Targeting bulldozer lines for competitive seeding to suppress postfire invasion in Coastal Sage Scrub. Noah Teller1\*, Elise Gornish2, Travis Bean1, and Loralee Larios1. 1University of California, Riverside; 2Univeristy of Arizona, Tucson. noah.teller@email.ucr.edu

As wildfires in the West become more frequent and severe, firefighting activity may provide opportunities for invasive species to establish and spread. Improved postfire rehabilitation strategies are needed to address this challenge. Postfire competitive seeding has been historically difficult and inconsistent, but by carefully designing the composition of species mixes used for competitive seeding in fire breaks, managers may be able to reduce the risk of postfire invasion. At Chino Hills State Park, fire breaks left by bulldozers during the Canyon fires of 2017 may have spread Mediterranean grasses and invasive forbs into Coastal Sage Scrub. Reestablishing native vegetation by seeding native species in these fire breaks may provide invasion resistance and help prevent type conversion of CSS to annual grassland. A greenhouse experiment at UC Riverside has characterized key competitive traits of twenty native and five invasive species from Coal Canyon across multiple individuals and life stages. Using these data we have created one seed mix with similar traits to invaders, and the other with maximum functional diversity in competitive traits across the local native species pool. We hypothesize that the trait-matched community will reduce relative abundance and dispersal of invasive species in the first year after seeding due to intense resource competition, but that the high functional diversity community will have better native plant establishment in the second year due to improved stress tolerance of slower-growing species. We will use our findings to provide better tools for land managers tasked with rehabilitating burned areas.