
**REDirt™ Topsoil: Fabricating Low Cost Soil Utilizing Waste Material
for Building Site Landscapes and Green Roofs**

Impact: When attempting to reduce the carbon footprint of green buildings and sustainable site development, many builders find difficulty procuring local topsoil. Shipping topsoil is economically costly and environmentally unsound. Additionally, due to stormwater issues, the built environment faces large scale loss of topsoil that is eroded into our local rivers and streams. The loss of this growing medium and its important nutrient content, make it necessary, yet expensive to revegetate the built environment.



This project's approach to the problem is to fabricate soil using low cost, local, reused material that was previously considered to be waste. This fabricated soil material will provide local businesses with a product for use in landscaping and green roof development.

Project Overview: The green economy provides a growing market for the low-cost use of previously underutilized and landfilled materials, while also creating a market for commercial products that can decrease the profit margin for site development.

GTECH's REDirt project will investigate the use of water treatment residual silt as a growing medium for landscapes and green roofs on new and existing buildings. Specifically, the project will create the best "recipe" for blending silt and other nutrients and research the practical applications of this product.

It is part of GTECH's organizational mission to provide opportunities for material reuse that is an asset but underutilized by the community. Part of this project will be to educate and create the systems necessary for more widespread composting and soil reuse throughout the region. It is also an opportunity for adaptive reuse of existing building materials and manufacturing byproducts.

GBA Product Innovation Grant Amount: \$20,000

Leadership Team: The Project team includes GTECH Strategies' CEO, Andrew Butcher, and COO, Chris Koch. Other collaborative entities include the Pennsylvania State University Cooperative Extension of Allegheny County, AgRecycle, and Pennsylvania American Water.

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