



# Focusing on Co-Benefits to Advance Climate Action



SUSTAINABLE CITIES NETWORK  
CLIMATE & RESILIENCE  
WORKGROUP  
1.31.2022



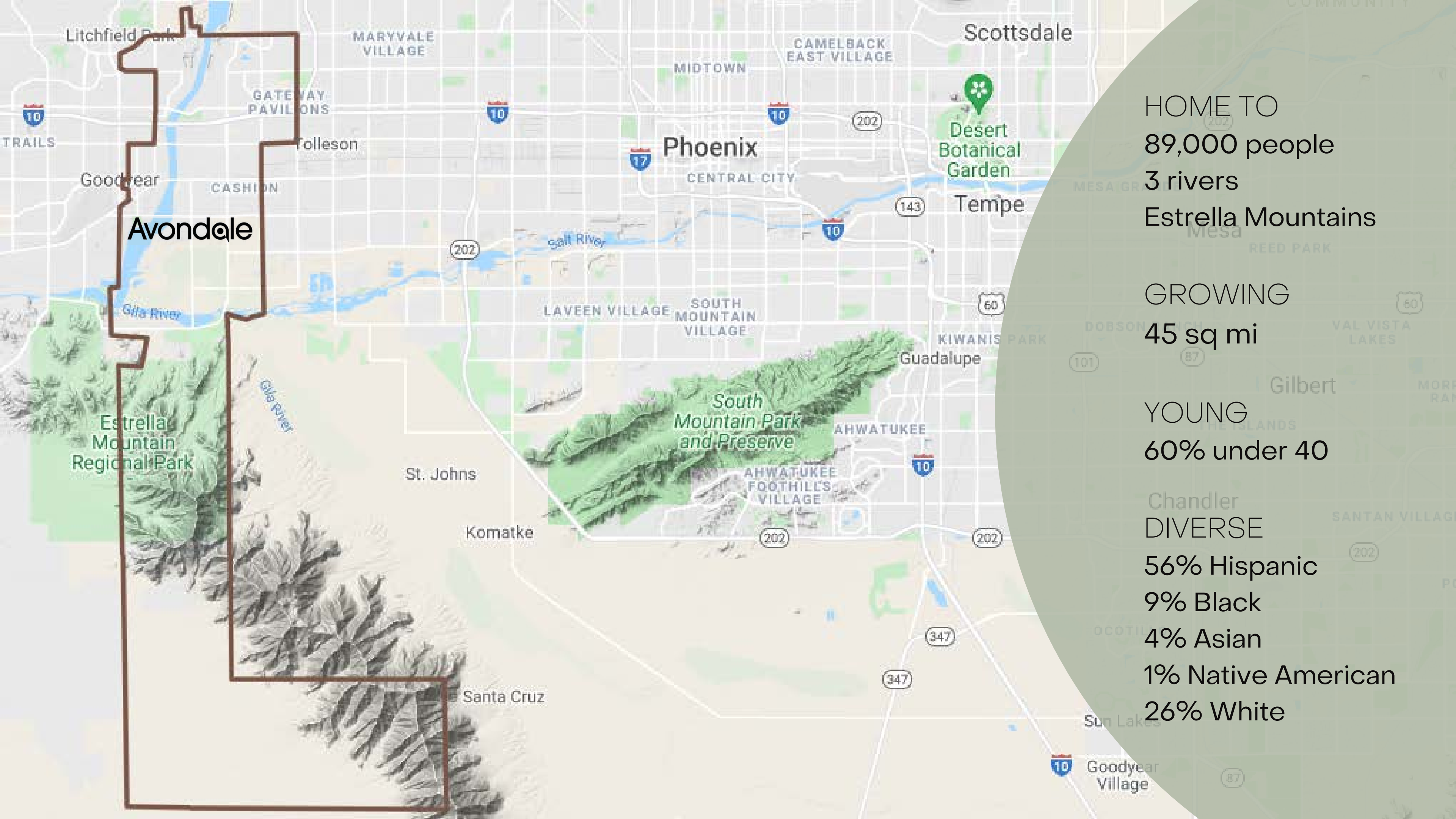


# What Will You Discover Today?



## Overview:

- Avondale Context
- Climate and Resilience Challenges
- Taking Action
  - Electric Vehicles
  - Walking/Biking
  - Wetlands
  - Trees
  - Vertical Farming
- Leveraging Co-benefits
- Advancing Equity



**Avondale**

HOME TO  
89,000 people  
3 rivers  
Estrella Mountains

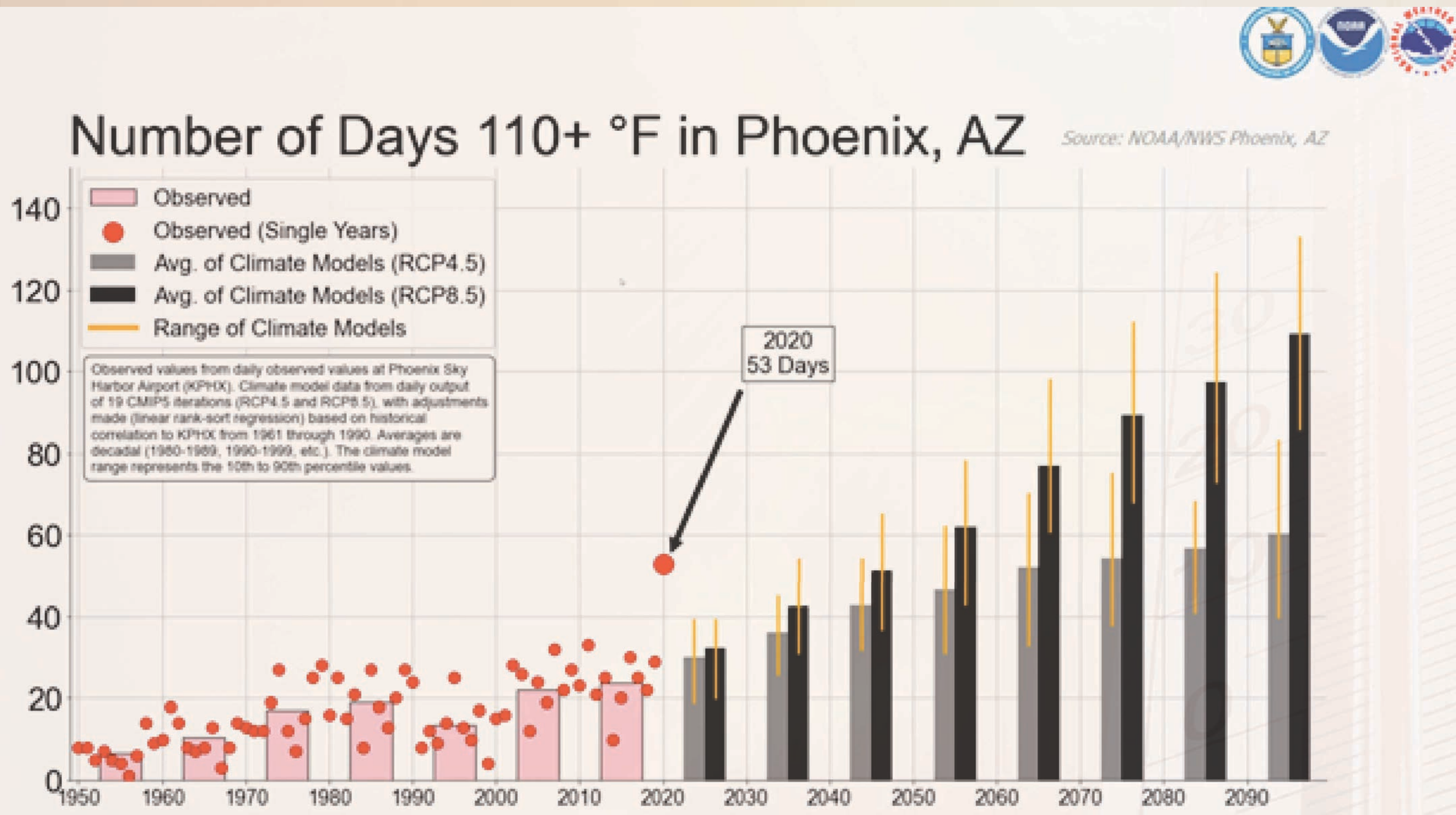
GROWING  
45 sq mi

YOUNG  
60% under 40

Chandler  
DIVERSE  
56% Hispanic  
9% Black  
4% Asian  
1% Native American  
26% White



# Climate & Resilience Challenges



323 people died of  
heat-associated  
causes in Maricopa  
County in 2020







## Daytime Surface Temps in May

122°F  
100°F

135°F  
131°F



Heat vulnerability is not even across the community.

Map Source: UREX

Temperature Source: Ruiz-Aviles et al., 2020



# Colorado River Shortage

## Tier 1 Shortage

- 30% reduction of Central Arizona Project water supply
- 18% reduction of Arizona's total Colorado River water supply
- 8% reduction of Arizona's total water use
- Affects central AZ farmers



### ARIZONA DEPARTMENT OF WATER RESOURCES

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### CENTRAL ARIZONA PROJECT

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## PRESS RELEASE FOR IMMEDIATE RELEASE

### Arizona heads into Tier 1 Colorado River Shortage for 2022

*ADWR and CAP joint statement in response to the U.S. Secretary of the Interior's first-ever declaration of a Colorado River Shortage*

**Phoenix, Arizona (August 16, 2021)** – The Colorado River Basin continues to experience drought and the impacts of hotter and drier conditions. Based on the Jan. 1 projected level of Lake Mead at 1,065.85 feet above sea level, the U.S. Secretary of the Interior has declared the first-ever Tier 1 shortage for Colorado River operations in 2022.

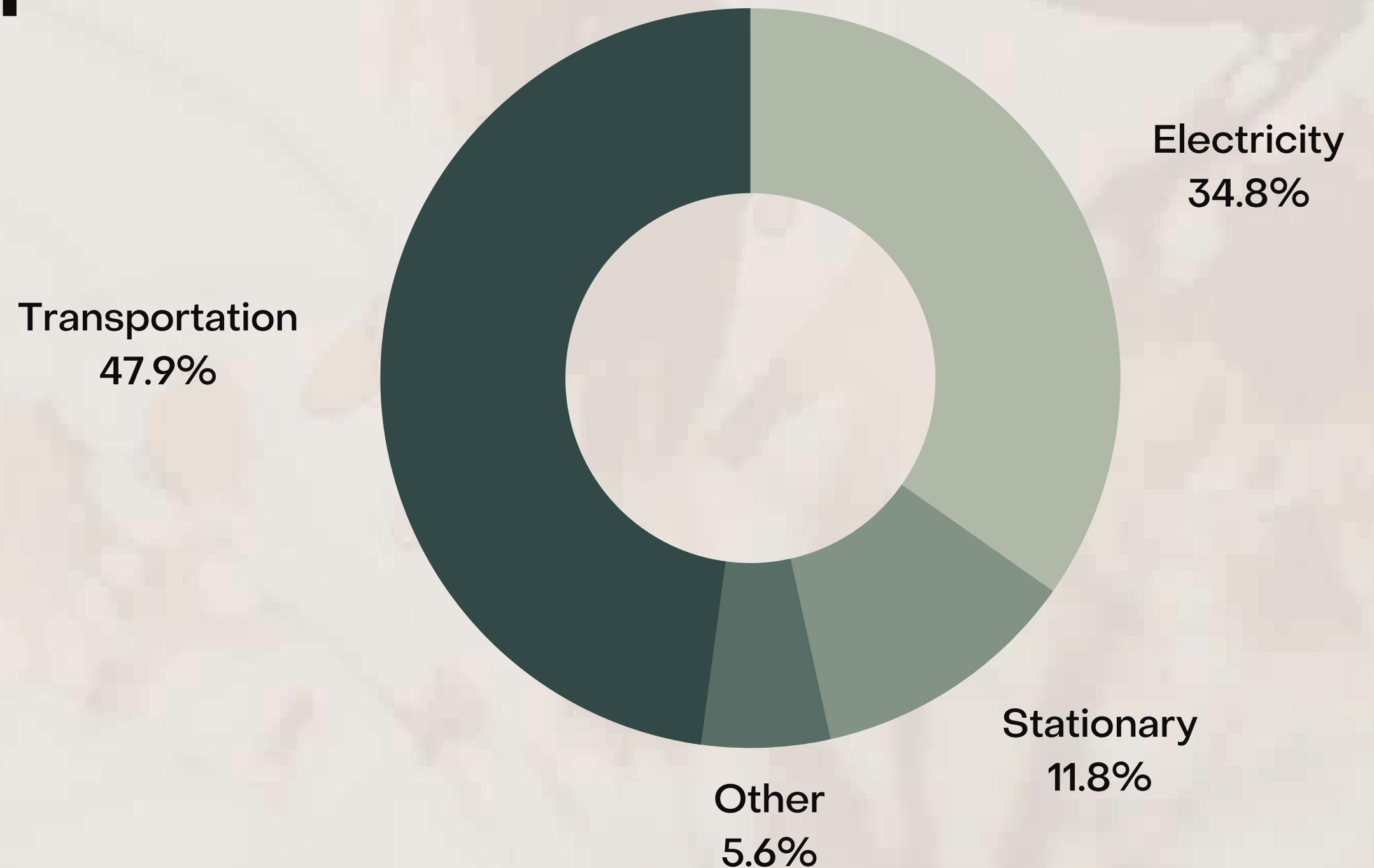
This Tier 1 shortage will result in a substantial cut to Arizona's share of the Colorado River -- about 30% of Central Arizona Project's normal supply; nearly 18% of Arizona's total Colorado River supply; and less than 8% of Arizona's total water use. Nearly all the reductions within Arizona will be borne by Central Arizona Project (CAP) water users. In 2022, reductions will be determined by Arizona's priority system -- the result will be less available Colorado River water for Arizona agricultural users.



## Community Greenhouse Gas Emissions

**Transportation  
& electricity  
account for  
83% of  
emissions**

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Source: Maricopa County Air Quality Department, 2020





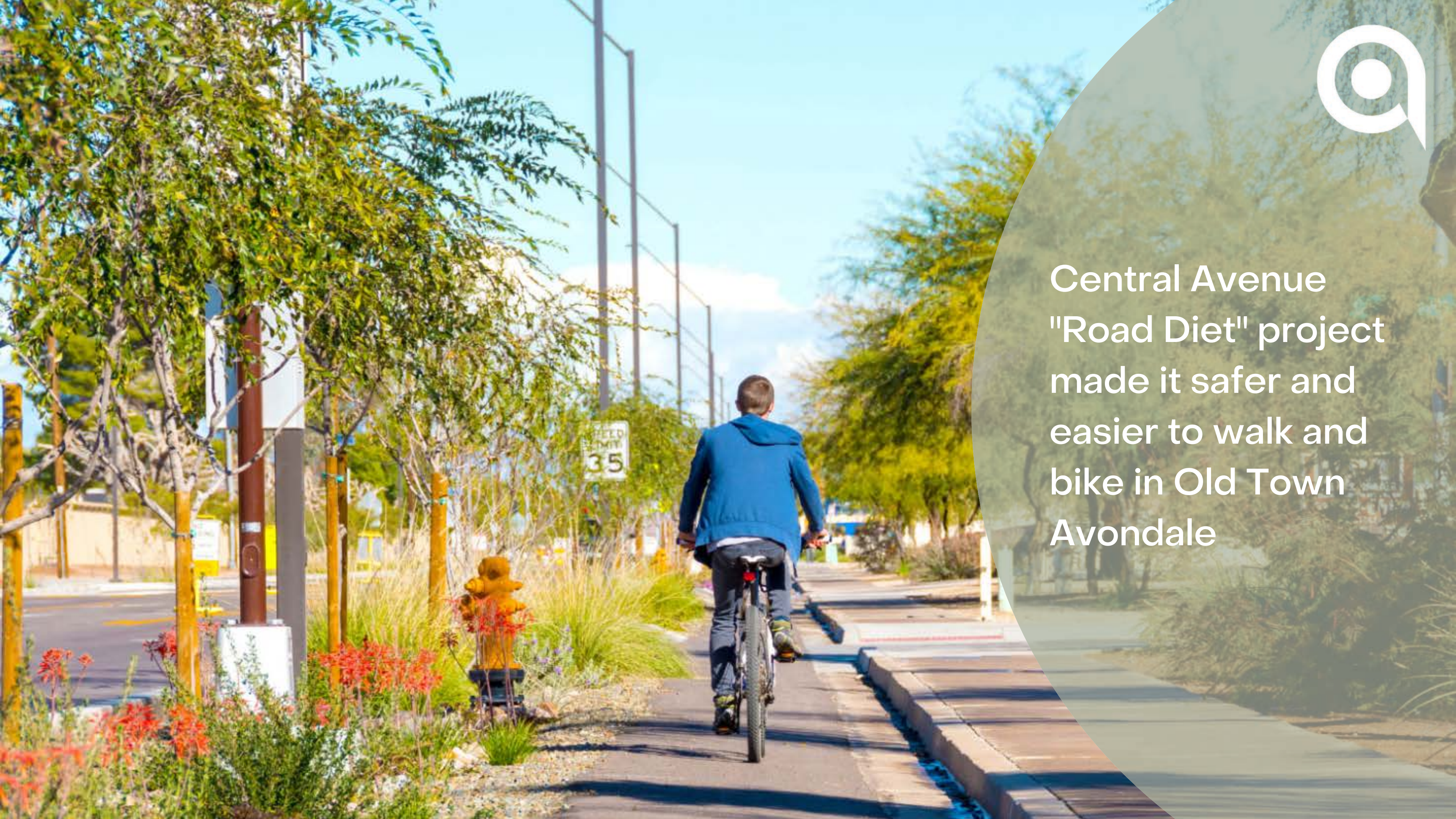
First city in Arizona to  
adopt EV charger  
installation standards  
in Zoning Ordinance







Central Avenue  
"Road Diet" project  
made it safer and  
easier to walk and  
bike in Old Town  
Avondale







Wetlands cool down the neighborhood

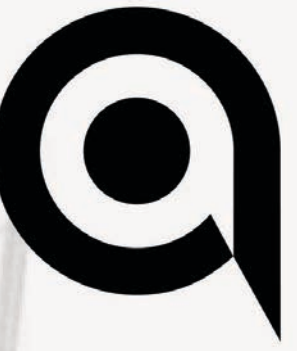




Planting more trees  
in partnership with  
utility providers and  
local non-profits.







# Vertical-Plane Aeroponics

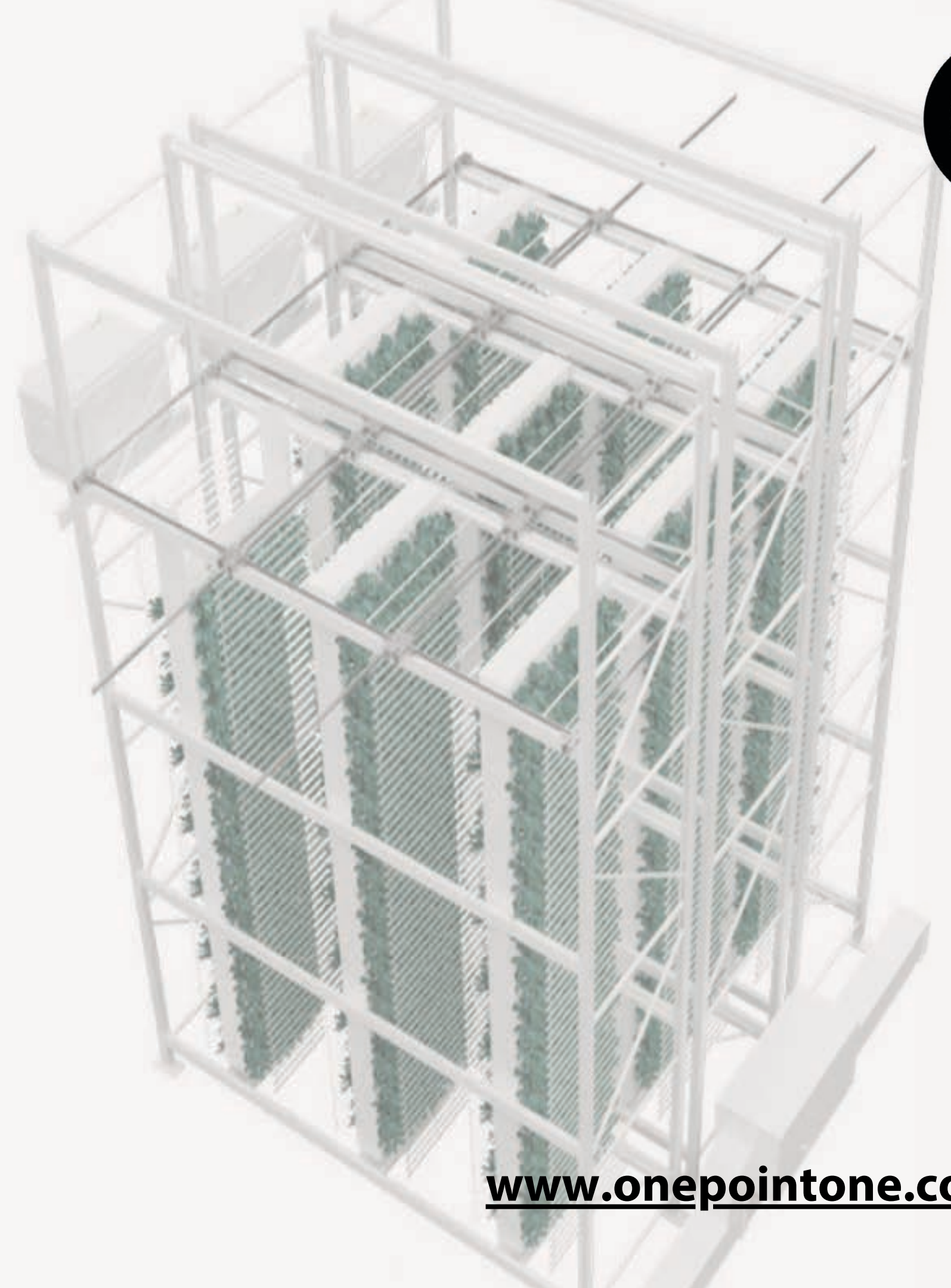
The most productive and environmentally efficient cultivation technology on and off the planet.

# 99%

Less Water Used

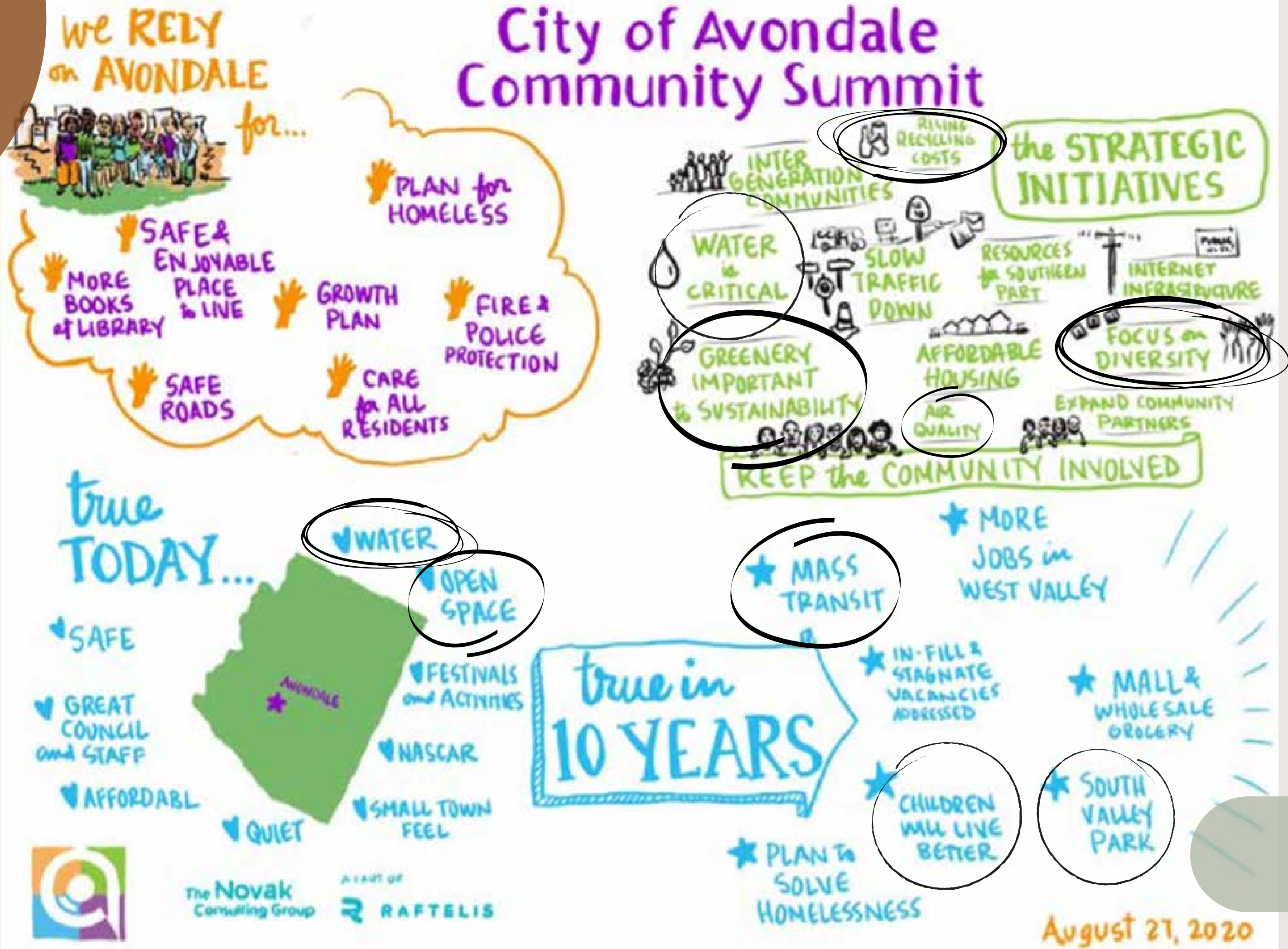
# 250x

More Plants per Acre



[www.onepointone.com](http://www.onepointone.com)









## Co-Benefits:

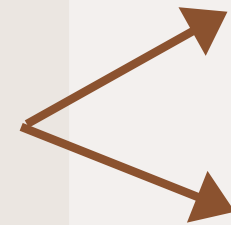
The added benefits we get when we act to mitigate climate change and its impacts, above and beyond the direct benefits of a more stable climate.



# Climate Action

## Strategies

Reduce GHG emissions



Electric Vehicles

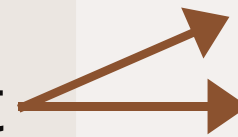
Walkability

Sequester carbon



Urban Forestry

Resilience to extreme heat



Wetlands

Food security & production



Water & land conservation



Vertical Farming



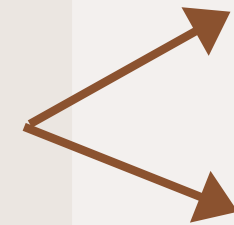


# Climate Action

## Strategies

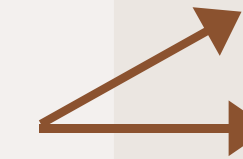
## Co-Benefits

Reduce GHG emissions



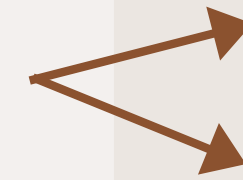
Electric Vehicles

Walkability



Innovation, technology

Cleaner air, human health



Pedestrian safety

Healthy lifestyles

Sequester carbon



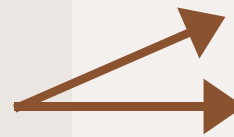
Urban Forestry



Cleaner air, human health

Shade, local cooling

Resilience to extreme heat



Wetlands

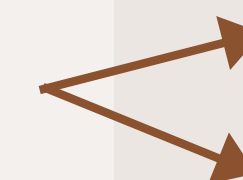


Reduced treatment costs

Food security & production



Vertical Farming



Innovation, technology

Water & land conservation



Economic development





# Advancing Equity



- Climate change disproportionately affects low-income communities and communities of color who are least responsible for climate change emissions.
  - Heat vulnerability
  - Energy burden
  - Access to transportation, healthcare, education, jobs
- Climate action and equity issues are integrally linked and can be mutually supportive.



# 1

## INEQUALITY

Unequal access to opportunities



# 2

## EQUALITY?

Evenly distributed tools and assistance



# 3

## EQUITY

Custom tools that identify and address inequality - deficit model - adjustments for individuals



# 4

## JUSTICE

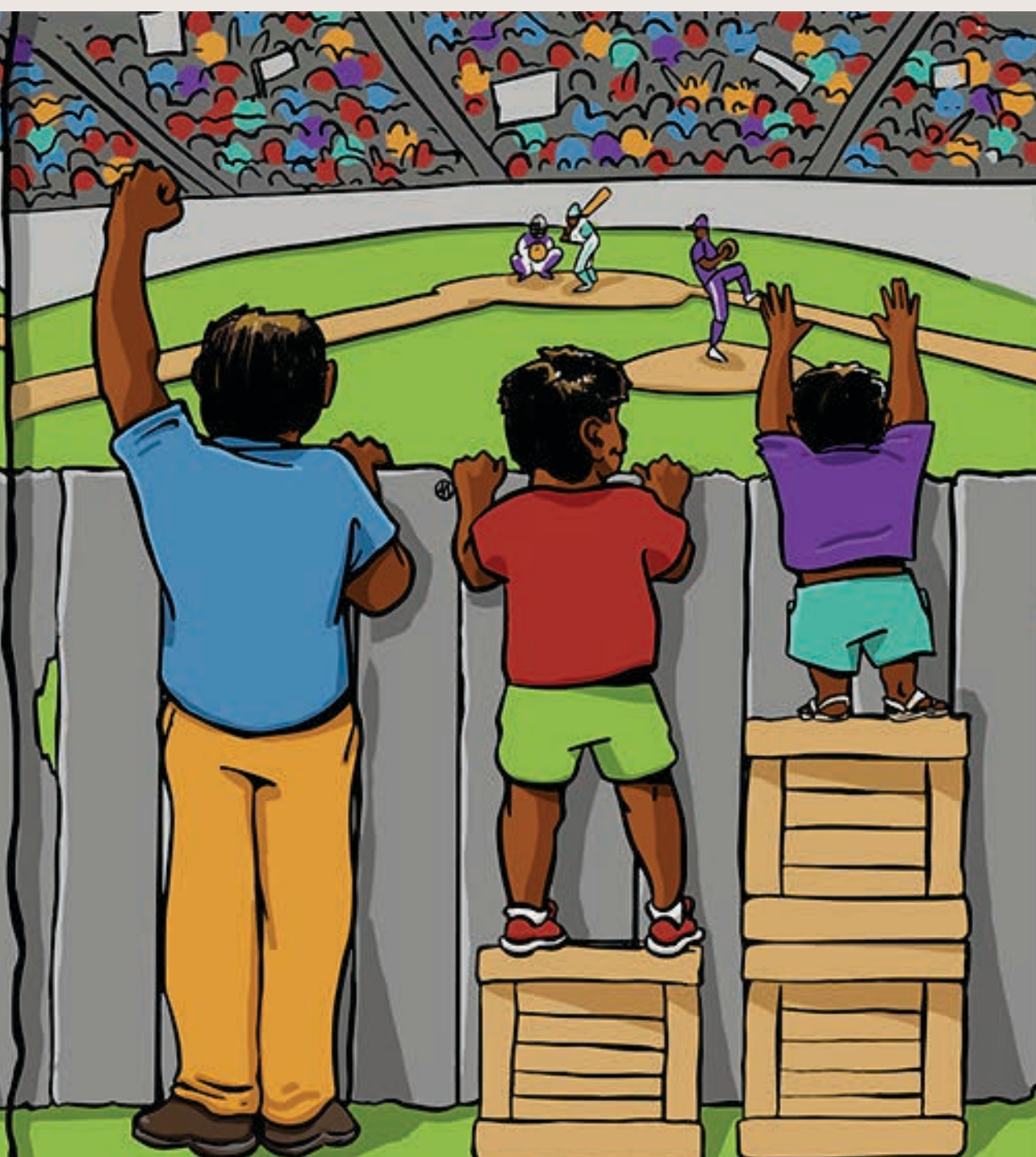
Fixing the systems to offer equal access to both tools and opportunities







**EQUALITY**



**EQUITY**



**JUSTICE**



# Types of Equity



Urban Sustainability Directors Network breaks down equity as:

- (1) **procedural equity** to ensure that processes are fair and inclusive in the development and implementation of any work;
- (2) **distributional equity** to ensure that resources, benefits, and burdens of a policy or program are distributed fairly, beginning with those most in need;
- (3) **structural equity** to ensure the correction of past harms, institutional racism, and the prevention of future negative consequences by changing decision-making and accountability structures; and
- (4) **intergenerational equity** to ensure that decisions do not result in unfair burdens on future generations





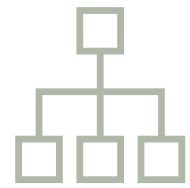
# Initial Steps

- protect the most vulnerable people from adverse effects of climate change
- work towards an inclusive and transparent decision-making process
- ensure youth voices are welcomed, heard, and taken seriously



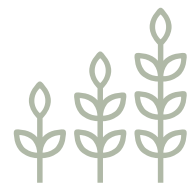


# Organization Structure



**Sustainability Division  
housed within  
Development and  
Engineering Services  
Department**

1 FTE



**Evolved from  
Environmental Program  
Manager**

Oversees stormwater  
and air quality permits



**Funded through \$1  
Environmental Fee  
on monthly utility bill**





# Key Messages

1

Focusing on co-benefits  
can provide a common  
ground for advancing  
climate action

2

Equity and climate  
change are linked;  
solutions need to address  
both

3

A culture of sustainability  
is just as vital as dedicated  
sustainability staff



# Thank You for Coming!



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# Avondale