

## 5-Year Seed Mixture Results in the Pinedale Anticline

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**Abstract:** Critical wildlife habitat supporting mule deer, antelope, and sage grouse in high elevation rangeland and sagebrush ecosystems of southwest Wyoming is threatened by energy development and residential sprawl, resulting in a fragmented landscape and a declining forage base. Restoring disturbances with diverse plant communities is needed. Our objectives were to assess establishment and persistence of native plants, and to test seed mixtures and seeding techniques. In October 2005, two seed mixtures were broadcast- and drill-seeded, and one seed mixture was hydro-seeded on disturbed areas adjacent to the monoculture plots. Density by species was counted in mixture plots. Seed mixture results were variable, but 5-year average data supports the recommendation to broadcast smaller seeded species and drill seed larger seeded species. In addition, higher seeding rates do not necessary translate to higher establishment rates; and aggressive rhizomatous species may out compete other components of the mix. Final project results provide recommendations for native plant restoration and species adaptation to the area. Relatively low establishment of forbs and shrubs indicate more work is needed to develop these plant materials and technologies.

Additional Key Words: Reclamation, native plants, wildlife habitat

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