URBAN TREE CANOPY COMMUNITY PRIORITIZATION PROJECT

FINAL REPORT

December 2022

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

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AUTHORS & ACKNOWLEDGMENTS

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All images are courtesy of project partners or in the public domain.

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EXECUTIVE SUMMARY

The Urban Tree Canopy Community Prioritization Project involved the Gateway Cities Council of Governments (COG), the nonprofit organization TreePeople, and Loyola Marymount University collaborating on developing local tree canopy assessments and community prioritization reports for four disadvantaged communities within Southeast Los Angeles County: the cities of Lynwood, Paramount, Montebello, and Vernon. Importantly, this project intended to provide insight into improving the tree canopy in these cities in a deliberate and thoughtful manner that prioritized the needs and desires of the residents within these communities and to invest in areas that have been historically excluded from accessing necessary resources and funding. The project sought to lay the groundwork for cities to bring about the benefits associated with increasing urban tree canopy, such as improved air quality, the mitigation of extreme heat, aesthetic value, and increased property values, by providing maps, data, and reports that can help guide the cities' urban forestry strategies for the future.

The project aimed to address a knowledge gap in the Gateway Cities subregion concerning community desires in urban forestry practices. First, the cities' spatial data was analyzed to better understand existing tree canopy as well as the potential for new plantings. Each of the cities were covered by a lower percentage of tree canopy than the Los Angeles County average of 18% (Galvin et. al., 2019), indicating a dire need for greater investment. Each city also had a great opportunity to increase their tree canopy; high resolution, high accuracy tree canopy data indicated that over 40% of each of the cities' land area could be categorized as possible tree canopy. Thus, Lynwood, Paramount, Montebello, and Vernon all currently lack tree canopy but have the potential to improve.

A series of planning meetings were held with the cities' staff. These meetings allowed the project team to further understand the environmental context of the cities from a qualitative perspective. These meetings offered a holistic view of each city and allowed us to gain a comprehensive understanding of the physical landscape of the city as well as identifying city priorities and challenges that may not have been gleaned from spatial data.
Next, a community tree summit was conducted in each city. These summits introduced the project to residents and informed them of the various benefits that tree canopy provided. Participants discussed their own personal experiences and values regarding trees and a survey was distributed that assessed what tree canopy benefits were seen as highest priority to the community. Lynwood, Paramount, and Montebello respondents all prioritized Air Quality as the most important benefit in tree planting. Vernon respondents prioritized Reduced Heat.

Overall, this project serves to provide a roadmap for Lynwood, Paramount, Montebello, and Vernon's future urban forestry strategies. Importantly, it does so in a way that includes both a data-driven approach and a community-driven approach. The urban tree canopy prioritization project aims to provide both quantitative and qualitative data for cities to improve their urban tree canopy in a way that uplifts community voices and supports sustainable development.

PROBLEM STATEMENT

The Gateway Cities subregion of Southeast Los Angeles County has historically been excluded from accessing necessary resources due to socioeconomic factors that have forced its residents to the margins of society. There is a dire need to correct this imbalance and ensure that the residents of the area are finally able to access resources and funding. Tree canopy is a resource that was once seen as an unnecessary luxury for these communities. Recent research by Zhou, et. al. (2021), however, has brought to light the holistic benefits that tree canopy can offer a socially vulnerable community. Increasing tree canopy has positive effects on health, aesthetics, water quality, social connection among a community, economy, air quality, and ecology, benefits that many residents of the Gateway Cities have been unable to access. The project attempts to remedy these injustices by laying the groundwork for tree planting by providing planning documents that ensure that future tree planting projects are intentional and reflective of the community desires of the residents of the Gateway Cities of Lynwood, Paramount, Montebello, and Vernon. This project aims not just to increase tree canopy, but to correct a history of neglect and disinvestment in the Gateway Cities subregion.

PROJECT DESCRIPTION

In each city, the project began with spatial data analysis to determine existing tree canopy at a parcel level, as well as parcels that were suitable for future tree planting. Demographic data and relevant legislation were also reviewed. Next, meetings with city staff were conducted to further understand the environmental context and urban forestry needs of the city. Following that, a public tree canopy event was held, where participants were led through a variety of interactive experiences including a survey that assessed participants' priorities for tree planting. The survey asked participants to prioritize a curated list of potential benefits that trees could offer their community. These benefits each had a corresponding spatial variable which was then ranked, weighted, and mapped using an ArcGIS model. This survey was also posted on the cities' and project team's websites. The final deliverables were: 1) a report detailing the process, findings, and recommendations for each city; 2) maps of existing, possible, and priority locations for tree canopy; 3) parcel database of priority rankings for each parcel in the city; 4) KMZ format mapping file of priority map; 5) tree canopy priorities survey specific to each city in English and Spanish and survey responses.

PROJECT RESULTS

Overview

The project results indicate that the cities of Lynwood, Paramount, Vernon, and Montebello all have the potential to increase and improve their respective urban forests. Spatial data reflects the potential for the cities to physically expand upon their tree canopies whilst survey responses reveal a community desire to do so. Based on survey data, Lynwood, Paramount, and Montebello respondents all prioritized Air Quality as the most important benefit in tree planting and Vernon respondents prioritized Reduced Heat. These desires are reflected in maps that translate these priorities into spatial variables. Lastly, it is important to acknowledge the challenges that the

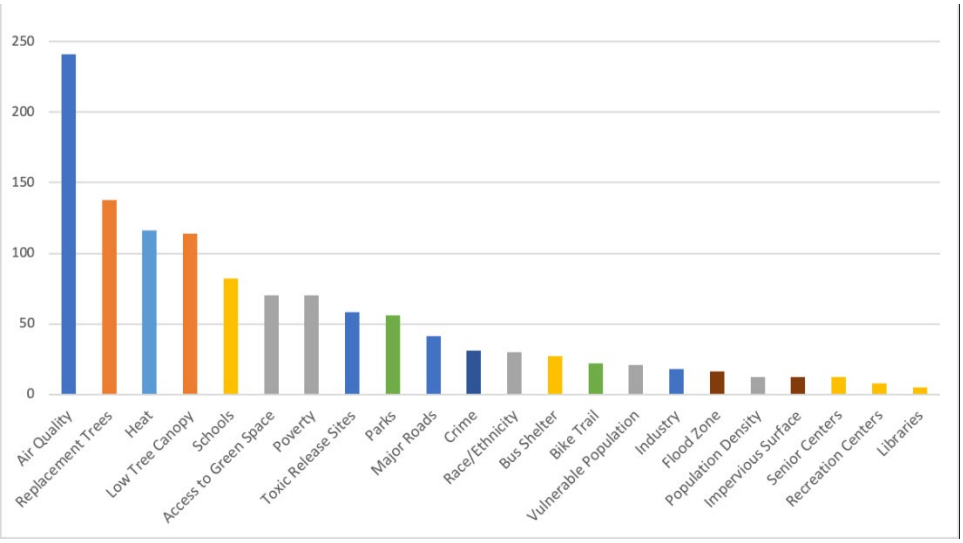
COVID-19 pandemic brought upon the project, as the daily lives of residents, city staff, and the project team were altered (these challenges are explained further in the *External Factors and Barriers Encountered* subsection).

Lynwood

The project launched in the City of Lynwood in August 2020. Upon analyzing the existing and potential tree canopy within the city at the parcel level, it was determined that 16% of the land was already covered by tree canopy while 41% of the land was suitable for tree planting. The project was then presented to city staff and other stakeholders to better understand the history of urban forestry in Lynwood, to gain insight on the urban forestry goals and current priorities, and to hear any concerns or any other information that could help guide the project. These virtual meetings took place from September to November 2020 with various city staff including the city manager, elected officials, and staff representatives from the departments of recreation, planning, and public works. Team members also met with the Mayor of Lynwood to brief her on the project.

After developing community engagement plans based on the city's input, the project team held two public tree summits: One on the weekday evening of December 10, 2020 and one on the weekend morning of December 12, 2020. In total, 24 participants attended the virtual tree summits.

Among other activities, a survey was administered to the tree summit participants as well as posted on the Lynwood website and social media of the project team. In total, 120 responses were collected. The survey consisted of a list of 22 possible benefits that trees could offer the Lynwood community that respondents were able to choose from in order to identify their priorities for tree planting. Of the 22 benefits, Air Quality was identified as the highest priority, followed by Replacement Trees, Reduce Heat, (the mitigation of) Low Tree Canopy, and Schools.



These benefits were also grouped into 8 categories:

I Want to Plant Trees To...	Specifically, I Want to Improve...	This Means the Tree Planting Team Will...
Beautify Neighborhoods	Low Tree Canopy	Plant trees on streets with few or no street trees, to beautify the neighborhood.
	Replacement Trees	Plant trees to replace those removed for development, damage and/or City capital improvement projects.
Improve Air Quality & Reduce Noise	Air Quality Index	Plant trees in areas with the poorest air quality scores to help improve the air quality.
	Toxic Release Sites	Plant trees near facilities that emit toxic pollution to help reduce the impacts of the pollution.
	Major Roads	Plant trees near major roads to help reduce the impacts of the air pollution and noise.
	Industrial Activities	Plant trees near industrial zones to help reduce the impacts of the air pollution and noise.
Increase Equity for Residents	Access to Green Spaces	Plant trees on streets that are further away from parks, to provide residents access to nearby green spaces.
	Poverty/Low Income	Plant trees in places with the lowest-income residents, as those residents often live near the least amount of trees and other green spaces.
	Population Density	Plant trees where there are highest densities of residents, as those residents often live near the least amount of trees and other green spaces.
	Race/Ethnicity	Plant trees in places with the most minority residents, as those residents often live near the least amount of trees and other green spaces.
	Vulnerable Populations	Plant trees in places with the most young children and elderly residents, to provide the benefits of trees to the most vulnerable residents.
Prevent Flooding & Increase Infiltration	Flood Zone	Plant trees in flood zones to slow the flow of water and help reduce the impacts of floods.
	Impervious Surface	Plant trees in places with highest amount of concrete, to help reduce the impacts of floods and increase the amount of water that infiltrates the ground.
Promote Recreation Opportunities	Bicycle Trails	Plant trees along the bicycle trails to promote community recreation and health.
	Park Improvement	Plant trees in parks (including pocket parks) to promote community recreation and health.
Protect Critical Community Places	Libraries	Plant trees near libraries to provide library users with the many benefits of trees.
	Bus Shelter	Plant trees near bus stops to provide shade for those waiting for the bus.
	Recreation Centers	Plant trees near rec centers to provide users with the many benefits of trees.
	Schools	Plant trees near schools to provide school children with the many benefits of trees.
	Senior Centers	Plant trees near senior centers to provide senior citizens with the many benefits of trees.
Reduce Crime	Crime	Plant trees in high crime areas to help discourage criminal activity.
Reduce Heat	Heat	Plant trees in areas with highest surface temperature to reduce heat.

When summarized by category, Improve Air Quality and Reduce Noise were revealed to be Lynwood survey respondents' highest priority (30% of votes), followed by Beautify Neighborhoods (21%), Protect Critical Community Places (17%), Increase Equity for Residents (16%), Reduce Heat (9.5%), Promote Recreation Opportunities (6.5%), Reduce Crime (2.5%), and Prevent Flooding and Increase Infiltration (2.5%).

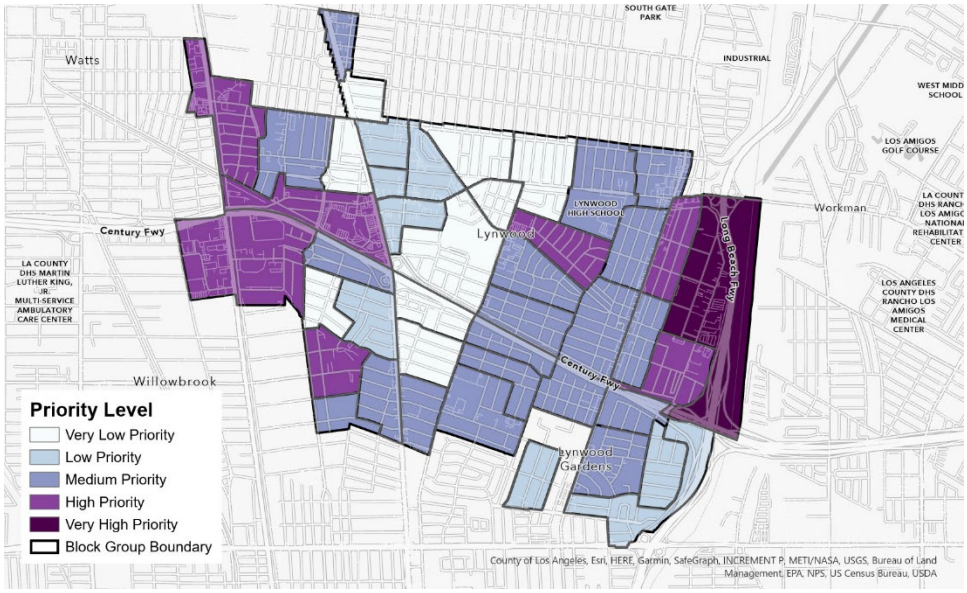
Responses to additional survey questions indicated that the residents of Lynwood agreed that the City of Lynwood should prioritize tree plantings, with 75% of survey respondents agreeing with the statement "it is a priority that the city should make Lynwood greener by planting more trees." Other survey responses also indicate that survey respondents believed there were barriers to planting trees and barriers to taking care of trees, with the majority of survey respondents strongly agreeing or somewhat agreeing with both statements.

These barriers fall into five categories:

These barriers fall into five categories:

- Resident Responsibility/Resident Perceptions: These identified barriers were related to resident's behaviors or perceptions regarding trees, such as "People don't take care of them," "Trees sometimes grow very big and make a lot of trash and neighbors don't like it," and "Not enough knowledge on care and maintenance."
- City Responsibility: These identified barriers were related to the city's actions regarding trees, such as "Poor maintenance from the city in low-income areas," "Trees are not a priority and important to the city," and "Lack of leadership."
- Infrastructure/Physical Environment: These identified barriers were related to the existing physical environment and how trees may impact that environment, such as "Damage to sidewalks," "Not enough space," "Lots of concrete," and "Power lines."
- Funding: These identified barriers included funding barriers at the individual or city level, including "Maintenance costs," "Resident can't afford to take care of tree," and "Budget."
- Specific Sites: Many respondents identified specific sites as barriers to tree planting and care, such as "Schools," "Vacant lot," "LA River," and "Louise Avenue."

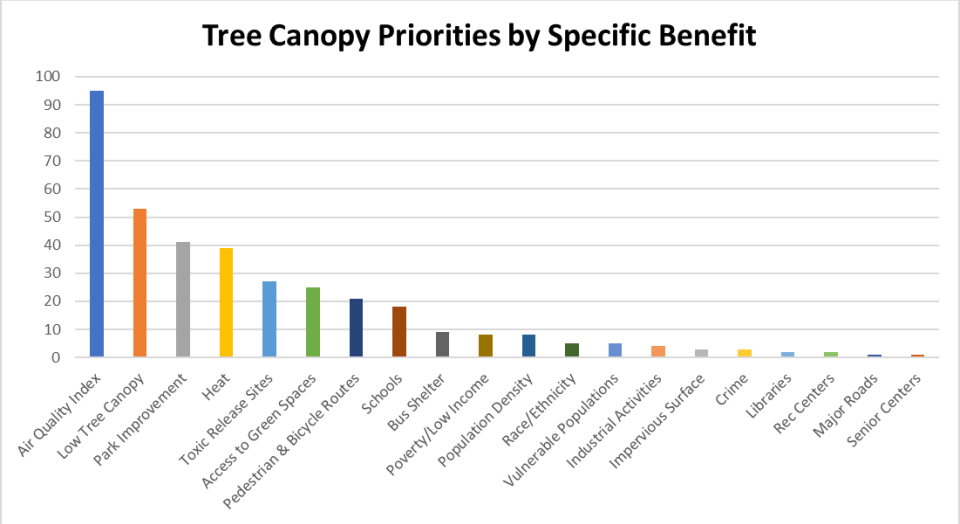
Overall, the project indicated that there is great opportunity for the City of Lynwood to increase its urban forest. Community members feel that urban tree canopy should be prioritized, but that there are barriers to tree planting and tree care in the city. The highest priority areas for tree planting are along the eastern and western edges of the city, which spatially represent the highest priority benefits of trees for survey participants since these areas align with the locations of the I-710 freeway and the Alameda truck corridor where air quality is most heavily impacted. This report can help inform the planting of 1,000 trees through a California Department of Forestry and Fire Protection (Cal Fire) grant secured by TreePeople in 2020 in partnership with the City of Lynwood.



Paramount

Beginning in early 2021, the project was conducted in the City of Paramount. Paramount's tree canopy analysis indicated that 15% of the city's land area was covered by existing tree canopy while 45% of the land area could be categorized as possible tree canopy. After assessing the city's present tree canopy and potential tree canopy, the project team met virtually with the City of Paramount. Representatives from the city included the city manager as well as staff from the departments of planning and public works. A briefing was also provided for the Paramount Vice Mayor. These meetings served both to inform the City of the project's goals and objectives as well as to allow the project team to gain added insight from city staff that would inform the development of community engagement plans, ensuring that the outreach would be successful. In total, five meetings were held throughout March, April and May of 2021.

After the planning meetings with the City, Paramount's virtual public tree summit was held on June 10, 2021. Participants were guided through a variety of interactive experiences including a survey that allowed them to choose among 20 different benefits specific to the city of Paramount to prioritize for tree planting. This survey was also shared by TreePeople at the weekly outdoor Paramount Farmer's Market for an additional three weeks after the summit. Overall, 37 survey responses were collected. Based on these responses, Air Quality was most frequently identified as the highest tree planting priority for Paramount residents followed by (the mitigation of) Low Tree Canopy, Park Improvement, Heat, and Toxic Release Sites.



The 20 different benefits could be further grouped into 7 categories:

I Want to Plant Trees To...	Specifically, I Want to Improve...	This Means the Tree Planting Team Will...
Beautify Neighborhoods & Promote Outdoor Activities	Low Tree Canopy	Plant trees on streets with few or no street trees, to beautify the neighborhood & provide shade for pedestrians.
	Park Improvement	Plant trees in parks to promote community recreation and health.
	Pedestrian & Bicycle Routes	Plant trees along pedestrian and bicycle routes to promote active transportation and community health, following the Bellflower-Paramount Active Transportation Plan.
Improve Air Quality & Reduce Noise	Air Quality Index	Plant trees in areas with the poorest air quality scores to help improve the air quality.
	Toxic Release Sites	Plant trees near facilities that emit toxic pollution to help reduce the impacts of the pollution.
	Major Roads	Plant trees near major roads to help reduce the impacts of the air pollution and noise.
	Industrial Activities	Plant trees near industrial zones to help reduce the impacts of the air pollution and noise.
Increase Equity for Residents	Access to Green Spaces	Plant trees on streets that are further away from parks, to provide residents access to nearby green spaces.
	Poverty/Low Income	Plant trees in places with the lowest-income residents, as those residents often live near the least amount of trees and other green spaces.
	Population Density	Plant trees where there are highest densities of residents, as those residents often live near the least amount of trees and other green spaces.
	Race/Ethnicity	Plant trees in places with the most minority residents, as those residents often live near the least amount of trees and other green spaces.
	Vulnerable Populations	Plant trees in places with the most young children and elderly residents, to provide the benefits of trees to the most vulnerable residents.
Prevent Flooding & Increase Infiltration	Impervious Surface	Plant trees in places with highest amount of concrete, to help reduce the impacts of floods and increase the amount of water that infiltrates the ground.
Protect Critical Community Places	Libraries	Plant trees near libraries to provide library users with the many benefits of trees.
	Bus Shelter	Plant trees near bus stops to provide shade for those waiting for the bus.
	Rec Centers	Plant trees near recreation centers to provide users with the many benefits of trees.
	Schools	Plant trees near schools to provide school children with the many benefits of trees.
	Senior Centers	Plant trees near senior centers to provide senior citizens with the many benefits of trees.
Reduce Crime	Crime	Plant trees in high crime areas to help discourage criminal activity.
Reduce Heat	Heat	Plant trees in areas with highest surface temperature to reduce heat.

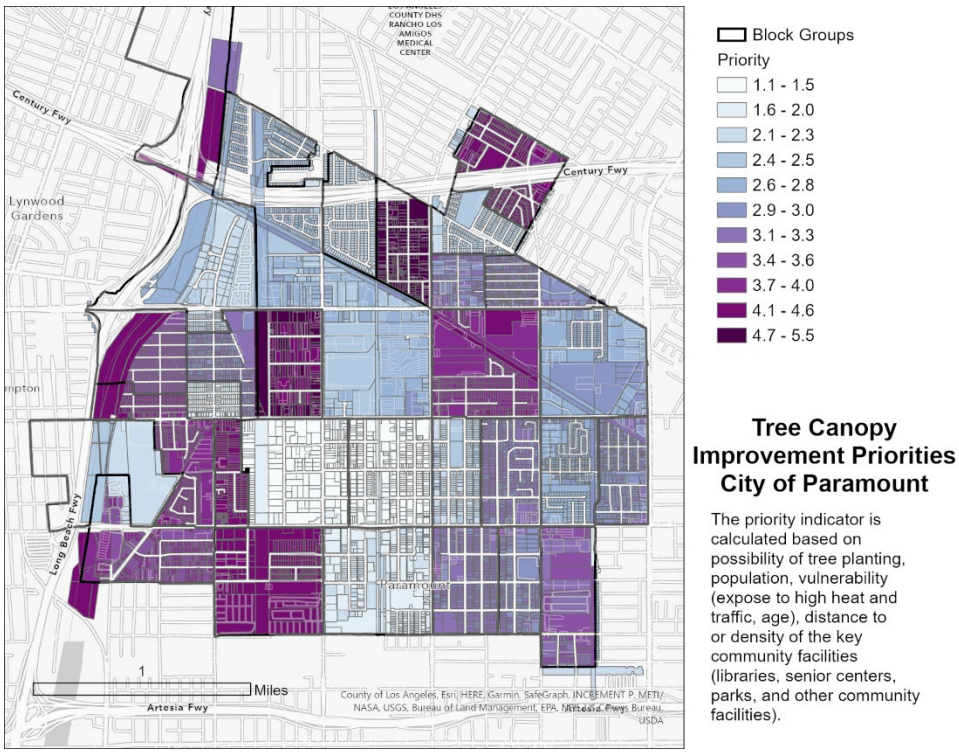
When summarizing priorities by category, Improve Air Quality and Reduce Noise was found to be the highest priority with 34% of the votes, followed by Beautify Neighborhoods and Promote Outdoor Activities (31%), Increase Equity for Residents (14%), Reduce Heat (11%), Protect Critical Community Places (9%), Prevent Flooding and Increase Infiltration (1%), and Reduce Crime (1%).

Responses to additional survey questions also indicated that most participants thought the city should make Paramount greener by planting more trees, with nearly 90% of participants choosing either the Strongly Agree or Somewhat Agree option when presented with a statement expressing the sentiment. Furthermore, nearly 60% of respondents believed that there are barriers to planting trees in Paramount and 92% believe that there are barriers to taking care of trees in the city.

These barriers can be divided into three categories:

Category	Examples of Barriers
Land Ownership	Refusal from private property owners Landlords Permission from city government
Land Availability	Highly industrial/concrete areas Not enough open ground space Parking lots
Water	Drought friendliness High price of water Water

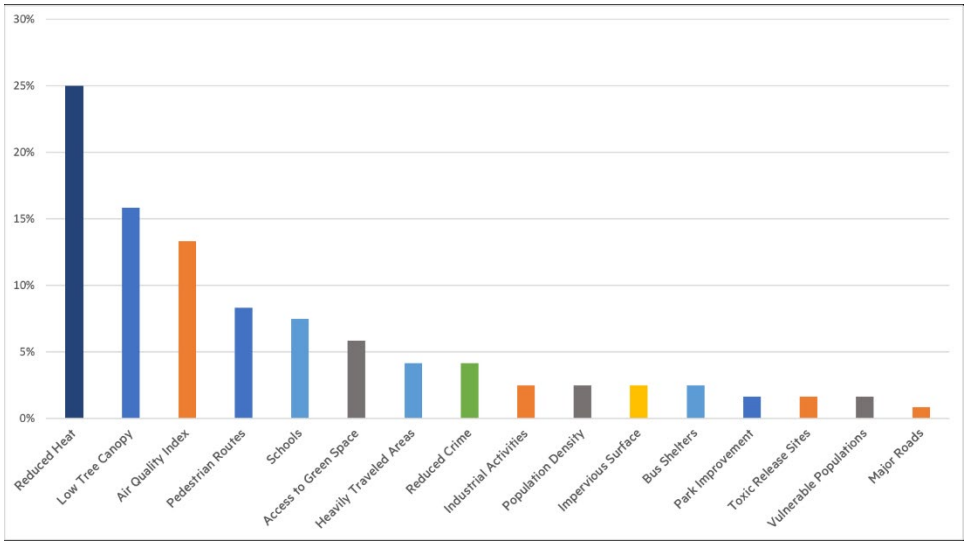
The project provides evidence that the City of Paramount has the opportunity to increase its urban forest, and that community members are interested in expanding the city's tree canopy but feel that there are barriers to both planting and taking care of trees. The highest priority areas for planting are located in the southeastern, southern central, and northern central areas of the city, which spatially represent the tree benefits chosen as highest priority by the residents.



Vernon

Next, the project was conducted in the City of Vernon. Unlike the other three cities, Vernon is a primarily industrial city with a residential population of about 200, but a daytime employee population in the tens of thousands. Background information about the city was gathered, including metrics on the current tree canopy. Vernon's present day tree canopy analysis indicated that 2% of the city's land area was covered by existing tree canopy while 51% of the land area could be suitable for tree canopy. After analyzing the tree canopy, the project team worked with the City of Vernon to gain further understanding about the landscape and context of the city. This involved three meetings held from August to December 2021 with City staff from the department of public works. Additionally, the project team met with the Green Vernon Commission and the Vernon Business Breakfast, as well as directly emailing Vernon businesses, hosting a free fruit tree distribution event, and sharing social media posts. These activities informed the project team's creation of the Vernon Tree Canopy Survey and development of the community engagement plans. However, planning was particularly difficult with Vernon as complications with COVID continually pushed back discussions with necessary personnel and the project team's point of contact at the city changing three times.

After this information collection, a hybrid public tree canopy roundtable event was held on March 16, 2022 at City Hall and via Zoom. The event was attended by approximately 35 people. After an activity that prompted meeting participants to identify an important tree in their life, attendees were directed to the Vernon Tree Canopy Survey, which presented 16 possible tree benefits for respondents to prioritize for tree planting. In total, 12 survey responses were collected, many of them from employees of Vernon, with two community members responding. Among the 16 possible tree benefits, participants in Vernon most frequently identified Reduced Heat as the highest priority, followed by (the mitigation of) Low Tree Canopy, Air Quality, Pedestrian Routes, and Schools.



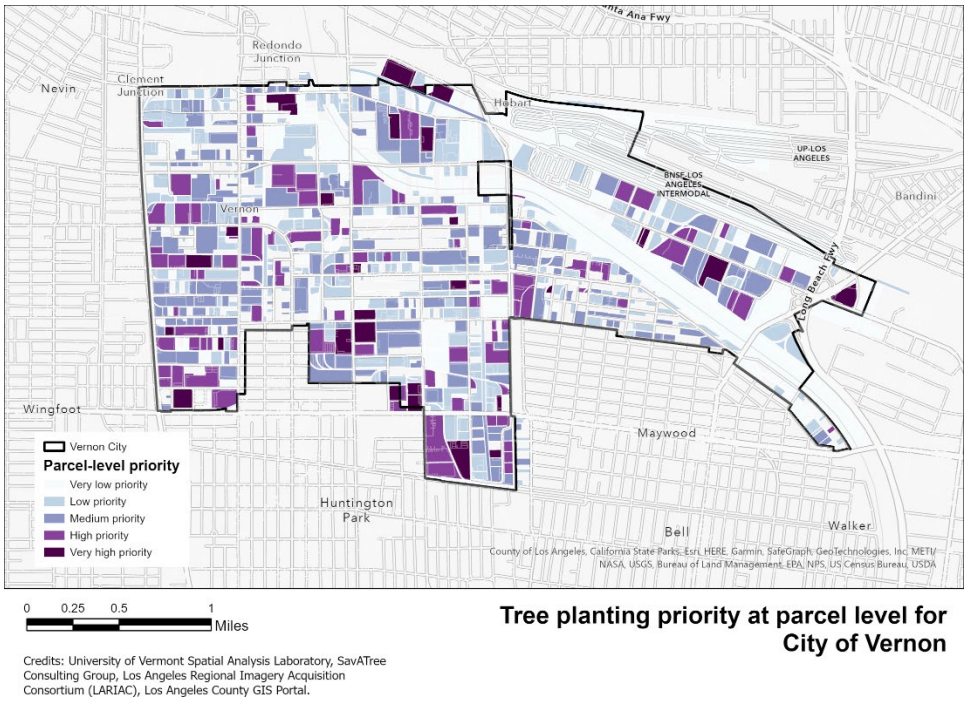
The 17 possible benefits could be grouped into 7 categories:

I Want to Plant Trees To...	Specifically, I Want to Improve...	This Means the Tree Planting Team Will...
Beautify Neighborhoods & Promote Outdoor Activities	Low Tree Canopy	Plant trees on streets with few or no street trees, to beautify the city & provide shade for pedestrians.
	Park Improvement	Plant trees in parks to promote community recreation and health.
	Pedestrian Routes	Plant trees along pedestrian routes to promote active transportation and community health.
Improve Air Quality & Reduce Noise	Air Quality Index	Plant trees in areas with the poorest air quality scores to help improve the air quality.
	Toxic Release Sites	Plant trees near facilities that emit toxic pollution to help reduce the impacts of the pollution.
	Major Roads	Plant trees near major roads to help reduce the impacts of the air pollution and noise.
	Industrial Activities	Plant trees near industrial zones to help reduce the impacts of the air pollution and noise.
Increase Equity for Residents	Access to Green Spaces	Plant trees on streets that are further away from parks, to provide residents access to nearby green spaces.
	Population Density	Plant trees where there are the most current residents or where future housing developments are planned.
	Vulnerable Populations	Plant trees in places with the most young children and elderly residents, to provide the benefits of trees to the most vulnerable residents.
Prevent Flooding & Increase Infiltration	Impervious Surface	Plant trees in places with highest amount of concrete, to help reduce the impacts of floods and increase the amount of water that infiltrates the ground.
Protect Critical Community Places	Bus Shelters	Plant trees near bus stops to provide shade for those waiting for the bus.
	Heavily Traveled Areas	Plant trees in places with the highest daytime populations, to provide benefits of trees where people spend most of their day.
	Schools	Plant trees near schools to provide school children with the many benefits of trees.
Reduce Crime	Crime	Plant trees in high crime areas to help discourage criminal activity.
Reduce Heat	Heat	Plant trees in areas with highest surface temperature to reduce heat.

Of these 7 categories, the highest priorities for tree planting were Beautify Neighborhoods and Promote Outdoor Activities (26%) and Reduce Heat (25%), followed by Improve Air Quality and Reduce Noise (18%), Protect Critical Places (14%), Increase Equity for Residents (10%), Reduce Crime (4%), and Prevent Flooding and Increase Infiltration (3%).

The survey also asked about perceptions of tree planting and care in the City of Vernon. All participants but one Strongly Agreed or Somewhat Agreed that the city should make Vernon greener by planting more trees. Respondents were evenly split when asked if there were barriers to planting trees in the city, with a third agreeing, a third disagreeing, and a third remaining neutral. The same pattern emerged when respondents were asked if there were barriers to taking care of trees in the city, with a third agreeing, a third disagreeing, and a third remaining neutral. Barriers generally concerned about existing infrastructure and industrial operations, such as: big rig trucks, power lines, underground utilities, too much concrete, and small sidewalks. Barriers to tree care included: lack of watering, trash/pollution, and overall lack of care.

Overall, this project provides evidence that the City of Vernon has a great opportunity to increase its tree canopy based on both potential and community support. High-priority parcels for planting trees are located throughout the city, with many parcels in the southwest, north and south central parts of the city, as well as east of the Los Angeles River. These parcels spatially represent the priorities identified by the respondents to the Vernon Tree Canopy Survey.



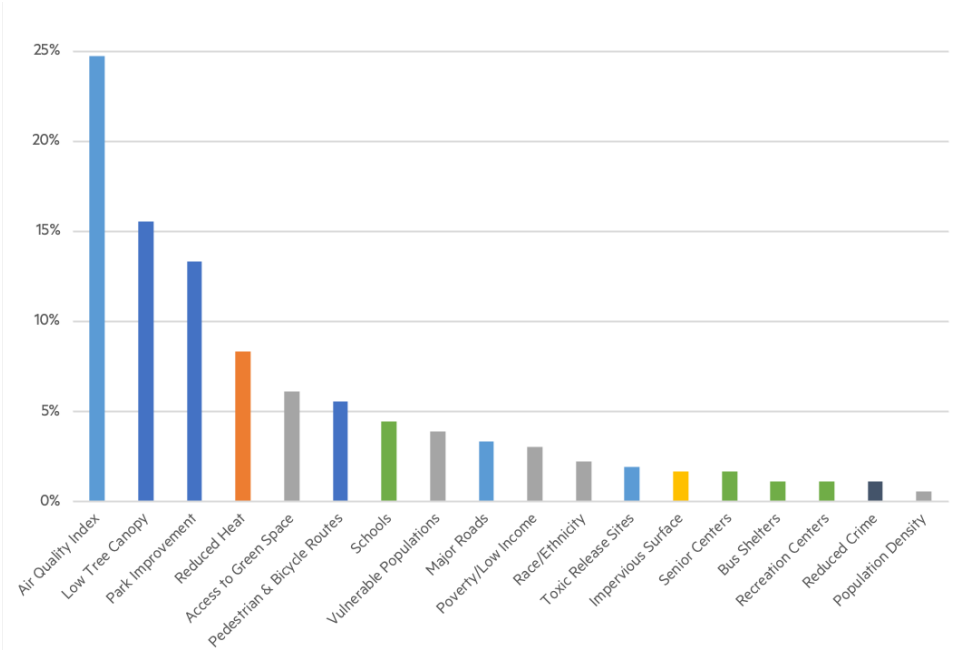
Tree planting priority at parcel level for City of Vernon

Credits: University of Vermont Spatial Analysis Laboratory, SavATree Consulting Group, Los Angeles Regional Imagery Acquisition Consortium (LARIAC), Los Angeles County GIS Portal.

Montebello

Lastly, the project was taken to the City of Montebello. The project team's tree canopy analysis showed that Montebello had 13% of its land area covered by existing tree canopy and 48% of the city's land was categorized as having potential for tree canopy. After this analysis, the project team held virtual meetings with the City of Montebello. Two meetings were held in April and May 2022 with city staff from the department of public works. These meetings helped to inform the community engagement plans and the Montebello Tree Canopy Survey which was presented at the public tree canopy event.

The public tree canopy event was held on the evening of June 16, 2022 both in person at City Hall and online via Zoom. At this event, attendees were guided through a variety of interactive activities that included a tree prioritization survey. This survey presented a list of 20 possible tree benefits for respondents to prioritize for tree planting. In total, 36 survey responses were collected. Among the 20 possible tree benefits, participants most frequently prioritized Air Quality, with 25% of votes going to this benefit, followed by (the mitigation of) Low Tree Canopy (16%), Park Improvement (13%), Reduced Heat (8%), and Access to Green Space (6%).



Further, the 20 possible tree benefits can be grouped into 7 categories:

I Want to Plant Trees To...	Specifically, I Want to Improve...	This Means the Tree Planting Team Will...
Beautify Neighborhoods & Promote Outdoor Activities	Low Tree Canopy	Plant trees on streets with few or no street trees, to beautify the neighborhood & provide shade for pedestrians.
	Park Improvement	Plant trees in parks to promote community recreation and health.
	Pedestrian & Bicycle Routes	Plant trees along pedestrian and bicycle routes to promote active transportation and community health.
Improve Air Quality & Reduce Noise	Air Quality Index	Plant trees in areas with the poorest air quality scores to help improve the air quality.
	Toxic Release Sites	Plant trees near facilities that emit toxic pollution to help reduce the impacts of the pollution.
	Major Roads	Plant trees near major roads to help reduce the impacts of the air pollution and noise.
	Industrial Activities	Plant trees near industrial zones to help reduce the impacts of the air pollution and noise.
Increase Equity for Residents	Access to Green Spaces	Plant trees on streets that are further away from parks, to provide residents access to nearby green spaces.
	Poverty/Low Income	Plant trees in places with the lowest-income residents, as those residents often live near the least amount of trees and other green spaces.
	Population Density	Plant trees where there are highest densities of residents, as those residents often live near the least amount of trees and other green spaces.
	Race/Ethnicity	Plant trees in places with the most minority residents, as those residents often live near the least amount of trees and other green spaces.
	Vulnerable Populations	Plant trees in places with the most young children and elderly residents, to provide the benefits of trees to the most vulnerable residents.
Prevent Flooding & Increase Infiltration	Impervious Surface	Plant trees in places with highest amount of concrete, to help reduce the impacts of floods and increase the amount of water that infiltrates the ground.
Protect Critical Community Places	Libraries	Plant trees near libraries to provide library users with the many benefits of trees.
	Bus Shelter	Plant trees near bus stops to provide shade for those waiting for the bus.
	Rec Centers	Plant trees near recreation centers to provide users with the many benefits of trees.
	Schools	Plant trees near schools to provide school children with the many benefits of trees.
	Senior Centers	Plant trees near senior centers to provide senior citizens with the many benefits of trees.
Reduce Crime	Crime	Plant trees in high crime areas to help discourage criminal activity.
Reduce Heat	Heat	Plant trees in areas with highest surface temperature to reduce heat.

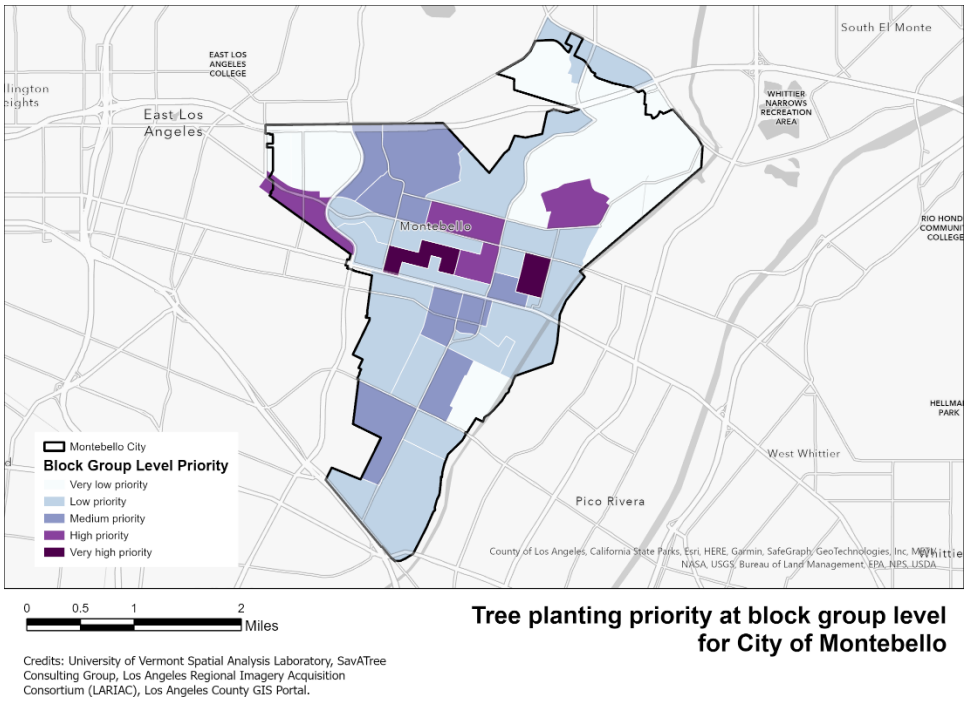
When summarized, these categories indicate that the Montebello respondents found that the highest priority for tree planting was to Beautify Neighborhoods and Promote Outdoor Activities (34%), followed by Improve Air Quality and Reduce Noise (30%), then Increase Equity for Residents (16%), Reduce Heat (8%), Protect Critical Community Places (8%), Prevent Flooding and Increase Infiltration (2%), and Reduce Crime (1%).

The survey also asked about perceptions of tree planting and care in the City of Montebello. These responses indicated that participants overwhelmingly agreed that the city should make Montebello greener by planting more trees, with 94% of survey takers Strongly Agreeing or Somewhat Agreeing to the statement. However, 61% of respondents also Strongly Agreed or Somewhat Agreed that there are barriers to planting trees in Montebello and 64% Strongly Agreed or Somewhat Agreed that there are barriers to taking care of trees in the city.

These barriers could be sorted into five categories:

Category	Example Barriers Listed
 Community Knowledge & Responsibilities	Public support Don't know how to care for tree People have to made aware of how important trees are
 City Policies & Responsibilities	City prohibits planting in the parkways Lack of maintenance from the city City needs to have rules for proper care of trees
 Infrastructure/ Physical Environment	Limited resources to grow Pollution Space/Location
 Funding	Budget Money Equipment
 Water	Drought Water conservation Water usage

Data from the analysis provides evidence that there is a strong opportunity and desire for improved urban forestry within the City of Montebello despite perceived barriers to tree planting and care. The highest priority areas for planting trees are located in the central area of the city, which spatially represent the responses of the tree prioritization survey.



Tree planting priority at block group level for City of Montebello

Credits: University of Vermont Spatial Analysis Laboratory, SavATree Consulting Group, Los Angeles Regional Imagery Acquisition Consortium (LARIAC), Los Angeles County GIS Portal.

External Factors and Barriers Encountered

The onset of the COVID-19 pandemic altered many planned engagement activities and no doubt had an effect on the success of outreach efforts. With public health and safety at risk, the project team had no choice but to migrate programming to a virtual format much of the time, making an accessibility an issue for those without access to the internet or a computer. Recommendations to socially distance also contributed to the digital divide – with little opportunity for face-to-face interaction, virtual communication became imperative to this project.

The pandemic also had far-reaching effects beyond the project, altering work structure, time commitments, resources, and many other once-stable life factors for everyone, from the project team, to city staff, to community members. COVID's effect on these life factors undoubtedly altered the project, from planning to implementation. In some cases, complications from COVID pushed back meetings with key officials, condensing the timeline for the project.

The project team also encountered administrative challenges over the course of the project. Staff turnover within both the cities and the project team was a complicating factor. For one city, the main point of contact shifted on three occasions. Additionally, as it continued, the project team had to reduce the number of staff working on the project due to capacity challenges.

Existing community relationships also affected the outcomes of this project. In the case of Lynwood, TreePeople hosted more community events and also had established long-standing relationships with a variety of key community stakeholders that predated the project. Leveraging these relationships proved key to a successful event, as evidenced by the number of survey responses in the Lynwood project.

Lessons Learned

Other communities considering similar projects should try to hold multiple tree summits in order to provide as much opportunity for community engagement as possible. Maintaining at least two project staff dedicated to community outreach and engagement throughout the duration of the project is also recommended. Lastly, a regular and consistent series of meetings with each partner city's main point of contact (biweekly would be ideal) is another best practice.

NEXT STEPS

The Urban Tree Canopy Community Prioritization Project will be a useful tool in pursuing other grant funding for implementation, bolstering arguments for legislation that supports the improvement of urban forestry, and forming community connections and trust. Already, TreePeople had direct contact with 442 Lynwood residents in the Calendar year 2022, 344 of whom have attended other tree planting and tree care events in 2022. In total TreePeople has hosted 31 community events in 2022. TreePeople has also secured an urban greening grant funded by Cal Fire for the City of Paramount. Thus far, the Urban Tree Canopy Community Prioritization Project has supported the work of two Urban Greening project grants in the Gateway cities. Lastly, the City of Vernon passed a resolution to plant 144 new trees in existing vacant tree wells. Assistant Director of Public Works Manuel Garcia used data and slide deck material from our project team to lobby support for the passing of the resolution.

Other potential grants that could be pursued using the deliverables from this project include the Caltrans Clean California Local Grant Program. which offers funds for local communities to beautify and improve local streets and roads, tribal lands, parks, pathways, and transit centers, and the Southern California Association of Governments' Sustainable Communities Program, which addresses objectives such as reducing greenhouse gas emissions. These grants could provide the funding to implement tree planting projects led by the guidance and research from the Urban Tree Canopy Community Prioritization Project.

Additionally, the South Coast Air Quality Management District will be seeking bids for a SELA Green Space Project to implement tree planting using $2.5 million earmarked for the purpose by the Southeast Los Angeles Community Steering Committee, convened under AB 617. The "SELA CSC" includes four cities that are part of the Gateway Cities, and the Urban Tree Canopy Community Prioritization Project could serve as a model for this new project. The Request for Proposals for the SELA Green Space Project is expected to be released in early 2023.

Lastly, the Gateway Cities COG was recently awarded a $1.75 million Regional Climate Collaboratives grant from the California Strategic Growth Council. The grant implements a new state program that allows for the formation of a regional climate collaborative with the Gateway Cities COG as the managing stakeholder and SELA Collaborative, TreePeople, the Los Angeles County Chief Sustainability Office, and GRID Alternatives as partners. Implementation projects informed by the Urban Tree Canopy reports and related deliverables would be an ideal opportunity for the new Collaborative to leverage its structure to ensure successful projects to improve urban forestry within the Gateway Cities.

BIBLIOGRAPHY

Galvin, M., O'Neil-Dunne, J., & Romolini, M. (2019). *Los Angeles County Tree Canopy Assessment.* Loyola Marymount University Center for Urban Resilience. https://digitalcommons.lmu.edu/cures_reports/5

Zhou, W., Huang, G., Picket, S. T. A., Wang, J., Cadenasso, M. L., McPhearson, T., Grove, J. M., & Wang, J. (2021). Urban tree canopy has greater cooling effects in socially vulnerable communities in the US. *One Earth, 4*(12), 1764-1775. https://doi.org/10.1016/j.oneear.2021.11.010