

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 ~~strikethrough~~ 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						
	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							
A. Soils formed in Glacial Till							
1. Dark gray fine-grained quartzite, slate, phyllite, metasiltstone and some calcareous sandstone							
a. Coarse-loamy soils			Bangor Penquis3	Dixmont	→		
b. Loamy-skeletal soils		Thorndike2	Danforth Winnecook3	Shirley	→		
c. Coarse-loamy soils formed in lodgment till w/ >10% clay		Monson2	Elliottsville3	Chesuncook Ragmuff3	Telos	Monarda	Burnham
d. Coarse-loamy soils formed in lodgment till w/ <10% clay			Plaisted#	Howland#		Monarda	Burnham
e. Fine-loamy soils formed in lodgment till				Perham	Daigle	Aurelie	
2. Calcareous dark gray shale, silt-stone, phyllite, metasiltstone and limestone							
a. Fine-loamy soils			Caribou Mapleton3	Conant	→	Easton	Washburn*
b. Coarse-loamy soils		Corinna2	Sebasticook4 Penobscot3	Wassookeag4	Kenduskeag		

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3. Dark gray limestone and calcareous shale							
a. Coarse-loamy soils	←	(Benson2)	Linneus3				
4. Red sandstone and conglomerate							
a. Loamy soils		Creasey2					
5. Mica schist with some granite, gneiss, and metasandstone							
a. Coarse-loamy soils	Abram1	Lyman2	Berkshire	Sunapee		Lyme	
		(Hollis2)	(Charlton)	(Sutton)		(Leicester)	
b. Coarse-loamy soils formed in lodgment till			Marlow	Dixfield*	Colonel	Brayton	Peacham
			(Paxton)	Peru	←	Pillsbury	(Whitman)
				(Woodbridge)	(Ridgebury)	→	
c. Coarse-loamy soils w/ a spodic horizon having > 6% organic carbon			Hogback2				
			Rawsonville3				
6. High elevation soils with a cryic temperature regime (generally at elevations greater than 2500 feet)							
a. Coarse-loamy soils formed in lodgment till			Sisk				
			Saddleback2	Surplus	→	Bemis	
b. Loamy-skeletal soils			Enchanted4				
7. Granite, gneiss and some schist							
a. Sandy-skeletal or sandy soils	Schoodic1	Hermon		Waumbek	←	Naskeag3	
		Canaan2					
b. Coarse-loamy soils formed in lodgment till			Becket	Skerry	Westbury		
c. Coarse-loamy over sandy or sandy-skeletal soils			Monadnock				

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

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5. Saprists							
a. pH \geq 4.5							Bucksport
b. Terric soils, pH \geq 4.5							Wonsqueak
							Pondicherry
							Markey
c. Undifferentiated soils							Borosaprists

Footnotes :

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

* Washburn, Dixfield, Sulfihemists, Sulfaquents are inactive series/undifferentiated groups & 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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