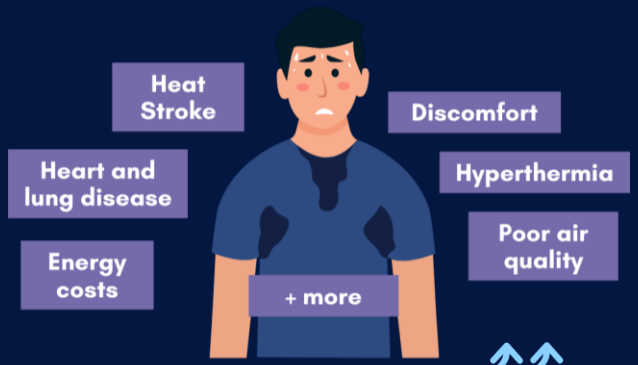
What is Urban Heat?

Dark surfaces like concrete and brick absorb and retain heat from the sun

Little space between buildings can create heat canyons that trap this heat, forming "islands" that are warmer than rural or suburban areas

Urban heat can affect us in many ways, such as increasing:



But trees can help!

Trees provide shade to keep us and the ground cool, as well as cooling through water loss, or evapotranspiration

Increasing the urban canopy can lower city temperatures

Resources

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Tuholske, C., Caylor, K., Funk, C., Verdin, A., Sweeney, S., Grace, K., Peterson, P., & Evans, T. (2021). Global urban population exposure to extreme heat. *Proceedings of the National Academy of Sciences of the United States of America, 118*(41), e2024792118. https://doi.org/10.1073/PNAS.2024792118/SUPPL_FILE/PNAS.2024792118.SAPP.PDF

Using Trees and Vegetation to Reduce Heat Islands | US EPA. (n.d.). Retrieved August 1, 2022, from https://www.epa.gov/heatislands/using-trees-and-vegetation-reduce-heat-islands

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100k trees planted by 2030. Let's Plant ABQ. (n.d.). Retrieved August 2, 2022, from https://letsplantabq.org/

Cover image: New UNM/CABQ partnership combats homelessness | UNM Newsroom. (n.d.). Retrieved August 1, 2022, fromhttp://news.unm.edu/filefid=5c672f9e2cfac21f35698ef5

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What are NASA Earth Observations?

Satellites circulating Earth take measurements and images, which allow us to gather information about our planet. These NASA datasets are free and publicly available!

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Have Questions?

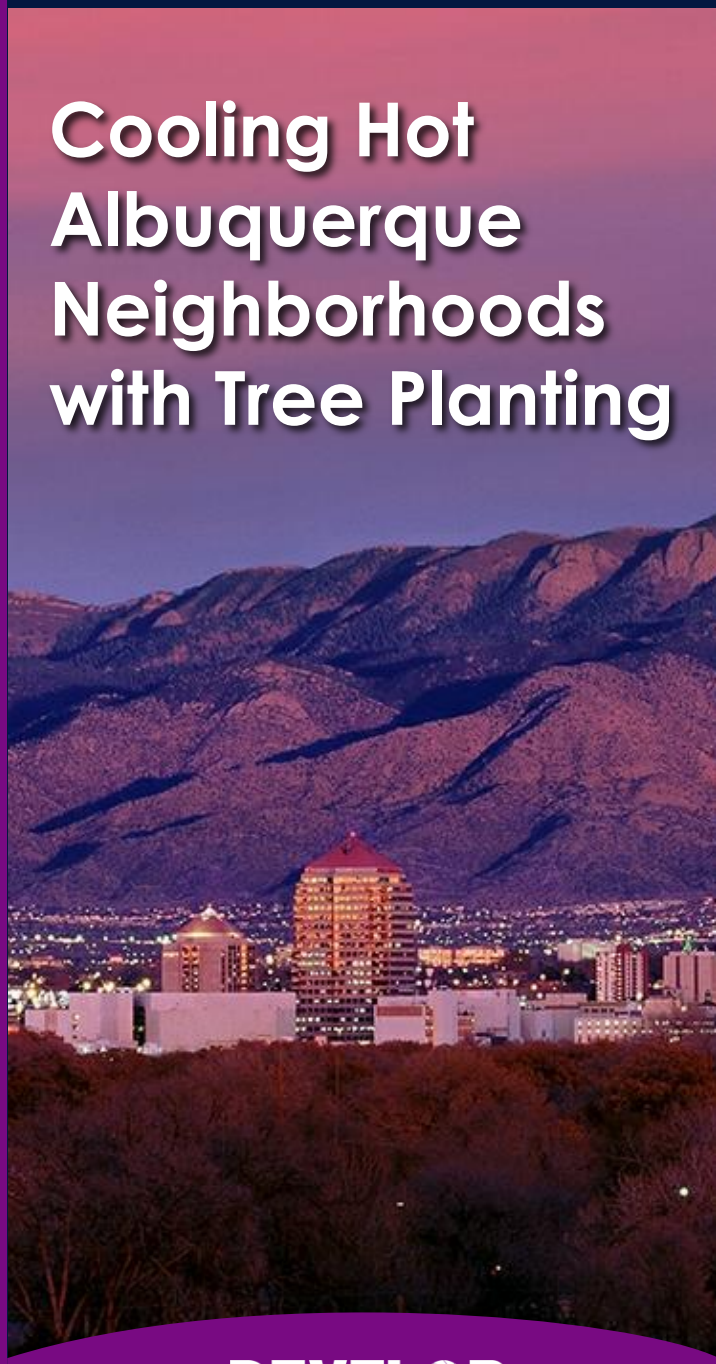
Please contact us with any questions about the program at **NASA-DL-DEVELOP@mail.nasa.gov.**

www.nasa.gov

NP-2022-08-037-LaRC

National Aeronautics and Space Administration

Cooling Hot Albuquerque Neighborhoods with Tree Planting



DEVELOP

Part of NASA's Applied Sciences Program, DEVELOP conducts feasibility studies that bridge the gap between Earth science information and society. DEVELOP works with communities and organizations to address environmental and policy concerns through 10-week projects that help both participants and partners learn more about using geospatial information.

Interested?

Apply to participate at one of the DEVELOP locations. For more information on eligibility and a full list of locations, visit us online at **https://appliedsciences.nasa.gov/nasadevelop/apply.**

VISIT OUR WEBSITE!

DEVELOP
APPLIED SCIENCES PROGRAM

Learn about the Let's Plant Albuquerque Alliance and **take the pledge to plant** at:

letsplantabq.org.

What NASA DEVELOP discovered about Albuquerque's Urban Heat:

The EPA projects that by 2040 Albuquerque will see 4x the current annual number of days with temperatures above 100 °F

Despite the projected temperature rise, a 30% increase in tree shade can allow neighborhoods to be cooler!

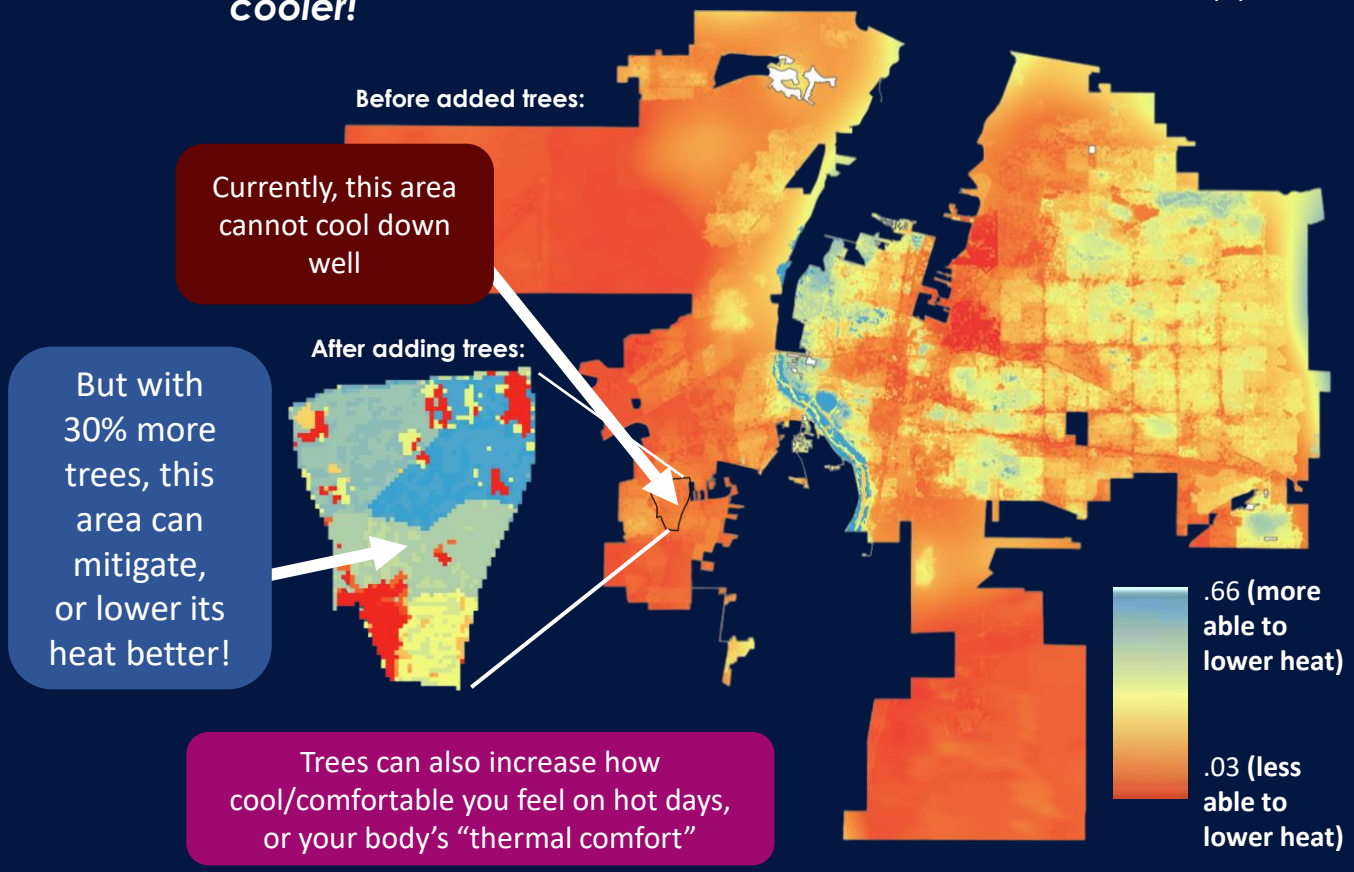
What can you do next?

Take the Pledge to Plant!

Browse climate-ready trees that qualify for the *Treebate* program

Organize a tree planting project with your community, and donate a tree, or two, or three**!**

Heat Mitigation Index
Based on the current tree canopy cover



Trees can also increase how cool/comfortable you feel on hot days, or your body's "thermal comfort"