

# WATTS RISING

2021 PROGRESS REPORT ON IMPLEMENTATION OF THE  
TRANSFORMATIVE CLIMATE COMMUNITIES PROGRAM GRANT



# Acknowledgments

## Prepared by the UCLA Luskin Center for Innovation

Principal Investigator: J.R. DeShazo, Ph.D.

Co-Principal Investigator: William Eisenstein, Ph.D.

Researchers: Silvia González, Jason Karpman, Bo Liu, Britta McOmber, and Kelly Trumbull

Editor: Colleen Callahan

## Prepared for

California Strategic Growth Council (SGC) (Contract Number: SGC18124)

## Report Period

Watts Rising award date (January 2018) through the end of month 15 of implementation (June 2020)

## Acknowledgments

We thank SGC for commissioning the UCLA Luskin Center for Innovation to conduct a five-year, third-party evaluation of Transformative Climate Communities Program (TCC) investments in Watts. In particular, we thank Louise Bedsworth, Alexandra Gallo, Sandra Lupien, Saharnaz Mirzazad, Gerard Rivero, and Sophie Young for their commitment to our work, and for their attention to our many informational requests.

In addition to our state partners at SGC, we would also like to thank our partners at the California Department of Conservation — namely, Brendan Pipkin, Elizabeth Hessom, and Sydney Mathis — for reviewing the accuracy of TCC background information provided in this report. This report would also not have been possible without the support of a team of skilled undergraduate and graduate student researchers who helped with data collection, analysis, writing, editing, and document design. Specifically, we would like to recognize Deanna Cunningham, Emma French, Elena Hernández, Sharon Sand, and Deja Thomas for their work on this document. We owe a great deal of gratitude to Mara Elana Burstein of Natural Resource Strategies for copy editing this report and Nick Cuccia for layout and design. We would also like to thank Bruce Mirken, Alvaro Sanchez, and Emi Wang at the Greenlining Institute for their thoughtful input on how to structure the content contained in this report.

Moreover, a big thank you to all of the Watts Rising project partners for sharing so much primary data with the evaluation team, as well as for reviewing the content in this report for accuracy. Namely, we'd like to acknowledge the following contributors: Ivory Chambeshi, Michael Cummings, Jose Hernandez, Katrina Kubicek, and Ava Post Koo.

Finally, yet importantly, the authors also acknowledge the Gabrielino and Tongva peoples as the traditional land caretakers of Tovaangar (Los Angeles basin, Southern Channel Islands), and recognize that their displacement has enabled the flourishing of UCLA.

## Disclaimer

The UCLA Luskin Center for Innovation appreciates the contributions of the aforementioned agencies. This report, however, does not necessarily reflect their views nor does it serve as an endorsement of findings. Any errors are those of the authors.

## For More Information

[www.innovation.luskin.ucla.edu](http://www.innovation.luskin.ucla.edu)

Cover image: Watts Healing Tech Garden (Photo Credit: Trumbull, UCLA Luskin Center for Innovation 2019)

© May 17, 2021 by the Regents of the University of California, Los Angeles. All rights reserved.



**Luskin Center  
for Innovation**



**CALIFORNIA  
STRATEGIC  
GROWTH  
COUNCIL**

# Table of Contents

<b>EXECUTIVE SUMMARY</b>	4
Watts Today	5
Watts Rising	5
Projects	6
Transformative Plans	7
Anticipated Benefits	8
Key Accomplishments	9
<b>BACKGROUND</b>	11
The Vision Behind TCC	11
Evaluating the Impacts of TCC	14
Watts Rising: Looking Back and Forward	17
<b>PROFILES: TRANSFORMATIVE PLANS</b>	20
Community Engagement Plan	21
<i>Stories From the Community: Engaging the Community During a Pandemic</i>	23
Displacement Avoidance Plan	25
Workforce Development Plan	27
<b>PROFILES: TCC FUNDED PROJECTS</b>	29
Affordable Housing and Sustainable Communities Project	30
Food Waste Prevention and Rescue Project	32
<i>Stories From the Community: Nourishing neighbors during a pandemic</i>	34
Low Carbon Transit Operations Project	36
Low Carbon Transportation Project	38
Rooftop Solar and Energy Efficiency Projects	40
Urban Community Forestry Projects	42
<i>Stories From the Community: Students grow while helping a garden grow</i>	45
Urban Greening Projects	46
<b>PROFILES: LEVERAGED PROJECTS</b>	49
103rd Street Streetscape	50
103rd Street Urban Trees/Rain Garden	51
Central Avenue Streetscape	52
Century Boulevard Complete Street	53
Jordan Downs Phase 1B	54
Jordan Downs Retail Center	55
<b>APPENDICES</b>	56
Appendix 1: Supplemental Maps	56
Appendix 2: Summary of Methods for Estimating Project Benefits	58
Appendix 3: Watts Rising Collaborative Structure	59
Appendix 4: Watts Rising TCC Census Tracts	60
Appendix 5: Watts Rising Control Census Tracts	61
Appendix 6: Indicator Data	62
Appendix 6.1: Demographics	62
Appendix 6.2: Economy	66
Appendix 6.3: Energy	68
Appendix 6.4: Environment	70
Appendix 6.5: Health	71
Appendix 6.6: Housing	75
Appendix 6.7: Transportation	79

# EXECUTIVE SUMMARY

## THE TRANSFORMATIVE CLIMATE COMMUNITIES PROGRAM

(TCC) is an innovative, new investment in community-scale climate action, with potentially broad implications. Launched in 2017 by the California State Legislature, TCC funds the implementation of neighborhood-level transformative plans that include multiple, coordinated projects to reduce greenhouse gas emissions. The program is also designed to provide an array of local economic, environmental, and health benefits to disadvantaged communities, while minimizing the risk of displacement. TCC empowers the communities most impacted by pollution to choose their own goals, strategies, and projects to enact transformational change — all with data-driven milestones and measurable outcomes.

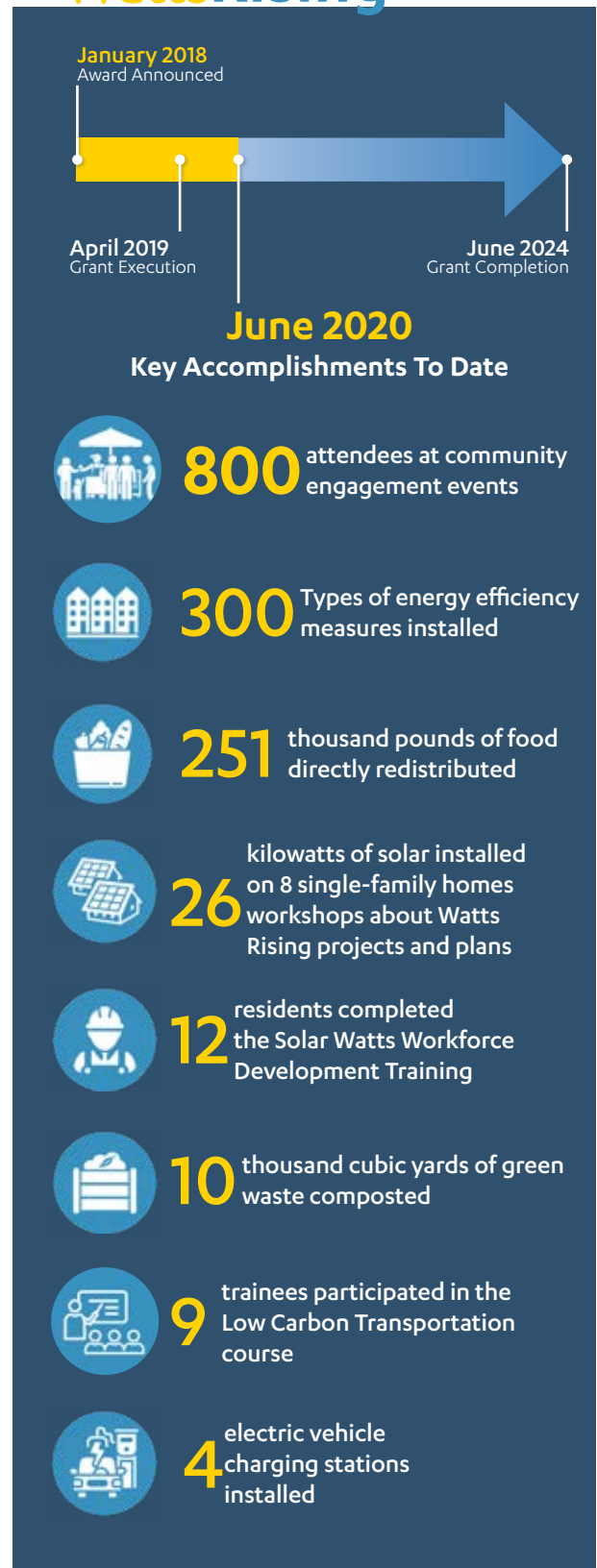
The California Strategic Growth Council (SGC) serves as the lead administrator of TCC. During the first round of the program, and through a competitive process, SGC awarded multimillion dollar grants to the City of Fresno (\$66.5 million), the Watts Neighborhood of Los Angeles (\$33.25 million), and the City of Ontario (\$33.25 million). During the second round, SGC awarded the City of Sacramento (\$23 million) and Pacoima, the Northeast San Fernando Valley neighborhood of Los Angeles (\$23 million). And during the third and most recent round, SGC awarded the City of Oakland (\$28.2 million), the City of Riverside (\$9.1 million), and the City of Stockton (\$10.8 million).

The UCLA Luskin Center for Innovation (LCI) serves as the lead evaluator for all three Round 1 sites, one Round 2 site (Northeast San Fernando Valley), and one Round 3 site (Stockton). LCI researchers are working with these communities to document their progress and evaluate the impacts of TCC investments.

This progress report is the second in a series of five that will provide an overview of the key accomplishments and estimated benefits of TCC funded activities in Watts, collectively referred to as Watts Rising.<sup>11</sup> This specific report documents progress through the end of FY 2019-'20, which overlaps with about 15 months of program implementation (April 2019 through June 2020) and the first four months of the COVID-19 pandemic. Project partners' responses to the pandemic are highlighted throughout the report.

<sup>1</sup>For annual reports that document TCC investments in Fresno and Watts, visit: <https://innovation.luskin.ucla.edu/climate/climate-investments/>

## WattsRising





Watts Rising Collaborative Community Event. Photo credit: Economic and Workforce Development Department LA

## Watts Today

Watts is a vibrant neighborhood of about 40,000 residents located in the southeastern part of the City of Los Angeles. The neighborhood has a long history of community organizing and is home to the Watts Towers and other home-grown arts and cultural landmarks. Watts is also located near many sources of air pollution, including the intersection of Interstate 110 and 105 freeways, near rail and truck routes for the Port of Los Angeles, and under the flight path for Los Angeles International Airport. In addition, Watts residents face limited access to fresh food and affordable housing. These and other sources of public health concerns in the neighborhood could be exacerbated as a result of climate change and more extreme heat days. The Watts Transformative Climate Communities Program (TCC) grant seeks to address these environmental and economic challenges through a suite of coordinated projects, including developing low carbon transportation options, constructing affordable housing, planting thousands of trees, and supporting other amenities that respond to community needs.

## Watts Rising

In 2017, the Housing Authority of the City of Los Angeles (HACLA) led efforts to submit a TCC grant. The grant was designed to support the following identified environmental and public health goals: (1) reduce local sources

of air pollution, (2) improve public health outcomes and address health disparities, (3) prevent displacement and its impact on physical and mental health, (4) address and mitigate non-greenhouse gas (GHG) emissions sources and exposure to pollution, and (5) create safe and secure public spaces. Furthermore, the following economic goals were identified: (1) access to job training, (2) access to high quality jobs and careers, (3) support and expansion of local businesses and organizations, (4) helping youth identify and prepare for careers in GHG reduction fields, and (5) empowering and educating residents to advocate for greater equity and provision of municipal services. HACLA hosted public meetings attended by residents and other key stakeholders to solicit input on project prioritization for TCC grant in support of the identified goals. Engagement efforts resulted in Watts Rising, a community-driven plan and initiative to transform a 2.6-square-mile area of the City of Los Angeles through a suite of projects and plans that will reduce GHGs while also providing local environmental, health, and economic co-benefits. In early 2018, SGC awarded \$33.25 million to the Watts Rising Collaborative as part of TCC. Watts Rising also leverages \$168,935,187 in outside funds to support this vision. Along with Fresno and Ontario – two other sites awarded Round 1 TCC funding – Watts will serve as one of the first communities in the country to pilot a community-led, multi-benefit, and place-based climate change mitigation program that specifically targets the needs of low-income households.

## Projects

Watts Rising includes a total of 23 projects, 17 of which are funded by TCC dollars and seven of which are funded by leveraged dollars. The TCC funded and leveraged projects

work synergistically to achieve the broad goals of TCC. The TCC funded projects and leveraged projects are consolidated into seven distinct project types below:

### TCC Funded Projects



**Affordable Housing and Sustainable Communities** — Funds the construction of an 81-unit affordable housing development. Increasing the density of housing aims to reduce vehicle miles traveled (VMT), along with lowering housing costs and travel costs for Watts residents. This project will also plant trees, which sequester carbon and provide shading benefits, as well as provide bicycle safety and education courses, which promote clean modes of transportation.



**Food Waste Prevention and Rescue** — Funds the development of a food rescue program that redistributes unsold food from a local grocery store to the community at regular events, increasing the accessibility of fresh produce for consumption and reducing the amount of food waste. Rescued food that is unable to be redistributed is turned into compost that can be used locally for gardening and urban greening applications. This process helps to divert the amount of organic material sent to landfills, where it decomposes in the absence of oxygen and releases methane, a potent GHG.



**Low Carbon Transportation** — Increases the fleet of electric vehicles (EV) for use by Watts residents, offsetting the miles driven by cars that run on fossil fuels.



**Rooftop Solar and Energy Efficiency** — Funds two projects aimed at installing free rooftop solar systems and increasing energy efficiency for residential properties. These two projects will enhance local generation of renewable energy, reduce the need to generate electricity via fossil fuels, and lower energy costs for property owners.



**Transit Operations** — Electrifies the bus fleet that travels through the project area, and increases the frequency of bus service. The transit operation project aims to improve transit ridership and reduce VMT.



**Urban and Community Forestry** — Funds the planting of 2,250 trees. As the trees mature, they will sequester carbon and shade nearby buildings, which should reduce the demand for electricity for cooling purposes. The additional tree coverage will also reduce the urban heat island effect on hot days and absorb stormwater on rainy days.



**Urban Greening** — Funds the planting of 475 trees and makes bicycle and pedestrian improvements. Similar to Urban and Community Forestry projects, Urban Greening projects result in the sequestration of carbon through maturing trees and provide shading benefits. Bicycle and pedestrian improvements aim to reduce car travel by improving alternative mobility options.

### Leveraged Projects



**Affordable Housing and Sustainable Communities** — Funds the construction of a 135-unit affordable housing development. A 31,299-square-foot grocery store will also be constructed nearby. Together, these investments increase the density of the neighborhood and accessibility of local shopping options, which aim to reduce VMT, along with lowering housing costs for Watts residents. Additionally, these two projects will plant 380 trees.



**Urban Greening and Active Transportation** — Funds the planting of 346 trees and other native species. Additionally, these projects make bicyclist and pedestrian improvements to over a mile of streets in Watts. These projects result in the sequestration of carbon through maturing trees and provide shading benefits. Bicycle and pedestrian enhancements aim to reduce car travel by improving alternative mobility options.

## Transformative Plans

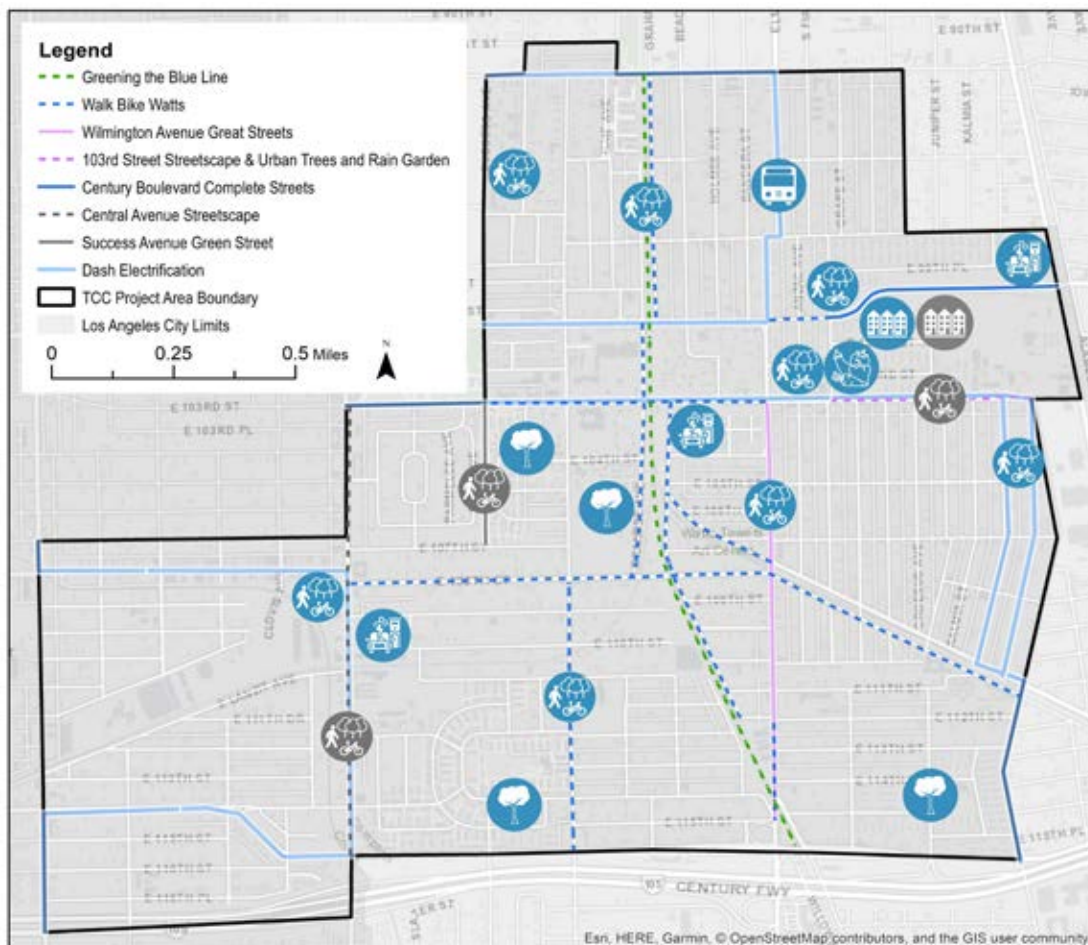
TCC is unique from other state-funded GHG reduction programs because it requires grantees to develop three transformative plans to maximize the benefits of the previously described project and to minimize unintended harms. Specifically, grantees were required to develop a community engagement plan (CEP), workforce development plan (WDP), and displacement avoidance plan (DAP).

Respectively, these three plans are designed to ensure that TCC investments reflect the community's vision and goals, bring economic opportunities to disadvantaged and low-income communities, and minimize the risk of gentrification and displacement of existing residents and businesses. In the case of Watts Rising, these three plans have been adapted in the following ways:

Community Engagement Plan	Workforce Development Plan	Displacement Avoidance Plan
<ul style="list-style-type: none"> <li>» Create Watts Rising Leadership Council</li> <li>» Engage Watts residents through each project</li> </ul>	<ul style="list-style-type: none"> <li>» Connect residents with training and educational opportunities that provide them with new skills</li> <li>» Place residents in employment opportunities on TCC and leveraged projects</li> </ul>	<ul style="list-style-type: none"> <li>» Produce and preserve affordable housing</li> <li>» Protect tenure of existing residents</li> <li>» Retain local small business community</li> </ul>

The TCC funded projects and leveraged projects are consolidated into eight distinct project types summarized below, and are mapped below (where applicable):

### Planned TCC projects\*

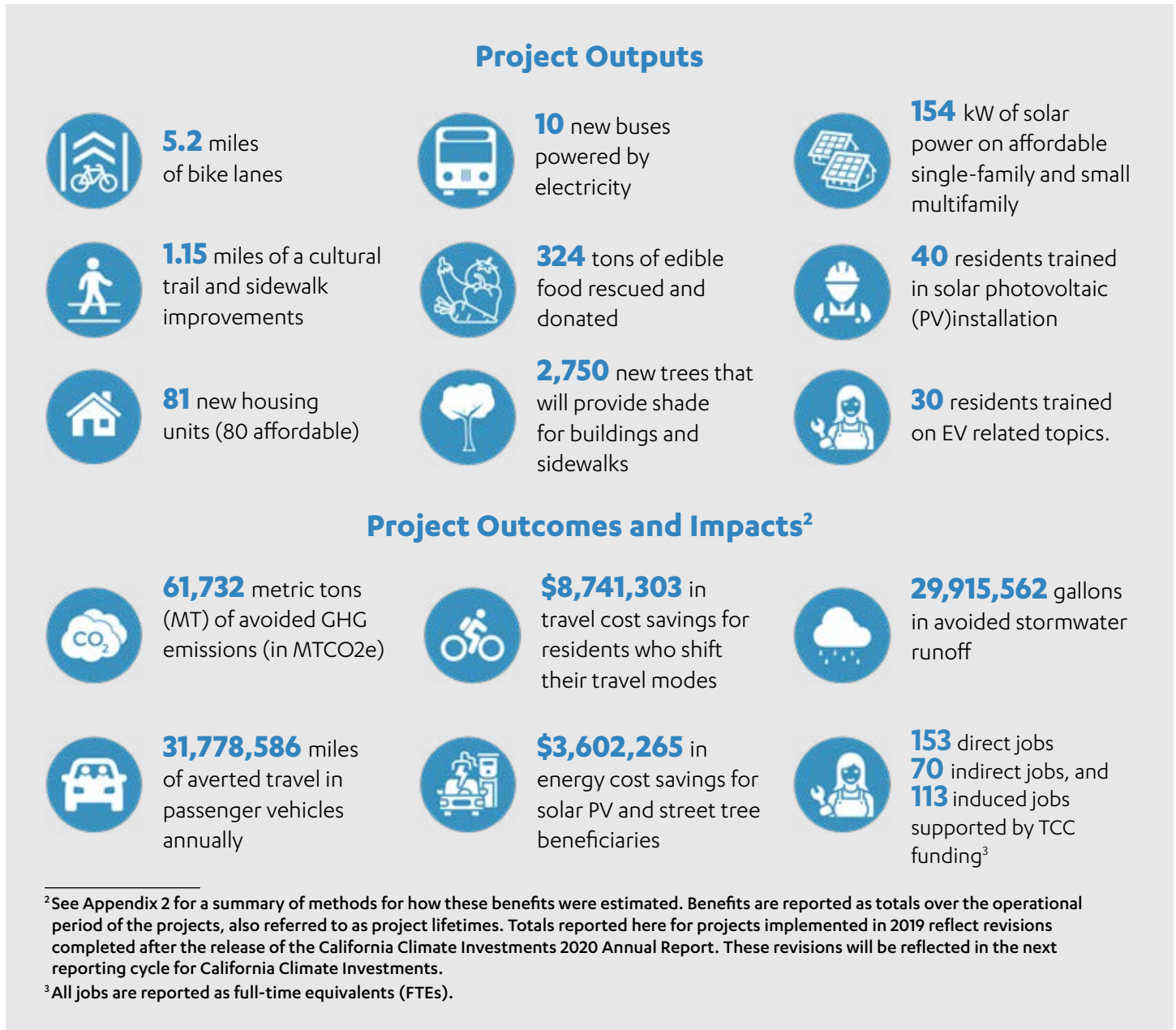


\* See the previous page for information about what each project icon represents. This map does not include projects or plans that are sitewide (e.g., community engagement) or projects for which locations have not yet been determined (e.g., rooftop solar installations).

## Anticipated Benefits

Watts Rising is slated to bring a number of benefits to residents of the TCC project area. The infographic below highlights a nonexhaustive list of these benefits, grouped by indicator type. This list includes outputs, outcomes, and impacts from TCC funded projects and does not include those from leveraged projects. Project outputs refer to the tangible goods and services that Watts Rising will deliver

by the end of project implementation. These outputs are expected to result in many positive outcomes and impacts. Outcomes refer to changes in stakeholder knowledge, attitudes, skills, behaviors, practices, or decisions, while impacts refer to changes in the environmental or human conditions that align with the objectives and goals of TCC.



Harder to quantify, but nevertheless important, is the leadership and collaboration capacity that will be created in Watts over the course of the TCC implementation process. This capacity could lay the foundation for many other funding and action-oriented opportunities that

leverage the TCC projects and plans to bring additional environmental, health, and economic benefits in Watts. In addition, lessons learned and best practices from Watts TCC could inform local climate action and investments well beyond Watts.



## Key Accomplishments

Much has happened following SGC's announcement of Watts Rising's TCC award in 2018. From then through the close of the 2019–'20 fiscal year (June 30, 2020), project partners have refined plans, built both capacity and governance structures, and taken initial steps necessary to implement an ambitious, unprecedented climate action initiative. These early accomplishments are described in more detail below.

### Establishing Partnerships and a Governance Structure

HACLA formed a number of partnerships in the community to facilitate TCC implementation. These include:

- » 19 organizational partners that will implement Watts Rising projects (a full list can be found in Table 3)
- » Data partners (Charles R. Drew University of Medicine and Science and the Watts Community Studio)
- » An anti-displacement partner (Watts Century Latino Organization)
- » A city partner (Mayor's Office of Economic Opportunity)
- » Other local organizations, such as Watts Neighborhood Council, Watts Gang Taskforce, Watts Clean Air and Energy Committee, Project Fatherhood, and more

Many of these community partnerships were formed during the TCC application process and since grant execution have been institutionalized in the form of the Watts Rising Leadership Council and Working Group Hubs.

The Watts Rising Leadership Council is the advisory body that provides oversight and facilitates coordination among the myriad of Watts Rising partners. In addition to the groups listed above, the Leadership Council includes Watts residents, businesses, and other community-based organizations. Starting with the first kickoff meeting in May 2019, the Leadership Council holds monthly meetings open to the public.

The Working Group Hubs are organized around the following similar project themes: (1) sustainable housing, (2) urban greening, (3) active transportation, and (4) low carbon transportation. Members focus on implementing one or more projects in those four thematic areas.

### Continuing Displacement Avoidance Efforts

Watts Rising's DAP is one of the three transformative plans. The following actions were taken to work toward the goals of this plan:

- » One tenants' rights education class and one financial education workshop were held in English and Spanish with a combined 46 attendees

- » One Watts Entrepreneur Business Accelerator micro-lending workshop was held with 40 attendees
- » Fifty-two residents attended a combined 173 case management sessions and referrals
- » Eleven businesses participated in the Valley Economic Development Center's (VEDC) microenterprise and entrepreneurial training

### Continuing Community Outreach and Engagement

Outreach and community engagement efforts commenced both sitewide and at the project level. A key component of the Watts Rising initiative is involving community members in projects. The Watts Rising CEP and each TCC funded project specifies activities taken to involve the community throughout the grant period. These include hosting events, organizing educational workshops, and recruiting residents as volunteers, trainees, or as hired staff. Community engagement events that have occurred since the grant was signed include:

- » Watts Healing Tech Garden held two community gardening days and one harvest festival
- » Weigand Elementary Urban Trees/Rain Gardens held 17 community outreach and engagement events in English and in Spanish
- » Freedom Tree Park held three community events for Jordan Downs residents, park users, and Watts families in English and in Spanish
- » The Affordable Housing and Sustainable Communities project held one Bicycle Education and Safety Training class

These events had almost 800 attendees combined. In addition, the Watts Yardners Program, Greening Housing project, Greening Watts, and Mudtown Farms projects conducted outreach to 790 Watts residents.

### Completing the Implementation of Two Leveraged Projects

In September 2018, the Century Boulevard Complete Streets project, led by the City of Los Angeles Bureau of Street Services, was completed. This leveraged project maximized over \$10 million in funding to make bicyclist and pedestrian improvements. Along a half a mile stretch of Century Boulevard in Watts, street lights, signals, sidewalks, and parkways were installed and 155 trees were planted.

In 2020, the 103rd Street Trees project, led by the City of Los Angeles Bureau of Street Services, was completed, leveraging over \$800,00 in funding. This project installed pedestrian lighting and ADA ramps, replaced curbs, gutters, and sidewalks, and planted 50 trees on a 0.4-mile stretch of 103rd Street.

These projects are two of six leveraged projects included in the Watts Rising project proposal. These projects are funded by leveraged dollars and contribute to achieving goals in the project area.

### Responded to COVID-19 Pandemic

After the COVID-19 pandemic hit, project implementation had to adapt. Watts Rising project partners creatively modified their project activities to support the community through this challenging period and to adhere to public health guidelines. Notable implementation pivots include:

- » The Mudtown Farms project ensured its food distribution followed COVID-19 public health safety guidelines by pre-bagging produce and distributing it through a drive-through process.
- » Watts Healing Tech Garden continued to distribute fresh produce to alleviate food insecurity exacerbated by the pandemic.
- » WalkBike Watts supported the East Side Rider's distribution of food to the community by providing guidance to

those coming to collect food to follow COVID-19 public health safety guidelines.

- » The Urban Peace Institute, part of the WalkBike Watts project, moved its community engagement meetings online and used them as a platform to disseminate critical public health information about the pandemic and provide updates on resources to the community.
- » Mudtown Farms adapted outreach by using more social media, as well as by distributing other organizations' flyers during their COVID-safe food distribution events. The rooftop solar and energy efficiency projects also focused outreach on mailers and online advertisements.
- » Weigand Elementary Urban Trees/Rain Gardens conducted two lessons for Jordan High School students remote, while Watts Yardners is preparing to move its Watts Growers Certification program classes online, which will begin in January 2021.

For more detail how Watts Rising responded to COVID-19, see individual project and plan profiles in the following chapters, as well as "Stories From the Community."



Jordan High School marching band at the grand opening of the Century Boulevard Complete Street, a leverage project completed in September 2018. Photo credit: Housing Authority of Los Angeles



Former Governor Jerry Brown in Fresno signs a package of climate change bills in September of 2016, including Assembly Bill 2722, which was authored by Assembly member Autumn R. Burke (at right) and established the Transformative Climate Communities Program. Photo credit: The Fresno Bee

## The Vision Behind TCC

**THE TRANSFORMATIVE CLIMATE COMMUNITIES PROGRAM (TCC)** was authorized in 2016 by Assembly Bill 2722 (authored by Assembly member Autumn Burke). The bill's intent is to fund the development and implementation of neighborhood-level transformative climate community plans that include multiple coordinated greenhouse gas (GHG) emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities.<sup>4</sup> The program is part of California's broader suite of programs, referred to as California Climate Investments, that use revenues from the state's Cap-and-Trade Program to fund projects that reduce GHG emissions. TCC is novel because of three signature elements: (1) its place-based and community-driven approach toward transformation; (2) robust, holistic programming via the integration of diverse strategies, and (3) cross-sector partnerships. The authors of this report are not aware of such a comprehensive, community-driven, and place-based climate action program anywhere else in the world.

<sup>4</sup> AB 2722, Transformative Climate Communities. 2016. Web. February 2017. Retrieved from: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160AB2722](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2722)

As a place-based program, all grant applicants must identify a project area that will be the focus of the TCC proposal. Proposals must be borne out of a robust community engagement process that brings together residents and stakeholders toward the development of a shared vision of how to invest TCC funds. The program's emphasis on comprehensive community engagement helps ensure that proposals are based on a deep understanding of a community's needs and assets, thereby maximizing the benefits that TCC dollars bring to existing residents in a selected site.

As a holistic program, TCC integrates a wide variety of GHG reduction strategies, such as sustainable land use, low carbon transportation, renewable energy generation, urban greening, and waste diversion. With these strategies in mind, TCC grantees develop site-specific projects, such as transit-oriented affordable housing, expanded bus service, rooftop solar installations, tree planting, and food waste recovery. These GHG reduction projects are modeled after existing California Climate Investment (CCI) project types, but TCC is novel in that it unifies them into a single, place-based initiative. In addition to integrating various CCI project types, TCC also requires TCC sites to incorporate crosscutting transformative plans, ensuring that TCC investment is underpinned by meaningful community engagement, provides direct economic benefits to existing residents and businesses, and enables these stakeholders to remain in their neighborhood. Moreover, grant recipients are expected to use TCC dollars in concert with other sources of funding that could complement the TCC investment to implement the community vision.

Last, the program emphasizes cross-sector partnerships by requiring applicants to form a coalition of organizations that would carry the implementation of the community vision. To assure that the implementation will deliver the community vision, all applicants are required to have an oversight committee that consists of project partners, community members, and local community-based organizations. The diverse partnerships, robust governance, and aforementioned transformative plans help ensure transparency and accountability for the investments, all while building the capacity of communities historically underinvested in, thereby helping to reverse that trend.

### **Program Administration**

SGC awards TCC grants and administers the program in partnership with the California Department of Conservation (DOC), with collaboration by other state agencies. SGC staff coordinate efforts with partnering state agencies and work with the California Air Resources Board (CARB) and DOC on program guidelines, evaluating applications, preparing agreements, monitoring agreement implementation, and program reporting.

There are two types of grants administered through TCC: implementation grants and planning grants. SGC awards implementation grants to sites that have demonstrated a clear community-led vision for how they can use TCC dollars to achieve program objectives in their communities. SGC also awards planning grants to fund planning activities in disadvantaged communities that may be eligible for future TCC implementation grants and other California Climate Investment programs. The implementation grants are funded through California's Cap-and-Trade auction proceeds, while the planning grants are funded through a mix of Proposition 84 funds and Cap-and-Trade auction proceeds.

### **Program Awards**

Since the launch of the program in 2016, there have been three rounds of awards. During Round 1, which was tied to fiscal year (FY) 2016-2017 funding, a total of \$133 million was allocated to implementation grants and \$1.6 million was allocated to planning grants. For Round 2, which was tied to FY 2018-2019 funding, a total of \$46 million was allocated to implementation grants, and a total of \$800,000 was allocated to planning grants. Last, for Round 3, which was tied to FY 2019-2020 funding, a total of \$48 million was allocated to implementation grants and a total of \$600,000 was allocated to planning grants. Table 1 provides an overview of the implementation and planning grants that have been distributed through FY 2019-2020.

**Table 1: Overview of TCC Implementation and Planning Grants Through FY 2019-2020**

Site Location	Round (Fiscal Year)	Grant Type	Funding Amount
Fresno	Round 1 (FY 2016-2017)	Implementation	\$66.5 million
Ontario	Round 1 (FY 2016-2017)	Implementation	\$33.25 million
Los Angeles - Watts	Round 1 (FY 2016-2017)	Implementation	\$33.25 million
Coachella Valley	Round 1 (FY 2016-2017)	Planning	\$170k
East Los Angeles	Round 1 (FY 2016-2017)	Planning	\$170k
East Oakland	Round 1 (FY 2016-2017)	Planning	\$170k
Gateway Cities	Round 1 (FY 2016-2017)	Planning	\$170k
Moreno Valley	Round 1 (FY 2016-2017)	Planning	\$94k
Richmond	Round 1 (FY 2016-2017)	Planning	\$170k
Riverside	Round 1 (FY 2016-2017)	Planning	\$170k
Sacramento - Franklin	Round 1 (FY 2016-2017)	Planning	\$170k
Stockton	Round 1 (FY 2016-2017)	Planning	\$170k
West Oakland	Round 1 (FY 2016-2017)	Planning	\$170k
Northeast Los Angeles - Pacoima	Round 2 (FY 2018-2019)	Implementation	\$23 million
Sacramento - River District	Round 2 (FY 2018-2019)	Implementation	\$23 million
Bakersfield	Round 2 (FY 2018-2019)	Planning	\$200k
Indio	Round 2 (FY 2018-2019)	Planning	\$200k
McFarland	Round 2 (FY 2018-2019)	Planning	\$200k
South Los Angeles	Round 2 (FY 2018-2019)	Planning	\$200k
Tulare County	Round 2 (FY 2018-2019)	Planning	\$200k
East Oakland	Round 3 (FY 2019-2020)	Implementation	\$28.2 million
Riverside	Round 3 (FY 2019-2020)	Implementation	\$9.1 million
Stockton	Round 3 (FY 2019-2020)	Implementation	\$10.8 million
Pomona	Round 3 (FY 2019-2020)	Planning	\$200k
Porterville	Round 3 (FY 2019-2020)	Planning	\$200k
San Diego - Barrio Logan/Logan Heights	Round 3 (FY 2019-2020)	Planning	\$200k



Central Avenue in October 2019, which will receive a number of pedestrian improvements as a result of a leveraged project.  
Photo credit: UCLA Luskin Center for Innovation

## Evaluating the Impacts of TCC

In 2017, SGC contracted with the University of California, Los Angeles and the University of California, Berkeley (UCLA-UCB evaluation team) to draft an evaluation plan for assessing the progress and outcomes of Round 1 TCC implementation grants at the neighborhood level. In November 2018, the UCLA-UCB evaluation team published an evaluation plan to serve as a guide for evaluating the three TCC Round 1 sites.<sup>5</sup> For Rounds 2 and 3 of the program, each TCC site selected a third-party evaluator from a list of qualified evaluation technical assistance providers that were preapproved by SGC through an open application process. Evaluation plans for Rounds 2 and 3 closely follow the evaluation plan from Round 1, with some site-specific modifications to reflect each site's unique set of projects, goals, and priorities for data tracking.

The Round 1 Evaluation Plan was developed in close consultation with the TCC Round 1 sites. To qualify for TCC funding, TCC applicants had to identify performance indicators associated with each proposed project type and transformative plan. The UCLA-UCB evaluation team then worked with the awarded grantees to refine their indicator tracking

plans to ensure that they aligned with their project goals. To do so, the evaluator developed project- and plan-specific logic models in collaboration with the grantees. Logic models are a helpful evaluation tool that illustrate all of the interim steps that must occur for a project or plan to realize its intended goals. These steps, within the context of TCC, are defined as follows:

- » **Inputs:** The investment dollars and leveraged funds that support TCC
- » **Activities:** The work of TCC grantees and co-applicants
- » **Outputs:** The products and services that TCC projects produce and deliver
- » **Short-term Outcomes:** Changes in stakeholders' knowledge, attitude, and skills
- » **Intermediate Outcomes:** Changes in stakeholders' behaviors, practices, or decisions
- » **Impacts:** Changes in environmental or human conditions that align with the objectives and goals of TCC

The latter four steps in the framework described above are treated as performance indicators that will be quantified and tracked over a five-year period (2019-2024) for the

<sup>5</sup>The UCLA Luskin Center for Innovation and UC Berkeley Center for Resource Efficient Communities. 2018. *Transformative Climate Communities Evaluation Plan: A Road Map for Assessing Progress and Results of the Round 1 Place-based Initiatives*. Retrieved from: [http://sgc.ca.gov/programs/tcc/docs/20190213-TCC\\_Evaluation\\_Plan\\_November\\_2018.pdf](http://sgc.ca.gov/programs/tcc/docs/20190213-TCC_Evaluation_Plan_November_2018.pdf)

purposes of program evaluation. The Round 1 Evaluation Plan for TCC summarizes the final list of indicators adopted by SGC for TCC evaluation and the methods for tracking those indicators. Indicator tracking responsibilities are split among the UCLA-UCB evaluation team and the grantees. In general, all output related indicators will be tracked over time by the grantees, while most outcome and impact related indicators will be tracked by the UCLA-UCB evaluation team.

It is important to note that it could take a generation for many of the transformative impacts of TCC investment to show up in secondary data. Trees, for example, can take 40 years to grow to maturity. Similarly, the transition to a new, higher-paying career can take decades of education and skill building to achieve. Thus, at the end of the relatively short five-year evaluation period, changes in the impact indicators may be too small to draw any statistically valid conclusions about indicator changes at the selected sites. Nonetheless, the UCLA-UCB evaluation team will update impact indicators annually for the sake of maintaining a complete time series, which will be helpful for developing trend lines over the long run that show the direction of impact indicators. See Appendix 6 for the latest indicator data the UCLA-UCB has collected.

### Methods for Evaluating TCC

The TCC Evaluation Plan includes two different modes of comparison. First, the UCLA-UCB evaluation team will measure changes in indicators in the TCC sites before and after the influx of TCC investments (before and after comparison). When possible, the UCLA-UCB evaluation team constructed a five-year pre-investment trend line prior to implementation kickoff (2014-2018) and will construct a five-year post-kickoff trend line (2019-2023). Second, the UCLA-UCB evaluation team will conduct the same before and after comparison for a set of control sites to isolate the effect of TCC investment from larger social, economic, and environmental forces. These control sites are individual census tracts that are similar to their respective TCC sites along a number of dimensions, including socioeconomic demographics, climate, and pollution burden (as demonstrated by their CalEnviroScreen scores).<sup>6</sup>

In addition to measuring changes within the TCC sites and a set of control sites, the UCLA-UCB evaluation team will also look at changes at the county and state level for a select set of indicators that speak to social equity (e.g., income, employment, housing costs, etc.). Tracking social equity indicators in these larger surrounding geographies will allow the evaluator to assess the degree to which TCC has helped reduce the economic gaps that exist in TCC

sites relative to nearby communities.

In summary, the UCLA-UCB evaluation team is collecting data at four geographic scales to assist with evaluating the effects of TCC:

- » **TCC project area:** The neighborhood boundary identified by the TCC grantees in which all TCC investments will be located. In some cases, a cluster of census tracts that have more than 10% areal overlap with the TCC project boundary area will be used for indicator tracking purposes instead of the actual project boundary. This is the case for all indicators that rely on American Community Survey (ACS) data, which can not reliably be apportioned to fit the actual TCC project boundary area. See Appendix 4 for a list of census tracts that will be used as a proxy for Watts' TCC project boundary area.
- » **TCC control sites:** A cluster of census tracts that match TCC census tracts along a number of dimensions, including socioeconomic demographics, climate, and pollution burden, but that did not receive TCC investment. Collecting before and after data for the control sites will help control for external forces such as broader trends that could also explain the changes in environmental, health, and economic conditions observed in the three awarded TCC sites. See Appendix 5 for a list of census tracts that will be used as control sites for evaluating the impacts of TCC investment in Watts.
- » **County:** The county in which TCC sites are situated (Los Angeles County in this report). County-scale measurements are helpful for understanding the degree to which TCC investments are addressing social equity concerns.
- » **State:** The state in which TCC sites are situated (California). Like county-scale measurements, statewide measurements are helpful for understanding the degree to which TCC investments are addressing social equity concerns, but at a broader scale.

When possible, the UCLA-UCB evaluation team will track indicators for the TCC project area and at the scale of the control sites, county, and state. However, a number of indicators do not easily lend themselves to measurement for the latter three geographies. Many of the indicators tracked by the UCLA-UCB evaluation team rely on primary data (e.g., transit ridership, business retention, compost production, etc.) that would be cost-prohibitive or technically infeasible to obtain at the same level of detail for control sites, the county, or the state. Even when secondary data are available, it may not be prudent to use limited evaluation resources to analyze indicators at all four scales. For example, accessibility indicators will be tracked for

<sup>6</sup>See the TCC Round 1 Evaluation Plan (Appendix 3.2) of the TCC Round 1 Evaluation Plan for a summary of the methods used to identify control sites: [http://sgc.ca.gov/programs/tcc/docs/20190213-TCC\\_Evaluation\\_Plan\\_November\\_2018.pdf](http://sgc.ca.gov/programs/tcc/docs/20190213-TCC_Evaluation_Plan_November_2018.pdf)

both TCC sites and control sites, but not at the county and state scale because of the processing time associated with running network analyses in ArcGIS. Furthermore, there are some indicators that must be estimated because they are tied to specific project activities and cannot be reliably obtained from either primary or secondary data (e.g., GHG reductions, energy and travel cost-savings, indirect and induced jobs, etc.). In these cases, estimates will be provided only for the TCC sites.

### **Evaluation Activities Through June 2020**

In the months after TCC grantees executed their contracts, the UCLA-UCB evaluation team worked with the grantees to operationalize a number of indicator tracking protocols. Specifically, the UCLA-UCB evaluation team developed reporting forms to streamline tracking activities and trained TCC project leads on how to use those forms. On an annual basis, TCC grantees complete and submit these reporting forms to the UCLA-UCB evaluation team. Each submission reflects the grantee's activities during the previous fiscal year. Many of the key accomplishments described in Watts Rising: 2021 Progress Report on Implementation of the Transformative Climate Communities Program Grant are pulled directly from the grantees' reporting forms

By the end of 2019, the UCLA-UCB evaluation team also completed baseline data collection for quantitative indicators. Findings from the baseline data collection process are narratively described in the final chapter of the first annual report, titled Watts Rising: A Baseline and Progress Report on Early Implementation of the TCC Grant. The underlying data for analyzing baseline trends are also included in Appendix 6 of this report, along with additional data that has been collected and processed within the past year. This Appendix will continue to be updated on an annual basis through the end of 2023.

With respect to qualitative data collection, the UCLA-UCB evaluation team began the process of testing and refining qualitative data collection instruments (i.e., surveys, interview guides, and focus group scripts).<sup>7</sup> The UCLA-UCB evaluation substantially revised the instruments from the original versions posted in the 2018 evaluation plan, improving their legibility and reducing their completion time.

In fall 2019, the UCLA-UCB evaluation started disseminating final versions of the community engagement and workforce development surveys in Watts. The surveys were made available in both English and Spanish. Community engagement surveys were disseminated in-person at an event in Watts. Workforce development surveys were mailed to projects administering workforce development to be disseminated at the beginning and end of their programs. Survey data will be analyzed toward the end of the five-year evaluation period, when it can be interpreted alongside the data that will be collected from forthcoming interviews and focus groups.

### **Evaluation Activities for the Coming Year**

During the third year of program implementation, the UCLA-UCB evaluation team will conduct focus groups. The focus groups will cover the topic of displacement. For each TCC site, there will be two focus groups: one with representatives from community-based organizations that work on housing issues and one with representatives of the business community. This is a departure from the 2018 evaluation plan in that a third focus group with local public officials will be replaced by interviews with those individuals, which will allow a greater range of topics to be covered. Focus group participants will be recruited in collaboration with TCC project partners. All focus groups will be conducted in a virtual environment. As with the survey data, the data collected during focus groups will be analyzed toward the end of the five-year evaluation period.

<sup>7</sup>See Section 3.3 of the TCC Round 1 Evaluation Plan for a summary of the timing, intent, and target population associated with each of these data collection instruments: [http://sgc.ca.gov/programs/tcc/docs/20190213-TCC\\_Evaluation\\_Plan\\_November\\_2018.pdf](http://sgc.ca.gov/programs/tcc/docs/20190213-TCC_Evaluation_Plan_November_2018.pdf)





Watts Rising participants. Photo credit: California Climate Investments

## Watts Rising: Looking Back and Forward

Watts Rising builds on years of community efforts to address challenges by soliciting resident input through meetings and other community engagement processes. Examples of previous work include the 1995 Watts Corridors Redevelopment Plan, the 2008 Central Avenue Master Plan, and, more recently, Watts Greenstreets, Watts Re:Imagined, Wilmington Avenue Great Streets, MudTown Farms, and other projects. The Watts Labor Community Action Committee, Watts Century Latino, and Grant HEDC were part of the Community Advisory Committee for the Watts Corridors Redevelopment Plan, and all became a part of Watts Rising. Over the past 15 years, Watts community engagement efforts have included the use of a diverse set of communications materials including flyers, door-to-door canvassing, emails, social media posting, and more in both English and Spanish. Efforts are made to ensure community meetings, workshops, and forums are bilingual and accessible. These methods were also used in community engagement around the Watts Rising application.

In 2013, Charles R. Drew University led the Watts Community Studio, which trained and hired youth to administer a survey to 700 households in Watts. The result of these efforts, in part, was the identification of community priorities. These later helped to inform project design and

selection for Watts Rising. Charles R. Drew University of Medicine and Science will conduct an annual survey during the grant period to track the evolution of resident perceptions throughout project implementation.

After the launch of TCC and call for proposals in 2016, HACLA hosted three workshops with over 100 attendees to support development of their application. Through this process, Watts residents had the opportunity to identify their priority projects for investing TCC dollars. HACLA also hosted additional working groups in 2017 focused on developing specific aspects of the transformative plans.

The result of these engagement efforts is Watts Rising, a suite of projects and plans aimed at reducing GHGs while also providing local environmental, health, and economic co-benefits for Watts residents. Per the TCC guidelines for Round 1 applicants, Watts Rising includes the following elements: (1) TCC funded projects that have a direct impact on GHG reductions; (2) leveraged projects that further the broad goals of TCC and only use matching funds; and (3) transformative plans to ensure that the suite of projects are bolstered by meaningful community engagement, workforce development, and displacement avoidance activities.

In early 2018, Watts Rising was selected by SGC for a TCC grant of \$33.25 million. Watts Rising will also leverage \$168 million in outside funds toward this vision. The TCC award

not only brings a significant influx of financial resources to the community, but also reinforces the cross-sector partnerships that were built before and during the TCC application process. Table 2 provides a summary of the Watts Rising projects, plans, and partners involved with implementation. Appendix 1 provides a detailed map of where all of the TCC and leveraged projects are located within the 2.6 square miles of the TCC Watts Rising boundary area.

projects, and leveraged projects that make up Watts Rising. Each profile includes an overview of the project or plan’s goals, the roles of various partners involved with implementation, and key accomplishments that have occurred following the announcement of Watts’ TCC award through the end of FY 2019-2020. This baseline and initial evaluation period overlaps with about one year of post-award consultation and 16 months of program implementation.

The next three sections of this report provide summary profiles on the various transformative plans, TCC funded

**Table 2: Summary of Watts Rising Projects and Plans**

Project/Plan Type	Project/Plan Name	Partners	TCC Funding	Leveraged Funding
Community Engagement Plan	N/A	Housing Authority of the City of Los Angeles*	\$1,850,915	\$565,200
Displacement Avoidance Plan	N/A	Housing Authority of the City of Los Angeles*	\$0	\$190,000
Workforce Development Plan	N/A	Green Commuter;* Restore Neighborhoods LA*	\$327,386	\$5,300
Affordable Housing and Sustainable Communities	Jordan Downs Phase 2A	Housing Authority of Los Angeles;* Michaels Development Company	\$13,250,000	\$26,446,312
Food Waste Prevention and Rescue Program	MudTown Farms	Watts Labor Community Action Committee;* Food Forward	\$392,110	\$4,579,393
Low Carbon Transit Operations Program	DASH Bus Electrification	Los Angeles Department of Transportation*	\$1,700,000	\$6,893,075
Low Carbon Transportation	Mega Watts Electric Vehicle Car Share	Watts Labor and Community Action Committee;* Green Commuter	\$1,833,862	\$519,120
Rooftop Solar and Energy Efficiency Projects	Solar Watts	Restore Neighborhoods LA*	\$1,315,152	\$81,338
	Energy Efficiency	Restore Neighborhoods LA*	\$1,802,955	\$148,374
Urban Community Forestry Projects	Community Healing Tech Garden	Los Angeles Cleantech Incubator*	\$364,000	\$0
	Watts Yardners	Watts Labor Community Action Committee*	\$523,549	\$50,000
	Greening Public Housing	North East Trees*	\$255,870	\$64,500
	Greening Watts	North East Trees;* TreePeople*	\$1,055,918	\$91,575

Table continues next page

Project/Plan Type	Project/Plan Name	Partners	TCC Funding	Leveraged Funding
Urban Greening	WalkBike Watts	Los Angeles Department of Transportation;* Department of Cultural Affairs;* Urban Peace Institute; We Care Outreach	\$3,511,260	\$13,110
	Wilmington Avenue Great Streets	Grant Housing and Economic Development Corporation*	\$868,000	\$0
	Weigand Elementary Urban Trees / Rain Garden	From Lot to Spot*	\$124,439	\$10,038
	Watts Cool Schools - Green Schools	Los Angeles Unified School District;* TreePeople*	\$621,861	\$0
	Greening the Blue Line	TreePeople*	\$305,179	\$0
	Century Gateway Park	BRIDGE Housing Corporation*	\$428,575	\$260,683
	Freedom Tree Park	Housing Authority of the City of Los Angeles*	\$1,157,900	\$0
Leveraged Projects	103rd Street Streetscape	City of Los Angeles Bureau of Street Services*	\$0	\$836,700
	103rd Street Urban Trees/ Rain Garden	From Lot to Spot*	\$0	\$104,166
	Central Avenue Streetscape	City of Los Angeles Bureau of Street Services; Grant Housing and Economic Development Corporation	\$0	\$4,127,890
	Century Boulevard Complete Streets	City of Los Angeles Bureau of Street Services*	\$0	\$10,689,780
	Jordan Downs Phase 1B	Michaels Development Corporation*	\$0	\$67,682,777
	Jordan Downs Retail Center	Primestor Development, Inc.*	\$0	\$44,314,118
<b>Total**</b>			<b>\$31,688,930</b>	<b>\$167,673,450</b>

\*Project lead

\*\*TCC funding subtotal here does not include additional grant money provided for grant administration and other related activities. Funding amounts are correct as of June 2019. Grant agreements may have been amended since.

Note: Changes to this table since the Year 1 Annual Report include: 1) Leveraged Project Success Avenue Green Streets lost funding and will not proceed with implementation. The Total Leverage funding amount has been adjusted to reflect this, and 2) Community Healing Gardens is no longer a partner on the Community Healing Tech Garden project.

# PROFILES: TRANSFORMATIVE PLANS



Watts residents examine photos of proposed projects at a community event. Photo Credit: UCLA Luskin Center for Innovation

**THE COUPLING OF TRANSFORMATIVE PLANS** alongside GHG reduction projects is one of the central elements of TCC that separates it from all other California Climate Investments. For Round 1 of TCC, applicants were required to develop three transformative plans: a community engagement plan, displacement avoidance plan, and workforce development plan. Together, these three plans are designed to ensure that TCC investments reflect the community’s vision and goals, bring economic opportunities to disadvantaged and low-income communities, and minimize the risk of gentrification and displacement of existing residents and businesses. Applicants were provided a menu of strategies for developing their plans and encouraged to choose those that spoke to the site’s priorities and strengths. The following section provides an overview of how Watts Rising structured their three transformative plans and what progress has been made toward plan implementation.

# Community Engagement Plan



Los Angeles Mayor Eric Garcetti at a Watts Rising tree event. Photo credit: Mayor Eric Garcetti, @MayorOfLA

## THE WATTS RISING COMMUNITY ENGAGEMENT PLAN

(CEP) builds on a long history of community leadership and engagement. Community engagement is an integral component in all phases of the Watts Rising Collaborative. The CEP spells out an overarching engagement process to ensure robust community involvement for the entire Watts Rising TCC initiative and complements multiple project-specific outreach activities. In addition to project-specific outreach and engagement (described in each project’s respective profile), HACLA will lead sitewide community engagement efforts. This centers around the creation of the Watts Rising Leadership Council, the advisory body for Watts Rising, as well as multimedia communications and an annual community survey.

## Key Accomplishments\*

- » The Leadership Council had its kickoff meeting in May and met monthly until December 2019 and again in June 2019.
- » See the Profiles: TCC Funded Projects section for project-specific community engagement accomplishments.

\*From award date (January 2018) through the end of FY 2019-'20 (June 2020)

*Continues next page.*

The Watts Rising Leadership Council is composed of representatives of key stakeholders, as well as Watts residents, business owners, and community leaders. The Leadership Council meets monthly to discuss relevant topics, and meetings are open to the public. The Leadership Council will also host an annual open house.

Given the collaborative nature of the initiative, Watts Rising will also organize the 19 project partners into four Working Group Hubs around the following project themes: (1) Sustainable Housing, (2) Urban Greening, (3) Active Transportation, and (4) Low Carbon Transportation. Members focus on implementing one or more projects in those four thematic areas. Community engagement events often plan to involve multiple projects both within and among hubs.

HACLA will also lead the development of messaging and avenues for communications. This includes the development and maintenance of a website and various social

### Key Accomplishments\*

*(Continued)*

- » The Mayor's Office of Economic Opportunity collaboration with the Mayor Garcetti's Office of Sustainability launched the Watts Rising Air Quality Monitoring Network consisting of installing 13 air quality sensors in the Watts Rising project area.

\*From award date (January 2018) through the end of FY 2019-'20 (June 2020)

media accounts. Finally, with Charles R. Drew University of Medicine and Science and the Watts Community Studio (the data partner), Watts Rising will issue an annual community survey.

### Project Details

Anticipated completion date

## Project-based throughout grant term

TCC grant funds  
**\$1,850,915**

Leveraged funds  
**\$565,200**

### Responses to COVID-19

- » Mudtown Farms adapted outreach by using more social media, as well as by distributing other organizations' flyers during their COVID-safe food distribution events
- » The rooftop solar and energy efficiency projects focused outreach on mailers and online advertisements

(also noted under relevant individual project)

## STORIES FROM THE COMMUNITY

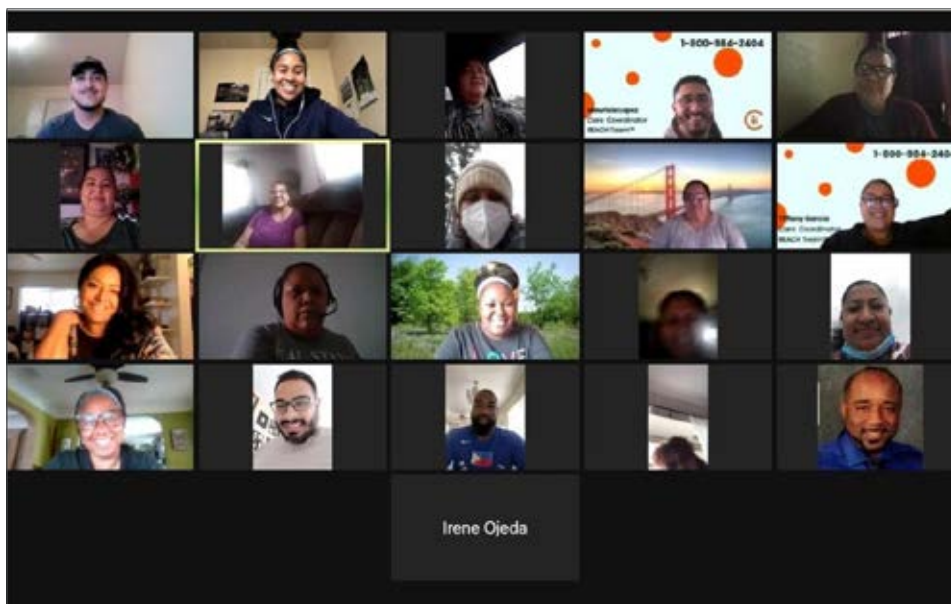
# Engaging the Community During a Pandemic

**JACKIE VALLADARES** is a native Angeleno and Program Coordinator at the Urban Peace Institute. The Urban Peace Institute is one of the organizations supporting the WalkBike Watts project. This project includes pedestrian and bicyclist improvements, the development of a cultural trail, and the establishment of a Safe Passage Program (described more on page 47). Community engagement is an essential component of this project.

Prior to the COVID-19 pandemic, Jackie described the community engagement facilitated by the Urban Peace Institute: “We were holding meetings to address public safety concerns and also infrastructure challenges.... Before COVID-19, we were doing a Walk to School Day ... a lot of it was face-to-face interactions. A lot of our work pre-COVID was engaging the community.”

When the shelter-in-place order was issued, the Urban Peace Institute responded quickly to continue community engagement virtually. Jackie notes, “We had a good momentum of engaging everyone. We saw that there were so many things happening quickly, [so] we doubled our virtual meetings to twice a month.”

In doing so, they creatively maximized their platform. They already had connections in the community and had established a communication channel through their project, which they were able to use to disseminate vital public health information to the community. They maximized their existing meetings to help share critical public health information with the community about the pandemic, such as statistics, updates from the mayor and governor, and available resources. During their meetings,



**Urban Peace Institute hosts a virtual Watts School Safety Collaborative meeting over Zoom.** Photo credit: Urban Peace Institute Instagram @urbanpeaceinstitute April 2021

Jackie explained, “We were updating them on the COVID-19 numbers. We were updating on any resources that the community members would have benefited from.” They made sure to answer questions and dispel myths to ensure the community was being misled by rumors or inaccurate information. Jackie explained how COVID-19 statistics updates were “a tool to help inform them and also inform others.”

~~~~~

**“We were updating them on the COVID-19 numbers. We were updating on any resources that the community members would have benefited from.”**

JACKIE VALLADARES

~~~~~

Saul Garcia, Coalition Organizer at the Urban Peace Institute, reiterated the importance of information in engage-

ment and its particular importance during these uncertain times. Saul described that prior to COVID-19, these meetings were focused on “issues that indirectly affect violence.” As they adapted, the information covered evolved, but Saul noted that, “We’re still looking at those issues in addition to COVID.”

The methods for community engagement also in some ways stayed the same. Saul explained how he continued to provide reminders to community members about meetings, including personalized text messages. In other ways, information about attending the meetings naturally needed to be modified in response to the pandemic. Saul made efforts to ensure that meetings, hosted on Zoom, were easily accessible by helping attendees understand which phone number to call in to and which link to click, as Zoom invitations can look confusing for those unfamiliar.

## STORIES FROM THE COMMUNITY



A volunteer distributes food to a community member using a socially distant method. Photo credit: Mudtown Farms Instagram, @mudtownfarmswatts December 2020.

The project continues to evolve. Jackie explained the next step they are working on to improve the efficacy of their meetings, including adding a parent advisory committee: “Starting next week, we’re having our first meeting with two [parents] that will give us direction [on] what needs to be changed.”

**HALEEMAH HENDERSON**, Project Manager at Mudtown Farms, works to distribute food to the community. Mudtown Farms also found ways to creatively adapt its community engagement, and even used its project’s position to help other organizations with their outreach. In addition to online outreach, especially through social media like Instagram, the project passed out flyers from other organizations through its food distribution events. This collaborative outreach with other organizations can help other projects with less of an opportunity for in-person interaction with residents during the pandemic maximize their impact as well.

////////////////////

**“How do we still serve folks and still build capacity and still engage people? [We’re] just coming up with new ways to do things.... We’re still in the process of working that out. How do we adapt the program and still meet our goals?”**

HALEEMAH HENDERSON

////////////////////

Other projects similarly adapted community engagement by moving meetings and classes online, prioritizing social media and online outreach, sending mailers, and distributing flyers instead of door-to-door canvassing and in-person events.

Haleemah noted how the COVID-19 pandemic caused challenges for community engagement: “People are at the center of it and it really requires

that people are interacting because it’s really about the space at MudTown farms and building capacity with folks. That’s a lot harder to do [during the pandemic].”

As the pandemic continues into 2021, Watts Rising projects, including Mudtown Farms, are looking to continually improve and adapt to better serve the community. Haleemah notes, “Now we’re really having to sit down and look at how do we revamp the program to adjust to what’s now being considered this new normal and not knowing when this is going to end? How do we still serve folks and still build capacity and still engage people? [We’re] just coming up with new ways to do things. We’re still in the process of working that out. How do we adapt the program and still meet our goals?” It will be an iterative process, not without challenges, but these projects so far have proven to show resilience and creativity in adapting and supporting their community.



# Displacement Avoidance Plan



Attendees at a Watts Rising Collaborative Community Event examining design plans. Photo credit: HACLA

## THE WATTS RISING DISPLACEMENT AVOIDANCE PLAN

(DAP) directly supports one of Watts Rising’s key identified goals: to prevent displacement and its impact on physical and mental health. Led by the Mayor’s Office of Economic Opportunity and Watts Century Latino, the Watts Rising DAP focuses on six key areas: (1) production of affordable housing, (2) preservation of affordable housing, (3) tenant protections and support, (4) neighborhood stabilization and well-being, (5) protections for small business, and (6) business stabilization and wealth building.

The Mayor’s Office of Economic Opportunity and Watts Century Latino will apply for funding opportunities and support relevant ordinance revisions that support the production and preservation of affordable housing. With outreach and marketing through Watts Rising communication channels and at events, the Mayor’s Office of Economic Opportunity also plans to promote Los Angeles’s Accessory Dwelling Unit ordinance. This program enables the utilization of part of a primary residence, such as a room detached from the primary dwelling, as additional living space often to be rented out.

## Key Accomplishments\*

- » 22 residents attended 1 tenants’ rights education class held in English and Spanish
- » 18 residents attended 1 financial education workshop held in English and Spanish
- » 40 residents attended 1 Watts Entrepreneur Business Accelerator (WEBA) micro-lending workshop
- » 11 residents utilized the Low-Income Purchase Assistance Program (LIPA)
- » 11 businesses participated in the Managed Career Solutions - Harbor Watts Business Source Center microenterprise and entrepreneurial training
- » 52 residents attended a combined 173 case management sessions and referrals

\*From award date (January 2018) through the end of FY 2019-20 (June 2020)

To support focus areas, the Mayor’s Office of Economic Opportunity will provide a number of workshops and trainings. These workshops will include legal services, tenant resources, tenants’ rights, resident organization, homeownership, foreclosure prevention, financial education, and financial literacy for residents. Additionally, tenant case management, advocacy, and legal services will be available to residents. Workshops for small businesses will cover

contracting opportunities, available services and opportunities like the Watts Entrepreneur Business Accelerator’s micro-lending opportunities. HACLA’s trainings will include tenant leadership training for residents, annual training for project partners on business contracting requirements, and a microenterprise and entrepreneurial training program for at least five businesses annually.

### **Project Details**

Launch date

**April 2019**

Anticipated completion date

**April 2022**

TCC grant funds

**\$0**

Leveraged funds

**\$190,000**

### **Responses to COVID-19**

- » The Displacement Avoidance Working Group developed a COVID-19 resources flyer, which was distributed to 500 residents at community meetings, food giveaways, and featured on the Watts Rising website
- » The Mayor’s Office of Economic Opportunity launched the L.A. Connected program, which helped people access economic assistance programs. They ensured Watts Rising project area residents received information about L.A. Connected by distributing flyers at food distribution events to 4,000 residents

# Workforce Development Plan



Stakeholders examining progress at Jordan Downs affordable housing development. Photo credit: Ben J. Winter, @Ben\_J\_Winter

**IN SUPPORT OF WATTS RISING’S** identified economic goals of “access to training, high quality jobs and careers, and helping youth identify and prepare for careers in GHG reduction fields,” Green Commuter Inc. and Restore Neighborhoods LA Inc. are leading the Watts Rising Workforce Development Plan (WDP) through their respective programs. Combined, they expect to train 70 Watts residents with the skills needed to be employed in green jobs. Green Commuter will lead the Mega Watts Electric Vehicle Car Share Workforce Development and Job Creation Program. Residents will be recruited through Jordan Downs Forward and the three Watts Los Angeles WorkSource Centers.

Green Commuter will offer free training to 30 Watts residents in a course on electric vehicles. Out of their pool of trainees, Green Commuter plans to hire six residents in support of their Mega Watts project. The three operations associates will ensure electric vehicles are “charged and in the right location” while three customer service associates will provide customer support and assist with outreach and marketing.

## Key Accomplishments\*

- » 12 residents completed the Solar Watts Workforce Development Training
- » 9 trainees were recruited and participated in the El Camino Community College course for the Low Carbon Transportation project

\*From award date (January 2018) through the end of FY 2019-’20 (June 2020)

Restore Neighborhoods LA will recruit five cohorts of eight Watts residents for the Solar Watts Workforce Development Program. These residents will complete 20 hours of classroom training, 162 hours of in-field training, and 10 hours of OSHA training. Through these trainings, participants will receive a comprehensive education about electricity, solar photovoltaic installation, and worksite hazards.

## Project Details

---

---

Launch date

April 2019

Anticipated completion date

December 2020

TCC grant funds

\$327,386

Leveraged funds

\$5,300

# PROFILES: TCC FUNDED PROJECTS



Electric vehicle demonstration at a Watts Rising community event. Photo credit: UCLA Luskin Center for Innovation

**TCC APPLICANTS CHOSE FROM A WIDE ARRAY OF PROJECT TYPES** in their effort to achieve the three objectives of TCC, namely: (1) reductions in GHGs; (2) improvements in public health and environmental benefits, and (3) expanded economic opportunity and shared prosperity. These various project types align with the suite of California Climate Investments overseen by various state agencies.<sup>8</sup> This alignment was built into TCC to streamline the proposal and indicator tracking process. For example, the California Air Resources Board (CARB) has developed GHG reduction quantification methodologies and co-benefit assessment methodologies for each project type under the existing suite of California Climate Investments. These methodologies can then be used by TCC grantees (and technical assistance providers, such as the UCLA-UCB evaluation team) to estimate the benefits of each project. The following section provides an overview of the Watts Rising projects, aggregated by project type, that will be using TCC dollars to achieve the aims of the program.

<sup>8</sup> For more information about California Climate Investments, visits: <http://www.caclimateinvestments.ca.gov/>

# Affordable Housing and Sustainable Communities Project



Rendering of Jordan Downs Redevelopment Source. Photo credit: HACLA

**INCREASING THE DENSITY OF AFFORDABLE HOUSING** aims to reduce vehicle miles traveled (VMT), along with lowering housing and travel costs for Watts residents.<sup>9</sup> An affordable housing and community center, called Jordan Downs Phase S2, will be constructed by Michaels Development Co. with support from the City of Los Angeles and the Housing Authority of the City of Los Angeles. It will include 81 affordable housing units and serve as a center for community education and engagement. The East Side Riders Bicycle Club, a local leading active transportation and mobility justice organization, will facilitate educational sessions at the facility, including a Bicycle Education and Safety Training and the League of Cycling Instructors trainings, in addition to hosting community bike rides. These will promote clean modes of transportation, with the aim to further decrease VMT. This project will also plant 25 trees, which sequester carbon and provide shading benefits.

<sup>9</sup> For a definition of affordable, see Appendix A of the FY 2017-18 AHSC Program Guidelines.

## Key Accomplishments\*

» **Bicycle Education and Safety Training classes kicked off with about 40 attendees at the first event**

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)

### Project Details

<p>Launch date</p> <p><b>April 2019</b></p> <p>Anticipated completion date</p> <p><b>January 2022</b></p> <p>TCC grant funds</p> <p><b>\$13,250,000</b></p>	<p>Leveraged funds</p> <p><b>\$26,446,312</b></p> <p>Project lifetime</p> <p><b>30 years</b></p>
---	--

### Estimated Benefits Over Project Lifetime

<p>GHG emissions reductions</p> <p><b>8,169 MTCO<sub>2</sub>e</b></p> <p>VMT reductions</p> <p><b>21,416,643 miles</b></p> <p>Travel cost savings</p> <p><b>\$3,515,959</b></p> <p>Trees planted</p> <p><b>25</b></p>	<p>Direct jobs from TCC dollars</p> <p><b>84 FTEs</b></p> <p>Indirect jobs from TCC dollars</p> <p><b>48 FTEs</b></p> <p>Induced jobs from TCC dollars</p> <p><b>65 FTEs</b></p>
---	--

# Food Waste Prevention and Rescue Project



WLCAC team on launch day of their collaboration with Food Forward. Photo credit: Food Forward

## THE WATTS LABOR COMMUNITY ACTION COMMITTEE

will lead the Mudtown Farms food rescue project, which reduces food waste while increasing local access to fresh produce. As part of this project, Food Forward, a non-profit, will rescue 108 short tons of food from the LA Produce Mart annually. This food will be sorted by trained volunteers and distributed to residents at regularly occurring events. Food that cannot be redistributed will be composted. This compost can be used by other Watts Rising projects, or by residents. Thirty volunteers will be recruited and trained to assist with food distribution and composting efforts. This process helps to divert the amount of organic material that is sent to landfills, where it decomposes in the absence of oxygen and releases methane, a potent GHG.

## Key Accomplishments\*

- » 251,551 pounds of food directly redistributed to 4,145 residents
- » 124,000 pounds of food redistributed by partner agencies
- » 187.8 tons of food collected from the LA Produce Mart
- » 10,000 cubic yards of green waste composted and 2,000 tons of material diverted from landfills
- » Combined 345 volunteers across 22 training events trained in food waste prevention and rescue and organics recycling, who assisted in quality control, food rescue, and composting
- » 200 residents in English and 200 in Spanish contacted through outreach

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)



### Project Details

Launch date	April 2019	Leveraged funds	\$4,579,393
Anticipated completion date	April 2022	Project lifetime	3 years
TCC grant funds	\$392,110		

### Estimated Benefits Over Project Lifetime

GHG emissions reductions	879 MTCO <sub>2</sub> e	Direct jobs from TCC dollars	4 FTEs
Short tons of edible food rescued and donated	324	Indirect jobs from TCC dollars	1 FTE
		Induced jobs from TCC dollars	7 FTEs

### Responses to COVID-19

- » Ensured their food distribution followed COVID-19 public health safety guidelines by pre-bagging produce and distributing produce through a drive-through process
- » Used social media for outreach and distributed other organizations’ flyers during food distribution events
- » Shared information with residents at food distribution events about Mayor Garcetti’s L.A. Connected Program, an initiative to provide CARES Act application support resources

## STORIES FROM THE COMMUNITY

# Nourishing neighbors during a pandemic

**MUDTOWN FARMS** is on the front-lines of battling food insecurity, which deepened in Watts during the pandemic. As program coordinator at MudTown Farms, Ava Post is part of a team that rescues produce from wholesale distributors before it goes to waste and redirects the fresh produce to Watts residents through bimonthly free distributions events.

“The need for produce has gone up. I know pretty much everyone’s been affected food security-wise,” said Ava.

“The need for produce has gone up. I know pretty much everyone’s been affected food security-wise.”

AVA POST

Launched before the pandemic, Mud-Town Farms was well-positioned to make adjustments to quickly provide food in a COVID-19 safe way. Originally the distribution events were set up in a grocery store style, where residents would pick out food that volunteers had sorted onto shelves.

“But we had to adapt. We started to pre-bag all the produce and we started a drive-through as well to distribute the food. So it’s been great to be able to continue to offer the service especially when people need it the most,” explained Ava.

Other complementary efforts as part of Watts Rising also addressed food insecurity. Like MudTown Farms, the Watts Healing Tech Garden was also well-positioned to distribute fresh produce to residents throughout



A volunteer sorts produce at a food distribution event during the pandemic in 2020. Photo credit: Mudtown Farms

the pandemic. Adjusting their food distribution procedures to align with updated health standards, the Watts Healing Tech Garden has continued to grow its fresh produce at the Edwin Markham Middle School. (For more information, see page 45 for last year’s profile featuring the Watts Healing Tech Garden.)

“So it’s been great to be able to continue to offer the service especially when people need it the most.”

AVA POST

## STORIES FROM THE COMMUNITY

**ELDER MICHAEL CUMMINGS** leads an organization that did a big pivot with its TCC project in 2020 to help alleviate food insecurity in Watts. Michael is executive director of We Care Outreach Ministries, an organization that added a new focus on food to its Safe Passages to School program.

A Pentecostal pastor and a gang interventionist fondly referred to as “Big Mike” in the Watts community, he and his We Care Outreach Ministries are dedicated to elevating the lives of Watts youth while keeping them safe and defusing tensions among community members.

“The Safe Passages to Schools Program was implemented to make sure kids get to and from school safely,” Michael said as he explained how the program, part of TCC through the WalkBike Watts project, involved training local adults to supervise

“We’re ground rooted here in Watts and we want to just make sure that we can change lives, one life at a time.”

ELDER MICHAEL CUMMINGS

students traveling to and from school. When schools went remote in March of 2020, the program pivoted to meal distribution while keeping its focus on community safety, including health.

“[We] made sure we could keep the peace as people waited [in long lines] to come and be safe and get their food,” Michael said. To support this goal, he explained, “Cedars-Sinai gave our team a COVID-19 training” on health guidelines including mask use,

social distancing, and frequent hand washing. They used the information to implement procedures for people coming to collect food, such as staying six feet from others in line.

Mike underscored the importance of community collaboration. In addition to their main food distribution partner, East Side Riders, they collaborate with other grassroots organizations, including the Watts Leadership Institute and the Watts Gang Taskforce. They are also able to refer residents visiting food distribution to other services through the Children’s Institute, the local housing authority, and more. (For more information on the Safe Passage to School project, see page 47.)

“We’re ground rooted here in Watts and we want to just make sure that we can change lives, one life at a time.”



A food distribution event led by East Side Riders with support from We Care Outreach in May 2020. Photo credit: Spectrum News 1 SoCal Twitter, @SpecNews1SoCal

# Low Carbon Transit Operations Project



LADOT Electric DASH Bus. Photo credit: LADOT

**THE DASH BUS ELECTRIFICATION PROJECT**, led by the Los Angeles Department of Transportation, will replace 10 clean natural gas or propane-fueled buses with battery electric buses. This will reduce the emission of local air pollutants and greenhouse gases. Five electric chargers will be installed to support these buses. Additionally, the Los Angeles Department of Transportation plans to increase the frequency of service from every 20 minutes to every 15 minutes, thereby improving local mobility options.

As LADOT begins production of its electric bus fleet, it has committed that the first electric DASH buses will be deployed to Watts, allowing the community to be on the frontline of greening the bus system.

## Key Accomplishments\*

- » LADOT signed a contract with BYD Motors Inc. for 10 battery electric DASH buses

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)

### Project Details

<p>Launch date</p> <p>April 2019</p> <p>Anticipated completion date</p> <p>November 2020</p> <p>TCC grant funds</p> <p>\$ 1,700,000</p>	<p>Leveraged funds</p> <p>\$6,893,075</p> <p>Project lifetime</p> <p>10 years</p>
---	---

### Estimated Benefits Over Project Lifetime

<p>GHG emissions reductions</p> <p>36,435 MTCO<sub>2</sub>e</p> <p>VMT reductions</p> <p>1,624,630 miles</p> <p>Travel cost savings</p> <p>\$310,025</p>	<p>Direct jobs from TCC dollars</p> <p>3 FTEs</p> <p>Indirect jobs from TCC dollars</p> <p>3 FTEs</p> <p>Induced jobs from TCC dollars</p> <p>3 FTEs</p>
--	--

### Responses to COVID-19

- » Bus production has been delayed due to COVID-19-related factory closure

# Low Carbon Transportation Project



Watts Vehicles and Veggies Community Event. Photo credit: UCLA Luskin Center for Innovation

**THE WATTS LABOR COMMUNITY ACTION COMMITTEE** and Green Commuter are partnering on the Mega Watts Electric Vehicle Care Share project. This project will deploy 15 electric vehicles (EVs) in the community as part of a car-share program, as well as install 24 EV charging stations. Increasing the fleet of EVs for use can help reduce the need for cars that run on fossil fuels. This project also plans to train and hire Watts residents (see the Workforce Development Plan section for more information on the training program).

The Mega Watts community engagement efforts will center on events and communication aimed at education and member recruitment. They plan to host annual Earth Day, National Drive Electric Week, and Ride Share Week, as well as a total of six Ride and Drive events throughout the grant period. They will also host educational events, including: “What’s Under the Hood” information sessions and driver’s license training workshops. This project will also conduct outreach, in the form of door-to-door and online, to recruit members for its car-share service.

## Key Accomplishments\*

- » 1 site assessment and host agreement was executed at Watts Labor Community Action Committee at 10950 South Central Ave.
- » 3 Level 2 EV chargers and 1 Level 3 (DCFC) chargers were installed at the Jordan Downs Housing Complex

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)

### Project Details

<p>Launch date</p> <p><b>April 2019</b></p> <p>Anticipated completion date</p> <p><b>March 2020</b></p> <p>TCC grant funds</p> <p><b>\$1,833,862</b></p>	<p>Leveraged funds</p> <p><b>\$519,120</b></p> <p>Project lifetime</p> <p><b>3 years</b></p>
--	--

### Estimated Benefits Over Project Lifetime

<p>GHG emissions reductions</p> <p><b>2,618 MTCO<sub>2</sub>e</b></p> <p>Direct jobs from TCC dollars</p> <p><b>8 FTEs</b></p> <p>Indirect jobs from TCC dollars</p>	<p><b>4 FTEs</b></p> <p>Induced jobs from TCC dollars</p> <p><b>4 FTEs</b></p>
--	--

### Responses to COVID-19

» Classes were suspended due to COVID-19.

# Rooftop Solar and Energy Efficiency Projects



Rooftops with solar panels in the Watts Rising site. Photo credit: Google Earth 2020

**RESTORE NEIGHBORHOODS LA (RNLA)** is leading the two low-income weatherization programs, which will provide energy cost savings to residents while avoiding GHGs associated with electricity generation in part from fossil fuels. RNLA will install approximately 154 kilowatts of solar panels on 48 residences in the site area, for an average project size of 3.2 kilowatts. RNLA will also provide energy efficiency upgrades for 300 homes. These energy efficiency improvements could include low-flow faucets and shower heads, LED lighting, window unit HVAC system replacement, smart thermostats, and more. Both projects will reduce energy costs for residents.

These projects will develop an online Solar Watts and Energy Efficiency portal for residents, which will enable them to sign up for an assessment, as well as reach online customer support. The Solar Watts and Energy Efficiency projects plan to conduct outreach via direct mail to all single-family homes in the TCC site, via digital advertisements and social media, as well as through multiple outreach events each year.

## Key Accomplishments\*

### *Solar Watts*

- » 45 solar site visits completed
- » A combined 26.145 kW of solar on 8 single-family homes installed

### *Energy Efficiency*

- » Over 300 different types of energy efficiency measures installed in single-family homes
- » 24 energy efficiency site assessments completed

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)



### Project Details

Launch date <b>April 2019</b>	Leveraged funds <b>\$229,713</b>
Anticipated completion date <b>April 2022</b>	Project lifetime <b>30 years</b>
TCC grant funds <b>\$3,118,107</b>	

### Estimated Benefits Over Project Lifetime

GHG emissions reductions <b>4,298 MTCO<sub>2</sub>e</b>	Direct jobs from TCC dollars <b>16 FTEs</b>
Renewable energy generation <b>23 gigawatt hours</b>	Indirect jobs from TCC dollars <b>7 FTEs</b>
Energy cost savings <b>\$3,602,265</b>	Induced jobs from TCC dollars <b>12 FTEs</b>

### Responses to COVID-19

» Focused outreach on mailers and online advertisements

# Urban Community Forestry Projects



LACI Day of Service with Community Healing Gardens. Photo credit: LACI

## THE FOUR WATTS RISING URBAN COMMUNITY

**FORESTRY** projects focus on planting a total of 2,250 trees, which provide shade and cooling benefits, as well as planting edible landscaping that will improve the availability of local, fresh produce to Watts residents. As the trees mature, they will sequester carbon. Their shading benefits should reduce the demand for electricity for cooling purposes. The additional tree coverage will also reduce the urban heat island effect on hot days and absorb stormwater on rainy days. These projects also include local training in tree care and maintenance, with a particular focus on training and hiring local youth. These projects are led by the Los Angeles Cleantech Incubator, Watts Labor Community Action Committee, North East Trees, and TreePeople.

**The Watts Healing Tech Garden** is expanding on the existing garden at Edwin Markham Middle School and adding water and energy efficient technologies. The project is led by the Los Angeles Cleantech Incubator (LACI) (Community Healing Gardens (CHG) used

## Key Accomplishments\*

### *The Watts Community Healing Tech Garden*

- » 10,890 square feet of garden planted; 6,400 pounds of food distributed, and a 200-square-foot greenhouse constructed.
- » Three events held: 2 community gardening days and 1 harvest festival, with over a combined 150 attendees, which included community tours of the garden.

### *The Watts Yardners Program*

- » Over 200 flyers in English and Spanish distributed to Watts residents

### *Greening Public Housing*

- » 30 youth contacted through outreach (English) and 80 residents contacted through outreach (English and Spanish).

### *Greening Watts*

- » Contacted 80 residents through outreach (English and Spanish).

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)

to be a partner but is no longer as of FY 2019-'20). Middle school students can take course electives that use the garden as an educational laboratory. Middle school and high school students volunteer in the garden, and multiple high school students are part of a CHG paid intern training program. The garden's frequent community events like the Annual Community Harvest Festival and Community Gardening Days provide an opportunity for community members to take home some of the organic produce as well as plant seeds for the upcoming season. The garden also offers community tours, which include culinary workshops and lessons on urban community gardening. Additionally, 100 shade trees grown by students through the current program will be given away to Watts residents at the quarterly community volunteer days.

To further add to the supply of local fresh food, the **Watts Yardners Program** will create 50 urban minifarms to be planted in residents' yards. These farms will include 150 fruit trees. Youth "Yardners" trained as part of this project will assist with outreach, as well as tree maintenance. Five cohorts will be recruited for the 20-hour Watts Growers Certification program. Informational workshops will also be provided for those interested in learning about urban

sustainability and green infrastructure. The **Greening Public Housing** project will result in planting 200 trees at three HACLA Public Housing Properties to increase the tree canopy. Up to 10 local youth will be hired as a part of the project and will participate in an Urban Forestry Curriculum for Youth to learn about tree planting and maintenance. The youth team will then teach resident volunteers how to plant and care for the trees planted in their community. Events associated with the project will include community meetings, workshops, and a planting day.

The **Greening Watts** project will result in a total of 1,800 trees planted throughout the Watts project area. This includes 950 trees planted along streets, in parks, schools, parking lots, or other open spaces. North East Trees will work with the City of Los Angeles and Watts residents through community planning meetings to determine locations to plant trees. An additional 850 trees will be distributed to local residents, who can learn how to care for their tree at Tree Care Workshops. North East Trees will also utilize the youth trained as a part of Greening Watts to help maintain trees. Additionally, project leads will host 25 tree planting events, 15 tree distribution events, and 18 tree care events with the help of recruited volunteers.

### Project Details

Anticipated completion date  
**April 2022 through  
March 2024**  
TCC grant funds  
**\$2,199,337**

Leveraged funds  
**\$206,075**  
Project lifetime  
**40 years**

### Estimated Benefits Over Project Lifetime

GHG emissions reductions  
**4,735 MTCO<sub>2</sub>e**  
Trees planted  
**2,250**

Direct jobs from TCC dollars  
**22 FTEs**  
Indirect jobs from TCC dollars  
**5 FTEs**  
Induced jobs from TCC dollars  
**9 FTEs**

### Responses to COVID-19

- » The Watts Healing Tech Garden distributed food grown in its garden to alleviate pandemic-exacerbated food insecurity in the community
- » North East Trees assisted the Residential Advisory Committees with food distributions

**STORIES FROM THE COMMUNITY**

# Students grow while helping a garden grow

**RUDY** is a junior at David Starr Jordan High School. He has lived in Watts his whole life with his parents and younger sister. Of his high school, he says “all my teachers want the best for me. They pour their heart and soul into everything that they teach, and I’m grateful for that.” When he’s not hanging out with friends, he’s working in the Community Healing Tech Garden.

He first became involved with the garden as a student at Markham Middle School. He took an elective class in sixth grade that taught him and the other students about topics including photosynthesis and plant life cycles. Then in ninth grade, Rudy began volunteering with the garden through a program called College Track, which provides participating students with scholarship money for college expenses. Inspired by his experience in the garden, Rudy is interested in studying fields such as botany, agriculture, and ornithology in college. The scholarship money he earned through work in the garden will help pay for college.

**“The garden gives me an opportunity to just breathe in that fresh air and do something, put my hands into the dirt. School is stressful. But every time I go to the garden, it’s like, ‘Okay, school aside, let’s focus on the garden.’ And then when I focus on the garden, my stress would go away.”**

RUDY



**Rudy (left) and Nicole Landers (second from right) at a community engagement event at the garden in September 2019. Photo credit: UCLA Luskin Center for Innovation**

The summer after his sophomore year, Nicole Landers, co-founder and executive director of Community Healing Gardens, hired Rudy as an intern to take on additional duties in the garden. Rudy collaborates with his coworkers on his expanded responsibilities maintaining the garden. “[The experience] taught me leadership skills. I gained ownership and accountability,” Rudy said. He also has a new role model. “Nicole inspires me so much because the garden helps the community by giving them fresh produce and making the kids open up their eyes into, ‘Oh, I can eat this instead of that,’” he added.

A major perk of working in an edible garden is the accessibility of fresh produce. Rudy sometimes brings home some of the fresh produce grown in the garden, where his parents cook with it. Recently, Rudy brought home some squash that his mom added to a

chicken vegetable soup. The produce varies seasonally, but Rudy noted that the cucumbers are his favorite. “We did a successful planting of strawberry,” he added, “that was a very good hit with the little kids.”

Rudy will continue to be involved as the garden expands and installs water and energy efficient technologies through the Watts Rising initiative.

**“The garden is just growing and growing. And I’m also growing with the garden. Everyone who associates with the garden is growing with it.”**

RUDY

# Urban Greening Projects



103<sup>rd</sup> Street/Watts Towers Blue Line Station in October 2019. Photo credit: UCLA Luskin Center for Innovation

**THE URBAN GREENING PROJECTS IN WATTS** will result in the planting of plants and 475 trees, the creation of parks, and pedestrian and bicycle improvements throughout the site area. As the trees mature, they will sequester carbon and shade nearby buildings, which should reduce the demand for electricity for cooling purposes. The additional tree coverage will also reduce the urban heat island effect on hot days and absorb stormwater on rainy days. Bicycle and pedestrian improvements aim to reduce car travel by improving alternative mobility options. For these projects, leads include: Los Angeles Department of Transportation, Grant Housing and Economic Development Corporation, From Lot to Spot, Los Angeles Unified School District, Tree People, BRIDGE Housing Corporation, and Housing Authority of Los Angeles. Project leads will be responsible for tree maintenance and care during the grant term. After the grant term, the City of Los Angeles Bureau of Street Services will assume maintenance responsibilities.

## Key Accomplishments\*

### ***Weigand Elementary Urban Trees/Rain Gardens***

- » 17 community outreach and engagement events held with a combined 546 attendees in English and in Spanish. This project also had 40 check ins with tree adopters, and conducted 3 lessons for 59 Jordan High School students

### ***Watts Cool Schools - Green Schools***

- » 9 Green Team volunteers recruited

### ***Freedom Tree Park***

- » 3 community events for Jordan Downs residents, park users, and Watts families held, with over 100 attendees across 3 events in English and Spanish

### ***WalkBike Watts, Wilmington Avenue Great Streets, Greening the Blue Line, and Century Gateway Park***

- » Project implementation pending

\* From award date (January 2018) through the end of FY 2019-'20 (June 2020)

The Los Angeles Department of Transportation and the City of Los Angeles Department of Cultural Affairs are leading the **WalkBike Watts** project, which involves pedestrian and bicyclist improvements, the development of a cultural trail, and the establishment of a Safe Passage Program for schools. The pedestrian and bicyclist improvements include the construction of 3.8 miles of bicycle sharrows and 1.4 miles of buffered bicycle lines, as well as the installation of nine crossing beacons, four new signals and one signal modification, five leading pedestrian intervals, eight curb extensions, bus pads and ADA landings, two curb ramps, and the planting of 10 trees. The cultural trail, which will include way-finding signage, will be designed and implemented through a community engagement process, with a goal of soliciting input from the local artist community.

The Urban Peace Institute and We Care Outreach will lead the creation of the Safe Passage Program, which will create safer routes for students from 112<sup>th</sup> Street, Flournoy, and Florence Griffith Joyner elementary schools, and Markham Middle School. Local adults will be trained to help ensure the safety of students as they commute to and from school each day along the identified passages.

On a half-mile stretch of Wilmington Avenue, 40 trees and 3,750 square feet of plants will be planted, and eight landscaped bump outs will be installed to improve pedestrian areas as part of the **Wilmington Avenue Great Streets** project. The **Weigand Elementary Urban Trees/Rain Gardens** project will result in the planting of 450 native plants, 43 native trees, and installation of 2,400 square feet of pervious rain gardens near Weigand Elementary School. The **Watts Cool Schools - Green Schools** project aims to provide cooling benefits to four local elementary schools through painting playgrounds with a cool coat, installing 80,000 square feet of cool pavement, removing asphalt, and planting 112 trees. Volunteer five-person “green teams”

will support tree planting, care, and maintenance and will participate in 16 tree care events. **The Greening the Blue Line** project will result in the planting of 200 trees in the first and last mile radius of the 103rd Street stop of the Blue Line Metro. The project will include 10 tree planting events and 19 tree care events.

**Century Gateway Park** and **Freedom Tree Park** will develop a 0.62-acre and 1-acre park, respectively. The Century Gateway Park will have 35 trees, local and drought tolerant plants near the intersection of East Century Boulevard and Grape Street, while the Freedom Tree Park will be located across from the Century Gateway Park with 100 plants and 35 trees.

Urban Greening projects will coordinate on community engagement that focuses on recruiting and educating community members through regular events. **Weigand Elementary Urban Trees/Rain Gardens** will host community tree care meetings to educate attendees about the project and to recruit tree adopters, who will be responsible for tree watering during the grant period. Additional tree adopters will be recruited via phone, bilingual flyers, and door-to-door canvassing. The project also plans to develop three Jordan High School lesson plans. At each elementary school, **Watts Cool Schools - Green Schools** will facilitate the development of an Eco-club to help engage and educate students on urban greening. At each school, the project partner will host a public presentation on the project and a community sustainability workshop. **Greening the Blue Line** will recruit community volunteers to assist with 10 tree planting activities and events and 19 tree care activities and events. **Century Gateway Park** and **Freedom Tree Park** will host community meetings to solicit resident input on how to prioritize park components and uses, as well as keep the community updated on park plans and progress.

### Project Details

Anticipated completion date  
**July 2020 through  
 April 2022**  
 TCC grant funds  
**\$7,017,214**

Leveraged funds  
**\$283,831**  
 Project lifetime  
**40 years**

### Estimated Benefits Over Project Lifetime

GHG emissions reductions  
**4,598 MTCO<sub>2</sub>e**  
 VMT reduction  
**436,866 miles**  
 Trees planted  
**475**  
 Energy cost savings  
**\$15,263**

Travel cost savings  
**\$4,595,005**  
 Direct jobs from TCC dollars  
**41 FTEs**  
 Indirect jobs from TCC dollars  
**14 FTEs**  
 Induced jobs from TCC dollars  
**29 FTEs**

### Responses to COVID-19

- » Weigand Elementary Urban Trees/Rain Gardens conducted 2 lessons for Jordan High School students remotely
- » WalkBike Watts supported the East Side Rider’s distribution of food to the community by providing guidance to those coming to collect food to follow COVID-19 public health safety guidelines
- » The Urban Peace Institute, part of the WalkBike Watts project, moved their community engagement meetings online and used them as a platform to disseminate critical public health information about the pandemic and provide updates on resources to the community





Watts Rising Collaborative Community Event. Photo credit: HACLA

**IN ADDITION TO THE 17 WATTS RISING PROJECTS** that are receiving TCC funding, the Housing Authority of the City of Los Angeles (HACLA) has also included six leveraged projects as part of its Watts Rising package. These leveraged projects are independently funded and help further the objectives of TCC. In Watts, these leveraged projects include: (1) Jordan Downs Phase 1B, (2) 103rd St Urban Trees/Rain Garden, (3) Central Avenue Streetscape, (4) 103rd Street Streetscape, (5) Century Boulevard Complete Streets, (6) and Jordan Downs Retail Center. One project, Success Avenue Green Streets, lost funding since the beginning of project implementation and will no longer be included in the suite of Watts Rising projects. These projects include the planting of trees and plants, pedestrian improvements, and the construction of more affordable housing units and a grocery store.

The TCC grant will allow HACLA to augment its existing efforts by funding more affordable housing, skilled employment opportunities, safer biking and walking infrastructure, and cooler conditions during extreme heat events. The following section provides an overview of the leveraged projects underway in Watts.

# 103rd Street Streetscape



Rendering of 103rd Street Streetscape improvements. Photo credit: LA County Department of Public Works

**THE CITY OF LOS ANGELES** Bureau of Street Services is installing pedestrian lighting and ADA ramps, replacing curbs, gutters, and sidewalks, along with the planting of 50 trees on a 0.4-mile stretch of 103rd Street. Pedestrian improvements promote alternatives to driving cars, while trees will sequester carbon and provide cooling benefits.

## Key Accomplishments

» This project was completed in 2020

## Project Details

Anticipated completion date

October 2019

TCC grant funds

\$0

Leveraged funds

\$836,700

# 103rd Street Urban Trees/Rain Garden



Heart of Watts Community Garden Opening Event. Photo credit: From Lot to Spot

**FROM LOT TO SPOT** will plant 600 native plants and 50 native trees, as well as install 2,800 square feet of pervious rain gardens. Associated events will include two community tree care meetings and a planting day. This project will also design related lesson plans for Jordan High School students. Trees and plants sequester carbon, while the additional vegetative coverage reduces the urban heat island effect on hot days and absorbs stormwater on rainy days.

## Key Accomplishments\*

- » 17 community outreach and engagement meetings held in English and Spanish with a combined 546 attendees
- » 700 residents through outreach in English and 900 residents in Spanish contacted
- » 59 Jordan High School students instructed across three lessons

\*From award date (January 2018) through the end of FY 2019-'20 (June 2020)

## Project Details

Anticipated completion date

December 2020

TCC grant funds

\$0

Leveraged funds

\$104,166

## Responses to COVID-19

- » Two of the three Jordan High School lessons were distance learning presentations

# Central Avenue Streetscape



Ground breaking ceremony for Central Avenue Streetscape improvements. Photo credit: Watts Neighborhood Council

**THE CITY OF LOS ANGELES** Bureau of Street Services and Grant Housing and Economic Development Corporation are collaborating to make transit and pedestrian improvements along a quarter mile of Central Avenue between 103rd Street and the Imperial Highway and along a quarter mile between 108th and 104th Streets. These pedestrian improvements include the construction and installation of three median islands, six bump outs, three signal modifications, four roadway lights, five bus pads, 12 accessible gutter ramps, and the planting of 81 trees. The bicycle and pedestrian improvements aim to reduce car travel by improving alternative mobility options. This project will also include the replacement of 58,000 square feet of sidewalk and 2,500 square feet of curbs and gutters, as well as the addition of tree wells, rain gardens, and permeable pavement. These changes will help to reduce the urban heat island effect and improve stormwater capture.

**Key Accomplishments**  
Implementation pending

**Project Details**  
Anticipated completion date  
**November 2020**  
TCC grant funds  
**\$0**  
Leveraged funds  
**\$4,127,209**

# Century Boulevard Complete Street



Century Boulevard on its Grand Opening Day after improvements were complete. Photo credit: Mayor Eric Garcetti, @MayorOfLA

**THE CITY OF LOS ANGELES** Bureau of Street Services and Bureau of Engineering constructed a half mile Complete Street on Century Boulevard. According to the City of Los Angeles Complete Street Design Guide, the aim of a Complete Street is “to ensure that the safety, accessibility, and convenience of all transportation users — pedestrians, bicyclists, transit riders, and motorists — is accommodated.” The improvements for this project include the installation of street lights, signals, sidewalks, and parkways, and 155 planted trees. These pedestrian and bicyclist improvements promote alternative mobility options to cars. The planted trees sequester carbon, reduce the urban heat island effect, and absorb stormwater on rainy days.

**Key Accomplishments**

---

This project was completed  
in August 2018.

**Project Details**

---

Anticipated completion date  
**August 2018**

TCC grant funds  
**\$0**

Leveraged funds  
**\$10,689,780**

# Jordan Downs Phase 1B



Rendering of Jordan Downs Phase 1B. Photo credit: SVA Architects

**MICHAELS DEVELOPMENT CO.** is leading the construction of 135 affordable multifamily housing units on Century Boulevard. This project includes the planting of 300 trees. This development increases the density of the neighborhood, which should result in a reduction in the vehicle miles traveled, along with lowering housing costs for Watts residents. The trees will sequester carbon and shade nearby buildings, which should reduce the demand for electricity for cooling purposes, reduce the urban heat island effect, and absorb stormwater.

## Key Accomplishments\*

- » Housing units currently under construction

\*From award date (January 2018) through the end of FY 2019-'20 (June 2020)

## Project Details

Anticipated completion date

May 2020

TCC grant funds

\$0

Leveraged funds

\$67,682,777

# Jordan Downs Retail Center



Rendering of Jordan Downs Phase 1B. Photo credit: SVA Architects

**PRIMESTOR DEVELOPMENT INC.** is constructing a 31,299-square-foot grocery store, which will include the planting of 80 trees. This will help to increase the density of the neighborhood and accessibility of local shopping options, which aim to reduce vehicle miles traveled. Furthermore, the additional trees will sequester carbon and provide cooling benefits.

### Key Accomplishments\*

- » Construction of Nike Inc., Smart & Final Extra!, Ross Stores Inc., and Blink Fitness units completed
- » 31,299 square feet of grocery store constructed
- » The shell build-out completed
- » Tenant improvements in progress

\*From award date (January 2018) through the end of FY 2019-'20 (June 2020)

### Project Details

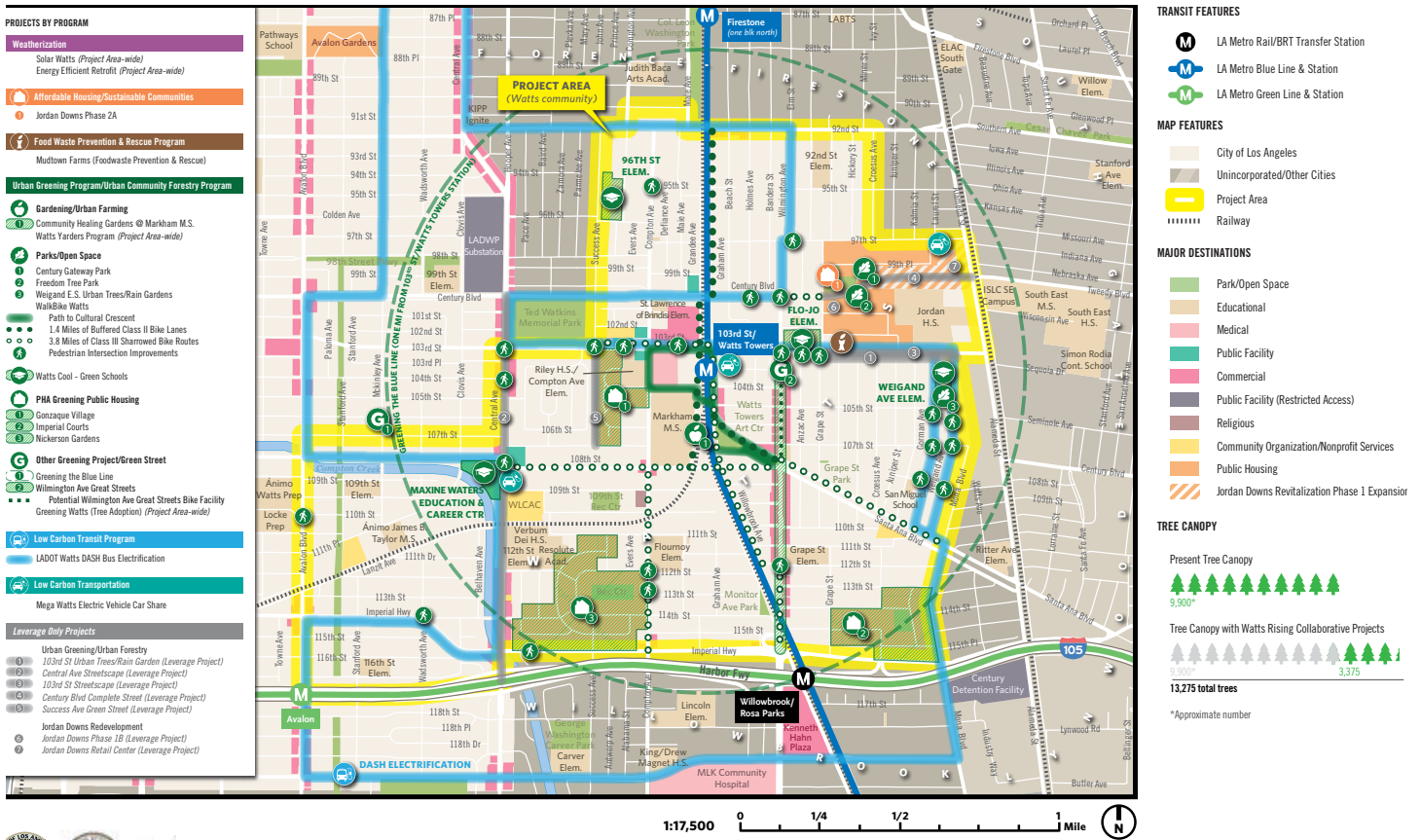
Anticipated completion date  
**September 2019**

TCC grant funds  
**\$0**

Leveraged funds  
**\$44,314,118**

# APPENDICES

## Appendix 1: Supplemental Maps



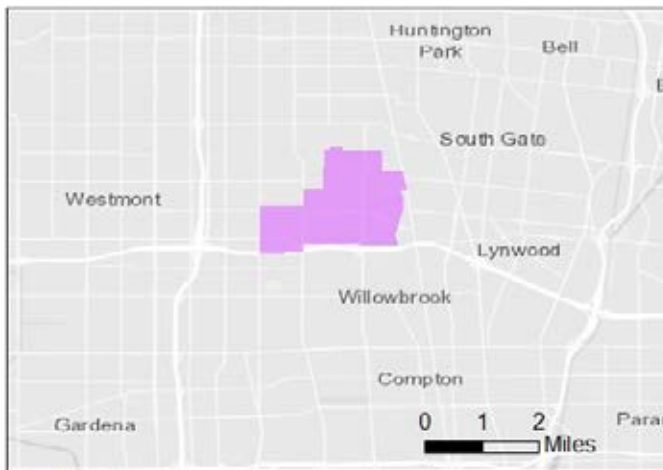
Watts Rising Collaborative  
 HACLA | TCC GRANT APPLICATION | JANUARY 2019  
 SUPPLEMENTAL MATERIALS 9-1: PROJECTS MAP (JANUARY, 2019 UPDATE)

Detailed map of Watts Rising project locations. Photo credit: Watts Rising Collaborative

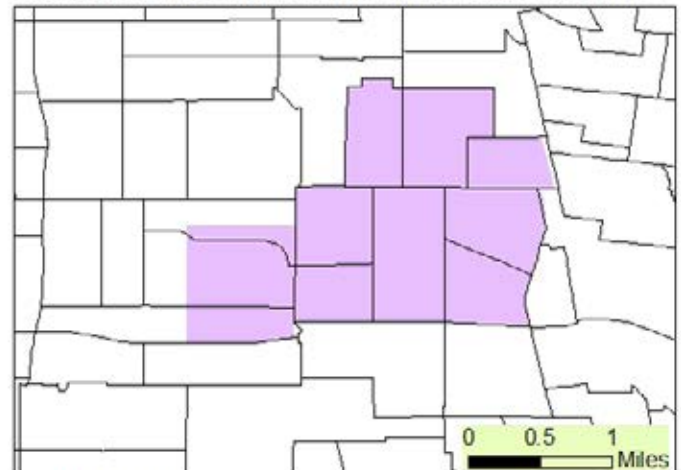


## Watts TCC Project Area Overlay Maps

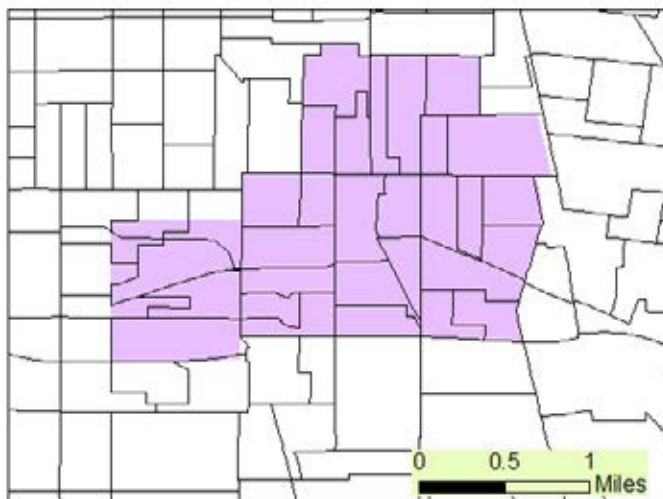
(#) = number of geographic units that intersect with TCC project area  
(excluding units with less than 2% of total area under TCC project area)  
Census tract, block group, and zip code maps from US Census Bureau (2016)



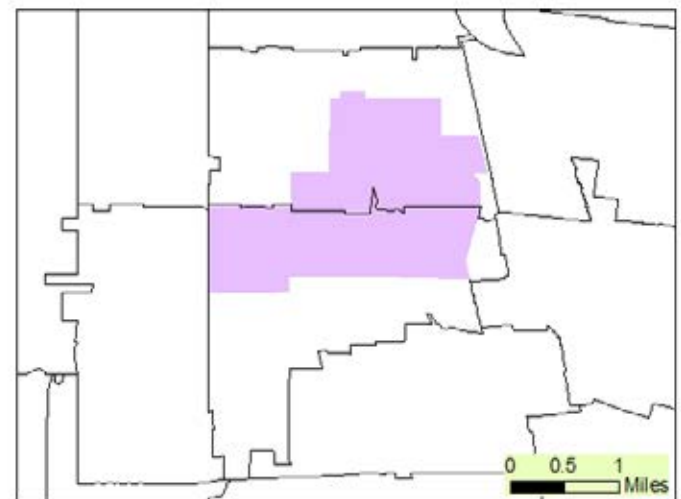
Watts TCC Project Area



Census Tracts (12)



Census Block Groups (36)



Zip Code Tabulation Areas (2)

Maps depicting the scale of the TCC project area. Photo credit: UCLA Luskin Center for Innovation

## Appendix 2: Summary of Methods for Estimating Project Benefits

Benefit	Methodology	Version
Avoided stormwater runoff	iTree Planting	1.2.0
Energy cost savings	California Air Resources Board (CARB) Co-benefit Assessment Methodology for Energy and Fuel Cost Savings <sup>10</sup>	September 13, 2019
Greenhouse gas (GHG) reductions	CARB GHG Quantification Methodologies by Project Type	FY 2016-17
Jobs (direct, indirect, induced)	CARB Job Co-benefit Assessment Methodology	April 2019
Travel cost savings	CARB Co-benefit Assessment Methodology for Travel Cost Savings <sup>11</sup>	October 18, 2019
Vehicle miles traveled (VMT) reductions	CARB GHG Quantification Methodologies by Project Type	FY 2016-17

<sup>10</sup> CARB’s energy and fuel cost-savings methodology does not provide an explicit example of how to calculate cost savings from urban forestry and greening projects. Nonetheless, CARB’s methodology does provide a basic framework for estimating cost savings from any project that achieves energy use reductions: (energy cost savings = net decline in energy use X per unit cost of energy). Thus, for urban forestry and urban greening projects, the UCLA-UCB evaluation team estimated energy cost savings by taking two outputs from iTree (annual electricity savings and annual natural gas savings) and multiplying these outputs by their per unit cost (as based on cost assumptions from Appendix A of CARB’s energy cost-savings methodology). The evaluation team then scaled up these costs by 40 years and prorated them according to the percentage of trees that actually shade buildings (and therefore have a meaningful impact on electricity and gas use).

<sup>11</sup> To calculate travel cost savings, CARB’s travel cost-savings methodology relies on estimates about changes in transit ridership. For Affordable Housing and Sustainable Communities (AHSC) projects, subsequent changes in ridership are unknown, and CARB’s methodology does not provide a method for calculating travel cost savings in the face of that unknown. Thus, the UCLA-UCB evaluation team expanded upon CARB’s methodology by estimating travel cost savings from AHSC projects without ridership estimates. To do so, the evaluation team conservatively assumes the following: (1) VMT reductions associated with the AHSC projects are achieved by drivers who switch to the most expensive alternative mode (which between transit, biking, and walking would be transit); (2) all individuals in the apartment complex will take transit so often that they buy a monthly transit pass because that’s the most economical thing to do at high levels of transit ridership; and (3) that all individuals in the apartment complex buy a pass for the duration of the project lifetime (less the number of months for which they receive a free pass). The evaluation team estimated the number of individuals in the apartment complex by multiplying the number of units by the average household size for the TCC census tracts.

# Appendix 3: Watts Rising Collaborative Structure



## Watts Rising Collaborative Stakeholder Structure

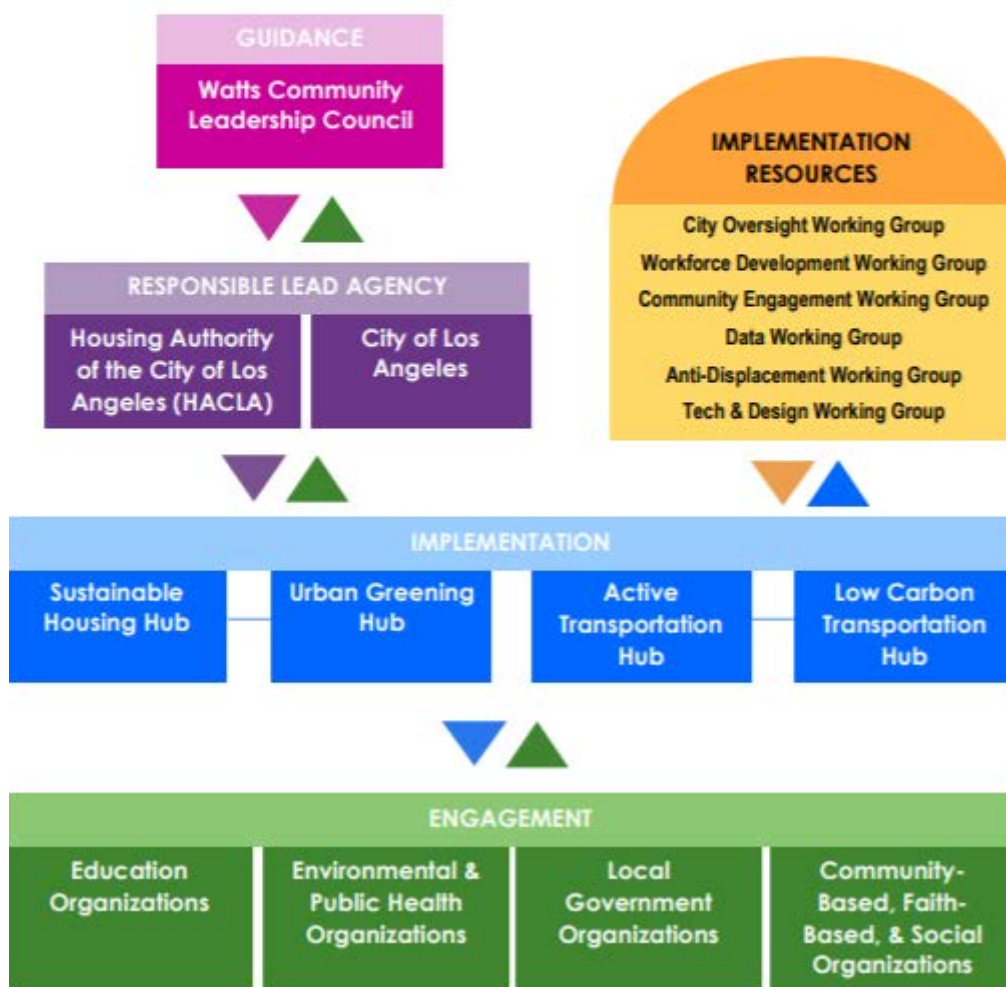


Diagram showing the Watts Rising Collaborative Structure. Photo Credit: Housing Authority of Los Angeles and Watts Rising

## Appendix 4: Watts Rising TCC Census Tracts

Census Tract GeoID Number	City	Population (ACS 2011-2016 estimate)	Area (sq. mi.)	Population Density (pop./ sq.mi.)
14000US06037241001	Los Angeles	4,580	0.35	13,086
14000US06037240900	Los Angeles	5,745	0.41	13,901
14000US06037242700	Los Angeles	5,969	0.39	15,228
14000US06037242100	Los Angeles	2,911	0.18	16,404
14000US06037242000	Los Angeles	4,159	0.25	16,656
14000US06037240800	Los Angeles	4,625	0.25	18,762
14000US06037242300	Los Angeles	4,577	0.24	18,815
14000US06037242200	Los Angeles	6,366	0.31	20,274
14000US06037243000	Los Angeles	7,147	0.28	25,804
14000US06037242600	Los Angeles	4,980	0.18	27,097
14000US06037243100	Los Angeles	6,459	0.23	27,559

## Appendix 5: Watts Rising Control Census Tracts

Census Tract GeoID Number	City	Population (ACS 2011-2016 estimate)	Area (sq. mi.)	Population Density (pop./ sq.mi.)
14000US06037239601	Los Angeles	3,644	0.16	22,350
14000US06037219901	Los Angeles	4,444	0.20	21,928
14000US06037232120	Los Angeles	5,715	0.20	28,363
14000US06037221500	Los Angeles	4,011	0.15	27,286
14000US06037237720	Los Angeles	3,134	0.13	24,958
14000US06037238310	Los Angeles	4,927	0.15	32,138
14000US06037238320	Los Angeles	4,133	0.18	22,859
14000US06037237710	Los Angeles	3,281	0.17	19,658
14000US06037241120	Los Angeles	5,082	0.26	19,832
14000US06037231100	Los Angeles	3,516	0.35	10,185
14000US06037231210	Los Angeles	3,509	0.12	28,341
14000US06037231300	Los Angeles	5,142	0.25	20,257
14000US06037231600	Los Angeles	6,957	0.37	18,874
14000US06037231710	Los Angeles	4,081	0.13	32,644
14000US06037240500	Los Angeles	6,509	0.31	20,748
14000US06037237500	Los Angeles	2,716	0.13	20,853
14000US06037232500	Los Angeles	4,762	0.30	16,066
14000US06037232700	Los Angeles	5,968	0.28	21,139
14000US06037240600	Los Angeles	5,685	0.26	21,786
14000US06037237101	Los Angeles	3,653	0.24	15,043
14000US06037237202	Los Angeles	4,714	0.43	11,014
14000US06037237401	Los Angeles	3,737	0.20	18,753
14000US06037239202	Los Angeles	5,347	0.49	10,856
14000US06037239501	Los Angeles	3,599	0.18	19,657
14000US06037239602	Los Angeles	3,586	0.14	25,937
14000US06037239802	Los Angeles	5,102	0.24	21,682
14000US06037239801	Los Angeles	3,524	0.14	24,617
14000US06037228500	Los Angeles	4,581	0.17	26,431
14000US06037231720	Los Angeles	4,789	0.18	26,265
14000US06037237102	Los Angeles	3,239	0.18	18,238
14000US06037241400	Los Angeles	3,377	0.22	15,196
14000US06037240010	Los Angeles	3,625	0.23	15,955
14000US06037241202	Los Angeles	4,807	0.45	10,703
14000US06037240401	Los Angeles	5,562	0.27	20,786
14000US06037541604	Compton	6,391	0.32	19,839
14000US06037535102	Unincorporated	5,055	0.23	22,150
14000US06037540901	Unincorporated	4,565	0.45	10,160
14000US06037600304	Unincorporated	3,412	0.17	19,825

# Appendix 6: Indicator Data

## Appendix 6.1: Demographics

**Table A6.1.1: American Community Survey (ACS) Demographic Indicators\***

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>Total Population (B01003)</b>	2009-2013	53,716	1,829	162,558	3,251	9,893,481	0	37,659,181	0
	2010-2014	55,008	1,854	164,136	3,143	9,974,203	0	38,066,920	0
	2011-2015	56,232	1,905	168,937	3,062	10,038,388	0	38,421,464	0
	2012-2016	57,518	1,882	169,881	2,981	10,057,155	0	38,654,206	0
	2013-2017	58,080	1,854	174,454	3,005	10,105,722	0	38,982,847	0
	2014-2018	57,757	1,884	178,719	2,976	10,098,052	0	39,148,760	0
	2015-2019	58,061	1,877	180,450	3,176	10,081,570	0	39,283,497	0
<b>Percent Hispanic, all races (B03002)</b>	2009-2013	71.3%	2.5%	71.8%	1.4%	47.9%	0.0%	37.9%	0.0%
	2010-2014	71.0%	2.4%	72.7%	1.3%	48.1%	0.0%	38.2%	0.0%
	2011-2015	71.8%	2.4%	73.1%	1.4%	48.2%	0.0%	38.4%	0.0%
	2012-2016	71.6%	2.4%	72.9%	1.3%	48.3%	0.0%	38.6%	0.0%
	2013-2017	72.9%	2.2%	73.2%	1.2%	48.4%	0.0%	38.8%	0.0%
	2014-2018	73.6%	2.1%	74.1%	1.2%	48.5%	0.0%	38.9%	0.0%
	2015-2019	74.1%	2.0%	74.7%	1.2%	48.5%	0.0%	39.0%	0.0%
<b>Percent White, non-Hispanic (B03002)</b>	2009-2013	11.8%	1.4%	12.1%	0.7%	32.5%	0.0%	39.7%	0.0%
	2010-2014	0.7%	0.3%	1.1%	0.2%	27.5%	0.0%	39.7%	0.0%
	2011-2015	0.7%	0.4%	0.9%	0.2%	27.2%	0.0%	39.2%	0.0%
	2012-2016	0.7%	0.4%	1.1%	0.2%	26.9%	0.0%	38.7%	0.0%
	2013-2017	0.8%	0.4%	1.2%	0.2%	26.7%	0.0%	38.4%	0.0%
	2014-2018	0.8%	0.4%	1.2%	0.2%	26.5%	0.0%	37.9%	0.0%
	2015-2019	0.8%	0.3%	1.6%	0.2%	26.2%	0.0%	37.2%	0.0%
<b>Percent all communities of color, non-Hispanic: Black, Asian, Pacific Islander, American Indian, other, and two or more races (B03002)</b>	2009-2013	28.0%	1.8%	27.0%	1.0%	24.6%	0.1%	22.4%	0.0%
	2010-2014	28.3%	1.7%	26.4%	1.0%	24.7%	0.1%	22.7%	0.0%
	2011-2015	27.5%	1.8%	25.8%	1.0%	24.8%	0.1%	22.9%	0.0%
	2012-2016	27.6%	1.8%	25.9%	1.0%	24.9%	0.1%	23.1%	0.0%
	2013-2017	26.4%	2.0%	25.6%	1.0%	25.1%	0.1%	23.3%	0.0%
	2014-2018	25.5%	2.0%	24.5%	1.0%	25.2%	0.1%	23.6%	0.0%
	2015-2019	25.1%	1.8%	23.7%	1.0%	25.3%	0.1%	23.8%	0.0%

\*MOEs for the county and the state are obtained directly from the U.S. Census Bureau. MOEs for TCC and control census tracts are derived by the UCLA Luskin Center for Innovation in accordance with the methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018). All MOEs are reported at the 90% confidence.

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>DEMOGRAPHIC-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent other communities of color, non-Hispanic: Pacific Islander, American Indian, other, two or more races</b>	2009-2013	0.8%	0.6%	1.0%	0.3%	2.7%	0.0%	3.6%	0.0%
	2010-2014	0.7%	0.5%	1.0%	0.3%	2.8%	0.1%	3.7%	0.0%
	2011-2015	0.9%	0.6%	1.1%	0.2%	2.9%	0.1%	3.7%	0.0%
	2012-2016	1.2%	0.7%	1.2%	0.2%	2.9%	0.0%	3.8%	0.0%
	2013-2017	1.1%	0.6%	1.2%	0.3%	2.9%	0.0%	3.9%	0.0%
	2014-2018	1.4%	0.8%	1.2%	0.2%	3.0%	0.0%	3.9%	0.0%
	2015-2019	1.7%	0.9%	1.2%	0.2%	3.0%	0.1%	4.0%	0.0%
<b>Percent Black, non-Hispanic (B03002)</b>	2009-2013	26.9%	1.7%	25.4%	1.0%	8.1%	0.0%	5.7%	0.0%
	2010-2014	27.4%	1.7%	24.9%	0.9%	8.0%	0.0%	5.7%	0.0%
	2011-2015	26.3%	1.7%	24.2%	1.0%	8.0%	0.0%	5.6%	0.0%
	2012-2016	25.8%	1.7%	24.2%	1.0%	8.0%	0.0%	5.6%	0.0%
	2013-2017	24.6%	1.9%	23.8%	1.0%	7.9%	0.0%	5.5%	0.0%
	2014-2018	23.6%	1.8%	22.6%	0.9%	7.9%	0.0%	5.5%	0.0%
	2015-2019	22.7%	1.5%	21.6%	0.9%	7.8%	0.0%	5.5%	0.0%
<b>Percent Asian, non-Hispanic (B03002)</b>	2009-2013	0.2%	0.2%	0.6%	0.3%	13.7%	0.0%	13.1%	0.0%
	2010-2014	0.3%	0.2%	0.5%	0.2%	13.8%	0.0%	13.3%	0.0%
	2011-2015	0.3%	0.3%	0.5%	0.1%	14.0%	0.0%	13.5%	0.0%
	2012-2016	0.6%	0.4%	0.6%	0.2%	14.1%	0.0%	13.7%	0.0%
	2013-2017	0.6%	0.4%	0.6%	0.2%	14.3%	0.0%	13.9%	0.0%
	2014-2018	0.5%	0.3%	0.7%	0.2%	14.4%	0.0%	14.1%	0.0%
	2015-2019	0.7%	0.6%	0.8%	0.2%	14.4%	0.0%	14.3%	0.0%
<b>Percent Pacific Islander, non-Hispanic (B03002)</b>	2009-2013	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.4%	0.0%
	2010-2014	0.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.4%	0.0%
	2011-2015	0.1%	0.1%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%
	2012-2016	0.1%	0.1%	0.0%	0.0%	0.2%	0.0%	0.4%	0.0%
	2013-2017	0.1%	0.1%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%
	2014-2018	0.2%	0.2%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%
	2015-2019	0.1%	0.1%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
<b>Percent American Indian, non-Hispanic (B03002)</b>	2009-2013	0.4%	0.3%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2010-2014	0.3%	0.3%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2011-2015	0.4%	0.5%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2012-2016	0.5%	0.5%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2013-2017	0.5%	0.5%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2014-2018	0.6%	0.7%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%
	2015-2019	0.8%	0.8%	0.1%	0.1%	0.2%	0.0%	0.4%	0.0%

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>DEMOGRAPHIC-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent two or more races, non-Hispanic (B03002)</b>	2009-2013	0.1%	0.1%	0.7%	0.2%	2.1%	0.0%	2.6%	0.0%
	2010-2014	0.1%	0.1%	0.6%	0.2%	2.2%	0.0%	2.7%	0.0%
	2011-2015	0.2%	0.1%	0.6%	0.2%	2.2%	0.0%	2.8%	0.0%
	2012-2016	0.3%	0.2%	0.6%	0.2%	2.2%	0.0%	2.9%	0.0%
	2013-2017	0.3%	0.2%	0.7%	0.2%	2.2%	0.0%	2.9%	0.0%
	2014-2018	0.3%	0.2%	0.6%	0.2%	2.2%	0.0%	3.0%	0.0%
	2015-2019	0.5%	0.2%	0.7%	0.2%	2.3%	0.1%	3.0%	0.0%
<b>Percent other, non-Hispanic (B03002)</b>	2009-2013	0.4%	0.5%	0.2%	0.1%	0.2%	0.0%	0.2%	0.0%
	2010-2014	0.3%	0.4%	0.3%	0.1%	0.2%	0.0%	0.2%	0.0%
	2011-2015	0.3%	0.4%	0.4%	0.1%	0.3%	0.0%	0.2%	0.0%
	2012-2016	0.3%	0.4%	0.4%	0.1%	0.3%	0.0%	0.2%	0.0%
	2013-2017	0.3%	0.3%	0.4%	0.1%	0.3%	0.0%	0.2%	0.0%
	2014-2018	0.3%	0.3%	0.4%	0.1%	0.3%	0.0%	0.2%	0.0%
	2015-2019	0.4%	0.4%	0.3%	0.1%	0.3%	0.0%	0.3%	0.0%
<b>Percent foreign born population (B05006)</b>	2009-2013	31.5%	1.9%	40.1%	1.1%	35.1%	0.1%	27.0%	0.1%
	2010-2014	31.4%	1.8%	39.5%	1.0%	34.9%	0.1%	27.0%	0.1%
	2011-2015	31.6%	1.8%	38.5%	0.9%	34.7%	0.1%	27.0%	0.1%
	2012-2016	32.1%	1.7%	37.8%	0.9%	34.5%	0.1%	27.0%	0.1%
	2013-2017	32.4%	1.7%	37.4%	0.9%	34.4%	0.1%	27.0%	0.1%
	2014-2018	32.7%	1.8%	37.8%	0.9%	34.2%	0.1%	26.9%	0.1%
	2015-2019	33.0%	1.6%	38.2%	1.0%	34.0%	0.1%	26.8%	0.1%

Table continues next page



	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>DEMOGRAPHIC-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent born in Asia (B05006)</b>	2009-2013	0.2%	0.2%	0.5%	0.2%	11.9%	0.1%	9.8%	0.0%
	2010-2014	0.2%	0.2%	0.4%	0.1%	12.0%	0.1%	10.0%	0.0%
	2011-2015	0.2%	0.2%	0.4%	0.1%	12.0%	0.1%	10.1%	0.0%
	2012-2016	0.5%	0.3%	0.4%	0.1%	12.1%	0.1%	10.2%	0.0%
	2013-2017	0.5%	0.3%	0.5%	0.1%	12.1%	0.1%	10.4%	0.0%
	2014-2018	0.5%	0.3%	0.6%	0.1%	12.2%	0.1%	10.5%	0.0%
	2015-2019	0.7%	0.6%	0.6%	0.1%	12.2%	0.1%	10.6%	0.0%
<b>Percent born in Africa (B05006)</b>	2009-2013	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.4%	0.0%
	2010-2014	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.4%	0.0%
	2011-2015	0.0%	0.1%	0.2%	0.1%	0.6%	0.0%	0.4%	0.0%
	2012-2016	0.0%	0.1%	0.2%	0.1%	0.5%	0.0%	0.5%	0.0%
	2013-2017	0.1%	0.1%	0.3%	0.1%	0.6%	0.0%	0.5%	0.0%
	2014-2018	0.0%	0.1%	0.4%	0.2%	0.6%	0.0%	0.5%	0.0%
	2015-2019	0.2%	0.2%	0.4%	0.2%	0.6%	0.0%	0.5%	0.0%
<b>Percent born in Latin America (B05006)</b>	2009-2013	0.1%	0.1%	0.2%	0.1%	0.3%	0.0%	0.2%	0.0%
	2010-2014	0.1%	0.1%	0.2%	0.1%	0.3%	0.0%	0.2%	0.0%
	2011-2015	31.3%	1.8%	37.7%	1.0%	20.0%	0.1%	14.2%	0.1%
	2012-2016	31.4%	1.7%	37.1%	0.9%	19.8%	0.1%	14.0%	0.0%
	2013-2017	31.6%	1.7%	36.5%	0.9%	19.6%	0.1%	13.8%	0.1%
	2014-2018	32.1%	1.8%	36.7%	0.9%	19.4%	0.1%	13.7%	0.1%
	2015-2019	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%

## Appendix 6.2: Economy

**Table A6.2.1: American Community Survey (ACS) Economic Indicators\***

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>Median household income (B19001)</b>	2009-2013	\$27,634	N/A	\$29,801	N/A	\$55,909	\$256	\$61,094	\$157
	2010-2014	\$28,349	N/A	\$29,000	N/A	\$55,870	\$244	\$61,489	\$154
	2011-2015	\$28,080	N/A	\$29,389	N/A	\$56,196	\$270	\$61,818	\$156
	2012-2016	\$29,543	N/A	\$29,880	N/A	\$57,952	\$331	\$63,783	\$188
	2013-2017	\$30,274	N/A	\$32,088	N/A	\$61,015	\$262	\$67,169	\$192
	2014-2018	\$31,508	N/A	\$35,188	N/A	\$64,251	\$247	\$71,228	\$217
	2015-2019	\$33,171	N/A	\$38,381	N/A	\$68,044	\$347	\$75,235	\$232
<b>Percent of individuals living below poverty (B17001)</b>	2009-2013	41.8%	2.9%	37.4%	1.6%	17.8%	0.2%	15.9%	0.1%
	2010-2014	42.9%	2.7%	38.6%	1.6%	18.4%	0.2%	16.4%	0.1%
	2011-2015	44.9%	2.9%	39.0%	1.5%	18.2%	0.1%	16.3%	0.1%
	2012-2016	43.4%	2.9%	38.4%	1.6%	17.8%	0.2%	15.8%	0.1%
	2013-2017	41.2%	3.0%	36.1%	1.5%	17.0%	0.2%	15.1%	0.1%
	2014-2018	37.4%	2.9%	31.8%	1.4%	16.0%	0.2%	14.3%	0.1%
	2015-2019	34.9%	2.7%	29.6%	1.5%	14.9%	0.1%	13.4%	0.1%
<b>Percent high income (\$125k +) (B19001)</b>	2009-2013	3.1%	1.0%	3.1%	0.5%	17.6%	0.1%	19.9%	0.1%
	2010-2014	3.3%	1.0%	2.9%	0.5%	18.0%	0.1%	20.4%	0.1%
	2011-2015	3.1%	0.9%	2.9%	0.5%	18.3%	0.1%	20.9%	0.1%
	2012-2016	2.8%	0.9%	3.2%	0.5%	19.4%	0.1%	22.1%	0.1%
	2013-2017	2.6%	0.9%	3.9%	0.6%	21.0%	0.2%	23.9%	0.1%
	2014-2018	3.6%	1.0%	5.7%	0.7%	22.8%	0.2%	26.1%	0.1%
	2015-2019	4.6%	1.1%	7.3%	0.8%	24.5%	0.2%	28.0%	0.1%

\*MOEs for the county and the state are obtained directly from the U.S. Census Bureau. MOEs for TCC and control census tracts are derived by the UCLA Luskin Center for Innovation in accordance with the methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018). All MOEs are reported at the 90% confidence level.

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>ECONOMIC INDICATORS (CONTINUED)</b>									
<b>Percent with less than high school education (S1501)</b>	2009-2013	50.0%	2.6%	50.3%	1.3%	23.4%	0.1%	18.8%	0.1%
	2010-2014	48.1%	2.3%	50.6%	1.3%	23.2%	0.1%	18.5%	0.1%
	2011-2015	47.2%	2.2%	48.5%	1.3%	22.7%	0.1%	18.2%	0.1%
	2012-2016	46.3%	2.1%	47.8%	1.3%	22.3%	0.1%	17.9%	0.1%
	2013-2017	47.2%	2.1%	47.0%	1.3%	21.8%	0.1%	17.5%	0.1%
	2014-2018	46.6%	2.3%	46.0%	1.3%	21.3%	0.1%	17.1%	0.1%
	2015-2019	46.4%	2.2%	45.4%	1.3%	20.9%	0.1%	16.7%	0.1%
<b>Percent with bachelor's degree or higher (S1501)</b>	2009-2013	4.0%	0.9%	6.7%	0.6%	29.7%	0.2%	30.7%	0.1%
	2010-2014	4.2%	0.9%	6.6%	0.5%	29.9%	0.2%	31.0%	0.1%
	2011-2015	4.8%	0.9%	6.6%	0.5%	30.3%	0.2%	31.4%	0.1%
	2012-2016	6.1%	1.0%	6.7%	0.5%	30.8%	0.1%	32.0%	0.1%
	2013-2017	5.9%	0.9%	6.9%	0.6%	31.2%	0.2%	32.6%	0.1%
	2014-2018	5.4%	0.9%	7.2%	0.6%	31.8%	0.2%	33.3%	0.1%
	2015-2019	6.2%	1.0%	7.7%	0.6%	32.5%	0.2%	33.9%	0.1%
<b>Percent employed for the population 16 years and over (B23025)</b>	2009-2013	45.6%	1.8%	51.2%	1.0%	57.5%	0.1%	56.4%	0.1%
	2010-2014	45.9%	1.8%	51.1%	1.0%	57.5%	0.1%	56.4%	0.1%
	2011-2015	45.7%	1.8%	51.4%	1.0%	58.0%	0.1%	56.9%	0.1%
	2012-2016	47.8%	1.9%	51.7%	1.0%	58.6%	0.1%	57.5%	0.1%
	2013-2017	48.9%	1.9%	52.7%	1.0%	59.3%	0.1%	58.2%	0.1%
	2014-2018	50.9%	2.1%	54.6%	1.0%	60.0%	0.1%	58.9%	0.1%
	2015-2019	52.4%	1.9%	56.3%	1.0%	60.7%	0.1%	59.4%	0.1%

## Appendix 6.3: Energy

**Table A6.2.1: American Community Survey (ACS) Energy Indicators\***

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>Percent of households heating home with electricity (B25040)</b>	2009-2013	19.0%	2.3%	25.1%	1.3%	25.0%	0.1%	25.5%	0.1%
	2010-2014	18.9%	2.2%	24.4%	1.3%	25.2%	0.1%	25.8%	0.1%
	2011-2015	21.8%	2.2%	25.1%	1.3%	25.7%	0.1%	26.2%	0.1%
	2012-2016	21.3%	2.4%	22.8%	1.2%	25.9%	0.2%	26.4%	0.1%
	2013-2017	21.6%	2.4%	20.4%	1.1%	26.0%	0.1%	26.5%	0.1%
	2014-2018	21.8%	2.3%	19.7%	1.1%	25.9%	0.2%	26.4%	0.1%
	2015-2019	23.0%	2.3%	20.2%	1.2%	26.1%	0.2%	26.6%	0.1%
<b>Percent of households heating home with other non-fossil fuels (B25040)</b>	2009-2013	0.0%	0.2%	0.3%	0.2%	0.3%	0.0%	1.9%	0.0%
	2010-2014	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	1.9%	0.0%
	2011-2015	0.0%	0.2%	0.2%	0.1%	0.4%	0.0%	1.9%	0.0%
	2012-2016	0.1%	0.2%	0.2%	0.1%	0.4%	0.0%	2.0%	0.0%
	2013-2017	0.1%	0.2%	0.1%	0.1%	0.5%	0.0%	2.1%	0.0%
	2014-2018	0.2%	0.2%	0.6%	0.2%	2.0%	0.1%	2.1%	0.0%
	2015-2019	0.1%	0.2%	0.1%	0.1%	0.5%	0.0%	2.1%	0.0%
<b>Percent of households heating home with utility gas (B25040)</b>	2009-2013	61.3%	2.8%	61.3%	1.5%	67.7%	0.2%	66.0%	0.1%
	2010-2014	59.5%	2.6%	60.7%	1.4%	67.2%	0.1%	65.6%	0.1%
	2011-2015	54.9%	2.6%	59.4%	1.4%	66.6%	0.2%	65.0%	0.1%
	2012-2016	55.9%	2.7%	61.7%	1.4%	66.2%	0.2%	64.6%	0.1%
	2013-2017	58.1%	2.6%	64.6%	1.3%	66.0%	0.1%	64.4%	0.1%
	2014-2018	61.5%	2.6%	65.4%	1.4%	65.9%	0.2%	64.3%	0.1%
	2015-2019	61.2%	2.7%	65.3%	1.4%	65.7%	0.2%	64.1%	0.0%

\*MOEs for the county and the state are obtained directly from the U.S. Census Bureau. MOEs for TCC and control census tracts are derived by the UCLA Luskin Center for Innovation in accordance with the methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018). All MOEs are reported at the 90% confidence.

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>ENERGY-RELATED INDICATORS (CONTINUED)</b>									
Percent of households heating home with other fossil fuels (B25040)	2009-2013	1.2%	0.6%	1.0%	0.3%	1.2%	0.0%	3.5%	0.0%
	2010-2014	1.0%	0.6%	0.9%	0.3%	1.3%	0.0%	3.4%	0.0%
	2011-2015	1.0%	0.6%	1.0%	0.3%	1.3%	0.0%	3.4%	0.0%
	2012-2016	0.9%	0.5%	0.8%	0.2%	1.3%	0.0%	3.4%	0.0%
	2013-2017	0.7%	0.5%	0.8%	0.2%	1.4%	0.0%	3.5%	0.0%
	2014-2018	0.9%	0.5%	0.7%	0.2%	1.4%	0.0%	3.5%	0.0%
	2015-2019	0.7%	0.5%	0.7%	0.2%	1.4%	0.1%	3.5%	0.0%
Percent of houses with no fuel used (B25040)	2009-2013	18.4%	2.3%	12.2%	1.0%	5.6%	0.1%	2.9%	0.0%
	2010-2014	20.5%	2.2%	13.6%	1.0%	5.8%	0.1%	3.0%	0.0%
	2011-2015	22.1%	2.3%	14.1%	1.0%	5.9%	0.1%	3.2%	0.0%
	2012-2016	21.4%	2.3%	14.4%	1.0%	6.1%	0.1%	3.3%	0.0%
	2013-2017	19.0%	2.2%	13.9%	0.9%	6.2%	0.1%	3.4%	0.0%
	2014-2018	15.1%	2.0%	14.0%	1.0%	6.2%	0.1%	3.4%	0.0%
	2015-2019	14.2%	2.0%	13.6%	1.0%	6.1%	0.1%	3.3%	0.0%

**Table A6.2.2: Solar PV Systems per 1,000 Households<sup>10</sup>**

Indicator	Dataset Year	Watts TCC Census Tracts	Control Tracts	Los Angeles County	California
Solar PV systems for all building types	2018	17.7	12.0	28.4	49.4

## Appendix 6.4: Environment

**Table A6.4.1: Land-Cover Indicators<sup>12</sup>**

Indicator	Dataset Year	Percent area for TCC Project Area	Square Miles
Impervious / buildings	2016	62.4%	1.6
Dry vegetation / barren	2016	14.0%	0.4
Green vegetation	2016	11.7%	0.3
Shadow	2016	11.9%	0.3
Unclassified	2016	<0.1%	<0.1
Water	2016	0%	0

<sup>12</sup> Land-cover indicators were derived from satellite imagery maintained by the National Agriculture Imagery Program.

## Appendix 6.5: Health

**Table A6.5.1: American Community Survey (ACS) Health Indicators\***

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>Percent with health insurance coverage (B27001)</b>	2009-2013	70.2%	1.8%	65.6%	1.1%	77.8%	0.2%	82.2%	0.1%
	2010-2014	71.5%	1.5%	67.1%	1.1%	79.1%	0.1%	83.3%	0.1%
	2011-2015	75.1%	1.3%	71.1%	1.0%	81.6%	0.1%	85.3%	0.1%
	2012-2016	77.5%	1.3%	75.2%	1.0%	84.1%	0.1%	87.4%	0.1%
	2013-2017	80.6%	1.5%	79.1%	1.0%	86.7%	0.1%	89.5%	0.1%
	2014-2018	84.1%	1.3%	82.6%	0.9%	89.2%	0.1%	91.5%	0.1%
	2015-2019	86.0%	1.2%	84.4%	0.9%	90.4%	0.1%	92.5%	0.1%
<b>Percent with private health insurance coverage (B27002)</b>	2009-2013	21.8%	1.9%	24.4%	1.0%	54.3%	0.2%	61.0%	0.2%
	2010-2014	20.2%	1.8%	23.6%	1.0%	54.1%	0.2%	60.8%	0.2%
	2011-2015	21.2%	1.9%	25.4%	1.0%	55.0%	0.2%	61.2%	0.2%
	2012-2016	22.3%	1.8%	26.9%	1.0%	55.8%	0.2%	61.8%	0.2%
	2013-2017	22.4%	1.8%	28.3%	1.1%	56.8%	0.2%	62.6%	0.2%
	2014-2018	25.4%	2.0%	29.5%	1.1%	57.9%	0.2%	63.4%	0.2%
	2015-2019	27.6%	2.0%	30.6%	1.2%	58.4%	0.3%	63.8%	0.2%
<b>Percent with public health insurance coverage (B27003)</b>	2009-2013	51.3%	2.3%	44.8%	1.3%	29.7%	0.1%	29.5%	0.1%
	2010-2014	54.7%	2.1%	46.8%	1.3%	31.1%	0.1%	30.8%	0.1%
	2011-2015	57.4%	1.9%	49.5%	1.2%	32.9%	0.1%	32.6%	0.1%
	2012-2016	58.7%	1.9%	52.3%	1.3%	34.7%	0.2%	34.3%	0.1%
	2013-2017	61.4%	2.1%	54.7%	1.3%	36.4%	0.1%	35.8%	0.1%
	2014-2018	61.9%	2.3%	56.9%	1.3%	38.0%	0.1%	37.2%	0.1%
	2015-2019	61.6%	2.2%	57.4%	1.3%	38.8%	0.2%	38.0%	0.1%

\*MOEs for the county and the state are obtained directly from the U.S. Census Bureau. MOEs for TCC and control census tracts are derived by the UCLA Luskin Center for Innovation in accordance with the methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018). All MOEs are reported at the 90% confidence.

**Table A6.5.2: Vehicle Collisions Involving Bicyclists and Pedestrians\***

Indicator	Dataset Year	Gross Number of Collisions				Normalized by Street Mile			
		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size	
		0ft	50 ft	0ft	50 ft	0ft	50 ft	0ft	50 ft
<b>Bicycle Collision at Injury Level 1: Fatal</b>	2019	0	0	1	1	0	0	4.3	4.3
	2018	1	1	1	1	17.9	17.9	4.3	4.3
	2017	0	1	0	0	0	17.9	0	0
	2016	1	1	1	1	17.9	17.9	4.3	4.3
	2015	0	0	1	2	0	0	4.3	8.6
	2014	0	0	0	0	0	0	0	0
	2013	1	1	1	1	17.9	17.9	4.3	4.3
<b>Bicycle Collision at Injury Level 2: Severe Injury</b>	2019	3	4	17	20	53.8	71.7	72.9	85.7
	2018	2	2	12	14	35.9	35.9	51.4	60.0
	2017	1	2	8	8	17.9	35.9	34.3	34.3
	2016	2	2	9	12	35.9	35.9	38.6	51.4
	2015	0	1	7	8	0	30.0	17.9	34.3
	2014	2	3	4	5	35.9	53.8	17.1	21.4
	2013	1	2	5	6	17.9	35.9	21.4	25.7
<b>Bicycle Collision at Injury Level 3: Visible Injury</b>	2019	10	11	38	50	179.3	197.2	162.9	214.3
	2018	11	12	50	66	197.2	215.2	214.3	282.9
	2017	8	13	55	64	143.4	233.1	235.8	274.3
	2016	5	6	30	40	89.7	107.6	128.6	171.5
	2015	5	8	49	40	89.7	143.4	210.0	171.5
	2014	7	7	72	96	125.5	125.5	308.6	411.5
	2013	6	8	53	70	107.6	143.4	227.2	300.1
<b>Bicycle Collision at Injury Level 4: Complaint of Pain</b>	2019	9	15	56	74	161.4	269.0	240.1	317.2
	2018	6	6	51	66	107.6	107.6	218.6	282.9
	2017	6	8	50	74	107.6	143.4	214.3	317.2
	2016	12	14	62	72	215.2	251.0	265.8	308.6
	2015	5	9	58	76	89.7	161.4	248.6	325.8
	2014	6	6	57	81	107.6	107.6	244.3	347.2
	2013	8	11	65	85	143.4	197.2	278.6	364.4

\*Collision data were obtained from the Transportation Injury Mapping System (TIMS). The numbers presented here are conservative in that they do not include collisions that were missing geographic coordinates in TIMS. Street mileage was obtained from OpenStreets-Map (OSM) and totaled 129 miles for the project area and 470 miles for the control tracts. Vehicle collisions involving bicycles and pedestrians are not mutually exclusive because some accidents may involve both modes.

Table continues next page



Indicator	Dataset Year	Gross Number of Collisions				Normalized by Street Mile			
		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size	
		0ft	50 ft	0ft	50 ft	0ft	50 ft	0ft	50 ft
Pedestrian Collision at Injury Level 1: Fatal	2019	2	4	13	18	35.9	71.7	55.7	77.2
	2018	4	4	19	20	71.7	71.7	81.4	85.7
	2017	2	2	14	15	35.9	35.9	60.0	64.3
	2016	2	2	6	8	35.9	35.9	25.7	34.3
	2015	1	1	7	9	17.9	17.9	30.0	38.6
	2014	2	3	8	11	35.9	53.8	34.3	47.2
	2013	1	1	7	11	17.9	17.9	30.0	47.2
Pedestrian Collision at Injury Level 2: Severe Injury	2019	7	9	46	56	125.5	161.4	197.2	240.1
	2018	8	11	48	60	143.4	197.2	205.8	257.2
	2017	8	10	27	35	143.4	179.3	115.7	150.0
	2016	3	8	23	27	53.8	143.4	98.6	115.7
	2015	3	7	16	20	53.8	125.5	68.6	85.7
	2014	4	6	25	31	71.7	107.6	107.2	132.9
	2013	5	5	24	31	89.7	89.7	102.9	132.9
Pedestrian Collision at Injury Level 3: Visible Injury	2019	8	11	72	92	143.4	197.2	308.6	394.4
	2018	12	18	81	102	215.2	322.8	347.2	437.2
	2017	11	15	76	95	197.2	269.0	325.8	407.2
	2016	19	23	77	92	340.7	412.4	330.1	394.4
	2015	13	17	54	76	233.1	304.8	231.5	325.8
	2014	11	16	61	86	197.2	286.9	261.5	368.6
	2013	15	21	71	88	269.0	376.6	304.3	377.2

Indicator	Dataset Year	Gross Number of Collisions				Normalized by Street Mile			
		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size		Value for TCC Site by Buffer Size		Value for Controls by Buffer Size	
		0ft	50 ft	0ft	50 ft	0ft	50 ft	0ft	50 ft
Pedestrian Collision at Injury Level 4: Complaint of Pain	2019	17	21	93	117	304.8	376.6	398.7	501.5
	2018	23	29	95	118	412.4	520.0	407.2	505.8
	2017	13	17	77	101	233.1	304.8	330.1	432.9
	2016	8	15	81	104	143.4	269.0	347.2	445.8
	2015	24	29	74	85	430.3	520.0	317.2	364.4
	2014	17	20	56	75	304.8	358.6	240.1	321.5
	2013	13	17	65	90	233.1	304.8	278.6	385.8
Combined Bicycle and Pedestrian Collision at Injury Level 1: Fatal	2019	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0
	2015	0	0	0	0	0	0	0	0
	2014	0	0	0	0	0	0	0	0
	2013	0	0	0	0	0	0	0	0
Combined Bicycle and Pedestrian Collision at Injury Level 2: Severe Injury	2019	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0
	2015	0	0	0	0	0	0	0	0
	2014	0	0	0	0	0	0	0	0
	2013	0	0	0	0	0	0	0	0
Combined Bicycle and Pedestrian at Injury Level 3: Visible Injury	2019	0	0	2	2	0	0	8.6	8.6
	2018	0	0	0	0	0	0	0	0
	2017	0	0	1	1	0	0	4.3	4.3
	2016	0	0	0	0	0	0	0	0
	2015	0	0	0	0	0	0	0	0
	2014	0	0	0	0	0	0	0	0
	2013	0	0	2	2	0	0	8.6	8.6
Combined Bicycle and Pedestrian at Injury Level 4: Complaint of Pain	2019	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2016	0	0	1	1	0	0	4.3	4.3
	2015	0	1	1	1	0	17.9	4.3	4.3
	2014	0	0	0	1	0	0	4.3	4.3
	2013	0	0	0	0	0	0	0	0

## Appendix 6.6: Housing

Table A6.6.1: American Community Survey (ACS) Housing Indicators\*

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>HOUSING-RELATED INDICATORS</b>									
<b>Percent renters (B25003)</b>	2009-2013	67.3%	2.6%	70.6%	1.3%	53.1%	0.2%	44.7%	0.1%
	2010-2014	66.5%	2.3%	72.1%	1.3%	53.6%	0.1%	45.2%	0.1%
	2011-2015	66.5%	2.2%	72.6%	1.2%	54.0%	0.2%	45.7%	0.1%
	2012-2016	64.5%	2.4%	72.8%	1.2%	54.3%	0.2%	45.9%	0.2%
	2013-2017	65.3%	2.5%	72.8%	1.2%	54.1%	0.2%	45.5%	0.1%
	2014-2018	64.7%	2.4%	72.5%	1.2%	54.2%	0.2%	45.4%	0.1%
	2015-2019	65.1%	2.4%	71.5%	1.2%	54.2%	0.2%	45.2%	0.1%
<b>Percent homeowners (B25003)</b>	2009-2013	32.7%	2.3%	29.4%	1.2%	46.9%	0.3%	55.3%	0.3%
	2010-2014	33.5%	2.3%	27.9%	1.2%	46.4%	0.3%	54.8%	0.3%
	2011-2015	33.5%	2.1%	27.4%	1.1%	46.0%	0.3%	54.3%	0.3%
	2012-2016	35.5%	2.4%	27.2%	1.1%	45.7%	0.3%	54.1%	0.3%
	2013-2017	34.7%	2.4%	27.2%	1.1%	45.9%	0.3%	54.5%	0.3%
	2014-2018	35.3%	2.2%	27.5%	1.1%	45.8%	0.3%	54.6%	0.3%
	2015-2019	34.9%	2.2%	28.5%	1.2%	45.8%	0.3%	54.8%	0.3%
<b>Percent of households paying <math>\geq</math>30% of income on rent (B25070)</b>	2009-2013	67.9%	4.4%	68.6%	2.3%	56.4%	0.3%	54.1%	0.2%
	2010-2014	69.4%	4.4%	70.1%	2.2%	57.0%	0.3%	54.2%	0.1%
	2011-2015	66.6%	4.1%	69.9%	2.1%	56.9%	0.3%	54.0%	0.1%
	2012-2016	67.0%	4.3%	70.4%	2.1%	56.5%	0.3%	53.6%	0.1%
	2013-2017	69.0%	4.4%	68.1%	2.2%	56.1%	0.3%	53.1%	0.1%
	2014-2018	68.1%	4.6%	65.9%	2.2%	55.5%	0.3%	52.6%	0.2%
	2015-2019	65.4%	4.9%	64.6%	2.3%	54.9%	0.3%	52.1%	0.2%
<b>Percent of households paying <math>\geq</math>50% of income on rent (B25070)</b>	2009-2013	41.1%	3.5%	43.5%	1.8%	30.7%	0.2%	28.3%	0.1%
	2010-2014	41.2%	3.3%	44.9%	1.8%	31.0%	0.2%	28.5%	0.1%
	2011-2015	41.5%	3.1%	44.7%	1.7%	30.9%	0.2%	28.2%	0.2%
	2012-2016	40.7%	3.3%	44.8%	1.7%	30.6%	0.2%	27.9%	0.1%
	2013-2017	40.3%	3.4%	43.4%	1.8%	30.1%	0.3%	27.4%	0.1%
	2014-2018	40.7%	3.5%	40.8%	1.7%	29.5%	0.2%	27.0%	0.2%
	2015-2019	37.4%	3.6%	38.6%	1.8%	29.0%	0.2%	26.6%	0.2%

\*MOEs for the county and the state are obtained directly from the U.S. Census Bureau. MOEs for TCC and control census tracts are derived by the UCLA Luskin Center for Innovation in accordance with the methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018). All MOEs are reported at the 90% confidence.

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>HOUSING-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent of households paying ≥30% of income on mortgage (B25091)</b>	2009-2013	34.7%	4.9%	30.9%	2.8%	30.3%	0.2%	29.7%	0.1%
	2010-2014	32.8%	4.8%	31.5%	2.7%	29.4%	0.2%	28.5%	0.0%
	2011-2015	29.4%	4.4%	31.1%	2.6%	28.5%	0.2%	27.4%	0.2%
	2012-2016	29.6%	4.3%	32.5%	2.7%	27.5%	0.2%	26.2%	0.2%
	2013-2017	31.8%	4.7%	31.5%	2.6%	26.5%	0.2%	25.3%	0.0%
	2014-2018	33.2%	4.8%	31.5%	2.7%	26.0%	0.2%	24.7%	0.0%
	2015-2019	32.3%	4.7%	31.0%	2.8%	25.7%	0.2%	24.4%	0.0%
<b>Percent of households paying ≥50% of income on mortgage (B25091)</b>	2009-2013	12.4%	3.0%	11.8%	1.8%	7.9%	0.1%	7.2%	0.1%
	2010-2014	10.9%	2.9%	10.6%	1.7%	7.4%	0.1%	6.7%	0.0%
	2011-2015	8.5%	2.3%	9.8%	1.6%	7.0%	0.1%	6.2%	0.0%
	2012-2016	9.3%	2.4%	9.7%	1.6%	6.5%	0.1%	5.8%	0.1%
	2013-2017	10.3%	2.9%	9.0%	1.5%	6.3%	0.1%	5.5%	0.1%
	2014-2018	9.8%	2.9%	9.3%	1.6%	6.0%	0.1%	5.4%	0.1%
	2015-2019	8.2%	2.6%	9.0%	1.5%	5.9%	0.1%	5.3%	0.0%
<b>Percent of households with more than one occupant per room (B25014)</b>	2009-2013	28.2%	2.9%	26.7%	1.5%	12.1%	0.1%	8.2%	0.1%
	2010-2014	25.9%	2.7%	26.4%	1.4%	12.1%	0.1%	8.2%	0.1%
	2011-2015	23.0%	2.5%	25.3%	1.4%	11.8%	0.1%	8.2%	0.1%
	2012-2016	21.9%	2.5%	23.9%	1.3%	11.8%	0.1%	8.2%	0.1%
	2013-2017	22.2%	2.5%	23.0%	1.3%	11.7%	0.1%	8.2%	0.1%
	2014-2018	22.0%	2.5%	22.0%	1.3%	11.4%	0.1%	8.2%	0.1%
	2015-2019	21.4%	2.4%	20.7%	1.3%	11.3%	0.1%	8.2%	0.1%
<b>Percent of households with more than one occupant per room (renters) (B25014)</b>	2009-2013	20.5%	2.5%	21.2%	1.4%	9.3%	0.1%	6.0%	0.0%
	2010-2014	18.1%	2.2%	21.0%	1.3%	9.3%	0.1%	6.0%	0.0%
	2011-2015	15.5%	2.0%	20.2%	1.2%	9.2%	0.1%	6.0%	0.1%
	2012-2016	13.9%	2.0%	19.1%	1.2%	9.2%	0.1%	6.1%	0.0%
	2013-2017	14.3%	2.0%	18.5%	1.2%	9.1%	0.1%	6.0%	0.1%
	2014-2018	14.2%	2.1%	17.2%	1.1%	8.9%	0.1%	6.0%	0.0%
	2015-2019	13.3%	2.0%	16.1%	1.1%	8.8%	0.1%	6.0%	0.1%
<b>Percent of households with more than one occupant per room (homeowners) (B25014)</b>	2009-2013	7.7%	1.5%	5.5%	0.6%	2.9%	0.1%	2.3%	0.0%
	2010-2014	7.7%	1.5%	5.4%	0.6%	2.8%	0.1%	2.2%	0.0%
	2011-2015	7.5%	1.4%	5.1%	0.6%	2.7%	0.1%	2.2%	0.0%
	2012-2016	8.1%	1.4%	4.8%	0.6%	2.6%	0.0%	2.1%	0.0%
	2013-2017	7.9%	1.4%	4.5%	0.6%	2.6%	0.0%	2.2%	0.0%
	2014-2018	7.8%	1.4%	4.7%	0.6%	2.6%	0.0%	2.2%	0.0%
	2015-2019	8.0%	1.4%	4.6%	0.6%	2.5%	0.1%	2.2%	0.0%

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>HOUSING-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent of households in same house 1 year ago (renters) (B07013)</b>	2009-2013	52.6%	3.0%	56.2%	1.5%	40.2%	0.2%	32.7%	0.2%
	2010-2014	52.4%	2.9%	57.3%	1.6%	41.0%	0.2%	33.7%	0.2%
	2011-2015	53.8%	2.9%	58.4%	1.4%	42.0%	0.3%	34.7%	0.2%
	2012-2016	53.8%	2.9%	59.2%	1.5%	42.9%	0.3%	35.4%	0.2%
	2013-2017	56.0%	3.1%	60.2%	1.5%	43.4%	0.3%	35.6%	0.2%
	2014-2018	56.0%	2.8%	61.2%	1.5%	43.9%	0.2%	35.8%	0.2%
	2015-2019	56.9%	2.9%	62.1%	1.5%	44.2%	0.3%	35.9%	0.2%
<b>Percent of households in same house 1 year ago (homeowners) (B070103)</b>	2009-2013	33.7%	3.0%	31.6%	1.6%	46.9%	0.3%	52.3%	0.3%
	2010-2014	33.8%	2.9%	30.5%	1.6%	46.3%	0.3%	51.7%	0.3%
	2011-2015	34.1%	2.7%	30.2%	1.6%	45.9%	0.3%	51.3%	0.3%
	2012-2016	36.5%	3.0%	30.4%	1.5%	45.6%	0.3%	51.0%	0.3%
	2013-2017	36.1%	3.2%	30.0%	1.5%	45.9%	0.3%	51.4%	0.2%
	2014-2018	37.8%	3.0%	30.4%	1.4%	45.9%	0.3%	51.6%	0.2%
	2015-2019	38.2%	2.7%	31.2%	1.5%	46.1%	0.3%	52.0%	0.3%
<b>Percent of households in same house 1 year ago (w/ income of ≥ \$75k) (B07010)</b>	2009-2013	1.2%	0.4%	1.3%	0.2%	10.5%	NA	12.1%	0.1%
	2010-2014	1.2%	0.4%	1.3%	0.2%	10.6%	0.1%	12.3%	0.1%
	2011-2015	1.2%	0.4%	1.4%	0.2%	10.7%	0.1%	12.4%	0.1%
	2012-2016	1.2%	0.4%	1.6%	0.2%	11.2%	0.1%	13.0%	0.1%
	2013-2017	0.9%	0.3%	1.8%	0.2%	11.9%	0.1%	13.8%	0.1%
	2014-2018	1.2%	0.4%	2.2%	0.3%	12.8%	0.1%	14.8%	0.1%
	2015-2019	1.6%	0.5%	2.7%	0.3%	13.8%	0.1%	16.0%	0.1%
<b>Percent of households in same house 1 year ago (w/ income of &lt;\$75k) (B07010)</b>	2009-2013	84.7%	1.4%	86.7%	0.8%	75.9%	NA	72.2%	0.1%
	2010-2014	84.6%	1.3%	86.8%	0.9%	76.1%	NA	72.5%	0.1%
	2011-2015	86.4%	1.1%	87.2%	0.9%	76.5%	NA	72.9%	0.1%
	2012-2016	88.4%	0.9%	87.6%	0.9%	76.6%	NA	72.8%	0.1%
	2013-2017	90.5%	1.3%	88.3%	1.0%	76.5%	NA	72.4%	0.1%
	2014-2018	92.3%	1.2%	88.8%	1.0%	76.2%	NA	71.8%	0.1%
	2015-2019	93.1%	1.5%	90.0%	1.0%	75.6%	0.2%	71.0%	0.1%
<b>Percent of housing units for rent that are vacant (B25002 and B25004)</b>	2009-2013	3.7%	1.1%	3.5%	0.6%	2.3%	0.1%	2.1%	0.1%
	2010-2014	3.4%	1.0%	3.6%	0.5%	2.2%	0.1%	2.0%	0.0%
	2011-2015	2.9%	1.0%	3.1%	0.5%	1.9%	0.1%	1.8%	0.0%
	2012-2016	1.8%	0.7%	2.5%	0.4%	1.8%	0.1%	1.7%	0.0%
	2013-2017	1.3%	0.6%	2.1%	0.4%	1.7%	0.1%	1.6%	0.0%
	2014-2018	1.1%	0.6%	1.9%	0.4%	1.7%	0.1%	1.5%	0.0%
	2015-2019	1.1%	0.6%	1.7%	0.4%	1.8%	0.1%	1.6%	0.0%

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>HOUSING-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent of housing units for sale that are vacant (B25002 and B25004)</b>	2009-2013	1.5%	0.7%	0.7%	0.3%	0.7%	0.0%	0.9%	0.0%
	2010-2014	1.2%	0.6%	0.9%	0.3%	0.6%	0.0%	0.8%	0.0%
	2011-2015	0.9%	0.5%	0.6%	0.2%	0.6%	0.0%	0.7%	0.0%
	2012-2016	0.6%	0.4%	0.4%	0.2%	0.5%	0.0%	0.6%	0.0%
	2013-2017	0.5%	0.4%	0.4%	0.2%	0.5%	0.0%	0.6%	0.0%
	2014-2018	0.7%	0.5%	0.4%	0.2%	0.5%	0.0%	0.6%	0.0%
	2015-2019	0.4%	0.4%	0.4%	0.2%	0.5%	0.0%	0.6%	0.0%

## Appendix 6.7: Transportation

**Table A6.7.1: American Community Survey (ACS) Transportation Indicators\***

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>TRANSPORTATION-RELATED INDICATORS</b>									
<b>Percent of households with a vehicle available (B08201)</b>	2009-2013	36.9%	2.8%	39.7%	1.5%	35.1%	0.1%	32.3%	0.1%
	2010-2014	35.9%	2.5%	39.6%	1.5%	35.1%	0.1%	32.2%	0.1%
	2011-2015	35.8%	2.5%	39.4%	1.4%	35.1%	0.2%	32.1%	0.1%
	2012-2016	35.0%	2.6%	38.8%	1.4%	34.7%	0.2%	31.7%	0.1%
	2013-2017	34.9%	2.5%	37.3%	1.4%	34.3%	0.2%	31.2%	0.1%
	2014-2018	34.7%	2.6%	36.7%	1.3%	33.9%	0.2%	30.8%	0.1%
	2015-2019	33.7%	2.7%	34.9%	1.4%	33.5%	0.2%	30.4%	0.1%
<b>Percent of workers commuting to work alone by car (B08301)</b>	2009-2013	64.3%	2.9%	61.4%	1.3%	72.4%	0.1%	73.2%	0.1%
	2010-2014	63.6%	2.7%	61.0%	1.4%	72.6%	0.1%	73.2%	0.1%
	2011-2015	63.5%	2.7%	63.7%	1.3%	73.0%	0.2%	73.4%	0.1%
	2012-2016	65.2%	2.0%	64.9%	1.3%	73.3%	0.1%	73.5%	0.0%
	2013-2017	67.5%	2.2%	66.8%	1.4%	73.7%	0.2%	73.6%	0.1%
	2014-2018	69.2%	2.0%	69.5%	1.3%	73.9%	0.2%	73.7%	0.0%
	2015-2019	70.9%	1.8%	69.5%	1.2%	74.0%	0.2%	73.7%	0.0%
<b>Percent of workers commuting to work by carpool (B08301)</b>	2009-2013	15.5%	2.3%	13.6%	1.2%	10.6%	0.1%	11.3%	0.1%
	2010-2014	16.3%	2.4%	12.8%	1.1%	10.3%	0.1%	11.1%	0.1%
	2011-2015	16.0%	2.3%	11.9%	1.0%	9.9%	0.1%	10.8%	0.1%
	2012-2016	15.2%	2.3%	12.3%	1.0%	9.8%	0.1%	10.6%	0.1%
	2013-2017	13.4%	2.0%	11.1%	0.9%	9.6%	0.1%	10.4%	0.1%
	2014-2018	12.8%	2.0%	10.5%	0.9%	9.5%	0.1%	10.3%	0.1%
	2015-2019	11.8%	1.7%	10.4%	0.9%	9.5%	0.1%	10.1%	0.1%
<b>Percent of workers commuting to work by public transit (B08301)</b>	2009-2013	12.1%	1.8%	17.8%	1.2%	7.1%	0.1%	5.2%	0.0%
	2010-2014	12.4%	1.9%	18.5%	1.2%	7.0%	0.1%	5.2%	0.0%
	2011-2015	13.7%	1.9%	17.0%	1.2%	6.8%	0.1%	5.2%	0.0%
	2012-2016	13.9%	2.1%	15.6%	1.1%	6.5%	0.1%	5.2%	0.0%
	2013-2017	13.5%	2.2%	14.6%	1.1%	6.3%	0.1%	5.2%	0.0%
	2014-2018	13.2%	2.4%	12.8%	0.9%	6.0%	0.1%	5.1%	0.0%
	2015-2019	12.0%	2.2%	13.2%	1.1%	5.8%	0.1%	5.1%	0.0%

Table continues next page

	Time Period (ACS 5-year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for Los Angeles County	MOE	Estimate for California	MOE
<b>TRANSPORTATION-RELATED INDICATORS (CONTINUED)</b>									
<b>Percent of workers commuting to work by foot (B08301)</b>	2009-2013	1.9%	0.8%	2.2%	0.4%	2.9%	0.1%	2.7%	0.0%
	2010-2014	2.2%	0.8%	2.6%	0.5%	2.9%	0.1%	2.7%	0.0%
	2011-2015	1.8%	0.7%	2.9%	0.5%	2.8%	0.1%	2.7%	0.0%
	2012-2016	1.5%	0.6%	2.5%	0.4%	2.8%	0.1%	2.7%	0.0%
	2013-2017	1.2%	0.6%	2.4%	0.5%	2.7%	0.1%	2.7%	0.0%
	2014-2018	0.8%	0.4%	1.9%	0.4%	2.7%	0.1%	2.7%	0.0%
	2015-2019	0.8%	0.5%	1.4%	0.3%	2.7%	0.1%	2.6%	0.0%
<b>Percent of workers commuting to work by bike (B08301)</b>	2009-2013	0.2%	0.3%	0.8%	0.3%	0.9%	0.0%	1.1%	0.0%
	2010-2014	0.2%	0.2%	1.0%	0.3%	0.9%	0.0%	1.1%	0.0%
	2011-2015	0.4%	0.3%	1.0%	0.3%	0.9%	0.0%	1.1%	0.0%
	2012-2016	0.4%	0.3%	0.9%	0.3%	0.9%	0.0%	1.1%	0.0%
	2013-2017	0.4%	0.3%	1.0%	0.3%	0.9%	0.0%	1.1%	0.0%
	2014-2018	0.3%	0.2%	0.8%	0.2%	0.8%	0.0%	1.0%	0.0%
	2015-2019	0.6%	0.4%	0.7%	0.2%	0.8%	0.0%	1.0%	0.0%
<b>Percent of workers commuting to work by other modes: taxicab, motorcycle, and other (B08301)</b>	2009-2013	1.5%	0.7%	1.1%	0.3%	1.2%	0.0%	1.3%	0.0%
	2010-2014	1.5%	0.7%	1.2%	0.3%	1.3%	0.0%	1.3%	0.0%
	2011-2015	0.7%	0.4%	0.9%	0.3%	1.4%	0.0%	1.4%	0.0%
	2012-2016	0.6%	0.4%	0.9%	0.3%	1.4%	0.0%	1.4%	0.0%
	2013-2017	0.7%	0.4%	0.9%	0.3%	1.5%	0.0%	1.5%	0.0%
	2014-2018	0.6%	0.4%	1.5%	0.3%	1.6%	0.0%	1.6%	0.0%
	2015-2019	1.1%	0.7%	1.8%	0.4%	1.6%	0.0%	1.6%	0.0%



**Table A6.7.2: Plug-in Electric Vehicle (PEV) Registrations<sup>13</sup>**

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	Los Angeles County	TCC Census Tracts	Control Census Tracts	Los Angeles County
Battery electric vehicle	2019	15	96	67,059	2.6	5.3	67.0
	2018	13	65	49,566	2.3	3.6	49.1
	2017	11	63	37,977	1.9	3.6	37.6
	2016	8	45	29,370	1.4	2.6	29.2
	2015	14	41	20,516	2.5	2.4	20.4
Plug-in hybrid electric vehicle	2019	40	145	58,563	6.9	8.0	58.1
	2018	22	110	49,027	3.8	6.2	48.6
	2017	7	46	25,777	1.2	2.6	25.5
	2016	6	37	26,648	1.0	2.2	26.5
	2015	10	27	21,547	1.8	1.6	21.5
Fuel cell vehicle	2019	0	3	2,165	0	0.2	2.1
	2018	0	2	1,592	0	0.1	1.6
	2017	0	0	174	0	0	0.2
	2016	0	1	344	0	0.1	0.3
	2015	0	0	57	0	0	0.1
Total EV registrations	2019	55	244	128,237	9.5	13.5	127.2
	2018	35	177	100,185	6.1	9.9	99.2
	2017	18	109	63,928	3.1	6.2	63.3
	2016	14	83	56,362	2.4	4.9	56.0
	2015	24	68	42,120	4.3	4.0	42.0

<sup>13</sup> EV registration data were obtained by request from the CARB Online Fleet Database. The EV registration data were normalized with 2017 and 2015 five-year ACS data.

**Table A6.7.3: Publicly Available Charging Infrastructure<sup>14</sup>**

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	Los Angeles County	TCC Census Tracts	Control Census Tracts	Los Angeles County
Level 2 Stations	2020	6	21	1,622	1.0	1.2	1.6
	2019	2	9	659	0.3	0.5	0.7
	2018	3	7	857	0.5	0.4	0.9
	2017	2	2	745	0.3	0.1	0.7
	2016	1	2	644	0.2	0.1	0.6
	2015	0	2	547	0	0.01	0.5
DC Fast-Charging Stations	2020	0	1	199	0	0.1	0.2
	2019	0	1	125	0	0.1	0.1
	2018	0	1	102	0	0.1	0.1
	2017	0	0	103	0	0	0.1
	2016	0	0	94	0	0	0.1
	2015	0	0	61	0	0	0.1

<sup>14</sup> Charging station data were obtained by request from the Alternative Fuels Data Center (AFDC), a resource administered by the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy’s Vehicle Technologies Office. Each dataset includes active stations and does not include stations that have previously opened and closed. In other words, each dataset is a snapshot of currently active stations in that year (taken during fall of each year). The charging station data were normalized with five-year ACS data for the respective year.

**UCLA Luskin**  
Center for Innovation

