

2018 Campaign to Map Urban Heat Islands of Baltimore and Washington, D.C.

On July 17-20, 2018, NOAA-sponsored teams of scientists and volunteers will conduct a field campaign to measure and map the **urban heat islands** of Baltimore, MD, and Washington, D.C. The campaign's two main purposes are to (1) produce very detailed maps of Baltimore's and D.C.'s urban heat islands so that (2) residents and city officials can consider whether and how they may want to take actions to protect people and reduce the risks associated with exposure to extreme heat.

We want your help!

Are you interested in helping your neighbors beat the heat? Sign up now to help collect the data that officials can use to understand heat exposure where you live and/or work. Team organizers need to hear from you by July 10. To sign up, go to: <https://tinyurl.com/y8vk47nm>. Volunteers must have their own car, a valid driver's license, and the ability to drive during three 1-hour periods in the morning, afternoon, and evening on a specific (hot!) day in late July.



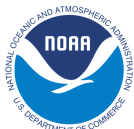
Background

The term “urban heat island” refers to the fact that cities’ unshaded roads and buildings gain heat during the day and radiate that heat into the surrounding air, increasing the local air temperature. As a result, highly developed urban areas can experience much warmer temperatures during the summer than surrounding, vegetated areas.

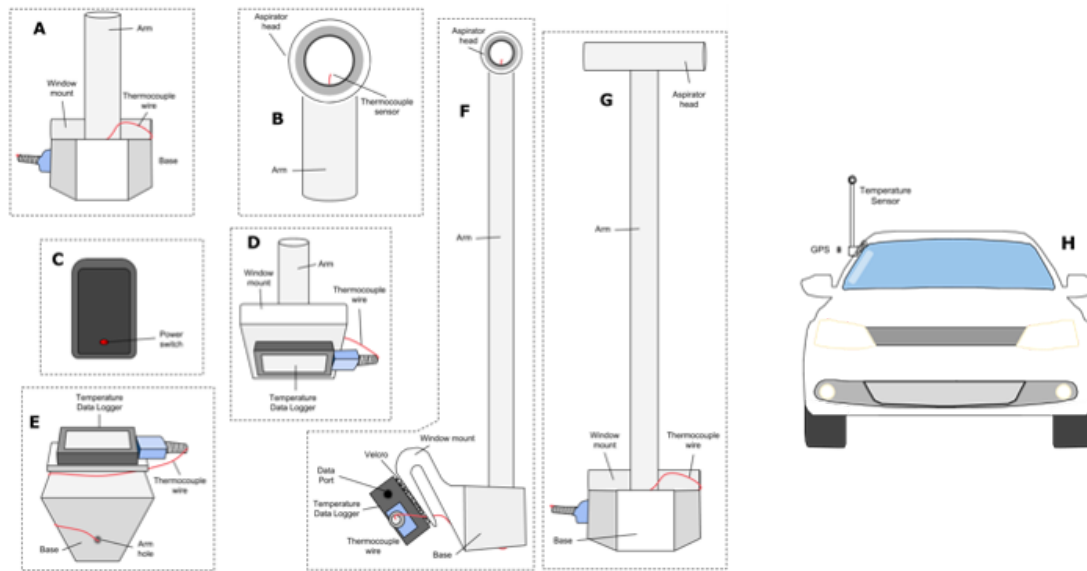
On one of the hottest days of summer in 2017, some built-up parts of Richmond, VA, were 16°F hotter than its vegetated areas on the same day. A team of scientists—led by Drs. Jeremy Hoffman, Science Museum of Virginia, and Vivek Shandas, Portland State University—found that parts of Richmond experienced temperatures as hot as 103°F on days when the city’s vegetated areas were 87°F. The team published very similar findings in Portland, OR, from a previous campaign. [Read more about the Richmond campaign.](#)

Now, with funding from NOAA’s Climate Program Office, the team is focusing on Baltimore and Washington, D.C. In late July, teams of local volunteers will fan out across those cities in cars equipped with special thermometers designed to measure air temperature once per second as well as record the time and precise location of each measurement. Thus, the data collected by the teams of volunteer drivers will enable the scientists to generate very detailed maps of temperatures across both cities at three different times of day: 6:00 am, 3:00 pm, and 7:00 pm.

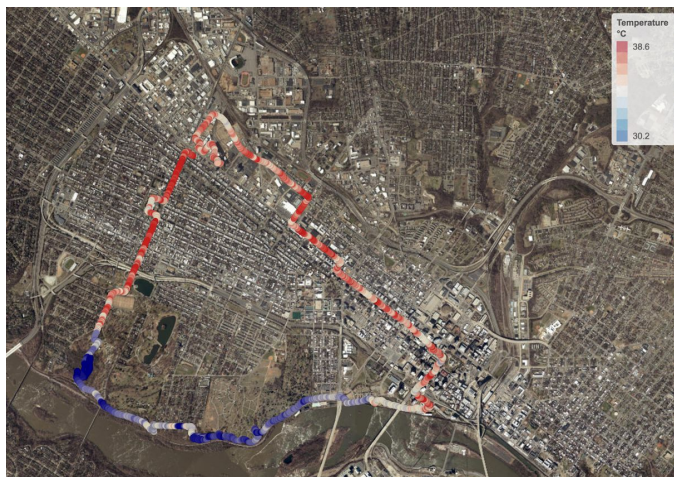
When ready, the findings from the UHI campaigns in Baltimore and D.C. will be published in a peer-reviewed science journal, and the data will be shared freely with officials and interested members of the public.



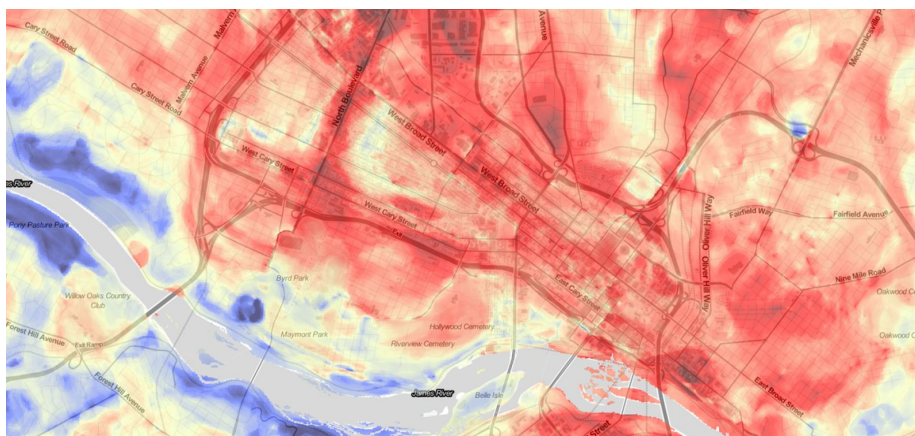
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The science team will provide specially designed thermometers, to be mounted on volunteers' cars.



Volunteers will drive designated transects in Baltimore and Washington, D.C., making temperature measurements once per second all along the way. Routes will be carefully planned to include the diversity of land cover types in both cities.



All measurements will be combined to produce high-resolution temperature maps for both entire cities. In this sample map of Richmond, VA, red shows hotter areas and blue shows cooler areas.

