

## **Soil Descriptions - NATL Old Field Plots**

### **Grid Point EF2.5 (NW corner of Field A)**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand

15 - 38 cm; brown, loose, sand

38 - 130 cm; yellowish brown, loose, sand

130 - 150 cm; pale brown, loose, sand

### **Grid Point EF3**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand

15 - 32 cm; brown, loose, sand

32 - 115 cm; yellowish brown, loose, sand

115 - 150 cm; pale brown, loose, sand

### **Grid Point EF3.5**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand

15 - 28 cm; brown, loose, sand

28 - 105 cm; yellowish brown, loose, sand

105 - 150 cm; pale brown, loose, sand

### **Grid Point EF4 (SW corner of Field A, NW corner of Field C)**

Natural soils - Thick sands 1.38 m in thickness overlying loamy soils

(water table perched in the lower part of the sands above the loamy soils).

0 - 15 cm; dark grayish brown, loose, sand

15 - 22 cm; brown, loose, sand

22 - 74 cm; yellowish brown, loose, sand

74 - 110 cm; pale brown, loose, sand

110 - 138 cm; light brownish gray, loose, sand

138 - 150 cm; yellowish brown and light brownish gray, friable, sandy loam

**Grid Point EF4.5**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand

15 - 31 cm; brown, loose, sand

31 - 110 cm; yellowish brown, loose, sand

110 - 150 cm; pale brown, loose, sand

**Grid Point EF5**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand

15 - 24 cm; brown, loose, sand

24 - 90 cm; yellowish brown, loose, sand

90 - 124 cm; pale brown, loose, sand

124 - 150 cm; light brownish gray, loose, sand

**Grid Point EF5.5 (SW corner of Field C)**

Natural soils - Thin sands .7 m in thickness overlying loamy soils and sandy clay

0 - 12 cm; dark grayish brown, loose, sand

12 - 19 cm; brown, loose, sand

19 - 62 cm; pale brown, loose, sand

62 - 70 cm; light brownish gray, loose, sand

70 - 85 cm; yellowish brown and light brownish gray, friable, sandy clay loam

85 - 150 cm; gray and olive brown, firm, sandy clay

**Grid Point F2.5**

Highly disturbed soils with layers of clay > 36 cm in thickness that begin within a depth of 30 cm of the surface

0 - 15 cm; mixed dark brown, loose, sand and reddish brown, friable, sandy loam

15 - 88 cm; gray, very firm, clay with thin layers of brown, loose, sand

88 - 150 cm; gray and olive brown, firm, sandy clay with thin layer of reddish brown, friable, sandy clay loam

**Grid Point F3**

Natural soils - Thick sands 115 m in thickness overlying loamy soils

0 - 15 cm; dark grayish brown, loose, sand

15 - 23 cm; brown, loose, sand

23 - 65 cm; yellowish brown, loose, sand

65 - 82 cm; pale brown, loose, sand

82 - 115 cm; light brownish gray, loose, sand

115 - 150 cm; yellowish brown and light brownish gray, friable, sandy loam

**Grid Point F3.5**

Disturbed soils - mixed sands with chunks of greenish gray clay that begins near the surface and extends to a depth of 150 cm.

0 - 90 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of greenish gray, very firm, clay (about 40% chunks of clay).

90 - 150 cm; light brownish gray and brown, loose, sand mixed with chunks of gray and greenish gray, very firm, sandy clay and clay (about 25% sandy clay and clay).

**Grid Point F4**

Disturbed soils - mixed sands and loamy soils with chunks of gray and greenish gray sandy clay and clay that begins near the surface and extends to a depth of 150 cm. The chunks of clay increase in size and amount with depth.

0 - 96 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of grayish brown sandy clay loam (about 20%) with chunks of gray, very firm, sandy clay (15%) and greenish gray clay (about 25% chunks of clay).

96 - 150 cm; light brownish gray and brown, loose, sand mixed with large chunks of gray and greenish gray, very firm, clay (about 45% sandy clay and clay).

**Grid Point F4.5**

Disturbed soils - mixed sands with chunks of gray and greenish gray clay that begins near the surface and extends to a depth of 150 cm. The chunks of clay increase in size and amount with depth.

0 - 40 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of gray and greenish gray, very firm, clay (about 35% chunks of clay).

40 - 150 cm; light brownish gray and brown, loose, sand mixed with large chunks of gray and greenish gray, very firm, clay (about 45 to 60% clay).

**Grid Point F5**

Disturbed soils - mixed sands overlying gray and greenish gray clay with many phosphatic rocks. The clay begins at a depth of 25 cm and extends to a depth of 95 cm.

0 - 25 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with a few chunks of gray and greenish gray, very firm, clay (about 5% chunks of clay).

25 - 95 cm; Gray and greenish gray, very firm, clay (90% clay) with many white phosphatic rocks.

95 - 150 cm; pale brown, loose, sand (natural soils).

**Grid Point F5.5**

Natural soils - Thick, yellowish brown and pale brown sands > 1.5 m in thickness

0 - 15 cm; dark grayish brown, loose, sand (a very small amount of loamy soils mixed with the sands in the upper 10 cm.

15 - 28 cm; brown, loose, sand

28 - 115 cm; yellowish brown, loose, sand

115 - 135 cm; pale brown, loose, sand

135 - 150 cm; light brownish gray, loose, sand

**Grid Point FG2.5**

Highly Disturbed soils – layers of very dense clay extended from a depth of 20 cm to 150 cm.

0 - 20 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of gray and greenish gray, very firm, clay (about 35% chunks of clay).

20 - 150 cm; gray and greenish gray, very firm, clay with many phosphatic nodules mixed with a few thin layers of light brownish gray and white, loose, sands (about 5% sand).

**Grid Point FG3**

Natural soils - Thick, light yellowish brown and pale brown sands 1.45 m in thickness overlying loamy soils

0 - 15 cm; dark grayish brown, loose, sand

15 - 32 cm; brown, loose, sand

32 - 105 cm; light yellowish brown, loose, sand

105 - 145 cm; pale brown, loose, sand

145 - 150 cm; yellowish brown and light brownish gray, friable, sandy clay loam.

**Grid Point FG3.5**

Highly Disturbed soils – layers of very dense clay extended from surface to a depth of 150 cm.

0 - 105 cm; dark gray and greenish gray, very firm, clay with many phosphatic nodules  
105 - 150 cm; dark gray and greenish gray, very firm, clay with many phosphatic nodules mixed with thin layers of light brownish gray and white, loose, sands (about 5% sand).

**Grid Point FG4**

Disturbed soils >100 cm in thickness consisting of mixed loamy sands and phosphatic rocks overlying sands.

0 - 107 cm; yellowish brown and light brownish gray, firm, sandy clay loam (85%) with phosphatic rocks mixed with thin layers of pale brown, loose, sands.  
107 - 150 cm; yellowish brown, loose, sand (natural soil).

**Grid Point FG4.5**

Highly Disturbed soils – layers of very dense clay extended from a depth of 25 to 150 cm.

0 - 25 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of gray and greenish gray, very firm, clay (about 35% chunks of clay).  
25 - 150 cm; dark gray and greenish gray, very firm, clay with many phosphatic nodules.

**Grid Point FG5**

Highly Disturbed soils – layers of very dense clay with a few mixings of sands extended from surface to a depth of 150 cm.

0 - 20 cm; dark gray and greenish gray, very firm, clay with many phosphatic nodules mixed with thin layers of brown and light brownish gray and white, loose, sands (about 15% sand).  
20 - 150 cm; olive brown, dark gray and greenish gray, very firm, clay with many phosphatic nodules

**Grid Point FG5.5**

Natural soils - Yellowish brown sands 76 cm in thickness overlying loamy soils

0 - 15 cm; dark grayish brown, loose, sand

15 - 26 cm; brown, loose, sand

26 - 76 cm; yellowish brown, loose, sand

76 - 150 cm; yellowish brown and light brownish gray, friable, sandy clay loam.

**Grid Point G2.5 (NE corner of Field A and NW corner of Field B)**

Disturbed soils - mixed sands with chunks of gray and greenish gray clay that begins near the surface and extends to a depth of 100 cm. Natural sands below that depth.

0 - 100 cm; dark grayish brown, brown, and light brownish gray, multi-colored, loose, sands mixed with chunks of gray and greenish gray, very firm, clay (about 20% chunks of clay).

100 - 150 cm; light brownish gray, loose, sand (natural soils).

**Grid Point G3**

Natural soils - Thick, light brownish gray and gray sands > 1.5 m in thickness

0 - 10 cm; dark grayish brown, loose, sand

10 - 24 cm; brown, loose, sand

24 - 110 cm; light brownish gray, loose, sand

110 - 150 cm; light gray, loose, sand (sands were saturated)

**Grid Point G3.5**

Natural soils - Thick, yellowish brown and light brownish gray sands > 1.5 m in thickness

0 - 8 cm; dark grayish brown, loose, sand

8 - 26 cm; brown, loose, sand

26 - 84 cm; yellowish brown, loose, sand

84 - 150 cm; light brownish gray, loose, sand

**Grid Point G4 (southeast corner of Field A, southwest corner of Field B, northeast corner of Field C and northwest corner of Field D)**

Highly Disturbed soils – layers of very dense clay extended from the surface to a depth of about 78 cm.

0 - 25 cm; dark gray, very firm, clay with many phosphatic nodules

25 - 78 cm; gray and greenish gray, very firm, clay with many phosphatic nodules

78 - 124 cm; yellowish brown, loose, sand (natural soil)

124 - 150 cm; light brownish gray, loose, sand (natural soil)

**Grid Point G4.5**

Highly disturbed soils - gray and greenish gray clay mixed with sands and large rocks on the surface overlying gray and greenish gray clay that extends to a depth of 150 cm.

0 - 40 cm; chunks of gray and greenish gray, very firm, clay (about 55% chunks of clay) mixed with brown and light brownish gray, loose, sand and large rocks (phosphatic).

40 - 150 cm; gray and greenish gray, very firm, clay with many phosphatic nodules

**Grid Point G5**

Highly disturbed soils - mixture of sands with chunks of gray clay on the surface overlying gray and greenish gray clay that overlies loamy soils mixed with clay at a depth of about of 90 cm.

0 - 15 cm; brown and light brownish gray, loose, sand mixed with chunks of gray clay (5% clay)

15 - 90 cm; gray and greenish gray, very firm, clay mixed with about 15% light brownish gray, loose, sand

90 - 150 cm; brown and olive brown, firm, sandy clay mixed with gray and greenish gray, very firm, clay (about 30% clay)

**Grid Point G5.5 (southeast corner of Field C and southwest corner of Field D)**

Natural soils - Thin, light brownish gray sands overlying loamy soils and sandy clay

0 - 10 cm; dark grayish brown, loose, sand

10 - 28 cm; brown, loose, sand

28 - 76 cm; light yellowish brown, loose, sand

76 - 110 cm; yellowish brown, friable, sandy clay loam and reddish brown, firm, sandy clay (about 40% sandy clay)

110 - 150 cm; yellowish brown, friable, sandy loam

**Grid Point GH2.5**

Disturbed soils - mixture of sands with chunks of gray clay on the surface overlying natural soils consisting of sands and sandy clay

0 - 15 cm; brown and light brownish gray, loose, sand mixed with chunks of gray clay (10% clay)

15 - 40 cm; yellowish brown, loose, sand

40 - 90 cm; light brownish gray and light gray, loose, sand (saturated with water)

90 - 150 cm; brown and olive brown, firm, sandy clay

**Grid Point GH3**

Disturbed soils – small chunks of clay (about 5%) mixed with brown and light brownish gray sands in the upper 36 cm overlying sandy clay at a depth of 130 cm.

0 - 14 cm; dark grayish brown, loose, sand mixed with small chunks of gray clay (about 5% clay)

14 - 36 cm; brown and pale brown, loose, sand mixed with small chunks of gray clay (about 5%)

36 - 76 cm; light brownish gray and pale brown, loose, sand

76 - 130 cm; light brownish gray and light gray, loose, sand

130 - 150 cm; olive brown and gray, firm, sandy clay

**Grid Point GH3.5**

Natural soils - Light brownish gray and light gray sands (this is a lower lying area)

0 - 18 cm; dark grayish brown, loose, sand

18 - 27 cm; brown, loose, sand

27 - 95 cm; light brownish gray, loose, sand

95 - 150 cm; light gray, loose, sand

**Grid Point GH4**

Disturbed soils – clay (about 85%) mixed with brown and light brownish gray sands in the upper 15 cm overlying sands and sandy clay (natural soils)

0 - 15 cm; gray clay (about 85% clay) mixed with brown and light brownish gray, loose, sands

15 - 44 cm; brown and light brownish gray, loose, sand

36 - 90 cm; light brownish gray, loose, sand

90 - 150 cm; olive brown and gray, firm, sandy clay

**Grid Point GH4.5**

Highly disturbed soils – dense clay (about 60%) mixed with thin layers of loamy soils 20% and sands (20%) to a depth of 25 cm. Gray clay from a depth of 25 to 150 cm.

0 - 25 cm; gray clay (about 60% clay) mixed with thin layers of light brownish gray, loose, sands (20%) and olive brown, firm, sandy clay loam (20%)

25 - 150 cm; gray and greenish gray, very firm, clay with many white phosphatic rocks



**Grid Point GH5**

Highly disturbed soils – dense clay (about 60%) mixed with thin layers of loamy soils 40% and sands (20%) to a depth of 55 cm. Gray clay from a depth of 55 to 150 cm.

0 - 55 cm; gray clay (about 60% clay) mixed with thin layers of olive brown, firm, sandy clay loam (40%)

55 - 150 cm; gray and greenish gray, very firm, clay with many white phosphatic rocks

**Grid Point GH5.5**

Disturbed soils – Sands on the surface overlying a thin layer of gray clay that overlies white “beach” sands

0 - 12 cm; brown and light brownish gray, loose sand

12 - 30 cm; gray and greenish gray, very firm, clay with many white phosphatic rocks

30 - 45 cm; light brownish gray and white, loose sand

45 - 150 cm; white, loose sand (“beach sand”)

**Grid Point H3.5**

Disturbed soils – at the west edge of the sinkhole, sands on the surface mixed with chunks of clay overlying sands and loamy soils (sandy clay loam) and clay

0 - 25 cm; brown and light brownish gray, loose sand mixed with chunks of gray and greenish gray clay (about 20% clay)

25 - 40 cm; light brownish gray, loose sand

40 - 90 cm; yellowish brown, firm, sandy clay loam

90 - 150 cm; gray, very firm, clay

**Grid Point H4 (northeast corner of Field D and northwest corner of Field E)**

Natural soils - Thin, light brownish gray sands overlying loamy soils and sandy clay

0 - 12 cm; dark grayish brown, loose, sand

12 - 22 cm; brown, loose, sand

22 - 56 cm; yellowish brown, loose, sand

56 - 80 cm; light brownish gray, loose, sand (saturated with water above the sandy clay loam)

80 - 125 cm; yellowish brown, friable, sandy clay loam

125 - 150 cm; olive brown and light gray, firm, sandy clay

**Grid Point H4.5**

Disturbed soils – mixed sands and loamy soils overlying sandy clay that overlies sands with chunks of clay

- 0 - 30 cm; brown and dark brown, loose, sands with about 40%, friable, loamy soils (sandy loams) with many phosphatic rocks
- 30 - 75 cm; yellowish brown, friable, sandy clay loam
- 75 - 102 cm; olive brown and gray, firm, sandy clay with about 20% dark brown, loose, sand
- 102 - 130 cm; dark brown, loose, sand with about 30% chunks of gray, very firm, clay
- 130 - 150 cm; brown, loose, sand with about 10% chunks of gray, very firm, clay

**Grid Point H5**

Highly disturbed soils – mixture of clay and loamy soils that extend from the surface to a depth of about 50 cm. that overlie a thin layer of sand and thicker layer of clay

- 0 - 50 cm; olive brown, friable, sandy clay loam (60%) with about 40%, gray, very firm, clay with many phosphatic rocks
- 50 - 70 cm; light brownish gray, loose, sand with a few chunks of gray, very firm, clay
- 70 - 105 cm; gray and greenish gray, very firm, clay with many phosphatic rocks
- 105 - 150 cm; brown, loose, sand with about 10% chunks of gray, very firm, clay

**Grid Point H5.5**

Disturbed soils – sands mixed with chunks of clay to a depth of 40 cm overlying sands and loamy soils

- 0 - 40 cm; brown and light brownish gray, mixed, loose, sands with chunks of gray, very firm, clay (about 30% clay)
- 40 - 135 cm; light brownish gray, loose, sand
- 135 - 150 cm; olive brown and gray, friable, sandy clay loam

**Grid Point HI4**

Disturbed soils – mixed sands with small amount of loamy soils overlying wet gray loamy soils; near the SEEP

- 0 - 105 cm; mixed brown, yellowish brown, and light brownish gray, mixed, loose, sands with chunks of olive brown, friable, sandy clay loams (about 20%).
- 105 - 150 cm; gray, friable, sandy clay loam (saturated with water)

**Grid Point HI4.5**

Disturbed soils – a layer of clay on the surface overlying sands (natural soils) at a depth of about 30 cm.

0 - 30 cm; gray, very firm, clay (about 80% clay) mixed with brown and light brownish gray, loose, sands.

30 - 72 cm; yellowish brown and pale brown, loose, sand (dry, natural soils)

72 - 150 cm; light brownish gray, loose, sand

**Grid Point HI5**

Disturbed soils – a mixture of sands and loamy soils overlying loamy soils (natural soils)

0 - 125 cm; yellowish brown and light brownish gray, loose, sands mixed with about 20% olive brown, friable, sandy clay loam (saturated with water at a depth of about 90 to 125 cm.

125 - 150 cm; yellowish brown and light brownish gray, friable, sandy loam (dry, natural soils)

**Grid Point I5**

Disturbed soils – sands overlying a mixture of sandy clay and sands. Sands (natural soils) below a depth of 110 cm.

0 - 28 cm; yellowish brown and light brownish gray, loose, sands mixed with about 10% olive gray, firm, sandy clay

28 - 90 cm; light gray, firm, sandy clay mixed with about 20% light brownish gray, loose sand

90 - 110 cm; light gray, friable, sandy clay loam (60%) with about 40% light brownish gray and olive brown, loose, sand

110 - 150 cm; light gray and olive brown, very friable, loamy sand

**Grid Point IJ5**

Disturbed soils – a layer of clay on the surface with mixings of sands and burned materials extending to a depth of about 30 cm. and overlie sands (natural soils)

0 - 30 cm; gray and reddish brown, very firm, clay mixed with burned materials.

30 - 65 cm; yellowish brown, loose, sand (natural soils)

65 - 95 cm; pale brown, loose, sand

95 - 150 cm; light brownish gray, loose, sand

**Grid Point J5** – thin layer of sand on the surface that overlies a layer of loamy soils overlying a layer of gray clay that extends from a depth of 50 to 90 cm. Clay underlain by loamy soils.

0 - 14 cm; brown and light brownish gray, mixed, loose, sand

14 - 50 cm; yellowish brown and light brownish gray, friable, sandy loam

50 - 90 cm; gray, very firm, clay

90 - 125 cm; gray, friable, sandy clay loam

125 - 150 cm; light gray, friable, sandy loam and loamy sand.