

ENERGY

Maximize the use of renewable energy resources, energy efficiency and responses to climate challenges.

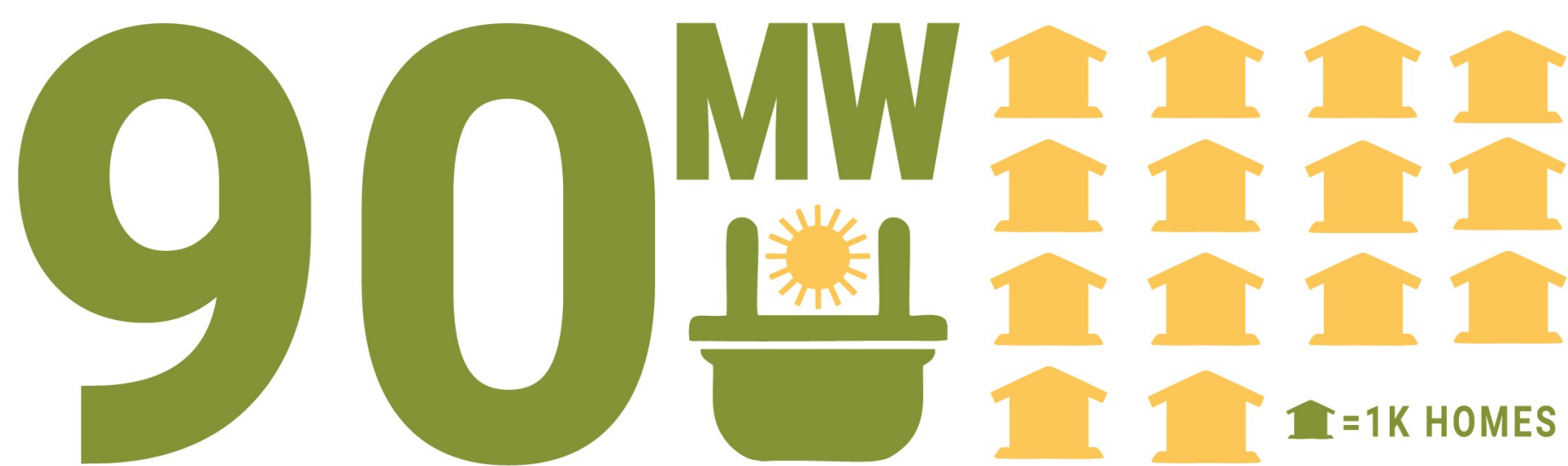
Residents and businesses rely on electricity and other energy sources every day to operate computers, cooling appliances and lighting. Much of this energy is provided by regulated utilities and comes from burning fossil fuels like coal. Using less energy or switching to clean energy yields cleaner air, supports green jobs and generates cost savings. For example, efficient appliances and heating/cooling equipment can reduce the utility bill for the average household by \$500 per year.

What is Scottsdale Doing?

Installing Solar Energy

- Solar energy installations on homes and businesses (distributed solar) have almost doubled since 2018.
- Current installations = over 90 MW or enough electricity to power 14,000 homes for a year.

DISTRIBUTED SOLAR CAPACITY (MEGAWATTS)

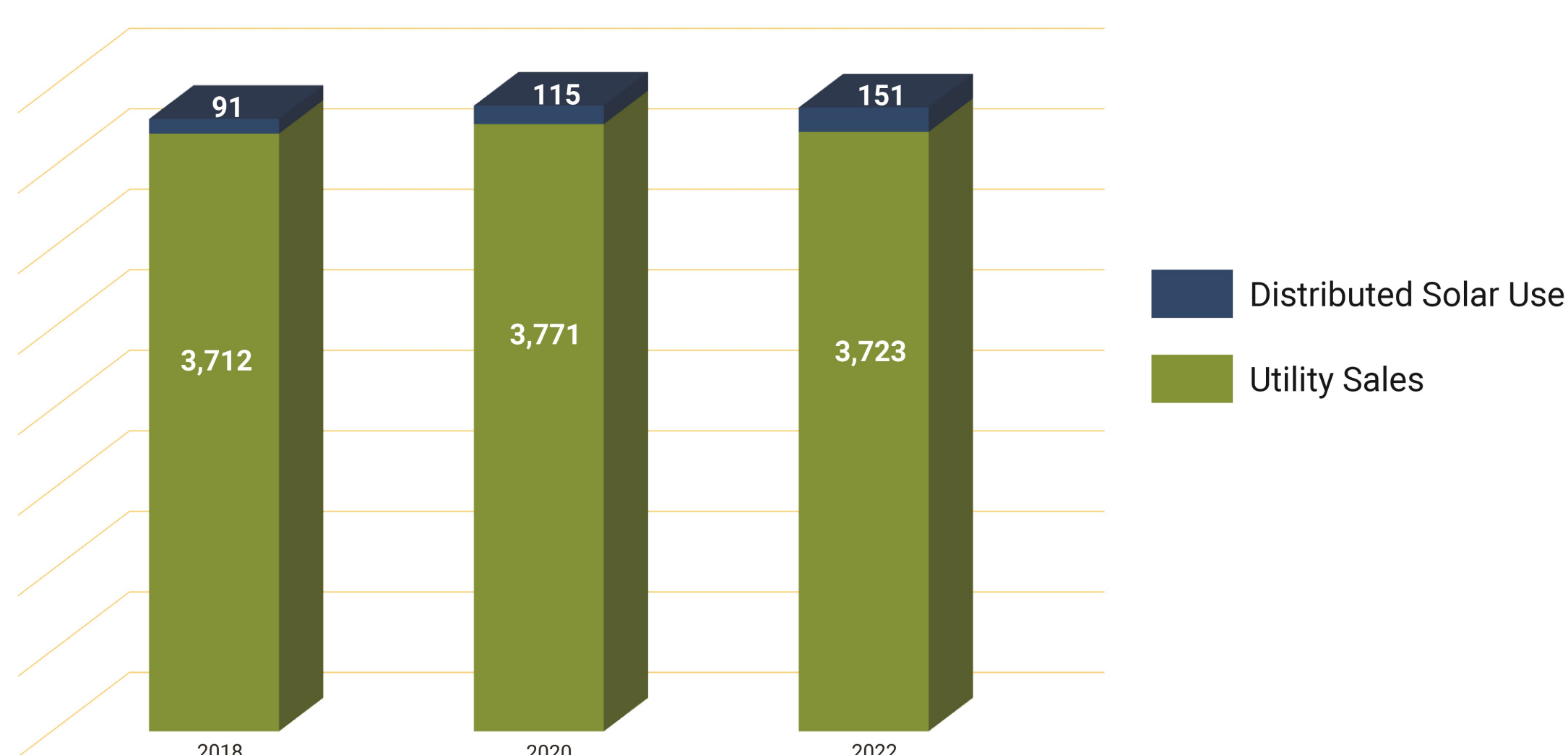


Source: [2022 Greenhouse Gas Emissions Inventory](#)

Using Less Energy

- Scottsdale's residents used 3.9 million megawatt hours of electricity in 2022 -- 50% more per capita than in Phoenix.
- Citywide, electricity purchased from utilities has been constant since 2018.

CITYWIDE ELECTRICITY USE (THOUSANDS MEGAWATT HOURS - MWh)



Source: [2022 Greenhouse Gas Emissions Inventory](#)

Building Greener

- Scottsdale was one of the first cities to adopt mandatory 'green' building codes (International Green Construction Code).
- In 2005, City Council adopted a LEED Gold requirement or higher for all public buildings, leading to the construction of the first LEED Platinum fire station – Scottsdale Fire Station 602.



- The number of green buildings citywide is just under 2% of all buildings.
- The city is conducting energy audits for 50 municipal buildings and has installed solar panels at the North Corporation Yard complex.

Reducing Greenhouse Gas Emissions

- Between 2018 and 2022, citywide greenhouse gas emissions decreased by 7%.

WATER

Conserve, protect and deliver quality drinking water safely and reliably to the community, now and into the future.

Providing quality drinking water and ensuring adequate water supplies has been a long-standing priority in Scottsdale. The desert southwest is experiencing one of its worst droughts in 1,200 years. Insufficient rainfall and snowpacks have lowered lake levels and endangered water supplies. The over-allocation of Colorado River water supplies, coupled with a hotter and drier climate, make protecting water resources essential. In 2021, the city enacted Stage 1 of its Drought Management Plan and requested all customers voluntarily reduce water consumption by at least 5%.

What is Scottsdale Doing?

Managing water supply

- Scottsdale Water pioneered total wastewater reuse and water banking through advanced purification systems, recycling and storing water and reducing reliance on ground water.
- In 2019 Scottsdale Water was the first Arizona water utility to be permitted for indirect potable reuse with the Advanced Recycled Purified Water infrastructure for demonstration purposes.
- In 2022, water use in Scottsdale totaled about 62 million gallons per day.
- Of the water that is delivered to customers, approximately 33% is currently “returned” to the collection system.

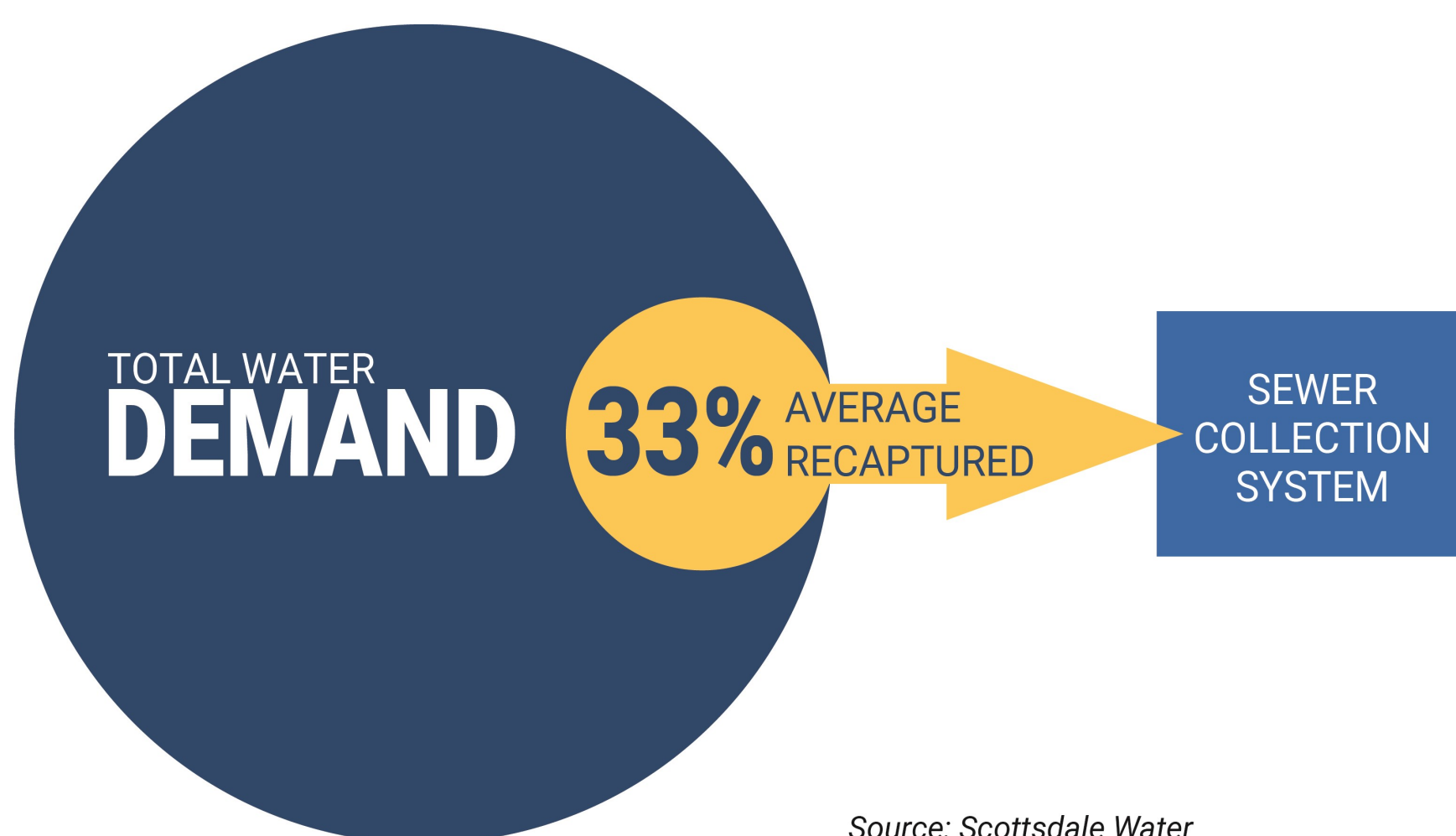
City leadership

- Parks & Recreation converted over 140,000 square feet of non-functional turf to xeriscape, saving more than 5.3 million gallons of water annually.
- The city also saved almost 4 million gallons of water through irrigation controllers.
- The city’s Xeriscape Garden demonstrates how beautiful a water-wise, natural desert landscape can be.



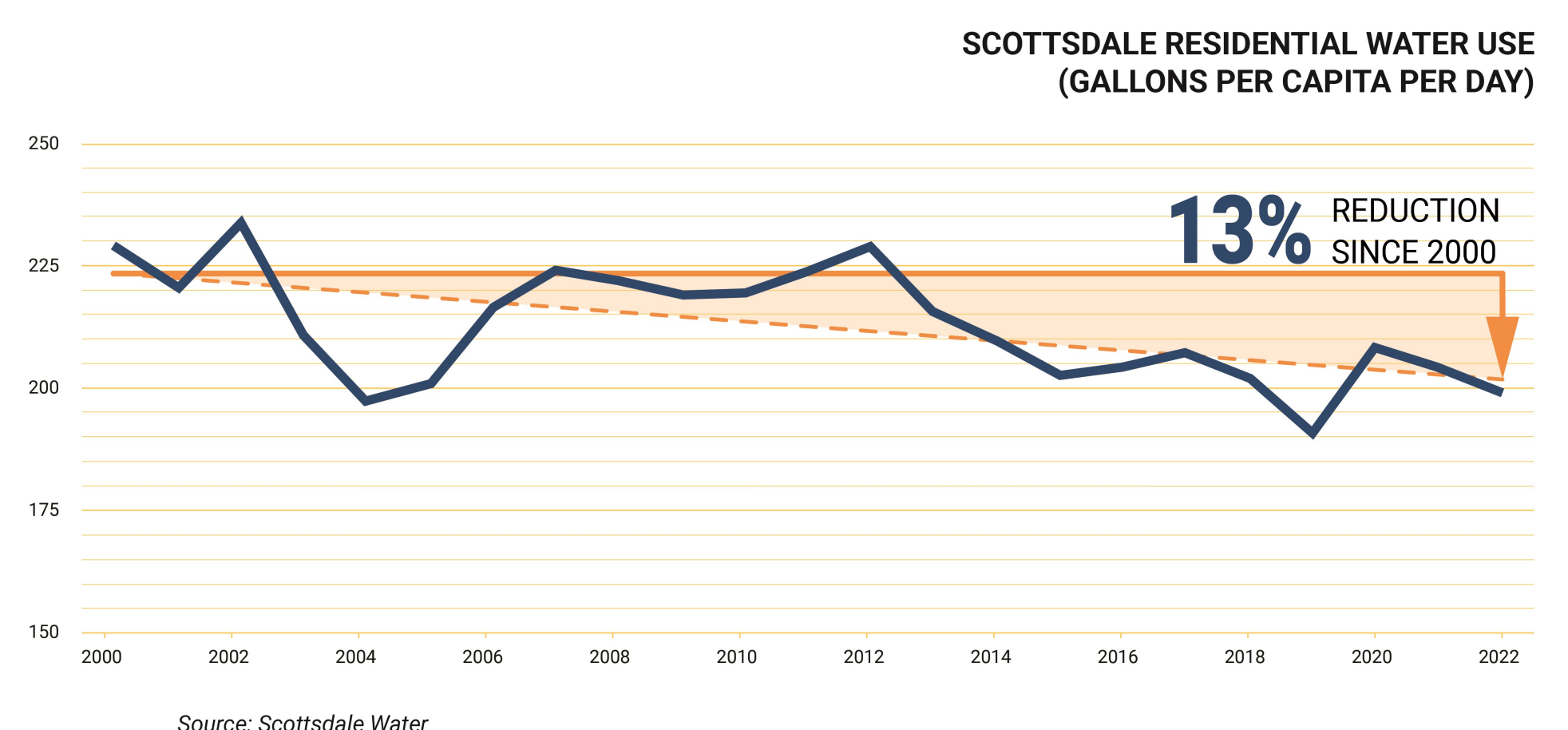
Working with others

- Staff administers residential and commercial rebate programs, as well as offering residential outdoor efficiency checks and a commercial audit program.
- In fiscal year 2023 residential and commercial turf conversion rebates incentivized removal of 440,000 square feet of grass – an almost 425% increase from the previous year and a 250% increase over the five-year average.



Using less water

- In 2022, the average residential customer used 13% less water than in 2000 or 199 gallons per capita per day (gpcd).
- Responding to a call to reduce water use between 2021 and 2022, the city saved 38 million gallons through conservation and turf removal.



WASTE

Develop a circular economy approach for materials management and effective citywide diversion of all waste streams.



Managing waste better and more efficiently benefits everyone. Recycling or reusing goods reduces the reliance on finite natural resources and yields cost savings by buying less and avoiding landfill fees. Solid Waste trucks will drive fewer miles on city streets, litter is reduced, and fewer landfills need to be built and maintained. Because of these benefits, achieving 'zero waste' has become a common long-term target for municipalities and organizations.

Sustainable materials management (SMM) goes beyond diversion to maximize environmental benefits and extend the life cycle of products and materials by keeping them in circulation as long as possible. One application of SMM is the creation of a circular economy, which "reduces material use, redesigns materials and products to be less resource intensive, and recaptures 'waste' as a resource to manufacture new materials and products."

What is Scottsdale Doing?

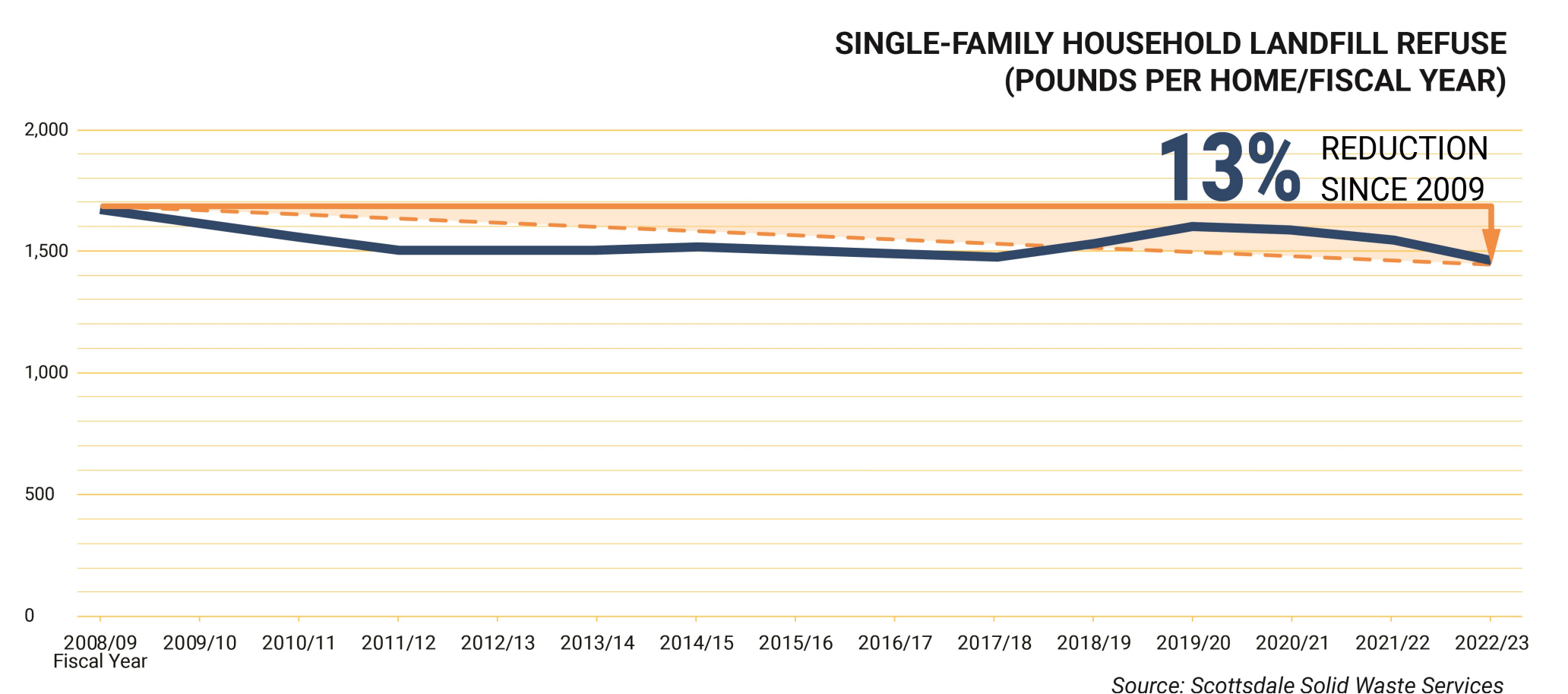
Services provided

- Scottsdale Solid Waste Services provide weekly pickups for approximately 85,000 single-family homes.
- Each residential customer is provided monthly pickup of bulk items and uncontained landscaping debris.
- Residents can also receive on-call move-in box collection, appliance collection, household hazardous waste collection and participate in quarterly e-waste drop-off events.



By the numbers

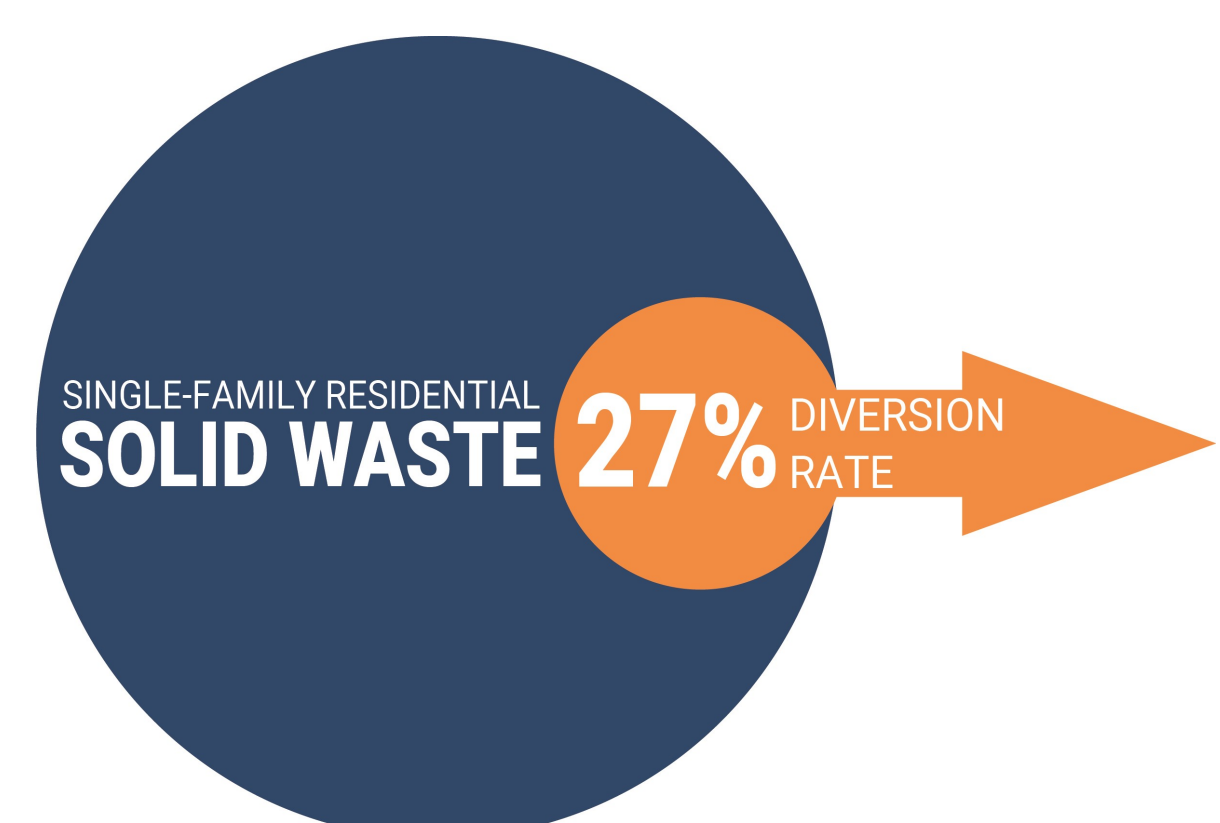
- In 2023, Scottsdale Solid Waste Services collected 61,814 tons of landfill refuse and 22,903 tons of recycling. The combined total was 10% less than in 2009.
- At the same time, the amount of landfill refuse collected per household is down almost 13% to under 1,500 pounds.



- In 2023, single-family residential households diverted 27% from disposal in the landfill through recycling.

Expanding city owned transfer station

- Doubling the tipping floor space will ensure future residential tonnage needs will be met far into the future.
- Creating a green waste drop-off area for commercial landscapers servicing residential homes and large HOAs.
- Building a permanent household hazardous waste facility will increase access for proper disposal.



AIR QUALITY

Reduce contaminants and pollutants to improve air quality and protect community health.

Like many metropolitan areas, Scottsdale has been working for years to improve air quality. The region's two biggest concerns are ozone and particulate matter (PM), as these exceed federal health-based standards most frequently. The causes of these pollutants are complex, given the number of sources and how far both can travel in the air.

Most fine particulates (PM-2.5) form when pollutant gases emitted by gasoline and diesel engines, power plants and industrial processes react in the atmosphere or are emitted directly from vehicles, smokestacks, fires and fireworks. Coarse particles (PM-10) sources include road dust kicked up by traffic, construction and demolition, blowing dust and biomass burning. Ground-level ozone is created when nitrogen oxides, volatile organic compounds and sunlight react.

What is Scottsdale Doing?

Scope of the problem

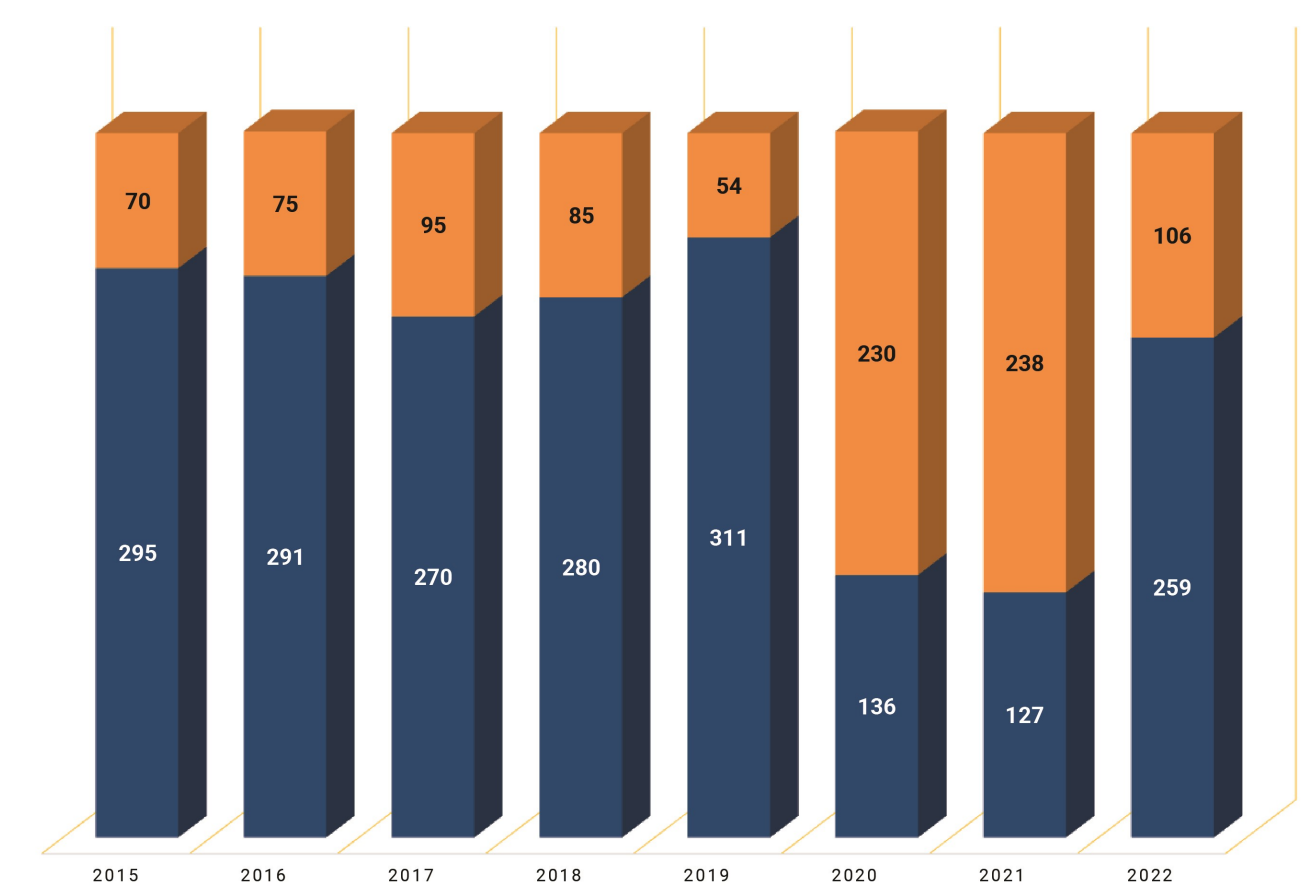
- The regional number of unhealthy air days can vary from year to year.
- In 2022, almost 1 in 3 days exceeded federal air quality standards.
- Every part of the city can be exposed to poor air quality, although not always for the same pollutant.
- Federal standards for ozone are tightening due to an improved understanding of the health effects.
- Metro Phoenix currently has the fifth-worst ozone levels in the country.

Health Impacts

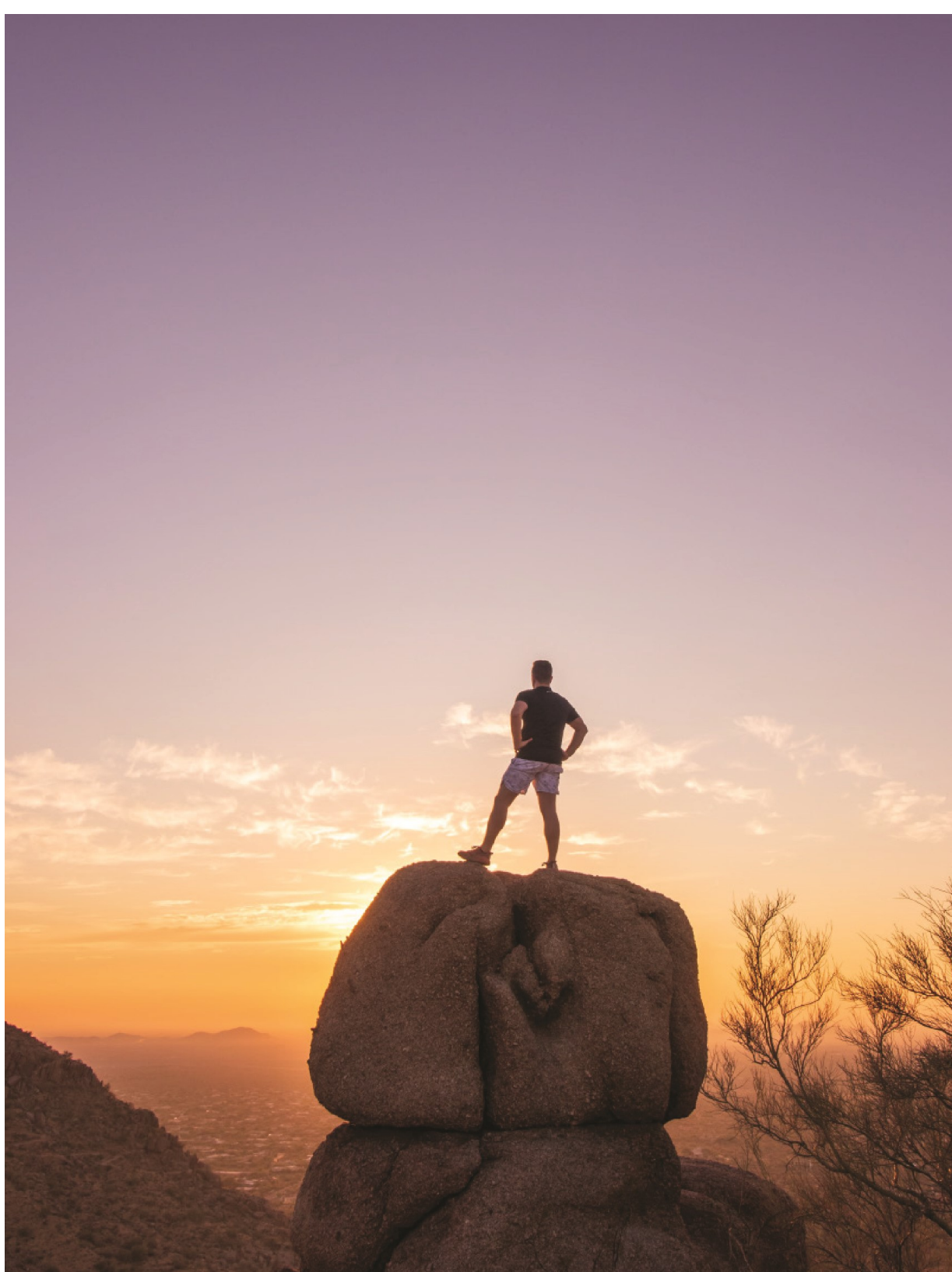
- Ozone and particulate matter can aggravate a range of health issues, like asthma, COPD and heart disease.
- Asthma illnesses in Scottsdale are lower than in the rest of Maricopa County, and asthma hospital encounters are concentrated in census tracts in south and central Scottsdale.

AIR QUALITY INDEX
(PHOENIX-MESA-SCOTTSDALE
CORE-BASED STATISTICAL AREA)

■ Good or Moderate Days (#)
■ Unhealthy Days (#)



Source: EPA



Actions taken

- Scottsdale has switched municipal vehicles to compressed natural gas and uses less gasoline and diesel fuel.
- Fleet and Solid Waste significantly reduce vehicle miles through sophisticated route optimizations.
- Transportation and Streets champions the use of van pool and bus pass programs.
- The transition to electric and other alternate fuel vehicles can also improve air quality. The number of publicly available electric vehicle charging ports in Scottsdale is up 30% in just one year, reflecting interest in this technology.

EXTREME HEAT

Ensure that the community prevents, is prepared for, responds to and recovers from extreme heat.

Temperatures in the Valley are setting records for extreme heat: regionally, for the hottest summer and the most heat-related fatalities, and globally, for the hottest year ever. Scottsdale and other Valley cities are experiencing a trend of increasing average temperatures going back over a century of data. But averages only tell some of the story, since the number and length of heat waves has also been increasing. The cumulative effect of multiple days of extreme daytime highs also makes nighttime temperatures uncomfortably high, combining to create a deadly weather phenomenon.

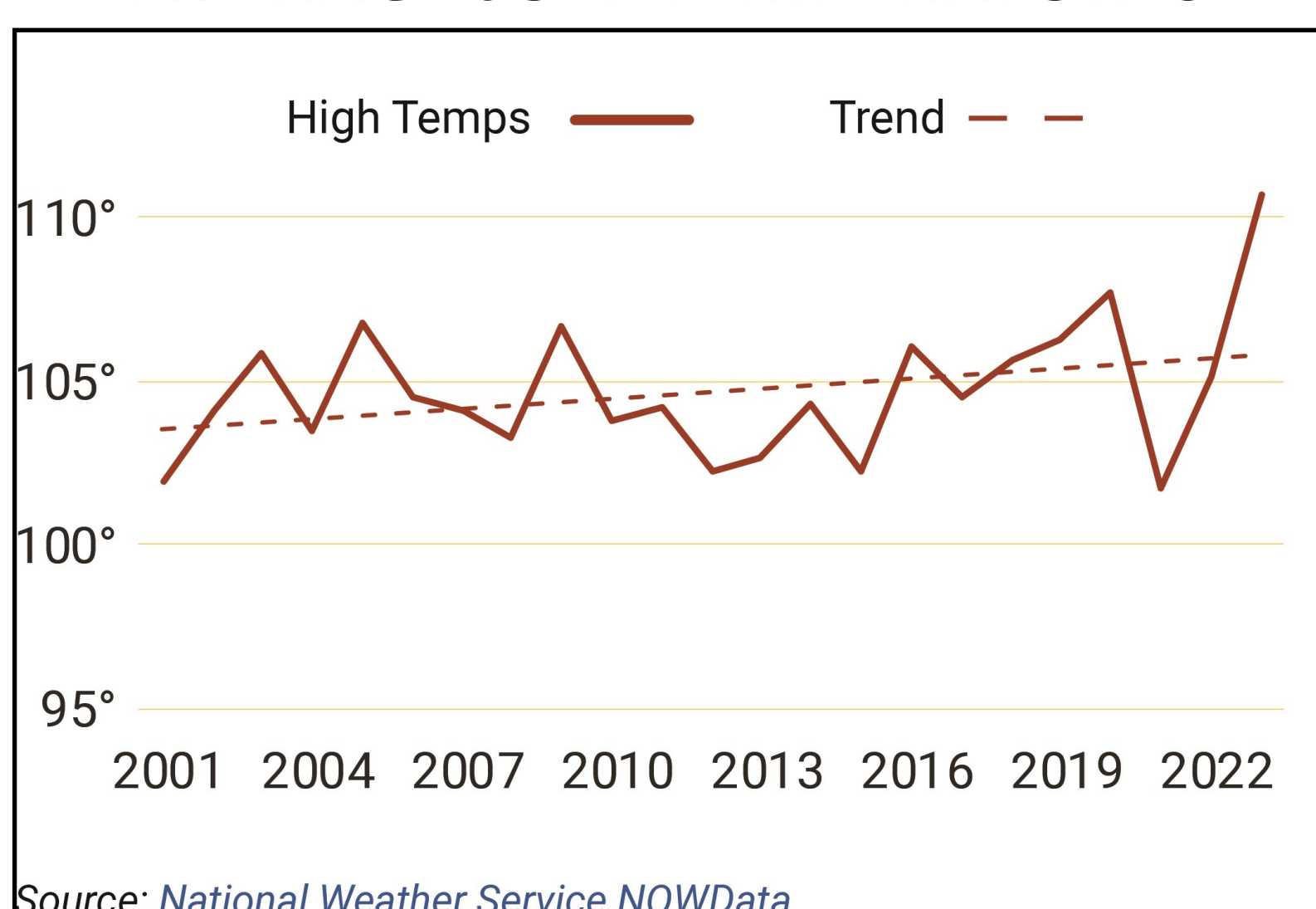
These long and hot summers impact human health, quality of life and economic vitality. Increased heat results in added energy use and higher air conditioning costs. Staying indoors during extreme heat is not always an option, and the impact of people deferring work, shopping or other activities can have a negative impact on the economy

What is Scottsdale Doing?

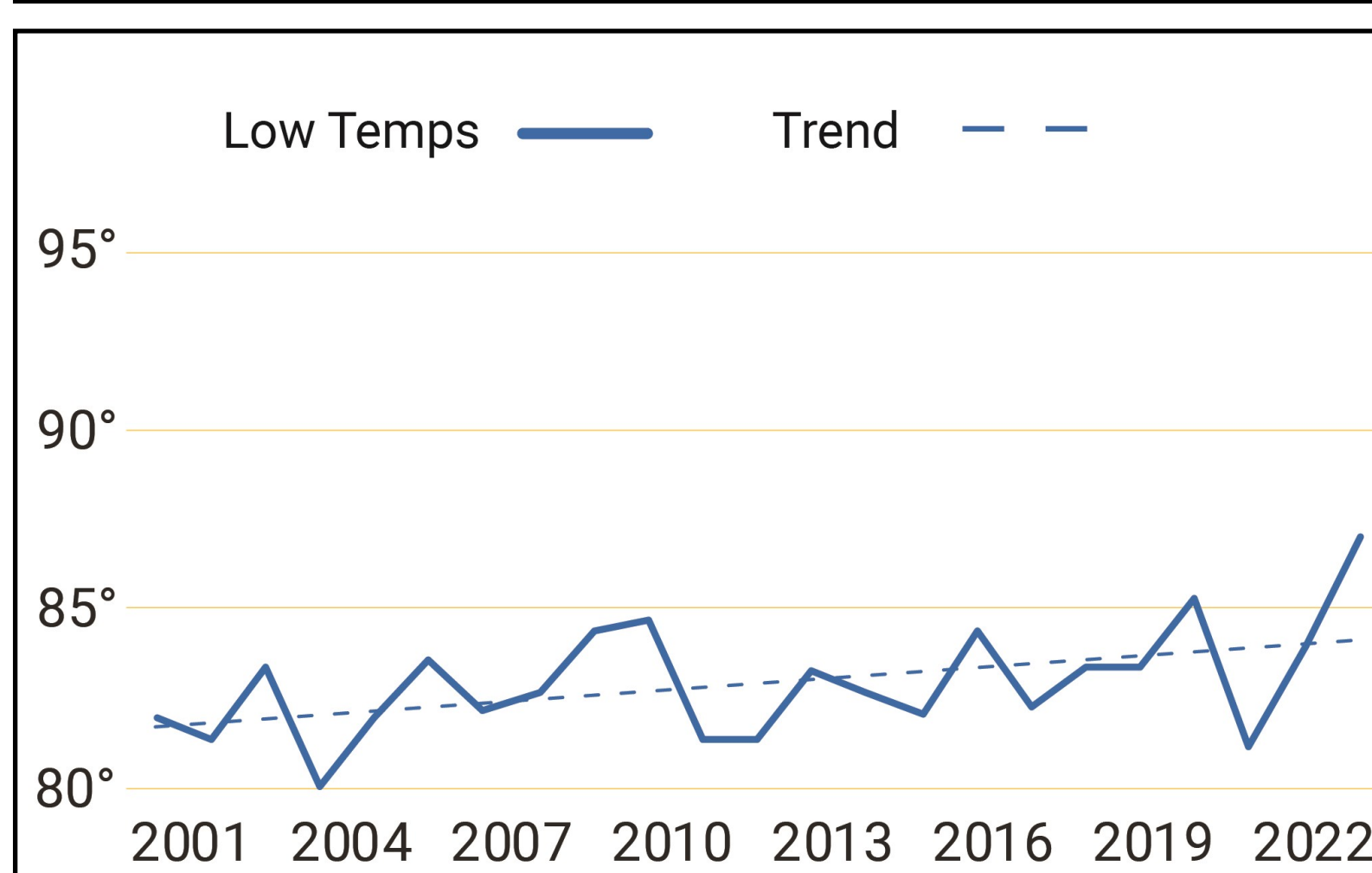
How hot is it?

- NOAA records show that Scottsdale is experiencing an upward trend in air temperatures.
- The number of excessively hot days and nights is also increasing, indicating that the heat season is getting longer.
- Comparing recent averages (2015-2023) to earlier years (2001-2014), there are now 5-8 additional days each year with extreme heat.
- Surface temperatures vary substantially across Scottsdale, ranging between 95.1°F and 165.5°F.

AVERAGE JULY TEMPERATURES

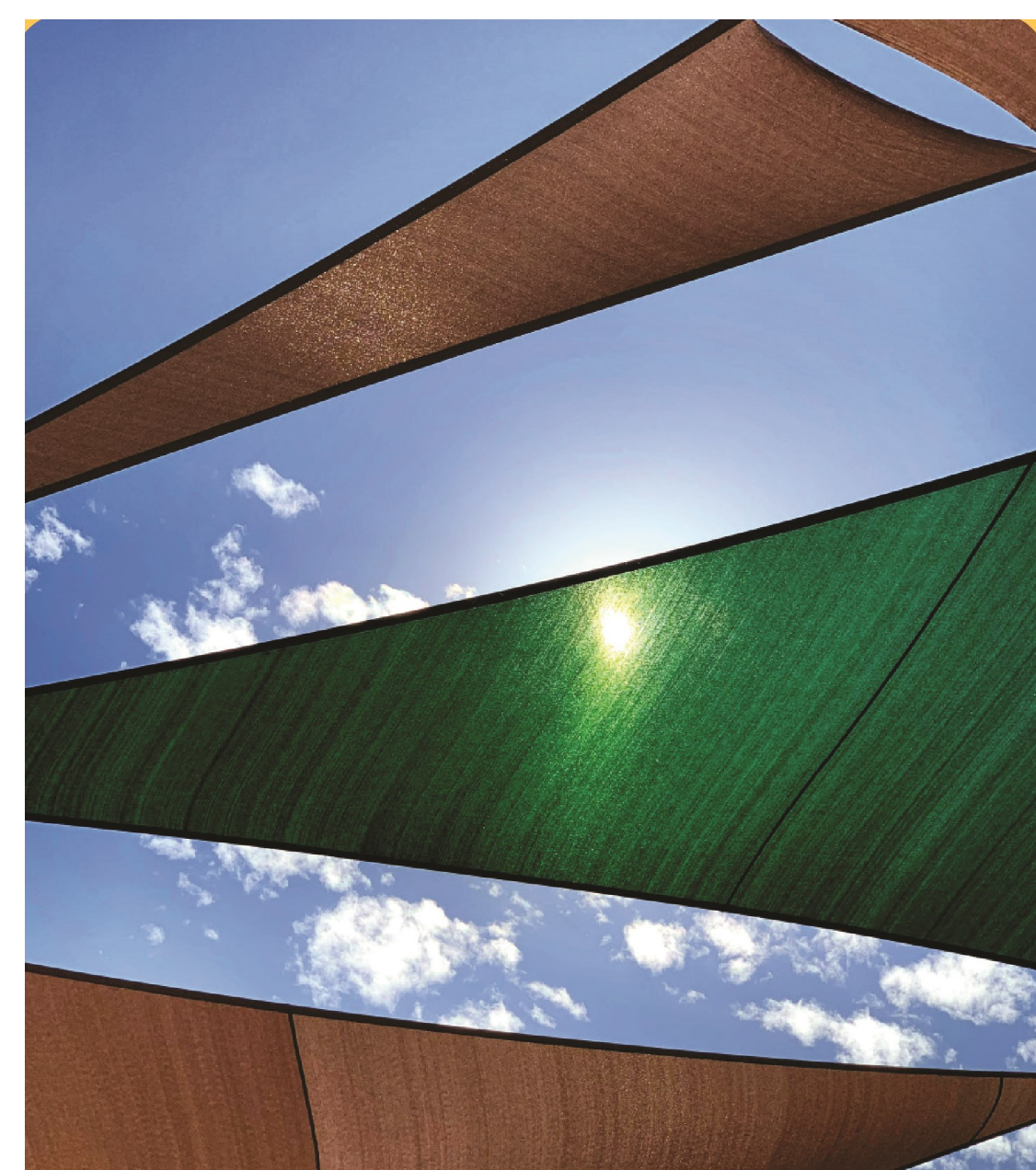


Source: [National Weather Service NOWData](#)



Benefits of shade and trees

- Greener areas, whether trees, shrubs or grass, will be cooler and can provide important air quality benefits.
- 13% of Scottsdale is covered with trees and shrubs, with larger percentages being asphalt and buildings (33%) or bare soil and concrete (45%).
- The amount of green landscape varies across the city, and tree canopy coverage is as low as 6% in south Scottsdale.



Health Impacts

- Exposure to extreme heat and air pollution compounds health impacts.
- One study found the risk of death from all causes increased 6% on days with extreme high temperatures.

SUSTAINABILITY

Scottsdale Guiding Principle

Scottsdale is well-known for livability, unparalleled leisure and world-class amenities. The diversity and natural beauty of Scottsdale's landscapes are among its defining features, and the city has long championed environmental stewardship while maintaining a high quality of life for residents, visitors and businesses.

Over the years, Scottsdale has proactively found creative solutions to environmental challenges and committed to make life better for residents and visitors:

- The city responded to flooding problems by building the Indian Bend Wash Greenbelt.
- Over 30,000 acres of desert habitat has been permanently preserved through the Scottsdale McDowell Sonoran Preserve.
- Zoning and other requirements guide development in desert and mountain areas, like the Environmentally Sensitive Lands Overlay District, which requires a percentage of each property be permanently preserved as Natural Area Open Space.



Science of Sustainability

- The science behind sustainability efforts is compelling. NASA's records and analysis confirm that the climate is warming faster than any time in the past 10,000 years.
- Extreme heat acts as a threat multiplier, worsening air quality and making our climate more arid.
- After setting records in July 2023 for the hottest month ever recorded in a U.S. city, the Phoenix area just broke the record for the most consecutive days over 100 degrees.
- The desert southwest is also experiencing one of its worst droughts in 1,200 years.

Economics of Sustainability

- The economics of sustainability also motivates us to take action.
- Safeguarding a sustainable future for Scottsdale will require investments, by the city, residents and businesses but will also yield financial and other benefits. One study in the journal *Science* evaluated the economy-wide impacts of different future warming scenarios and found that Maricopa County would see a 5-10% drop in gross domestic product by the end of the century.
- Failing to act also has costs.
- Extreme heat, poor air quality and drought can affect the economy in a range of ways: health impacts, loss of business when people stay indoors and utility bills squeezing disposable income.

