

Manufactured Topsoil Success Story

Franklin County State Airport Project

Manufactured Topsoil (MFT)

MFT is an exceptionally productive, cost-effective, and sustainable alternative to stripping native loam, compliant with VTrans topsoil specifications. It is composed of locally sourced, environmentally sound recycled materials that supports lush, healthy vegetative cover requiring little additional input or maintenance. With an increase in both cost and scarcity of native topsoil, as well as the enactment of Act 250 preventing the striping of material from existing gravel pits for this purpose, Manufactured Topsoil is the ideal solution for roadside construction projects and reclamations.



Aerial view of the airport and material stockpile location.



During the expansion, topsoil was stripped from the bare section above and later reclaimed with MFT.

The Project

In April of 2023, the Franklin County State Airport in Swanton, VT, underwent reconstruction and expansion of the aircraft runway. This project required the removal of native topsoil on-site, necessitating a viable, low-maintenance, and cost effective replacement for reclamation. Due to the high visibility of the runway green by the public, the topsoil replacement needed to sustain aesthetically pleasing grass cover long term.

MFT composed of recycled materials sourced from generators within the state of Vermont was chosen for this project for both its ability to outperform conventional loam as well as the associated cost savings. Components included Exceptional Quality (EQ) Biosolids, Paper Fiber, Wood Ash, and sand, which were blended together on site to form a homogenous topsoil blend.

The Blend

Blends are project specific based on project requirements and ingredients.

- 5 part Paper Fiber for increased organic matter and improved water retention.
- 5 part sand for porosity and structure.
- 1 part EQ Biosolids as a source of slow-release, plant available nitrogen, and organic matter.
- 1/2 part Wood Ash for pH adjustment, potassium, micronutrients, and deep, rich color.

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The Results

Average pH: 8.2, Average Organic Matter %: 3.97

The plant available, slow release nitrogen, as well as organic matter, potassium and micronutrients in MFT made it's utilization an ideal choice for this project. Grass growth remained thick and healthy, pictured below at one year post MFT application, far exceeding average results with conventional loam. Additionally, the array of nutrients contained in the MFT enabled the contractor to complete the project without the application of any supplemental fertilizers, saving additional time and funds.



“Northern Tilth believes that no supplemental fertilization is needed when applying this topsoil and seeding it to a conservation mix of grass. The topsoil has ample phosphorus and potassium and contains a long-term pool of slow-release nitrogen. It is our opinion that the manufactured topsoil will develop a fertile, grass cover without adding fertilizer to the soil fertility inherent in the topsoil.” - Andrew Carpenter, Soil Scientist.