

## EIGHT YEAR SHRUB RESPONSES: RECLAIMED TERRACES, LA PLATA MINE, NEW MEXICO<sup>1</sup>

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**Abstract.** Establishment of woody vegetation on southwest mine sites poses difficult challenges. Among these are; species, timing, and planting method. This program was initiated in 1994 by building five terraces (10' x 500') on a north-facing spoil stockpile. 300 seedlings of seven species were planted in the spring (March 1995) and consisted of bare root and container stock. Mountain mahogany, piñon pine and ponderosa pine were solely bare root stock; while big sagebrush, fourwing saltbrush, and antelope bitterbrush were planted from both bare root and container stock. Gambel oak was planted only as containerized stock. 314 container seedlings of six species were planted in the fall (October 1995). Antelope bitterbrush was excluded. Survival was determined annually for three years and then in 2003 (year eight). Based on eight year survival, fall planting was more successful than spring planting, 47% and 8%, respectively. Spring planted bare root sagebrush, fourwing and bitterbrush were more successful than the containers, 18% and 4% respectively. However, fall planted containers of sagebrush and fourwing averaged 65%. Fall planted shrubs, and piñon pine averaged 56%. None of the spring planted trees survived. Survival of 50% or greater was reported for all fall planted species after 8 years except ponderosa pine. Both prior to interseeding and after interseeding indicated the interseeding provided no ill effects to the regeneration of the existing shrub population.

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