



Limited Reuse Soils (LRS) Management

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ABSTRACT

Roadside soils and “street wastes” have limited reuse potential due to the presence of metals and manmade contaminants related to the transportation corridor. NHDES classifies this impacted material as solid waste when excavated during construction or collected during maintenance operations. NHDOT produces significant amounts of this solid waste. The disposal of this material is expensive and an inefficient use of a limited natural resource. NHDOT conducted research and developed multiple guidance documents to effectively minimize generation and increase reuse of LRS materials within the transportation corridor. This statewide approach reduces labor and consultant costs for both agencies while better protecting human health and the environment by limiting the exposure, handling, and transportation of these materials.

BACKGROUND

What is LRS?

Limited Reuse Soils (LRS) include roadside soils and “street wastes” (ditching materials, catch basin cleanouts, street sweepings) that have limited reuse potential due to the presence of elevated levels of regulated compounds such as polycyclic aromatic hydrocarbons (PAHs) and metals.



Why is LRS an Issue?

NHDOT creates significant amounts of LRS during routine construction projects and maintenance efforts. Disposal of this material results in expensive fees, use of landfill space, and a high carbon footprint.

SCOPE OF WORK

- Assist NHDOT employees with the proper handling, storage, disposal, and reuse of street wastes
- Conduct research on how other states manage LRS
- Develop documents to train and assist NHDOT operations field staff and project contractors
- Minimize environmental impact and better protect public health through the design and operations of a given project

PROCESSES

Analyses

Research

Fourteen states provided information to the NHDOT related to their LRS management plans. This information assisted in developing a framework for the New Hampshire LRS management plan.

Sampling

Sampling was performed in multiple right-of-ways to confirm what the conducted research findings.

Findings

1. Defined LRS as all present topsoil in the right-of-way, or the top 6” of soil where topsoil is absent (New Jersey Department of Transportation)
2. LRS Management Guidance

Developing a Framework

Multiple documents were created for the planning, design, construction, and operations/maintenance processes of a given project. The documents include:

- NHDOT Waivers
- Soil Management Plan (SMP)
- Special Attentions and Provisions
- Project Operations Plan
- Limited Reuse Soils – *de minimis* Guidance

CONCLUSION

Studying the environmental and financial impacts of Limited Reuse Soils resulted in an urgency to manage this impacted soil material. Through the definition of LRS and multiple management documents and procedures, the goal of the NHDOT to minimize LRS is attainable. In the future, further research will contribute to updating and creating even more effective management practices.

Source Reduction Hierarchy

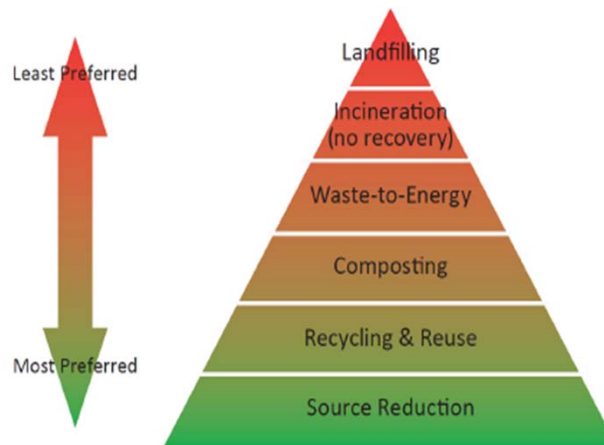


Image source: NHDES Solid Waste