Agency/Organization: US Geological Survey

Project Name: Development of Resilient Plant Materials for Desert Restoration

Project Number: 2023-USGS-2382A

Reporting Period: July 1, 2026 – September 30, 2026

Project Contact Name and Information: Lesley DeFalco, Ph.D.; USGS, Western Ecological Research Center; 500 Date St., Boulder City, NV; 89005. (702) 294-6591. ldefalco@usgs.gov

QUESTION 1: What did you accomplish during this reporting period? How did these accomplishments help you reach the goal of your project? If relevant, what indicators or benchmarks were used to determine your progress?

We re-planted seeds of fringed amaranth in the greenhouse to supplement the treatment levels we were able to implement (early and late flowering) during previous grow-outs. Once plants mature, we will count and sort fringed amaranth seeds for planting into the common garden.

To maximize diversity of forbs for our forb conditioning experiment, we obtained permission from the City of Boulder City to collect fresh seeds of native forbs important to desert tortoise habitat. We collected wingnut cryptantha from a site within the same seed transfer zone as the common garden. We sowed seeds into pots in the greenhouse and we are currently imposing drought treatments during early, middle, and late fruit maturation. We have collected seeds from senesced plants and are currently sorting and counting wingnut cryptantha seeds so that they are ready for planting in our experimental array in the common garden during winter-spring 2026/27. We also collected desert chicory seed, which we will couple with desert chia when we additional treatments to promote germination.

After out-planting the pre-conditioned shrub seedlings to the USGS Searchlight, Nevada common garden in late February (M26), we implemented a drought stress treatment on half the number of outplants in early April and implemented a herbivore stress treatment on half the number of plants in late May. We have continued to monitor survival and growth of these shrubs monthly in response to these stressors (M33).

Sara Scoles-Sciulla presented project progress at the annual Multiple Species Habitat Conservation Plan Progress Report Symposium in August 2026, completing Milestone 31.

These Milestones are instrumental in our greenhouse pre-conditioning trials and in our garden evaluations of plant materials so we can develop our final deliverables for this project.

QUESTION 2: What, if any, problems were encountered? Briefly describe those problems and the manner in which they were dealt.
None.

QUESTION 3: What, if any, proposed activities were not completed? Briefly describe those activities, the reasons they were not completed and your plans for carrying them out.
None.

QUESTION 4: What is the calculated percent of work completed?
We are approximately 22% toward project completion.

QUESTION 5: Do you foresee any upcoming problems with future project activities? If so, how do you propose to overcome those problems?
None anticipated.

QUESTION 6: Is there anything else you want to tell the DCP about this project?
We have nothing additional to note concerning this project.

QUESTION 7: What was produced during the reporting period?
During the reporting period, we produced this Quarterly Progress Report (D12).