



Seeds of Success 2013 Annual Report



Seeds of Success (SOS) is the national native seed collection program, led by the U.S. Department of Interior Bureau of Land Management in partnership with numerous federal agencies and non-federal organizations. The mission of the SOS is to collect wildland native seed for long-term germplasm conservation and for use in seed research, development of native plant materials, and ecosystem restoration.

2013 was a great year for Seeds of Success. Seed collection numbers remained strong and steady amid a federal shutdown and persistent drought throughout much of the western US. A SOS workshop at the National Native Seed Conference in Santa Fe, New Mexico provided a SOS Protocol refresher for many existing collectors and introduced the program to others. Additionally, SOS was represented at the 5th Global Botanic Gardens Congress in Dunedin, New Zealand, where SOS National Collection Curator, Megan Haidet, gave a talk titled "Seed banking and native plant materials for a changing climate."

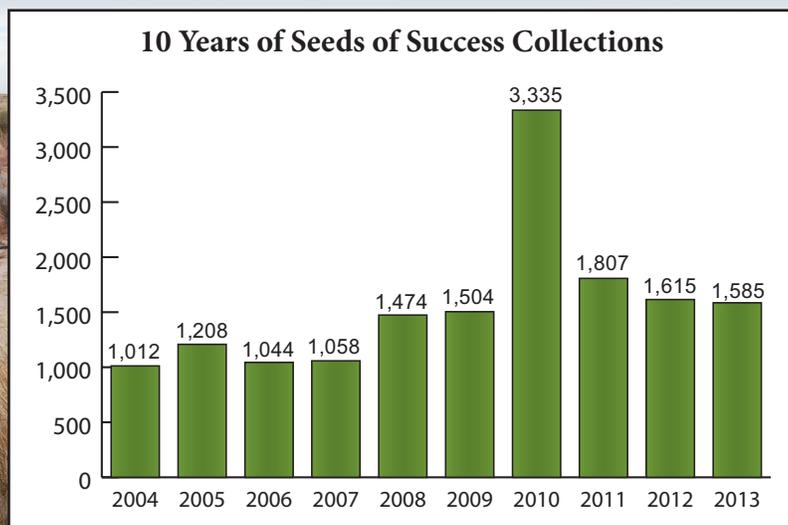
New Mexico Restoration Project Uses Seeds of Success Material

In addition to making 40 seed collections for SOS, in 2013, the BLM's New Mexico State Office collection team repeated monitoring on the Culp Restoration Project sand bluestem (*Andropogon hallii*) plantings. This project began in 2007 when BLM botanist Mike Howard was requested to aid in the reclamation/restoration of a 3 acre oil well pad in Chaves County, approximately 30 miles east of Roswell, New Mexico. The restoration project supports habitat management for the lesser prairie chicken, a threatened species under the Endangered Species Act.

The pad was previously seeded and planted with irrigated sand sagebrush, but the seeding failed. The site is characterized by highly disturbed, xeric, mobile (aeolian), deep sandy soils which are often difficult to re-vegetate. The project attempted to plant locally collected sand bluestem as containerized plants, using different depth pots to determine establishment success versus cost efficiency. SOS collections of sand bluestem from 2007 and 2008 were transferred to the USDA NRCS Los Lunas Plant Materials Center for grow out. In 2009, planting treatments were randomly assigned

2013 Seeds of Success Collections in Brief	
Total 2013 Seed Collections	1,585
Unique Taxa Collected	865
Plant Families Represented	88
Ecoregions Represented	59
States Represented	30
Collectors Trained	132

Chicago Botanic Garden Conservation and Land Management interns monitor the Culp Restoration Project by measuring sand bluestem plants. (Photo by Mike Howard, BLM NM)





Early succession species collected at Pine Hill Preserve, left to right: White fairy lantern (*Calochortus albus*) flower and seed pod and sticky monkeyflower (*Diplacus aurantiacus* ssp. *aurantiacus*). (Photos by Pine Hill Preserve)

to 802 containerized sand bluestem plants across the entire project area due to varying topography of the site. Nearly all the plants were watered at planting and adequate rainfall eliminated the need for an irrigation system.

In November 2013, Howard and Chicago Botanic Garden Conservation and Land Management interns spent 2 days in the field collecting persistence and size data for all plants. In 2010, 66% of the plantings persisted while only 50% persisted in 2011. In 2013, 44% of the plantings were alive. Differences in pot sizes are evident; seedlings from deep pots and tall pots had the highest survivorship. Monitoring photos show an improvement in overall site restoration throughout the monitoring period.

Conserving Resources at Pine Hill Preserve

The Mother Lode Field Office has been making SOS collections since 2009 and averages 15 collections each year. In 2013, all but one of the fifteen seed collections submitted were collected from the chaparral, grassland and oak woodland plant communities of the central Sierra foothills, primarily within Pine Hill Preserve (PHP) and from the neighboring Kanaka Valley. The PHP is managed under a Cooperative Management Agreement involving nine organizations including the American River Conservancy, Bureau of Land Management, Bureau of Reclamation, CalFire, California Department of Fish and Game, El Dorado County, El Dorado County Water Agency, El Dorado Irrigation District, and U.S. Fish and Wildlife Service. All parties work together to conserve and manage habitat for eight rare plant species growing on Pine Hill Preserve managed lands.

Pine Hill, the defining land feature, is higher in elevation than the rest of PHP; half of the 2013 collections from the Preserve were gathered from the top of the hill. Over the last few years, fuel breaks were created around phone and emergency towers atop Pine Hill. Fuel break construction on Preserve lands adjacent to structures and/or private property is a critical component of managing PHP. In addition to increasing public safety and protection of structures against wildfires, shrub clearing and burning enhances habitat for the rare plants and allows for the establishment of early succession species. In 2013, the SOS collection team took advantage of the opportunity to collect early succession species on Pine Hill including white fairy lantern (*Calochortus albus*) and sticky monkeyflower (*Diplacus aurantiacus* ssp. *aurantiacus*).

SEEDS



OF SUCCESS

For more information
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