

# Major Land Resource Area 144A

## New England and Eastern New York Upland, Southern Part

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### Ecological site keys

#### 144A PES Key

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##### 1a. Soils not permanently submerged in water

##### 2a. Soils native, not anthropogenic (Not Human Altered Human Transported [HAHT])

##### 3a. Soils without organic layer ("O" horizon) or organic layer < 40 cm (16") in thickness –Mineral Soils

##### 4a. Parent material of glaciated nature; glaciolacustrine, glaciofluvial, or glacial till (not alluvium)

##### 5a. Glaciated Parent material water-deposited (glaciofluvial, glaciolacustrine)

##### 6a. Glaciated meltwater fluvial deposits (glaciofluvial/outwash)

##### 7a. Soils well-drained to excessively well drained

##### 8a. Soils somewhat excessively drained to excessively drained

9a. Soils nutrient rich; higher base saturation - Semi-rich Dry Outwash ... F144AY021MA –  
Semi-Rich Dry Outwash

9b. Soils not nutrient rich; lower base saturation – Dry Outwash ... F144AY022MA – Dry  
Outwash

##### 8b. Soils well drained

10a. Soils nutrient rich; higher base saturation – Semi-rich Moist Outwash ... F144AY025MA –  
Semi-Rich Moist Outwash

##### 10b. Soils not nutrient rich; lower base saturation

11a. Soils without eolian mantle (loess) – Well Drained Outwash ... F144AY023CT – Well  
Drained Outwash

11b. Soils with eolian mantle (loess) – Well Drained Eolian Outwash ... F144AY024NY –  
Well Drained Eolian Outwash

##### 7b. Soils moderately well-drained to very poorly drained

##### 12a. Soils moderately well drained

13a. Soils nutrient rich; higher base saturation – Semi-rich Moist Outwash ... F144AY025MA –  
Semi-Rich Moist Outwash

##### 13b. Soils not nutrient rich; lower base saturation

14a. Surface texture silty – Moist Silty Outwash ... F144AY026CT – Moist Silty  
Outwash

- 14a. **Surface texture sandy – Moist Sandy Outwash ... F144AY027MA – Moist Sandy Outwash**
- 12b. **Soils poorly to very poorly drained**
  - 15a. **Soils poorly drained**
    - 16a. **Soils nutrient rich; higher base saturation – Semi-rich Wet Outwash ... F144AY029NY – Semi-Rich Wet Outwash**
    - 16b. **Soils not nutrient rich; lower base saturation – Wet Outwash ... F144AY028MA – Wet Outwash**
  - 15b. **Soils Very Poorly Drained**
    - 17a. **Soils nutrient rich; higher base saturation – Semi-rich Very Wet Outwash ... F144AY030NY – Semi-Rich Very Wet Outwash**
    - 17b. **Soils not nutrient rich; lower base saturation – Very Wet Outwash ... F144AY031MA – Very Wet Outwash**
- 6b. **Glaciated lakewater deposits (glaciolacustrine)**
  - 18a. **Soils well drained – Well Drained Lake Plain ... F144AY017NH – Well Drained Lake Plain**
  - 18b. **Soils moderately well drained to very poorly drained**
    - 19a. **Soils moderately well drained and somewhat poorly drained – Moist Lake Plain ... F144AY018NY – Moist Lake Plain**
    - 19b. **Soils poorly or very poorly drained**
      - 20a. **Soils poorly drained – Wet Lake Plain ... F144AY019NH – Wet Lake Plain**
      - 20b. **Soils very poorly drained – Very Wet Coastal Lake Plain ... F144AY020MA – Very Wet Coastal Lake Plain**
- 5b. **Glaciated parent material ice-deposited (glacial till)**
  - 21a. **Soils well drained to excessively drained**
    - 22a. **Soils somewhat excessively to excessively drained**
      - 23a. **Soils shallow (< 50cm) to bedrock – Shallow Dry Till Uplands ... F144AY033MA – Shallow Dry Till Uplands**
      - 23b. **Soils moderately deep or deep to bedrock – Dry Till Uplands ... F144AY032NH – Dry Till Uplands**
    - 22b. **Soils well drained**
      - 24a. **Soils nutrient rich; higher base saturation**
        - 25a. **Soils shallow (< 50cm) to bedrock – Shallow Semi-rich Well Drained Till Uplands ... F144AY035MA – Shallow Semi-Rich Well Drained Till Uplands**
        - 25b. **Soils moderately deep or deep to bedrock – Semi-rich Well Drained Till Uplands ... F144AY036NY – Semi-Rich Well Drained Till Uplands**
      - 24b. **Soils not nutrient rich; lower base saturation**

**26a. Soils moderately deep to densic contact -Well Drained Dense Till Uplands ... F144AY007CT**  
– Well Drained Dense Till Uplands

**26b. Soils deep to contact – Well Drained Till Uplands ... F144AY034CT** – Well Drained  
Till Uplands

**21b. Soils moderately well to very poorly drained**

**27a. Soils moderately well drained**

**28a. Soils nutrient rich; higher base saturation – Semi-rich Moist Till Uplands ... F144AY038NY** –  
Semi-Rich Moist Till Uplands

**28b. Soils not nutrient rich; lower base saturation**

**29a. Soils moderately deep to densic contact – Moist Dense Till Uplands ... F144AY037MA** –  
Moist Dense Till Uplands

**29b. Soils deep to contact – Moist Till Uplands ... F144AY008CT** – Moist Till Uplands

**27b. Soils poorly to very poorly drained**

**30a. Soils poorly drained**

**31a. Soils nutrient rich; higher base saturation – Semi-rich Wet Till Depressions ... F144AY039NY**  
– Semi-Rich Wet Till Depressions

**31b. Soils not nutrient rich; lower base saturation – Wet Till Depressions ... F144AY009CT** –  
Wet Till Depressions

**30b. Soils very poorly drained**

**32a. Soils nutrient rich; higher base saturation – Semi-rich Very Wet Till Depressions ...**  
F144AY040NY – Semi-Rich Very Wet Till Depressions

**32b. Soils not nutrient rich; lower base saturation – Very Wet Till Depressions ... F144AY041MA**  
– Very Wet Till Depressions

**4b. Parent material Alluvium; landform a floodplain**

**33a. Soils excessively drained to well drained**

**34a. Soils excessively drained – High Floodplain Levee ... F144AY006CT** – High Floodplain Levee

**34b. Soils well drained - Sandy High Floodplain ... F144AY010NH** – Sandy High Floodplain

**33b. Soils moderately well drained to very poorly drained**

**35a. Soils moderately well drained – Sandy Low Floodplain ... F144AY012CT** – Sandy Low  
Floodplain

**35b. Soils poorly to very poorly drained**

**36a. Soils poorly drained**

**37a. Soil texture coarse-sandy – Wet Sandy Low Floodplain ... F144AY014CT** – Wet Sandy  
Low Floodplain

**37b. Soil texture coarse-silty – Wet Silty Low Floodplain ... F144AY015NY** – Wet Silty Low  
Floodplain

**36b. Soils very poorly drained – Very Wet Low Floodplain F144AY016MA ... F144AY016MA – Very Wet Low Floodplain**

**3Bb. Soils with organic layer ("O" horizon) ? 40 cm (16") in thickness – Organic Soils**

**38a. Soils formed in freshwater environments**

**39a. Wetland mineralogy nutrient rich; euic soil reaction class – Semi-rich Organic Wetlands ... F144AY042NY – Semi-Rich Organic Wetlands**

**39b. Wetland mineralogy nutrient poor; dysic soil reaction class – Acid Organic Wetlands ... F144AY043MA ... F144AY043MA – Acidic Organic Wetlands**

**38b. Soils formed in salt/brackish environments**

**40a. Tidally flooded daily – Tidal Low Marsh ... R144AY002CT – Tidal Salt High Marsh mesic very frequently flooded**

**40b. Tidally flooded twice a month – Tidal High Marsh ... R144AY001CT – Tidal Salt Low Marsh mesic very frequently flooded**

**2b. Soils anthropogenic (Human Altered Human Transported [HAHT] -Urban Soils**

**41a. HAHT material dredged**

**42a. Soils excessively to moderately well drained - Dredgic Material**

**42b. Soils somewhat poorly to poorly drained - Wet Dredgic Material**

**41b. HAHT material not dredged; either methanogenic, combustic, spolic, or pauciartifactic, or artifactic**

**43a. HAHT material methanogenic (landfill soils) – Landfills**

**43b HAHT material not methanogenic; either combustic, spolic, pauciartifactic & artifactic**

**44a. HAHT material combustic (coal combustion)**

**45a. Soils somewhat excessively drained to moderately well drained – Ashy**

**45b. Soils somewhat poorly to poorly drained – Wet Ashy**

**44b. HAHT material not combustic; either spolic or pauciartifactic & artifactic**

**46a. Soils spolic (clean fill, <10% artifacts) - Clean Fill**

**46b. Soils pauciartifactic & artifactic (>10% artifacts, mostly construction debris) – Artifactic**

**1b. Soils permanently (>21hrs/day) submerged in water - Subaqueous Soils**

**47a. Soils formed in freshwater**

**48a. Soils formed in submerged mineral deposits - Subaqueous Freshwater Mineral Deposits ... R144AY045RI – Subaqueous Freshwater Mineral Deposits**

**48b. Soils formed in submerged organic deposits - Subaqueous Freshwater Organic Deposits ... R144AY046RI – Subaqueous Freshwater Organic Deposits**

**47b. Soils formed in salt and/or brackish water**

**49a. Soils formed in submerged glacial deposits - Subaqueous Haline Glacial Deposits ... R144AY049RI – Subaqueous Haline Slopes**

**49b. Soils formed in marine or estuarine deposits**

**50a. Soils formed in low energy environments (lagoon & bay bottoms, stream valleys, coves) - Subaqueous Haline Low Energy Basins ... R144AY048RI – Subaqueous Haline Low Energy Basins**

**50b. Soils formed in high energy environments**

**51a. Landform a washover fan slope - Subaqueous Haline Slopes ... R144AY049RI – Subaqueous Haline Slopes**

**51b. Landform a washover fan flat or flood tidal delta flat - Subaqueous Haline Flats ... R144AY050RI – Subaqueous Haline Flats**

key2 . Key 2 is a strict dichotomous key w/ paired couplets. 7 HAHT PES were added as reserves to be developed in EDIT (NBarrett)

## **MLRA 144A Outline**

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### **I. Soils permanently (>21hrs/day) submerged in water**

#### **A. Soils formed in freshwater**

**1 Soils formed in submerged organic deposits ... R144AY046RI – Subaqueous Freshwater Organic Deposits**

**2 Soils formed in submerged mineral deposits ... R144AY045RI – Subaqueous Freshwater Mineral Deposits**

#### **B. Soils formed in salt and/or brackish water**

**1 Soils formed in submerged glacial deposits ... R144AY047RI – Subaqueous Haline Glacial Deposits**

**2 Soils formed in marine or estuarine deposits**

**i. Soils formed in low energy environments (lagoon & bay bottoms, stream valleys, coves) ... R144AY048RI – Subaqueous Haline Low Energy Basins**

**ii. Soils formed in high energy environments**

**a. Landform a washover fan flat or flood tidal delta flat ... R144AY050RI – Subaqueous Haline Flats**

**b. Landform a washover fan slope ... R144AY049RI – Subaqueous Haline Slopes**

### **II. Soils not permanently submerged in water**

#### **A. Soils with organic layer ("O" horizon) ? 16" in thickness**

**1 Soils formed in freshwater environments**

**i. Wetland mineralogy nutrient poor; Dysic soil reaction class ... F144AY043MA – Acidic Organic Wetlands**

**ii. Wetland mineralogy nutrient rich; Euic soil reaction class ... F144AY042NY – Semi-Rich Organic Wetlands**

**2 Soils formed in salt/brackish environments**

**i. Tidally flooded daily ... R144AY001CT – Tidal Salt Low Marsh mesic very frequently flooded**

**ii. Tidally flooded twice a month ... R144AY002CT – Tidal Salt High Marsh mesic very frequently flooded**

**B. Soils without organic layer ("O" horizon) or organic layer < 16" in thickness**

**1 Parent material alluvium; landform a floodplain**

- i. Soils excessively drained ... F144AY006CT – High Floodplain Levee**
- ii. Soils well, moderately well, somewhat poorly, poorly or very poorly drained**
  - a. Soils hydric; drainage class somewhat poorly, poorly or very poorly drained**
    - 1) Soils very poorly drained ... F144AY016MA – Very Wet Low Floodplain
    - 2) Soils somewhat poorly or poorly drained
  - b. Soils not hydric; drainage class well, moderately well**
    - 1) Soils well drained
      - a) Soil texture coarse-silty
      - b) Soil texture coarse-loamy ... F144AY010NH – Sandy High Floodplain
    - 2) Soils moderately well drained
      - a) Soil texture coarse-silty
      - b) Soil texture coarse-loamy ... F144AY012CT – Sandy Low Floodplain

**2 Parent material glacial till, glaciofluvial, or glaciolacustrine; landform not a floodplain**

- i. Parent material glaciolacustrine**
  - a. Soils well drained ... F144AY017NH – Well Drained Lake Plain**
  - b. Soils moderately well, somewhat poorly, poorly or very poorly drained.**
    - 1) Soils moderately well and somewhat poorly drained ... F144AY018NY – Moist Lake Plain
    - 2) Soils poorly or very poorly drained
      - a) Soils poorly drained ... F144AY019NH – Wet Lake Plain
      - b) Soils very poorly drained ... F144AY020MA – Very Wet Coastal Lake Plain
- ii. Parent material glacial till or glaciofluvial**
  - a. Soils extremely to moderately acid ... F144AY022MA – Dry Outwash**
  - b. Soils moderately acid to moderately alkaline ... F144AY021MA – Semi-Rich Dry Outwash**

**3 Soil depth < 20" to Bedrock**

- i. Bedrock lithology limestone**
- ii. Bedrock lithology granite, gneiss, or schist**