



Ready, Set, GROW! Webinar Series

Climate-Ready Trees:

Planting smarter for a
warmer
(and shadier) future

Dr. Marisa Y. Thompson
NMSU Horticulture Extension Specialist
December 18, 2024

Social media: @NMDesertBlooms

ABQ Area Climate Ready Trees - FULL REPORT

<https://treenm.org>



What would you like to learn
from this webinar?



39th Annual Urban Tree Care Conference February 6th - 7th, 2025

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<https://www.thinktreesnm.org/>



BE BOLD. Shape the Future.

<https://treeschoolnm.com/workshops/>

You're
invited!

The first annual
Treemendous
Fruit Tree
Retreat!

A five-day deep-dive into pruning,
plant health care, planting, and more!

Feb 27 - March 3, 2025
Albuquerque, NM

A Tree School immersive experience,
to foster confidence, community, and joy.



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THE 2024 LAND AND WATER SUMMIT

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SAVE THE DATE: LAND & WATER SUMMIT
MARCH 6-8, 2024

<https://www.landandwatersummitnm.org/>



SWAAN
Southwest
Agroforestry
Action Network

SWAAN CON IN SANTA FE, NM MARCH 11-13, 2025



Conference Sessions

Join us in Santa Fe, New Mexico, for conference sessions held at Santa Fe Community College in the Main Building, Jemez Room.



Field Trip

More information on Day 2 and the program details coming soon!



Leadership Meeting

Our third day will be a meeting of current and future leaders of our network. If you are interested in joining the leadership team or a committee, please attend.



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ABQ Area Climate Ready Trees - FULL REPORT

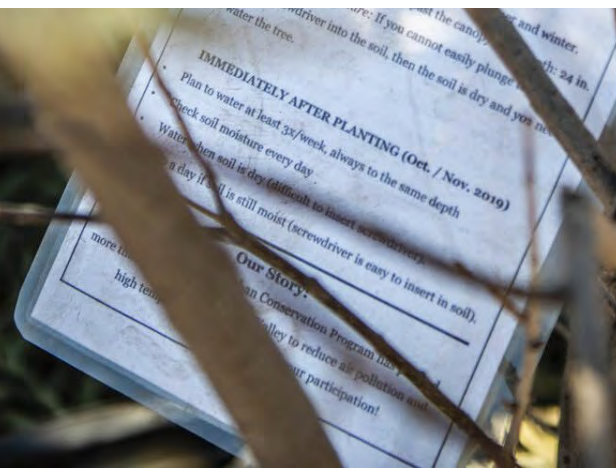
<https://treenm.org>



In the next 30 years, high temperatures in the Albuquerque area are expected to resemble the current high temperatures in Las Cruces or El Paso, and in 80 years, by 2100, closer to the highs currently experienced in Tucson. For perennial plants to live and thrive as long as possible, we need to consider how cold hardy they are in our area now and how heat hardy they will be in warmer decades to come.

- from my column *"Match Maker: Picking the Right Shrub/Tree for Your Area"*

May 2020 <https://nmsudesertblooms.blogspot.com/>



Sarah Hurteau, The Nature Conservancy

Photo: Roberto Rosales

Climate Ready Trees for Albuquerque's Community Forest

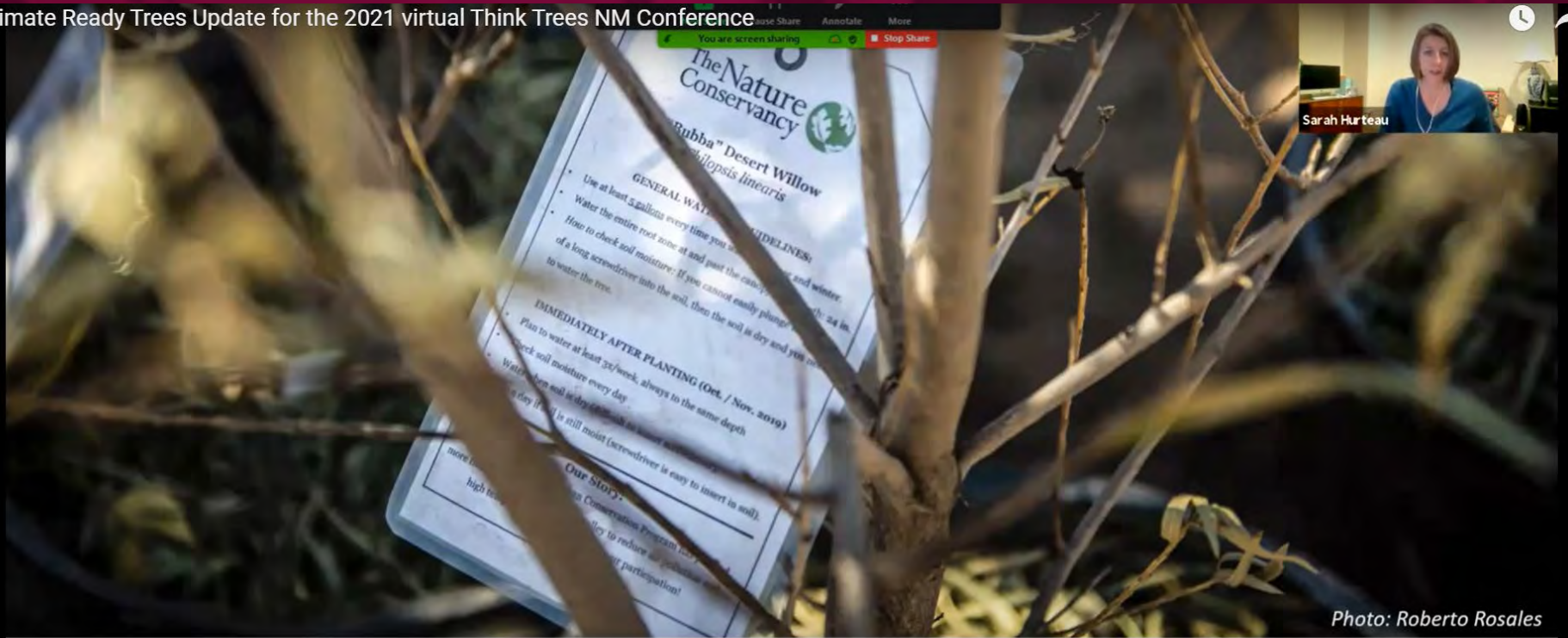


Photo: Roberto Rosales

Climate Ready Trees Project Update

<https://www.youtube.com/watch?v=fmI1J-2svVI>

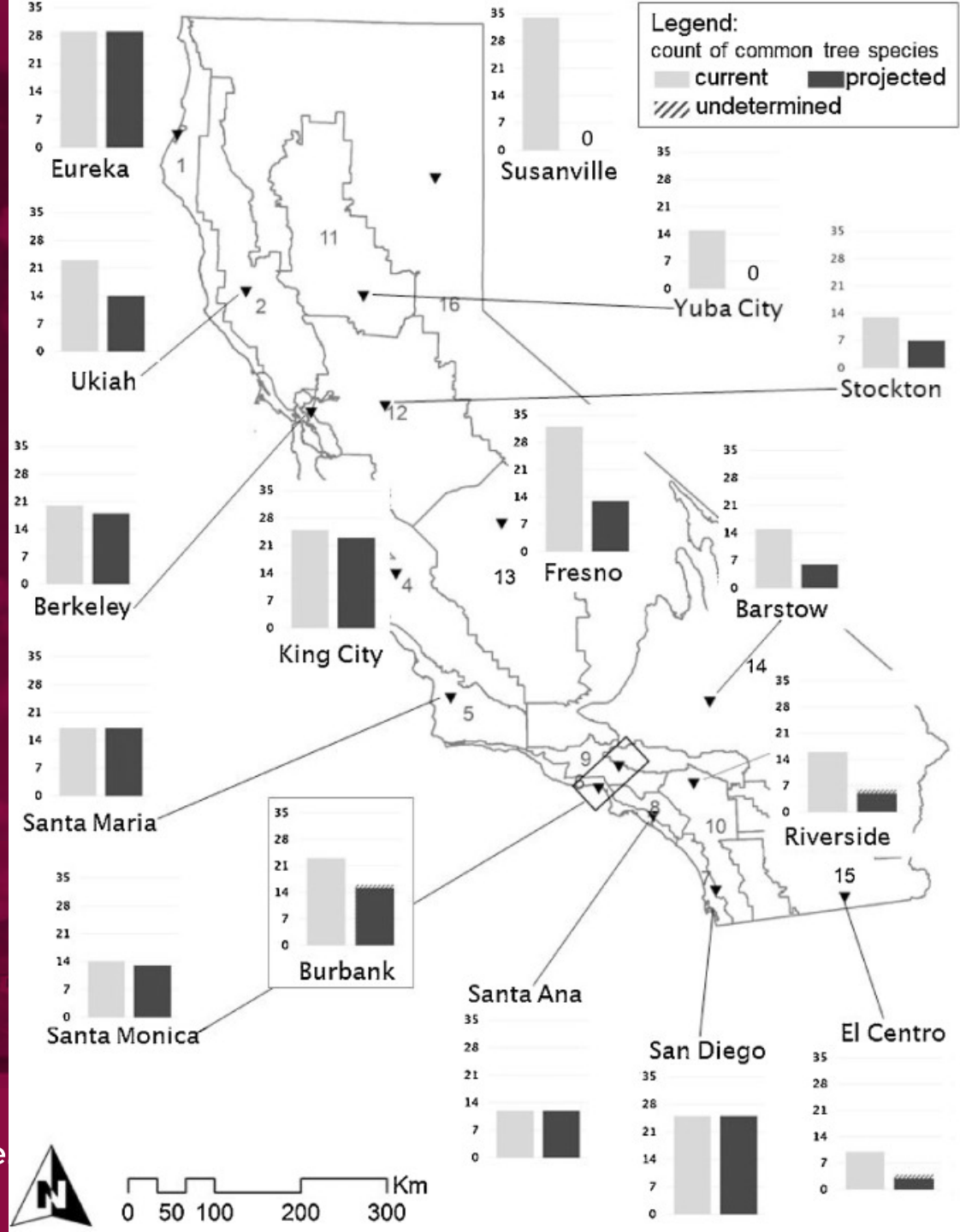


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Dr. Igor Lacan – University of California Extension

<https://ucanr.edu/sites/Igor/>

“The Impact of Climate Change-Induced Temperature Increases on the Suitability of Street Tree Species in California Cities”
McBride & Lacan, 2018



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Invited Collaborators

- Jennifer Dann, NM State Forestry
- Joran Viers, Albuquerque City Forester
- Andrew Lisignoli, Trees of Corrales
- Carol Bada, NM State Forestry, Tree Nursery
- Dr. Will Pockman, UNM
- Dr. Marisa Thompson, NMSU Extension
- Judith Phillips, Native Plant Society
- Amos Arbor, ABCWUA
- Hunter Ten Broeck, Waterwise Landscapes
- Dr. George Koch, Northern Arizona University



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Tree Criteria Scoring

Soil type tolerance

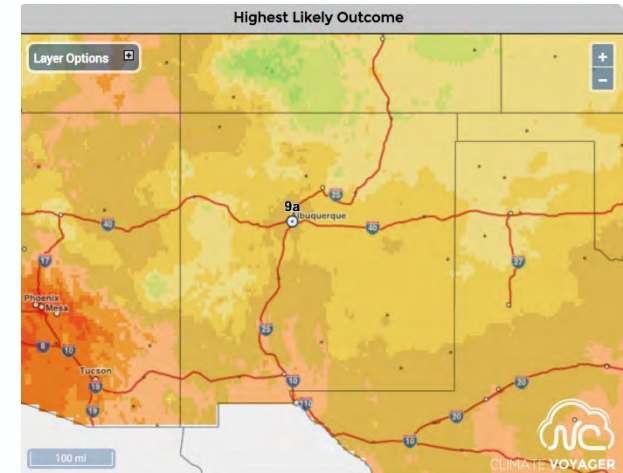
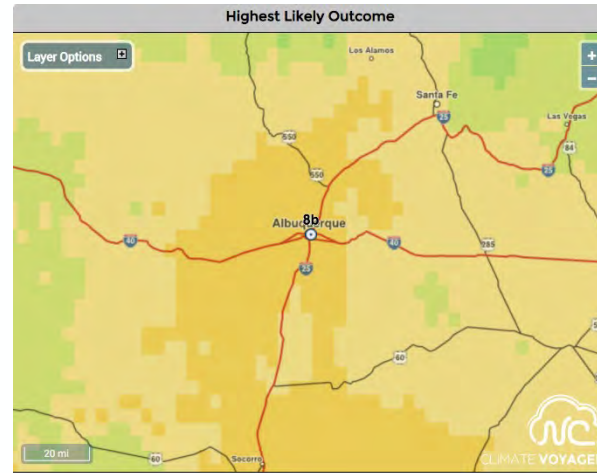
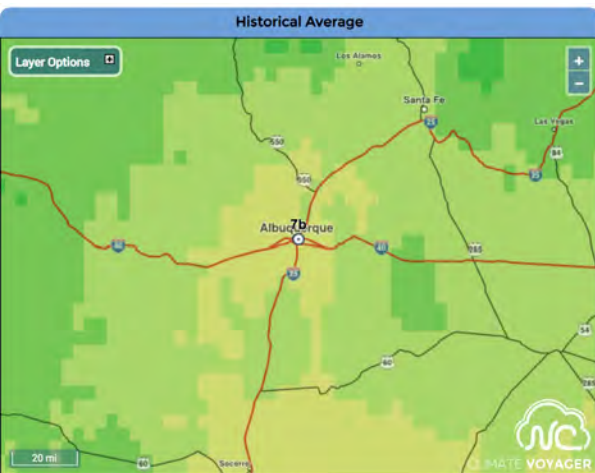
Drought Tolerance

Heat Tolerance – Next 30 Years – El Paso

2060-2099 – Tucson

Cold Tolerance – Next 30 Years – ABQ now

2060-2099 – El Paso now



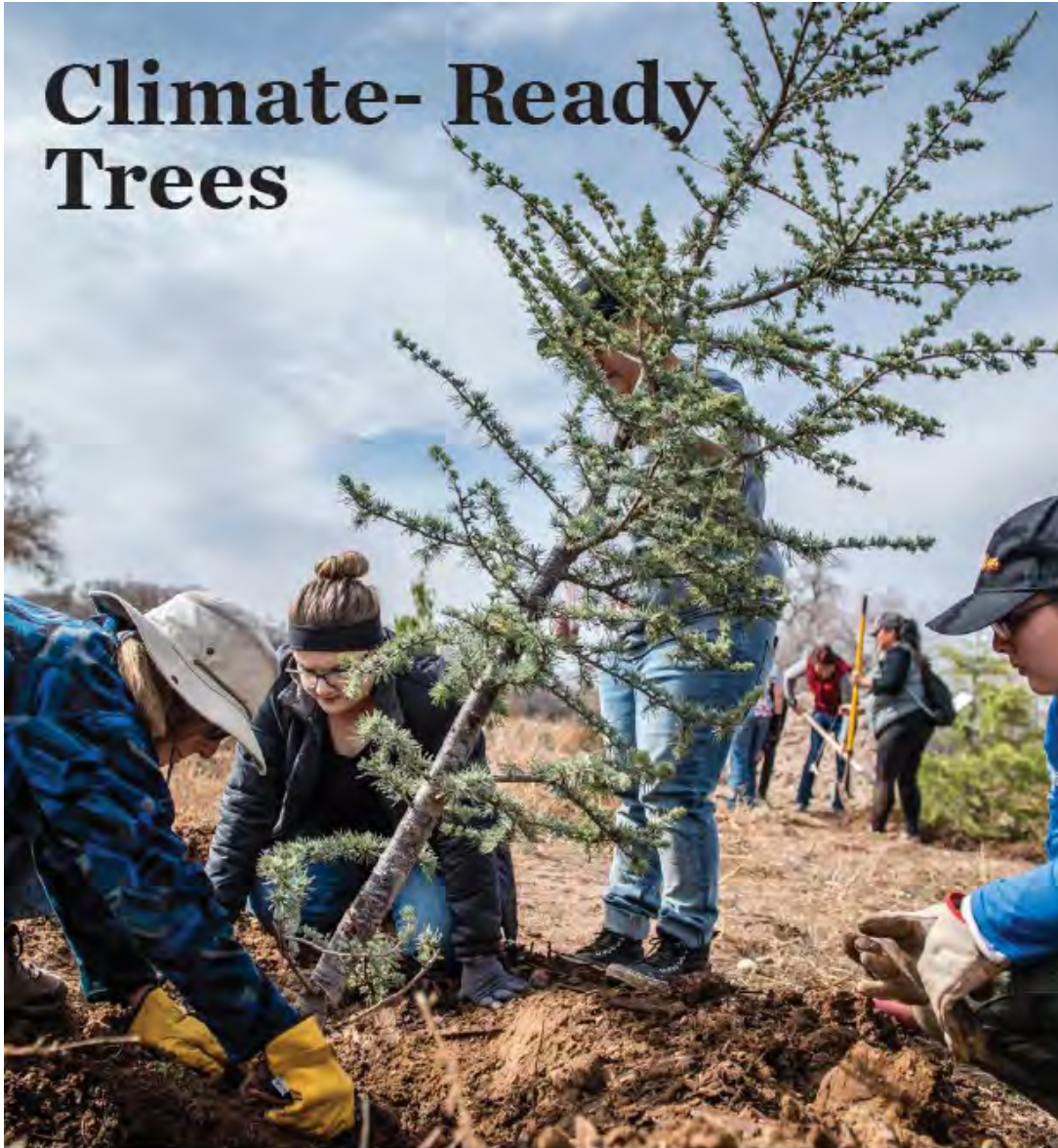
Tree Criteria Scoring

Bonus Columns:

- Flooding tolerance
- Urban compaction tolerance
- Alkaline Soil Tolerance
- Well-drained soil requirement
- Pests/disease susceptibility
- Allergens/ Toxic parts
- Management requirements (pruning, tree litter, etc.)
- Branch attachment strength/ prone to breakage
- Edible parts
- Attractiveness (fragrance, blooms, color)
- Supports wildlife



Climate- Ready Trees



Tree Species Selection Guidelines for the Albuquerque Metro Area



<https://www.nature.org/newmexicotrees>



Location Type 3: Xeriscaped Areas



LOCATION TYPE 3 XERISCAPED AREAS



LOCATION CHARACTERISTICS

- Follows "Right Tree in the Right Place"
- Consider Existing Utilities
- Building Setback: Varies
- Consider Users
- Xeriscaped or Low-Medium Irrigation
- Examples: Plants of the Southwest, Explora, High Desert Neighborhood

TREE CHARACTERISTICS

- Mature Tree Height: Site Specific
- Water Needs: Low to Very Low
- Ornamental and Large Trees
- Wildlife or Pollinator Benefit Desired



Photo Credit: ABCWUA

RECOMMENDED TREES

- | | |
|---|---|
| <ul style="list-style-type: none"> <i>Arbutus xalapensis</i> <i>Celtis reticulata</i> <i>Cercis canadensis</i> var. <i>mexicana</i> <i>Cercis reniformis</i> <i>Cercis canadensis</i> var. <i>texensis</i> <i>Cercis occidentalis</i> <i>Cedrus atlantica</i> <i>Chilopsis linearis</i> <i>Cotinus obovatus</i> <i>Forestiera neomexicana</i> <i>Gymnocladus dioica</i> <i>Fraxinus cuspidata</i>* <i>Juniperus deppeana</i>* <i>Juniperus monosperma</i>* <i>Juniperus virginiana</i>* <i>Lagerstroemia indica</i> <i>Leucaena retusa</i>* <i>Maclura pomifera</i> <i>Parkinsonia x Cercidium</i>* <i>Pinus eldarica</i> <i>Pinus pinea</i>* <i>Pistacia chinensis</i>* <i>Prosopis glandulosa</i>* <i>Prosopis velutina</i>* <i>Quercus arizonica</i> <i>Quercus fusiformis</i> <i>Quercus gravesii</i> <i>Quercus ilex</i> <i>Quercus muehlenbergii</i> <i>Quercus oblongifolia</i> <i>Quercus suber</i>* <i>Sapindus saponaria</i> var. <i>drummondii</i>* <i>Sophora secundiflora</i>* <i>Rhus lanceolata</i> <i>Ulmus x 'Morton' Accolade</i>™ <i>Ulmus x 'Frontier'</i> <i>Ulmus x parvifolia</i>* <i>Vitex agnus-castus</i> | <ul style="list-style-type: none"> Texas Madrone Netleaf Hackberry Mexican Redbud Oklahoma Redbud Texas Redbud Western Redbud Atlas Cedar Desert Willow American Smoketree New Mexico Privet Kentucky Coffeetree Fragrant Ash* Alligator Juniper* One Seed Juniper* Eastern Red Cedar* Crape Myrtle Goldenball Leadtree* Osage Orange Palo Verde Hybrids* Afghan Pine* Italian Stone Pine Chinese Pistache* Honey Mesquite* Velvet Mesquite* Arizona White Oak Escarpment Live Oak Chisos Red Oak Holly Oak Chinquapin Oak Blue Oak Cork Oak* Western Soapberry* Texas Mountain Laurel* Prairie Flameleaf Sumac Accolade Elm Frontier Elm Lacebark Elm* Chaste Tree |
|---|---|

* These species have further site specific needs outlined in Appendix A - Master List

Right Tree, Right Place

Keeping mature size and other species characteristics in mind, consider overhead and underground utilities, proximity to buildings and traffic, the users of the space and maintenance and upkeep.



LET'S PLANT
ALBUQUERQUE

Trees are a gift from one generation to the next.

CLIMATE-READY

Planting a tree? Pick from

- MESQUITES : screwbean
- JUJUBE
- CHINESE PISTACHE
- NETLEAF HACKBERRY
- CEDARS : atlas & deodar
- CHASTE TREE
- ELMS : accolade & fremont
- RUSSIAN HAWTHORN
- OKLAHOMA REDBUD
- NEW MEXICO PRIVET
- OAKS : escarpment live oak
- KENTUCKY COFFEETREE
- APRICOT
- AFGHAN PINE
- DESERT WILLOW
- CRAPE MYRTLE

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

These Trees Eligible For A

25% REBATE
ON YOUR WATER BILL

UP TO \$100 FOR RESIDENTIAL AND \$500 FOR COMMERCIAL ACCOUNTS

 www.abcwua.org
www.505Outside.com

Must be a Water Authority customer

TREEBATE CERTIFIED



That's not all! FIND MORE CLIMATE-READY TREES ONLINE at nature.org/newmexicotrees



The Nature Conservancy



TRIE NEW MEXICO

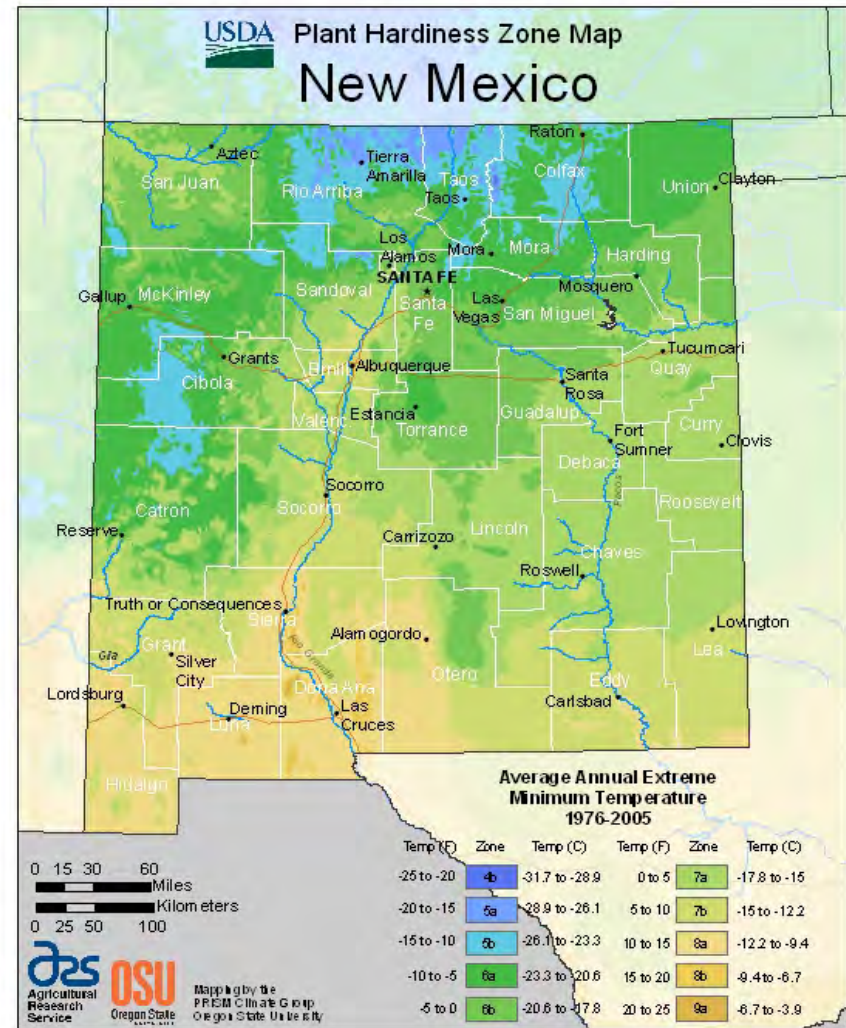
This main background of this poster contains approximately 10,000 trees - the average yearly goal to reach our 10-year goal.

How to Adapt this Climate Ready Trees Model to Other Areas:

1. Is there a city today with the climate that is predicted for my city in 50 (or 100) years?

2. Do my favorite urban trees thrive in that other city?

If not, be sure to ask why!?



EMNRD
NM State Forestry
Urban & Community Forestry
Climate Ready Trees

<https://www.emnrd.nm.gov/sfd/urban-and-community-forestry/climate-ready-trees/>



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<https://www.emnrd.nm.gov/sfd/urban-and-community-forestry/>

The Urban and Community Forestry Program helps communities develop and sustain healthy urban forests

We do this through a variety of services:

- Technical assistance for development of local community forestry programs, tree care, training for professionals, planning and outreach efforts, and support of community events;
- Grant funding for tree planting and support of local urban forestry programs;
- Coordinating volunteer events and K-12 education opportunities; and
- Building partnerships and identifying funding opportunities

For more information contact Alyssa O'Brien at alyssa.obrien@emnrd.nm.gov.



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Benefits from the Community Forest

Trees are vital to communities, and human and environmental health. They contribute to:

- Reduced storm water runoff;
- Improved air and water quality;
- Increased property values;
- Improved quality of life for citizens;
- Increased economic development opportunities; and
- Reduced energy use at homes and businesses.



Climate Ready Trees

The Climate Ready Trees Program is designed to identify climate adaptable tree species that can survive current conditions and climatic changes over the next century and introduce these species into our urban landscape. Using climate modeling, The Nature Conservancy determined future climate zones for New Mexico, then a rigorous review protocol evaluated potential trees species' adaptability and tolerances to urban and climate conditions. Now demonstration sites are needed to introduce these new species into the urban landscape and to inform both nursery growers and the public about these new species.

Municipalities or public schools may apply to have public spaces that they own and are open to the public within New Mexico become Climate Ready Demonstration Sites (Demonstration Sites). These sites will provide educational opportunities for the public and allow for observations on how Climate Ready Trees perform under local and regional conditions.

Read more about [Goals & Requirements](#) for Climate Ready Trees.

[Demonstration Site Application.](#)

[Monitoring Form.](#)



Legend

Plant_Hardiness_Zones_Current

Plant Hardiness Zones (Current)

Current Zone

- 5a (-20 to -15 °F/-28.9 to -26.1 °C)
- 5b (-15 to -10 °F/-26.1 to -23.3 °C)
- 6a (-10 to -5 °F/-23.3 to -20.6 °C)
- 6b (-5 to 0 °F/-20.6 to -17.8 °C)
- 7a (0 to 5 °F/-17.8 to -15 °C)
- 7b (5 to 10 °F/-15 to -12.2 °C)
- 8a (10 to 15 °F/-12.2 to -9.4 °C)



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Plant_Hardiness_Zones_Future

Plant Hardiness Zones Future

Future_Zon

- 8a (10 to 15 °F/-12.2 to -9.4 °C)
- 8b (15 to 20 °F/-9.4 to -6.7 °C)
- 9a (20 to 25 °F/-6.7 to -3.9 °C)
- 9b (25 to 30 °F/-3.9 to -1.1 °C)



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DIVE INTO THE FEW NATIVE SPECIES LISTED and ASK FOR AUDIENCE PARTICIPATION!

Experiential Notes from Audience

- On wildlife benefits/cons?
- Issues?
- Size/health?
- Unexpected positives?



CLIMATE READY TREES FOR NEW MEXICO

USDA Hardiness Zone 9A
Silver City, Carlsbad, Roswell, Socorro, Albuquerque, Farmington

| | |
|---------------------------|----------------------|
| Persian Silk Tree/ Mimosa | Golden-ball Leadtree |
| Atlas Cedar | Osage Orange |
| Deodar Cedar | Little Leaf Mulberry |
| Cedar of Lebanon | Fruitless Olive |
| Prairie Pride Hackberry | Afghan Pine |
| Netleaf Hackberry | Aleppo Pine |
| Eastern Redbud | Italian Stone Pine |
| Mexican Redbud | Chinese Pistache |
| Oklahoma Redbud | Pistachio |
| Texas Redbud | Honey Mesquite |
| Mediterranean Fan Palm | Screwbean Mesquite |
| Desert Willow | Pomegranate |
| Arizona Cypress | Arizona White Oak |
| Italian Cypress | Southern Red Oak |
| Texas Persimmon | Escarpment Live Oak |
| Coolibah Tree | Valley Oak |
| Fig (edible) | Burr Oak |
| New Mexico Olive | Chinquapin Oak |
| Evergreen Ash | Texas Red Oak |
| Ginkgo | Southern Live Oak |
| Yaupon Holly | Interior Live Oak |
| Chinese Juniper | Mexican Elder |
| Alligator Juniper | Western Soapberry |
| Oneseed Juniper | Tx. Mt. Laurel |
| Eastern Redcedar | Cedar Elm |
| Crape Myrtle | Lacebark/Chinese Elm |
| | Chaste Tree |
| | Japanese Zelkova |
| | Jujube |

What would you like to learn from this webinar?

- Are there benefits to the Aquifer when trees are planted?
- How many trees are too many on an acre of land? How far apart should the trees be planted?
 - Deborah, Chaves County
- What do I need to do to set up shade so my garden can be more successful? – Lorie, El Paso; Becky, Sandoval
- How to care for long-established trees – Angelica, Santa Fe
- Planting figs – Jan, El Paso
- I've learned that tree planting is not done in spring or summer. I'd like to learn why that is and the best time to plant a tree – Leigh, El Paso
- Planting in open, windy areas to provide shade.
Complementary plantings to support trees. – Jennifer, Rio Arriba County

What would you like to learn from this webinar?

- Where are we finding to "obtain" these climate ready trees and how to convince the public to plant them? – Luis, ABQ
- Is it possible for a tree to survive on rainfall here once established? – Amy, Socorro
- Would like to learn about pros and cons of soil amendments when tree planting – Andrew, Santa Fe
- What tree or shrub do you recommend for west facing area that's extremely hot and dry? – Mona, Santa Fe
- I have cottonwoods that are getting very old. Looking for ideas to replace and plant with them. – Lou, Sandoval
- What type of trees to plant to provide not only shade but haven for birds and wildlife? – Bobbie, Bern Co.
- Tree water requirements - John, Sandoval

What would you like to learn from this webinar?

- Best planting location when there's not much yard space?
 - Andrea, El Paso
- Advice on adding a couple of heat tolerant evergreens
 - Gene, Sandoval

Thanks!

Marisa Thompson

NMSU Extension
Horticulture Specialist



Social Media @NMDesertBlooms

<https://nmsudesertblooms.blogspot.com/>



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