

# Some Notes about Seeding Grasses following Wildfire

By Rich Casale, CPESC #3

*Note: These notes come from personal experiences having worked on over a dozen California wildfires over the past 40 years and from research of studies conducted following various wildfires in the western United States over the past century.*

## Potential Positive Effects

- Seeding can reduce non-native invasive encroachment through competition.
- Seeding can increase infiltration and reduce runoff and resulting soil erosion.
- Seeding may be used purposely to reduce shrub regrowth on rangelands.
- Seeding with proper grasses; proper seedbed preparation and location and proper care and maintenance can help reduce surface erosion, sediment and runoff in first and/or first 2 seasons following wildfire depending on site conditions, seed choice, water holding ability of soil, timing, supplemental irrigation, seeding cover, etc.

## Potential Negative Effects

- Grasses are herbaceous with annuals having shallow root systems and have little to no effect on slope stability. In fact grasses increase infiltration which can have a negative effect where slopes are prone to sliding. Seeding, especially on slide prone slopes can be a factor that increases the likelihood of slope saturation and risk of debris flows.
- Seeding competes with and/or slows down regeneration of pre-existing native vegetation.
- Seeding uses up more ground moisture and reduces regrowth of native plants that regenerate from resident seed bank in the soil.
- Seeding has been shown to provide marginal effects/results in the first year following fire or not at all and no significant effect when slower native perennials are the plant of choice in the first year.
- Seeding may have long term negative effects on the ecosystem by changing plant community composition over time.
- Seeding is usually not cost effective and does not guarantee safeguard to human life or property.
- Seeding can attract pocket gophers leading to more opportunities for soil piping and “dry erosion”. Studies shows that seeding can increase pocket gopher activity by 4.5%.
- Seeding that is successful especially on the unburned wildland interface can become a fire hazard in the following fire season.
- Seeding can give property owners a false sense of security.
- Reseeding annual or perennial grasses are not the climax species in a woodland or shrub land plant community and therefore may delay natural regeneration even longer. Seeded grasses would also compete with native pioneering grasses and forbs.
- Native grass seeding may cause gene pollution of resident native grasses especially if the grasses sowed were of different gene types and collected in other areas of the state.
- Seedbed preparation can cause disturbance to slopes, soil, pre-existing vegetation, native seedbank, etc.