Importance of Carbon:Nitrogen Ratio in Native Plant Restoration on Contaminated Soils. (S11-henry173816-Poster)

Authors:

- C.Henry* - *University of Washington*
- P.DeVolder - *University of Washington*
- S.Brown - *University of Washington*

Abstract:

Zinc, Pb and Cd contaminated mine tailings in Jasper County, MO and Leadville, CO were amended with lime and organic matter to reduce metal availability and restore a vegetative cover with native species. Organic matter amendments consisted of municipal biosolids and wood waste. Organic mater was applied at both 2.5 and 5% rates of addition. The C:N ratio was also varied from 8:1 to 50:1. Effect of organic matter rate of addition as well as C:N ratio on the establishment of native plant species was measured. Result varied by site with higher OM (5%) and lower C:N (8:1) resulting in greater cover in Jasper, and C:N of 30:1 at both rates of organic matter addition providing the best cover in Leadville. Individual species response and plant metal concentration will also be reported

Corresponding Author Information:

Chuck Henry
University of Washington
Box 352100 Bloedel Hall
Seattle, WA 98195

phone: 206 685 1915
fax: 206 685 3091
e-mail: clh@u.washington.edu

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