K Factor, Whole Soil—Howard County, Maryland
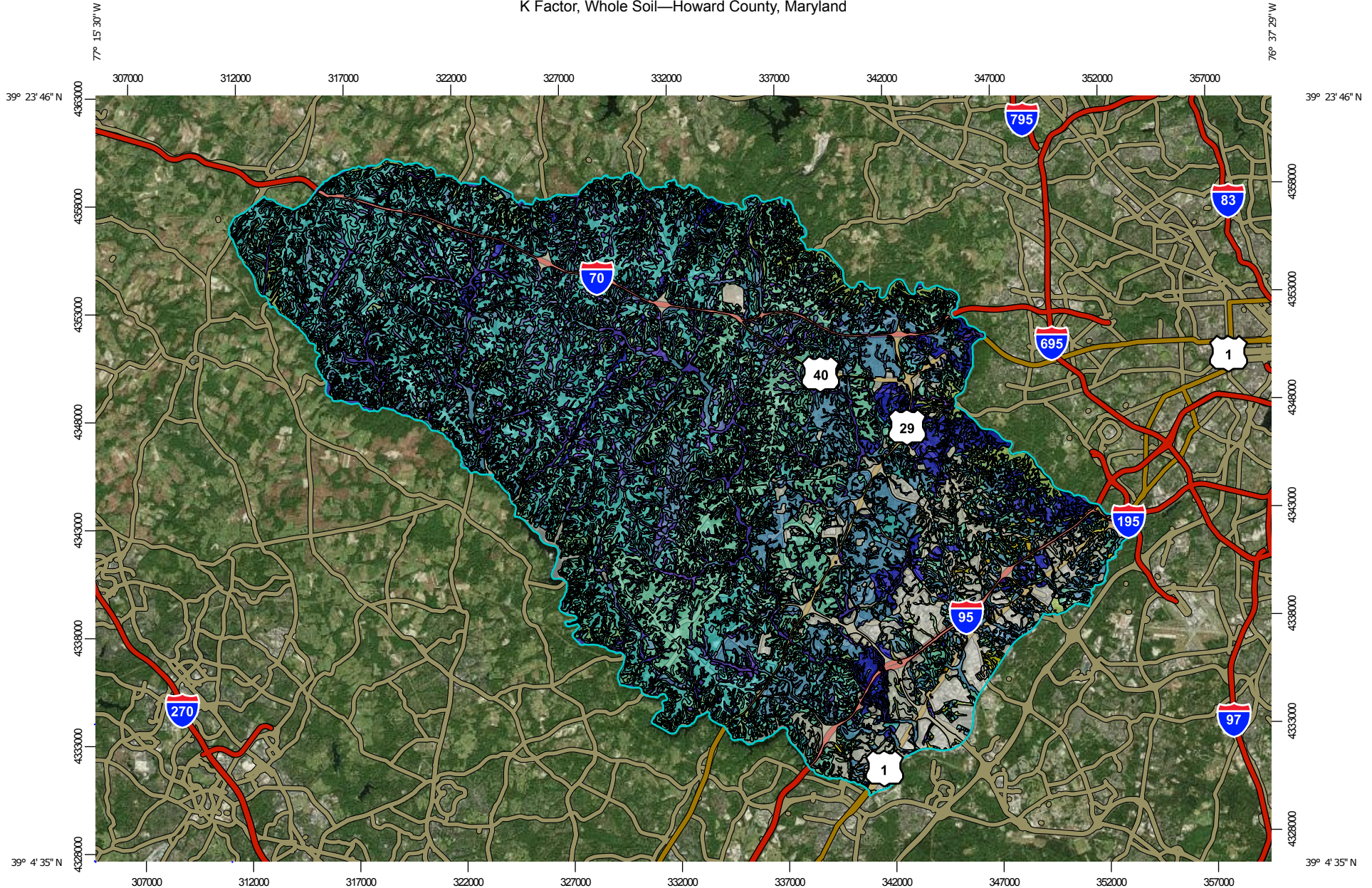
Map Scale: 1:250,000 if printed on A landscape (11" x 8.5") sheet.

					Meters
0	3500	7000	14000		21000

				Feet
0	10000	20000	40000	60000

N
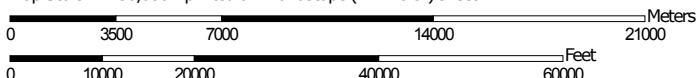
Map projection: Web Mercator   Corner coordinates: WGS84   Edge tics: UTM Zone 18N WGS84

USDA   **Natural Resources**
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

10/1/2018
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MAP LEGEND

MAP INFORMATION

Area of Interest (AOI)

☐ Area of Interest (AOI)

Soils

Soil Rating Polygons

- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Lines

- .02
- .05
- .10
- .15
- .17
- .20

- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Points

- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Water Features

Streams and Canals

Transportation

- ╉╉╉ Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Howard County, Maryland
Survey Area Data: Version 13, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AwB	Alloway silt loam, 2 to 5 percent slopes	.55	58.2	0.0%
BaA	Baile silt loam, 0 to 3 percent slopes	.49	2,538.5	1.6%
BeA	Benevola silt loam, 0 to 3 percent slopes	.43	144.3	0.1%
BeB	Benevola silt loam, 3 to 8 percent slopes	.43	535.6	0.3%
BeC	Benevola silt loam, 8 to 15 percent slopes	.43	116.1	0.1%
BrC	Brinklow channery loam, 8 to 15 percent slopes	.32	321.2	0.2%
BrD	Brinklow channery loam, 15 to 25 percent slopes	.32	1,342.2	0.8%
BtF	Brinklow-Blocktown channery loams, 25 to 65 percent slopes	.24	594.7	0.4%
CeB	Chillum loam, 2 to 5 percent slopes	.32	457.5	0.3%
CeC	Chillum loam, 5 to 10 percent slopes	.43	479.5	0.3%
ChB	Chillum-Russett loams, 2 to 5 percent slopes	.43	399.2	0.2%
ChC	Chillum-Russett loams, 5 to 10 percent slopes	.43	380.5	0.2%
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	.55	5,055.3	3.1%
Cp	Codorus and Hatboro soils, 0 to 2 percent slopes, frequently flooded	.32	244.6	0.2%
CrD	Croom and Evesboro soils, 10 to 15 percent slopes	.37	439.1	0.3%
DhB	Downer-Hammonton sandy loams, 2 to 5 percent slopes	.17	105.6	0.1%
DhC	Downer-Hammonton sandy loams, 5 to 10 percent slopes	.17	126.9	0.1%
DxC	Downer-Phalanx complex, 5 to 10 percent slopes	.17	2.2	0.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
EaB	Elioak silt loam, 3 to 8 percent slopes	.49	9.9	0.0%
EbC	Evesboro loamy sand, 2 to 10 percent slopes	.15	175.6	0.1%
FaaA	Fallsington sandy loams, 0 to 2 percent slopes, northern coastal plain	.24	1,749.9	1.1%
GaC	Gaila loam, 8 to 15 percent slopes	.55	1,244.1	0.8%
GaD	Gaila loam, 15 to 25 percent slopes	.55	183.7	0.1%
GbA	Gladstone loam, 0 to 3 percent slopes	.32	572.7	0.4%
GbB	Gladstone loam, 3 to 8 percent slopes	.32	8,166.5	5.0%
GbC	Gladstone loam, 8 to 15 percent slopes	.32	4,930.5	3.0%
GcB	Gladstone-Legore complex, 3 to 8 percent slopes	.32	101.9	0.1%
GcC	Gladstone-Legore complex, 8 to 15 percent slopes	.32	190.5	0.1%
GdC	Gladstone-Legore complex, 8 to 15 percent slopes, stony	.28	126.5	0.1%
GdD	Gladstone-Legore complex, 15 to 25 percent slopes, stony	.28	245.3	0.2%
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	.32	3,244.6	2.0%
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes		797.8	0.5%
GgA	Glenelg loam, 0 to 3 percent slopes	.37	3,271.3	2.0%
GgB	Glenelg loam, 3 to 8 percent slopes	.37	25,366.3	15.6%
GgC	Glenelg loam, 8 to 15 percent slopes	.43	10,454.5	6.4%
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	.43	6,975.0	4.3%
GhC	Glenelg-Urban land complex, 8 to 15 percent slopes	.43	968.7	0.6%
GmA	Glenville silt loam, 0 to 3 percent slopes	.49	898.1	0.6%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GmB	Glenville silt loam, 3 to 8 percent slopes	.55	7,033.9	4.3%
GmC	Glenville silt loam, 8 to 15 percent slopes	.49	1,103.4	0.7%
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	.49	7,011.2	4.3%
GoB	Glenville-Codorus silt loams, 0 to 8 percent slopes	.49	1,085.9	0.7%
GuB	Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes	.49	949.7	0.6%
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	.43	4,167.2	2.6%
JaB	Jackland silt loam, 3 to 8 percent slopes	.37	211.1	0.1%
LaB	Legore silt loam, 3 to 8 percent slopes	.64	525.3	0.3%
LaC	Legore silt loam, 8 to 15 percent slopes	.64	707.2	0.4%
LeB	Legore silt loam, 3 to 8 percent slopes, stony	.64	122.8	0.1%
LeC	Legore silt loam, 8 to 15 percent slopes, stony	.64	629.5	0.4%
LmB	Legore-Montalto silt loams, 3 to 8 percent slopes	.64	859.8	0.5%
LoB	Legore-Montalto-Urban land complex, 0 to 8 percent slopes	.64	1,882.6	1.2%
LoC	Legore-Montalto-Urban land complex, 8 to 15 percent slopes	.64	400.1	0.2%
LrD	Legore-Relay gravelly loams, 15 to 25 percent slopes, very stony	.64	648.1	0.4%
LrF	Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony	.64	756.3	0.5%
MaB	Manor loam, 3 to 8 percent slopes	.28	1,644.1	1.0%
MaC	Manor loam, 8 to 15 percent slopes	.32	8,849.8	5.5%
MaD	Manor loam, 15 to 25 percent slopes	.32	7,409.6	4.6%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
McD	Manor loam, 15 to 25 percent slopes, very rocky	.28	1,878.6	1.2%
MgD	Manor-Bannertown sandy loams, 15 to 25 percent slopes, rocky	.24	777.2	0.5%
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	.24	1,628.5	1.0%
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky	.32	2,318.8	1.4%
MoB	Mount Lucas silt loam, 3 to 8 percent slopes, stony	.37	152.4	0.1%
MoC	Mount Lucas silt loam, 8 to 15 percent slopes, stony	.37	110.1	0.1%
OcB	Occoquan loam, 3 to 8 percent slopes	.37	883.0	0.5%
OcC	Occoquan loam, 8 to 15 percent slopes	.37	1,545.6	1.0%
PfC	Patapsco-Fort Mott complex, 5 to 10 percent slopes	.20	2.5	0.0%
RsB	Russett fine sandy loam, 2 to 5 percent slopes	.43	311.4	0.2%
RsC	Russett fine sandy loam, 5 to 10 percent slopes	.43	605.6	0.4%
RsD	Russett fine sandy loam, 10 to 15 percent slopes	.43	240.0	0.1%
RtB	Russett-Alloway-Hambrook complex, 0 to 5 percent slopes	.43	15.1	0.0%
RtC	Russett-Alloway-Hambrook complex, 5 to 10 percent slopes	.43	6.8	0.0%
RtD	Russett-Alloway-Hambrook complex, 10 to 15 percent slopes	.43	3.0	0.0%
RuB	Russett and Beltsville soils, 2 to 5 percent slopes	.43	1,200.2	0.7%
RuC	Russett and Beltsville soils, 5 to 10 percent slopes	.43	593.5	0.4%
SaB	Sassafras loam, 2 to 5 percent slopes	.32	424.1	0.3%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
SaC	Sassafras loam, 5 to 10 percent slopes	.32	443.1	0.3%
SfB	Sassafras gravelly sandy loam, 2 to 5 percent slopes	.32	241.2	0.1%
SrC	Sassafras and Croom soils, 5 to 10 percent slopes	.32	703.9	0.4%
SrD	Sassafras and Croom soils, 10 to 15 percent slopes	.37	575.8	0.4%
SrE	Sassafras and Croom soils, 15 to 25 percent slopes	.32	256.1	0.2%
UaF	Udorthents, Highway, 0 to 65 percent slopes		3,415.1	2.1%
UbF	Udorthents, Refuse, 0 to 65 percent slopes		276.9	0.2%
UcB	Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes		2,463.5	1.5%
UcD	Urban land-Chillum-Beltsville complex, 5 to 15 percent slopes		886.7	0.5%
UdB	Udorthents, loamy, 0 to 5 percent slopes	.24	13.4	0.0%
UfA	Urban land-Fallsington complex, 0 to 2 percent slopes	.28	348.7	0.2%
UoE	Udorthents, 0 to 45 percent slopes, Gravel Pits		217.8	0.1%
Ur	Urban land		0.7	0.0%
UsB	Urban land-Sassafras-Beltsville complex, 0 to 5 percent slopes		844.5	0.5%
UsD	Urban land-Sassafras-Beltsville complex, 5 to 15 percent slopes		316.1	0.2%
UtD	Urban land-Udorthents complex, 0 to 15 percent slopes		4,455.8	2.7%
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes		1,889.2	1.2%
UuD	Urban land-Udorthents complex, 8 to 25 percent slopes		163.2	0.1%
UwC	Urban land-Woodstown-Sassafras complex, 5 to 10 percent slopes		68.8	0.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		1,378.4	0.9%
WaA	Watchung silt loam, 0 to 3 percent slopes	.43	97.2	0.1%
WcB	Watchung silt loam, 3 to 8 percent slopes, stony	.43	422.6	0.3%
WdaA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Coastal Plain	.32	0.2	0.0%
WdaB	Woodstown sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	.32	178.5	0.1%
WgB	Wheaton-Glenelg complex, 0 to 8 percent slopes	.37	178.5	0.1%
WgD	Wheaton-Glenelg complex, 8 to 25 percent slopes	.37	74.3	0.0%
WhA	Wiltshire silt loam, 0 to 3 percent slopes	.49	170.0	0.1%
WhB	Wiltshire silt loam, 3 to 8 percent slopes	.49	295.5	0.2%
ZbA	Zekiah and Issue soils, 0 to 2 percent slopes, frequently flooded	.55	28.3	0.0%
Totals for Area of Interest			**162,113.0**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.