

Project Year-End Summary Report 2021

Title of Project: A Demonstration Plot of Native Grasses, Legumes, and Forbs in Compacted Soil

Begin answering in the shaded box right beside or below each question and it will expand to accommodate as you type. Use up to a total of two pages. More detailed presentations, articles or posters are welcome separately (See final instructions at the end of this form.)*

1. Organization name or Individual who received the grant: Santa Fe Extension Master Gardeners

2. Amount of Grant: \$1,500.00

4. Was additional outside funding obtained? (check box that applies) Yes No
Other funding source(s) if you checked "yes." Friends of Santa Fe Master Gardeners

5. Briefly, how was the grant money from the Carter Conservation Fund used?

Soil Respiration Test \$ 120

34 cubic yards Compost plus delivery \$ 616

Temporary irrigation \$ 75

Native grass seed, wildflower mix, legumes \$ 363

Native Grass Hay \$400

Binder \$ 33

We logged 115 volunteer hours

6. Write an abstract or summary of the activities performed and the progress that was made this year on your project. Save any conclusions, lessons learned, and benefits achieved for the final sections, 7&8.

A 10,000 square foot area to the west of the Extension Office was surveyed and shaped into terraces sloping from the porch to an induced meander that channels storm runoff from the upper parking lot. Excess rainwater from three cisterns was diverted to the terraces. SFEMG volunteers armoured the upper 2 terraces with 8" rip rap. By slowing and redirecting water, these features improve infiltration and reduce erosion. The lower parking-lot runoff is directed to the lower 2 terraces. To prepare the soil for seeding, we loosened the hardpack with a chisel plow. SFEMG volunteers incorporated 34 cubic yards of biosolids compost, installed a temporary irrigation system, scattered seeds for native grasses and forbs on August 14, and covered the seedbed with blue grama hay. About half the area was sprinkled with a mulch binder. Germination was evident within a week of the seeding.

In September we added 32 perennials and a small shrub donated by the Xerces Society (Pollinator Habitat Kit) and 30 seedlings from the New Mexico Forestry Division's seedlink program.

The first workshop, Soil Testing, was given in June. Additional workshops were: Passive Water Harvesting and the Induced Meander in August and What's That Weed? in September.

7. State how your project furthers a Native Plant Society mission area. Pick the best fitting area: achieves plant or ecological education, contributes to conservation/restoration of native plants and habitats, adds to botanical research, or promotes appropriate use of native plants to conserve water, land and/or wildlife.

This project addresses each of the NPSNM's mission areas. Reshaping the slope to the west of the building has slowed and redirected water to improve infiltration and reduce erosion. Our long-term goals are to provide sufficient vegetation coverage to establish a sustainable, diverse native plant community and a vigorous network of roots that will further reduce erosion, runoff, and compaction; improve field capacity and soil aggregation; sequester carbon; and increase diversity of microbes in the soil profile and insects in and above the ground. The change in the appearance of the landscape after the first flush of new vegetation was dramatic.

Although workshops this season were small and limited to Master Gardeners, the grounds are used by a wide variety of community groups and those of us who were on site frequently interacted with visitors interested in the project. In 2022 we are planning several events for the public in addition to the regularly scheduled continuing education for Master Gardeners. Two small pilot studies were initiated a) at seeding (3 one-square-meter plots were randomized to include legumes, pretreatment with a mycorrhizal inoculant, or both) and b) when the perennials were planted ((16) or without (16) mycorrhizal inoculant).

8. State any other conclusions. Include any lessons learned that would assist others. What benefit to you, the community or the environment resulted or do you hope will result from your use of this grant?

This project was, unexpectedly, ideally suited to the strange circumstances brought on by the persistent pandemic. All work sessions and classes were restricted to 10 or fewer volunteers, masked and distanced, a situation that made it possible for zoom-weary interns to meet and engage with instructors and each other. Volunteers for other projects (herb garden, cactus garden, veggie garden) dropped by frequently for progress reports, as did visitors to the fairgrounds from other community groups. Initial germination suggests our aim to revegetate and restore habitat is attainable: annual monitoring of plant diversity and beneficial insects will provide a quantitative indicator. Expected changes in soil health will emerge over time.

We expect this "living classroom" to host more workshops on native plants, weed management, soil testing, and beneficial insect monitoring. We also expect the progress made so far will inspire more reclamation and restoration efforts in the long term.

Final Instructions

Please send your completed form in MS Word as an email attachment to cartergrantapps@gmail.com by November 31.

** To remain in good standing for any future funding from the Native Plant Society of New Mexico, plan to write an article (600-1000 words, illustrations welcome) for our newsletter, **or** create and present a poster at our annual state conference, **or** send us a copy of or link to a published article connected with the past year's work, **or** work with a local chapter of NPSNM to make an educational and visual presentation to a group.*

What are your intentions in this regard? 1) We submitted an article with photos to the NPSNM Newsletter for publication in January 2022; 2) We plan to take a poster to the Annual Meeting of the NPSNM in 2022; 3) we are drafting a fact sheet for the Agricultural, Consumer and Environmental Sciences publications describing the basic process that will be accessible to stewards of both small and large tracts in need of reclamation; 4) The SFEMG Native Plant Project web page has pre/during/post images of the project.

Our next state conference is scheduled for August, 2022 in Albuquerque. Contact our Albuquerque chapter if you wish to contribute in that way. Write to cartergrantapps@gmail.com at any time with questions.