

CONSTRUCTION MATERIALS

Beginning in 1989, New Hampshire State law mandated that local master plans include a section which addresses construction materials. The amended statute, NHRSA §674:2 VIII-a, requires the following:

"A construction materials section which summarizes known sources of construction materials which are available for future construction materials needs, including, at a minimum, the location and estimated extent of excavations which have been granted permits under NHRSA §155-E, as well as reports filed pursuant to NHRSA §155-E:2, I(d) with respect to non-permitted excavations."

The purpose of this chapter is to identify which construction materials are relevant in North Hampton and to depict the general location of such materials on the soil survey of Rockingham County prepared by the Natural Resources Conservation Service (NRCS). Other sources of information are also used where appropriate. The soil survey identifies deposits of roadfill, sand, gravel, and topsoil as construction materials.

The NRCS rates the performance of each soil type based on its physical characteristics and test data conducted during the soil survey. For each intended use of the soil, a soil potential rating is provided. The ratings of "good", "moderate", "fair", and "poor" are used for roadfill and topsoil. For sand and gravel, the soils are rated as "probable" or "improbable" as to the possibility of sand or gravel being present.

It should be noted that the soil maps are intended for general town wide land use planning. Due to the mapping techniques used, there may be different soil types within a mapped area of another soil type. Because of these limitations, the soil maps should not be used for site specific land use planning. Additionally, the development mosaic established in North Hampton further limits the useful application of soils maps, as development is likely the largest limiting factor for the extraction of construction materials. The information contained herein is not designed or intended to be used for definitive identification of construction materials.

The soil types that are likely to contain any of the four construction materials and are found in North Hampton are listed in **Table CM-1**. Each soil number and name is provided, as well as the number of acres of that type of soil found in North Hampton.

The source for the soil information is the SCS soil map as digitized by Complex Systems of the University of New Hampshire and provided to the Rockingham Planning Commission in digital format. Calculations of the number of acres for each soil type are based on this digital information. Each of the four types of construction materials are listed in **Table CM-1**. For roadfill and topsoil, if a soil has a rating of good or moderate, it was indicated. For sand and gravel, only the probable rating is listed. Only the soils that had a good, moderate or probable rating in any category were included in the table.

Table CM-1: Soil Potential Ratings for Construction Materials

Soil Symbol	Name	Description	Acreage	Road	Sand	Gravel	Topsoil
12A	Hinckley	fine sandy loam	22.1	Good	Prob.	Prob.	Mod.
12B	Hinckley	fine sandy loam	19.4	Good	Prob.	Prob.	Mod.
29B	Woodbridge	loamy sand	15.2	Good	Prob.	Prob.	Mod.
32A	Boxford	silt, loam	199.5	Good	Prob.	Prob.	Good
32B	Boxford	silt, loam	125	Good	Prob.	Prob.	Good
33A	Scitico	silt, loam	417.2	Mod.	-	-	-
38A	Eldridge	fine sandy loam	170.8	Good	Prob.	-	-
38B	Eldridge	fine sandy loam	112.3	Good	Prob.	-	-
42B	Canton	gravelly, sandy loam	99.1	Good	-	-	Mod.
43B	Canton	gravelly, sandy loam	119.4	Good	-	-	Mod.
43C	Canton	gravelly, sandy loam	31.2	Good	-	-	Mod.
62B	Charlton	fine sandy loam	4.2	Good	-	-	-
63B	Charlton	fine sandy loam	36.6	Good	-	-	-
63C	Charlton	fine sandy loam	31.4	Good	-	-	-
63D	Charlton	fine sandy loam	2.1	-	-	-	Mod.
66B	Paxton	fine sandy loam	15.8	Good	-	-	-
66C	Paxton	fine sandy loam	3.8	Good	-	-	-
67B	Paxton	fine sandy loam, stony	22.0	Good	-	-	-
67C	Paxton	fine sandy loam, stony	11.8	Good	-	-	-
115	Scarboro	muck	42.4	-	Prob.	-	-
125	Scarboro	stony muck	14.3	-	Prob.	-	-
305	Lim-Pootatuck	floodplain soils	18.1	-	Prob.	-	-

Table CM-1: continued

Soil Symbol	Name	Description	Acreage	Road	Sand	Gravel	Topsoil
313A	Deerfield	fine sandy loam	66.7	-	Prob.	-	-
313B	Deerfield	fine sandy loam	27.3	-	Prob.	-	-
314A	Pipestone	sand	223.5	-	Prob.	-	-
395	Chocorua	mucky peat	174.2	-	Prob.	-	-
446B	Scituate-Newfields	very stony	21.5	Good	Prob.	Prob.	Good
460B	Pennichuck	channery, sandy loam	77.0	Mod.	Prob.	Prob.	Good
497	Pawcatuck	mucky peat	34.5	-	Prob.	-	-
510A	Hoosic	gravelly, sandy loam	468.3	Good	Prob.	Prob.	-
510B	Hoosic	gravelly sandy loam	456.2	Good	Prob.	Prob.	-
510C	Hoosic	gravelly sandy loam	216.2	Good	Prob.	Prob.	-
510D	Hoosic	gravelly sandy loam	13.3	-	Prob.	-	-
531B	Scio	very fine sandy loam	46.8	-	Prob.	Prob.	-
538A	Squamscott	fine sandy loam	1,100.0	Mod.	-	-	-
546A	Walpole	very fine sandy loam	130.0	-	Prob.	Prob.	-
547A	Walpole	very fine sandy loam	155.0	-	Prob.	Prob.	-
547B	Walpole	very fine sandy loam	47.0	-	Prob.	Prob.	-
599	Urban Land-Hoosic	gravelly sandy loam	55.7	Good	Prob.	Prob.	-
799	Urban Land-Canton	gravelly sandy loam	18.3	Good	-	-	-

North Hampton's town boundaries encompass an area of 13.9 square miles (8,896 acres). Additionally, North Hampton has a number of ponds, rivers and tributaries, including the Winnicut River and Little River; these waterbodies contribute to the approximate 54.9 acres (or .61% of the total town acreage) of surface water in North Hampton. Based on these figures, approximately 99.4% of the town's area was reviewed for soil type and availability for construction use.

Roadfill

Table CM-1 reveals that twenty-three soils in North Hampton are rated as good for use as roadfill, while three soils rated moderate for the same use. These twenty-three soils total 2,275.8 acres. The largest single soil type classified as good for roadfill is the 510 A-C, Hoosic, which includes 1,140.7 acres in North Hampton.

Sand

Sand is a very valuable material used in many facets of construction. There are twenty-six soil types in North Hampton that the SCS have given a probable rating for the presence of sand. The total size of the potential sand producing soils is **2,952.3** acres. The 510 A-D, Hoosic is likely the largest single soil type in this category, with the 32 A-B, Boxford, being the second largest soil type.

Gravel

Gravel is a most sought after construction material for many types of industries. Due to the geology of North Hampton and much of the coastal region, gravel deposits are not very plentiful. In North Hampton, there are 15 soil types where gravel presence is rated as probable. This area covers a total of **2,068.2** acres. The existing deposits are relatively small and spread throughout the community, making it difficult to excavate in an economically beneficial manner, or in such a way as to avoid the degradation of the quality of life of North Hampton's residents. Again, the bulk of the probable gravel soils are from one soil type - the 510 A-D, Hoosic.

Topsoil

Topsoil deposits are the smallest of the four construction materials found in North Hampton. Only a handful of the soils were rated good or moderate for topsoil; **731.5** acres of the good or moderate rated lands for topsoil are found in North Hampton.

Existing Excavations

At present, there are no regularly active excavations in North Hampton nor have there been any excavations permitted under NHRSA §155-E in North Hampton within the past seven years. However, there are three grandfathered excavation sites in North Hampton, all three of which are almost entirely depleted. Two of these pits, Hobbs and Knowles, are located on Birch Road, and the third, Dustin, is located on Lovering Road.

Past Excavations

Several areas in North Hampton were excavated in the 1950s and 1960s, when Interstate 95 was being constructed. One of these reclaimed areas is now owned by the Town of North Hampton and used as a recreational area; Dearborn Park.

Identification of Stratified Drift Aquifers

The 1999, as part of this Master Plan update, the Water Resource Management and Protection Plan was updated and amended. Prepared originally in 1989 by the Rockingham Planning Commission, the Plan contains information on the stratified drift aquifers located in North Hampton. In 1990, the U.S.G.S. completed the most thorough and accurate study of the region's groundwater resources to date. The report is entitled, Geohydrology and Water Quality of Stratified Drift Aquifers in the Exeter, Lamprey, and Oyster River Basin, Southeastern NH. These two reports contain the best available information relating to the primary and secondary stratified drift aquifers within North Hampton.

Excavation Regulations

In the late 1980's, the North Hampton Planning Board adopted new Excavation Regulations that were based on a model developed by the Rockingham Planning Commission. These regulations incorporated all of the required provisions from NHRSA §155-E. Given the scarcity of large amounts of construction materials in North Hampton which are not already developed upon, and the resultant lack of excavation activity within the past ten years, the existing regulations appear to be adequate. In the future, however, these regulations could be updated to comply with any amendments to NHRSA §155-E. Furthermore, given the established development pattern in North Hampton, the Planning Board should give consideration to establishing areas or overlay districts in which excavation activities would not be permitted.

RECOMMENDATIONS:

1. Review and revise, as needed, the excavation regulations of the Town of North Hampton in accordance with amendments to NHRSA §155-E.
2. Review and take action to insure that existing and/or abandoned excavation areas are in compliance with NHRSA §155-E and/or applicable local regulations and that these facilities minimize environmental impacts to the surrounding properties.
3. Given the established development pattern in North Hampton, the Planning Board should give consideration to establishing areas or overlay districts in which excavation activities would not be permitted.