

# Memorandum



CITY OF DALLAS

DATE August 25, 2023

TO Honorable Mayor and Members of the Dallas City Council

SUBJECT **Urban Heat Island Mapping Study with NOAA and CAPA Strategies**

The purpose of this memorandum is to provide information on the Urban Heat Island Mapping Study that took place on Saturday, August 5th, 2023, by the Office of Environmental Quality and Sustainability (OEQS) in partnership with the National Oceanic and Atmospheric Administration (NOAA) and CAPA Strategies. The study supports several goals of the Comprehensive Environmental and Climate Action Plan (CECAP) by: advancing the use of cool roofs and other greening infrastructure to reduce the urban heat island (UHI) effect in existing and new buildings (Goal 1); advancing the use of green infrastructure in mobility assets as UHI mitigation (Goal 3); and working to reduce the UHI Index by 20% by 2030, 50% by 2040, and 75% by 2050 by increasing access to green spaces, increasing the tree canopy, and protecting and expanding the urban forest (Goal 6).

In March 2023, OEQS was selected to participate in the urban heat island mapping campaign 2023 Cohort. This is NOAA's 7<sup>th</sup> year conducting the campaign and the first time Dallas has participated in the event. The purpose of the study is to identify the hotspots in our City and look for equitable ways to implement cooling solutions in our communities. The urban heat island data will help decision makers take actions to reduce the health impacts of extreme heat, which often target the most vulnerable. Data will help the City prepare for extreme heat events and implement possible solutions like enhanced tree planting strategies, cooling shelters, develop heat action plans, and educate residents and policymakers. This summer, 16 cities participated in the study, including Oklahoma City, Oklahoma, Brockton, Massachusetts, Chicago, Illinois, and Sedona, Arizona.

During the event, City staff and approximately 70 volunteers navigated 9 routes in 3 separate time periods to collect data across 100 square miles of the City. Air sensors were mounted on car windows and volunteers drove through predesigned routes at speeds below 35 miles. Sensors collected time, GPS location, humidity, and temperature every second during one-hour traverses. Points of interest were identified, and 9 routes were created to cover these areas. Areas included were Joppa, West Dallas, Downtown Dallas, Fair Park, and others. Routes were driven 3 times during the day, at 6-7am, 3-4pm, and 7-8pm. Volunteers included City of Dallas staff, Dallas Environmental Commissioners, recent high school and college graduates, UT Southwestern Sustainability Committee members, Texas Trees Foundation representatives, retired citizens, and many others. Each mapping team included a driver and navigator. Volunteer coordinators helped manage supplies and volunteers at City Hall. All volunteers were required to complete a waiver, training, and a knowledge check. Air sensors were mounted on car windows and volunteers drove through predesigned routes at speeds below 35 miles. Sensors collected time, GPS location, humidity, and temperature every second during one-hour traverses. Moving forward, CAPA Strategies plans to provide a data report and recommendations by the end of October.

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Please let us know if you have questions or need additional information. Should you have any questions, please reach out to Carlos Evans at [carlos.evans@dallas.gov](mailto:carlos.evans@dallas.gov); 469-617-1925.



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