

PRIME and IMPORTANT FARMLANDS OF RHODE ISLAND

For more information visit: <http://www.ri.nrcs.usda.gov/technical/soils.html>

Title V Definitions:

http://www.access.gpo.gov/nara/cfr/waisidx_00/7cfr657_00.html

Introduction

The Natural Resources Conservation Service (NRCS) is committed to the management and maintenance of the resource base that supports the productive capacity of American Agriculture. This management and maintenance includes identifying of the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops. Prime farmland information is supplemented with separate designations of soil map units that have statewide, local, or unique importance as farmland capable of producing these crops.

The USDA - Natural Resources Conservation Service (NRCS) and the Rhode Island Department of Administration's Division of Planning have identified those lands in Rhode Island that have a combination of physical and chemical features that make them best suited for farming. These "Important Farmlands" are subdivided into: 1) "Prime Farmlands" which are the best soils for agricultural use, and 2) "Additional Farmlands of Statewide Importance" which are other soils that are less well suited for intensive farming but are still valuable for many farm enterprises.

No "Unique" or "locally important" farmlands have been identified in Rhode Island.

The Important Farmland soil map units listed on the following pages are taken from the "Soil Survey of Rhode Island" (USDA - Natural Resources Conservation Service, July 1981). To Qualify as an area of Important Farmland, the land must be available for agricultural use, but need not currently be farmed. The term "available" means the land must not have been physically converted to a land use that makes it impossible to farm in the future, such as a residential subdivision. The availability of the land is not dependent on the owner's intentions or plans, but rather on the physical condition of the land.

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(A) Prime Farmlands

(1) General: Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, range-land, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. Examples of soils that qualify as prime farmland are Palouse silt loam, 0 to 7 percent slopes; Brookston silty clay loam, drained; and Tama silty clay loam, 0 to 5 percent slopes.

(2) Specific Criteria: Prime farmlands meet all the following criteria. 1. Terms used in this section are defined in USDA publications. "Soil Taxonomy, Agriculture Handbook 436", "Soil Survey Manual, Agriculture Handbook 18", "Rainfall-erosion Losses From Cropland, Agriculture Handbook 282", "Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss, Agriculture Handbook 346"; and "Saline and Alkali Soils, Agriculture Handbook 60."

(i) The soils have:

(a) Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a depth of 40 inches (1 meter), or in the root zone (root zone is

the part of the soil that is penetrated or can be penetrated by plant roots) if the root zone is less than 40 inches deep, to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugar beets, sugarcane, vegetables, tobacco, orchard, vineyard, and bush fruit crops) adapted to the region in 7 or more years out of 10; or

(b) Xeric or ustic moisture regimes in which the available water capacity is limited, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; or,

(c) Aridic or torric moisture regimes, and the area has a developed irrigation water supply that is dependable and of adequate quality; and,

(ii) The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded) These are soils that, at a depth of 20 inches (50 cm), have a mean annual

temperature higher than 32 deg. F (0 deg. C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47 deg. F (8 deg. C); in soils that have no O horizon, the mean summer temperature is higher than 59 deg. F (15 deg. C); and,

(iii) The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep; and,

(iv) The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and,

(v) The soils can be managed so that, in all horizons within, a depth of 40 inches (1 meter) or in the root zone. If the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15; and,

(vi) The soils are not flooded frequently during the growing season (less often than once in 2 years); and,

(vii) The product of K (erodibility factor) x percent slope is less than 2.0, and the product of I (soils erodibility) x C (climatic factor) does not exceed 60; and

(viii) The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50 cm) and the mean annual soil temperature at a depth of 20 inches (50 cm) is less than 59 deg. F (15 deg. C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59 deg. F (15 deg. C) or higher; and,

(ix) Less than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm).

(B) Unique Farmland

(1) General. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.

(2) Specific characteristics of unique farmland

(i) Is used for a specific high-value food or fiber crop.

(ii) Has a moisture supply that is adequate for the specific crop. The supply is from stored moisture, precipitation, or a developed irrigation system.

(iii) Combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, aspect, or other conditions, such as nearness to market, that favor the growth of a specific food or fiber crop.

(C) Additional Farmland of Statewide Importance

This is land, in addition to prime and unique farmland, that is of statewide importance for the production of food, feed, fiber, forage, and oil seed crops. Criteria for defining and delineating this land are to be determined by the appropriate state agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some states, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state law.

Special note: In Rhode Island, all soils that meet the "Prime Farmland" criteria are also included in the "Additional Farmland of Statewide Importance" category. The inclusion of these soils in the list of Additional Lands of Statewide Importance" by the U.S. Dept. of Agriculture resulted from a May 1985 request by the RI Department of Administration's Division of Planning seeking to have the Prime Farmlands afforded the additional protection given to Statewide Importance Farmlands.

Soil Map Units That Qualify as Prime Farmland

From: "Soil Survey of Rhode Island" (correlated and published, 1981)

Check the Soil Data Mart for Official Updates to the List:
<http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=RI600&UseState=RI>

Map Unit	Map Unit Name
AfA	Agawam fine sandy loam, 0 to 3 percent slopes
AfB	Brichwood sandy loam, 3 to 8 percent slopes
Bc	Birchwood sandy loam
BhA	Bridgehampton silt loam, 0 to 3 percent slopes
BmA	Bridgehampton silt loam, till substratum, 0 to 3 percent slopes
BrA	Broadbrook silt loam, 0 to 3 percent slopes
BrB	Broadbrook silt loam, 3 to 8 percent slopes
CdA	Canton and Charlton fine sandy loams, 0 to 3 percent slopes
CdB	Canton and Charlton fine sandy loams, 3 to 8 percent slopes
EfA	Enfield silt loam, 0 to 3 percent slopes
MmA	Merrimac sandy loam, 0 to 3 percent slopes
MmB	Merrimac sandy loam, 3 to 8 percent slopes
NaA	Narragansett silt loam, 0 to 3 percent slopes
NaB	Narragansett silt loam, 3 to 8 percent slopes
NeA	Newport silt loam, 0 to 3 percent slopes
NeB	Newport silt loam, 3 to 8 percent slopes
Nt	Ninigret fine sandy loam
PaA	Paxton fine sandy loam, 0 to 3 percent slopes
PaB	Paxton fine sandy loam, 3 to 8 percent slopes
PmA	Pittstown silt loam, 0 to 3 percent slopes
PmB	Pittstown silt loam, 3 to 8 percent slopes
Pp	Podunk fine sandy loam
PsA	Poquonock loamy fine sand, 0 to 3 percent slopes
PsB	Poquonock loamy fine sand, 3 to 8 percent slopes
RaA	Rainbow silt loam, 0 to 3 percent slopes
RaB	Rainbow silt loam, 3 to 8 percent slopes
ScA	Scio silt loam, 0 to 3 percent slopes
Ss	Sudbury sandy loam
StA	Sutton fine sandy loam, 0 to 3 percent slopes
StB	Sutton fine sandy loam, 3 to 8 percent slopes
Tb	Tisbury silt loam
WhA	Wapping silt loam, 0 to 3 percent slopes
WbB	Wapping silt loam, 3 to 8 percent slopes
WhA	Woodbridge fine sandy loam, 0 to 3 percent slopes
WhB	Woodbridge fine sandy loam, 3 to 8 percent slopes

NOTE: All the "Prime Farmland" soil map units listed above are also designated as "Additional Land of Statewide Importance". (See the definition of Additional Land of Statewide Improvement.)

**Soil Map Units That Qualify as
Additional Farmland of Statewide Importance**

From: "Soil Survey of Rhode Island"
(correlated and published, 1981)

Check the Soil Data Mart for Official Updates to the List:
<http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=RI600&UseState=RI>

Map Unit	Map Unit Name
BhB	Bridgehampton silt loam, 3 to 8 percent slopes
BmB	Bridgehampton silt loam, till substratum, 3 to 8 percent slopes
CdC	Canton and Charlton fine sandy loams, 8 to 15 percent slopes
Dc	Deerfield loamy fine sand
EfB	Enfield silt loam, 3 to 8 percent slopes
GBC	Gloucester-Bridgehampton complex, rolling
HkA	Hinckley gravelly sandy loam, 0 to 3 percent slopes
HkC	Hinckley gravelly sandy loam, rolling
HnC	Hinckley-Enfield complex, rolling
NeC	Newport silt loam, 8 to 15 percent slopes
QoA	Quonset gravelly sandy loam, 0 to 3 percent slopes
QoC	Quonset gravelly sandy loam, rolling
Rc	Raypol silt loam
Re	Ridgebury fine sandy loam
Ru	Rumney fine sandy loam
Se	Stissing silt loam
Wa	Walpole sandy loam
WgA	Windsor loamy sand, 0 to 3 percent slopes
WgB	Windsor loamy sand, 3 to 8 percent slopes

NOTE: All the "Prime Farmland" soil map units listed above are also designated as "Additional Land of Statewide Importance". (See the definition of Additional Land of Statewide Improvement.)