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Emergency Stabilization and Rehabilitation: What Works in the Great Basin?

Federal land management agencies have invested heavily in seeding vegetation for emergency stabilization and rehabilitation (ES&R) of non-forested lands over the past 10 years. ES&R projects are implemented to reduce post-fire dominance of non-native annual grasses, minimize probability of recurrent fire, and ultimately result in plant communities with desirable characteristics including resistance to invasive species and resilience or ability to recover following disturbance.

Land managers lack scientific evidence to verify whether seeding non-forested lands achieves their desired long-term ES&R objectives. The overall objective of this chronosequence investigation is to determine if ES&R projects increase perennial plant cover, improve community composition, decrease invasive annual plant cover and result in a more desirable fuel structure relative to no treatment following fires. The project will examine the effects of seeding treatments (drill and broadcast) vs. no seeding on these biotic and abiotic (bare ground and litter) responses for the dominant climactic regimes and ecological types within the region. Seeding effectiveness will be evaluated relative to post-treatment precipitation, post-treatment grazing level and time-since-seeding. A relational model (structural equation model) will guide the analyses and be used to evaluate the relative effects of various factors that control post-fire seeding treatment effectiveness. This project will revisit previous post-fire seeding projects in Oregon, Idaho, Nevada, and Utah. Dr. David A. Pyke of the US Geological Survey is the Principal Investigator and results are expected in the summer of 2012. This new research from the JFSP will provide Great Basin managers with a sound foundation for post fire decisions.

For more information or to view the project proposal 09-S-02-1, visit the JFSP website at:
<http://www.firescience.gov>

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