

ATTACHMENT 4
USDA NRCS HYDRIC SOIL UNIT DESCRIPTIONS

**USDA NRCS descriptions of the 23 wetland soil units
(hydric soils and soils with hydric inclusions)
That occur within the proposed Marble River Wind Farm
Clinton County, New York**

Adirondack loam, 3 to 8 percent slopes (AgB) - This very deep, somewhat poorly drained, loamy soil formed in low lime, upland glacial till. It is underlain by a dense substratum. The available water capacity is moderate. Permeability is moderate in the surface and subsoil, and slow in the substratum. Capability unit is 3w. This unit of Adirondack soils is designated as farmland of state-wide importance. Adirondack has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Adirondack loam, gently sloping, very bouldery (AhB) - This unit consists of very deep, somewhat poorly drained, low lime, loamy soil. It is on upland till plains underlain by a dense substratum. Slopes range from 0 to 8 percent. Boulders cover up to 3 percent of the ground surface. The available water capacity is moderate. Permeability is moderate in the surface and subsoil, and slow in the substratum. Capability unit is 6s. Adirondack has possible inclusions of Lyonmounten, Sabattis, and other soils considered as hydric in the Clinton County area.

Bucksport mucky peat (Bx) - This very deep, very poorly drained soil formed in low to medium lime, organic materials greater than 51 inches thick. It occurs in depressions on lake plains and till plains. The available water capacity is high. Permeability is moderately slow to moderately rapid. Capability unit is 7w. Bucksport is recognized as a hydric soil in Clinton County.

Churubusco muck (Ck) - This unit consists of nearly level, very poorly drained, organic deposits underlain by sandstone bedrock. Depth to bedrock ranges from 16 to 50 inches. Available water capacity is high. Permeability is moderate or moderately rapid. Capability unit is 7w. Churubusco is recognized as a hydric soil in Clinton County.

Cook mucky loamy fine sand (Crk) - This unit is very deep, very poorly drained, sandy soil overlying loamy material. It formed in medium lime, water-worked deposits over glacial till. Slope ranges from 0 to 3 percent. The available water capacity is low to moderate. Permeability is moderately rapid in the surface, rapid in the upper substratum, and moderately slow in the loamy substratum. Capability unit is 4w. Cook is recognized as a hydric soil in the Clinton County area.

Deinache fine sand (Df) - This is a very deep, poorly drained, sandy soil formed in medium lime, glacial outwash material. The available water capacity is low to moderate. Permeability is rapid in the mineral surface, subsoil, and upper substratum, and moderate or moderately rapid in the lower substratum. Capability unit is 4w un-drained (3w drained). Deinache is designated as farmland of state-wide importance. Deinache is recognized as a hydric soil in Clinton County.

Hailesboro silt loam (Ha) - This very deep, somewhat poorly drained, silty soil formed in medium to high lime material on lake plains. The available water capacity is high. Permeability is moderate in the mineral surface layer and moderately slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of Hailesboro soil are designated as prime farmland.

Hailesboro has possible inclusions of Adjidaumo and other soils considered as hydric soils in the Clinton County area.

Lyonmounten loam (Lv) - This is a very deep, poorly drained, loamy soil formed in low lime, glacial till on uplands. Slope ranges from 0 to 3 percent. The available water capacity is high. Permeability is moderate in the mineral surface, and moderate or moderately slow in the subsoil and substratum. Capability unit is 4w un-drained (3w drained). This unit is on the New York listing for farmland of state-wide importance. Lyonmounten is listed as a hydric soil in Clinton County.

Lyonmounten loam, very stony (Ly) - This is a very deep, poorly drained, loamy soil. It formed in low lime, glacial till in depressional areas on Uplands. Slope ranges from 0 to 8 percent, but is dominantly 0 to 3 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is high. Permeability is moderate in the mineral surface, and moderate or moderately slow in the subsoil and substratum. Capability unit is 6s. Lyonmounten is recognized as a hydric soil in Clinton County.

Malone gravelly loam, 0 to 3 percent slopes (MeA) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of this unit qualify as prime farmland in the Clinton County area. Malone has possible inclusions of Runeberg, Cook, and other soils considered as hydric in the Clinton County area.

Malone gravelly loam, 3 to 8 percent slopes (MeB) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil or substratum. Capability unit is 3w. Only drained areas of this soil qualify as prime farmland in the Clinton County area. Malone has possible inclusions of Runeberg, Cook and other soils considered as hydric soils in the Clinton County area.

Malone gravelly loam, gently sloping, very stony (MfB) - This is a very deep, somewhat poorly drained, loamy soil formed in high lime, glacial till. Slope ranges from 0 to 8 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is moderate. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. Capability unit is 6s. Malone has possible inclusions of Runeberg, Cook and other soils considered as hydric in the Clinton County area.

Muskellunge silty clay loam, 3 to 8 percent slopes (MwB) - This very deep, somewhat poorly drained, clayey soil formed in high lime sediments on lake plains. The available water capacity is high. Permeability is moderately slow in the mineral surface and slow in the subsoil and substratum. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland. Muskellunge has possible inclusions of Adjidaumo and other soils considered as hydric soils in Clinton County.

Peasleeville loam, 0 to 3 percent slopes (PeA) - This very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. The available water capacity is high. Permeability is moderate. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland in Clinton County. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Peasleeville loam, 3 to 8 percent slopes (PeB) - This very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. The available water capacity is high. Permeability is moderate. Capability unit is 3w. Only drained areas of this unit are recognized as prime farmland in Clinton County. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Peasleeville loam, gently sloping, very stony (PfB) - This is a very deep, somewhat poorly drained, loamy soil formed in medium lime, glacial till uplands. Slope ranges from 0 to 8 percent. Large stones cover up to 3 percent of the ground surface. The available water capacity is high. Permeability is moderate. Capability unit is 6s. Peasleeville has possible inclusions of Lyonmounten, Sabattis and other soils considered as hydric in the Clinton County area.

Pits, gravel (Pn) - Gravel pits are generally very deep. Series consists of excessively drained to well drained material on glacial outwash plains, terraces, kames, and eskers. Available water capacity is very low. Permeability is rapid. This unit is not assigned to a capability unit. This unit may have hydric soil inclusions; on-site investigation is recommended.

Runeberg mucky loam (Ry) - This very deep, very poorly drained, loamy soil formed in medium to high lime, glacial till. The available water capacity is moderate to high. Permeability is moderate in the mineral surface, moderately slow in the subsoil, and moderately slow or slow in the substratum. Capability unit is 5w undrained (4w drained). Runeberg is recognized as a hydric soil in the Clinton County area.

Sabattis mucky fine sandy loam, very bouldery (Sb) - This very deep, very poorly drained soil formed in low lime, glacial till. It has a thin organic surface overlying loamy till. The available water capacity is high. Permeability is moderately slow to moderately rapid in the organic surface, moderate or moderately rapid in the subsoil, and moderately slow in the substratum. Capability unit is 5w. Sabattis is recognized as a hydric soil in Clinton County.

Saprists and Aquents, ponded (Se) - This unit consists of very deep, very poorly drained, organic and mineral soil formed in depressions on lake plains and uplands. The common name for this unit is fresh water marsh. Available water capacity is high. Permeability is moderately slow to moderately rapid in the surface, and ranges from very slow to rapid below. Capability unit is 8. Saprists and Aquents are recognized as a hydric soil type in Clinton County.

Sciota fine sand (Sn) - This is a very deep and somewhat poorly drained soil that is formed in sandy, medium to high lime, outwash material. Slopes range from 0 to 3 percent. The available water capacity ranges from low to moderate and permeability is rapid. Capability unit is 3w. This unit has possible inclusions of Deinache, Pinconning or other soils considered as hydric in the Clinton County area.

Topknot-Chazy complex, gently sloping, rocky (TcB) - This unit is shallow and moderately deep, somewhat poorly drained, loamy soil. It formed in a thin mantle of low lime, glacial till overlying sandstone bedrock on upland. Bedrock exposures occur on less than 2 percent of the ground surface. Slope ranges from 0 to 8 percent. The available water capacity ranges from very low to moderate. Permeability is moderate. Capability unit is 6s. This unit has possible inclusions of Sabattis, Wonsqueak and other soils considered as hydric in the Clinton County area.

Wonsqueak muck (Wu) - This is a very deep, very poorly drained soil formed in 16 to 51 inches of low to medium lime, organic material overlying loamy deposits. It occurs in depressions on lake and till plains. The available water capacity is high. Permeability is moderately slow to moderately rapid in the organic part, and moderately slow or moderate in the substratum. Capability unit is 7w. Wonsqueak is recognized as a hydric soil in Clinton County.