide Field SUBWATERSH ▲](#)

FIELD EcoR_ID ▶

FIELD DESCRIPTION

Ecoregion ID interpreted from Bailey's Ecoregions of the World 1989 (example record = AM)

[Hide Field EcoR_ID ▲](#)**FIELD Shape_Length ▶**

FIELD DESCRIPTION

Length of feature in internal units.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES Positive real numbers that are automatically generated.

[Hide Field Shape_Length ▲](#)**FIELD KM_calc ▶**

FIELD DESCRIPTION

Length of line segment in kilometers calculated in UTM NAD 83 zone 17N projection (field must be recalculated when changes are made to the data)

[Hide Field KM_calc ▲](#)[Hide Details for object AquaticStreamClassificationWVSWAP2015 ▲](#)[Hide Fields ▲](#)**Metadata Details ▶**

METADATA LANGUAGE English (UNITED STATES)

METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset

SCOPE NAME dataset

LAST UPDATE 2016-12-05

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

LAST MODIFIED IN ARCGIS FOR THE ITEM 2016-12-07 10:41:32

[Hide Metadata Details ▲](#)**Metadata Maintenance ▶**

MAINTENANCE

UPDATE FREQUENCY as needed

[Hide Metadata Maintenance ▲](#)**Thumbnail and Enclosures ▶**

THUMBNAIL

THUMBNAIL TYPE JPG

Hide Thumbnail and Enclosures ▲

FGDC Metadata (read-only) ▼