

Community Trees Reduce the Heat Island Effect.



HOW COOL IS THAT

Trees can reduce surrounding air temperatures as much as 7.2° F (4.0° C) during the summer.²



Tree shade lowers surface temperatures in parking lots by approximately 36° F (20° C).³



Large parks or tree-covered neighborhoods can cool daytime summer air temperatures by approximately 10° F (5.5° C).⁴

Picture this scene: The midday summer sun is shining down on the city, but it is not keeping people indoors. Children are playing in the shaded parks, pedestrians are walking down tree-lined streets, and drivers are finding shady parking spots that will prevent their cars from heating up while running errands.

High temperatures are one of the most serious threats to human beings. The ten warmest years on record worldwide have occurred since 1998, and the problem is getting worse—especially in our cities, where hard surfaces concentrate and reflect the sun's energy. These hotter metropolitan areas are known urban heat islands, and combined with an aging population and increased urbanization, they will increase the city-dwelling population's vulnerability to heat-related health issues.¹

Research shows that trees are effective tools to cool our communities. Tree planting — in city parks, along streets, or on private lawns — can lower urban temperatures. Breaking up urban heat islands and greening our communities will combat increasing temperatures, reduce heat stress, and save lives.

REFERENCES:

¹U.S. Global Change Research Program. Temperature Extremes. Retrieved from <http://nca2014.globalchange.gov/report/sectors/human-health/intro-section-2>.

²Mackey, C.W.; Lee, X.H.; Smith, R.B. (2012). Remotely Sensing the Cooling Effect of City Scale Efforts to Reduce Urban Heat Island. *Building & Environment*. 49: pp. 348-358.

³Scott, K.; Simpson, J.R.; McPherson, E.G. (1999). Effects of Tree Cover on Parking Lot Microclimate and Vehicle Emissions. *Journal of Arboriculture*. 25 (3): pp. 129-142.

⁴McPherson, E.G.; Simpson, J.R. (1995). Shade Trees as a Demand-Side Resource. *Home Energy*. 12 (2): pp. 11-17.

WHAT YOU CAN DO:

- Develop tree planting programs for public property (libraries, bus stops, along sidewalks, etc.) that could provide shade for vulnerable populations.
- Target tree planting programs for neighborhoods with low amounts of tree cover and low rates of air conditioner use.
- Encourage developers to establish meaningful tree cover to break apart urban heat islands.

Thank you for your ongoing commitment to improving your community with trees.

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