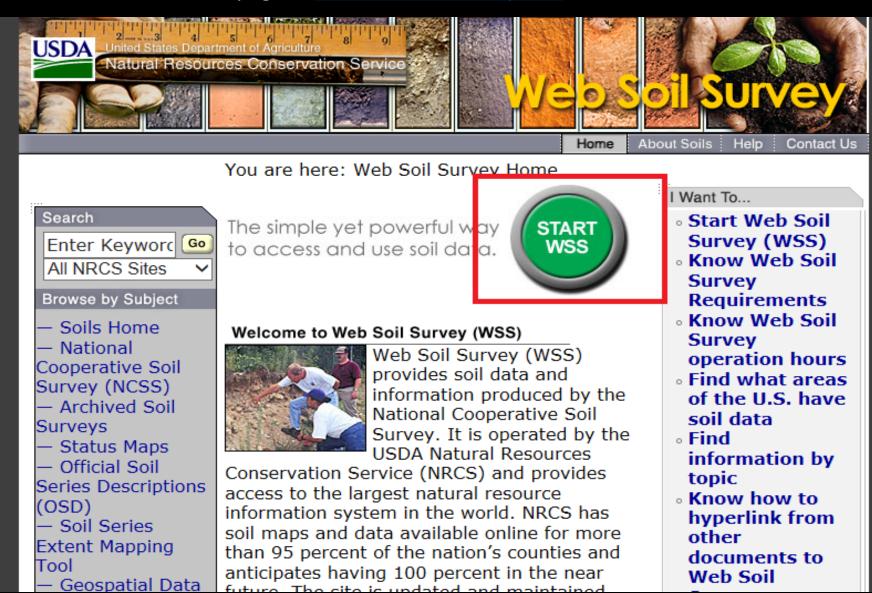
Web Soil Survey

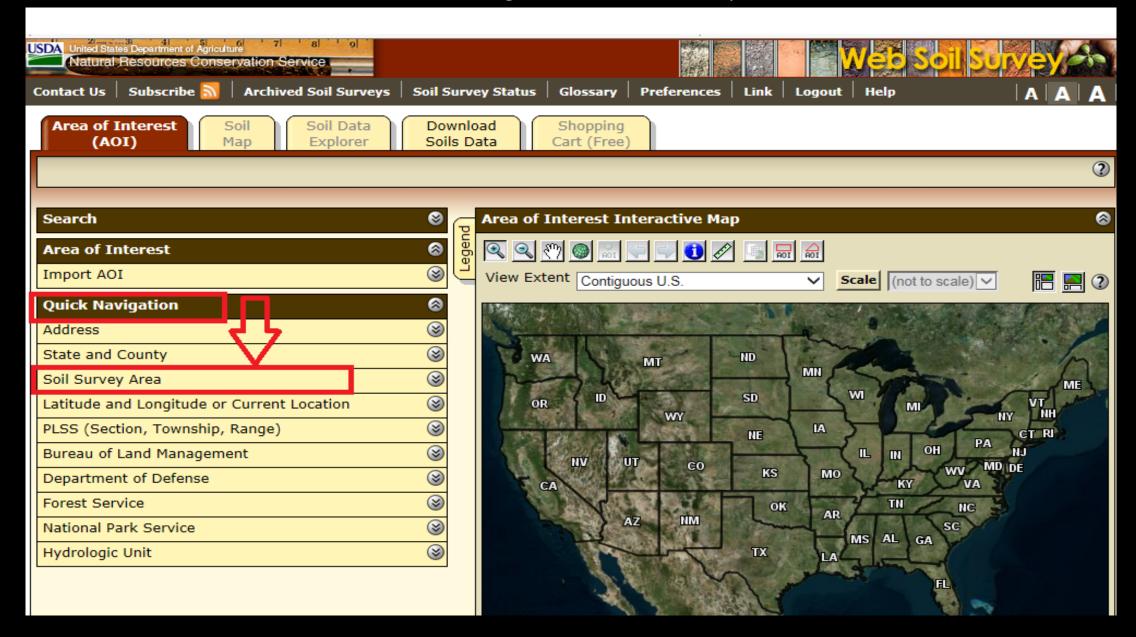
Instructions on how to access NRCS Web Soil Survey data to answer Soil Resource questions for the Maryland State Envirothon Contest.

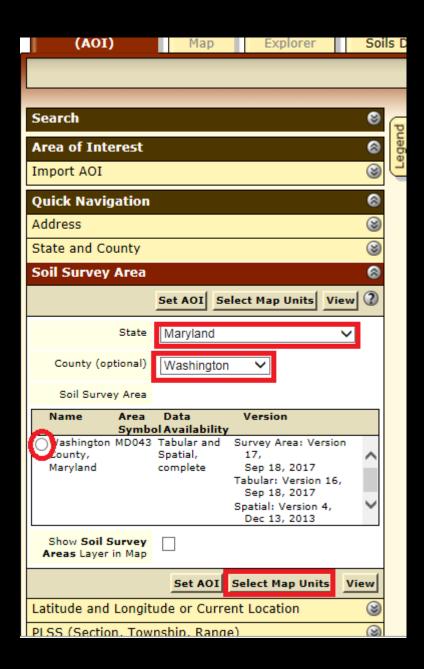
Example – Washington County, MD

Start on the homepage at www.websoilsurvery.com and click "START WSS"



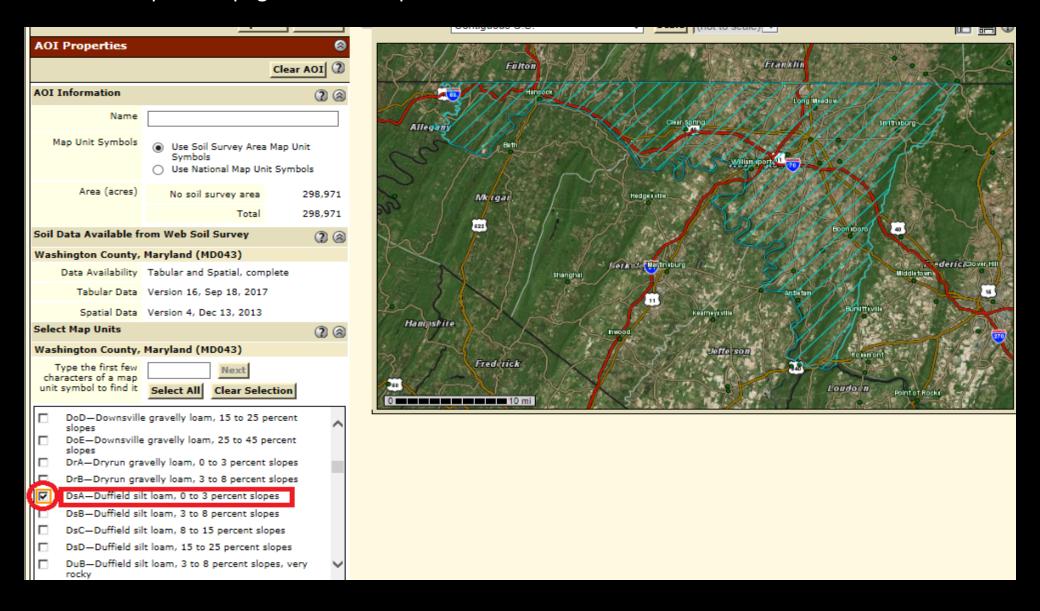
Under Quick Navigation select Soil Survey Area





Use the State dropdown box to select Maryland and use the County Dropdown box to select Washington. Check the box next to Washington County, Maryland. Click Select Map Units.

Under AOI Properties, check the boxes for the map units labeled: BeC, DsA, HaB, and Ln. Then, select the tab at the top of the page Soil Data Explorer.



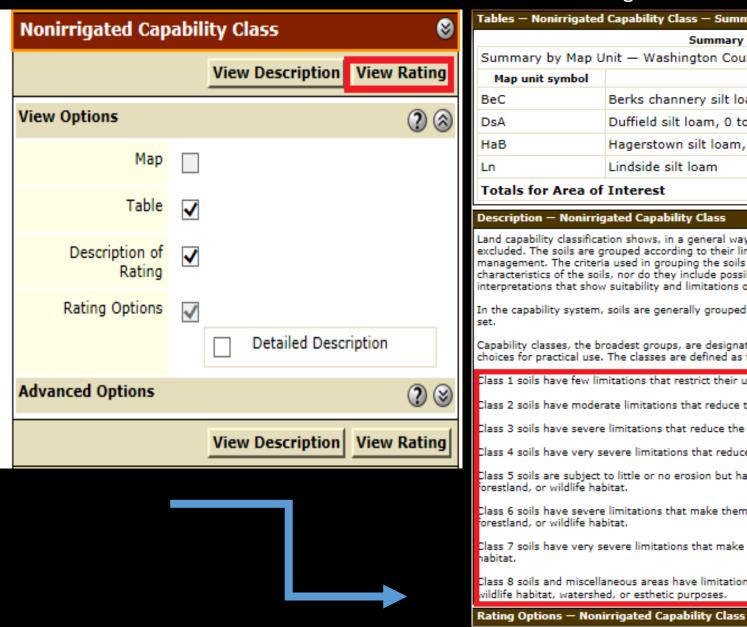
Select the tab Suitabilities and Limitations for Use.
Below select Land Classifications



Under Land Classifications, select Nonirrigated Capability Class



Select view rating



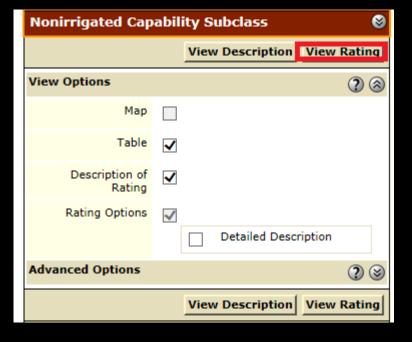
A table will appear displaying the numbered rating and a Description box will follow the table below explaining the rating classifications.

The National Control of the Control of the National Control of the							
Tables — Nonirrigated Capability Class — Summary By Map Unit							
Summary by Map Unit — Washington County, Maryland (MD043)							
Summary by Map Unit — Washington County, Maryland (MD043)							
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI			
BeC	Berks channery silt loam, 8 to 15 percent slopes	3	_	_			
DsA	Duffield silt loam, 0 to 3 percent slopes	1	_	_			
HaB	Hagerstown silt loam, 3 to 8 percent slopes	2	_	_			
Ln	Lindside silt loam	2	_	_			
Totals for Area of	Interest		298,971.2	100.0%			
Description — Nonirric	pated Capability Class			8			
Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.							
In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.							
Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:							
Class 1 soils have few limitations that restrict their use.							
Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.							
Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.							
Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.							
Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, or wildlife habitat.							
Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, or wildlife habitat.							
Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife nabitat.							
Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.							

Back under the Suitabilities and Limitations tab, select Nonirrigated Capability Subclass



Select View Rating



A table will appear showing the rating and a Description box below with explanations of the rating system.

Tables — Nonirrigated Capability Subclass — Summary By Map Unit



Summary by Map Unit — Washington County, Maryland (MD043)

Summary by Map Unit — Washington County, Maryland (MD043)



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BeC	Berks channery silt loam, 8 to 15 percent slopes	е	_	_
DsA	Duffield silt loam, 0 to 3 percent slopes		_	_
HaB	Hagerstown silt loam, 3 to 8 percent slopes	e	_	_
Ln	Lindside silt loam	w	_	_
Totals for Area of Interest			298,971.2	100.0%

Description — Nonirrigated Capability Subclass



Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

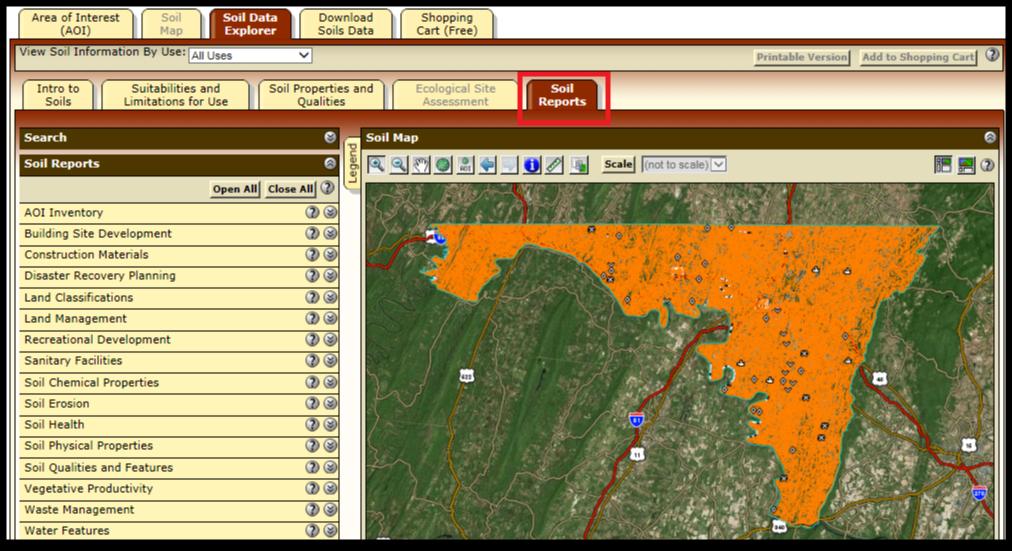
In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability subclasses are soil groups within one capability class. They are designated by adding a small letter, "e," "w," "s," or "c," to the class numeral, for example, 2e. The letter "e" shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; "w" shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); "s" shows that the soil is limited mainly because it is shallow, droughty, or stony; and "c," used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

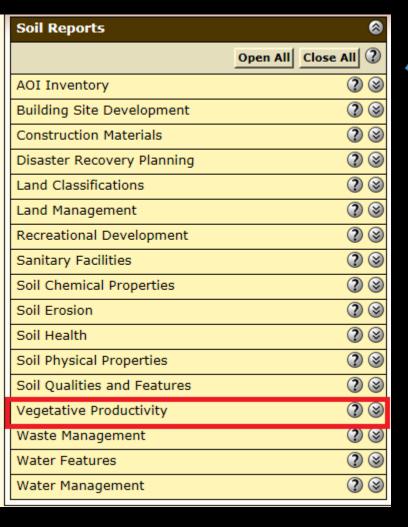
In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by "w," "s," or "c" because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, or wildlife habitat.

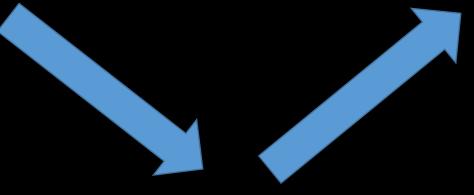
The following slides demonstrate how to view crop yield ratings

Navigate to the Soil Reports tab as seen below. This will bring up a map of the county.

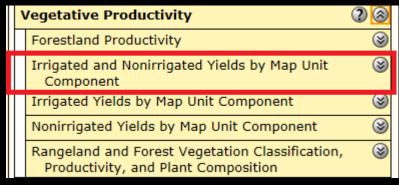


Under Soil Reports on the left-hand panel, select Vegetative Productivity

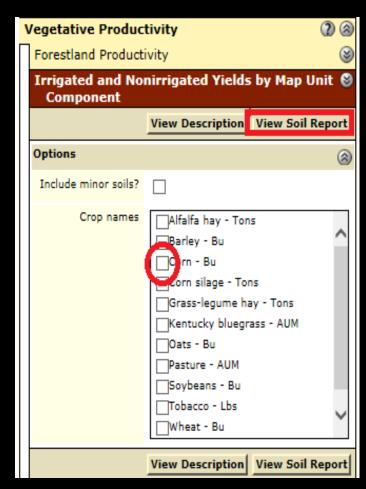




Select Irrigated and Nonirrigated Yields by Map Unit Component



Check the box for Corn and select View Soil Report

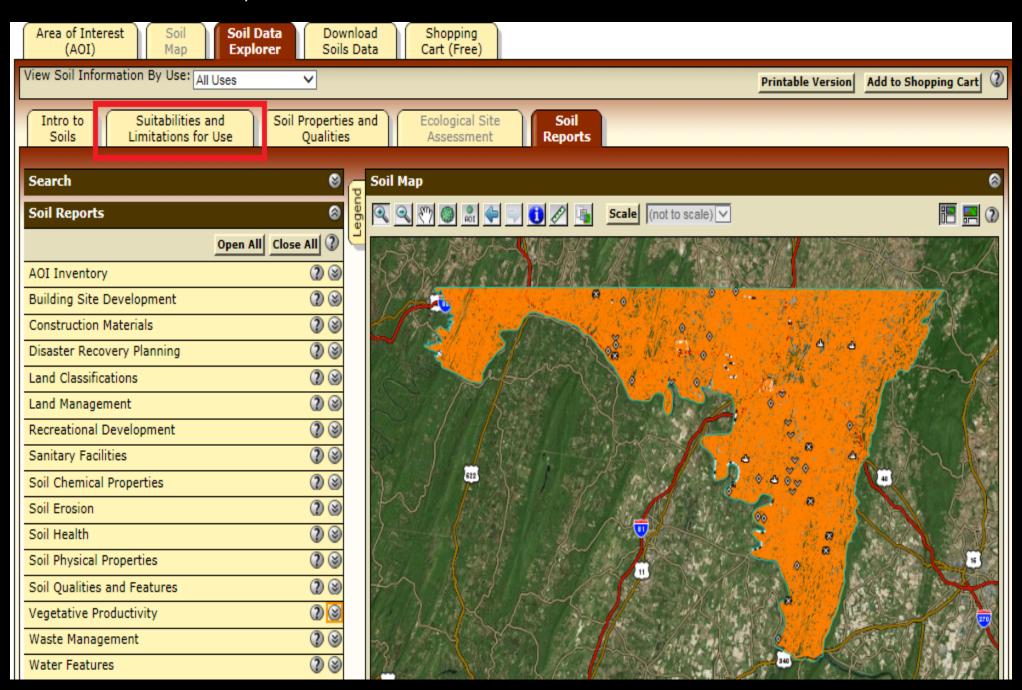


This will produce a table displaying the ratings for each map unit. Also, below the table is a description box detailing the information in the table (the description box was too large to fit onto a slide.)

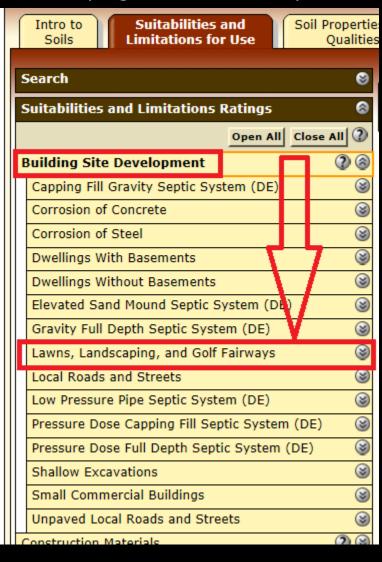
Report — Irrigated and Nonirrigated Yields by Map Unit Component								
Washington County, Maryland								
Map symbol and soil	Land	l capability	Corn					
name	Irrigated	Nonirrigated	Irrigated	Nonirrigated				
				Bu				
BeC—Berks channery silt loam, 8 to 15 percent slopes								
Berks	_	3e	_	75				
DsA—Duffield silt loam, 0 to 3 percent slopes								
Duffield	_	1	_	130				
HaB—Hagerstown silt loam, 3 to 8 percent slopes								
Hagerstown	_	2e	_	155				
Ln—Lindside silt loam								
Lindside		2w	_	145				

The following slides will demonstrate how to view lawn, landscaping, and golf fairways

First, click on the Suitabilities and Limitations for Use Tab.



Click on the first tab in the list Building Site Development. Under that selection, choose Lawns, Landscaping, and Golf Fairways



Select View Rating



This will produce a table detailing the rating for each map-unit. A description box will be provided below the table.

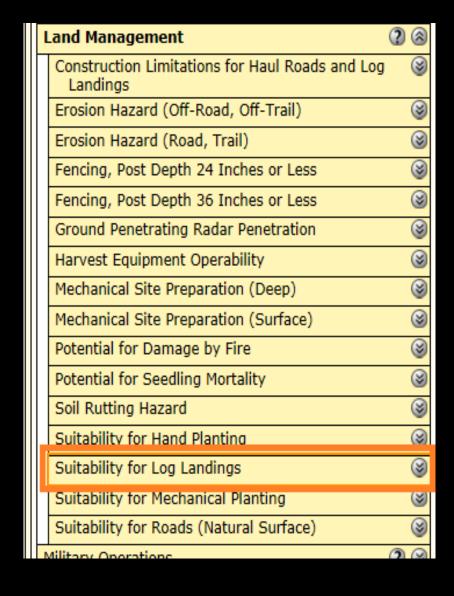
Tables — Lawn	s, Landscaping, and Golf Fairways — Summary B	y Map Unit				8
			shington County, Maryland	(MD043)		
Summary by	Map Unit — Washington County, Maryland (MD043)				@
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
BeC	Berks channery silt loam, 8 to 15 percent slopes	Somewhat limited	Berks (85%)	Low exchange capacity (0.75)	_	-
				Slope (0.63)		
				Large stones content (0.61)		
				Droughty (0.49)		
				Depth to bedrock (0.07)		
DsA	Duffield silt loam, 0 to 3 percent slopes	Somewhat	Duffield (85%)	Dusty (0.04)	_	_
		limited	SWANPOND (6%)	Dusty (0.06)		
			RYDER (3%)	Depth to bedrock (0.26)		
				Gravel content (0.18)		
				Dusty (0.04)		
HaB	Hagerstown silt loam, 3 to 8 percent slopes	Somewhat limited	Hagerstown (85%)	Low exchange capacity (0.50)	_	-
				Dusty (0.04)		
			Carbo (5%)	Depth to bedrock (0.80)		
				Low exchange capacity (0.75)		
				Dusty (0.04)		
Ln	Lindside silt loam		Lindside (85%)	Flooding (1.00)	e	-
				Depth to saturated zone (0.04)		Percent of AOI
				Dusty (0.03)		
			Melvin (5%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Flooding (0.60)		
				Low exchange capacity (0.50)		
				Dusty (0.03)		
Totals for A	Totals for Area of Interest 298,971.2 100					

The following slides will demonstrate how to view forestry productivity, specifically log landings

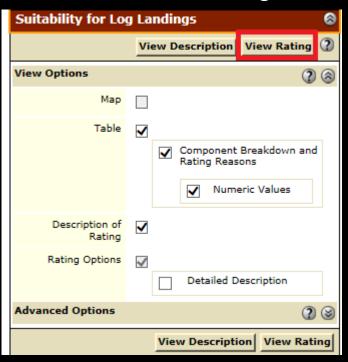
While staying within the Suitabilities and Limitations for Use tab, select Land Management



Under Land Management, select Suitability for Log Landings



Select View Rating



A table will appear with the rating for each map unit. A description box will be provided below the table to explain the ratings.

Tables — Suitabi	ility for Log Landings — Summary By Map Unit					(
	Summary I	y Map Unit — Was	hington County, Maryland	(MD043)				
Summary by Map Unit — Washington County, Maryland (MD043)								
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI		
BeC	Berks channery silt loam, 8 to 15 percent slopes	Moderately suited	Berks (85%)	Slope (0.50)	-	_		
				Low strength (0.50)				
				Dusty (0.05)				
			Weikert (10%)	Slope (0.50)				
				Low strength (0.50)				
				Landslides (0.07)				
				Dusty (0.05)				
DsA	Duffield silt loam, 0 to 3 percent slopes	Moderately	Duffield (85%)	Low strength (0.50)	-	_		
		suited		Dusty (0.04)				
			SWANPOND (6%)	Low strength (0.50)				
				Dusty (0.06)				
			OPEQUON (2%)	Low strength (0.50)				
				Dusty (0.04)				
HaB	Hagerstown silt loam, 3 to 8 percent	Moderately	Hagerstown (85%)	gerstown (85%) Low strength (0.50)	_	-		
	slopes	suited		Dusty (0.04)				
			Opequon (5%)	Low strength (0.50)				
				Slope (0.50)				
				Dusty (0.03)				
			Carbo (5%)	Low strength (0.50)				
				Dusty (0.04)				
Ln	Lindside silt loam	Poorly suited	Lindside (85%)	Flooding (1.00)	-	_		
				Low strength (0.50)				
				Dusty (0.03)				
			Melvin (5%)	Ponding (1.00)				
				Flooding (1.00)				
				Wetness (1.00)				
				Low strength (0.50)				
				Dusty (0.03)				
Totals for Area of Interest						100.0%		

Select the Area Of Interest tab

- Now, before you move on to the practice section, you need to uncheck each box for each of the map units that you had previously selected at the beginning (BeC, DsA, HaB, and Ln.)
- This will provide you with a cleared selection.

Practice

Try navigating the site to find...

- 1. Nonirrigated corn yields for the map units: Cp, MsB, and OpB. (Under Suitabilities an Limitations)
- 2. Land Capability Class for the map units: DeC, DoA, and Me. (Under Soil Reports)
- 3. Forestland Productivity of the tree species Northern Red Oak for the map units: AmB, CaB, and WeB. Look for the Site Index Rating. (Under Soil Reports)
- 4. Soil Health ratings for the map units: AmB, CaB, and WeB. Look for the Organic Matter RV (pct). (Under Soil Reports)
- 5. Ratings for Dwellings With Basements for the map units: DsA, TrB, and WrC. (Under Suitabilities and Limitations)
- 6. Hydric Rating By Map Unit for the map units: At, CaB, and Po. (Under Suitabilities and Limitaions)
- Water features rating of flood frequency of map units: Bc, Ft, Pg. (Under Soil Reports)