

ZONING

250 Attachment 8

Town of Mount Hope

Appendix A Table of Soil Groups

GROUP I. SOILS DEVELOPED IN SANDS AND GRAVEL, NEARLY LEVEL THROUGH SLOPING

- A. Characteristics: The soils in this group are excessively well through well-drained, medium and coarse-textured and are formed in glacial outwash plains, terraces and stream valleys. They are underlain by water-deposited beds of sand, or sand and gravel. These soils have moderately rapid to very rapid permeability. The seasonal high water table and bedrock are below six feet. Slope ranges from 0% through 15%. Soils included in this group are: CnA, CnB, CnC, HoA, HoB, HoC, OkA, OkB, OtB, OtC, RhA, RhB, RhC.
- B. Use and Requirements:
- 1) These soils may be used for on-site septic systems that are adequately designed. These soils have slight limitations for septic systems on “A” and “B” slopes and moderate limitations on “C” slopes.
 - 2) Buildings with and without basements may be installed on these soils. These soils have slight limitations for homesites with and without basements on “A” and “B” slopes and moderate limitations on “C” slopes.
 - 3) Erodibility on these soils is low to medium and may be a problem on the steeper “C” slopes.

GROUP II. SOILS DEVELOPED IN VERY FINE SANDS AND SILTS, NEARLY LEVEL TO GENTLY SLOPING

- A. Characteristics: The soils in this group are well-drained and may occur in areas where glacial lake sediments have accumulated. These sediments contain very fine sands and silts. These soils are moderately permeable and have a high seasonal water table of six feet plus. Bedrock generally occurs at six feet plus. Slope ranges from 0% through 8%. Soils included in this group are: AdA, AdB, UnB.
- B. Use and Requirements:
- 1) These soils may be used for on-site septic systems that are adequately designed. These soils have slight limitations for septic systems.
 - 2) Buildings with and without basements may be installed on these soils. These soils have slight limitations for homesites with and without basements.

MOUNT HOPE CODE

- 3) Erodibility on these soils is high and may be a problem on all slopes.

GROUP III. SOILS DEVELOPED IN COARSE SILTS AND LOAM WITH A FIRM BASAL TILL LAYER, NEARLY LEVEL THROUGH SLOPING

- A. Characteristics: The soils in this group are well-drained, medium to moderately coarse-textured, and are developed in thick glacial till deposit of the upland. These soils are moderately permeable in the upper 30 inches and slowly permeable below 30 inches. The water table and bedrock are generally six feet or deeper. Slope ranges from 0% to 15%. Soils included in this group are: ChB, ChC, PtB, PtC.
- B. Use and Requirements:
 - 1) These soils may be used for on-site septic systems that are adequately designed. These soils have moderate limitations for septic systems.
 - 2) Buildings with and without basements may be installed on these soils. These soils have slight to moderate limitations for homesites.
 - 3) Erodibility on these soils is low to medium and erosion may be a problem on the "C" slopes.

GROUP IV. SOILS DEVELOPED IN COARSE SILTS AND LOAM WITH A FIRM FRAGIPAN, NEARLY LEVEL THROUGH SLOPING

- A. Characteristics: The soils in this group are well to moderately-well-drained, and occur mostly on the tops and sides of drumlin hills. The soils are underlain by compact glacial till, and have a fragipan 16 inches to 30 inches below the soil surface. These soils are moderately through very slowly permeable and have a seasonal high water table at 1 1/2 feet through four feet. Bedrock is usually below six feet. Soils included in this group are: CgA, CgB, MdB, MdC, SwB, SwC, WuB, WuC.
- B. Use and Requirements:
 - 1) These soils may be used for on-site septic systems that are adequately designed to overcome the noted limitations. These soils have moderate to severe, and severe limitations for on-site septic systems. The Mardin (Md) and Swartswood (Sw) soils have a slowly permeable layer at 24 inches to 30 inches, and the Wurtsboro (Wu) and Castile (Cg) soils have a slowly permeable layer at 16 inches to 24 inches. If the well-drained layers are removed during the grading, or if the systems are installed below the well-drained layers, problems can be expected.

On-site investigation is necessary to determine site conditions, with special attention given to time of year, and field conditions under which tests are taken. (See New York State Department of Health bulletins.)

ZONING

- 2) Buildings with and without basements may be installed on these soils. In cases where buildings are installed deeper than four feet on the Mardin and Swartswood, and three feet on the Wurtsboro, a free-flowing outlet should be provided. These soils have slight to moderate limitations for buildings. The Castile soils are influenced by the seasonal high table and position in the landscape.
- 3) Erodibility is low to medium on these soils and erosion may be a problem on the “C” slopes.

GROUP V. SOILS DEVELOPED IN HEAVY SILTS AND CLAYS, NEARLY LEVEL TO GENTLY SLOPING

- A. Characteristics: The soils in this group are moderately well-drained, and occur in areas where glacial lake sediments have accumulated. These sediments contain clay and heavy silts. These soils are slowly permeable, very unstable, and have a very high shrink rate and swell potential. The water table is from 1 1/2 feet to 3 feet. Bedrock is generally below six feet. Slope ranges from 0% to 8%. Soils included in this group are: CoB, ScA, ScB.
- B. Use and Requirements:
 - 1) These soils may be used for septic systems, if it is proven that the limitations, as stated in the Soils Interpretation Report for Orange County, have been or will be overcome. These soils have severe limitations for septic systems.
 - 2) Buildings with and without basements may be installed on these soils. In cases where basements are constructed at depths greater than three feet, adequate foundation drainage to a free outlet should be provided. These soils have slight through severe limitations for homesites.
 - 3) Erodibility on these soils is high, and erosion may be a problem on all slopes.

GROUP VI. SOILS DEVELOPED IN MEDIUM SANDS AND SILTS, INFLUENCED BY BEDROCK AND SURFACE STONES, NEARLY LEVEL THROUGH SLOPING

- A. Characteristics: The soils in this group are well to moderately well-drained, and occur on the tops and sides of drumlin hills. The soils are underlain by compact glacial till and have a fragipan that ranges from 16 inches to 30 inches. The soils in this group have a surface stoniness condition and shallowness to bedrock problem. On-site investigation is a must on these soils. Slope ranges from 0% to 15%. Soils included in this group are: BnB, BnC, CLC, SXC.
- B. Use and Requirements:
 - 1) In cases where deep pockets of Bath soils are found in the Bath-Nassau complex unit (Bn), these soils may be used for on-site septic systems, if adequately designed. On-site septic systems may also be used in cases where the extreme stoniness of the

MOUNT HOPE CODE

Swartswood (SxC) soils is found to be only a surface condition. On-site investigation is necessary to determine the extent of stoniness or the bedrock condition of these soils. The soils have severe limitations for septic systems.

- 2) Buildings with and without basements may be installed on these soils, if adequate foundation drainage is provided to a free-flowing outlet. These soils have moderate to severe limitations for homesites.
- 3) Erodibility on these soils is low to medium. Erosion may be a problem on the "C" slopes.

GROUP VII. SOILS DEVELOPED IN SILTS, CLAYS AND VERY FINE SANDS THAT ARE WET, NEARLY LEVEL TO GENTLE SLOPING

- A. Characteristics: The soils in this group are somewhat poorly drained, and occur in concave areas in the glacial till upland. These soils are very fine sands through silty clay loam texture. Permeability is slow to very slow. The seasonal high water table is 1/2 to 1 1/2 feet. Bedrock is generally six feet plus. These soils are subject to ponding. Soils included in this group are: ErA, ErB, ESB, Fd, Ra, RbA, RbB.
- B. Use and Requirements:
 - 1) Septic systems shall not be installed on these soils (See the Soils Interpretation Report for Orange County.) Exemption from this section may be granted by the Planning Board on one-lot subdivisions if the applicant can prove, to the satisfaction of the Board, that the system will be able to function with no problems.
 - 2) Homesites with basements shall not be installed on these soils. Homesites without basements may be installed, if adequate drainage is provided to a free-flowing outlet.
 - 3) Erosion on these soils ranges from low to high.
 - 4) Fredon (Fd) and Raynham (Ra) are placed in this group, but, in some cases, these soils are subject to ponding and flooding. On-site investigation is necessary to determine the location of these soils on the landscape.

GROUP VIII. SOILS DEVELOPED IN SILTS THAT ARE INFLUENCED BY BEDROCK NEARLY LEVEL THROUGH SLOPING

- A. Characteristics: The soils in this group occur mostly in rougher areas of upland. The soils are underlain by hard bedrock, and some areas contain exposed rock outcrops. In most places, hard rock is found from 20 inches to 40 inches below the soil's surface. Permeability is moderate to slow above the bedrock. Where limestone bedrock occurs, severe cracks and voids in the rock must be considered. Slope ranges from 0% to 15%. Soils included in this group are: ANC, FAC, HLC, LdB, LdC, RKC, ROC, RMC, RSB.

ZONING

B. Use and Requirements:

- 1) Septic systems shall not be installed on these soils. Exemption from this section may be granted by the Planning Board on one-lot subdivisions if the applicant can prove, to the satisfaction of the Board, that the system will be able to function with no problems.
- 2) Homesites may be installed on these soils, but adequate foundation drainage should be provided to a free-flowing outlet.
- 3) Erodibility on these soils is low to medium. Erosion may be a problem on the “C” slopes.

GROUP IX. SOILS DEVELOPED IN SILTS, CLAY AND VERY FINE SANDS THAT POND, NEARLY LEVEL

A. Characteristics: The soils in this group are poorly to very poorly drained, with a seasonal high water table at 0 foot to 1/2 foot. These soils are located in flat concave areas on the landscape. Permeability is very slow. A ponding condition will occur during most of the year. In some areas, these soils are located along streams and are subject to infrequent flooding. Slope ranges from 0% to 3%. Soils included in this group are: Ab, AC, Ca, Ha, Ma, Sb.

B. Use and Requirements:

- 1) Septic systems shall not be installed on these soils.
- 2) Buildings shall not be installed on these soils. These are ponding soils and give temporary storage during heavy rainfalls. In cases where buildings are installed on these soils, the storage eliminated by draining these areas should be replaced with holding ponds so as not to increase runoff to areas below.

GROUP X. SOILS DEVELOPED IN VERY FINE SANDS AND SILTS THAT FLOOD, NEARLY LEVEL

A. Characteristics: The soils in this group are nearly level and are in the floodplains of stream valleys. All these soils are subject to flooding with the lower-lying, poorly drained soils being flooded most frequently. The seasonal high water table fluctuates with the stream level. Permeability is moderate through very slow. Slope ranges from 0% to 3%. Soils included in this group are: Be, My, Tg, Su, Uf, Wa, Wd.

B. Use and Requirements:

- 1) These soils shall not have septic systems installed on them.
- 2) Buildings with and without basements shall not be constructed on these soils.

MOUNT HOPE CODE

Note: Fredon (Fd) and Raynham (Ra) soils are placed in Group VII, but, in some cases, these soils are located along small streams and are subject to ponding and flooding. On-site investigation is necessary to determine the location of these soils on the landscape.

GROUP XI. SOILS DEVELOPED IN VERY FINE SANDS, HEAVY SILTS AND CLAYS, GENTLY SLOPING

- A. Characteristics: The soils in this group are well to moderately well-drained, and occur in areas where glacial lake sediments have accumulated. These sediments are in layers composed of silts, very fine sands and clay. These soils are slowly permeable, very unstable and have a high shrink and swell potential. The water table ranges from 1 1/2 feet to six feet. Erosion and sluffing on these soils is severe. Slope ranges from 8% to 15%. Soils included in this group are: CoC, UnC.
- B. Use and Requirements:
- 1) These areas shall not be used for on-site septic systems except in cases where it can be proven that erosion and sluffing will not occur, or necessary measures have been taken to prevent them.
 - 2) Buildings with and without basements shall not be installed on these soils, except in cases where it can be proven that erosion and sluffing will not occur, or necessary measures have been taken to prevent them.
 - 3) Erodibility on these soils is high, and erosion and sluffing may be a severe problem.

GROUP XII. SOILS DEVELOPED IN SANDS AND SILTS THAT ARE INFLUENCED BY STEEP SLOPES, MODERATELY STEEP TO STEEP

- A. Characteristics: The soils in this group are all soils that occur on slopes ranging from 15% through 25%. Slope percentages in some units are combined. The range of these soils is 15% through 35%. These soils rated rapid for surface runoff. Soils included in this group are: AND, ANF, CLD, HLD, HOD, MdD, NaD, OtD, PtD, RhD, RKD, RMD, ROD, RSD, SwD, SXD.
- B. Use and Requirements:
- 1) Septic systems shall not be installed on these soils.
 - 2) Buildings shall not be constructed on these soils, except in cases where 50% of the area where the buildings are to be constructed is less than 15% slope or if 4,000 square feet of buildable area is less than 15% slope.
 - 3) Erodibility on these soils is low to medium, and erosion may be a problem on the "C" slopes.

ZONING

GROUP XIII. SOILS DEVELOPED IN SANDS, SILTS AND CLAYS THAT ARE DOMINATED BY VERY STEEP SLOPES

- A. Characteristics: The soils in this group are all soils that occur on slopes ranging from 25% through 45%. These soils are rated very rapid for surface runoff. Soils included in this group are: CoD, OVE, MNE, RKF, ROF, RSF, SXF.
- B. Use and Requirements:
 - 1) Septic systems shall not be installed on these soils.
 - 2) Buildings shall not be installed on these soils.
 - 3) Erodibility is a problem on steep slopes.

GROUP XIV. SOILS DEVELOPED IN ORGANIC MATERIAL, NEARLY LEVEL

- A. Characteristics: The soils in this group occur in depressional areas where surface organic materials are generally five feet or greater. These areas are subject to either flooding or ponding, and are covered with water most of the year. Soils included in this group are: Cd, Ce, Pa, Pb.
- B. Use and Requirements:
 - 1) These soils shall not have septic systems installed on them.
 - 2) Buildings (other than those that are agriculturally related) shall not be installed on these soils.
 - 3) These soils are best suited for agricultural use.

GROUP XV. WATER BODIES AND MARSHLAND

- A. Characteristics: This group consists of marshland and water bodies within Orange County. The marshland has approximately 1 foot to 2 feet of water during most of the year. All ponds and lakes are also included in this group. Soils and mapping units in this group are Cf, HH, water.