

Wool Erosion Control Blankets: A New Roadside Reclamation Tool¹

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Abstract: Road construction projects can significantly disturb existing soil profile and obliterate roadside plant communities, making successful revegetation and restabilization of slopes extremely difficult. A new erosion control product manufactured with regionally-produced waste wool is currently being evaluated in an active 2018-2020 field project³. The erosion control blankets (ECBs) will be evaluated for growth and establishment of desirable planted species and weedy species on harsh roadside sites with steep slopes (~3:1) and invasive cheatgrass competition. 3-4 different compositions of these wool erosion control blankets (WECBs) (100% wool, 70% wool-30% straw, 50% wool-50% straw, and 30% wool-70% straw) are being evaluated against conventional coconut-coir ECBs. Wool becomes saturated at 33% of its moisture-free weight (D'Arcy 1990), but can store up to 400% of its weight in water (Upton 2003), leaving a large amount available for plant uptake. Sheep wool also contains 15 – 17% nitrogen, which can act as a slow release fertilizer for plant growth and development. Prototype WECBs were recently field tested against traditional coconut-coir ECBs in Montana. In general the WECB prototypes outperformed the coconut-coir in two significant areas: they allowed for higher levels of plant canopy over seeded perennial grasses and reduced plant canopy cover of weedy species (Ament et al. 2017). This project has great relevance to the Land Use Planning and Design, Soils and Overburden, and Revegetation technical sessions.

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