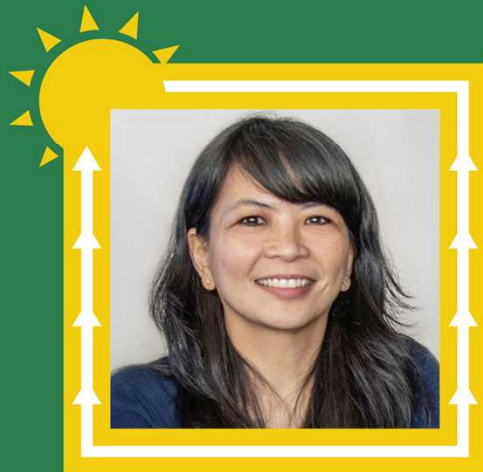


StreetsLA's Extreme Heat Toolkit: PILOT TO DECISION TOOL



Ana Tabuena-Ruddy

Assistant Director and
Chief Sustainability Officer
StreetsLA

SCAG: Energy and Environment Committee
November 6, 2025

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StreetsLA's PILOT TO DECISION TOOL

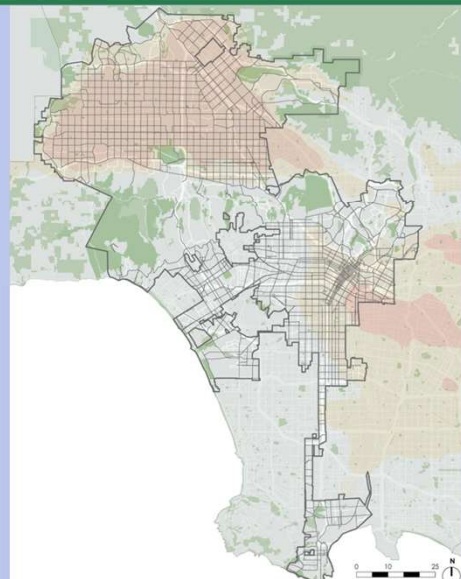
Equitable Cooling Strategies for LA Neighborhoods



23,000 lane miles
15 Council Districts



Extreme Heat Toolkit
Decision Support Tool



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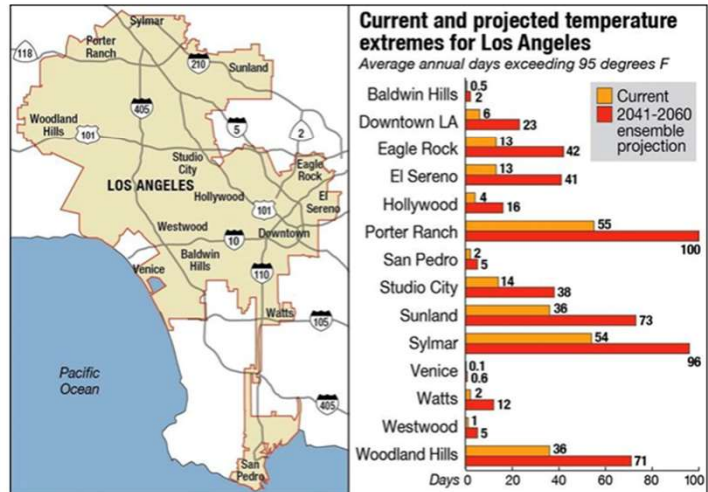
What We've Heard So Far



- Power of cool surfaces in cities across the U.S.
- National research and health urgency from NASA, NOAA
- Great modeling – but mostly at citywide scale

What's still missing? Tools for local block-by-block decision-making.

And LA is expected to get HOTTER!



Source: UCLA LARC study, 2012; chart based on the mean/average projected by the 18 climate models

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StreetsLA's PILOT TO DECISION TOOL

From Pilot to Scale



- Inherited a promising cool pavement pilot
- **Now:**
 - 181 lane miles of cool paving
 - 617 street segments
 - 5,600+ trees planted



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StreetsLA's PILOT TO DECISION TOOL

Trees or Cool Pavement?

The question of allocative efficiency



Trees,
Cool Pave,
or
Both?



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StreetsLA's PILOT TO DECISION TOOL

Trees or Cool Pavement?

The question of allocative efficiency





- Started as a traditional cost-benefit analysis
- Found location-specific variation limited usefulness
- Shifted to developing a **Decision Support Tool**
- Empower neighborhoods to plan cooling intentionally

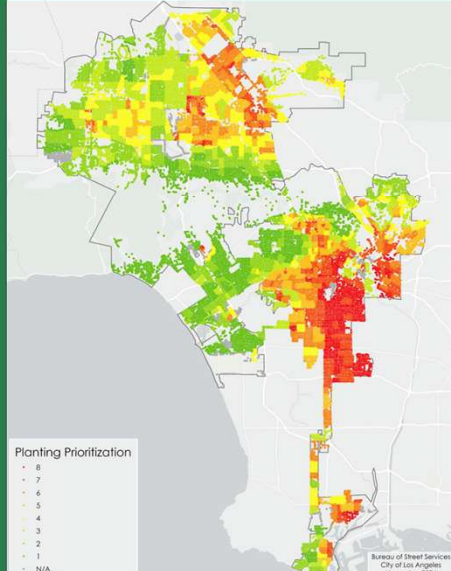
"What is possible in my community?"

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StreetsLA's PILOT TO DECISION TOOL

Trees or Cool Pavement? The question of allocative efficiency



Bureau of Street Services
City of Los Angeles
November 2024

EQUITY AND SITE-SPECIFIC CONDITIONS: **tree planting**

BOE Infrastructure Equity Scorecard		
Social	Education	Bachelor or Higher
		No HS Diploma Rate
Economic	Homeownership Rate	
		Low-Income Homeowner Severe Housing Cost Burden
		Low-Income Renter Severe Housing Cost Burden
Social Capital	Poverty	
		Unemployment
		Limited English-Speaking
		Percentage of Registered Voters
Health		Percent of Response to the 2020 Census
		Uninsured Rate
		Asthma
		Cardio
Environmental		Diabetes
	Environmental Index	Particulate Matter 2.5
		Toxic Release
		Traffic Proximity + Impacts
Infrastructural		Water Contaminants
		Climate Hazards
	Physical Infrastructure	Food Access
		No Internet Subscription Percent
	Public Space	Park Access
		Heat Island / Tree Canopy
	Transportation	> 30 min Commute
	Automobile Access	
	Walkability	
	Transportation Burden	



In addition, prioritize:

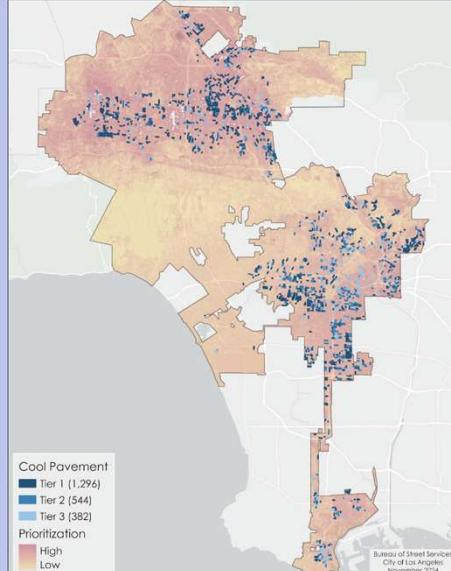
- Large planting locations
- Locations with no low overhead primary high voltage lines
- Locations with no low overhead communication lines
- Shade data

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StreetsLA's PILOT TO DECISION TOOL

Trees or Cool Pavement? The question of allocative efficiency



Bureau of Street Services
City of Los Angeles
November 2024

EQUITY AND SITE-SPECIFIC CONDITIONS: **cool paving**

Inclusion Criteria & Data Sources:
In this section, learn more details about the map layers and fields.

- **Cool Pavement Street Candidates (BSS Street Inventory)**
 - PCI 80+
 - Local streets
 - Asphalt
 - Within Disadvantaged Communities (DACs) (CalEPA)
- **Sidewalk Width Tiers (BOE Sidewalk Inventory)**
 - **Tier 1** = Sidewalk width insufficient for tree planting or other projects
 - **Tier 2** = Up to 50% of the street feasible for tree planting or other projects
 - **Tier 3** = More than 50% of the street feasible for tree planting or other projects
- **Vacant Tree Sites (BSS Tree Inventory)**
 - Existing vacant tree wells available for planting
- **Community Assets**
 - **Schools (LA County)**
 - **LAPL Libraries (City of Los Angeles)**
 - **Parks & Open Space (LA County)**
 - **Transit Stops: Bus & Rail (GTFS & LA Metro)**
 - **Service Areas** = 0.25mi walkshed around community assets
- **Cool Pavement Risk Factors**
 - **Heat Severity** = Areas hotter than the city average, rated 1 (slightly above the mean) to 5 (significantly above the mean) (Trust for Public Land)
 - **Heat ER Visits** = Excess Heat-related ER Visits per ZIP Code (UCLA)
 - **Tree Canopy** = GIS representation of canopy coverage; inversely-related for CP prioritization (BSS internal data)
 - **Weighting** = 4 * [Heat Severity] - 2 * [Canopy] + [Heat ER Visits]

In addition, prioritize:

- Existing sweeping routes
- Proximity to existing Cool Neighborhoods
- Proximity to transportation projects

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StreetsLA's PILOT TO DECISION TOOL

Trees or Cool Pavement?
The question of allocative efficiency





TREES	COOL PAVING
Tier 1: Vacant Sites	Tier 3: Entire segment is plantable but have newly planted trees or >50% plantable
Tier 2: Tree Well Sawcut Required	Tier 2: 50% or more of Tier 1 cool paving
Tier 3: Require sidewalk widening, curb extensions, lane removals	Tier 1: No sidewalk or <7ft. wide sidewalks



Cool Paving



Cool Paving & Trees





Trees

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StreetsLA's PILOT TO DECISION TOOL

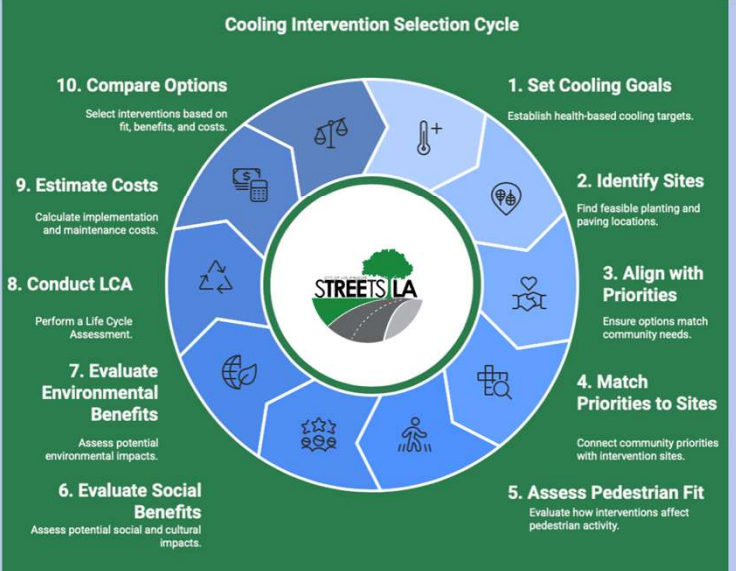
The Decision Support Tool

- **10-step process for local cooling decisions**
- **Built from research + field data + expert interviews**
- **Supports: Council Districts, CBOs, city teams**
- **Focused on outcomes, equity, and feasibility**

*This tool is still in development and being further refined.

Cooling Intervention Selection Cycle



- 10. Compare Options**
Select interventions based on fit, benefits, and costs.
- 9. Estimate Costs**
Calculate implementation and maintenance costs.
- 8. Conduct LCA**
Perform a Life Cycle Assessment.
- 7. Evaluate Environmental Benefits**
Assess potential environmental impacts.
- 6. Evaluate Social Benefits**
Assess potential social and cultural impacts.
- 5. Assess Pedestrian Fit**
Evaluate how interventions affect pedestrian activity.
- 4. Match Priorities to Sites**
Connect community priorities with intervention sites.
- 3. Align with Priorities**
Ensure options match community needs.
- 2. Identify Sites**
Find feasible planting and paving locations.
- 1. Set Cooling Goals**
Establish health-based cooling targets.

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StreetsLA's PILOT TO DECISION TOOL

The Decision Support Tool



Step 1: Health-based cooling goals using Council District baselines

Health-Based Cooling Goal	Potential Health Impact	Recommended Percentage Increase Above Baseline to Reach Goal	New Cool Pave Units Required to Achieve Goal	New Street Tree Units Required to Achieve Goal	Combined Units of Street Trees & Cool Pave
Decrease temps by (#) degrees	associated range of projected heat-related mortality decrease	% increase above baseline (10, 20, 30, 40)	X	Y	XY

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StreetsLA's PILOT TO DECISION TOOL

The Decision Support Tool

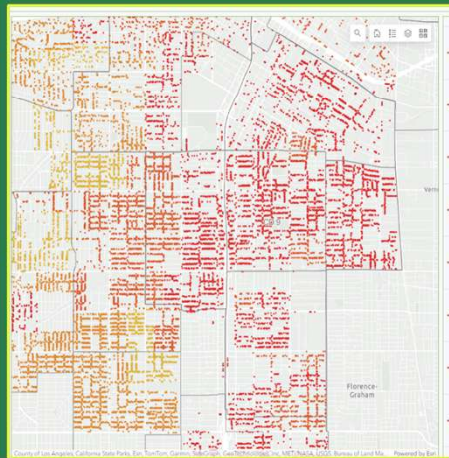


Step 2: Identify feasible tree planting and cool paving sites

Cool Paving available intervention sites



Tree Planting available intervention sites



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StreetsLA's PILOT TO DECISION TOOL

The Decision Support Tool



Step 3: Align options with community priorities



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Remaining Steps in the Decision Tool



Step 4: Match priorities with available intervention sites

Step 5: Assess pedestrian activity and intervention fit

Step 6: Evaluate potential social & cultural benefits

Step 7: Evaluate potential environmental benefits

Step 8: Conduct Life Cycle Assessment (LCA)

Step 9: Estimate implementation and maintenance costs

Step 10: Compare fit, benefits, and costs to select interventions



*This tool is still in development and being further refined.

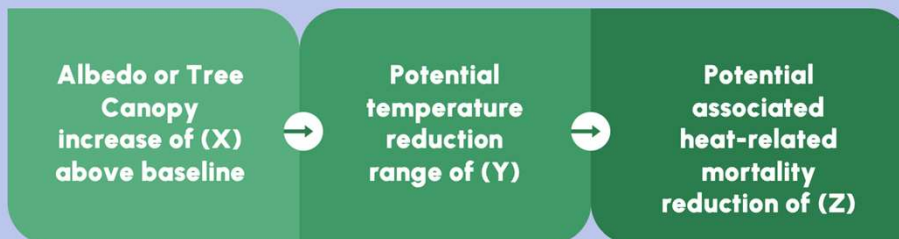
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StreetsLA's PILOT TO DECISION TOOL

Cooling = Lives Saved



- Canopy & albedo increases reduces temps
- Temp drops are linked to reduced heat mortality
- Must be applied cautiously – context matters
- **Tool enables responsible, place-based use of science**



Kalkstein, et al, 2022; Sheridan et al, 2024;
Vaidyanathan, et al, 2024; Gallo et al, 2024
Sheridan et al, 2024; Kapwata et al, 2024,
Huber et al, 2024

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StreetsLA's PILOT TO DECISION TOOL

What We've Learned and What's Next



- StreetsLA tools guide cooling decisions at the **neighborhood scale**
- **No one-size-fits-all solution**
- Trees and cool pave offer different, **complementary benefits**
- Each comes with unique costs and implementation needs
- Effectiveness depends on **site conditions and use**
- **Combined approaches** deliver stronger results
- **Act now** – perfect data isn't needed to support communities today
- Tool is built for **real-world decisions**
- Tracks progress and **empowers local leadership**
- So we can keep building heat resilience – block by block

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PILOT TO DECISION TOOL



THANK YOU

**Presented by:
Ana Tabuena-Ruddy**

**SCAG: Energy and Environment Committee
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