

Urban Heat Island Project Final Report

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Urban heat is a growing challenge in Sacramento

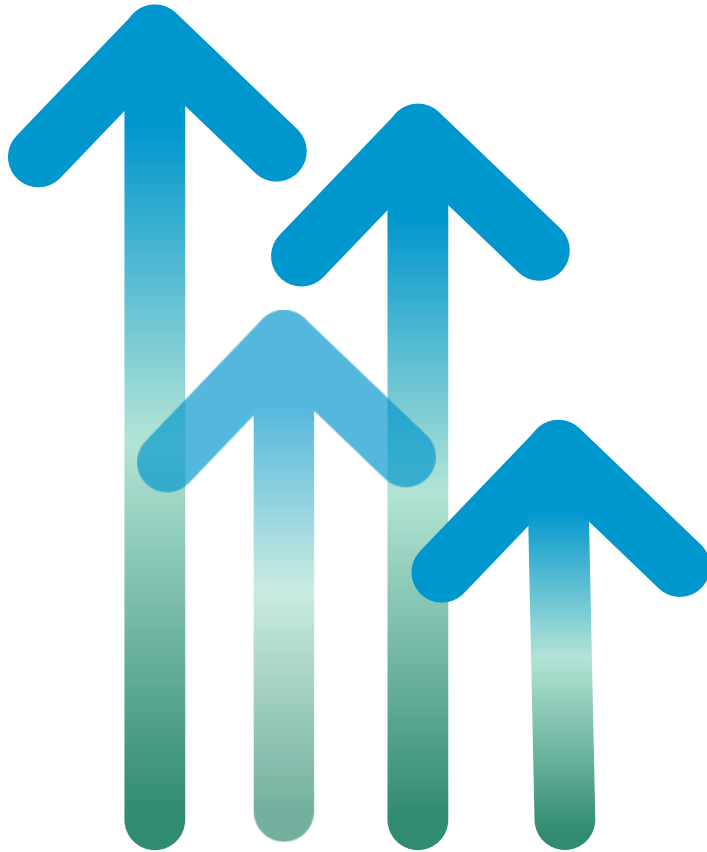
SACRAMENTO METROPOLITAN



Capital Region Urban Heat Island Reduction Plan

- **Project timeline:** May 2018-February 2020
- **Project partners:** Local Government Commission, Altostratus, WSP (sub-contractors)
- **Funding:** \$487,775 from Senate Bill 1 Adaptation Planning Grant
- **Technical advisory committee:**
 - City of Sacramento, Sacramento County, Sacramento County Department of Public Health, Regional Transit, SMUD, the Sacramento Tree Foundation
 - El Dorado County, El Dorado County Transportation Commission, City of Davis, Sacramento Area Council of Governments (SACOG), Yolo County
 - Feather River Air Quality Management District, Placer County Air Pollution Control District, Yolo-Solano Air Quality Management District
 - California Air Resources Board, California Department of Public Health

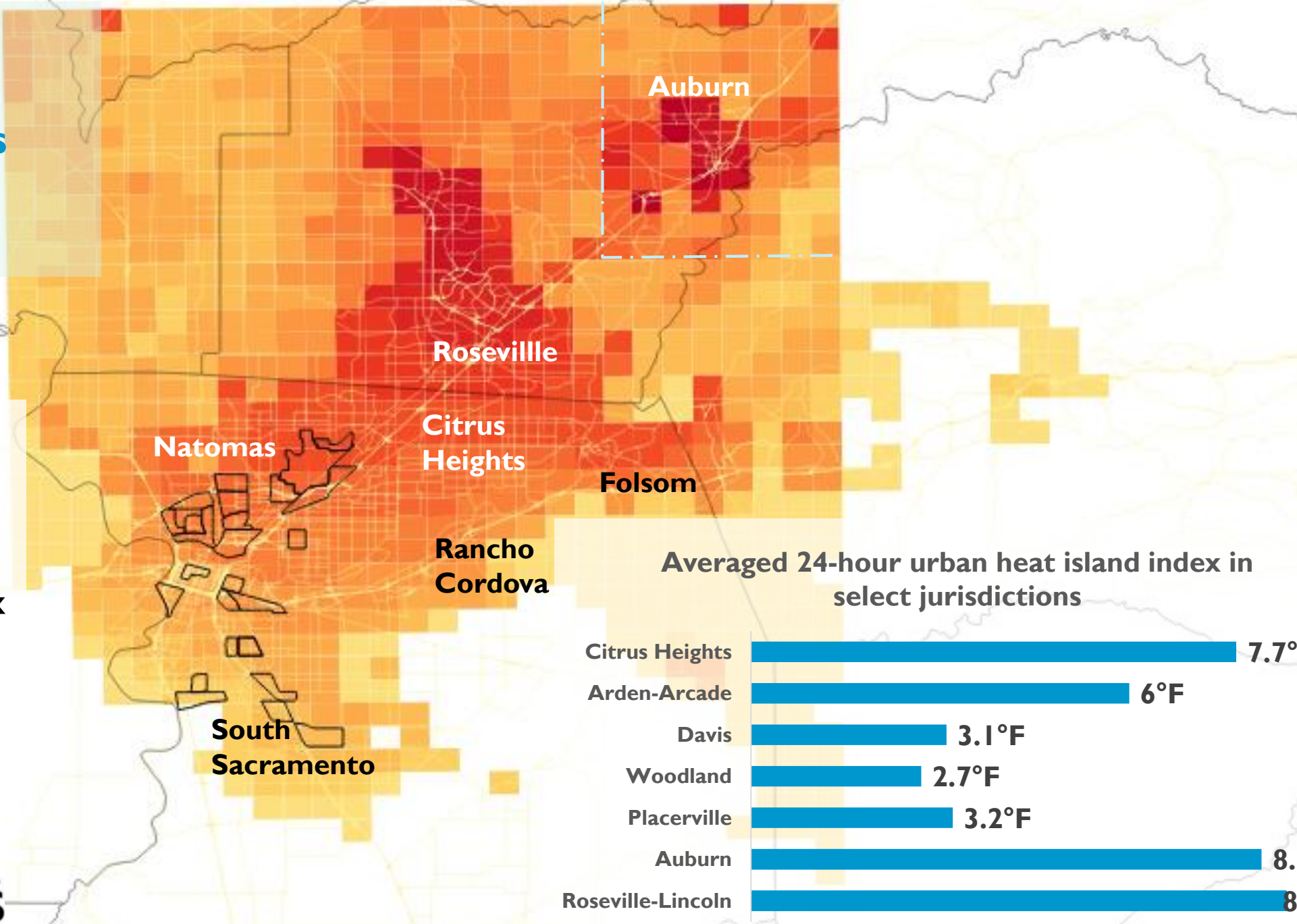
Strategies to reduce urban heat



- Increase **tree canopy** in the region by at least 12 percentage points, starting with priority areas and areas with the lowest tree canopy.
- Increase **cool roof and cool pavement deployment**, so that average albedo in the region increases by at least 0.25 to 0.35.
- Increase **zero-emissions vehicle deployment** in the region, **solar photovoltaic shading** of parking lots, **infill development**, **cool walls**, and other cooling strategies.
- **Coordinate and cooperate** with regional jurisdictions and organizations to maximize cooling benefits and develop consistent policies.

Takeaway #1:
The urban heat island is a serious challenge for the Capital Region

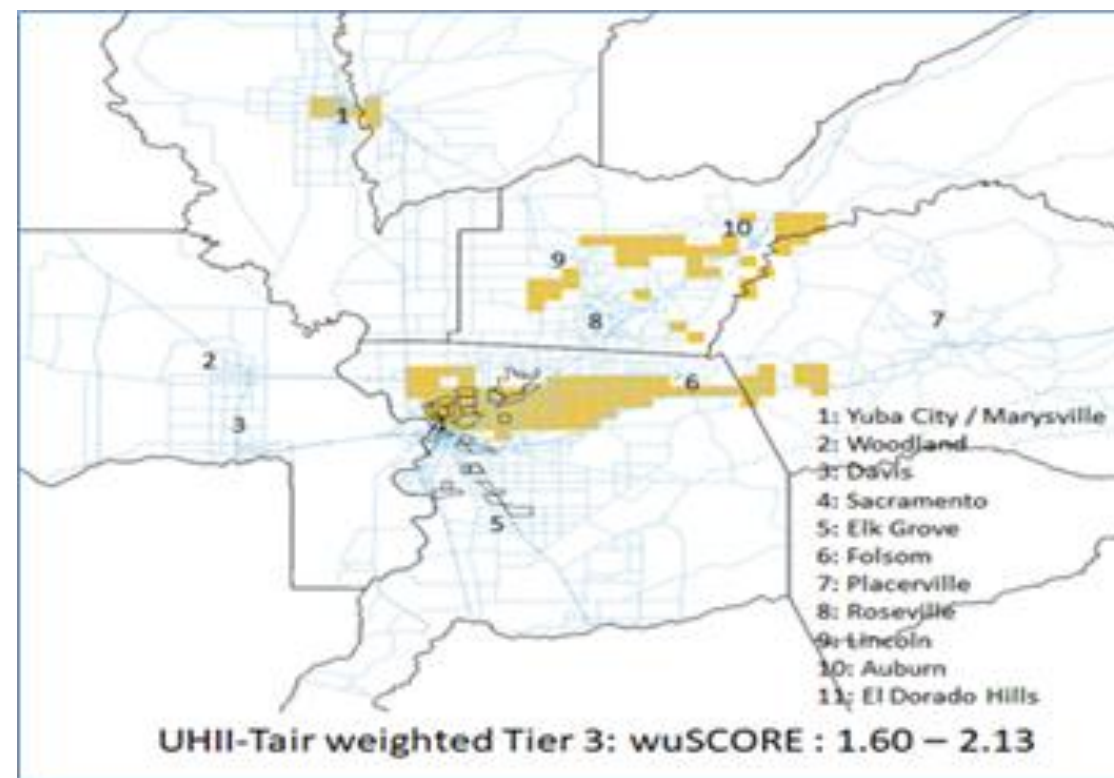
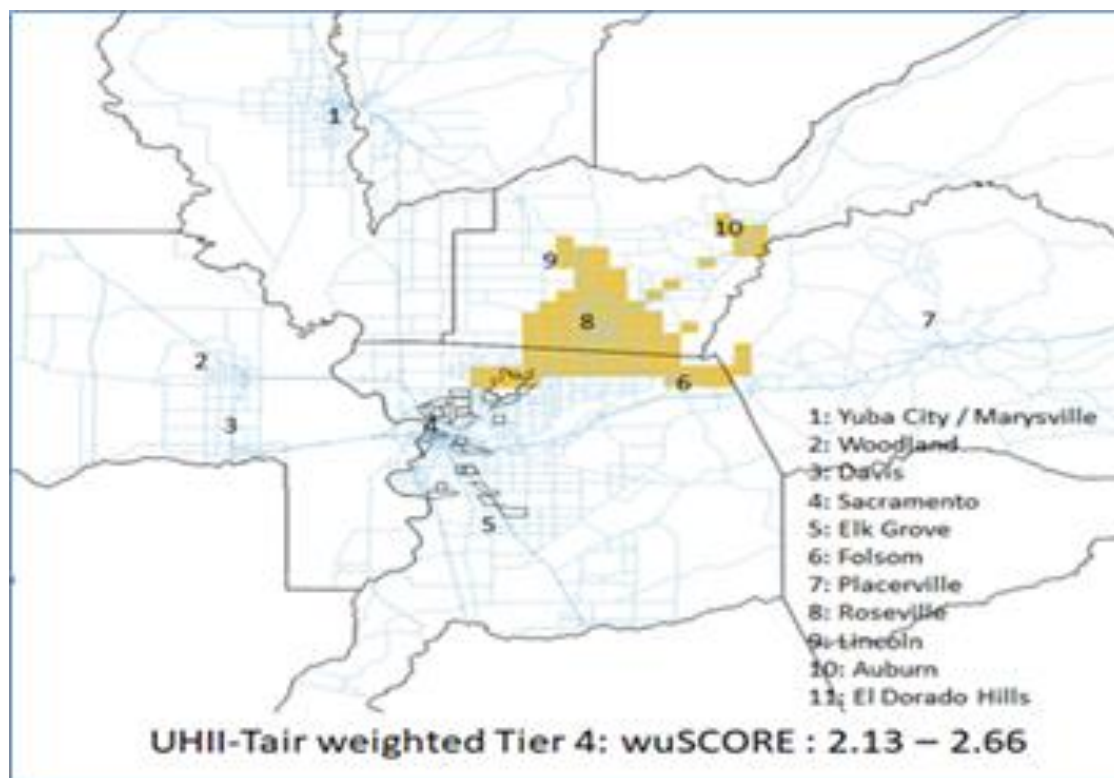
24-hours averaged Urban Heat Island Index





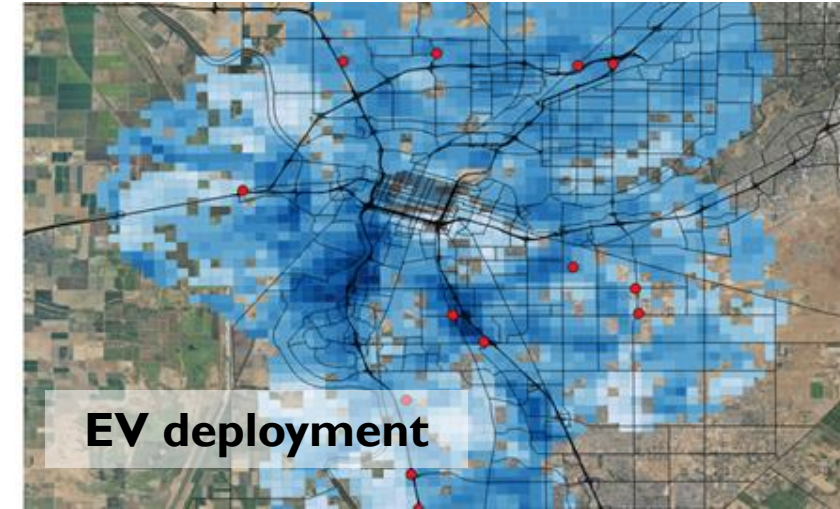
Takeaway #2: Priority areas for urban heat island reduction

The areas of Citrus Heights, Folsom, El Dorado Hills, the northeast part of the County, North Sacramento, North Highlands, Del Paso Heights, Roseville, Lincoln, and Auburn have the most severe urban heat islands in the region; they are some 7 to 10 degrees warmer than they would be otherwise



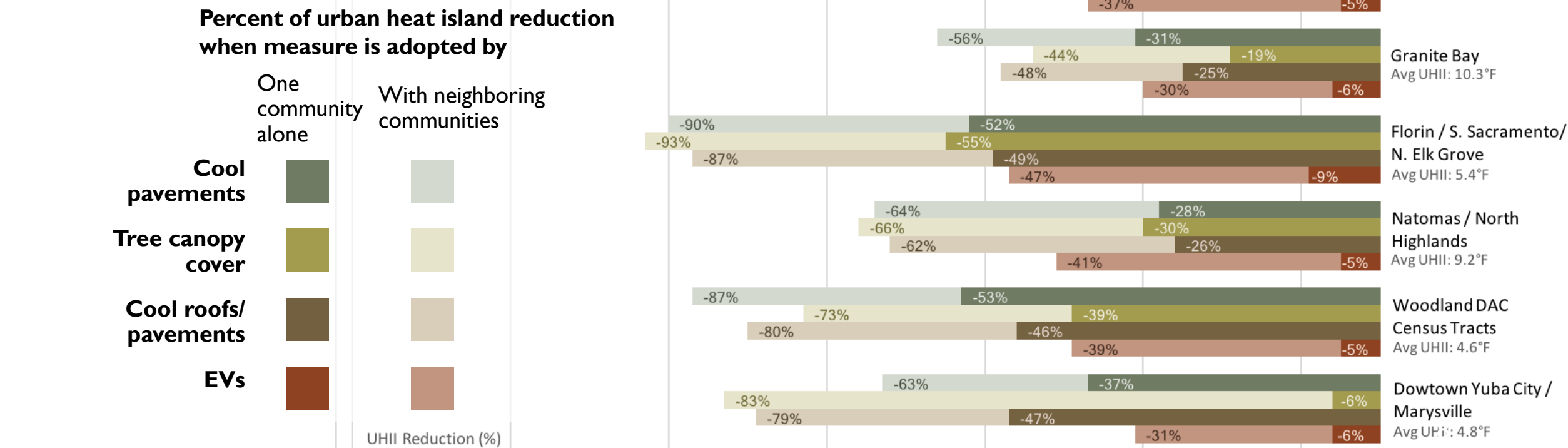
Takeaway #3:

Existing, effective strategies deployed at realistic levels can reduce or completely offset the urban heat island effect.



Takeaway #4:
Strategies have
greater impact
when adopted
in concert with
neighboring
(upwind)
jurisdictions

Urban Heat Island Reduction Potential Under Current Climate & Land Use Conditions



Opportunities
Urban cooling strategies can be embedded in existing public works projects, programs, and policies, as well as new targeted initiatives.



Green infrastructure, and cool / permeable pavements can be incorporated into maintenance & complete streets projects.

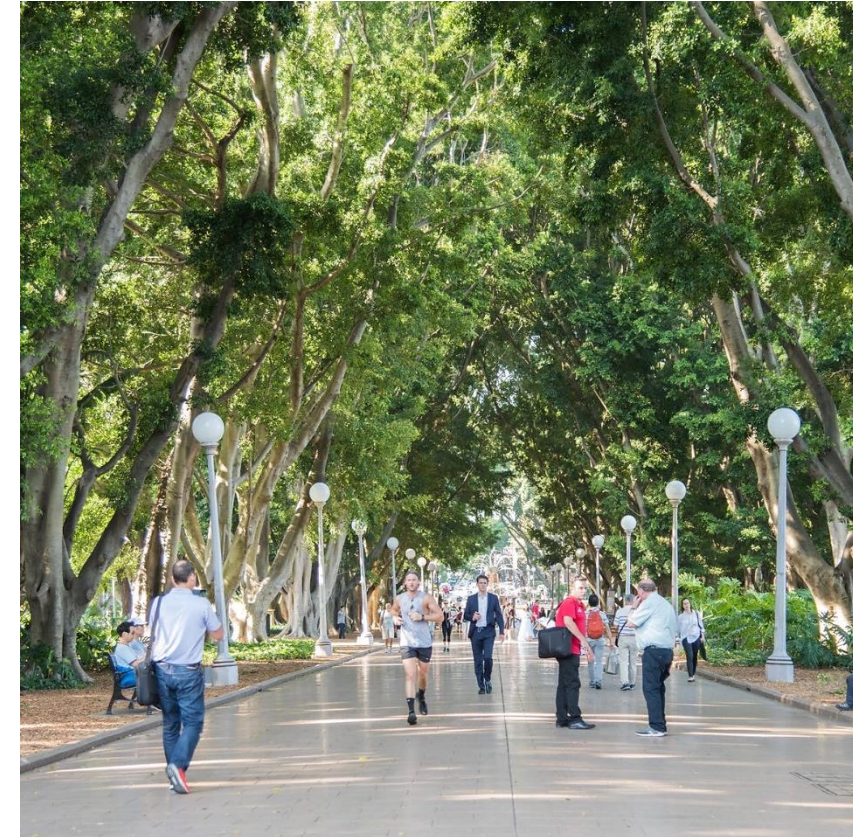


Infill development protects our natural and wild lands, reducing urban heat, and can be designed to support tree canopy and green spaces.

Next Steps

- Discuss strategies with Planning and Public Works departments to determine feasibility of measures
- Incorporate measures into stimulus funding projects as well as ongoing road repaving and maintenance, road widening, complete streets, bike lane and pedestrian paths construction, and other agency-led projects.
- Cooperate and coordinate with neighboring jurisdictions to develop consistent policies and maximize cooling.

Adopted at scale, these strategies can deliver regional and local cooling, protect public health, reduce ozone pollution, save money for businesses, agencies, and residents, and improve quality of life.



Learn more

All final reports, community engagement toolkit, and interactive maps will be online at www.airquality.org