

Abstract Submitted
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Physical Properties of Enzymatically Stabilized Dredged Material SAEED RABBANIFARA, T. THUY-MINH NGUYENB, QIN QIANA, PAUL BERNAZZANIB, MIEN JAO, Lamar University — The constant process of riverway sediment removal leads to an accumulation of dredge material in landfills. This poor-quality soil has no real application. However, improvement of physical properties and stabilization of dredged material makes it possible to efficiently use the soil in a variety of applications. The purpose of this research is to investigate improvements in the physical properties including load bearing capacity of dredge soil through the environmentally friendly addition of enzymes. Once added the enzymes are thought to alter the crystal structure of the clay particles resulting in a modification of the surface charge distribution. The enzymes later biodegrade leaving a fine particle material with improved mechanical properties that is more structurally reliable.

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