

Report Title

*Mildly Contaminated
 Soil Distribution
 Assessment*



NHDOT Environment

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Report Link

<https://www.nh.gov/dot/org/projectdevelopment/materials/research/projects/documents/FHWA-NH-RD-26962K.pdf>

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Why was it studied?

Limited Reuse Soils (LRS) include roadside soils and street wastes (ditching materials, catch basin cleanouts, and street sweepings) that have limited reuse potential due to the presence of metals and manmade contaminants related to transportation corridor uses. New Hampshire Department of Environmental Services (NHDES) classifies this material as solid waste. New Hampshire DOT (NHDOT) creates significant amounts of this material during routine construction projects and maintenance efforts. Disposal of this material in solid waste facilities is not only harmful to the environment, but is also expensive. Impacts include fees for soil disposal, landfill space, and a high carbon footprint. In addition, soil is not a renewable source, so it is important to reuse LRS in appropriate manners on NHDOT projects. Because of data collected locally and from other states, this study looked at ways to minimize the production of LRS and develop guidance for management.



What was done?

Through this project, NHDOT and NHDES created multiple LRS construction documents to manage LRS solid waste. The construction documents limit handling, transportation, and production of LRS resulting in increased protection of human health and the environment, and a department-wide reduction of labor and consultant costs. This includes addressing the issue through each project’s design, construction, and post-construction processes. In order to achieve a standard approved approach to LRS management, NHDOT and NHDES developed waivers from the solid waste rules along with an LRS Soil Management Plan (SMP). The waivers and LRS SMP were the framework for multiple internal guidance documents including Special Attentions, Special Provisions, and Project Operation Plan Guidance (contractor submittals). These guidance documents allowed for effective training of NHDOT operations field staff and external project contractors in order to achieve LRS management.

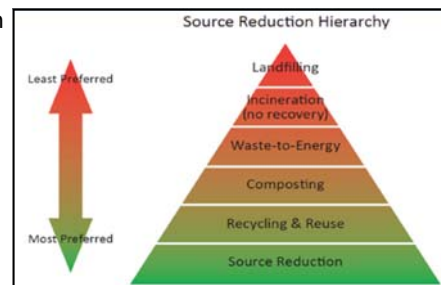


Image source: NHDES Solid Waste

What did we learn?

Through research conducted by other state transportation departments and confirmatory NHDOT sampling, NHDOT defined LRS as all topsoil within state owned right-of-way or the first 6 inches of soil where topsoil is absent. This definition of LRS was used to construct the waivers, LRS SMP, and guidance documents.

How can we use it?

NHDOT will consider LRS during design and operations through the use of the LRS guidance documents and training. These practices result in department-wide guidance related to the reduction of LRS generation, management during construction, and reuse of LRS within the transportation corridor.