

The Importance of Tree Canopy in Urban Conservation

Amy Miller & Sarah Hurteau
The Nature Conservancy
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The Nature Conservancy



Mission -- Conserve the Lands and Waters on Which All Life Depends

Science-based, non-partisan organization

- In all states and 71 countries
- In New Mexico for past 30 years

Focus on developing and implementing pragmatic solutions to address conservation challenges both for people and for nature

- Achieve mission by using a non-confrontational, collaborative approach

The Nature Conservancy (TNC) in New Mexico

- Protecting Water Security
- Restoring Forests
- Protecting Important Lands
- Building Healthy Cities
- Tackling Climate and Energy



The Future of Cities



70%

of the global population
will
be living in cities by
2050

80%

of the world's resources
will
be used by global cities

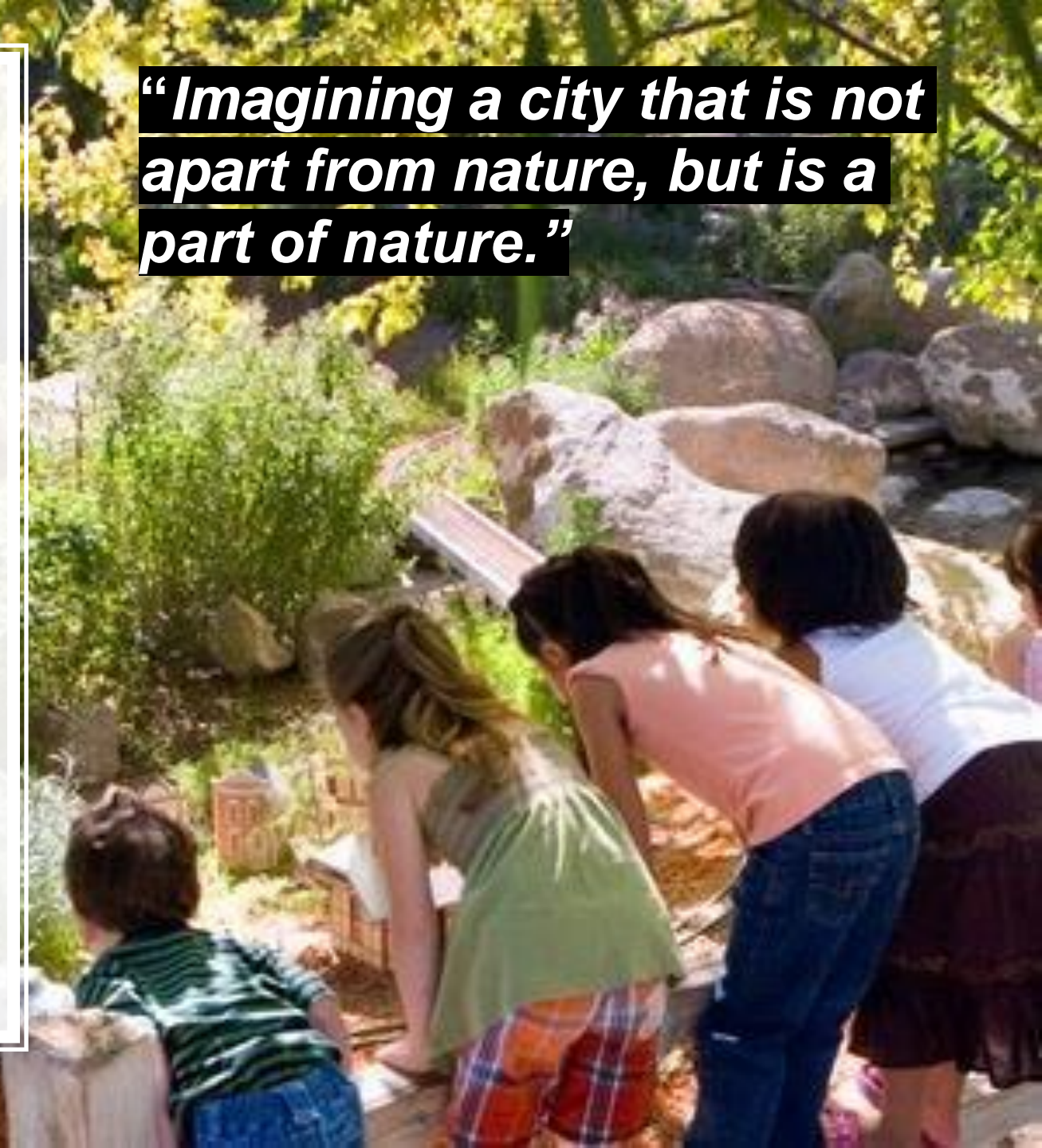
**\$5
Trillion**

will be needed annually
until 2030 to invest in
the creation of
infrastructure that
supports 9 billion
people

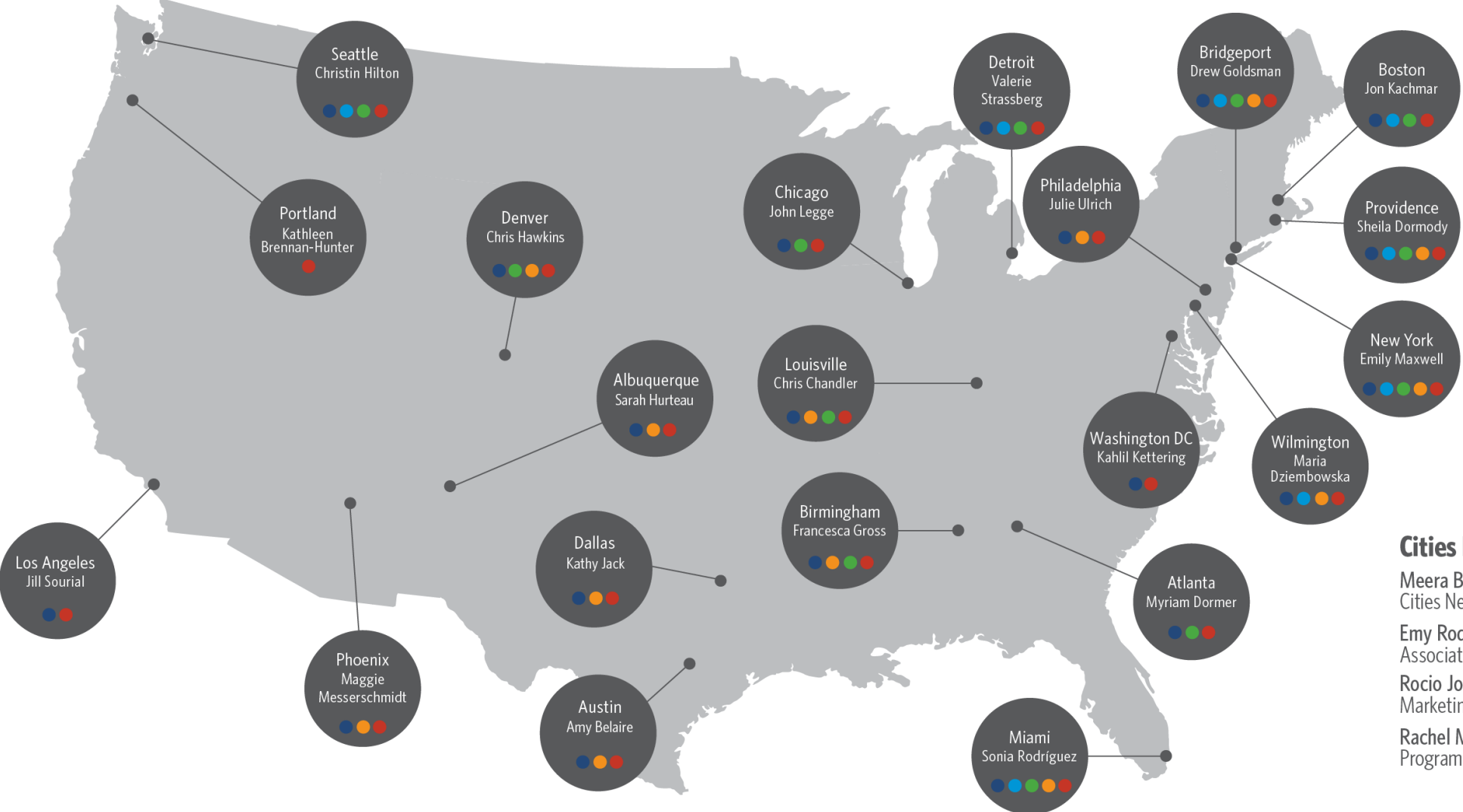
TNC Cities Network

- Urban conservation staff working in 21 U.S. cities, committed to supporting the voice and vision of local communities to co-develop innovative conservation solutions
- Prioritizing collaboration with low-income and underserved communities, where conservation can have the greatest impact for people and nature.

“Imagining a city that is not apart from nature, but is a part of nature.”



Cities Network: A New Approach



Cities Network Staff

- Meera Bhat
Cities Network Director
- Emy Rodriguez
Associate Program Manager
- Rocio Johnson
Marketing Manager
- Rachel Mulbry
Program Specialist

Improving water quality and mitigating flooding
 Protecting coastal communities
 Safeguarding biodiversity
 Alleviating poor air quality and heat islands
 Connecting people and nature

TNC Albuquerque Conservation Program

1. Reduce Heat Impacts in New Mexico's Largest City
 - Maintain outdoor livability and quality of life
 - Stabilize, then increase canopy cover
2. Support People and Biodiversity with Nature's Water
 - Restore wetlands, arroyos and Bosque forest systems
 - Protect source watersheds and increase water conservation practices
3. Build a Culture of Stewardship that is Diverse and Inclusive
 - Develop a shared understanding of urban conservation challenges
 - Increase number and quality of places for people to connect with nature



Urban Air Quality

- Air quality in most cities worldwide is a challenge
- One of the most damaging pollutants in urban areas is particulate matter
 - Fine particulate matter (2.5 micrograms or less tied to burning of fossil fuels, agriculture residue and fuel wood)
 - Causes acute respiratory diseases like asthma, strokes, and heart disease
 - Tied to 3.2 million deaths each year
- Heat is increasing in urban areas
 - Heat wave frequency, duration, season length and intensity have all been increasing in Albuquerque and many other cities



Planting Healthy Air

- Research by TNC, World Resources Institute & others -- restoration and other land management improvements could provide more than 1/3 of emissions reductions necessary to keep global warming under 2°C.
- Study by TNC and C40 on street trees indicate that trees are already delivering meaningful reductions in PM and urban temperatures

Benefits of Urban Trees

Research has linked the presence of urban trees to...



REDUCING RATES
of cardiac disease, strokes, and
asthma due to improved air quality



COOLING city streets by 2-4° F,
reducing deaths from heat and
cutting energy use



FILTERING up to a third of fine
particle pollutants within
300 yards of a tree



PROTECTING BIODIVERSITY
including habitat for migrating
birds and pollinators




REDUCING OBESITY LEVELS
by increasing physical activity
including walking and cycling



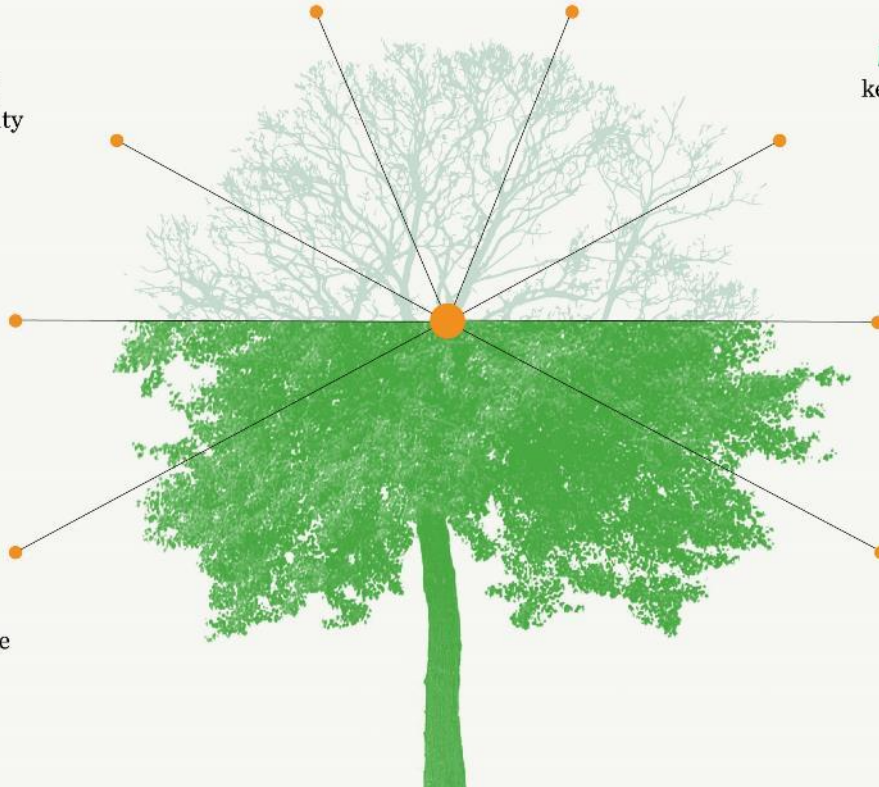
MANAGING STORMWATER,
keeping pollutants out of waterways,
and reducing urban flooding



INCREASING
neighborhood property values



REDUCING STRESS by helping
interrupt thought patterns that
lead to anxiety and depression



Opportunities in the Albuquerque Metro Area

- Tree canopy currently at about 10%, with the third highest rate of loss in U.S.
- Temperatures in Albuquerque gradually increasing, more air conditioning means more emissions
- High soil loss rate in New Mexico, creating dust, erosion and air challenges
- Green space and trees have least coverage in underserved areas (ex: International District, non-agricultural areas in the South Valley)

TNC Vision for Trees

- Develop a shared vision for increasing tree canopy and vegetation
 - Increase coordination across agencies and departments on work that connects to trees
- Trees, vegetation and other green infrastructure play a part in Albuquerque's commitment to the Paris Climate Agreement
- Launch tree advocacy and education effort creating new capacity for stewardship of our city trees
- Employ youth in conservation projects building a ladder to natural resource careers
- Increase the number of certified arborists in the Albuquerque area by 5%
- Advocate for changes in policy that regulate trees and shrubs to enhance street tree survivorship and health





Opportunities for the Air Quality Control Board

- Support funding initiatives that include tree planting
- Support policy changes related to trees and environmental health that increase coordination across city departments
- Support research that links air quality data and human health impacts locally including the role of the environment as part of the solution
- Promoting habitat through vegetation cover