

Santa Fe Pollinator Habitat Kits: Planting Guidance



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Each Santa Fe pollinator habitat kit, like this Low to Medium Water Kit, consists of 8 species of drought-tolerant, pollinator-attractive native wildflowers and one native tree or shrub. These plants require care and attention in the first year or two, but are low maintenance over the long term. Photo: Xerces Society / Kaitlin Haase.

Thank you for your interest and work in conserving pollinators in Santa Fe. In planting this kit, you are an essential partner in urban pollinator conservation! This handout includes instructions for planting and follow-up care for successful habitat establishment.

Background

New Mexico is home to more than three hundred species of butterflies and over one thousand species of native bees. In the Santa Fe area, pollinator habitat has been replaced with urban infrastructure and non-native plants. Fortunately, many pollinators are able to thrive in urban areas where landscaping includes a diversity of native plant species free of pesticides.

One important step we can take to protect these important animals is to increase the native flowering plants available to these species by creating connected, climate-resilient pollinator habitat throughout urban Santa Fe. In order to address pollinator declines and habitat loss, The Xerces Society has partnered with Santa Ana Native Plant Nursery to produce these kits and make them available to residents and organizations in Santa Fe interested in creating pollinator habitat.

What's in this kit?

Each kit contains 33 native, drought-tolerant plants including variety of perennial wildflowers and an early blooming shrub or tree documented to be attractive to native pollinators. The following page includes the species list for both kit types.



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Low Water Pollinator Habitat Kit

BLOOM PERIOD	COMMON NAME	SPECIES	PLANT TYPE	MAX. SIZE (height x width)
early–mid	New Mexico olive	<i>Forestiera pubescens</i>	small tree	12–15 ft. x 12 ft.
early–mid	Pale evening primrose	<i>Oenothera pallida</i>	perennial	1.5 ft. x 1.5 ft.
early–mid	Plains prickly pear	<i>Opuntia pallida</i>	cactus	8–10 in. x spreading
mid	Upright prairie coneflower	<i>Ratibida columnifera</i>	perennial	1–3 ft. x 2 ft.
mid	Horsetail milkweed	<i>Asclepias subverticillata</i>	perennial	2 ft. x 2 ft.
mid	Blackfoot daisy	<i>Melampodium leucanthum</i>	perennial	8 in. x 2 ft.
mid	Chocolate flower	<i>Berlandiera lyrata</i>	perennial	12–18 in. x 2 ft.
mid–late	Desert mule ear	<i>Scabrethia scabra</i>	perennial	3–4 ft. x 2–3 ft.
late	Threadleaf groundsel	<i>Senecio flaccidus</i>	perennial	3 ft. x 2 ft.

Low to Medium Water Pollinator Habitat Kit

BLOOM PERIOD	COMMON NAME	SPECIES	PLANT TYPE	MAX. SIZE (height x width)
early	Threeleaf sumac	<i>Rhus trilobata</i>	shrub	5–7 ft. x 3–12 ft.
early–mid	Rocky mountain penstemon*	<i>Penstemon strictus</i>	perennial	2 ft. x 1.5 ft.
mid	Showy milkweed [†]	<i>Asclepias speciosa</i>	perennial	2–3 ft. x 3 ft.
mid	White prairie clover	<i>Dalea candida</i>	perennial	2 ft. x 2 ft.
mid	Hairy false goldenaster	<i>Heterotheca villosa</i>	perennial	2 ft. x 2 ft.
mid	Bee balm [†]	<i>Monarda fistulosa</i>	perennial	1–2 ft. x 1 ft.
mid	Cota	<i>Thelesperma megapotamicum</i>	perennial	1–3 ft. x 1 ft.
mid–late	MacDougal verbena	<i>Verbena macdougalii</i>	perennial	2–3 ft. x 1 ft.
mid–late	Blanketflower	<i>Gaillardia pulchella</i>	perennial	2 ft. x 1–2 ft.

* Quantities limited. May be substituted with either Palmer penstemon (*Penstemon palmeri*), which reaches a maximum size of 3–6 ft. x 2 ft., or desert four o'clock (*Mirabilis multiflora*), which reaches a maximum size of 2 ft. x 3 ft.

† Species with medium water maintenance; all other species have low water needs once established.

Tips for Plant Establishment

The plants in your kit are ideally suited for the Santa Fe area, but they will need good care to get started. Follow these guidelines to ensure the success of your pollinator habitat.

1. Timing

Plant soon after picking up your kits to allow time for root establishment before the first hard freeze and no later than September 26th, 2021. If an early frost occurs, covering your newly planted kit with cardboard boxes or light blankets could help prevent plants from freezing.

2. Weed Management

Before and after planting, manage weeds so they aren't crowding out the habitat kit plants. Providing a layer of top mulch (around the plants but not right next to the new tiny stems) may help protect against weed encroachment, and will also help maintain soil moisture.

3. Soil Amendments

These native plants are adapted to the soils of the high deserts of New Mexico and do not require supplemental organic material or nutrients in the form of compost or fertilizers, though bee balm (*Monarda fistulosa*) and showy milkweed (*Asclepias speciosa*) do respond well to some added organic material. Most species in both kit types do best in well-drained soils.

4. Plant Spacing

Kit transplants will be very small and will need space to grow after planting. Refer to the habitat kit plant lists above for max height and width of each species to determine spacing of your planting area.

5. Design and Location

Plants from each kit can all be planted in one location or in different areas on your property. Identify microclimates around your yard that are suitable for certain species, such as a high and dry location for the prickly pear or a water collecting area for showy milkweed and bee balm. New Mexico olive can do well in a large container or planted in a level area with or without shade. The three leaf sumac tolerates planting on slopes. Desert four o'clock can tolerate some shade and spreads widely.

Consider planting all four individuals of one species from a kit in close proximity to attract pollinators to a single-species clump and to easily track plant survival. You could use a landscaping flag or other easy-to-spot marker to make it easy to find the plants in your garden until they're large enough to see easily, especially since some of the plants may disappear completely over the winter.

6. Irrigation

Plantings will need supplemental irrigation to get established; careful observation to adapt the watering schedule for your location is essential. Keep soil moist for the first month after planting – except for cacti, which can dry out some. Slowly decrease watering frequency into autumn, and water every 3 to 4 weeks in winter unless we have deep snow– except cacti. In 2022, the first full season of plant growth, plants should be irrigated deeply at least 2x/week.

Once well established (that is, after the first year), irrigation can be gradually decreased. Generally, by the third year after planting, most kit species will need only monthly irrigation, or no irrigation at all except in extreme drought. Drip irrigation is ideal for transplants but be careful not to overwater; watch your seedlings carefully and if they look like they're yellowing, or starting to bend over and look droopy; they may be getting too much water. Most of the species in these kits are more sensitive to overwatering than underwatering.

7. Planting

Dig holes a little deeper than, and 2 to 3 times as wide as the plant's container. If your soil is heavily compacted, break up soil deeper down and surrounding the hole to allow root penetration. Irrigate plants in pots thoroughly before planting. Water the holes and allow water to drain just before planting. Backfill the hole so that it is about the same depth as the container. Adding sand to the bottom of the planting holes can help improve drainage and curb damage from overwatering. Gently remove the plant from the container, break up roots if root bound, and place it in the hole. Gently pack soil around the plant. It is important not to make the holes too deep; the base of the plant should be at the same level as the surrounding soil. You can use any extra soil to make a small berm around the plant to help capture water for the first couple of weeks. Water the plant well.



These kits feature pollinator-attractive species that bloom consecutively through the growing season. Here, an American bumble bee (*Bombus pensylvanicus*) visits blanketflower (*Gaillardia pulchella*), a species in the Low to Medium Water kit. Photo: Xerces Society / Kaitlin Haase.

8. Protecting from Animals

Birds, rodents, or other animals may sample your new plants even if they would not normally eat these particular species when mature. If you know you have rabbits or other plant predators, be prepared to protect your plants for at least the first 6 months. Small wire cages or other physical barriers are the best protectors. Sprays that repel herbivores are generally less effective than physical barriers and may be toxic or repellent to insects feeding on the plants; they are not recommended for use on this habitat planting. If a plant does get eaten, it may grow back if the plant's roots were strong (and the nibbling does not continue).



Wood borer bees (*Lithurgopsis* sp.) are frequent visitors of prickly pear cactus (*Opuntia pallida*), featured in the Low Water Kit. Photo: Xerces Society / Kaitlin Haase.

Xerces is here to help!

We are excited to partner with you on creating pollinator habitat. Please feel free to contact us if you have any questions or need additional guidance (kaitlin.haase@xerces.org). You will find publications about monarchs, pollinators, and habitat restoration work on our website (www.xerces.org), or by following the links provided below.

Additional Resources

Pollinator Habitat

- Pollinator Plants: Albuquerque and Santa Fe Region: <https://xerces.org/publications/plant-lists/pollinator-plants-albuquerque-and-santa-fe-region>
- Nesting and Overwintering Habitat for Pollinators and Beneficial Insects: <https://xerces.org/publications/fact-sheets/nesting-overwintering-habitat>

Pesticide Exposure and Pest Management

- Smarter Pest Management: Protecting Pollinators at Home: <https://xerces.org/publications/fact-sheets/smarter-pest-management-protecting-pollinators-at-home>
- Buying Bee-Safe Plants: <https://xerces.org/publications/fact-sheets/buying-bee-safe-plants>

Local Water Conservation and Native Plant Gardening Resources

- Saving Water Outdoors (City of Santa Fe Water Conservation): <https://savewatersantafe.com/saving-water/saving-water-at-home/saving-water-outdoors/>
- Rain barrel and irrigation rebate program for City of Santa Fe residents: <https://savewatersantafe.com/outdoor-rebates/>
- Santa Fe Native Plant Project (Santa Fe Master Gardeners): <https://www.sfemg.org/santa-fe-native-plant-project>

Acknowledgments and Partners

The Xerces Society for Invertebrate Conservation is a nonprofit focused on protecting the natural world through the conservation of invertebrates and their habitats. We take our name from the now extinct Xerces Blue butterfly (*Glaucopsyche xerces*), the first butterfly known to go extinct in North America as a result of human activities.

Santa Ana Native Plant Nursery is a wholesale native plant nursery located in the Santa Ana Pueblo specializing in the production of high-quality native plants from locally collected seeds. Their plants are used in wildlife habitat restoration projects, agricultural revegetation projects, erosion control and urban and rural landscaping. The nursery will add a retail garden center facility which will be open to the public when the Santa Ana Pueblo lifts COVID-19 restrictions.

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