

## STATE OF MAINE SOILS CATENA KEY

The soil catena concept is a useful guide to understand the complex nature of soils that blanket the landscape. A soil catena is a sequence of soil series that extend across relief positions and are developed from similar parent material. Relief influences soil formation primarily through its effect on drainage, runoff, and erosion. The key that follows uses the catena concept by matching parent material and drainage for each series. This is helpful in identifying the relationship of one series to others. It is intended to be used only as a guide; the Official Series Description should be used to identify the soil being evaluated.

(Series listed in *italics* have a mesic soil temperature regime and are no longer used in Maine except in parts of York and Cumberland Counties.)

(Series listed as ~~strickethrough~~ are from outside MLRA Region R. These series may have different soil properties from what was described when these soils were first identified in Maine.)

PARENT MATERIAL	SOIL DRAINAGE CLASS						
Of the soils catena & selected characteristics of the deepest, best drained member	Excessively Drained	Somewhat Excessively Drained	Well Drained	Moderately Well Drained	Somewhat Poorly Drained	Poorly Drained	Very Poorly Drained
<b>A. Soils formed in Glacial Till</b>							
<b>1. Dark gray fine-grained quartzite, slate, phyllite, metasilstone and some calcareous sandstone</b>							
a. Coarse-loamy soils			<a href="#">Bangor</a>	<a href="#">Dixmont</a>	→		
			<a href="#">Penguin3</a>				
b. Loamy-skeletal soils		<a href="#">Thorndike2</a>	<a href="#">Danforth</a>	<a href="#">Shirley</a>	→		
			<a href="#">Winnecook3</a>				
c. Coarse-loamy soils formed in lodgment till w/ >10% clay		<a href="#">Monson2</a>	<a href="#">Elliottsville3</a>	<a href="#">Chesuncook</a>	<a href="#">Telos</a>	<a href="#">Monarda</a>	<a href="#">Burnham</a>
				<a href="#">Ragmuff3</a>			
d. Coarse-loamy soils formed in lodgment till w/ <10% clay			<a href="#">Plaisted#</a>	<a href="#">Howland#</a>		<a href="#">Monarda</a>	<a href="#">Burnham</a>
e. Fine-loamy soils formed in lodgment till				<a href="#">Perham</a>	<a href="#">Daigle</a>	<a href="#">Aurelie</a>	
<b>2. Calcareous dark gray shale, silt-stone, phyllite, metasilstone and limestone</b>							
a. Fine-loamy soils			<a href="#">Caribou</a>	<a href="#">Conant</a>	→	<a href="#">Easton</a>	Washburn*
			<a href="#">Mapleton3</a>				
b. Coarse-loamy soils		<a href="#">Corinna2</a>	<a href="#">Sebasticook4</a>	<a href="#">Wassookeag4</a>	<a href="#">Kenduskeag</a>		
			<a href="#">Penobscot3</a>				



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Maine NRCS Soils Catena Key  
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Page 1 of 5

PARENT MATERIAL	SOIL DRAINAGE CLASS						
	Excessively Drained	Somewhat Excessively Drained	Well Drained	Moderately Well Drained	Somewhat Poorly Drained	Poorly Drained	Very Poorly Drained
Of the soils catena & selected characteristics of the deepest, best drained member							
<b>3. Dark gray limestone and calcareous shale</b>							
a. Coarse-loamy soils	←	<a href="#">(Benson2)</a>	<a href="#">Linneus3</a>				
<b>4. Red sandstone and conglomerate</b>							
a. Loamy soils		<a href="#">Creasey2</a>					
<b>5. Mica schist with some granite, gneiss, and metasandstone</b>							
a. Coarse-loamy soils	<a href="#">Abram1</a>	<a href="#">Lyman2</a>	<a href="#">Berkshire</a> <a href="#">(Charlton)</a>	<a href="#">Sunapee</a> <a href="#">(Sutton)</a>		<a href="#">Lyme</a> <a href="#">(Leicester)</a>	
		<a href="#">(Hollis2)</a>	<a href="#">Tunbridge3</a>				
b. Coarse-loamy soils formed in lodgment till			<a href="#">Marlow</a> <a href="#">(Paxton)</a>	<a href="#">Dixfield</a> <a href="#">Peru</a> <a href="#">(Woodbridge)</a>	←	<a href="#">Brayton</a> <a href="#">Pillsbury</a> →	<a href="#">Peacham</a> <a href="#">(Whitman)</a>
					<a href="#">Colonel</a> <a href="#">(Ridgebury)</a>		
c. Coarse-loamy soils w/ a spodic horizon having > 6% organic carbon			<a href="#">Hogback2</a> <a href="#">Rawsonville3</a>				
<b>6. High elevation soils with a cryic temperature regime (generally at elevations greater than 2500 feet)</b>							
a. Coarse-loamy soils formed in lodgment till			<a href="#">Sisk</a> <a href="#">Saddleback2</a>	<a href="#">Surplus</a>	→	<a href="#">Bemis</a>	
b. Loamy-skeletal soils			<a href="#">Enchanted4</a>				
<b>7. Granite, gneiss and some schist</b>							
a. Sandy-skeletal or sandy soils	<a href="#">Schoodic1</a>	<a href="#">Hermon</a> <a href="#">Canaan2</a>		<a href="#">Waumbek</a>	←	<a href="#">Naskeag3</a>	
b. Coarse-loamy soils formed in lodgment till			<a href="#">Becket</a>	<a href="#">Skerry</a>	<a href="#">Westbury</a>		
c. Coarse-loamy over sandy or sandy-skeletal soils			<a href="#">Monadnock</a>				



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<b>B. Soils formed in Glaciofluvial Material</b>							
1. Granite, gneiss, schist and some metasandstone and lesser amounts of slate, shale and phyllite							
a. Sandy-skeletal soils	<a href="#">Colton</a> <a href="#">(Hinckley)</a>			<a href="#">Duane</a>			
b. Sandy soils	<a href="#">(Windsor)</a>	<a href="#">Adams</a>		<a href="#">Croghan</a>	←	<a href="#">Moosilauke</a>	<a href="#">Searsport</a>
		<a href="#">(Merrimac)</a>		<a href="#">(Deerfield)</a>	←	<a href="#">Naumburg</a>	
c. Sandy soils with a cemented spodic horizon					<a href="#">Au-Gres</a>	<a href="#">Kinsman</a> <a href="#">(Walpole)</a>	<a href="#">(Scarboro)</a>
					<a href="#">Finch</a> <a href="#">(Saugatuck)</a>		
2. Slate, shale, phyllite, metasilstone and lesser amounts of granite, gneiss, and schist							
a. Sandy-skeletal soils	←	<a href="#">Masardis</a>	<a href="#">Stetson</a>	<a href="#">Sheepscot</a>			
b. Coarse-loamy over sandy or sandy-skeletal soils			<a href="#">Allagash</a>	<a href="#">Madawaska</a>	→		<a href="#">(Halsey)</a>
			<a href="#">(Agawam)</a>	<a href="#">(Ninigret)</a>	←	<a href="#">(Fredon)</a>	
c. Sandy soils				<a href="#">Machias</a>	<a href="#">(Red Hook)</a>	<a href="#">(Atherton)</a>	→
				<a href="#">Skowhegan</a>	→		
<b>C. Soils formed in Glaciomarine and Glaciolacustrine Deposits</b>							
1. Silt and clay deposits							
a. Fine soils			<a href="#">(Suffield)</a>	<a href="#">Buxton</a>	<a href="#">Lamoine</a>	<a href="#">Scantic</a>	<a href="#">Biddeford</a>
b. Fine-silty soils				<a href="#">Boothbay</a>	<a href="#">Pushaw</a>	<a href="#">Swanville</a> <a href="#">(Canandaigua)</a>	→
2. Very fine sand and silt deposits							
a. Coarse-silty soils			<a href="#">Salmon</a>	<a href="#">Nicholville</a>	←	<a href="#">Roundabout</a>	
			<a href="#">(Hartland)</a>	<a href="#">(Belgrade)</a> <a href="#">(Scio)</a>		<a href="#">(Raynham)</a>	
3. Loamy materials over silt and clay deposits							
a. Coarse-loamy over clayey soils			<a href="#">Melrose</a>	<a href="#">Elmwood</a>	<a href="#">Swanton</a>	→	<a href="#">Whately</a>
4. Sandy material over loamy deposits							
a. Sandy over loamy soils				<a href="#">(Eldridge)</a>			
5. Soils in tidal areas							
a. Fine-silty soils							<a href="#">Gouldsboro</a>
							Sulfaquents



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<b>D. Soils formed in Alluvial Deposits</b>							
<b>1. Slate, phyllite and metasiltstone</b>							
a. Coarse-silty soils			<a href="#">Fryeburg</a>	<a href="#">Lovewell</a>		<a href="#">Charles</a>	<a href="#">Medomak</a>
			<a href="#">(Hadley)</a>		<a href="#">Cornish</a>	<a href="#">(Limerick)</a>	<a href="#">(Saco)</a>
			<a href="#">Lille</a>	<a href="#">(Winooski)</a>			
<b>2. Granite, gneiss and schist</b>							
a. Coarse-loamy soils			<a href="#">Ondawa</a>	<a href="#">Podunk</a>		<a href="#">Rumney</a>	
b. Sandy soils	<a href="#">Sunday</a>						
<b>E. Organic Soils</b> (pH's given in 0.01 M CaCl <sub>2</sub> )							
<i>All organic soils are very deep (&gt;60 inches) to bedrock unless otherwise noted.</i>							
<i>These Terric organic soils range from 16 to 51 inches in thickness over mineral soil.</i>							
<b>1. High Elevation Folists with a Cryic Temperature Regime</b>							
a. Very shallow & shallow to bedrock soils, pH < 4.5	←		<a href="#">Ricker+</a>				
b. Deep & very deep fragmental soils, pH < 4.5		<a href="#">Mahoosuc</a>					
<b>2. Folists with a Frigid Temperature Regime</b>							
a. Very shallow & shallow to bedrock soils, pH < 4.5	←		<a href="#">Knob Lock</a>				
<b>3. Fibrists</b>							
a. pH < 4.5							<a href="#">Vassalboro</a>
b. Terric soils, pH ≥ 4.5							<a href="#">Togus</a>
c. Soils formed mainly from sphagnum, pH < 4.5							<a href="#">Moosabec</a>
							<a href="#">Waskish</a>
<b>4. Hemists</b>							
a. pH < 4.5							<a href="#">Sebago</a>
b. pH ≥ 4.5							<a href="#">Meadowsedge</a>
							<a href="#">Rifle</a>
c. Terric soils, pH < 4.5							<a href="#">Chocorua</a>
d. Tidal area soils							Sulfihemists



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<b>5. Sapristis</b>							
a. pH $\geq$ 4.5							<a href="#">Bucksport</a>
b. Terric soils, pH $\geq$ 4.5							<a href="#">Wonsqueak</a>
							<a href="#">Pondicherry</a>
							<a href="#">Markey</a>
c. Undifferentiated soils							Borosapristis

**Footnotes :**

- <sup>1</sup> Very shallow (<10 inches of mineral soil above bedrock)
  - <sup>2</sup> Shallow (10 to <20 inches of mineral soil above bedrock)
  - <sup>3</sup> Moderately deep (20 to < 40 inches of mineral soil above bedrock)
  - <sup>4</sup> Deep (40 to < 60 inches of mineral soil above bedrock)
- All others are Very Deep (> 60 inches of mineral soil above bedrock)

\* Washburn is an inactive series & no current description is available.

\*Ricker was used in both cryic & frigid areas prior to 2007.

# Howland and Plaisted included tills >10% clay in surveys published prior to 1992.



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