

## Project Year-End Summary Report 2021

Title of Project: Native New Mexico Plant Restoration to conserve Native Pollinators

*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: La Cosecha-Agricultura Network

2. Amount of Grant: \$ 1,000.00

4. Was additional outside funding obtained? (check box that applies) Yes  No

Other funding source(s) if you checked "yes." Additional outside funding was provided by Natural Resource Conservation Service (with Tree New Mexico as the fiduciary agent, U.S. Department of Agriculture, the National Fish and Wildlife Foundation (through Rocky Mountain Youth Corps), and the Indian Pueblo Cultural Center (IPCC).

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

The Carter Conservation Funds were used to purchase plant propagules: saplings, seedlings, plugs, and seeds of native New Mexico trees shrubs, cacti, desert succulents, forbs, and grasses. An emphasis was placed on the last two growth forms. Ollas, unglazed clay pots, were used for watering in the raised beds in which wildflowers were planted at the McEwen site.

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.

We planted a total of 239 individual plants McEwen Site representing 27 plant families, 44 genera, and 82 species of native, New Mexico, woody plants (trees, shrubs, desert succulents, cacti, and vines). During the course of the year, we had a total of nine different events (talks or walks) at 7 different places (virtual or real) at 9 different venues. The events consisted of 14 hours of programming, with 163 slides or pages of presentations and 1 set of 10 flash cards, serving 163 participants. The new web page devoted to pollinators contains 17 pages of content with 28 illustrations (one-line drawing and 27 photos and 26 species of bees,) a listing of 32 native New Mexico trees and shrubs, 3 vines, 8 cacti, 7 succulents, and 8 references for further information.

At the IPCC-Pre-contact Area, I planted 34 individual plants representing nine different plant families, 13 genera, and 16 species of native New Mexico woody plants (trees, shrubs, desert succulents, cacti, vines, and canes). I planted 2 Rio Grande cottonwoods, 1 peach-leaf willow, and 2 red willows in the arroyo. We also built ten check dams to slow parking lot runoff. An adobe-raised bed with native New Mexico wildflowers was planted to attract pollinators.

As per our proposal, we planted Santa Fe Cholla, and endangered endemic cactus in north central New Mexico with permission from Daniella Roth, NM State botanist. The following grasses were planted as plugs: buffalo grass (103 at McEwen), Indian rice grass (13 at McEwen, 24 at IPCC), silver beard grass (12 at McEwen), the following grasses were planted as seed: blue grama and Indian rice grass. On 26 September 2021, I planted 102 plugs of buffalo grass in a 65 square foot area. Buffalo grass is one of two, native, sod-forming grasses

in New Mexico. The other is blue grama. I planted this species on a 12 ft by 5 ft plot on the northern side of the McEwen site using the seed ball method. I tried the burlap cover method with Indian rice grass, in the spring of 2021 on the north side of McEwen on a south facing slope. I applied compost to a 3 ft by 24 ft rectangle of soil, raked it into the top layer, and then sowed the seeds on top of that then rolled out a bolt of burlap mesh.

The following woody plants (purchased with NPS funds) were planted as saplings: trumpet gooseberry (1 at McEwen), Louisiana sage (2 at McEwen), red willow (1 at McEwen), screwbean mesquite (1 at McEwen) and creosote bush (1 at McEwen). One pencil cactus and 3 Santa Fe cholla were planted at McEwen.

We planted the following native forbs at McEwen: scorpion flower (1), yarrow (1), desert four o'clock (1), showy milkweed (2), beebalm (3), and yerba mansa (2). In raised beds on the west end of the McEwen site we planted: desert penstemon (7), desert zinnia (1), plains blackfoot (1), Mexican hat (2), broadleaf milkweed (1), butterfly weed (1), chocolate flower (1), yellow coneflower (1), bush mourning glory (1).

At the IPCC we planted the following forbs: beebalm (5 in an adobe planter), cota (14 in a adobe planter and a raised bed), Pueblo tea (5), desert zinna (2), plains blackfoot (5), chocolate flower (5), and Mexican hat (2). One red willow and 3 western clematis was purchased with NPS funds. With the wildflowers we established 2 pollinator gardens to attract them to the vegetable garden. The 3 Western clematis was planted on a trellis near the gazebo. While the red willow was planted in an arroyo with two other willows and a Rio Grande cottonwood purchased with USDA funds.

In addition, at the IPCC, the seeds of Hopi many-branched sunflower; a Pueblo landrace cultivar. These seeds had a high germination rate, and grew tall and vigorous. Seeds of the Rocky Mountain bee plant and "High Desert Mix" were planted.

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.

Although, we contributed to NPS mission numbers 1 and 3, I am most proud of our accomplishments in category No. 2. Mil will continue on with the education mission in my courses in Horticulture, Plant Science, and Arboriculture at CNM and SIPI. Plus I will use I-Tree to calculate plant ecological services they provide.

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?

Here are ways I would do better in the future. Water more during a drought and coordinate efforts with other waterers. The plugs of Indian rice grass, silver beard grass, and buffalo grass did very well though were more expensive than the seeds. I prefer native grass plugs over seeds especially during a drought. I might try using binder with broadcast sowing, to prevent carpenter ants and other granivorous animals from "stealing" the grass seeds. Concentrate grass seed planting after a late winter snowfall or during the heart of the summer, monsoon season. Cold stratify seeds the fall before the spring of planting. Read the leaves to fine tune amount and frequency of watering pinyon seeds and willow whips.

## Final Instructions

**Please send your completed form in MS Word as an email attachment to [cartergrantapps@gmail.com](mailto: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? I plan on writing an article for the NPS-NM newsletter.*

*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](mailto:cartergrantapps@gmail.com) at any time with questions.*