Biosolids Impact on Cu-Mo Tailings Nutrient Status in the Southern Interior of British Columbia: 15 Years Later

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Tailings storage facilities (TSF) present many challenges during revegetation because they are nutrient poor and lack organic matter. The use of organic amendments has shown to alleviate these limitations. Biosolids are one of the tools we can use as an amendment on TSF's. There is still debate whether biosolids provide a long term benefit to macronutrients, or if these benefits diminish with time. To test this, a study was conducted on two TSF's in British Columbia's southern interior. Biosolids were applied in a field experiment in 1998, and sampled in 1999 and 2000 to compare macronutrients, carbon, nitrogen, phosphorus and potassium across a 15 year period. Biosolids improved carbon, nitrogen and phosphorus in 1999, and these benefits remained unchanged in 2000. No treatment effects were found for potassium, likely because it is removed during the dewatering stage of biosolids manufacturing. This research supports the hypothesis that biosolids provide a long term benefit to the macronutrient status of tailings.