LABarometer
Urban Shade Report

SHADE AND TREE PLANTING ATTITUDES

AUGUST 1, 2025

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Background and Methods

This report presents findings from the fifth wave of the LABarometer Mobility & Sustainability survey, with a focus on heat, shade, and support for tree planting and maintenance in Los Angeles County.

The LABarometer Mobility & Sustainability survey tracks environmental sustainability, transportation behavior, and climate vulnerability in L.A. County – inspired by county-wide efforts to reduce automobile congestion and increase resilience to climate change in the region. The survey covers a variety of topics, including heat and pollution exposure, natural disaster preparedness, pro-environmental behavior, transportation sentiment, transportation access and behavior, and the steps Los Angeles County residents are taking to adapt to climate change.

This report focuses on survey findings related to heat, shade, and trees. Since 2020, we have asked respondents to rate the level of shade in their neighborhood and at local transit stops and to report any symptoms of heat exposure. This year, we collaborated with USC Public Exchange, the L.A. County Chief Sustainability Office, the City of Los Angeles Office of Forest Management, and the U.S. Forest Service Pacific Southwest Research Station to add questions on tree planting and maintenance. Respondents were asked to rate their level of support for spending a higher portion of their city's funds on tree planting and maintenance, both in their neighborhood and in high-need neighborhoods. Respondents were also asked to identify what they perceive as the three most important benefits of trees for their neighborhood.

To contextualize respondents' perceptions and attitudes, we linked survey responses to neighborhood-level measures of tree canopy coverage (percent of census tract covered by trees) using respondent geocodes. These measures are included in the statistical analyses (pp. 16-22) and were provided by the L.A. County Chief Sustainability Office.

Survey Methodology

All LABarometer surveys are fielded to the LABarometer Panel, a probability-based Internet panel of adults living in households throughout Los Angeles County. From 2019 to 2022, LABarometer survey waves comprised four surveys, fielded three to six months apart. The surveys covered the following topics: Livability, Mobility, Sustainability & Resilience, and Affordability & Prosperity.

In 2022, LABarometer moved to a biannual survey frequency and the four surveys were combined and reduced in size to two surveys, one on Livability & Affordability and one on Mobility & Sustainability. The Mobility & Sustainability survey is fielded in January or February of each year, and the Livability & Affordability Survey is fielded in July or August of each year. Field periods range from 8-12 weeks

All LABarometer surveys are fielded in English and in Spanish. To participate in a survey, panel members can use any computer, cell phone, or tablet with Internet access. The majority of panel

members have their own Internet access. Panel members who do not have access to Internet are provided with an Internet-enabled tablet to ensure their regular participation in surveys.

Sample Information

Wave 5 of the Mobility & Affordability survey was fielded from February 19, 2025 – April 27, 2025, and a total of 1,347 Los Angeles County residents participated. Participants were recruited from the LABarometer Panel and the survey completion rate was 72%.

Survey Weights

The method for creating sample weights for the tracking survey follows the general procedure for UAS surveys described in CESR's online methodology documentation. Sample weights are constructed in two steps. First, we calculate a base weight that corrects for unequal probabilities of selection of different households into the UAS. Second, we generate post-stratification weights, which align sample distributions of key demographics, namely gender, race/ethnicity, age, and education, with their population counterparts. Population benchmarks are derived from the Basic Monthly Current Population Survey (CPS). The provided sample weights bring the sample in line with the L.A. County adult population.

About the Panel

The LABarometer Panel is a probability-based, Internet panel of approximately 2,000 adults living in households throughout Los Angeles County. It is a sub-panel of the Understanding America Study (UAS), a national Internet panel of ~15,000 Americans maintained by the USC Dornsife Center for Economic and Social Research. Following UAS procedures, LABarometer panel members are recruited in batches and refreshed through address-based sampling using postal codes. Eligible individuals are all non-institutionalized adults aged 18 and older living in a contacted household in Los Angeles County.

About LABarometer

LABarometer is a research center housed at the USC Dornsife Center for Economic and Social Research (CESR). We conduct basic and applied social science research on issues affecting Los Angeles County residents, with the aim of informing academic research, public discourse, and policy. At the heart of our research is the LABarometer Panel, a probability-based Internet survey panel of approximately 2,000 adults randomly selected from households throughout L.A. County.

LABarometer surveys are fielded to the LABarometer Panel on a biannual basis to monitor social and economic conditions in Los Angeles County. These longitudinal surveys focus on four dimensions of individual and community well-being: livability, affordability, mobility, and sustainability. LABarometer surveys include questions about residents' lives, their attitudes and behaviors, and the challenges they encounter in their communities, filling data gaps on topics ranging from housing insecurity and climate resilience to transportation behavior and the economy.

Perceptions of Shade in Neighborhood

Summary

Respondents were asked, “Please rate how strongly you agree or disagree with the following statement: There are enough trees in my neighborhood to provide adequate shade for walking on a hot sunny day.” Response options included Agree Strongly, Agree, Agree Somewhat, Neither Agree Nor Disagree, Disagree Somewhat, Agree, Disagree Strongly. To generate the tables below, response options were collapsed into the following three categories: Agree (Agree Strongly and Agree), Neither Agree Nor Disagree, Disagree (Disagree Strongly and Disagree).

Results: Nearly half of respondents (48%) agree that there are enough trees in their neighborhood to provide adequate shade for walking. Agreement is higher among homeowners, residents with a Bachelor’s degree or more, residents who are Non-Hispanic White, residents aged 65+, residents of Supervisor District 5, and Republicans. Notably, only age remains a significant predictor of shade perceptions in analyses with demographic controls (see p. 17).

Enough Tree Shade in Neighborhood, Total Sample:

	All
% Agree	48.0
% Neither	15.4
% Disagree	36.5
N	1,334

Enough Tree Shade in Neighborhood, by Housing Tenure:

	Rent or lease	Own	Other
% Agree	44.7	54.8	23.4
% Neither	18.3	11.7	14.5
% Disagree	37	33.5	62.1
N	592	641	20

Enough Tree Shade in Neighborhood, by Household Income:

	<$30k	$30k-49,999	$50k-99,999	$100k+
% Agree	38.7	55.6	44.3	54.9
% Neither	20.9	18.1	16.7	8.6
% Disagree	40.4	26.4	39	36.5
N	282	195	361	495

Enough Tree Shade in Neighborhood, by Education:

	HS graduate or less	Some college	BA+
% Agree	42.5	48.5	53.2
% Neither	21.6	15.1	9.6

% Disagree	35.9	36.4	37.2
N	225	434	675

Enough Tree Shade in Neighborhood, by Race/Ethnicity:

	NH White	NH Black	NH Asian	NH Other	Hispanic/Latino
% Agree	55.4	38.4	44.6	49.4	45.5
% Neither	9.6	27.2	12.9	18.1	18.3
% Disagree	35.1	34.4	42.5	32.5	36.2
N	437	97	201	57	541

Enough Tree Shade in Neighborhood, by Age:

	18-35	36-49	50-64	65+
% Agree	43.4	46.8	48.6	56.7
% Neither	20.7	15.3	15.2	7.9
% Disagree	36	38	36.2	35.4
N	310	418	353	250

Enough Tree Shade in Neighborhood, by Supervisor District:

	1st District	2nd District	3rd District	4th District	5th District
% Agree	44.9	45	49.2	47.3	53.4
% Neither	17.5	18.3	12.9	13.4	15.6
% Disagree	37.6	36.8	37.8	39.3	31.1
N	297	254	211	279	246

Enough Tree Shade in Neighborhood, by Political Affiliation:

	Democrat	Republican	Independent	Other
% Agree	48.4	56.9	43.3	41.1
% Neither	13.5	12	19.9	15.9
% Disagree	38.1	31.1	36.7	43
N	671	200	407	44

Perceptions of Shade at Neighborhood Bus/Metro Stops

Summary

Respondents were asked, “Please rate how strongly you agree or disagree with the following statement: The bus and/or Metro tops in my neighborhood are well-shaded.” Response options included Agree Strongly, Agree, Agree Somewhat, Neither Agree Nor Disagree, Disagree Somewhat, Agree, Disagree Strongly. To generate the tables below, response options were collapsed into the following three categories: Agree (Agree Strongly and Agree), Neither Agree Nor Disagree, Disagree (Disagree Strongly and Disagree).

Results: Perceptions of shade at public transit stops are considerably lower than perceptions of neighborhood shade, with only 23.3% of respondents agreeing and 47.5% disagreeing that there is sufficient shade at the bus or Metro stops in their neighborhood. Disagreement is especially pronounced among Democrats and residents of Supervisor District 3.

Enough Shade at Nearest Bus/Metro Stops:

	All
% Agree	23.3
% Neither	21.2
% Disagree	47.6
% Not applicable	8
N	1,334

Enough Shade at Nearest Bus/Metro Stops, by Housing Tenure:

	Rent or lease	Own	Other
% Agree	25.4	21.9	8.6
% Neither	20.7	20.6	30.1
% Disagree	49.8	44.6	61.3
% Not applicable	4	12.8	0
N	593	640	20

Enough Shade at Nearest Bus/Metro Stops, by Household Income:

	<$30k	$30k-49,999	$50k-99,999	$100k+
% Agree	26.1	18.3	22.6	24.3
% Neither	21.1	27.4	21.2	17.9
% Disagree	47.9	46.7	50.2	45.5
% Not applicable	4.9	7.6	6	12.4
N	283	195	360	495

Enough Shade at Nearest Bus/Metro Stops, by Education:

	HS graduate or less	Some college	BA+
% Agree	22.5	24.8	23.2

% Neither	21.5	22.3	20.1
% Disagree	47.1	47.5	48.1
% Not applicable	8.9	5.4	8.7
N	224	435	675

Enough Shade at Nearest Bus/Metro Stops, by Race/Ethnicity:

	NH White	NH Black	NH Asian	NH Other	Hispanic/Latino
% Agree	18.6	26.3	26	19.9	25.4
% Neither	20.2	30.7	18.6	34.2	20.4
% Disagree	48	41.3	47.4	31.6	49.2
% Not applicable	13.2	1.7	8.1	14.3	5
N	437	97	201	58	540

Enough Shade at Nearest Bus/Metro Stops, by Age:

	18-35	36-49	50-64	65+
% Agree	22.6	21.7	25.2	24.1
% Neither	23.5	21.2	18.2	21.5
% Disagree	48.1	50.6	48.9	40.1
% Not applicable	5.8	6.6	7.7	14.2
N	310	418	353	250

Enough Shade at Nearest Bus/Metro Stops, by Supervisor District:

	1st District	2nd District	3rd District	4th District	5th District
% Agree	22.6	18.3	23	25.4	26.6
% Neither	22.1	23.7	13.3	17.6	30.1
% Disagree	48.1	51.7	56.2	48.9	32.6
% Not applicable	7.3	6.2	7.6	8.1	10.6
N	297	255	211	278	246

Enough Shade at Nearest Bus/Metro Stops, by Political Affiliation:

	Democrat	Republican	Independent	Other
% Agree	25	26.4	19.9	19.6
% Neither	18.3	22.3	26.1	12.2
% Disagree	50.1	38.4	46.1	67.3
% Not applicable	6.6	12.9	7.9	1
N	670	200	407	44

Support for Tree Planting in High-Need Neighborhoods

Summary

Respondents were presented with the following introductory text: “The general fund is the main budget used to run your city. It is funded by various sources, such as taxes and fees for licenses and permits. This fund supports a number of city services, including public safety, public works, community libraries, housing services, recreation centers, planning and transportation, and administration.” They were then asked, “How much do you support or oppose your local government spending more money from the general fund to increase the amount of tree planting and maintenance **in high-need neighborhoods with low tree cover**?” Response options included Strongly support, Somewhat support, Somewhat oppose, and Strongly oppose.

Results: There is significant support for planting more trees in high-need areas, with 82% of respondents expressing either strong or moderate support. Support is particularly strong among higher-income residents, residents with a Bachelor’s degree or more, Non-Hispanic White and Asian residents, residents of Supervisor District 3, and Democrats.

Support for Tree Planting in High-Need Neighborhoods:

	All
% Strongly support	34.6
% Somewhat support	47.7
% Somewhat oppose	12.3
% Strongly oppose	5.5
N	1,334

Support for Tree Planting in High-Need Neighborhoods, by Housing Tenure:

	Rent or lease	Own	Other
% Strongly support	36	32.6	25.7
% Somewhat support	46.4	51.3	37.2
% Somewhat oppose	12	10.9	34.4
% Strongly oppose	5.6	5.2	2.6
N	591	641	20

Support for Tree Planting in High-Need Neighborhoods, by Household Income:

	<$30k	$30k-49,999	$50k-99,999	$100k+
% Strongly support	28.8	26.8	36.3	41.7
% Somewhat support	48.2	55.9	46.2	44.4
% Somewhat oppose	14.4	11.2	13.4	10.3
% Strongly oppose	8.6	6.2	4.2	3.7
N	282	195	361	494

Support for Tree Planting in High-Need Neighborhoods, by Education:

	HS graduate or less	Some college	BA+
% Strongly support	25.7	33.5	44.1
% Somewhat support	51.4	48.5	43.5
% Somewhat oppose	15.4	12.2	9.2
% Strongly oppose	7.5	5.8	3.3
N	226	434	674

Support for Tree Planting in High-Need Neighborhoods, by Race/Ethnicity:

	NH White	NH Black	NH Asian	NH Other	Hispanic/Latino
% Strongly support	39.7	13.9	40	32.4	32.8
% Somewhat support	44.4	62.7	48.5	52.2	47
% Somewhat oppose	9.8	14.6	10	9.7	14.4
% Strongly oppose	6.1	8.8	1.5	5.7	5.8
N	437	97	202	58	539

Support for Tree Planting in High-Need Neighborhoods, by Age:

	18-35	36-49	50-64	65+
% Strongly support	31.9	40.6	32.3	31.1
% Somewhat support	49.8	44.3	47.8	50.6
% Somewhat oppose	15.3	7.6	14.1	12.6
% Strongly oppose	3	7.5	5.8	5.8
N	309	419	352	250

Support for Tree Planting in High-Need Neighborhoods, by Supervisor District:

	1st District	2nd District	3rd District	4th District	5th District
% Strongly support	35.2	28.7	43.4	35.2	31.8
% Somewhat support	49.8	50.1	43.5	43.5	49.3
% Somewhat oppose	10.2	18	8	13.1	12.1
% Strongly oppose	4.8	3.2	5	8.2	6.9
N	296	255	211	279	246

Support for Tree Planting in High-Need Neighborhoods, by Political Affiliation:

	Democrat	Republican	Independent	Other
% Strongly support	43.5	21.3	27.2	40.4
% Somewhat support	46.3	47	51.3	37.1
% Somewhat oppose	8	16.3	15.9	20
% Strongly oppose	2.2	15.4	5.5	2.6
N	671	200	406	43

Support for Tree Planting in Own Neighborhood

Summary

Respondents were presented with the following introductory text: “The general fund is the main budget used to run your city. It is funded by various sources, such as taxes and fees for licenses and permits. This fund supports a number of city services, including public safety, public works, community libraries, housing services, recreation centers, planning and transportation, and administration.” They were then asked, “How much do you support or oppose your local government spending more money from the general fund to increase the amount of tree planting and maintenance **in your neighborhood**?” Response options included Strongly support, Somewhat support, Somewhat oppose, and Strongly oppose.

Results: Respondents are supportive of spending more money on tree planting and maintenance in their own neighborhood, with 77.6% of respondents expressing either strong or moderate support. The demographic breakdown of support mirrors the breakdown of support for tree planting and maintenance in high-need neighborhoods. Support is particularly strong among higher-income residents, residents with a Bachelor’s degree or more, Non-Hispanic White and Asian residents, residents of Supervisor District 3, and Democrats.

Support for Tree Planting in Own Neighborhood:

	All
% Strongly support	34.1
% Somewhat support	43.5
% Somewhat oppose	17.2
% Strongly oppose	5.3
N	1,334

Support for Tree Planting in Own Neighborhood, by Housing Tenure:

	Rent or lease	Own	Other
% Strongly support	34.5	32.9	48.8
% Somewhat support	42.7	45.5	35
% Somewhat oppose	16.9	16.6	15.6
% Strongly oppose	5.8	5	0.7
N	592	641	20

Support for Tree Planting in Own Neighborhood, by Household Income:

	<$30k	$30k-49,999	$50k-99,999	$100k+
% Strongly support	28.4	29.4	34.6	40.8
% Somewhat support	46.6	49.8	42.2	38.5
% Somewhat oppose	16.5	17.6	17.7	17.1
% Strongly oppose	8.4	3.2	5.5	3.6

N	282	195	361	495

Support for Tree Planting in Own Neighborhood, by Education:

	HS graduate or less	Some college	BA+
% Strongly support	25.9	30.2	44.7
% Somewhat support	46.8	47.4	37.6
% Somewhat oppose	20.7	16.6	14.1
% Strongly oppose	6.6	5.9	3.5
N	225	434	675

Support for Tree Planting in Own Neighborhood, by Race/Ethnicity:

	NH White	NH Black	NH Asian	NH Other	Hispanic/Latino
% Strongly support	36	15.7	42.8	33.1	33
% Somewhat support	38.3	53.5	44.5	41.2	45.2
% Somewhat oppose	19.8	19.7	11.3	11.6	17.1
% Strongly oppose	5.9	11.1	1.4	14.1	4.6
N	437	97	201	58	540

Support for Tree Planting in Own Neighborhood, by Age:

	18-35	36-49	50-64	65+
% Strongly support	32.1	39.8	32.9	29.3
% Somewhat support	44.6	43.3	40.3	46.7
% Somewhat oppose	20.3	11	21.5	16.3
% Strongly oppose	3	5.9	5.3	7.8
N	310	419	352	250

Support for Tree Planting in Own Neighborhood, by Supervisor District:

	1st District	2nd District	3rd District	4th District	5th District
% Strongly support	37.8	27.6	45.9	34.2	26.8
% Somewhat support	45.7	46.8	36.5	42.4	42
% Somewhat oppose	12.1	20.3	14	17.1	24
% Strongly oppose	4.4	5.3	3.7	6.3	7.1
N	297	255	211	278	246

Support for Tree Planting in Own Neighborhood, by Political Affiliation:

	Democrat	Republican	Independent	Other
% Strongly support	41.8	21.9	28.3	35.7
% Somewhat support	41.8	42.4	47	39.8
% Somewhat oppose	14.3	23.4	18.3	22.5
% Strongly oppose	2.1	12.3	6.4	2
N	671	200	406	44

Perceived Benefits of Trees

Summary

Respondents were provided with the following question: “Trees provide a variety of benefits. Understanding which benefits are most important to your community helps the City and its partners know where trees should be planted. In thinking about priorities you have for your neighborhood, which benefits of trees are most important to you? Select up to three answers.” Response options included: Beautify my neighborhood, Encourage outdoor activities, Improve air quality, Reduce noise, Prevent flooding, Provide habitat for wildlife, Reduce crime, Reduce temperatures when it’s hot out.

Results: The three benefits most frequently cited by respondents are neighborhood beautification, improved air quality, and reduced temperatures. These are followed in frequency by wildlife habitat and outdoor activities. Demographic differences are relatively small. Lower-educated and lower-income residents are more likely than higher-educated and higher-income residents to identify crime reduction as an important benefit. Non-Hispanic White residents are more likely than other racial/ethnic groups to cite wildlife habitat as an important benefit. Younger adults aged 18-35 are less likely than older adults to cite neighborhood beautification and more likely to cite outdoor activities as important benefits. Lastly, renters are more likely than homeowners to cite outdoor activity opportunities and crime reduction as important benefits.

Top 3 Benefits of Trees:

	All
% Beautify	54.9
% Outdoor activity	18.5
% Improve air quality	67.8
% Reduce noise	10.1
% Prevent flooding	6.7
% Wildlife habitat	27.4
% Reduce crime	9.1
% Reduce temperature	65.7
N	1,324

Top 3 Benefits of Trees, by Housing Tenure:

	Rent	Own	Other
% Beautify	50.3	62	45.9
% Outdoor activity	18.5	15.6	40.5
% Improve air quality	69.1	68.5	50.8
% Reduce noise	9.3	12.5	0
% Prevent flooding	6.6	6.4	11
% Wildlife habitat	24.4	30.6	24.2

% Reduce crime	10.7	8.1	0
% Reduce temperature	62.4	69	74.4
N	591	641	20

Top 3 Benefits of Trees, by Household Income:

	<$30k	**$30k-49,999**	**$50k-99,999**	**$100k+**
% Beautify	41.8	51.2	55.1	67.3
% Outdoor activity	19.8	20.7	18.3	16.5
% Improve air quality	59.5	64.6	71.9	72.8
% Reduce noise	6.2	8.8	10	13.9
% Prevent flooding	7	6.8	8.5	5.1
% Wildlife habitat	27.2	23.7	26.2	30.5
% Reduce crime	11.7	11.7	10	4.8
% Reduce temperature	59.5	63.9	65.7	71.8
N	281	195	361	495

Top 3 Benefits of Trees, by Education:

	HS graduate or less	**Some college**	**BA+**
% Beautify	46.7	53.6	63.8
% Outdoor activity	19.4	16.2	19.1
% Improve air quality	60.2	71.5	73
% Reduce noise	7.2	9.8	13
% Prevent flooding	5.8	8.5	6.5
% Wildlife habitat	28.5	24	28.5
% Reduce crime	12.4	10.4	4.9
% Reduce temperature	60.2	61.8	73.6
N	225	433	675

Top 3 Benefits of Trees, by Race/Ethnicity:

	NH White	**NH Black**	**NH Asian**	**NH Other**	**Hispanic/Latino**
% Beautify	61.3	59.1	54.5	64.2	49.5
% Outdoor activity	14.3	15.2	16.6	19.2	22.5
% Improve air quality	63	64.9	77.7	60	68.9
% Reduce noise	14.7	3.8	11	3.3	8
% Prevent flooding	4.1	3.6	15.5	5.7	6.3
% Wildlife habitat	35.2	17.8	19.9	28.1	25.8
% Reduce crime	5.5	17.4	8.3	7.2	10.5
% Reduce temperature	71.6	42.8	67.9	59.5	65
N	436	97	201	58	540

Top 3 Benefits of Trees, by Age:

	18-35	36-49	50-64	65+
% Beautify	44.8	56.1	60.5	61.1
% Outdoor activity	23.3	16.2	17.2	16.3
% Improve air quality	70	70.6	66.2	61.8
% Reduce noise	8.8	10	10.4	11.8
% Prevent flooding	8.7	5.2	6.4	6.5
% Wildlife habitat	24.2	25.9	30.4	30.7
% Reduce crime	10.2	9.5	7.9	8.2
% Reduce temperature	65.6	63.1	66.9	68.1
N	310	418	352	250

Top 3 Benefits of Trees, by Supervisor District:

	1st District	2nd District	3rd District	4th District	5th District
% Beautify	50.6	54.8	49	62.1	55.7
% Outdoor activity	19.1	21.7	14.2	15.3	19.2
% Improve air quality	68.1	66.4	75.1	66.9	63.6
% Reduce noise	9.5	8.3	13.9	11	7.3
% Prevent flooding	7.2	8.8	9	3.1	6.8
% Wildlife habitat	23.6	22.6	34.5	22.1	39.1
% Reduce crime	10.5	13.6	4.8	8.3	6.3
% Reduce temperature	71.1	56.8	73.7	66.4	63.2
N	296	255	211	278	246

Top 3 Benefits of Trees, by Political Affiliation:

	Democrat	Republican	Independent	Other
% Beautify	56.4	56.5	51.8	50.2
% Outdoor activity	17.6	13.5	21.5	22.1
% Improve air quality	71.7	66.3	62.9	69.2
% Reduce noise	10.1	11.6	9.4	5.9
% Prevent flooding	7.3	6.4	6.9	0
% Wildlife habitat	28.3	29.7	26.2	21.4
% Reduce crime	7.7	10.4	10.5	7.6
% Reduce temperature	65.2	65.3	64.5	82.4
N	670	199	407	44

Regression Analyses

Tree Canopy Coverage

Summary of Results:

In the table below, we regress tree canopy coverage (percent of census tract covered by trees) on respondent demographic characteristics to identify the demographic predictors of residing in a census tract with relatively high tree canopy coverage. Results indicate that non-Hispanic Black and Hispanic residents are significantly less likely than non-Hispanic White residents to live in high-canopy neighborhoods. Residents of Supervisor Districts 3 and 5 are also more likely to be living in high-canopy neighborhoods, an indication that tree canopy is unequally distributed across supervisor districts.

OLS Regression of % Tree Canopy on Respondent Characteristics

	% Tree Canopy	
Race/Ethnicity (*ref: Non-Hispanic White*)		
Non-Hispanic Black	-1.806**	(0.619)
Non-Hispanic Asian	-0.688	(0.448)
Non-Hispanic Other	-0.858	(0.728)
Hispanic/Latino	-1.298***	(0.376)
Age *(ref: 18-34 years)*		
35-44 years	-0.282	(0.427)
45-54 years	0.091	(0.451)
55-64 years	-0.305	(0.473)
65+ years	0.761	(0.488)
Education *(ref: HS or Less)*		
Some College	0.090	(0.433)
BA+	0.506	(0.451)
Household Income *(ref: <$25,000)*		
$25,000-49,999	0.445	(0.474)
$50,000-74,999	-0.201	(0.506)
$75,000+	0.504	(0.450)
Housing Tenure *(ref: Rent)*		
Own	-0.005	(0.322)
Other	-0.984	(1.107)
Supervisor District *(ref: District 1)*		
District 2	-0.559	(0.442)
District 3	1.927***	(0.461)
District 4	-0.789	(0.422)
District 5	3.416***	(0.447)
Political Affiliation *(ref: Democrat)*		
Republican	-0.543	(0.411)
Independent	-0.364	(0.331)
Other	0.740	(0.797)
Constant	10.017***	(0.677)
Observations	1205	
R-squared	0.159	

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Perceptions of Neighborhood Shade

Summary of Results:

In the table below, we regress perceptions of neighborhood tree shade on respondent demographic characteristics and tree canopy coverage to identify the demographic and contextual predictors of perceived neighborhood shade, controlling for supervisor district. Across supervisor districts, age remains a significant predictor – residents age 65+ are significantly more likely than residents age 18-34 to perceive their neighborhood as sufficiently shaded by trees. Tree canopy coverage is also positively correlated with perceptions of neighborhood shade – confirmation that subjective perceptions of tree shade reflect objective tree canopy conditions.

OLS Regression of Perceived Adequacy of Neighborhood Shade on Respondent Characteristics

	Enough Tree Shade in Neighborhood			
	(1)		(2)	
Race/Ethnicity (*ref: Non-Hispanic White*)				
Non-Hispanic Black	-0.122	(0.270)	-0.034	(0.269)
Non-Hispanic Asian	-0.081	(0.194)	-0.059	(0.192)
Non-Hispanic Other	-0.424	(0.321)	-0.385	(0.319)
Hispanic/Latino	-0.206	(0.162)	-0.146	(0.161)
Age *(ref: 18-34 years)*				
35-44 years	0.286	(0.188)	0.293	(0.187)
45-54 years	0.322	(0.198)	0.308	(0.197)
55-64 years	0.210	(0.208)	0.212	(0.206)
65+ years	0.533*	(0.214)	0.487*	(0.212)
Education *(ref: HS or Less)*				
Some College	-0.174	(0.194)	-0.180	(0.193)
BA+	-0.215	(0.201)	-0.243	(0.199)
Household Income *(ref: <$25,000)*				
$25,000-49,999	0.261	(0.213)	0.247	(0.211)
$50,000-74,999	0.165	(0.224)	0.191	(0.223)
$75,000+	0.251	(0.200)	0.236	(0.198)
Housing Tenure *(ref: Rent)*				
Own	0.026	(0.139)	0.025	(0.138)
Other	-0.669	(0.495)	-0.610	(0.492)
Supervisor District *(ref: District 1)*				
District 2	0.020	(0.192)	0.046	(0.191)
District 3	0.259	(0.199)	0.163	(0.199)
District 4	0.163	(0.184)	0.200	(0.183)
District 5	0.312	(0.194)	0.130	(0.198)
Political Affiliation *(ref: Democrat)*				
Republican	0.131	(0.175)	0.157	(0.174)
Independent	0.131	(0.145)	0.154	(0.144)
Other	-0.526	(0.355)	-0.531	(0.353)
% Tree Canopy in Census Tract			0.049***	(0.012)
Constant	3.793***	(0.302)	3.303***	(0.323)
Observations	1030		1030	
R-squared	0.029		0.044	

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Symptoms of Heat Exposure

Summary of Results:

In the table below, we regress self-reported symptoms of heat exposure (where 0=no symptoms, 1= one or more symptoms) on respondent characteristics and tree canopy to identify the demographic and contextual predictors of subjective heat exposure. Results indicate that, across supervisor districts, residents who are non-Hispanic Black, older (age 65+), or higher income ($75,000+) are significantly less likely to report symptoms of heat exposure than residents who are non-Hispanic white, younger (age 18-34), or low-income (<$25,000), respectively (Model 1). Notably, tree canopy coverage is *not* significantly correlated with self-reported symptoms (Model 2). This suggests that factors other than neighborhood tree shade drive heat-related symptoms.

OLS Regression of Heat Exposure Symptoms on Respondent Characteristics

	Any Heat Exposure Symptoms			
	(1)		(2)	
Race/Ethnicity (*ref: Non-Hispanic White*)				
Non-Hispanic Black	-0.164**	(0.063)	-0.159*	(0.063)
Non-Hispanic Asian	0.042	(0.046)	0.044	(0.046)
Non-Hispanic Other	0.081	(0.074)	0.084	(0.074)
Hispanic/Latino	0.006	(0.038)	0.010	(0.039)
Age *(ref: 18-34 years)*				
35-44 years	-0.030	(0.043)	-0.030	(0.043)
45-54 years	-0.057	(0.046)	-0.057	(0.046)
55-64 years	-0.090	(0.048)	-0.089	(0.048)
65+ years	-0.120*	(0.050)	-0.123*	(0.050)
Education *(ref: HS or Less)*				
Some College	0.067	(0.044)	0.067	(0.044)
BA+	0.025	(0.046)	0.023	(0.046)
Household Income *(ref: <$25,000)*				
$25,000-49,999	-0.093	(0.048)	-0.094	(0.048)
$50,000-74,999	-0.072	(0.051)	-0.071	(0.051)
$75,000+	-0.158***	(0.046)	-0.160***	(0.046)
Housing Tenure *(ref: Rent)*				
Own	-0.065*	(0.033)	-0.065*	(0.033)
Other	-0.010	(0.113)	-0.008	(0.113)
Supervisor District *(ref: District 1)*				
District 2	0.044	(0.045)	0.046	(0.045)
District 3	0.047	(0.047)	0.041	(0.047)
District 4	0.007	(0.043)	0.009	(0.043)
District 5	0.002	(0.046)	-0.009	(0.047)
Political Affiliation *(ref: Democrat)*				
Republican	-0.011	(0.042)	-0.009	(0.042)
Independent	-0.010	(0.034)	-0.009	(0.034)
Other	0.132	(0.081)	0.130	(0.081)
Percent Tree Canopy			0.003	(0.003)
Constant	0.578***	(0.069)	0.548***	(0.075)
Observations		1205		1205
R-squared		0.046		0.047

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Support for Tree Planting in High-Need Neighborhoods

Summary of Results:

In the table below, we regress support for funding additional tree planting and maintenance in high-need neighborhoods on respondent characteristics, tree canopy coverage, heat symptoms, and perceptions of neighborhood shade to identify the demographic, perceptual, and contextual predictors of support.

Results indicate that, across supervisor districts, residents who are non-Hispanic Black or have a political affiliation of Republican, Independent, or Other are significantly less likely to support tree planting and maintenance than those who are non-Hispanic white or Democrats, respectively. College educated (Bachelor's degree or more) and high-income (>$75,000+) are significantly *more* likely to express policy support (Model 1). Once we account for differences in perceived neighborhood shade (Model 2), these income differences become non-significant and perceptions of neighborhood shade are negatively correlated with policy support – meaning, the more satisfied respondents are with the amount of tree shade in their neighborhood, the less likely they are to support tree planting and maintenance in high-need neighborhoods. The effects of tree canopy coverage and self-reported heat exposure are non-significant.

In Models 3 and 4, the relationship between perceived neighborhood shade and policy support appears to be driven primarily by the responses of high-income and college-educated respondents. In Model 3, the interaction of perceived shade with a high income ($75,000+) is statistically significant and negative, while the direct effect of a high income on policy support is statistically significant and positive. Likewise, in Model 4, the interaction of perceived shade with a college education (Some College or Bachelor's degree or more) is statistically significant and negative, while the direct effect of a college education (Some College or Bachelor's degree or more) on policy support is statistically significant and positive.

Altogether, these findings suggest that support for additional tree planting and maintenance among socioeconomically advantaged residents is heavily influenced by what they perceive as their own neighborhood environment – i.e. whether or not they believe their own neighborhood needs more tree shade – whereas support among socioeconomically disadvantaged residents has little to do with how they perceive their own neighborhood environment.

OLS Regression of Support for Tree Planting in High-Need Neighborhoods on Respondent Characteristics

	Support Tree Planting and Maintenance in High-Need Neighborhoods							
	(1)		(2)		(3)		(4)	
Race/Ethnicity (*ref: Non-Hispanic White*)								
Non-Hispanic Black	-0.465***	(0.100)	-0.372**	(0.109)	-0.369***	(0.109)	-0.373***	(0.108)
Non-Hispanic Asian	-0.029	(0.072)	0.008	(0.078)	-0.002	(0.078)	0.019	(0.077)
Non-Hispanic Other	-0.108	(0.118)	-0.104	(0.129)	-0.107	(0.129)	-0.094	(0.128)
Hispanic	-0.064	(0.061)	-0.027	(0.065)	-0.024	(0.065)	-0.028	(0.065)
Age *(ref: 18-34 years)*								

35-44 years	0.030	(0.069)	-0.003	(0.075)	-0.002	(0.076)	-0.012	(0.075)
45-54 years	-0.052	(0.073)	-0.089	(0.080)	-0.083	(0.080)	-0.089	(0.079)
55-64 years	-0.031	(0.076)	-0.026	(0.083)	-0.018	(0.083)	-0.033	(0.083)
65+ years	-0.045	(0.079)	-0.065	(0.086)	-0.051	(0.086)	-0.064	(0.086)
Education *(ref: HS or Less)*								
Some College	0.071	(0.070)	0.033	(0.078)	0.031	(0.078)	0.618***	(0.177)
BA+	0.198**	(0.073)	0.168*	(0.081)	0.169*	(0.081)	0.500**	(0.168)
Household Income *(ref: <$25,000)*								
$25,000-49,999	0.108	(0.076)	0.074	(0.086)	0.360	(0.198)	0.062	(0.085)
$50,000-74,999	0.095	(0.082)	0.006	(0.090)	0.266	(0.211)	0.015	(0.090)
$75,000+	0.182*	(0.073)	0.149	(0.080)	0.467**	(0.168)	0.143	(0.080)
Housing Tenure *(ref: Rent)*								
Own	-0.086	(0.052)	-0.050	(0.056)	-0.049	(0.056)	-0.043	(0.055)
Other	-0.273	(0.178)	-0.236	(0.199)	-0.201	(0.200)	-0.227	(0.198)
Supervisor District *(ref: District 1)*								
District 2	-0.035	(0.071)	-0.059	(0.077)	-0.060	(0.077)	-0.051	(0.077)
District 3	-0.024	(0.074)	0.016	(0.080)	0.020	(0.080)	0.032	(0.080)
District 4	-0.055	(0.068)	-0.003	(0.074)	-0.004	(0.074)	0.009	(0.074)
District 5	-0.011	(0.072)	0.039	(0.080)	0.040	(0.080)	0.057	(0.080)
Political Affiliation *(ref: Democrat)*								
Republican	-0.577***	(0.066)	-0.596***	(0.070)	-0.593***	(0.070)	-0.604***	(0.070)
Independent	-0.277***	(0.053)	-0.255***	(0.058)	-0.249***	(0.058)	-0.259***	(0.058)
Other	-0.122	(0.130)	-0.158	(0.145)	-0.152	(0.145)	-0.163	(0.144)
Percent Tree Canopy			0.004	(0.005)	0.004	(0.005)	0.004	(0.005)
Heat Symptoms			0.068	(0.050)	0.073	(0.050)	0.069	(0.049)
Perceived Neighborhood Shade			-0.053***	(0.013)	0.009	(0.032)	0.033	(0.031)
Perceived Shade X HH Income								
Shade Adequacy X $25,000-49,999					-0.071	(0.043)		
Shade Adequacy X $50,000-74,999					-0.065	(0.047)		
Shade Adequacy X $75,000+					-0.078*	(0.036)		
Perceived Shade X Education								
Shade Adequacy X Some College							-0.141***	(0.038)
Shade Adequacy X BA+							-0.081*	(0.035)
Constant	3.228***	(0.109)	3.194***	(0.119)	3.162***	(0.186)	3.057***	(0.186)
Observations		1194		1194		1029		1029
R-squared		0.122		0.122		0.141		0.149

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Support for Tree Planting in Own Neighborhood

Summary of Results:

In the table below, we regress support for funding additional tree planting and maintenance in one's own neighborhood on respondent demographic characteristics, tree canopy coverage, heat exposure symptoms, and perceived neighborhood shade to identify the demographic, perceptual, and contextual predictors of support.

Model 1 indicates that residents who are non-Hispanic Black, located in Supervisor District 5, or have a political affiliation of Republican, Independent, or Other are significantly less likely to support increased spending on tree planting and maintenance than those who are non-Hispanic White, located in Supervisor District 1, or a Democrat, respectively. College educated (Bachelor's degree or more) and high-income (>$75,000+) residents are significantly *more* likely to express support (Model 1). Once we account for perceptions of neighborhood shade, the effect of household income becomes non-significant (Model 2). Perceptions of neighborhood shade are, again, negatively correlated with policy support – meaning, the more respondents perceive their neighborhood as adequately shaded, the less they support tree planting and maintenance in their neighborhood – and the effects of tree canopy coverage and self-reported heat exposure are, again, non-significant.

In Model 3, the interaction of perceived shade with a high income ($75,000+) is statistically significant and negative, while the direct effect of a high income on policy support is statistically significant and positive. This suggests that support among high-income residents is highly correlated with what they perceive as their own neighborhood's needs – i.e. whether or not their own neighborhood is sufficiently shaded – whereas support among low-income residents has little to do with how they perceive their own neighborhood's shade needs.

In Model 4, the interaction of perceived shade with Some College is statistically significant and negative, which indicates that moderately educated residents are less likely to express support for increased spending on tree planting if they think their neighborhood is adequately shaded. The direct effect of a Bachelor's degree or more remains statistically significant and positive – meaning, highly educated respondents are more likely than lower educated respondents to support additional tree planting in their neighborhood regardless of their own neighborhood conditions.

OLS Regression of Support for Tree Planting in Own Neighborhood on Respondent Characteristics

	Support Tree Planting and Maintenance in Own Neighborhood							
	(1)		(2)		(3)		(4)	
Race/Ethnicity (*ref: Non-Hispanic White*)								
Non-Hispanic Black	-0.386***	(0.104)	-0.315**	(0.111)	-0.312**	(0.112)	-0.315**	(0.111)
Non-Hispanic Asian	0.094	(0.076)	0.097	(0.080)	0.083	(0.080)	0.102	(0.080)
Non-Hispanic Other	-0.167	(0.123)	-0.178	(0.132)	-0.184	(0.132)	-0.173	(0.132)
Hispanic/Latino	0.013	(0.063)	0.061	(0.067)	0.060	(0.067)	0.060	(0.067)
Age *(ref: 18-34 years)*								

35-44 years	0.119	(0.072)	0.075	(0.077)	0.074	(0.077)	0.070	(0.077)
45-54 years	-0.066	(0.076)	-0.118	(0.082)	-0.115	(0.082)	-0.117	(0.082)
55-64 years	-0.089	(0.080)	-0.085	(0.086)	-0.079	(0.086)	-0.089	(0.086)
65+ years	-0.092	(0.082)	-0.115	(0.088)	-0.105	(0.089)	-0.114	(0.088)
Education *(ref: HS or Less)*								
Some College	0.044	(0.073)	0.009	(0.080)	0.007	(0.080)	0.352	(0.182)
BA+	0.197**	(0.076)	0.210**	(0.083)	0.211*	(0.083)	0.428*	(0.173)
Household Income *(ref: <$25,000)*								
$25,000-49,999	0.134	(0.080)	0.154	(0.088)	0.361	(0.204)	0.147	(0.088)
$50,000-74,999	0.056	(0.086)	-0.040	(0.092)	0.142	(0.217)	-0.036	(0.092)
$75,000+	0.156*	(0.076)	0.122	(0.083)	0.439*	(0.173)	0.119	(0.083)
Housing Tenure *(ref: Rent)*								
Own	-0.003	(0.054)	0.029	(0.057)	0.028	(0.057)	0.033	(0.057)
Other	0.070	(0.186)	0.090	(0.204)	0.130	(0.205)	0.098	(0.204)
Supervisor District *(ref: District 1)*								
District 2	-0.104	(0.074)	-0.128	(0.079)	-0.126	(0.079)	-0.123	(0.079)
District 3	-0.081	(0.078)	-0.028	(0.082)	-0.025	(0.082)	-0.018	(0.083)
District 4	-0.086	(0.071)	-0.055	(0.076)	-0.057	(0.076)	-0.048	(0.076)
District 5	-0.194*	(0.075)	-0.102*	(0.082)	-0.102	(0.082)	-0.092	(0.082)
Political Affiliation *(ref: Democrat)*								
Republican	-0.466***	(0.069)	-0.478***	(0.072)	-0.476***	(0.072)	-0.482***	(0.072)
Independent	-0.248***	(0.056)	-0.248***	(0.060)	-0.244***	(0.060)	-0.250***	(0.060)
Other	-0.151	(0.134)	-0.271	(0.147)	-0.268	(0.147)	-0.274	(0.147)
Percent Tree Canopy			-0.006	(0.005)	-0.006	(0.005)	-0.006	(0.005)
Heat Symptoms			0.040	(0.051)	0.047	(0.051)	0.041	(0.051)
Perceived Neighborhood Shade			-0.083***	(0.013)	-0.026	(0.033)	-0.029	(0.032)
Perceived Shade X HH Income								
Shade Adequacy X $25,000-49,999					-0.052	(0.045)		
Shade Adequacy X $50,000-74,999					-0.046	(0.048)		
Shade Adequacy X $75,000+					-0.078*	(0.037)		
Perceived Shade X Education								
Shade Adequacy X Some College							-0.083*	(0.039)
Shade Adequacy X BA+							-0.053	(0.037)
Constant	3.137***	(0.114)	3.206***	(0.124)	3.312***	(0.191)	3.318***	(0.191)
Observations		1195		1195		1030		1030
R-squared		0.107		0.109		0.154		0.154

Standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001