STOCKTON RISING

A BASELINE AND PROGRESS REPORT ON EARLY IMPLEMENTATION OF THE TRANSFORMATIVE CLIMATE COMMUNITIES PROGRAM GRANT

UCLA Luskin Center for Innovation

Acknowledgments

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Disclaimer
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Cover image: Mural in Stockton that also serves as the Stockton Rising logo (Photo credit: risestockton.org)

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CALIFORNIA STRATEGIC GROWTH COUNCIL

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EXECUTIVE SUMMARY

THE TRANSFORMATIVE CLIMATE COMMUNITIES PROGRAM (TCC) is an innovative 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 (GHG) 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.

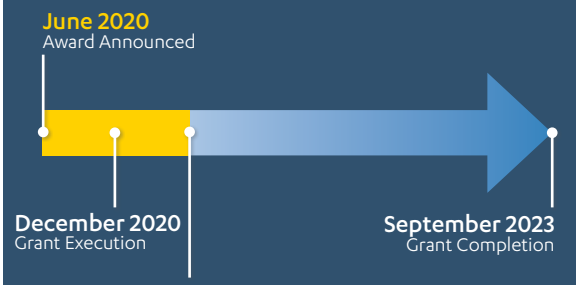
The California Strategic Growth Council (SGC) serves as the lead administrator of TCC. During the first round of the program, and through a competitive process, SGC awarded multimillion-dollar grants to the City of Fresno ($66.5 million), the Watts Neighborhood of Los Angeles ($33.25 million), and the 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 the these communities to document their progress and evaluate the impacts of TCC investments.

This progress report is the first in a series of three that will provide an overview of the key accomplishments and estimated benefits of TCC funded activities in Stockton, collectively referred to as Stockton Rising.[1] This specific report documents progress through the end of FY 2020-21, which overlaps with about six months of post-award planning (June to December of 2020), and six months of grant implementation (January to June of 2021). The majority of implementation has occurred during the COVID-19 pandemic, so project partners' responses to the pandemic are also highlighted throughout the report.

[1] For annual reports that LCI has produced for other TCC sites, visit: https://innovation.luskin.ucla.edu/climate/climate-investments/

Stockton Rising



June 2021
Key Accomplishments To Date

- **3,072** linear feet of pedestrian pathways added
- **1,350** boxes of local, organic produce delivered (15 to 20 pounds each)
- **33** street lights added
- **29** meetings of Stockton Rising's various grant governance bodies
- **15** online cooking classes taught to students from grades K-8
- **12** bike racks added
- **8** rooftop solar contracts signed for properties occupied by low-income households
- **3** online gardening classes taught to students from grades K-8

Aerial view of Downtown Stockton. Photo credit: ClimatePlan.org

Stockton Today

Located in the heart of California's Central Valley, and connected to the San Francisco Bay by the San Joaquin River, Stockton is a port city and an agricultural hub. As such, the city has been a node for the siting of heavy industry and major transportation infrastructure. The city is divided by a network of passenger and freight carrying railways, two highways (State Route 4 and 99), and a freeway (Interstate 5). As a result the, city is home to neighborhoods with some of the worst pollution burdens in the state.

Demographically, Stockton is one of the most diverse cities in the state. According to 2020 census data, Stockton's 310,000 residents are 42% Hispanic, 24% Asian, 19% non-Hispanic white, and 13% black. Unfortunately, this diverse community suffers from higher levels of poverty and unemployment than the rest of the state. Such inequities are the byproduct of freeway building, redlining practices, and other legacies of structural racism that have dispossessed communities of color from their support networks and concentrated them in neighborhoods with few resources but high in health hazards. The city's 2012 bankruptcy also lead to years of disinvestment, which has contributed to Stockton's slow economic recovery following the Great Recession.

Stockton Rising

In 2016, a coalition of community-based organizations in Stockton partnered with the Greenlining Institute (GLI) to address the environmental, health, and economic inequities facing Stockton. The coalition focused its sights on the city's most disadvantaged neighborhoods, namely those in Downtown and South Stockton. GLI played a critical role in helping the coalition think through opportunities to leverage California Climate Investment dollars toward reversing the harmful legacies of the past.

In 2017, GLI and community partners invited the City of Stockton to join them in applying for TCC Round 1 Planning Grant. One year later they were awarded $170,000. These funds helped support the formation of an even broader coalition of community-based and external partners, known as Rise Stockton, and the development of the Sustainable Neighborhood Plan (SNP). In producing this plan, the Rise Stockton coalition engaged over 2,000 residents and translated their input into seven community priorities: energy, water, health, parks, safety, transportation, waste, and water. For each of these priorities, the SNP identifies projects that will provide meaningful community benefits.

Building upon the momentum from their planning grant, the City of Stockton and partners from the Rise Stockton coalition successfully applied for a TCC Round 3 Implementation Grant. They were awarded a total of $10.8 million in 2020. These funds will support the realization of previous planning efforts by investing in a suite of projects and plans, collectively referred to as Stockton Rising, that deliver the following benefits to residents of South Stockton, all at no cost: energy- and water-efficiency installations, rooftop solar photovoltaic (PV) systems, locally grown food, increased tree coverage, improved active transportation infrastructure, and multiple job training opportunities that prepare residents for careers in a decarbonized economy.

Projects

Stockton Rising includes a total of seven projects. For the purpose of legibility to a broad audience, this report consolidates these seven projects into five distinct project types , as summarized below. Figure 1 maps the location of project types within the TCC project area (only projects with known locations at the outset of grant implementation are mapped).

TCC Funded Projects

Active Transportation — Funds the transformation of a ten-block auto-dominated thoroughfare along Miner Avenue in Downtown Stockton into a marquee "complete street" (a street that serves the mobility needs of all users, regardless of travel mode). More specifically, the project will deliver the following outputs: 117 new trees, 485 shrubs, 34 streetlights, 15 benches, 14 bike racks, upgraded utility connections, new paint striping, and traffic signal upgrades. The improvements from the project are expected to encourage a modeshift from cars to more active modes, thereby resulting in reduced vehicle miles traveled (VMT) and environmental benefits such as reduced GHGs and local air pollutants. These environmental benefits will also be augmented by the project's urban greening component's.

Energy and Water Efficiency — Funds energy and water efficiency measures for 812 residents while also employing low-income youth. Energy efficiency measures will be installed at no cost to residents, and will include: LEDs, refrigerators, water heater blankets, and smart thermostats. Similarly, water efficiency measures will be installed at no cost to residents, and will include: kitchen aerators, bathroom aerators, showerheads, dishwashers, and toilets. Benefiting households will also be educated on best practices to conserve energy and water. A total of 45 youth and 14 adults will be recruited for seasonal positions to assist with project implementations. The youth positions will have post-employment opportunities to gain additional experience in the building and construction trades.

Healthy Food Access— Funds the delivery of free boxes of organic produce to 50 families on a weekly basis for 30 months. The produce will be procured vis-a-vis community supported agriculture (CSA), a farming model in which local farmers send boxes of seasonal produce directly to consumers. The boxes will be complemented by educational programming on how to cook the contents of each box. Educational programming will be delivered through printed materials, a phone-in hotline with a live educator, and recorded demonstrations (at least 15 in total). In addition to the educational content directly tied to the food boxes, the project will also include weekly cooking classes and at least five gardening classes. These classes will be offered online to the community at large with outreach efforts focused within the TCC project area.

Rooftop Solar — Funds the installation of up to 621 kilowatts of DC rated (kW-DC) solar PV panels on the roofs of residential buildings that are occupied by low-income households. A total of 378 kW-DC will be installed across 108 single-family homes and 243 kW-DC will be installed on four multi-family structures. The installations will be used as job training opportunities for residents interested in a career in the solar sector. Once installed, the rooftop solar systems will enhance local generation of renewable energy and lower energy costs for property owners.

Urban Forestry — Funds the planting of 1,750 trees throughout the project area. All of the trees will belong to species that are as drought tolerant as possible, minimizing watering needs. As the trees mature, they will reduce GHGs by sequestering carbon. Moreover, the trees will help absorb local air pollutants such as PM 2.5 and NOx, as well as stormwater runoff. The community will be engaged in implementation through 10 community tree planting events. Additionally 25 individuals will be hired and trained for part-time, seasonal positions to assist with tree planting activities.

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 Stockton Rising, these three plans have been adapted in the following ways:

Community Engagement Plan

» **Coordination and alignment** of projects and plans to ensure they are in sync with the community's vision for climate justice. This will be accomplished through the a collaborative stakeholder structure (CSS) that governs TCC implementation, and includes participation from the following:
- 9 TCC funded project partners
- 8 resident representatives
- 4 stakeholders organizations
- A nondefined number of Community Coalition members (project area residents and workers)

» **Resident capacity building** around climate action. Specifically, project partners will recruit and train residents for the following roles:
- 10 community liaisons who function as local ambassadors for the Stockton Rising initiative
- 30 youth leaders who act as local experts on environment justice and climate resiliency

» **Educational campaigns** that spotlight opportunities to benefit from, participate in, and learn from climate action efforts, including the following events:
- Block party with presentations by project partners
- Summit that highlights early outcomes from TCC

» **Communications** with project area residents across multiple channels, such as:
- Social media posts about project updates
- PhotoVoice walking tours that narratively document how TCC is changing the community

Displacement Avoidance Plan

» **Technical assistance** from a third-party contractor who will assist Stockton Rising partners in developing a DAP [Stockton Rising partners did not have the capacity to develop a DAP at the time of applying for a TCC implementation grant, so it will be developed during the grant implementation period]

» **Organizational capacity building** amongst project partners to better study and document site-specific displacement pressures

Workforce Development Plan

» **Solar installation training** with GRID Alternatives. A total of 16 trainees will gain paid, on-the-job experience in the solar sector.

» **Bus mechanic training** with the San Joaquin Regional Transit District (RTD). A total of 4 trainees will learn how to repair electric buses in a paid, three-year long apprenticeship program. Graduates will be then be hired by RTD as full-time employees.

» **Gardening/landscaping training** for a total of 40 incarcerated individuals. Participants will earn credits that expedite their release from prison.

» **Climate Careers Program** that prepares Stockton youth for jobs in the building and construction trades, with the following tracks:
- 45 paid positions installing water and energy efficiency measures at residential properties (14 additional positions will be offered to adults to assist with installations activities)
- 11 paid pre-apprenticeships through California's Multi-Craft Core Curriculum (MC3) program
- 10 paid externships at different host organizations

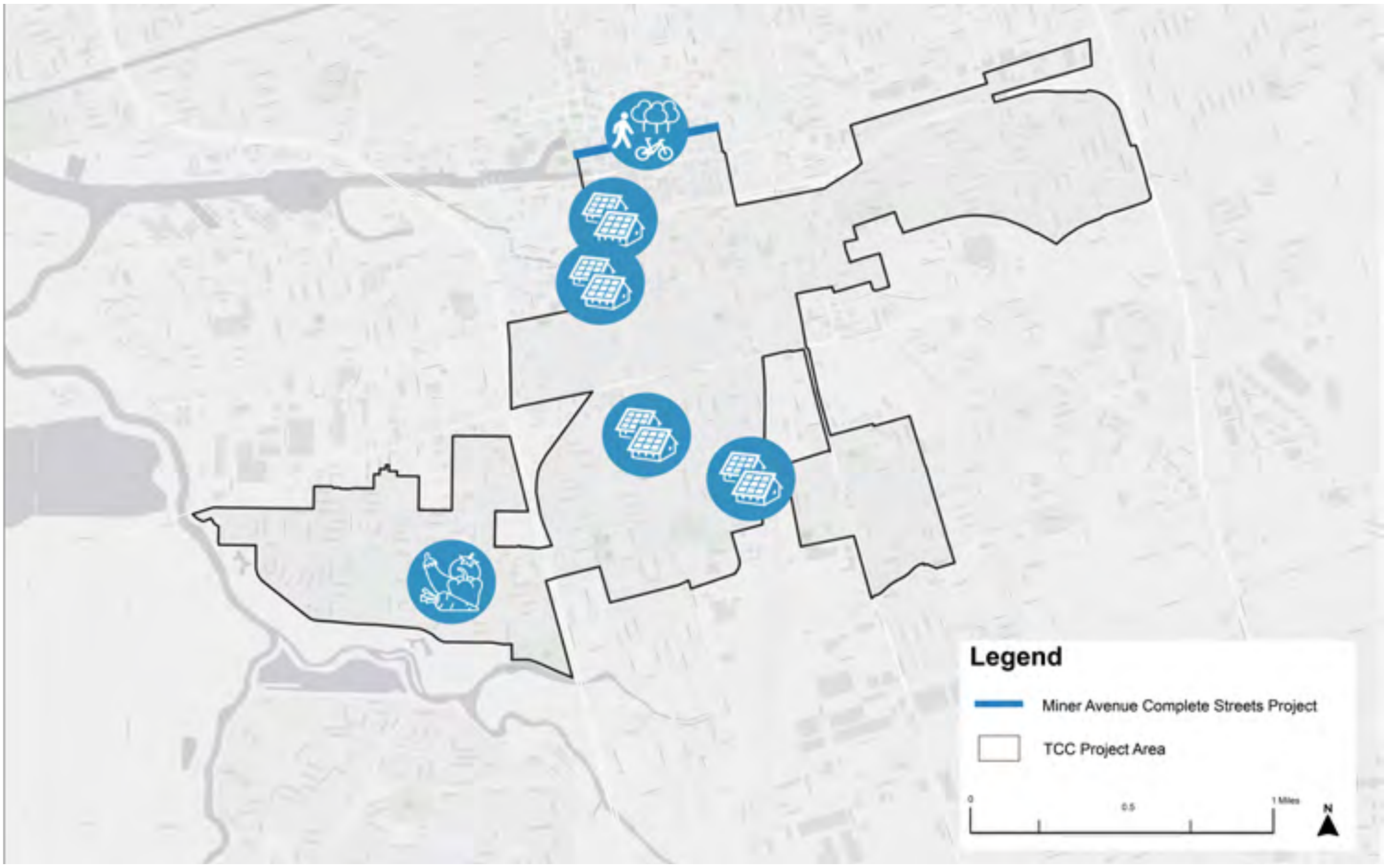
Project Area

The Stockton Rising project area was configured to bring investment to some of the state's most disadvantaged neighborhoods. All census tracts within the project boundary area are defined as disadvantaged according to CalEnviroscreen 3.0 (around 75% of the project area ranks within the top 5% of the state).

The project area boundary was also drawn to connect key assets within those census tracts. Key assets include: Stockton's commercial downtown; the Little Manila historic district; two Amtrak stations that provide direct rail service from Stockton to Sacramento, Oakland, Bakersfield, and San Jose; 11 public parks; six elementary schools; one high school; and one community center.

Figure 1 shows where TCC funded projects and leveraged projects will be located within the project area. See **Appendix 1** for a more detailed map that includes assets located within the project area.

Figure 1. **Map of Stockton Rising Project with Known Locations of Projects***



***See the previous two pages for information about what each icon represents. This map does not include projects or plans that are sitewide (e.g., community engagement, energy and water efficiency upgrades, solar installations at single-family properties, tree plantings, etc.).** Figure credit: UCLA Luskin Center for Innovation

Anticipated Benefits

Stockton Rising is slated to bring a number of benefits to residents of the TCC project area. The infographic below highlights a non-exhaustive list of these benefits. This list includes outputs, outcomes, and impacts from TCC funded projects and plans. Project outputs refer to the tangible goods and services that Stockton 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.

Project Outputs

- **0.5** miles of bike lanes
- **812** homes provided free energy and water efficiency upgrades
- **621** kW of solar power on affordable multifamily developments and single-family homes
- **0.75** miles of sidewalk and construction improvements
- **1,850** new trees that will provide shade and capture stormwater
- **6,250** boxes of free, local, and organic produce (15 to 20 pounds each)
- **10** residents trained as Community Liaisons who serve as local climate action experts and share resources
- **30** youth trained as environmental justice advocates
- **100** paid training opportunities for jobs that support climate action efforts

Project Outcomes and Impacts[2]

- **17,139** metric tons (MT) of avoided GHG emissions (in CO_2e)
- **201,096** miles of averted travel in passenger vehicles annually
- **$6,777,929** in energy, water, and travel cost savings
- **23,695** pounds of avoided local air pollutants[3]
- **12,428,668** gallons in avoided stormwater runoff
- **74** direct jobs **21** indirect jobs, and **48** induced jobs supported by TCC funds[4]

[2] See **Appendix 2** for a summary of methods for how these benefits were estimated. Benefits are reported as totals over the operational period of the projects, also referred to as project lifetimes.

[3] Pollutants include: diesel particulate matter (PM), fine particulate matter (PM2.5), nitrogen oxides (NOx), and reactive organic gases (ROGs). The total does not reflect air local air pollutant reductions from water efficiency measures because the California Air Resources Board did not have an approved methodology for doing so at the time of Stockton Rising's grant award.

[4] All jobs are reported as full-time equivalents (FTEs).

Harder to quantify, but nevertheless important, is the leadership and collaboration capacity that will be created in Stockton 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 to Stockton. In addition, lessons learned and best practices from Stockton's TCC grant could inform local climate action and investments at much broader scales.

Early Accomplishments

Construction workers pouring curbs at a roundabout at the intersection of San Joaquin and Miner, where TCC dollars are being used to make "complete street" improvements. Photo credit: City of Stockton

Much has happened following SGC's announcement of Stockton Rising's TCC award in June of 2020. From that announcement through the close of the 2020-'21 fiscal year (June 30, 2021), project partners have made considerable progress toward implementing an ambitious, unprecedented climate action initiative.

Key accomplishments of Ontario Together project partners are described in this section according to the phase in which they occurred. Specifically, accomplishments are divided between: (a) post-award consultation, a period of planning and preparation between the award announcement and grant execution; and (b) grant implementation, which formally began in December 2020, when the City of Stockton executed its grant agreement with SGC. Given the timing of grant execution, this first annual report overlaps with only six months of program implementation. Nonetheless, Stockton Rising's projects and plans are well underway and providing tangible benefits for project area residents.

Post-Award Consultation (June 2020 – December 2020)

Formalized Partnerships and Governance Structure

During the post-award consultation phase, Stockton Rising partners participated in a comprehensive review of all projects and transformative plans to ensure that they complied with TCC guidelines, and that requisite partnerships were in place to successfully carry them out. Key deliverables that came out of this process included: an executed grant agreement with clearly defined work plans and roles for each project partner; an evaluation plan to measure the effects of TCC investment in collaboration with LCI; and the establishment of a collaborative stakeholder structure (CSS) for coordinating grant governance (see **Appendix 4** for a full list of members within Stockton's CSS).

Grant Execution Implementation (December 2020 – June 2021)

Connected Residents with Healthy Food Options

Within the first six months of project implementation, project partners have already put 1,350 boxes of free, seasonal organic produce in the hands of residents. The average food box tends to weigh between 15 and 20 pounds. To complement the food boxes, project partners hosted two virtual demonstrations on ways to turn the produce into healthy meals at home. In addition to the cooking demonstrations for recipients of the CSA boxes, project partners also taught 15 online cooking classes and three gardening classes to students K through 8 at Taylor Leadership Academy, a public school in the TCC project area.

Broke Ground on Miner Avenue Improvements

Construction activity along Miner Avenue has already resulted in dramatic improvements along the commercial corridor. Through June 2021, construction workers were able to install the following: 3,650 square feet of new permeable surfaces that will infiltrate stormwater; 33 new street lights, 24 wheel chair ramps, and 12 bike racks.

Kicked Off Solar Installations in Low-Income Settings

Through the end of FY 2020-21, project partners executed contracts for eight solar PV system installations. Of these systems, four will occur at single-family properties, benefiting low-income homeowners, thereby providing

financial relief in the face of rising energy costs (see **page 26** for a case study on two residents in the project area who decided to go solar and their motivations for doing so). The remaining four systems will be installed at multi-family properties that house low-income individuals and families.

Conducted Outreach in Support of Efficiency Upgrades

Project partners also kicked off implementation of energy and water efficiency installations by spreading the word about how residents can take advantage of the opportunity. Specifically, project partners sent out 4,814 mailers; posted 950 informational flyers, and posted 51 announcements on Facebook about the various efficiency measures that residents can access through the Stockton Rising initiative.

Launched Job Training for Electric Bus Mechanics

As part of Stockton's Workforce Development Plan (WDP), a portion of TCC funds are being used to enroll four apprentices in a three-year-long bus mechanic apprenticeship program at the San Joaquin Regional Transit District (RTD). Apprentices will learn specifically how to repair electric buses. During the first six months of implementation, project partners at RTD successfully recruited one of these apprentices, who has already logged 569 hours of on-the-job training. Upon successful completion of the apprenticeship program, each trainee will be offered a regular, full-time position at RTD.

Deepened Engagement Efforts Around Climate Action

Stockton's Community Engagement Plan (CEP) builds upon the foundational work that project partners accomplished during their TCC Planning Grant. During that grant, project partners engaged over 2,000 residents in re-imagining Downtown and South Stockton as a sustainable and equitable neighborhood. As that vision gets realized through Stockton's TCC Implementation grant, project partners are deepening engagement efforts by inviting residents to participate in grant governance, as well as building their capacity to serve as environmental leaders who advocate at broader scales for climate justice.

With respect to grant governance, Stockton's CCS began meeting regularly and coordinating alignment across projects and plans. During the reporting period, there were 29 meetings of the various working groups within Stockton's CSS. Specifically, the Steering Committee met five times; the Community Engagement Working Team met 12 times; and the Workforce Development Working Team met 12 times. For each working group within Stockton's CSS, there are two seats reserved for resident representatives (set to be filled during the FY 2021-2022).

And with respect to capacity building, a total of 10 young adults were recruited for a climate resilience and leader-

Key Accomplishments Through June 2021

Partnership Formation

- An executed grant agreement with clearly defined work plans, partner roles, deliverables, and reporting expectations for each project and plan;
- The development of an evaluation plan, in collaboration with LCI, for tracking the outputs and outcomes from each project and plan; and
- Establishment of a collaborative stakeholder structure (CSS) for coordinating grant governance, composed of nine project partners and 8 resident representatives.

Healthy Food Access

- **1,350** boxes of seasonal organic produced delivered (15 to 20 pounds each);
- **15** online cooking classes taught to 37 students from grades K-8;
- **3** online gardening classes taught to 37 students from grades K-8; and
- **2** online cooking demonstrations for families that received food boxes.

Complete Street Transformations

- **3,650** square feet of permeable surfaces added;
- **3,072** linear feet of pedestrian pathways added;
- **33** street lights added;
- **24** wheelchair ramps added;
- **12** bike racks added; and
- **4** traffic signals upgraded to include video detection of users of all modes.

Renewable Energy Access

- **4** contracts executed for solar PV installations on single-family properties; and
- **4** contracts executed for solar PV installations on multi-family properties.

ship development program. Through a series of educational workshops, these participants learned how they can advocate for policy change to address issues such as soil contamination, air pollution, and the various impacts of climate change. The training program also exposes participants to professional opportunities to continue their advocacy work over the long term (see **page 28** for a case study on how the program has shaped the aspirations of two participants, as well as the program's lead coordinator).

Responded to COVID-19 Pandemic

In between submitting an application and receiving an implementation grant, Stockton Rising project partners had to rethink how to approach their proposed work in the aftermath of COVID-19. Despite the many challenges presented by the pandemic, all Stockton Rising projects and plans were able to carry on. The ways in which project partners pivoted in response to the pandemic are highlighted throughout this report. Notable pivots include:

- Community engagement partners switched to virtual platforms to conduct workshops, events, and meetings.
- Energy and water efficiency partners deployed a satellite program in which homes assessments were conducted virtually and efficiency kits were sent in the mail.
- Project partners delivered boxes of seasonal produce using COVID-19 safety protocols, and supplemented food deliveries with virtual programming on how to prepare the produce from the safety of one's home.

Key Accomplishments Through June 2021

Energy and Water Saving Measures

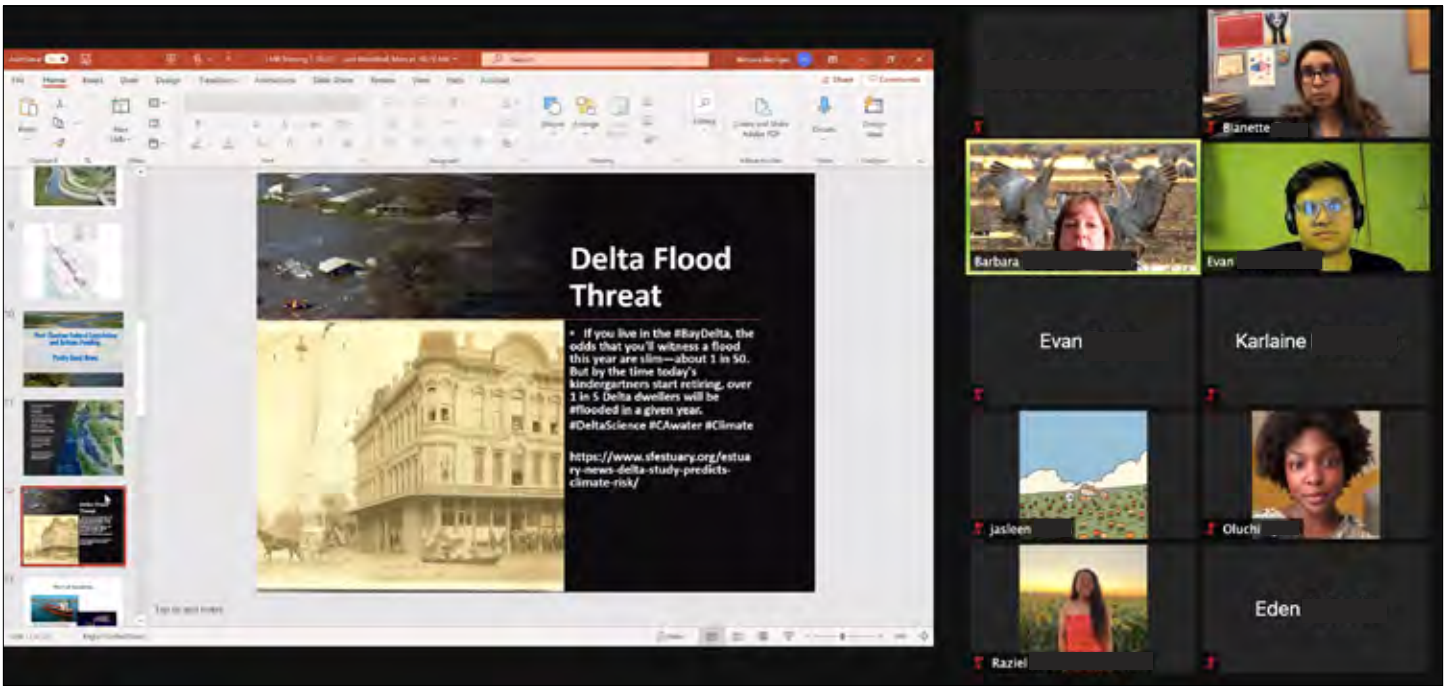
- **4,814** informational mailers sent to resident in the project area about opportunities to benefit from free energy and water efficiency upgrades;
- **950** informational flyers posted around the project area; and
- **51** informational announcements posted on Facebook.

Community Engagement

- **29** total meetings of the various grant governance bodies within Stockton Rising's collaborative stakeholder structure; and
- **10** young adults recruited and enrolled in a climate resilience and leadership development program.

Workforce Development

- **1** trainee completed 569 hours of training through San Joaquin Regional Transit District's electric bus maintenance mechanic apprenticeship program.



Water quality training for youth in enrolled in Stockton's climate resilience and leadership development program, one of the components of Stockton Rising's CEP. Photo credit: Little Manila

BACKGROUND

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 (TCC) 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 plans that include multiple coordinated greenhouse gas (GHG) emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities.[4] 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.

[4] AB 2722, Transformative Climate Communities. 2016. Web. February 2017. Retrieved from: 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 cross-cutting 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 TCC investment.

Last, as a program that emphasizes cross-sector partnerships, TCC requires applicants to form a coalition of organizations that will support with grant implementation. To assure that the community's vision is realized, all applicants are required to have an oversight committee that consists of project partners (i.e., organizations funded to carry out grant implementation), residents, and other key stakeholders (e.g., community-based organizations, unions, faith-based groups, etc.). The diverse partnerships, robust governance structure, and aforementioned transformative plans help ensure transparency and accountability for the investments, all while building community capacity in neighborhoods with long histories of disinvestment, thereby helping to reverse that trend.

Program Administration

SGC awards TCC grants and administers the program in partnership with the Department of Conservation (DOC), and with the support of the California Air Resources Board (CARB) and other state agencies. The administrative functions of SGC and DOC include: developing program guidelines, evaluating applications, preparing agreements, monitoring agreement implementation, and 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 disadvantaged communities that may be eligible for future TCC implementation grants and other California Climate Investment programs, but need financial assistance to prepare for the proposal writing process. 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 planning grants. Table 1 provides an overview of the implementation and planning grants that have been distributed through FY 2020-2021.

Table 1: Overview of TCC Implementation and Planning Grants Through FY 2020-2021

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/Sun Valley	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 - Eastside	Round 3 (FY 2019-2020)	Implementation	$9.1 million
South 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

Trees being planted in the TCC project area at Mattie Harrell Park. Photo credit: City of Stockton

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 grants.[5]

Following the publication of the Round 1 evaluation plan, the UCLA-UCB evaluation team entered a second contract with SGC to serve as the third-party evaluator in all three Round 1 sites. The UCLA Luskin Center for Innovation (LCI) is now the sole contractor in that role, and will continue as such for the first five years of TCC Round 1 grant implementation (2019 through 2024).

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. LCI was selected to serve as the evaluator for the Round 2 grant in Northeast Los Angeles (Pacoima) and the Round 3 grant in Stockton.

LCI's 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. These modifications were made in close consultation with the project partners in each TCC site.

Conceptual Framework for Evaluating TCC

Logic models greatly informed all of the evaluations plans that LCI produced. Logic models illustrate the interim steps that must occur for a project or plan to realize its intended goals. Within the context of TCC, these steps 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 of TCC (i.e., GHG reductions; public health and environmental benefits; and economic opportunities and shared prosperity).

[5] 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

The LCI evaluation team translated the latter four steps in the logic model framework into indicators that could be quantified and tracked for the purposes of program evaluation. The Stockton Rising evaluation plan summarizes the final list of indicators that will be tracked over the initiative's three-year completion period (2021 to 2023), as well as the methods for tracking them.[6] Indicator tracking responsibilities will be partially split among the LCI evaluation team and TCC project partners. In general, all output-related indicators will be tracked by the project partners, while most outcome and impact related indicators will be tracked by the LCI evaluation team.

Quantitative Methods for Evaluating TCC

To quantitatively assess the effects of TCC, the LCI evaluation team will conduct two different forms of comparison: (1) before-and-after TCC investment; (2) and a with-and-without TCC investment. Together, these two modes of comparison will provide the most reliable assessment of what changes can be attributed to TCC investment.

For the before-and-after comparison , the LCI evaluation team will measure changes in indicators before and after TCC kickoff, which in the case of Stockton Rising, occurred on December 28, 2020. Whenever possible, the LCI evaluation team will construct a five-year pre-kickoff trend line (2016-2020 for Stockton Rising) and a five-year post-kickoff trend line (2021-2025 for Stockton Rising).

For the with-and-without comparison, the LCI evaluation team will compare trends in TCC sites to trends in a set of control sites that did not receive TCC investment. This will help isolate the effect of TCC from larger social, economic, and environmental forces that may also be acting on indicators. To support this effort, the LCI evaluation team has identified control sites that are similar to TCC sites along a number of dimensions, including socioeconomic demographics, climate, and pollution burden (as demonstrated by CalEnviroScreen scores).[7]

In addition to measuring changes within TCC sites and control sites, the LCI evaluation team is also measuring changes at the county and state level for indicators that speak to social equity (e.g., income, employment, housing costs, etc.). This will allow the LCI evaluation team to assess whether TCC is reducing socio-economic disparities between TCC sites and the broader regions where they are located. If, for example, employment slightly increases within TCC sites, but a much greater increase is observed regionally, then the economic gap between TCC sites and nearby communities has not been sufficiently addressed.

In summary, the LCI evaluation team will analyze quantitative data at four geographic scales (where possible):

- **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% area 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 cannot 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 Stockton Rising's TCC project boundary area.
- **TCC control sites:** A cluster of census tracts that match TCC census tracts along a number of dimensions (e.g., demographics, climate, pollution burden, etc.) but that did not receive TCC investment. Collecting before and after data for the control sites will help control for external forces that may also be acting on indicators of interest within 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 Stockton.
- **County:** The county in which TCC sites are located (San Joaquin County for Stockton). County-scale measurements are helpful for understanding the degree to which TCC investments are addressing social equity concerns at a regional scale.
- **State:** The state in which TCC sites are located (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.

It's important to underscore that not all indicators easily lend themselves to analysis at the latter three scales. Many TCC indicators rely on the collection of primary data, and it may be cost-prohibitive or technically infeasible to collect that data for control sites, the county, or the state. This is true for indicators such as trees planted and food boxes delivered, which are reported to the LCI evaluation team directly by project partners. Even when secondary data are readily available at all four scales, it may not be prudent to use limited evaluation resources to analyze the data at all of those scales. This is true for bicyclist and pedestrian collision data, which must be cleaned and geocoded before being analyzed. Furthermore, some indicators must be estimated because they cannot be measured directly (e.g., GHG reductions, indirect jobs, etc.). In cases these cases, the LCI evaluation team is providing estimates for TCC sites

[6] A digital copy of the Stockton Rising evaluation plan is available upon request (send request to luskincenter@gmail.com).

[7] 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

only. Developing estimates for other geographic scales requires making a number of site-specific assumptions that are outside the LCI evaluation team's scope of work.

It is also important to note that it could take a generation for the transformative impacts of TCC investment to be quantitatively measured. Urban tree canopy, for example, can take 40 years to grow to maturity. Similarly, a career transition can require close to a decade (or more) of education and skill building. Thus, at the end of a relatively short evaluation period (May 2021 through September 2024), changes in impact indicators may be too small to draw any statistically valid conclusions. Nonetheless, the LCI evaluation team will update impact indicators annually for the sake of maintaining a complete time series. See **Appendix 6** for the latest indicator data the LCI has collected.

Qualitative Methods for Evaluating TCC

Many of the potential benefits of TCC will likely be missed by the quantitative methods previously described. For example, improvements in wellbeing, community capacity to tackle new challenges, and communication across diverse stakeholder groups are difficult to describe in numerical terms. Thus, in order to capture some of the nuanced effects that TCC may have at the individual and community level, the LCI evaluation team will be analyzing qualitative data collected from surveys, interviews, and focus groups.[8]

The LCI evaluation team will prioritize the use of qualitative data collection instruments to examine the aspects of TCC that are particularly novel relative to other grant programs. Specifically, the LCI evaluation team will collect qualitative data about the rollout of the transformative plans and the collaborative stakeholder structure.

Communicating the Effects of TCC

The LCI evaluation team will release three annual progress reports that document the early effects of TCC investment in Stockton. The first two progress reports will highlight findings from the LCI evaluation team's quantitative data collection. High-level findings from both qualitative and quantitative research will be summarized in the third annual progress report, once all qualitative data collection efforts have been completed.

To complement LCI's observations about the effects of TCC, each annual progress report also spotlights the perspectives of TCC project partners and beneficiaries. These perspectives are highlighted in the following chapter, entitled *Stories from the Community*. The individuals profiled in this chapter are recruited directly by TCC project partners and are interviewed by the LCI evaluation team. From these interviews, the LCI evaluation team develops two case studies per year about how the effects of TCC are being felt on the ground.

Evaluation Activities in Stockton Through June 2021

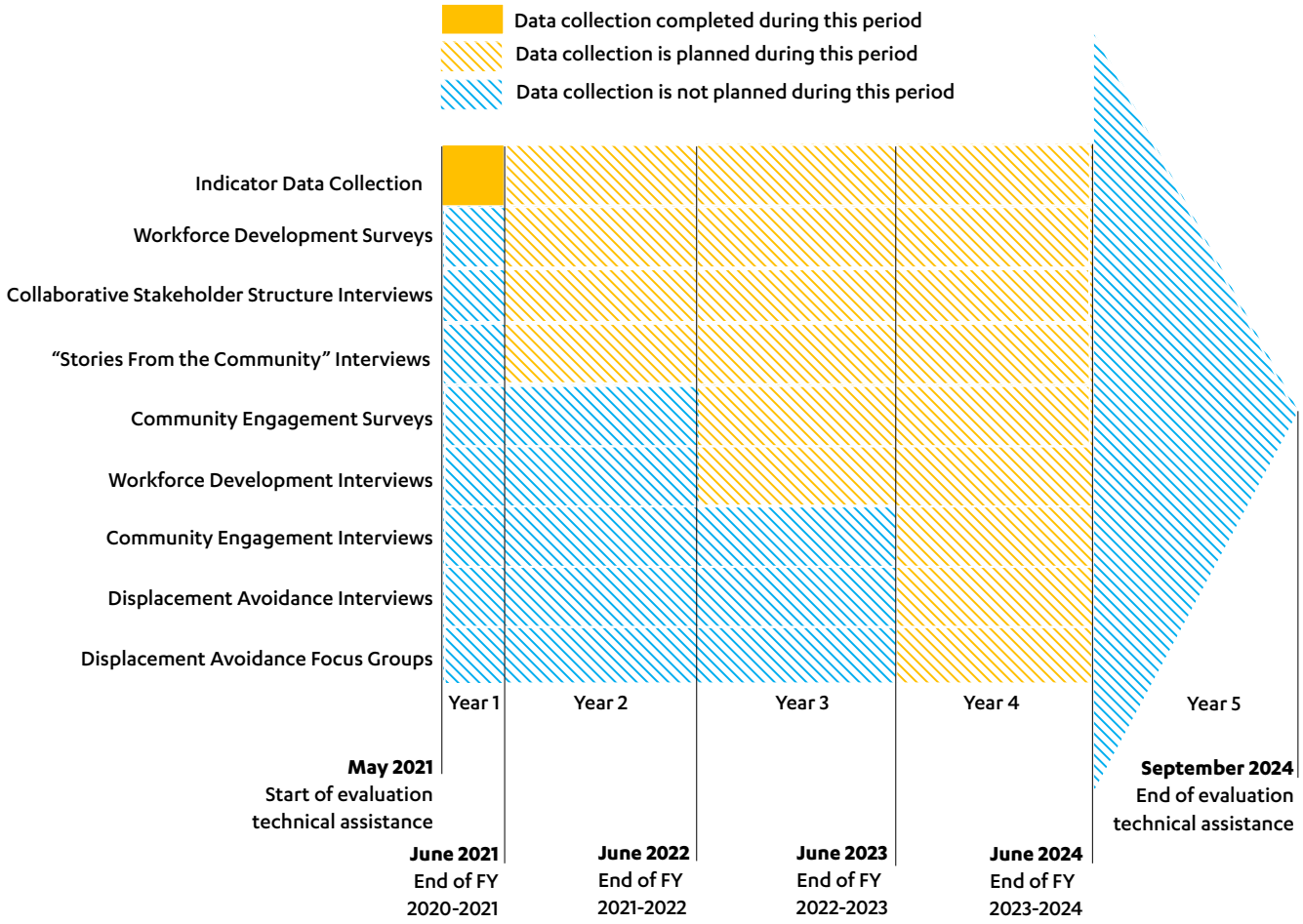
During the first year of program implementation, the LCI evaluation team worked with Stockton Rising to operationalize indicator tracking protocols. Specifically, the LCI evaluation team developed reporting forms to streamline tracking activities and trained project partners on how to use those forms. On an annual basis, project partners will complete and submit indicator reporting forms to the LCI evaluation team. Each submission reflects the project partner's activities during the previous fiscal year. Many of the key accomplishments described in this document are pulled directly from the reporting forms submitted by Stockton Rising project partners.

The LCI evaluation team also completed baseline data collection activities for quantitative indicators , the results of which are summarized in the final chapter of this annual report. This data will be updated on an annual basis through the release of the third Stockton Rising annual report in 2024.

Figure 2 provides a summary timeline of data collection activities that the LCI evaluation team is coordinating in Stockton. The timing of pending activities is subject to change.

[8] 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 (since the publication of the Round 1 evaluation plan, the LCI evaluation team has also committed to interviewing members of each TCC site's collaborative stakeholder structure on annual basis about implementation successes, challenges, and opportunities to improve the rollout of TCC in real world contexts)

Figure 2. Timeline of Data Collection Activities for Stockton Rising*



***Each "year" in the figure corresponds to a fiscal year (FY) rather than a calendar year.** Figure credit: UCLA Luskin Center for Innovation

A photo collage of Little Manila in South Stockton before and after it was bisected by a crosstown freeway in the 1970s.
Photo credit: SPD Historical Archives and Elena Mangahas

A Brief History of Stockton: The Legacy of Environmental Injustice

TCC Awards are reserved for California's most disadvantaged communities. Understanding how those communities became so disadvantaged is critical for evaluating the efficacy of TCC. If the root causes of pollution, poverty, and other harms are overlooked, then they are likely to continue. This section provides a brief history of Stockton, and how environmental injustices from the past still affect the lives of Stockton residents today.

Displacement of Yatchicumne People

The Stockton area was first occupied by the Yatchicumne, a branch of the Northern Valley Yokuts Indians. During the California Gold Rush, gold seekers passed through Stockton on their way to the fields, transforming Stockton from a small settlement to a busy commercial hub. Its strategic location along several waterways led it to become the gateway, supply, and transit center to California's southern gold mines. During this time, the Indigenous Yokuts were violently displaced.[9]

Emergence as a Hub of Industry and Immigration

Following their displacement, Yokut land was commercialized and urbanized. Businesses such as flour mills, wagon factories, and iron works began to grow, especially along the Stockton Channel. A leading industry was the manufacturing of agricultural tools. By the end of the nineteenth century, Stockton was one of the most industrialized cities in California.[10]

With industrialization came new immigrant communities. In the 1850s, thousands of Chinese immigrants came to Stockton to escape political and economic unrest in China and potentially discover gold.[11] When the Gold Rush ended, many Chinese settled in Stockton, having found work on railroads and reclamation projects in the Sacramento–San Joaquin River Delta. By 1880, the city had the third largest Chinese community in California. However, due to discriminatory laws, like the Chinese Exclusion Act of 1882, Chinese people could not purchase property, and many Americans resented them. It wasn't until 1962 that American-born Chinese were allowed to buy property.

In the early 1900s, the shipbuilding industry began to develop, and the Port of Stockton opened as the first

[9] City of Stockton. 2019. Sustainable Neighborhood Plan.
[10] https://www.visitstockton.org/about-us/stockton-history/
[11] http://downtownstockton.org/stockton_history.php

inland seaport in California. The modernization of the port brought thousands of African Americans to the shipyards.[12] By 1937, ships from across the globe had traveled through Stockton, and the city continued to grow as its industrial base expanded.[13]

Discriminatory Lending and Investment Practices

As Stockton became increasingly urbanized, it became divided into North and South Stockton by local and federal laws intended to exclude under-resourced communities of color from civic participation, prosperity, and social mobility.[14] Specifically, the Federal Housing Administration (FHA), created under the New Deal in 1934, designed color coded maps of neighborhoods in major cities to indicate which were best suited for investment. Through this process, many communities of color, like South Stockton and Downtown, were highlighted as red areas, or areas where banks should not make investments.

As immigrants and residents of color were systematically denied home loans, the value of the areas they lived in fell. For members of these communities, building generational wealth through homeownership was unattainable. On the other hand, white residents in North Stockton were able to own homes and continued to develop further outward. This urban sprawl has led to increased energy use, pollution from automobile reliance, the fragmentation of natural areas, and diminished community cohesiveness

Displacement, Division, and Detention

In the late 1960s, the city government, federal government, and private developers worked together to demolish "blighted" neighborhoods, including Filipino, Chinese, Japanese, Mexican, and African American communities.[15] After their displacement, the city built State Route 4, which reinforced the social and economic inequality that already divided North and South Stockton.[16] This freeway ran right through Little Manila, one of the biggest Filipino communities in the U.S., devastating families, businesses, and community centers.

In the 1970s, Prescient Nixon declared the War on Drugs, dramatically increasing criminalization, imprisonment, and punitive sentencing practices, which disproportionately impacted low-income communities of color. The loss of family stability and the rise in violence exacerbated poverty and trauma.

The Housing Bubble and Municipal Bankruptcy

At the brink of the Great Recession, Stockton had become a hotbed for new developments of upscale housing, approved by city officials hoping to attract the wealthy Bay Area commuters.[17] In 2006, the price of homes soared to a median value of nearly $400,000 from $110,000 in 2000.[18]

Once the housing market began to crash, many referred to Stockton as "ground zero" of the housing crisis.[19] In 2007, Stockton had the highest foreclosure rate of the top 100 metro areas, with one foreclosure for every 27 households.[20] In 2012, Stockton became the largest city in the U.S. to declare bankruptcy. While devastating, its bankruptcy ushered in a new era of change that Stockton is advancing towards

A New Era of Local Planning and Policy

In 2015, the city left bankruptcy protection and started on a path to reinvent itself as a sustainable city, fiscally and environmentally.[21] For example, Stockton has developed a long-term financial plan to advise financial decisions and created its own Office of Performance & Data Analytics to promote transparency and accountability. There have also been efforts to address environmental challenges, including the Community Emissions Reduction Program, the Clean Truck Program in the Port of Stockton, and the 2040 General Plan, which contains many goals, policies, and actions that address public health, environmental justice, air quality, and climate change.[22]

Despite these recent planning efforts, the legacy of racist land use policy remains apparent in Stockton. An unequal distribution of resources has left Stockton's communities of colors to combat extreme heat, air and water pollution, chronic poverty, and homelessness at greater levels

[12] Corburn, Jason and Amanda Fukutome. 2019. Advance Peace Stockton: 2018-2019 Progress Report.

[13] https://www.visitstockton.org/about-us/stockton-history/

[14] City of Stockton. 2019. Sustainable Neighborhood Plan.

[15] Ibid.

[16] Ibid.

[17] https://rsscoalition.org/history/

[18] Christie, Jim. 2012. "How Stockton went broke: A 15-year spending binge." *Reuters*.

[19] Clark, Andrew. 2008. "Mortgage crisis: Welcome to sub-prime capital, USA." *The Guardian*.

[20] Christie, Les. 2007. "California cities fill top 10 foreclosure list." *CNNMoney.com*.

[21] City of Stockton. 2015. "News Release - Stockton Exiting Bankruptcy."

[22] City of Stockton. 2018. *Envision Stockton 2040 General Plan*.

Community members gather to discuss the issue of food justice in South Stockton. Photo credit: Rise Stockton

than those in whiter and wealthier neighborhoods. These persistent inequities ultimately drove community-based organizations to apply for TCC funding. The history of that is briefly summarized described in the next section.

Stockton Rising: Looking Back and Forward

Stockton's TCC Implementation Grant is the result of years of activism, community engagement, coalition building, targeted technical assistance, and strategic planning. This section provides a brief history of that work. [23]

Early Climate Action Planning Efforts

After the adoption of the Global Warming Solution Act of in 2006, also known as Assembly Bill (AB) 32, a local chapter of the Sierra Club voiced concerned that Stockton's 2035 General Plan plan was not in alignment with the state's GHG reduction goals. The Sierra Club eventually filed a lawsuit challenging the adequacy of the Environment Impact Report that was produced in support of the City's draft 2035 General Plan.

In 2008, a settlement agreement was signed between the City of Stockton, the Attorney General of California, and the Serra Club. As part of that settlement, the City of Stockton was required to develop a plan to achieve local compliance with AB 32. The result of that settlement agreement is the 2014 Climate Action Plan (CAP), which provides a roadmap of twenty-six measures to achieve feasible GHG reductions in Stockton.[24]

Financing the CAP, however, was a major challenge for the City of Stockton, and remains so today. Stockton was hit particularly hard by the Great Recession. Home to many low-wage workers, Stockton had some of the highest foreclosure rates in the United States during this time. In 2012, Stockton filed for bankruptcy.

Against this backdrop, the Greenlining Institute (GLI) selected Stockton as a site in which to invest its technical assistance services. GLI is an Oakland-based policy advocacy organization that works to advance economic opportunities and empowerment for people of color. As such, GLI closely tracks the flow of California Climate Investments and assesses the degree to which they benefit disadvantaged communities. Recognizing that communities in the San Joaquin Valley were not receiving a proportional share of these funds, GLI decided to act.

[23] For additional background, refer to the Greenlining Institute's case study on Stockton, entitled *Seeding an Environmental Justice Coalition,* available at: https://greenlining.org/publications/2021/environmental-justice-coalition-to-undo-disinvestment-tcc-case-study/

[24] For the full plan, visit: https://www.stocktonca.gov/files/Climate_Action_Plan_August_2014.pdf

In 2016, GLI convened a group of community-based organizations in Stockton to explore ways to bring California Climate Investment dollars to the city. From that convening, an environmental justice coalition began to form.

With continued technical assistance from GLI, community partners and neighborhood residents hosted workshops and participated in trainings on the environmental and health inequities in their communities. From these events, a vision for a TCC Planning Grant was developed. In search of a partner with the capacity to handle the administrative functions of the grant, community partners invited the Mayor's Office of the City of Stockton to serve as the Lead Applicant on the group's proposal.

TCC Funded Planning Work Begins

In 2018, the City of Stockton and seven community-based co-applicants were awarded a TCC Planning Grant of $170,000. The award helped solidify and expand the partnerships among the group, leading to the formation of the Rise Stockton Coalition. See Appendix 3 for a full list of Rise Stockton Coalition members and the mission of each member organization.

The TCC Planning Grant also supported a robust community engagement process to identify resident concerns and priorities for more equitable neighborhoods. In total, Rise Stockton coalition members engaged over 2,000 residents through a variety of engagement modalities, including: five town halls, 20 small meetings and workshops, eight Climate Leadership Forums that trained empowered residents to serve as environmental justice advocates in their community, 10 survey and door-to-door canvassing campaigns, and 100 one-on-one conversations. This yearlong engagement process ultimately culminated in the Sustainable Neighborhoods Plan (SNP), which translated resident input into seven community-identified priorities: energy, health, parks, safety, transportation, waste and water. For each of these priorities, the SNP identifies projects that will provide meaningful community benefits.

Stockton Rising is Born

In 2020, the City of Stockton was awarded a TCC Round 3 Implementation Grant of $10.8 million to build upon the momentum of previous planning efforts. These funds will support a suite of projects and plans, collectively referred to as Stockton Rising, that advance the vision of the SNP. Specifically, Stockton Rising will deliver the following benefits, all at no cost for residents: energy- and water-efficiency installations, rooftop solar photovoltaic (PV) systems, locally grown food, increased tree coverage, improved active transportation infrastructure, and multiple job training opportunities that prepare residents for careers in a decarbonized economy. Table 2 provides a summary of the funding levels for each Stockton Rising projects and plan.

In the spirit of environmental justice, the TCC Implementation Grant will be concentrated in the Stockton's most disadvantaged neighborhoods, namely those in Downtown and South Stockton. Appendix 1 provides a detailed map of the TCC project area and locations of site-specific projects.

The TCC Implementation Grant will also strengthens the cross-sector partnerships that were formed during the Planning Grant. A number of Rise Stockton partners now have funded roles to implement TCC projects and plans, and by extension of those roles, also serve as members of a collaborative stakeholder structure that deals with grant governance and oversight (known locally the Stockton Rising Steering Committee), which meets on a quarterly basis. The oversight body also includes eight paid, part-time positions for residents to contribute to the grant governance process. See Appendix 4 for a full list of Stockton Rising Steering Committee members.

Stockton Mayor Michael Tubbs and Rise Stockton leaders. **Photo credit: Rise Stockton**

Complementary Investments Underway

In addition to TCC, Stockton is the site of several other novel investments aimed at environmental and economic justice. In 2019, former Stockton Mayor Michael D. Tubbs launched the Stockton Economic Empowerment Demonstration (SEED), a universal basic income experiment that leveraged philanthropic funds to pay 125 low-income Stockton residents $500 per month for a two year period, with no strings attached.[25] That same year, CARB selected Stockton to serve as an AB 617 community, and provided $32 million in funding to the Joaquin Valley Air Pollution Control District for air pollution monitoring activities and the development of an emissions reduction plan for a 16 square mile area that encompasses the TCC project area.[26] One year later, CARB awarded a Sustainable Transportation Equity Project (STEP) Implementation Grant of $7.5 million to the San Joaquin Council of Governments to implement a bundle of mobility improvement projects that serve a X mile square area in South Stockton, an area that also overlaps with the TCC project area.[27]

While the aforementioned investments—TCC and otherwise—bode well for the realization of environmental and economic justice goals in Stockton, they also challenge the task of program evaluation. Disentangling the effect of the TCC Implementation Grant from other public benefit programs is difficult when they all are co-located. Thus, Stockton Rising is best understood as part of a bundle of investments, and caution should be practiced when attributing community-scale transformations to any single investment within that bundle. To practice such caution, the LCI evaluation team will be using qualitative data collection instruments to gather stakeholder input about the contributions of TCC relative to other programs in achieving community-scale transformations.

Table 2: Summary of Stockton Rising Projects and Plans

Project/Plan Type	Project/Plan Name	Partners	TCC Funding	Leveraged Funding
Community Engagement Plan	N/A	Public Health Advocates*; Little Manila Rising; Catholic Charities the Diocese of Stockton	$866,759	$0
Displacement Avoidance Plan	N/A	City of Stockton*	$0**	TBD
Workforce Development Plan	N/A	Rising Sun Center for Opportunity*; GRID Alternatives; Insight Garden; San Joaquin Regional Transit District	$541,725	$1,101,752
Active Transportation	Miner Avenue Complete Streets Improvement	City of Stockton*	$1,500,000	$17,808,920
Energy and Water Efficiency	Climate Careers Energy	Rising Sun Center for Opportunity*	$1,301,400	$0
	Climate Careers Water	Rising Sun Center for Opportunity*	$1,198,600	$0
Healthy Food Access	Edible Education At Home	Edible Schoolyard Project	$400,000	$51,533
Rooftop Solar	Stockton Energy for All Single-Family	GRID Alternatives*	$1,124,625	$1,134,022
	Stockton Energy for All Multi-Family	GRID Alternatives*	$944,657	$297,150
Urban Forestry	Urban Forest Renovation Project	City of Stockton*; Little Manila Rising; PUENTES	$1,835,000	$0
Total* **			**$10,834,490**	**$20,393,378**

*Project lead
**SGC has awarded a separate technical assistance grant ($100,000) to support the development of the Displacement Avoidance Plan.
***TCC funding total includes additional funding from SGC for grant administration ($580,000) and indicator tracking ($541,725).

[25] For more background on SEED, visit: https://www.stocktondemonstration.org/

[26] For more background on the AB 617 work underway in Stockton, visit: https://www.stocktondemonstration.org/

[27] For more background on the STEP Implementation Grant in Stockton, visit: https://ww2.arb.ca.gov/lcti-stockton-mobility-collective

STOCKTON RISING: STORIES FROM THE COMMUNITY

Stockton Rising project partners gather at a community resource fair in the TCC project area on August 18, 2021.
Photo credit: GRID Alternatives

AS A COMMUNITY-LED INITIATIVE, Stockton Rising engages a wide variety of stakeholders. Residents, local business owners, workers, and others help implement projects to advance community-defined goals for climate action, economic development, and more. This chapter provides a series of case studies of how these stakeholders have contributed to the rollout of Stockton Rising and/or benefited from the initiative's suite of projects and plans. The case studies are provided in reverse chronological order in order to spotlight more recent additions to this annual report. It's important to note that these stakeholders represent only a small sample of the many individuals who have shaped—or been shaped by—the implementation of Stockton Rising. Thus, their purpose is to be illustrative, but not exhaustive, of the ways in which Stockton Rising has touched the lives of community stakeholders.

Solar installations bring financial relief to low-income homeowners

Background:

This case study explores how TCC funded solar installations have financially benefited low-income homeowners in Stockton. The case study does so through the lens of two individuals, Carolyn Hopkins and Mayra Delgado, who are using the savings from their lower energy bills to better maintain their homes and personal wellbeing. For more on Stockton's solar projects, see **page 44**.

Interviews for this case study were conducted in March 2022.

Installation of solar PV panels on a single family home in the TCC project area. Photo credit: GRID Alternatives

CAROLYN HOPKINS is a longtime Stockton resident who moved to the city when she was one-year old. Sixty-five years later, she's now a retired homeowner, living with her son and granddaughter, and trying to make ends meet. Rising energy costs haven't been kind to her in that regard, and were ultimately what motivated her to go solar.

> **"Prior to going solar, my electricity bills were getting so big that I couldn't pay them all at once, and I had to get on a payment plan ."**
>
> CAROLYN HOPKINS

Hopkins first heard about Stockton's solar program for low-income homeowners through her son, who had an internship with GRID Alternatives, the organization leading Stockton's solar installations. At first, Hopkins was skeptical that she wouldn't have to pay anything for her new solar panels. However, after going over the program details with a representative at GRID Alternatives, Hopkins realized that there was no catch. The cost of the panels and their installation is covered by TCC funds, and are exclusively reserved for homeowners that qualify as low-income. In addition to the TCC grant, GRID Alternatives also receives philanthropic funding, which has allowed the organization to upgrade Hopkins' roof so that it could safely support the panels.

The upfront costs of rooftop solar are often what deter many low-income individuals from investing in solar on their own. Stockton's solar program, however, eliminates that issue, enabling homeowners to access measurable cost savings soon after their solar panels go live. By generating on-site electricity, the panels offset the consumption charges that ratepayers are billed. In Hopkins' case, her solar panels have produced enough electricity to save her as much as $100 per month.

> **"My summer utility bill, which includes both electricity and gas, is where I have seen the greatest cost savings, they went from over $200 down to around $100."**
>
> CAROLYN HOPKINS

Now that she's paying lower energy bills, Hopkins plans to use her cost savings to pay off her property taxes. She also is looking forward to taking a vacation with her family. Time with family is particularly important to Hopkins. For example, when GRID Alternatives awarded her a $200 incentive for a referral she made, Hopkins spent the money on taking her grandchildren out to dinner.

The rooftop solar panels have also enabled Hopkins to spend more money on maintaining a comfortable living environment. For example, during the winter, Hopkins used to rely primarily on space heaters to heat her home room-by-room because central heating was too expensive.

The energy cost savings from the solar panels have allowed Hopkins to turn on her central heater during the winter without having to worry so much about her resulting bill.

"My home is two stories and it gets really cold downstairs during the winter. When I didn't have the solar panels, I was too afraid to turn the central heat on. Now I can afford to do that."

CAROLYN HOPKINS

Hopkins' switch from electric space heaters to gas powered central heating is a certainly win for her wellbeing, but it's important to note that it may not be a clear environmental win. This points to the challenge of achieving deep GHG reductions in low-income settings, where residents live in older buildings that are not yet fully electrified, and often lack the funds to invest in electrification themselves. Thus, while rooftop solar systems are a critical step forward in the path towards decarbonization, they are certainly not the last step. To achieve a zero carbon future, greater investment is needed to help low-income homeowners like Hopkins upgrade their central heating system to an electric one, which thanks to her solar panels, she could power on-site.

❖

MAYRA DELGADO is another Stockton resident who decided to go solar in order to help make ends meet. Originally, from Mexico, Delgado moved to Stockton about 20 years ago with her former husband on the recommendation of her brother, who was already living there. Delgado was attracted to Stockton for the lower cost of living relative to the San Francisco Bay Area, where she had initially landed.

For a while, Delgado was able to take full advantage of the lower cost of living. With the modest income she and her husband both earned working at Mervyn's, a national chain of department stores, they were able to buy a home for themselves and their three daughters. But when the Great Recession came in 2008, the Delgado family was hit hard: Mervyn's went bankrupt, Delgado and her husband lost their jobs, the interest rate on their home loan soared, and they were forced into foreclosure.

Delgado eventually recovered from the loss. She started working as a teacher's assistant, rebuilt her savings, and bought another home. But her recovery was interrupted by the pandemic and subsequent school closures. Now a single mom, Degaldo was forced to decide between working full-time or caring for her youngest daughter, a high school student with special needs. Delgado ultimately chose her daughter, and quit her full-time job for a part-time one at Amazon. The loss in income is when she started falling behind on her electricity bills, and like Hopkins, had to get on a payment plan.

"In December, my utility bill was $340 or $380, I had no idea how I was going to pay it...things got so bad that I owed my utility a total of $600."

MAYRA DELGADO

In search of a way to save money, Delgado started searching on the internet for options, and that's when it occurred to her that going solar could help. She first explored getting panels through a for-profit solar company, but it didn't make financial sense for Deglado because of all the upfront costs. Then she eventually discovered Stockton's no-cost solar program for low-income homeowners.

Like Hopkins, Delgado was skeptical at first, and it was her interactions with GRID Alternatives that made her feel confident that she wasn't being scammed. She was particularly impressed by the follow through from GRID Alternatives to address issues at her property that made installing solar panels challenging. Like Hopkins, Delgado needed repairs to her roof and tree trimming around her property, all of which GRID Alternatives covered at no cost to Delgado.

"GRID Alternatives was always looking for ways to save me money, they knew I was a single mom and wanted to make sure I didn't have to spend any of my own money on the solar panels."

MAYRA DELGADO

After her solar panels were connected to grid, Delgado saw a dramatic decline in her utility bills. This has helped her catch up on the money she owes to her gas and electricity provider. Once those are paid off, Delgado plans to invest her savings back into her home and the health of her family. In practice, that means repainting her home and maintaining a healthy and diverse diet, all of which have been hard for Delgado to afford in the face of inflation.

"Before I got the panels, I had to make some tough choices. I could pay my bills or I could buy fresh fruits and vegetables. Not having to choose between the two gives me great peace of mind."

MAYRA DELGADO

Stockton youth learn how to advocate for environmental justice

Zoom recording of a Stockton Rising youth engagement session in April 2021 . Photo credit: Little Manila Rising

Background:

This case study explores how TCC funds for community engagement have built local capacity to tackle environmental injustices. The case study does so through the lens three Stockton natives: a project partner who used TCC funds to launch a youth leadership program; and two graduates of that program. For more on Stockton's Community Engagement Plan, see **page 31**.

Interviews for this case study were conducted in October 2021.

BIANETTE PEREZ is a Stockton native committed to helping fellow first generation college students succeed. After earning her bachelor's degree in Chicanx Studies at UCLA, she was awarded a Stockton Urban Revitalization Fellowship to return to her hometown and work at Little Manila Rising. During her fellowship, Perez helped the Little Manila Rising promote a book about the life and work of Larry Itliong, a Filipino American who co-founded the United Farmer Workers union. The larger goal of the campaign was to improve educational outcomes for students of color by better integrating the histories of marginalized communities within school curricula.

Now, Perez holds a regular position at Little Manila Rising as the Leadership & Community Engagement Director. In that role, she leads the organization's effort to build capacity among Stockton's youth to advocate for social justice. As part of that effort, Perez is funded by TCC to coordinate an environmental justice workshop series in which 30 young adults from Stockton (ages 17 to 24) facilitate discussions on topics such as soil contamination, air pollution, health impacts, and civic engagement. The goal was to develop leadership skills amongst participants, and also equip them to be environmental justice messengers within their community. Perez hopes to leverage the engagement sessions to build a more robust youth employment program at Little Manila Rising, what she refers to as the "school to social justice pipeline."

Bianette Perez, coordinator of the Stockton Rising youth engagement sessions. Photo credit: Urban Waters Learning Network

"At Little Manila Rising, we strongly believe that youth are important leaders in the community who will help shift society toward equitable solutions to climate change."

BIANETTE PEREZ

Karlaine Francisco, an environmental justice advocate trained by Little Manila Rising. Photo credit: Karlaine Francisco

"My goal was to better understand what it means to be an environmental justice advocate and to share that knowledge with my community...now I feel qualified to teach others what I learned."

KARLAINE FRANCISCO

KARLAINE FRANCISCO is one of the young adults who participated in the Little Manila Rising's environmental justice workshop series. The granddaughter of immigrant farmworkers, Francisco was particularly interested in learning more about the connection between agricultural pollution and farmworker health, and took the lead on facilitating a session on soil contamination. She credits her participation in the workshop series as teaching her research and collaboration skills, as well as providing her a sense of community and connection with her hometown as she transitioned to college as a freshman at UC Berkeley.

Francisco hopes to build upon her experience at Little Manilla Rising by pursuing a career in environmental law and policy with a focus on health. Her motivation for doing so is to ensure that environmental policies protect and benefit low-income and immigrant communities. Francisco plans to use her time at UC Berkeley to explore different professional vocations for doing just that, whether that be a practicing attorney, an academic, or an educator based in the community.

RAZIEL ("RACHEL") RAMIL is a recent graduate of UC Davis, where she studied community and regional development, and has returned to Stockton to launch her career in environmental justice advocacy. She was first exposed to the topic of environmental justice in one of her college courses. After graduating, Ramil was eager to learn more about the topic, and was drawn to the Little Manila Rising workshop series because it applied the lens of environmental justice to the issues confronting her hometown, such as poor air quality and chronic asthma.

During the workshop series, Ramil facilitated a session entitled "Make Your Voice Heard!" in which she presented on advocacy strategies for neighborhood improvements. She also moderated a breakout group in which she and her peers identified the top issues in their community, the key decision makers who exert influence on those issues, and an agenda for meeting with those decision makers.

Now, Ramil is employed at the California Center for Civic Participation, where she is helping curate an environmental justice program called Green Focus. The program exposes Sacramento high school students to environmental policy and career opportunities in the field. In the long run, she hopes to get more involved with policymaking in order to reduce disparities within her community.

Raziel Ramil, another environmental justice advocate trained by Little Manila Rising. Photo credit: Raziel Ramil

"I want to pay it forward, and am integrating lessons from my training in Stockton to help students in other parts of the state to become environmental justice advocates in their own communities."

RAZIEL RAMIL

TRANSFORMATIVE PLANS

Catholic Charities of the Diocese of Stockton staff recruiting for resident Climate Justice Leaders. Photo credit: Rise Stockton

THE COUPLING OF TRANSFORMATIVE PLANS alongside GHG reduction projects is one of the central elements of the TCC that separates it from all other California Climate Investments. For Round 3 of TCC, applicants were required to develop three transformative plans: a community engagement plan, workforce development plan, and displacement avoidance 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 Stockton Rising structured its three transformative plans and what progress has been made toward plan implementation.

Community Engagement Plan

Closing celebration for the first cohort of environmental justice advocates recruited and trained by Little Manila Rising.
Photo credit: Little Manila Rising

STOCKTON RISING'S COMMUNITY ENGAGEMENT PLAN (CEP) creates opportunities for South Stockton residents to participate in local climate action planning, policy, and advocacy. The plan does so through a resident-inclusive grant governance model, leadership development programs, and multiple channels of communication with TCC project partners.

Public Health Advocates (PHA) leads the CEP. Since 2014, PHA has engaged Stockton's African American residents through its Racial and Ethnic Approaches to Community Health (REACH) Program, which promotes healthy lifestyle choices and physical activity. Through this work, PHA has developed strong ties with the faith-based community, working to install community gardens at churches, establishing mobile farmers markets, and providing nutrition education.

Catholic Charities the Diocese of Stockton (CCDC) and Little Manila Rising (LMR) serve as supporting partners. CCDC will leverage its network of four Catholic churches in South Stockton with large Latinx and Filipinx communities towards recruitment, outreach, and engagement efforts. Similarly, LMR will draw upon more than 20 years of experience engaging with marginalized communities in Stockton to maximize the reach and impact of the CEP.

Key Accomplishments*

- 29 total meetings of the various grant governance bodies within Stockton Rising's collaborative stakeholder structure (12 Community Engagement Working Team meetings; 12 Workforce Development Working Team meetings; and 5 Steering Committee meetings)
- 10 young adults enrolled in LMR's climate resilience and leadership development program
- Kicked off outreach around TCC funded projects (see next chapter for more information by project)

*From award date (June 2020) through the end of FY 2020-'21 (June 2021)

Community Engagement Strategies

There are four main strategies in the Stockton Rising CEP:

» **Coordination and alignment** of projects to ensure they are in sync with the community's vision for climate justice. This will be accomplished through the a collaborative stakeholder structure (CSS) that governs TCC implementation, and is composed of the following subgroups (See **Appendix 4** for a summary of specific members within each subgroup and details on voting privileges):

- Capital Strategies Working Team (CSWT) - meets bi-monthly and includes representation from two project area residents and six project partners that work on projects involving capital improvements;
- Community Engagement Working Team (CEWT) - meets monthly and includes representation from two project area residents, two community stakeholder groups, and three project partners that are directly involved with community engagement activities;
- Workforce Development Working team (WDWT) - meets bi-monthly and includes representation from two project area residents, two community stakeholder groups, and four project partners that are directly involved with workforce development activities;
- Steering Committee - executive level working group that meets quarterly and includes representation from two project area residents and the lead facilitators for the CSWT, CEWT, and WDWT.
- Community Coalition - meets bi-monthly and is open to all project area resident and workers who wish to learn about TCC implementation progress and provide input on pending implementation decisions.

» **Resident capacity building** around climate action. To support this strategy, PHA will recruit and train residents for 10 paid positions as "Community Liaisons". These liaisons will serve as local experts on Stockton's TCC grant and disseminate information and resources related to the grant within their networks. Simultaneously, LMR will train up to 30 youth leaders (10 annually) to become climate resiliency experts (see **page 28** for participant stories).

» **Educational campaigns** that broadcast opportunities to benefit from, participate in, and learn from local climate action efforts. This will be accomplished through two community wide events: (1) a Block Party with presentations by TCC project partners, as well as other community leaders; and (2) a Summit that provides an overview of evaluation metrics and early findings.

» **Communications** with project area residents across multiple channels. In addition to the channels described above, PHA will post regular social media updates about TCC. Additionally, CEWT partners will create audio and video content (known locally as PhotoVoice Walking tours) on an annual basis that document resident perspectives on the challenges of living in South Stockton and early effects of TCC.

Project Details

Launch date
December 2020

Anticipate completion date
September 2023

TCC grant funds
$866,759

Leveraged funds
$0

Responses to COVID-19

» Project partners and Community Liaisons witched to virtual platforms to conduct community engagement events and meetings.

Displacement Avoidance Plan

Demolition of Razil Social Cub, a culturally significant building in Stockton's historic Little Manila district, after financing could not be secured for structural repairs. Photo credit: Little Manila Rising

STOCKTON RISING'S DISPLACEMENT AVOIDANCE PLAN (DAP) will be finalized during the first year of the grant term. The Strategic Growth Council (SGC) awarded Stockton a TCC Implementation Grant without a fully developed DAP at the time of the city's application because there was a clear need for more capacity building around the topic. After years of disinvestment leading to (and resulting from) the city's bankruptcy, the threat of investment-induced displacement has not been a central focus of recent planning or community organizing efforts in Stockton. Thus, SGC has provided the City of Stockton a separate $100,000 Technical Assistance Grant to support the creation of a DAP during the grant term. Once finalized, Stockton's DAP will be implemented during the grant term entirely through leveraged funds.

The City of Stockton is serving as the interim project lead for the DAP. Using funding from the Technical Assistance Grant, the City will hire a consultant with expertise in displacement avoidance to perform the substantive work of developing the DAP. The consultant will work with City staff and the Community Engagement Plan team to engage residents and small businesses to identify displacement risks and develop a plan to address them.

Key Accomplishments

Implementation pending

Project Details

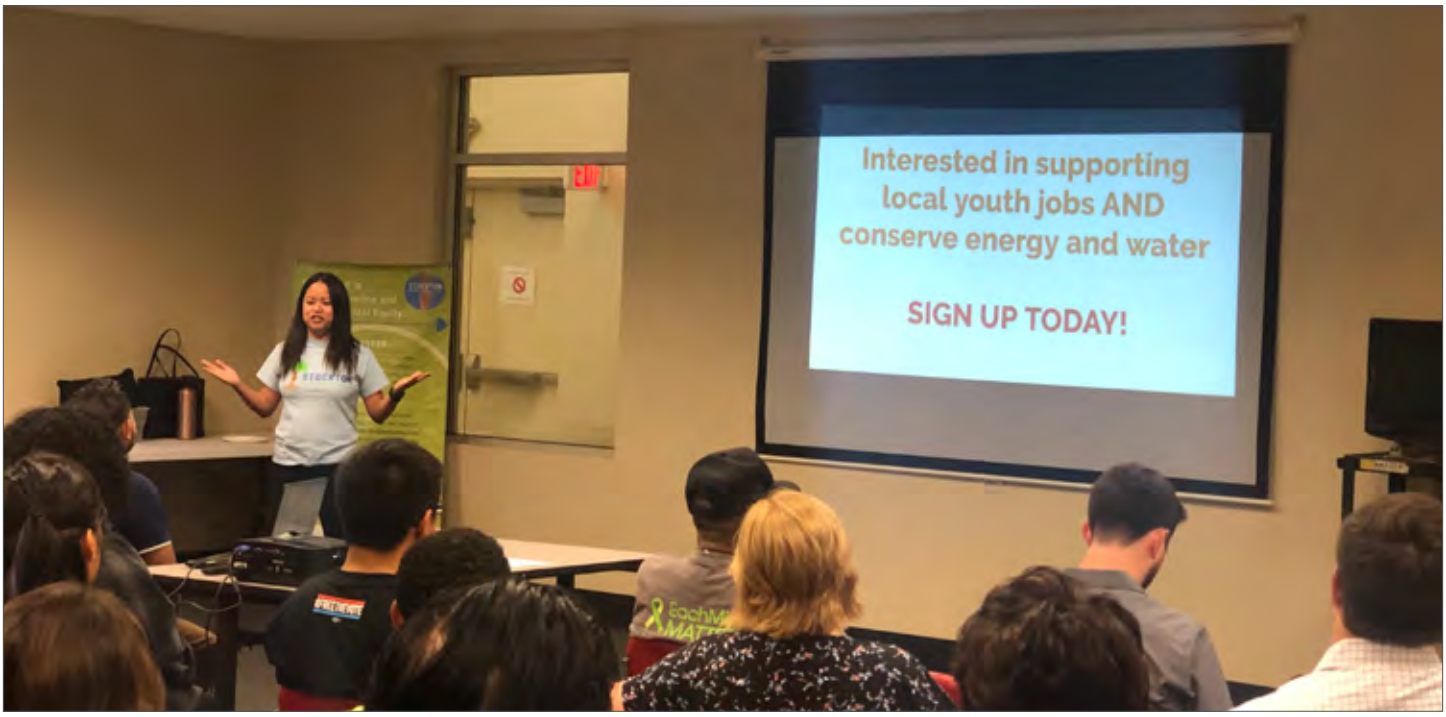
Launch date
December 2020

Anticipate completion date
September 2023

TCC grant funds
$0

Leveraged funds
TBD

Workforce Development Plan



Senior Community Engagement Manager, Justina Caras shares information about youth focused green jobs amongst the Stockton community. Photo credit: Rise Stockton

WORKFORCE DEVELOPMENT is central to the Stockton Rising vision. The site's Workforce Development and Economic Opportunities Plan (WDEOP) includes four paid job training programs: (1) GRID Alternatives' solar installation basics training program; (2) The San Joaquin Regional Transit District's electric bus maintenance mechanic apprenticeship program; (3) Insight Garden's vocational gardening and landscaping program; and (4) Rising Sun Center for Opportunity's Climate Careers program that prepares Stockton youth for jobs in the building and construction trades.[9]

Rising Sun Center for Opportunity will serve as the designated lead for the WDEOP, and will employ a workforce coordinator to ensure coordination across the four job training programs, as well as alignment with the Stockton Rising vision. To support this effort, this coordinator will organize and lead monthly meetings that include TCC partners, stakeholders, and resident representatives.

Key Accomplishments*

» **1 trainee completed 569 hours of training through San Joaquin Regional Transit District's electric bus maintenance mechanic apprenticeship program**

*From award date (June 2020) through the end of FY 2020-'21 (June 2021)

Continues on next page

[9] **In addition to the four job training programs described here, Little Manila Rising will also hire and train 25 seasonal, part-time workers to assist with tree planting activities. However, these positions are not considered a formal part of the Stockton's WDEOP because they do not include training for a specific vocation following the work opportunity.**

Solar Installation Training

GRID Alternatives will recruit and train 16 individuals on how to install rooftop solar photovoltaic (PV) systems. GRID will recruit trainees from the TCC project area as much as possible, but not exclusively. Trainees will then gain on-the-job experience helping GRID Alternatives meet its TCC-funded goal to install 378 kilowatts (kW) of solar PV capacity on single-family homes in the project area (see next chapter for more details about this work).

Bus Mechanic Training

The San Joaquin Regional Transit District (RTD) will train four individuals in a three-year long electric bus mechanic apprenticeship program. RTD will recruit the apprentices from within its existing workforce. The training will cover the mechanical components of a bus including electrical, brakes, diesel engines, HVAC, transmission and drivetrain, steering and suspension, preventative maintenance and inspection, electronic diesel diagnostics, electric drive systems, hybrid systems, and welding. Upon completing the apprenticeship program, apprentices will receive a California Division of Apprenticeship Standards Bus Mechanic Journeyman Certificate. Graduates will be employed by RTD as full-time bus mechanics.

Gardening/Landscaping Training

The Insight Garden Program will tailor a vocational gardening and landscaping training program to the needs of 40 incarcerated individuals who are about to enter Stockton's workforce. The program will teach practical skills such as permaculture, landscape design, skill building, organic gardening, and conservation. In addition to vocational training, the program will also teach life skills, including topics such as interpersonal communication, leadership development, community building, and emotional processing. Moreover, the program will also include lessons on topics such as environmental justice, food access, and healthy equity. To incentivize enrollment and program completion, participants will be offered earned time credits that reduce the length of their prison sentence.

Climate Careers Program

Rising Sun Center for Opportunity (Rising Sun) will recruit low-income youth (ages 18-24) from the project area for its Climate Careers program, which will expose them to job opportunities in the building and constructions trades. The goal of the program is to create a pipeline for young adults to high-skill careers that pay livings wages.

During the first stage of the program, 45 young adults will be recruited for seasonal positions that provide paid, hands-on experience installing water and energy efficiency measures in single- and multi-family homes. Their work on this project will help Rising Sun achieve its TCC-funded goal to provide efficiency upgrades to 812 residents in the project area (see next chapter for more on this work). In addition to paid work experience, the training program will also offer workshops on professional development and environmental justice, as well as one-on-one interactions with Youth Development Specialists at Rising Sun.

During the second stage of the program, Rising Sun will provide at least 10 training graduates with a paid externship at a partner organizations in Stockton. These partners include, but are not limited to: Hatch Workshop, Changeist, New Genesis Housing Development, Edge Collaborative, GRID Alternatives, and Rising Sun.

Along with the externship opportunity, 11 training graduates will also be offered paid training in the Multi-Craft Core Curriculum (MC3) program, a pre-apprenticeship program in the construction sector. Rising Sun will serve as the recruitment partner for the program, while California Human Development, a nonprofit organization based in Santa Rosa, will coordinate all of the program's activities.

In addition to the youth training and employment opportunities, Rising sun will also recruit and employ 14 adults for seasonal positions to assist with energy and water efficiency installations. These positions will also include opportunities to serve as project managers.

Project Details

Launch date
December 2020

Anticipate completion date
September 2023

TCC grant funds
$541,725

Leveraged funds
$1,101,752

PROFILES:

TCC FUNDED PROJECTS

Chef Liesha Barnett, one the lead partners for Stockton Rising's TCC-funded food access project. Photo credit: Unbound Stockton

TCC APPLICANTS CHOSE FROM A WIDE ARRAY OF PROJECT TYPES in their effort to achieve the three objectives of TCC, namely: (1) reductions in greenhouse gases (GHGs); (2) improvements in public health and environmental benefits, and (3) expanded economic opportunity and shared prosperity. The following section provides an overview of the Stockton Rising projects, aggregated by project type, that will be using TCC dollars to achieve the aims of the program.

Active Transportation

Rendering of Miner Ave following TCC investment. Photo credit: Jacobs Engineering

STOCKTON RISING'S ACTIVE TRANSPORTATION PROJECT will transform a ten-block auto-dominated thoroughfare in Downtown Stockton, on Miner Avenue between Center Street and Aurora Street, into a marquee "complete street" (a street that serves the mobility needs of all users, regardless of travel mode). The project, known as Miner Avenue Complete Street Improvement, will also provide linkage to the Downtown Transit Center and the Robert Cabral Rail Station as well as nearby schools and parks. The improvements from the project are expected to encourage a modeshift from cars to more active modes, thereby resulting in reduced vehicle miles traveled (VMT) and environmental benefits such as reduced GHGs and local air pollutants. These environmental benefits will also be augmented by the project's urban greening components.

The City of Stockton Public Works Department will lead project implementation. The Public Works Department will also be responsible for the long-term operations and maintenance of the new infrastructure.

Key Accomplishments

- 3,650 square feet of permeable surfaces added (and impermeable surfaces removed)
- 3,072 linear feet of pedestrian pathways added
- 33 streetlights added
- 24 wheelchair ramps added
- 12 bike racks added
- 4 traffic signals upgraded to include video detection of users of all modes

*From award date (January 2018) through the end of FY 2020-'21 (June 2021)

Specific project improvements include augmented tree canopy, more accessible sidewalks, new pedestrian-oriented lighting, bike lanes, and furniture that activates the street for pedestrians, bicycles, and transit. By the end of grant implementation, the project will deliver the following outputs:

- 117 new trees
- 485 shrubs
- 34 streetlights
- 14 bike racks
- 15 benches
- 0.75 miles of improved sidewalks
- 0.5 miles of new bike lanes
- upgraded utility connections
- new paint striping
- traffic signal upgrades
- new topsoil for landscaping

Project Details

Launch date
December 2020

Anticipated completion date
September 2023

Project lifetime (post-implementation)
40 years

TCC grant funds
$1,500,000

Leveraged funds
$17,808,920

Estimated Benefits Over Project Lifetime

GHG emissions reductions
476 $MTCO_2e$

Diesel PM reductions
2 pounds

PM 2.5 reductions
57 pounds

NOx reductions
603 pounds

Reactive organic gas reductions
4 pounds

Avoided stormwater runoff
1,087,993 gallons

VMT reduction
201,096

Travel cost savings
$101,533

Direct jobs from TCC dollars
5 FTEs

Indirect jobs from TCC dollars
2 FTEs

Induced jobs from TCC dollars
6 FTEs

Energy and Water Efficiency

Stockton youth recruit households for energy and water efficiency upgrades. Photo credit: Rising Sun Center for Opportunity

STOCKTON RISING'S ENERGY AND WATER EFFICIENCY PROJECTS,- known locally as Climate Careers Energy and Water, will help reduce utility bills for 812 residents in the TCC project area while also employing low-income youth. Energy efficiency measures will be installed at no cost to residents of single and multi-family homes, and will include: LEDs, refrigerators, water heater blankets, and smart thermostats. Similarly, water efficiency measures will be installed at no cost to residents, and will include: kitchen aerators, bathroom aerators, showerheads, dishwashers, and toilets. Benefiting households will also be educated on best practices to conserve energy and water. A total of 56 youth will be recruited for seasonal positions to carry out project activities.

Rising Sun Center for Opportunity (Rising Sun) will serve as the project lead for Stockton's water and energy efficiency projects. Rising Sun is also coordinating Stockton's Workforce Development and Economic Opportunities Plan (WDEOP), which includes complementary job training and placement opportunities for 45 young adults who will be employed by the efficiency projects. In addition to serving 45 youth, Rising sun will also recruit and employ 14 adults to assist with project implementation. See the previous chapter for more details about Stockton Rising's WDEOP.

Key Accomplishments*

- 4,814 informational mailers sent to residents in the project area about opportunities to benefit form free efficiency measures
- 950 informational flyers posted around the project area
- 5 informational announcements posted on Facebook

*From award date (January 2018) through the end of FY 2020-'21 (June 2021)

Project Details

Launch date
December 2020

Anticipated completion date
September 2023

Project lifetime (post-implementation)
15 years

TCC grant funds
$2,069,282

Leveraged funds
$1,431,173

Estimated Benefits Over Project Lifetime

GHG emissions reductions
8,219 $MTCO_2e$

PM 2.5 reductions*
1,087 pounds

NOx reductions*
9,442 pounds

Reactive organic gas reductions*
957 pounds

Electricity savings
14,360,620 kWh

Heat savings
905,593 therms

Water use savings
11,927,092 gallons

Energy cost savings
$2,824,172

Water cost savings
$50,275

Direct jobs from TCC dollars
16 FTEs

Indirect jobs from TCC dollars
6 FTEs

Induced jobs from TCC dollars
10 FTEs

*Not including reductions from water efficiency measures because the California Air Resources Board did not have an approved methodology for doing so at the time of Stockton Rising's grant award.

Responses to COVID-19

» Deployed a satellite energy and water efficiency program in which homes assessments were conducted virtually and water and energy efficiency kits were sent in the mail.

Healthy Food Access

Project partners at the Edible Schoolyard Project about to give away fresh food boxes. Photo credit: The Edible Schoolyard Project

STOCKTON RISING'S HEALTHY FOOD ACCESS PROJECT, known locally as Edible Education at Home, will provide 50 families in the project area with free boxes of organic produce on a weekly basis for 30 months. The produce will be procured vis-a-vis community supported agriculture (CSA), a farming model in which local farmers send boxes of seasonal produce directly to consumers. The boxes will be complemented by educational programming on how to cook the contents of each box. Educational programming will be delivered through printed materials, a phone-in hotline with a live educator, and recorded demonstrations (at least 15 in total).

In addition to the programming that is directly tied to the food boxes, the project will also create educational content for TCC project area residents at large. This includes weekly online cooking classes and at least 5 gardening classes. During the first of six months of grant implementation, these classes were delivered to students K-8. Future classes will be offered to a wider audience, with outreach efforts focused in the TCC project area.

The Edible Schoolyard Project (ESYP) will serve as the project lead. ESYP will partner with Taylor Leadership Academy, a K-8 public school in the TCC project area, to recruit families to participate in the CSA program.

Key Accomplishments

- 3,800 educational materials printed and disseminated
- 1,350 boxes of seasonal organic produced delivered (15 to 20 pounds each);
- 40 cooking workbooks distributed to families that received CSA boxes
- 29 individuals served through an informational hotline
- 15 online cooking classes taught to 37 students from grades K-8.
- 3 online gardening classes taught to 37 students from grades K-8.
- 2 engagement events for families that received CSA boxes, which included cooking demonstrations

*From award date (January 2018) through the end of FY 2020-'21 (June 2021)

Project Details

Anticipated completion date
December 2020

Project lifetime (post-implementation)
September 2023

TCC grant funds
$400,000

Leveraged funds
$51,533

Estimated Benefits Over Project Lifetime

GHG emissions reductions
N/A[10]

Organic produce delivered
47 tons[11]

Direct jobs from TCC dollars
2 FTEs

Indirect jobs from TCC dollars
1 FTEs

Induced jobs from TCC dollars
2 FTEs

[10] While this project may lead to GHG reductions through a number of pathways, the California Air Resources Board and the Strategic Growth Council have not approved standardized methodology for estimating those reductions. Potential pathways for GHG reductions include: reduced food miles traveled, reduced use of energy-intensive agricultural inputs such as artificial fertilizer and pesticides, and composting practices that sequester carbon in the soil.

[11] Assumes 6,250 boxes of produced will be delivered over the project lifetime, and a minimum weight of 15 pounds per box.

Responses to COVID-19

- Moved in-school cooking classes to a virtual setting.
- Created a suite of online educational materials, activities, and lesson plans to engage residents at home.
- Practiced COVID-19 safety protocols when delivering CSA boxes to project participants.

Rooftop Solar

GRID Alternatives staff and trainees install rooftop solar PV panels in the TCC project area. Photo credit: GRID Alternatives

STOCKTON RISING'S SOLAR PROJECTS, collectively referred to as Stockton Energy for All, will enhance the generation of local renewable energy by installing up to 621 kilowatts of DC rated (kW-DC) solar PV panels on the roofs of residential buildings. A total of 378 kW-DC will be installed across 108 single-family homes and 243 kW-DC will be installed on four multi-family structures, all at no cost to property owners. Using leveraged funding, Stockton Energy for all may also provide residents with roof repairs and electrical service panel upgrades to help make their homes "solar ready" and/or prepared for full-building electrification.

All project outputs will specifically benefit low-income households. As a result, all single-family homes must be owner-occupied by a low-income household to qualify. For multi-family installations, GRID Alternatives will specifically target properties that are providing affordable housing to low-income residents.

Stockton Energy for All will be led by GRID Alternatives, an Oakland-based nonprofit organization that installs solar power systems and provides job training opportunities in the process. The workforce development services offered by GRID Alternatives will be integrated into the Stockton Rising WDEOP (see previous chapter for more details about the WDEOP).

Key Accomplishments*

- 4 contracts executed for installations on single-family properties
- 4 contracts executed for installations on multi-family properties

*From award date (January 2018) through the end of FY 2020-'21 (June 2021)

Project Details

Launch date
December 2020

Anticipate completion date
September 2023

Project lifetime (post-implementation)
40 years

TCC grant funds
$2,068,281

Leveraged funds
$1,431,173

Estimated Benefits Over Project Lifetime

GHG emissions reductions
6,748 $MTCO_2e$

PM 2.5 reductions
936 pounds

NOx reductions
3,735 pounds

Reactive organic gas reductions
595 pounds

Renewable energy generation
28,457,555 kWh

Energy cost savings
$3,801,929

Direct jobs from TCC dollars
8 FTEs

Indirect jobs from TCC dollars
2 FTEs

Induced jobs from TCC dollars
5 FTEs

Urban Forestry

Trees being planted in the TCC project area at Mattie Harrell Park. Photo credit: City of Stockton

STOCKTON RISING'S URBAN FORESTRY PROJECT, know locally as the Urban Forest Renovation Project, will reverse a decline in tree canopy in the project area through the planting of 1,750 trees (in addition to the 117 that will be planted as part of the Miner Avenue Complete Street Improvement Project). Plantings will occur at locations where trees were lost to natural events (many of which are in the city's public parks) ,as well as new locations that will be identified by Stockton Rising's collaborative stakeholder structure. All of the trees will belong to species that will thrive and are as drought tolerant as possible to minimize watering. As the trees mature, they will reduce GHGs by sequestering carbon. Moreover, the trees will help absorb local air pollutants such as PM 2.5 and NOx, as well as stormwater runoff.

The City of Stockton will lead project implementation and will also be responsible for maintaining trees that are on public land. Little Manila Rising (LMR) will 10 host community tree planting events in which residents can learn basic tree planting skills. Additionally, LMR will hire and train 25 seasonal, part-time workers to assist with planting activities. PUENTES will serve in a supporting role, assisting with trainings for volunteers at planting events.

Key Accomplishments

Implementation pending

Estimated Benefits Over Project Lifetime

Launch date
December 2020

Anticipated completion date
September 2023

Project lifetime (post-implementation)
40 years

TCC grant funds
$1,835,000

Leveraged funds
$0

Estimated Benefits Over Project Lifetime

GHG emissions reductions
1,697 $MTCO_2e$

Total PM 2.5 reductions
533 pounds

Total NOx reductions
5,725 pounds

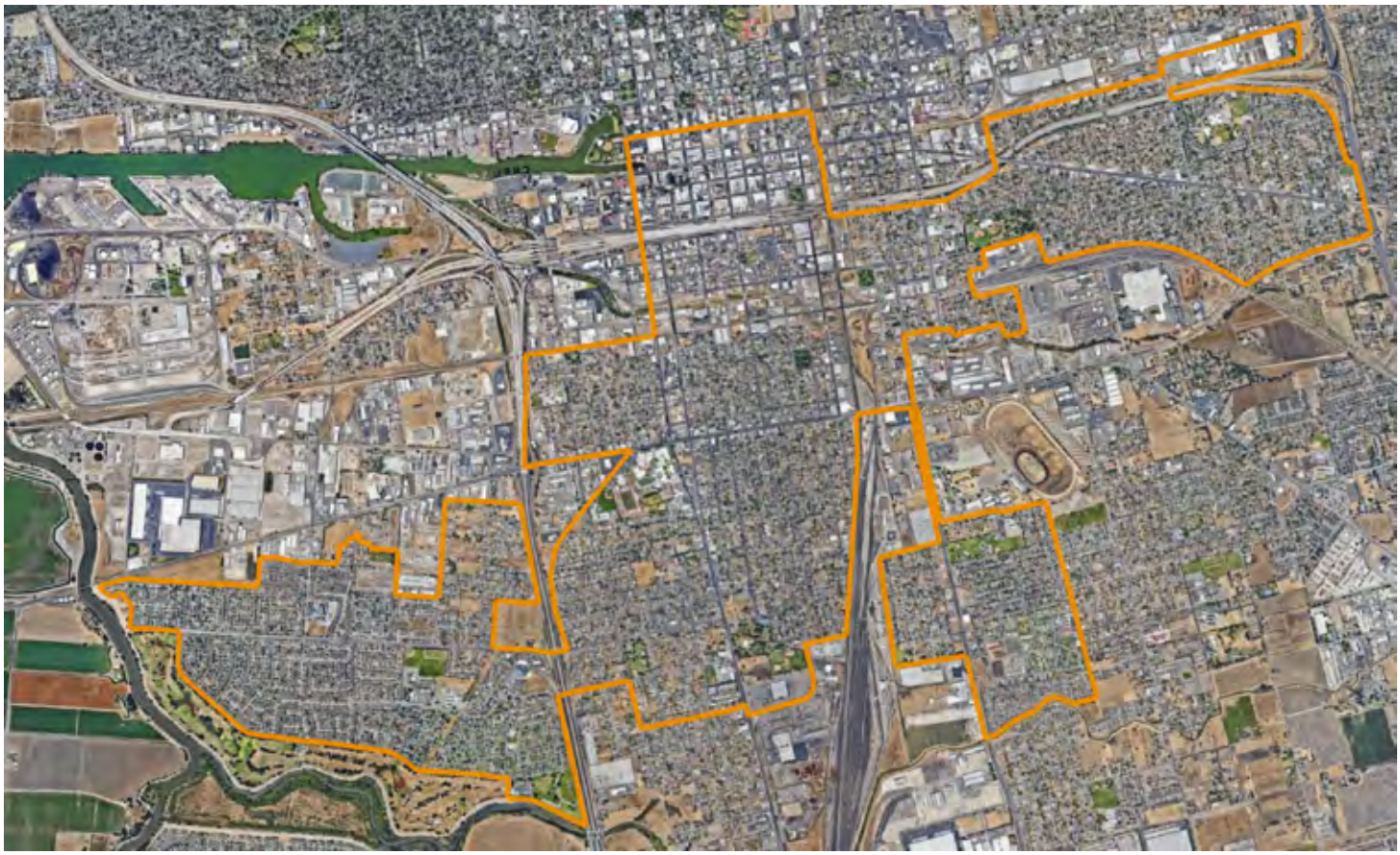
Avoided stormwater runoff
11,340,676 gallons

Direct jobs from TCC dollars
19 FTEs

Indirect jobs from TCC dollars
4 FTE

Induced jobs from TCC dollars
7 FTEs

INDICATOR TRACKING: BASELINE DATA



Aerial view of the Stockton TCC site boundary; the site is 5.0 square miles and measures 5.1 miles from west to east and 2.7 miles from north to south at the farthest points. Photo credit: Google Earth 2022

THE FIRST STEP IN EVALUATION is to establish baseline data for indicators in treatment and control settings prior to an intervention. In the context of Stockton Rising, the treatment setting is the TCC project boundary area (and the census tracts it encompasses), while the control setting is a group of census tracts that are demographically and environmentally similar to the treatment tracts, but did not receive a TCC award. In addition to looking at baseline conditions in the project boundary area and control tracts, the LCI evaluation team will also be looking at baseline conditions at the scale of San Joaquin County and the State of California. This will help demonstrate whether TCC investments are addressing equity gaps at broader geographic scales.

The following section provides a summary of the baseline conditions for indicators that the LCI evaluation team will be tracking throughout TCC grant implementation. When possible, baseline data is reported over a five-year period preceding grant implementation (2016-2020); otherwise, a pre-investment snapshot or truncated trend line is provided. For some indicators, treatment and control sites may have pre-investment trend lines that differ in scale and direction. At this stage, these differences reflect the inherent heterogeneity of disadvantaged communities in California. These differences will be more meaningful after grant implementation, when they can be viewed alongside differences in post-investment trend lines.

Demographics

The population in the TCC project area Stockton decreased at a statistically significant rate over the past decade, a trend that is inconsistent with the rest of San Joaquin County and California (see **Table 4**). It's difficult to assess whether the population decline is actually reflective of what's happening in the community or a result of decreased turnout for the 2020 census.

In terms of race and ethnicity, there has been a statistically significant decrease in the relative size of the non-Hispanic Asian population the project area. This decline has been coupled with a statistically significant increase in the relative size of the Hispanic population and non-Hispanic white population. Excluding the increase in Hispanic individuals, the statistically significant demographic shifts in the TCC project area are incongruent with what is happening at the county and state level. Again, it's difficult to assess whether these shifts are consistent with what's actually happening on the ground, or a result of a systematic undercount in the 2020 census.

Table 4: ACS Demographic Indicators[14]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Total population	2016-2020	38,501	47,196	751,615	39,346,023
	2011-2015	53,043	54,154	708,554	38,421,464
	% Change	-27.4%*	-12.8%*	+6.1%*	+2.4%*
Percent Hispanic, all races	2016-2020	73.6%	56.8%	41.7%	39.1%
	2011-2015	68.5%	55.3%	40.1%	38.4%
	% Change	+7.4%*	+2.7%	+4.0*	+1.8*
Percent Non-Hispanic, Asian	2016-2020	8.1%	14.6%	15.5%	14.6%
	2011-2015	13.9%	15.4%	14.5%	13.5%
	% Change	-41.6%*	-5.6%	+7.3%*	+8.1*
Percent Non-Hispanic, Black	2016-2020	10.3%	11.8%	6.8%	5.4%
	2011-2015	10.1%	8.5%	6.7%	5.6%
	% Change	+1.8%	+39.3%*	+0.9%	-3.2%*
Percent Non-Hispanic, White	2016-2020	6.2%	14.0%	30.7%	36.5%
	2011-2015	4.7%	17.3%	34.3%	38.7%
	% Change	+30.1%*	-19.0%*	-10.5%*	-5.7%*
Percent Non-Hispanic, others (Pacific Islander, American Indian, two or more races, and other)	2016-2020	1.8%	2.8%	5.3%	4.4%
	2011-2015	2.8%	3.5%	4.4%	3.7%
	% Change	-35.3%	-19.4%	+20.1%*	+16.4*
Percent foreign-born population	2016-2020	33.7%	28.1%	23.0%	26.6%
	2011-2015	35.9%	29.1%	23.3%	27.0%
	% Change	-6.1%	-3.5%	-1.3%	-1.7%*

* Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).

[14] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

Economy

Economic conditions in the TCC project area in Stockton appear to have improved according to multiple ACS indicators during the decade that followed the recession: median household income, high income attainment, and the employment rate increased, while poverty levels decreased. All of these trends were statistically significant. Moreover, these trends are consistent with what is occurring at the county and state level (see **Table 5**).

Mixed results were observed for educational attainment, a precursor to economic mobility. While the share of the population with less than a high school education has gone down at statistically significant rate, so too have the share of individuals with a bachelor's degree. However, the latter trend was too marginal to be statistically significant.

Table 5: ACS Economic Indicators[15]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Median household income[17]	2016-2020	$36,591	$43,601	$68,628	$78,672
	2011-2015	$28,556	$33,600	$53,274	$61,818
	% Change	+28.1%*	+29.8%*	+28.8%*	+27.3%*
Percent of individuals living below poverty	2016-2020	30.2%	25.2%	13.7%	12.6%
	2011-2015	39.2%	30.8%	18.6%	16.3%
	% Change	-23.0%*	-18.0%*	-26.4%*	-22.8%*
Percent high-income households ($125k+)	2016-2020	4.6%	8.2%	23.0%	29.8%
	2011-2015	2.2%	3.8%	14.0%	20.9%
	% Change	+105.5%*	+114.7%*	+65.3%*	+43.0%*
Percent with less than high school education	2016-2020	43.2%	32.7%	19.9%	16.1%
	2011-2015	48.5%	34.9%	22.0%	18.2%
	% Change	-11.0%*	-6.2%	-9.6%*	-11.7%*
Percent with bachelor's degree or higher	2016-2020	5.0%	10.0%	19.2%	34.7%
	2011-2015	5.1%	9.1%	18.4%	31.4%
	% Change	-2.6%	+10.1%	+4.3%*	+10.4%*
Percent employed in civilian labor force	2016-2020	50.5%	49.9%	56.0%	59.4%
	2011-2015	44.7%	45.9%	52.7%	56.9%
	% Change	+13.0%*	+8.7%*	+6.3%*	+4.4%*

* Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).

[15] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

[17] Median incomes for the TCC project area and TCC control tracts are not true medians because the evaluator did not have access to the underlying survey data. So to construct a representative median for the TCC project area and TCC control tracts, the evaluator aggregated the number of households in each income range in Table B19001 for selected census tracts, calculated cumulative shares for each range, and used linear interpolation to determine the median. This approach assumes an even distribution of incomes within the range that contains the midpoint. This approach yields a comparable figure to the median income within the aggregated tracts, but it overestimates the margin of error compared to methods that rely on actual survey data. Given these limitations, the evaluator only estimated the median for this indicator and did not conduct a test for statistical significance. More details about the methodology can be found in California Department of Finance (2011) *Re-calculating Medians and their Margin of Errors for Aggregated ACS Data*.

Energy

There is a limited set of energy-related indicators that can be tracked at the census tract scale or smaller given the regional nature of electricity generation and transmission. Also, utility data on electricity and gas consumption at the address level are not publicly available for privacy reasons. However, several useful indicators can be obtained at an appropriate geographic scale for tracking trends in local energy resources. In particular, ACS data can be used to examine the reliance of different communities on fossil fuels for heating purposes. Additionally, satellite data processed and maintained by Stanford University's DeepSolar Project can be used to examine the prevalence of solar PV systems among households in different communities.

Within the TCC project area, it appears that residents are becoming increasingly more reliant on natural gas utilities for their heating needs, and less reliant on electrical heating appliances (see **Table 6**). This trend was consistent was also observed for San Joaquin County as a whole, but the reverse is true for California. This discrepancy may be due to the economic recovery of households in the Central Valley after the foreclosure crisis, whereby low-income households feel like they can better afford to run heating or cooking appliances fueled by natural gas.

With respect to solar PV installations, data were not available for different points in time, but were available at different geographic scales, showing a disparity in solar PV adoption among TCC residents relative to the rest of the county and state (See **Table 7**). Compared with the rest of the state and county, the adoption rate in the TCC project area is less than half that of the state.

Table 6: ACS Energy Indicators[18]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Percent of households heating home with electricity	2016-2020	25.7%	28.0%	25.6%	27.1%
	2011-2015	30.5%	31.3%	29.0%	26.2%
	% Change	-15.6%*	-10.5%	-11.6%*	+3.5%*
Percent of households heating home with utility gas	2016-2020	71.6%	67.9%	67.4%	63.6%
	2011-2015	67.6%	65.1%	65.0%	65.0%
	% Change	+5.9%*	+4.4%	+3.7%*	-2.2%*
Percent of households heating home with other fossil fuels (bottled, tank, or liquefied petroleum gas; fuel oil, kerosene, etc.; coal or coke)	2016-2020	0.9%	1.2%	3.6%	3.6%
	2011-2015	0.8%	0.9%	3.5%	3.4%
	% Change	+23.2%	+26.4%	+4.2%	+6.4%*
Percent of houses with no fuel used	2016-2020	1.2%	1.3%	1.0%	3.2%
	2011-2015	0.7%	1.7%	0.6%	3.2%
	% Change	+69.0%	-25.7%	+50.6%*	+0.8%

*Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).

Table 7: Solar PV Systems per 1,000 Households[19]

Indicator	Dataset Year	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Solar PV Systems for All Building Types	2018	23.3	33.2	61.70	49.4

[18] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

[19] Solar PV system data were sourced from *The DeepSolar Project*, a product of Stanford Engineering. For TCC census tracts and control tracts, a weighted average was applied, as based on the number of households within each census tract (using 2011-2015 ACS data)

Environment

Like energy indicators, there is a limited set of environmental quality indicators that can be tracked at the neighborhood scale from secondary sources. The California Environmental Protection Agency (CalEPA) and the California Office of Environmental Health Hazard Assessment (OEHHA) publish a number of environmental metrics at the census tract level (e.g., air pollutants, pesticide use, drinking water contaminants, etc.) through the CalEnviroScreen tool, but these metrics are derived from a sample of data collected a more coarse geographic scale, and then modeled or estimated at the census tract level.[14] The resulting data are helpful for ranking census tracts according to their likely pollution burden, but are not a reliable source for measuring the effects of the Stockton Rising initiative over time.

Satellite data, however, are regularly updated and can be used to measure changes in land cover at small geographic scales. The National Agriculture Imagery Program (NAIP) administered by the United States Department of Agriculture (USDA) Farm Service Agency (FSA), provides satellite imagery at a one-meter ground sample distance with an infrared band that allows researchers to classify imagery according to the spectral wavelengths of different land-cover types. This classification process, however, is resource intensive because it requires time and expertise to properly stitch together satellite imagery at the neighborhood scale. For that reason, the LCI evaluation team will refrain from analyzing vegetative cover within the Stockton project area until the end of project implementation, when pre and post-implementation imagery can be processed alongside one another, thereby allowing for cost-efficiencies in processing labor.

As an interim measure of vegetative cover, the LCI evaluation team has analyzed the percentage of open space within the Stockton Rising project area and comparison geographies (see **Table 8**). The underlying data for this analysis was obtained from the California Protected Areas Database (CPAD). This database reflects lands that are owned in fee and protected for open space purposes by over 1,000 public agencies or non-profit organizations. It's important to note that this database does not include open space that is not formally designated as such (e.g., landscaped medians, tree wells along sidewalks, etc.), nor does it include privately held open space (e.g., backyards, golf courses, etc.), so it is an imperfect proxy of total vegetative cover within the project area. Nonetheless, open space coverage does communicate how much of a neighborhood is expressly protected from hardscaped development.

According to data from CPAD, about 3% of the total project area is open space. When normalized by population, that translates to about 114 square feet of open space per resident. The World Health Organization recommends the availability of a minimum of 9 square meters (or 97 square feet) of green space per individual.[15] The Stockton Rising project area exceeds that threshold by 18%. For a spatial overview of where much of this open space is located within the project area, see the detailed map in **Appendix 1**.

Table 8: Open Space Indicators[16]

	Stockton Rising Project Area Boundary	Control Census Tracts	San Joaquin County	California
Open access (sq mi)	0.16	0.13	11	58,750
Total area (sq mi)	5	26	1,427	163,696
Percent of open access	3%	0.5%	1%	36%
Total population[17]	38,501	47,196	751,615	39,346,023
Open access per person (sq ft)	114	75	410	41,629

[14] CalEPA and OEHHA, 2017. CalEnviroScreen 3.0.

[15] World Health Organization. 2012. Health Indicators of Sustainable Cities in the Context of the Rio+20 UN Conference on Sustainable Development

[16] Open space indicators were derived from the December 2021 edition of the California Protected Areas Database (CPAD). Accessible at: https://www.calands.org/cpad/

[17] Based on 2016-2020 ACS data.

Health

Health data are highly sensitive information and are not generally available from secondary sources at a temporal and geographic scale appropriate for measuring neighborhood-level transformations. Many of the indicators of interest to TCC stakeholders, such as changes in the prevalence of asthma, obesity, diabetes, and heart disease, are only available at the zip code level or are not released annually. Stockton's TCC project boundary area, however, is much smaller than the zip code boundaries that it bisects (see **Appendix 1** for an overlap between the TCC project boundary area and zip code boundaries). Nonetheless, there are two health related indicators that can be tracked at a geographic scale that is appropriate for evaluating the effects of Stockton Rising: health insurance coverage and vehicle collisions involving a cyclist or pedestrian.

While enrolling individuals in health insurance programs is not an explicit objective of Stockton Rising, it could be an indirect effect of the initiative. Workforce development components of Stockton Rising could provide workers access to jobs that have employer sponsored health insurance packages or the supplemental income needed to purchase health insurance from the public market. Within the TCC project area, there has already been a statistically significant trend towards increased enrollment in health insurance, which is true for San Joaquin County and California as well. This could be explained by the rollout of the Affordable Care Act in 2010. See **Table 9** for a summary of these trends.

Pedestrian- and bicyclist-involved vehicle collisions continue to be a concern in California.[19] Stockton Rising's investments in active transportation infrastructure should theoretically lead to a decline in vehicle collisions involving bicyclists and pedestrians. Prior to these investments, total vehicle collisions involving a bicyclist in the TCC project area declined by 25% from 2015 to 2020 (20 to 15 collisions, respectively). Collisions involving a pedestrian also declined, at a rate of 29% during the same period (22 to 31 collisions, respectively). See **Table 10** for a summary of collisions involving bicyclists and pedestrians in both the TCC project area and control sites.

Table 9: ACS Health Indicators[20]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Percent with health insurance coverage	2016-2020	88.9%	92.2%	93.7%	92.8%
	2011-2015	77.6%	81.4%	86.0%	85.3%
	% Change	+14.5%*	+13.3*	+8.9%*	+8.8%*
Percent with private insurance coverage	2016-2020	30.0%	37.3%	60.6%	64.3%
	2011-2015	27.9%	37.5%	57.2%	61.2%
	% Change	+7.4%	-0.5%	+6.0%*	+5.0%*
Percent with public insurance coverage	2016-2020	64.4%	61.6%	42.9%	38.0%
	2011-2015	54.6%	50.7%	37.7%	32.6%
	% Change	+18.0%*	+21.4%*	+13.7%*	+16.5%*

*Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).

[19] CalSTA, 2019, California Office of Traffic Safety 2019 Annual Report

[20] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

Table 10: Vehicle Collisions Involving Bicyclists and Pedestrians[21,22]

Indicator	Data Range	Gross Number		Normalized per 1,000 Street Miles	
		TCC Project Boundary Area	Control Census Tracts	TCC Project Boundary Area	Control Census Tracts
Bicycle Collision at Injury Level 1: Fatal	2020	2	0	15.1	0.0
	2015	0	0	0.0	0.0
	% Change	+100%	No change	+100%	No change
Bicycle Collision at Injury Level 2: Severe Injury	2020	3	0	22.7	0.0
	2015	2	2	15.1	10.0
	% Change	+50%	-100%	+50%	-100%
Bicycle Collision at Injury Level 3: Visible Injury	2020	6	5	45.4	24.9
	2015	8	6	60.5	29.9
	% Change	-25%	-17%	-25%	-17%
Bicycle Collision at Injury Level 4: Complaint of Pain	2020	4	2	30.3	10.0
	2015	10	17	75.7	84.7
	% Change	-60%	-88%	-60%	-88%
Pedestrian Collision at Injury Level 1: Fatal	2020	4	3	30.3	15.0
	2015	1	2	7.6	10.0
	% Change	+300%	+50%	+299%	+50%
Pedestrian Collision at Injury Level 2: Severe Injury	2020	5	7	37.8	34.9
	2015	6	3	45.4	15.0
	% Change	-17%	+133%	-17%	+133%
Pedestrian Collision at Injury Level 3: Visible Injury	2020	8	5	60.5	24.9
	2015	10	13	75.7	64.8
	% Change	-20%	-62%	-20%	-62%
Pedestrian Collision at Injury Level 4: Complaint of Pain	2020	5	7	37.8	34.9
	2015	14	9	105.9	44.9
	% Change	-64%	-22%	-64%	-22%

[21] 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 OpenStreetsMap (OSM) and totaled 132 miles for the project area and 201 miles for the control tracts. See Appendix 7 for results at different buffer sizes to capture collisions with geographic coordinates that may not have perfectly overlapped with street lines within the project area and control tracts.

[22] Vehicle collisions involving bicycles and pedestrians are not mutually exclusive because some accidents may involve both modes.

Housing

There are a number of housing related indicators that can be tracked using ACS data: housing cost burden, housing crowding, tenure (i.e., residents in the same house on year ago), and vacancies of units for rent or for sale. Taken together, these indicators provide a snapshot of displacement pressures that may be occurring in the TCC project area. High rent burdens, low vacancies, short tenures, and crowded conditions all suggest that a neighborhood is vulnerable to residential displacement or already experiencing displacement.[23] See **Tables 11** and **12** for a summary of the housing indicators tracked for renters and homeowners in the TCC project area and comparison geographies.

Statistically significant housing trends for renters in the TCC project area include: decreased housing cost burden (at or above 50% of household income); increased tenure; and a decline in the percentage of rental units that are vacant. These were all consistent with the rest of San Joaquin County and California, except for housing tenure, which went down in the rest of the state. This may suggest that gentrification and displacement pressures in the project area are not as intense as in the rest of the state because renters have been able to maintain their housing for a longer period of time.

Meanwhile there were no statistically significant trends for homeowners over the past five years in the TCC project area. This speaks to the relative stability of homeownership relative to renting.

Table 11: ACS Housing Indicators for Renters[24]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Percent renters**	2016-2020	60.8%	56.0%	42.3%	44.7%
	2011-2015	62.1%	54.9%	43.4%	45.7%
	% Change	-2.0%	+2.1%	-2.5%*	-2.1%*
Percent of renters paying ≥30% of income on rent**	2016-2020	60.7%	60.3%	51.4%	51.5%
	2011-2015	64.2%	63.7%	54.2%	54.0%
	% Change	-5.4%	-5.3%	-5.3%*	-4.5%*
Percent of renters paying ≥50% of income on rent**	2016-2020	30.3%	36.6%	24.3%	26.2%
	2011-2015	35.9%	35.7%	29.0%	28.2%
	% Change	-15.7%*	+2.7%	-16.0%*	-7.1%*
Percent of renters in with more than one occupant per room in their unit**	2016-2020	8.6%	7.7%	5.0%	5.9%
	2011-2015	10.8%	8.2%	5.0%	6.0%
	% Change	-20.4%	-5.7%*	+0.5%	-1.8%*
Percent of renters in same house in same house one year ago**	2016-2020	58.9%	48.2%	34.4%	35.6%
	2011-2015	47.5%	39.4%	32.7%	34.7%
	% Change	+23.8%*	+22.4%*	+5.2%*	-2.7%*
Percent of housing units for rent that are vacant	2016-2020	1.1%	3.1%	1.5%	1.6%
	2011-2015	5.1%	5.7%	2.3%	1.8%
	% Change	-78.2%*	-46.0%*	-33.0%*	-10.7%*

*Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).
**Refers to households rather than individuals.

[23] Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., Loukaitou-Sideris, A., Ong, P., & Thomas, T. (2015, August). Gentrification, displacement and the role of public investment: a literature review. In Federal Reserve Bank of San Francisco (Vol. 79).

[24] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

Table 12: ACS Housing Indicators for Homeowners[25]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Percent homeowners**	2016-2020	39.2%	44.0%	57.7%	55.3%
	2011-2015	37.9%	45.1%	56.6%	54.3%
	% Change	+3.5%	-2.6%	+1.9%*	+1.7%*
Percent of homeowners paying ≥30% of income on mortgage**	2016-2020	25.5%	28.6%	14.3%	15.4%
	2011-2015	29.0%	28.6%	17.6%	18.2%
	% Change	-12.0%	+<0.1%	-18.7%*	-15.2%*
Percent of homeowners paying ≥50% of income on mortgage**	2016-2020	6.4%	5.0%	4.9%	5.2%
	2011-2015	6.0%	4.4%	6.6%	6.2%
	% Change	+6.3%	+12.7%	-25.2%*	-17.0%*
Percent of homeowners in with more than one occupant per room in their unit**	2016-2020	4.2%	3.3%	2.8%	2.3%
	2011-2015	5.4%	3.8%	2.3%	2.2%
	% Change	-22.3%	-12.5%	+25.1%*	+5.9%*
Percent of homeowners in same house one year ago**	2016-2020	35.8%	41.3%	53.7%	52.7%
	2011-2015	37.0%	42.1%	51.4%	51.3%
	% Change	-3.4%	-1.8%	+4.5%*	+2.7%*
Percent of housing units for sale that are vacant	2016-2020	1.0%	1.0%	0.5%	0.5%
	2011-2015	1.2%	1.0%	0.8%	0.7%
	% Change	-18.8%	-1.4%	-39.0%*	-24.8%*

*Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).
**Refers to households rather than individuals.

[25] Ibid.

Transportation

Within the TCC project area, there has been a statistically significant shift away from carpooling toward driving alone for commutes to work. The decline in carpooling is consistent at the county and state scale, while the increase in driving alone is unique to the TCC site and San Joaquin County (see **Table 13**). According to project partners, this inconsistency may be due to the relative share of super commuters in Stockton and San Joaquin County compared to the rest of the state. Many of these super commuters may have had to return to less flexible jobs that do not allow for remote work.

Aside from the ACS data on commutes to work, there is no other secondary data that is updated on an annual basis at the census tract scale or smaller for understanding the travel behavior of TCC project area residents in relation to the comparison to geographies. The last National Household Travel Survey, for example, was conducted in 2017.[26]

In addition to looking at travel behavior, this report also provides baseline data on the adoption rate of electric vehicles (EV) and the rollout of EV charging infrastructure. While these are not explicit objectives of Stockton Rising, they could be indirectly affected. For example, improved economic outcomes for TCC residents alongside community education about the environmental goals of TCC could lead to changes in consumer demand for zero-emission technologies.

Prior to TCC investment, the adoption of electric vehicles in the TCC project area appears to be growing at a faster rate than the rest of San Joaquin County when normalized by population (see **Table 14**).[27] Meanwhile, the relative growth rates of publicly available EV charging stations in the TCC project area versus the county are difficult to compare because there were zero stations in the TCC project area a the start of the study period (see **Table 15**), so any increase appears significant in relative terms.

Table 13: ACS Transportation Indicators[28]

Indicator	ACS Five-year Sample	TCC Census Tracts	Control Census Tracts	San Joaquin County	California
Percent of workers commuting to work by car (alone)	2016-2020	80.3%	77.8%	78.6%	72.1%
	2011-2015	69.2%	74.4%	76.6%	73.4%
	% Change	+15.9%*	+4.5%	+2.6%*	-1.8%*
Percent of workers commuting to work by carpool	2016-2020	14.0%	14.6%	12.2%	10.0%
	2011-2015	23.1%	18.7%	14.8%	10.8%
	% Change	-39.4%*	-21.8%*	-17.4%*	-7.8%*
Percent of workers commuting to work by public transit	2016-2020	1.8%	2.3%	1.6%	4.6%
	2011-2015	1.7%	0.8%	1.5%	5.2%
	% Change	+7.2%	+187.8%*	+10.3%	-11.5%*
Percent of workers commuting to work by foot	2016-2020	0.9%	0.9%	1.3%	2.5%
	2011-2015	1.2%	1.3%	1.9%	2.7%
	% Change	-25.5%	-32.6%	-29.4%*	-6.8%*
Percent of workers commuting to work by bike	2016-2020	0.5%	0.4%	0.3%	0.8%
	2011-2015	0.6%	1.0%	0.5%	1.1%
	% Change	-19.9%	-58.2%	-44.3%*	-24.7%*

* Statistically significant at the 95% confidence level. Significance tests were conducted in accordance with methods described by the U.S. Census Bureau in *Understanding and Using American Community Survey Data: What All Data Users Need to Know* (2018).

[26] https://nhts.dot.ca.gov/

[27] Data were not collected for California at this time because it must be requested by county directly from the California Air Resources Board (CARB).

[28] See Appendix 7 for the following details: (1) the ACS table numbers that were sourced for each indicator; (2) additional estimates for 2012-2016, 2013-2017, 2014-2018, and 2015-2019; and (3) the margins of error for all estimates.

Table 14: Plug-in Electric Vehicle (PEV) Registrations[29]

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	San Joaquin County	TCC Census Tracts	Control Census Tracts	San Joaquin County
Battery electric vehicle (BEV)	2020	55	45	2,882	14.3	9.5	38.3
	2015	5	8	459	0.9	1.5	6.5
	% Change	+1000%	+463%	+528%	+1489%	+533%	+489%
Plug-in hybrid electric vehicle (PHEV)	2020	99	69	2,401	25.7	14.6	31.9
	2015	20	9	385	3.8	1.7	5.4
	% Change	+395%	+668%	+524%	+576%	+441%	+491%
Fuel cell vehicle (FCEV)	2020	0	0	19	0	0	<1.0
	2018	0	0	0	0	0	0
	% Change	No change	No change	+90%	No change	No change	+200%
Total EVs	2020	154	114	5,302	40	24.1	70.5
	2015	25	17	844	4.7	3.1	11.9
	%Change	+516%	+571%	+528%	+751%	+677%	+492%

Table 15: Publicly Available Charging Infrastructure[30]

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	San Joaquin County	TCC Census Tracts	Control Census Tracts	San Joaquin County
Level 2 Stations	2020	2	0	41	0.5	0	0.6
	2015	0	0	28	0	0	0.4
	% Change	+100%	No Change	+46%	+100%	No Change	+50%
DC Fast-Charging Stations	2020	0	0	11	0	0	0.1
	2015	0	0	7	0	0	0.1
	% Change	No Change	No Change	+57%	No Change	No Change	No Change

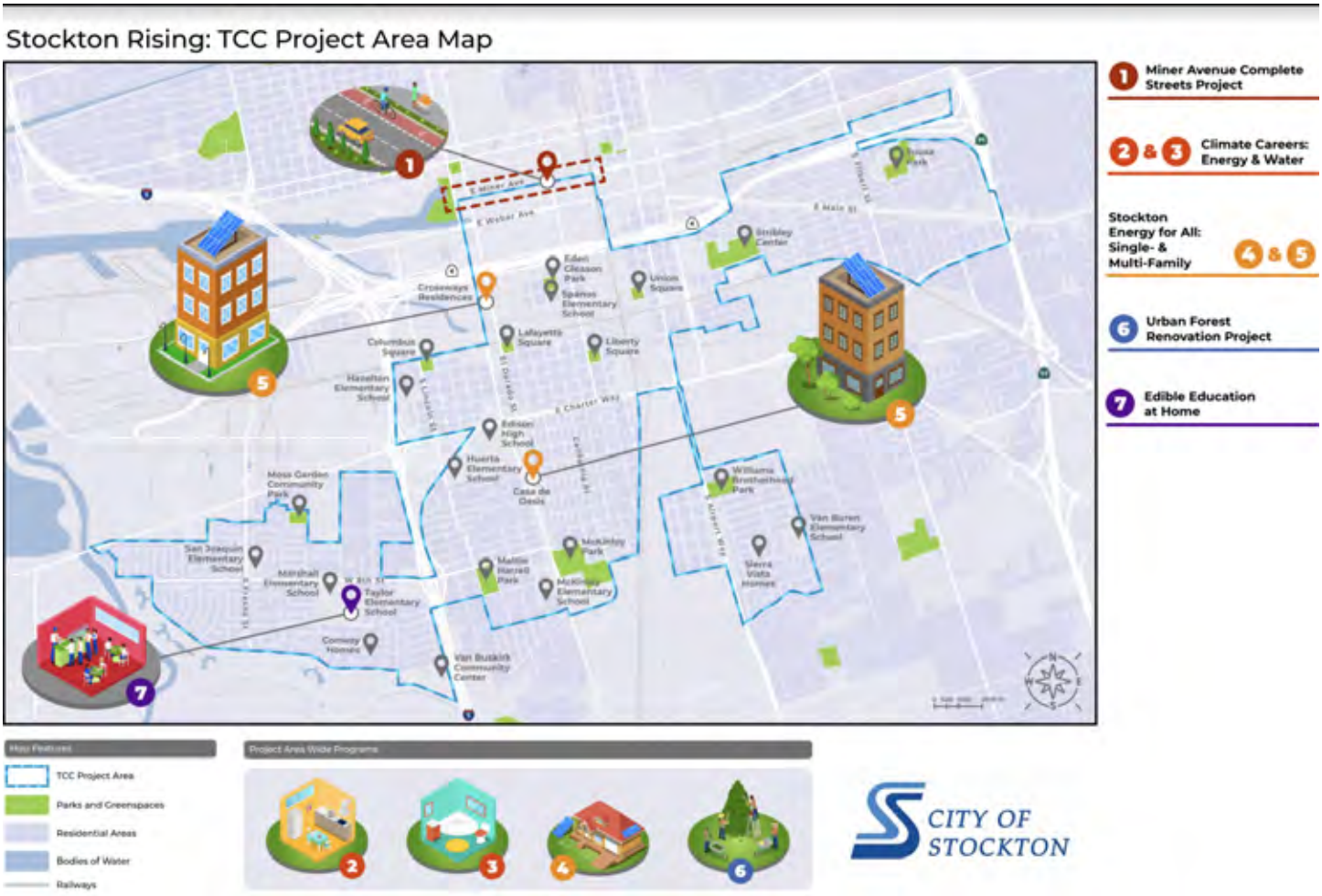
*Difference is due to population growth because there was no change in charging stations.

[29] EV registration data were obtained by request from the California Air Resources Boards (CARB) Online Fleet Database. The EV registration data were normalized with 2015 and 2020 five-year ACS data.

[30] 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. The 2015 and 2020 datasets include active stations and does not include stations that have previously opened and closed. The charging station data were normalized with 2015 and 2020 five-year ACS data.

APPENDICES

Appendix 1: Supplemental Maps



Detailed project map. **Figure credit: City of Stockton**

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

Appendix 2
Summary of Methods for Estimating Project Benefits

Benefit	Methodology	Version	Revision Date
Avoided stormwater runoff	California Air Resources Board (CARB) Quantification Methodology (QM): Urban Greening Grant Program	Version 2	2/4/2019
Energy use and cost savings	CARB QM: Low-Income Weatherization Program	N/A	1/22/2019
	CARB QM: Water-Energy Grant Program	Version 3	10/6/2018
Greenhouse gas (GHG) reductions	CARB QM: Low-Income Weatherization Program	N/A	1/22/2019
	CARB QM: Urban Greening Grant Program	Version 2	2/4/2019
	CARB QM: Water-Energy Grant Program	Version 3	10/6/2018
Jobs	CARB Job Co-benefit Assessment Methodology	N/A	1/31/2020
Local air pollutant reductions	CARB QM: Low-Income Weatherization Program	N/A	1/22/2019
	CARB QM: Urban Greening Grant Program	Version 2	2/4/2019
	CARB QM: Water-Energy Grant Program	Version 3	10/6/2018
Renewable energy generation	CARB QM: Low-Income Weatherization Program	N/A	1/22/2019
Travel cost savings	CARB QM: Urban Greening Grant Program	Version 2	2/4/2019
Vehicle miles traveled (VMT) reductions	CARB QM: Urban Greening Grant Program	Version 2	2/4/2019
Water cost savings	Evaluator methodology[15,16,17]	N/A	N/A
Water use reduction	CARB QM: Water-Energy Grant Program	Version 3	10/6/2018

[15] At the time of writing this report, CARB did not provide a methodology for estimating water cost savings. Thus, the evaluation team developed a custom methodology for estimating water cost savings from Stockton Rising's water efficiency interventions. Using the total water use reduction estimate from CARB's GHG Quantification Methodology for Water-Energy Projects (11,927,092 gallons), the evaluation team proportionally allocated those cost savings to the two different catchment zones in the TCC project area served by the California Water Service Company (98% of the project area) and the City of Stockton Municipal Utilities Department (2% of the project area). The evaluation team then applied the most conservative cost estimate from each utility's rate schedule to the water savings that were allocated to each catchment zone: $3.18 per centum cubic foot (CCF) for CalWater and $2.11 per CCF for The City of Stockton Municipal Utilities Department.

[16] The rate schedule for the California Water Service Company was obtained from: http://www.stocktonca.gov/government/departments/adminServices/ubilServFee.html

[17] The rate schedule for the City of Stockton Municipal Utilities Department was obtained from: http://www.stocktonca.gov/government/departments/adminServices/ubilServFee.html

Appendix 3: Rise Stockton Coalition Members

Member Organization	Organization Mission	Organization Location
Asian-Pacific Self-Development And Residential Association (APSARA)	Provide leadership for the San Joaquin County residents by collaborating with the larger community to provide a safe, positive environment that promotes economic independence.	Stockton
Catholic Charities of the Diocese of Stockton	Partner with others in advocating for justice and in assisting those in need by providing help for today and hope for tomorrow.	Stockton
The Climate Center	Work to rapidly reduce greenhouse gas pollution at scale, starting in California.	Santa Rosa
Changeist	Build a community of diverse young people that utilize their personal agency to create a more just society.	Stockton
The Edible Schoolyard Project	Transform the health of children by designing hands-on educational experiences in the garden, kitchen, and cafeteria that connect children to food, nature, and to each other.	Berkeley
Elemental Excelerator	Provide funding and bring commercial opportunities to entrepreneurs who are building world-changing companies.	East Palo Alto
Fathers & Families of San Joaquin*	Reclaim our destiny and to give our people a reason to live, and lead with purpose.	Stockton
The Greenlining Institute	Work toward a future when communities of color can build wealth, live in healthy places filled with economic opportunity, and are ready to meet the challenges posed by climate change.	Oakland
GRID Alternatives Central Valley	Make renewable energy technology and job training accessible to underserved communities.	Fresno
Little Manila Rising	Bring multifaceted equity to Stockton.	Stockton
Public Health Advocates	Bring a public health lens to today's most pressing problems, helping communities to pass laws, reform systems, and establish norms that foster justice, equity, health.	Davis
Promotores Unidas Para la Educacion Nacional Tecnologias Sostenibles (PUENTES)	Fight food deserts, advocates for food education, and encourages the sustainable development of communities by cultivating a connection between people and their food.	Stockton
Restore the Delta	Ensure the health of the San Francisco Bay-Delta estuary and Delta communities.	Stockton
Rising Sun Center for Opportunity	Benefit the community through training, employment, and direct energy and water efficiency services.	Oakland
STAND	Work to make our neighborhood of minority and low-income residents a safer and more desirable place to live.	Stockton
Third City Coalition	Connect local changemakers across all backgrounds to form strong, lasting partnerships.	Stockton

*Organization dissolved in 2021.

Appendix 4: Stockton Rising Collaborative Stakeholder Structure (CSS)

Subgroup (meeting frequency)	Purpose	Member (number of members)	Role in Subgroup
Steering Committee (quarterly)	Coordination and alignment of CSS; monitor grant progress; adaptive grant management; and conflict resolution.	City of Stockton (1)	Facilitator and final decision maker
		Public Health Advocates (1)	Community Engagement Coordinator
		Rising Sun Center for Opportunity (1)	Workforce Coordinator
		Project Area Residents (2)	Resident Representatives
Capital Strategies Working Team (bi-monthly)	Coordination of all 7 projects; review progress of projects; and report progress.	City of Stockton (3)	Facilitator and final decision maker (1) and City Representatives (2)
		Edible Schoolyard Project	Project Partner
		GRID Alternatives Central Valley (1)	Project Partner
		Little Manila (1)	Project Partner
		PUENTES (1)	Project Partner
		Rising Sun Center for Opportunity(1)	Project Partner
		Project Area Residents (2)	Resident Representatives
Community Engagement Working Team (monthly)	Coordination of community engagement activities; oversight of public communications; and onboarding of residents to participate in the CSS.	Public Health Advocates (1)	Facilitator*
		Catholic Charities (1)	Project Partner*
		Little Manila (1)	Project Partner*
		Third City Coalition (1)	Community Stakeholder*
		TBD (1)	Community Stakeholder*
		Project Area Residents (2)	Resident Representatives*
Workforce Development Working Team (bi-monthly)	Coordination of workforce development activities; and report on progress of activities.	Rising Sun Center for Opportunity (1)	Facilitator*
		GRID Alternatives Central Valley (1)	Project Partner*
		Insight Garden Program (1)	Project Partner*
		San Joaquin Regional Transportation District (1)	Project Partner*
		Edge Collaborative (1)	Community Stakeholder*
		TBD (1)	Community Stakeholder*
		Project Area Residents (2)	Resident Representatives*
Community Coalition (bi-monthly)	Share information; collect community feedback; ensure alignment of TCC with community priorities; and participate in mandatory consultation process.	Public Health Advocates (1)	Facilitator
		Project Area Residents (unlimited)	Resident Representative*
		Project Area Workers (unlimited)	Worker Representative*

*Voting members (decisions are made by simple majority of voting members).

Appendix 5: Stockton Rising TCC Census Tracts

Census Tract GeoID Number	City	Population (ACS 2015-2019 estimate)	Area (sq. mi.)	Population Density (pop./ sq.mi.)	Overlap with TCC Project Area (%)
14000US006077000100	Stockton	3,688	0.73	5,054	65%
14000US006077000600	Stockton	1,703	0.35	4,834	68%
14000US006077000700	Stockton	4,680	0.7	6,713	80%
14000US006077000801	Stockton	7,624	3.43	2,220	13%
14000US006077001900	Stockton	4,681	1.11	4,205	52%
14000US006077002000	Stockton	3,357	0.78	4,329	62%
14000US006077002201	Stockton	2,856	0.85	3,354	36%
14000US006077002202	Stockton	5,079	0.86	5,897	19%
14000US006077002300	Stockton	4,334	0.8	5,389	67%
14000US006077002401	Stockton	5,328	0.74	7,182	66%
14000US006077002503	Stockton	2,258	0.68	3,317	39%
14000US006077002504	Stockton	3,884	0.35	11,186	100%

Appendix 6: Stockton Rising Control Census Tracts

Census Tract GeoID Number	City	Population (ACS 2015-2019 estimate)	Area (sq. mi.)	Population Density (pop./ sq.mi.)
14000US006077000402	Stockton	4,153	0.56	7,368
14000US006077001500	Stockton	10,290	1.84	5,596
14000US006077001700	Stockton	3,957	0.65	6,079
14000US006077001800	Stockton	4,438	0.74	5,998
14000US006077002100	Stockton	5,727	1.28	4,478
14000US006077002800	Stockton	6,097	2.82	2,160
14000US006077003305	Stockton	4,375	0.79	5,537
14000US006077003313	Stockton	2,895	0.19	15,196
14000US006077003405	Stockton	4,507	0.43	10,538
14000US006077003406	Stockton	3,938	0.32	12,151
14000US006077003409	Stockton	4,159	0.54	7,732
14000US006077003700	Stockton	3,154	16.18	195

Appendix 7: Indicator Data

Appendix 7.1: Demographics

Table A7.1.1: American Community Survey (ACS) Demographic Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Total Population (B01003)	2011-2015	53,043	1,559	54,154	1,736	708,554	0	38,421,464	0
	2012-2016	52,578	1,604	55,033	1,736	714,860	0	38,654,206	0
	2013-2017	51,575	1,718	55,447	1,684	724,153	0	38,982,847	0
	2014-2018	49,960	1,544	57,224	1,678	732,212	0	39,148,760	0
	2015-2019	49,472	1,6745	57,690	1,751	742,603	0	39,283,497	0
	2016-2020	38,501	2,327	47,196	2,327	751,615	0	39,346,023	0
Percent Hispanic, all races (B03002)	2011-2015	68.5%	2.1%	55.3%	2.4%	40.1%	0	38.4%	0
	2012-2016	69.4%	2.1%	55.3%	2.3%	40.5%	0	38.6%	0
	2013-2017	69.3%	2.3%	55.2%	2.5%	40.8%	0	38.8%	0
	2014-2018	68.0%	2.4%	55.6%	2.3%	41.1%	0	38.9%	0
	2015-2019	68.5%	2.6%	56.1%	2.2%	41.4%	0	39.0%	0
	2016-2020	73.6%	3.8%	56.8%	3.4%	41.7%	0	39.1%	0
Percent White, non-Hispanic (B03002)	2011-2015	4.7%	0.7%	17.3%	1.2%	34.3%	0.04%	38.7%	0.0%
	2012-2016	5.3%	0.7%	16.3%	1.2%	33.9%	0.04%	38.4%	0.0%
	2013-2017	5.7%	0.9%	15.7%	1.2%	33.2%	0.04%	37.9%	0.0%
	2014-2018	6.0%	1.0%	15.2%	1.4%	32.5%	0.04%	37.5%	0.0%
	2015-2019	6.6%	1.0%	14.9%	1.3%	31.8%	0.03%	37.2%	0.0%
	2016-2020	6.2%	1.2%	14.0%	1.5%	30.7%	0.1%	36.5%	0.0%
Percent all communities of color, non-Hispanic: Black, Asian, Pacific Islander, American Indian, Other, and Two or More Races (B03002)	2011-2015	26.8%	1.7%	27.4%	1.9%	25.6%	0.3%	22.9%	0.0%
	2012-2016	25.3%	1.6%	28.4%	2.0%	25.7%	0.3%	23.1%	0.0%
	2013-2017	25.0%	1.7%	29.1%	2.0%	26.0%	0.3%	23.3%	0.0%
	2014-2018	26.0%	1.9%	29.2%	2.1%	26.4%	0.3%	23.6%	0.0%
	2015-2019	24.9%	2.0%	29.0%	2.2%	26.7%	0.3%	23.8%	0.0%
	2016-2020	20.2%	2.1%	29.2%	2.5%	27.6%	0.5%	24.4%	0.1%

*Margins of Error (MOE) 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 (LCI) 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 interval.

Table continues next page

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent other communities of color, non-Hispanic: Pacific Islander, American Indian, Other, Two or More Races	2011-2015	2.8%	0.7%	3.5%	0.9%	4.4%	0.3%	3.7%	0.0%
	2012-2016	2.4%	0.6%	2.9%	0.7%	4.4%	0.3%	3.8%	0.0%
	2013-2017	2.8%	0.7%	3.1%	0.8%	4.6%	0.2%	3.9%	0.0%
	2014-2018	2.8%	0.8%	2.7%	0.7%	4.5%	0.2%	3.9%	0.0%
	2015-2019	3.1%	0.9%	3.2%	0.7%	4.8%	0.2%	4.0%	0.0%
	2016-2020	1.8%	0.8%	2.8%	0.7%	5.3%	0.3%	4.4%	0.0%
Percent Black, non-Hispanic (B03002)	2011-2015	10.1%	1.2%	8.5%	1.0%	6.7%	0.2%	5.6%	0.0%
	2012-2016	9.2%	1.1%	9.4%	1.1%	6.7%	0.1%	5.6%	0.0%
	2013-2017	9.7%	1.1%	9.7%	1.2%	6.7%	0.1%	5.5%	0.0%
	2014-2018	10.5%	1.3%	9.4%	1.1%	6.8%	0.1%	5.5%	0.0%
	2015-2019	10.1%	1.4%	9.7%	1.1%	6.7%	0.1%	5.5%	0.0%
	2016-2020	10.3%	1.8%	11.8%	2.1%	6.8%	0.1%	5.4%	0.0%
Percent Asian, non-Hispanic (B03002)	2011-2015	13.9%	1.2%	15.4%	1.5%	14.5%	0.2%	13.5%	0.0%
	2012-2016	13.7%	1.2%	16.1%	1.6%	14.5%	0.2%	13.7%	0.0%
	2013-2017	12.6%	1.3%	16.3%	1.5%	14.8%	0.2%	13.9%	0.0%
	2014-2018	12.7%	1.3%	17.1%	1.8%	15.0%	0.2%	14.1%	0.0%
	2015-2019	11.7%	1.3%	16.1%	1.8%	15.2%	0.1%	14.3%	0.0%
	2016-2020	8.1%	1.2%	14.6%	1.6%	15.5%	0.3%	14.6%	0.0%
Percent Pacific Islanders, non-Hispanic (B03002)	2011-2015	0.4%	0.3%	0.2%	0.2%	0.5%	<1.0%	0.4%	0.0%
	2012-2016	0.3%	0.3%	0.1%	0.2%	0.5%	<1.0%	0.4%	0.0%
	2013-2017	0.4%	0.4%	0.3%	0.3%	0.5%	<1.0%	0.4%	0.0%
	2014-2018	0.3%	0.3%	0.1%	0.1%	0.5%	<1.0%	0.4%	0.0%
	2015-2019	0.2%	0.2%	0.1%	0.1%	0.5%	<1.0%	0.4%	0.0%
	2016-2020	0.0%	0.1%	0.1%	0.1%	0.6%	<1.0%	0.3%	0.0%
Percent American Indian, non-Hispanic(B03002)	2011-2015	0.3%	0.2%	0.3%	0.2%	0.3%	0.1%	0.4%	0.0%
	2012-2016	0.2%	0.1%	0.2%	0.1%	0.3%	0.0%	0.4%	0.0%
	2013-2017	0.2%	0.1%	0.3%	0.2%	0.2%	0.05%	0.4%	0.0%
	2014-2018	0.1%	0.1%	0.3%	0.2%	0.2%	0.0%	0.4%	0.0%
	2015-2019	<0.5%	0.1%	0.2%	0.2%	0.2%	0.05%	0.4%	0.0%
	2016-2020	<0.5%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	0.0%

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	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent other, non-Hispanic (B03002)	2011-2015	0.0%	0.04%	0.1%	0.1%	0.1%	0.04%	0.2%	0.0%
	2012-2016	0.0%	0.04%	0.1%	0.1%	0.1%	0.04%	0.2%	0.0%
	2013-2017	0.0%	0.04%	0.1%	0.1%	0.1%	0.03%	0.2%	0.0%
	2014-2018	0.1%	0.1%	0.2%	0.1%	0.1%	0.04%	0.2%	0.0%
	2015-2019	0.0%	0.1%	0.2%	0.2%	0.1%	0.04%	0.3%	0.0%
	2016-2020	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%	0.3%	0.0%
Percent foreign-born population (B05006)	2011-2015	35.9%	1.7%	29.1%	1.6%	23.3%	0.5%	27.0%	0.1%
	2012-2016	35.4%	1.7%	29.8%	1.6%	23.3%	0.4%	27.0%	0.1%
	2013-2017	35.2%	1.7%	29.6%	1.7%	23.3%	0.4%	27.0%	0.1%
	2014-2018	34.6%	1.7%	29.6%	1.5%	23.3%	0.4%	26.9%	0.1%
	2015-2019	33.2%	1.7%	29.6%	1.6%	23.3%	0.5%	26.8%	0.1%
	2016-2020	33.7%	2.7%	28.1%	1.7%	23.0%	0.5%	26.6%	0.1%
Percent born in Asia (B05006)	2011-2015	7.8%	0.8%	9.0%	1.0%	9.0%	0.2%	10.1%	0.0%
	2012-2016	8.3%	0.9%	9.3%	1.0%	9.1%	0.2%	10.2%	0.0%
	2013-2017	7.6%	0.8%	9.3%	1.0%	9.2%	0.2%	10.4%	0.0%
	2014-2018	7.6%	0.8%	9.4%	1.1%	9.5%	0.2%	10.5%	0.0%
	2015-2019	7.0%	0.9%	9.6%	1.2%	9.7%	0.2%	10.6%	0.0%
	2016-2020	5.5%	1.1%	9.1%	1.2%	9.5%	0.3%	10.6%	0.0%
Percent born in Africa (B05006)	2011-2015	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%	0.4%	0.0%
	2012-2016	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%	0.5%	0.0%
	2013-2017	0.1%	0.2%	0.1%	0.1%	0.3%	0.1%	0.5%	0.0%
	2014-2018	0.1%	0.2%	0.1%	0.1%	0.3%	0.1%	0.5%	0.0%
	2015-2019	0.1%	0.2%	0.1%	0.1%	0.3%	0.1%	0.5%	0.0%
	2016-2020	0.0%	0.1%	0.1%	0.1%	0.4%	0.1%	0.5%	0.0%
Percent born in Latin America (B05006)	2011-2015	27.6%	1.7%	19.7%	1.6%	12.6%	0.3%	14.2%	0.1%
	2012-2016	26.7%	1.7%	20.1%	1.5%	12.5%	0.3%	14.0%	0.0%
	2013-2017	27.1%	1.7%	19.6%	1.5%	12.4%	0.3%	13.8%	0.1%
	2014-2018	26.5%	1.7%	19.5%	1.4%	12.2%	0.3%	13.7%	0.1%
	2015-2019	25.7%	1.6%	19.3%	1.5%	12.1%	0.3%	13.5%	0.1%
	2016-2020	28.0%	2.7%	18.5%	1.6%	11.8%	0.4%	13.2%	0.1%

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Appendix 7.2: Economy

Table A7.2.1: American Community Survey (ACS) Economic Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Median household income (B19001)	2011-2015	$28,556	N/A	$33,600	N/A	$53,274	$946	$61,818	156
	2012-2016	$28,645	N/A	$34,180	N/A	$55,045	$896	$63,783	188
	2013-2017	$31,338	N/A	$36,312	N/A	$57,813	$863	$67,169	192
	2014-2018	$32,776	N/A	$38,968	N/A	$61,145	$1,022	$71,228	217
	2015-2019	$34,830	N/A	$41,565	N/A	$64,432	$745	$75,235	232
	2016-2020	$36,591	N/A	$43,601	N/A	$68,628	$1,259	$78,672	270
Percent of individuals living below poverty (B17001)	2011-2015	39.2%	2.7%	30.8%	2.9%	18.6%	0.5%	16.3%	0.1%
	2012-2016	39.8%	2.7%	29.6%	2.6%	17.8%	0.6%	15.8%	0.1%
	2013-2017	35.9%	2.7%	28.8%	2.9%	17.1%	0.6%	15.1%	0.1%
	2014-2018	33.1%	2.6%	25.6%	2.6%	15.9%	0.5%	14.3%	0.1%
	2015-2019	30.9%	2.7%	23.3%	2.6%	14.5%	0.6%	13.4%	0.1%
	2016-2020	30.2%	3.0%	25.2%	3.0%	13.7%	0.6%	12.6%	0.1%
Percent high income ($125k +) (B19001)	2011-2015	2.2%	0.7%	3.8%	1.0%	13.9%	0.5%	20.9%	0.1%
	2012-2016	2.9%	0.9%	4.0%	0.9%	14.9%	0.5%	22.1%	0.1%
	2013-2017	3.9%	1.0%	4.8%	1.0%	16.8%	0.6%	23.9%	0.1%
	2014-2018	4.5%	1.2%	6.1%	1.2%	18.8%	0.7%	26.1%	0.1%
	2015-2019	5.3%	1.3%	6.7%	1.2%	20.9%	0.7%	28.0%	0.1%
	2016-2020	4.6%	1.4%	8.2%	1.6%	23.0%	0.8%	29.8%	0.1%
Percent with less than high school education (S1501)	2011-2015	48.5%	2.3%	34.9%	2.2%	22.0%	0.5%	18.2%	0.1%
	2012-2016	47.0%	2.2%	35.7%	2.2%	22.0%	0.5%	17.9%	0.1%
	2013-2017	45.8%	2.4%	34.4%	2.2%	21.6%	0.5%	17.5%	0.1%
	2014-2018	44.1%	2.4%	34.4%	2.1%	21.1%	0.5%	17.1%	0.1%
	2015-2019	43.6%	2.5%	33.9%	2.3%	20.7%	0.6%	16.7%	0.1%
	2016-2020	43.2%	2.9%	32.7%	2.2%	19.9%	0.6%	16.1%	0.1%
Percent with bachelor's degree or higher (S1501)	2011-2015	5.1%	0.7%	9.1%	1.1%	18.4%	0.5%	31.4%	0.1%
	2012-2016	4.9%	0.7%	8.6%	1.0%	18.2%	0.4%	32.0%	0.1%
	2013-2017	5.1%	0.8%	8.7%	1.0%	18.1%	0.5%	32.6%	0.1%
	2014-2018	5.6%	0.9%	8.4%	1.1%	18.4%	0.5%	33.3%	0.1%
	2015-2019	5.8%	0.9%	9.0%	1.1%	18.8%	0.5%	33.9%	0.1%
	2016-2020	4.9%	1.0%	10.0%	1.6%	19.2%	0.6%	34.7%	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 LCI 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 interval.

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	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent employed for the population 16 years and over (B23025)	2011-2015	44.7%	1.7%	45.9%	1.8%	52.7%	0.5%	56.9%	0.1%
	2012-2016	44.9%	1.7%	46.5%	1.6%	53.4%	0.4%	57.5%	0.1%
	2013-2017	47.8%	1.6%	47.6%	1.7%	54.2%	0.4%	58.2%	0.1%
	2014-2018	50.1%	1.8%	50.2%	1.7%	55.2%	0.4%	58.9%	0.1%
	2015-2019	50.6%	1.8%	51.0%	1.7%	55.6%	0.4%	59.4%	0.1%
	2016-2020	50.5%	2.4%	49.9%	2.0%	56.0%	0.5%	59.4%	0.1%

Appendix 7.3: Energy

Table A7.3.1: American Community Survey (ACS) Energy Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent of households heating home with electricity (B25040)	2011-2015	30.5%	2.2%	31.3%	2.5%	29.0%	0.6%	26.2%	0.1%
	2012-2016	26.9%	2.2%	30.4%	2.4%	28.4%	0.6%	26.4%	0.1%
	2013-2017	25.1%	2.2%	29.3%	2.5%	27.2%	0.6%	26.5%	0.1%
	2014-2018	24.8%	2.2%	29.0%	2.3%	26.7%	0.7%	26.4%	0.1%
	2015-2019	23.3%	2.1%	26.6%	2.3%	25.5%	0.6%	26.6%	0.1%
	2016-2020	25.7%	2.9%	28.0%	2.9%	25.6%	0.8%	27.1%	0.1%
Percent of households heating home with other non-fossil fuels (B25040)	2011-2015	0.4%	0.3%	0.6%	0.4%	1.5%	0.2%	1.9%	0.02%
	2012-2016	0.6%	0.3%	0.8%	0.4%	1.7%	0.2%	1.9%	0.03%
	2013-2017	0.7%	0.4%	1.0%	0.5%	1.7%	0.2%	2.0%	0.02%
	2014-2018	0.6%	0.3%	1.1%	0.5%	1.9%	0.2%	2.1%	0.03%
	2015-2019	0.5%	0.3%	0.9%	0.5%	2.0%	0.2%	2.1%	0.02%
	2016-2020	0.4%	0.4%	1.0%	0.5%	2.1%	0.2%	2.2%	0.03%
Percent of households heating home with utility gas (B25040)	2011-2015	67.6%	2.3%	65.1%	2.4%	65.0%	0.6%	65.0%	0.1%
	2012-2016	70.8%	2.3%	65.8%	2.5%	65.5%	0.6%	64.6%	0.1%
	2013-2017	72.1%	2.3%	66.6%	2.5%	66.5%	0.6%	64.4%	0.1%
	2014-2018	71.6%	2.3%	67.3%	2.6%	66.7%	0.7%	64.3%	0.1%
	2015-2019	73.4%	2.2%	70.0%	2.5%	68.1%	0.6%	64.1%	0.0%
	2016-2020	71.6%	3.3%	67.9%	2.7%	67.4%	0.7%	63.6%	0.1%
Percent of households heating home with other fossil fuels (B25040)	2011-2015	0.8%	0.4%	0.9%	0.4%	3.5%	0.2%	3.4%	0.04%
	2012-2016	0.9%	0.4%	1.2%	0.5%	3.5%	0.2%	3.4%	0.04%
	2013-2017	1.0%	0.4%	1.2%	0.6%	3.5%	0.2%	3.5%	0.04%
	2014-2018	1.0%	0.4%	1.3%	0.6%	3.6%	0.2%	3.5%	0.04%
	2015-2019	0.9%	0.4%	1.2%	0.6%	3.5%	0.2%	3.5%	0.04%
	2016-2020	0.9%	0.5%	1.2%	0.5%	3.6%	0.3%	3.6%	0.0%
Percent of houses with no fuel used (B25040)	2011-2015	0.7%	0.4%	1.7%	0.6%	0.6%	0.1%	3.2%	0.03%
	2012-2016	0.9%	0.4%	1.6%	0.5%	0.7%	0.1%	3.3%	0.03%
	2013-2017	1.2%	0.5%	1.7%	0.6%	0.8%	0.1%	3.4%	0.03%
	2014-2018	1.9%	0.7%	1.3%	0.5%	0.8%	0.1%	3.4%	0.04%
	2015-2019	1.9%	0.7%	1.2%	0.6%	0.8%	0.1%	3.3%	0.03%
	2016-2020	1.2%	0.7%	1.3%	0.6%	1.0%	0.2%	3.2%	0.04%

*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 LCI 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 interval.

Table A7.3.2: Solar PV Systems per 1,000 Households*

Indicator	Dataset Year	TCC Census Tracts	Control Census Tracts	San Bernardino County	California
Solar PV Systems for All Building Types	2018	23.3	33.2	61.7	49.4

*Solar PV system data were sourced from The DeepSolar Project, a product of Stanford Engineering. For TCC census tracts and control tracts, a weighted average was applied, as based on the number of households within each census tract (using 2011-2015 ACS data)

Appendix 7.4: Environment

Table A7.4: Open Space Indicators*

	Stockton Rising Project Area Boundary	Control Census Tracts	San Joaquin County	California
Open access (sq mi)	0.16	0.13	11.04	58,750.05
Total area (sq mi)	5.0	26.4	1,426.5	163,695.6
Percent of open access	3%	0.5%	1%	36%
Total population	38,501	47,196	751,615	39,346,023
Open access per person (sq ft)	114	75	410	41,629.40

*Open space indicators were derived from the California Protected Areas Database (CPAD).

Appendix 7.5: Health

Table A7.5.1: American Community Survey (ACS) Health Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent with health insurance coverage (B27001)	2011-2015	77.6%	1.6%	81.4%	1.4%	86.0%	0.5%	85.3%	0.1%
	2012-2016	80.7%	1.7%	85.3%	1.3%	88.3%	0.4%	87.4%	0.1%
	2013-2017	83.4%	2.0%	87.4%	1.2%	90.3%	0.4%	89.5%	0.1%
	2014-2018	86.0%	1.8%	89.9%	1.2%	92.5%	0.3%	91.5%	0.1%
	2015-2019	88.8%	1.6%	91.8%	1.3%	93.6%	0.3%	92.5%	0.1%
	2016-2020	88.9%	1.4%	92.2%	1.5%	93.7%	0.3%	92.8%	0.1%
Percent with private health insurance coverage (B27002)	2011-2015	27.9%	1.8%	37.5%	2.2%	57.2%	0.7%	61.2%	0.2%
	2012-2016	28.0%	1.9%	38.5%	2.3%	57.9%	0.6%	61.8%	0.2%
	2013-2017	28.9%	1.8%	37.3%	2.3%	58.1%	0.7%	62.6%	0.2%
	2014-2018	29.9%	1.9%	37.7%	2.3%	58.9%	0.7%	63.4%	0.2%
	2015-2019	31.5%	2.1%	37.5%	2.2%	59.7%	0.6%	63.8%	0.2%
	2016-2020	30.0%	2.1%	37.3%	2.1%	60.6%	0.7%	64.3%	0.2%
Percent with public health insurance coverage (B27003)	2011-2015	54.6%	2.4%	50.7%	2.3%	37.7%	0.6%	32.6%	0.1%
	2012-2016	58.1%	2.3%	54.1%	2.5%	39.7%	0.6%	34.3%	0.1%
	2013-2017	59.6%	2.4%	57.1%	2.3%	41.5%	0.6%	35.8%	0.1%
	2014-2018	61.3%	2.5%	59.2%	2.6%	43.0%	0.6%	37.2%	0.1%
	2015-2019	63.2%	2.7%	61.0%	2.6%	43.4%	0.6%	38.0%	0.1%
	2016-2020	64.4%	3.4%	61.6%	3.1%	42.9%	0.7%	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 LCI 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 interval.

Table A7.5.2: Vehicle Collisions Involving Bicyclists and Pedestrians*

Indicator	Dataset Year	Gross Number of Collisions				Normalized by 1,000 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	50ft	0ft	50ft
Bicycle Collision at Injury Level 1: Fatal	2020	2	2	0	0	15.1	15.1	0.0	0.0
	2019	2	2	2	2	15.1	15.1	10.0	10.0
	2018	2	2	1	1	15.1	15.1	5.0	5.0
	2017	1	1	0	0	7.6	7.6	0.0	0.0
	2016	1	1	2	2	7.6	7.6	10.0	10.0
	2015	0	0	0	0	0.0	0.0	0.0	0.0
Bicycle Collision at Injury Level 2: Severe Injury	2020	3	4	0	0	22.7	30.3	0.0	0.0
	2019	3	3	2	2	22.7	22.7	10.0	10.0
	2018	3	3	3	3	22.7	22.7	15.0	15.0
	2017	3	3	5	6	22.7	22.7	24.9	29.9
	2016	3	3	0	0	22.7	22.7	0.0	0.0
	2015	2	2	2	3	15.1	15.1	10.0	15.0
Bicycle Collision at Injury Level 3: Visible Injury	2020	6	6	5	6	45.4	45.4	24.9	29.9
	2019	10	11	9	12	75.7	83.2	44.9	59.8
	2018	10	11	9	9	75.7	83.2	44.9	44.9
	2017	10	10	7	9	75.7	75.7	34.9	44.9
	2016	14	15	8	11	105.9	113.5	39.9	54.8
	2015	8	8	6	8	60.5	60.5	29.9	39.9
Bicycle Collision at Injury Level 4: Complaint of Pain	2020	4	4	2	3	30.3	30.3	10.0	15.0
	2019	10	10	7	11	75.7	75.7	34.9	54.8
	2018	9	9	7	8	68.1	68.1	34.9	39.9
	2017	9	10	5	8	68.1	75.7	24.9	39.9
	2016	10	10	10	17	75.7	75.7	49.8	84.7
	2015	10	11	17	20	75.7	83.2	84.7	99.7

*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 OpenStreetsMap (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.

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Indicator	Dataset Year	Gross Number of Collisions				Normalized by 1,000 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	50ft	0ft	50ft
Pedestrian Collision at Injury Level 1: Fatal	2020	4	4	3	4	30.3	30.3	15.0	19.9
	2019	2	2	5	7	15.1	15.1	24.9	34.9
	2018	5	5	1	1	37.8	37.8	5.0	5.0
	2017	3	3	2	3	22.7	22.7	10.0	15.0
	2016	1	1	3	3	7.6	7.6	15.0	15.0
	2015	1	2	2	2	7.6	15.1	10.0	10.0
Pedestrian Collision at Injury Level 2: Severe Injury	2020	5	6	7	9	37.8	45.4	34.9	44.9
	2019	3	3	5	6	22.7	22.7	24.9	29.9
	2018	5	5	7	8	37.8	37.8	34.9	39.9
	2017	7	7	4	5	53.0	53.0	19.9	24.9
	2016	4	6	8	10	30.3	45.4	39.9	49.8
	2015	6	7	3	4	45.4	53.0	15.0	19.9
Pedestrian Collision at Injury Level 3: Visible Injury	2020	8	8	5	6	60.5	60.5	24.9	29.9
	2019	13	14	7	10	98.4	105.9	34.9	49.8
	2018	10	10	7	10	75.7	75.7	34.9	49.8
	2017	17	18	9	11	128.6	136.2	44.9	54.8
	2016	12	13	10	11	90.8	98.4	49.8	54.8
	2015	10	11	13	15	75.7	83.2	64.8	74.8
Pedestrian Collision at Injury Level 4: Complaint of Pain	2020	5	5	7	9	37.8	37.8	34.9	44.9
	2019	18	18	11	13	136.2	136.2	54.8	64.8
	2018	11	12	11	13	83.2	90.8	54.8	64.8
	2017	20	21	8	10	151.3	158.9	39.9	49.8
	2016	15	16	16	17	113.5	121.1	79.7	84.7
	2015	14	15	9	12	105.9	113.5	44.9	59.8

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Indicator	Dataset Year	Gross Number of Collisions				Normalized by 1,000 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	50ft	0ft	50ft
Combined Bicycle and Pedestrian Collision at Injury Level 1: Fatal	2020	0	0	0	0	0	0	0	0
	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
Combined Bicycle and Pedestrian Collision at Injury Level 2: Severe Injury	2020	0	0	0	0	0	0	0	0
	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
Combined Bicycle and Pedestrian at Injury Level 3: Visible Injury	2020	0	0	0	0	0	0	0	0
	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
Combined Bicycle and Pedestrian at Injury Level 4: Complaint of Pain	2020	0	0	0	0	0	0	0	0
	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

Appendix 7.6: Housing

Table A7.6.1: American Community Survey (ACS) Housing Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent renters (B25003)	2011-2015	62.1%	2.5%	54.9%	2.4%	43.4%	0.7%	45.7%	0.1%
	2012-2016	63.8%	2.5%	55.0%	2.4%	44.3%	0.7%	45.9%	0.2%
	2013-2017	63.8%	2.3%	56.1%	2.5%	44.3%	0.7%	45.5%	0.1%
	2014-2018	64.6%	2.3%	56.5%	2.5%	44.4%	0.7%	45.4%	0.1%
	2015-2019	65.0%	2.3%	56.3%	2.6%	43.4%	0.7%	45.2%	0.1%
	2016-2020	60.8%	3.7%	56.0%	3.2%	42.3%	0.8%	44.7%	0.1%
Percent homeowners (B25003)	2011-2015	37.9%	2.2%	45.1%	2.3%	56.6%	0.7%	54.3%	0.3%
	2012-2016	36.2%	2.1%	45.0%	2.1%	55.7%	0.7%	54.1%	0.3%
	2013-2017	36.2%	2.0%	43.9%	2.2%	55.7%	0.7%	54.5%	0.3%
	2014-2018	35.4%	2.1%	43.5%	2.1%	55.6%	0.7%	54.6%	0.3%
	2015-2019	35.0%	2.1%	43.7%	2.4%	56.6%	0.7%	54.8%	0.3%
	2016-2020	39.2%	3.1%	44.0%	2.5%	57.7%	0.8%	55.3%	0.3%
Percent of households paying ≥30% of income on rent (B25070)	2011-2015	64.2%	4.1%	63.7%	4.6%	54.2%	1.3%	54.0%	0.1%
	2012-2016	64.2%	4.0%	63.6%	4.4%	53.4%	1.3%	53.6%	0.1%
	2013-2017	62.6%	4.0%	61.9%	4.4%	52.8%	1.3%	53.1%	0.1%
	2014-2018	60.3%	4.1%	58.3%	4.3%	52.3%	1.2%	52.6%	0.2%
	2015-2019	60.1%	4.1%	58.4%	4.4%	51.8%	1.3%	52.1%	0.2%
	2016-2020	60.7%	5.1%	60.3%	5.5%	51.4%	1.6%	51.5%	0.2%
Percent of households paying ≥50% of income on rent (B25070)	2011-2015	35.9%	3.2%	35.7%	3.6%	29.0%	1.0%	28.2%	0.2%
	2012-2016	36.0%	3.1%	36.4%	3.5%	28.3%	0.9%	27.9%	0.1%
	2013-2017	34.3%	2.9%	34.1%	3.4%	27.1%	1.0%	27.4%	0.1%
	2014-2018	31.6%	3.0%	33.7%	3.5%	26.0%	0.8%	27.0%	0.2%
	2015-2019	31.4%	2.9%	34.1%	3.4%	25.6%	1.0%	26.6%	0.2%
	2016-2020	30.3%	3.4%	36.6%	5.1%	24.3%	1.0%	26.2%	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 LCI 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 interval.

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	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent of households paying ≥30% of income on mortgage (B25091)	2011-2015	29.0%	3.8%	28.6%	3.8%	17.6%	0.8%	18.2%	0.05%
	2012-2016	28.1%	3.9%	27.2%	3.6%	16.6%	0.8%	17.2%	0.04%
	2013-2017	25.9%	4.0%	28.2%	3.8%	15.8%	0.8%	16.5%	0.1%
	2014-2018	25.7%	4.0%	26.5%	4.0%	15.1%	0.7%	16.0%	0.1%
	2015-2019	24.7%	4.2%	30.0%	4.3%	14.7%	0.8%	15.7%	0.1%
	2016-2020	25.5%	5.1%	28.6%	4.7%	14.3%	0.8%	15.4%	0.1%
Percent of households paying ≥50% of income on mortgage (B25091)	2011-2015	6.0%	2.0%	4.4%	1.4%	6.6%	0.5%	6.2%	0.0%
	2012-2016	5.8%	2.0%	3.5%	1.1%	5.7%	0.4%	5.8%	0.1%
	2013-2017	5.6%	2.1%	3.0%	1.1%	5.2%	0.4%	5.5%	0.1%
	2014-2018	6.0%	2.1%	3.1%	1.1%	5.2%	0.4%	5.4%	0.1%
	2015-2019	5.9%	2.1%	3.9%	1.5%	5.0%	0.5%	5.3%	0.0%
	2016-2020	6.4%	2.7%	5.0%	2.5%	4.9%	0.5%	5.2%	0.1%
Percent of households with more than one occupant per room (B25014)	2011-2015	16.1%	2.0%	12.0%	1.8%	7.3%	0.4%	8.2%	0.1%
	2012-2016	15.6%	1.9%	11.1%	1.6%	7.2%	0.4%	8.2%	0.1%
	2013-2017	13.8%	1.8%	10.8%	1.6%	7.1%	0.4%	8.2%	0.1%
	2014-2018	13.7%	1.8%	11.7%	1.8%	7.3%	0.4%	8.2%	0.1%
	2015-2019	12.5%	1.8%	11.8%	1.9%	7.4%	0.4%	8.2%	0.1%
	2016-2020	12.7%	2.3%	11.0%	2.0%	7.9%	0.5%	8.2%	0.1%
Percent of households with more than one occupant per room (renters) (B25014)	2011-2015	10.8%	1.7%	8.2%	1.6%	5.0%	0.3%	6.0%	0.1%
	2012-2016	10.9%	1.6%	6.9%	1.3%	4.9%	0.3%	6.1%	0.0%
	2013-2017	10.0%	1.5%	6.4%	1.2%	4.8%	0.3%	6.0%	0.1%
	2014-2018	10.2%	1.6%	7.2%	1.4%	5.0%	0.3%	6.0%	0.0%
	2015-2019	9.2%	1.6%	7.6%	1.5%	4.9%	0.3%	6.0%	0.1%
	2016-2020	8.6%	2.0%	7.7%	1.8%	5.0%	0.4%	5.9%	0.1%
Percent of households with more than one occupant per room (homeowners) (B25014)	2011-2015	5.4%	1.1%	3.8%	0.9%	2.3%	0.2%	2.2%	0.0%
	2012-2016	4.6%	1.0%	4.2%	1.0%	2.2%	0.2%	2.1%	0.0%
	2013-2017	3.8%	1.0%	4.4%	1.1%	2.3%	0.2%	2.2%	0.0%
	2014-2018	3.6%	0.9%	4.5%	1.1%	2.3%	0.2%	2.2%	0.0%
	2015-2019	3.3%	0.9%	4.3%	1.1%	2.5%	0.3%	2.2%	0.0%
	2016-2020	4.2%	1.3%	3.3%	1.0%	2.8%	0.3%	2.3%	0.0%

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	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent of households in same house 1 year ago (renters) (B07013)	2011-2015	47.5%	3.1%	39.4%	2.8%	32.7%	0.9%	34.7%	0.2%
	2012-2016	51.8%	3.3%	41.5%	3.0%	34.2%	0.7%	35.4%	0.2%
	2013-2017	53.2%	3.2%	42.7%	3.0%	34.5%	0.8%	35.6%	0.2%
	2014-2018	56.0%	3.1%	44.6%	3.1%	35.4%	0.8%	35.8%	0.2%
	2015-2019	59.0%	3.2%	46.5%	3.2%	35.3%	0.8%	35.9%	0.2%
	2016-2020	58.9%	4.9%	48.2%	3.7%	34.4%	0.9%	35.6%	0.2%
Percent of households in same house 1 year ago (homeowners) (B07013)	2011-2015	37.0%	2.6%	42.1%	2.5%	51.4%	0.8%	51.3%	0.3%
	2012-2016	34.6%	2.5%	42.9%	2.8%	50.5%	0.8%	51.0%	0.3%
	2013-2017	33.9%	2.2%	41.3%	2.7%	50.9%	0.8%	51.4%	0.2%
	2014-2018	33.5%	2.2%	41.4%	2.6%	50.7%	0.9%	51.6%	0.2%
	2015-2019	33.0%	2.4%	41.7%	2.7%	52.0%	0.9%	52.0%	0.3%
	2016-2020	35.8%	3.4%	41.3%	3.0%	53.7%	0.8%	52.7%	0.2%
Percent of households in same house 1 year ago (w/ income of > $75k) (B07010)	2011-2015	1.5%	0.4%	2.3%	0.5%	8.5%	0.2%	12.4%	0.1%
	2012-2016	1.6%	0.4%	2.3%	0.4%	9.0%	0.3%	13.0%	0.1%
	2013-2017	1.9%	0.5%	2.9%	0.5%	9.9%	0.3%	13.8%	0.1%
	2014-2018	2.1%	0.5%	3.4%	0.6%	10.7%	0.3%	14.8%	0.1%
	2015-2019	2.6%	0.6%	3.8%	0.7%	11.6%	0.3%	16.0%	0.1%
	2016-2020	2.4%	0.7%	4.4%	0.8%	12.4%	0.3%	16.8%	0.1%
Percent of households in same house 1 year ago (w/ income of < $75k) (B07010)	2011-2015	83.2%	1.8%	80.1%	1.8%	75.2%	0.8%	72.9%	0.1%
	2012-2016	84.7%	1.8%	82.5%	2.0%	75.3%	0.8%	72.8%	0.1%
	2013-2017	85.1%	1.8%	81.3%	2.1%	75.1%	0.8%	72.4%	0.1%
	2014-2018	86.7%	2.0%	82.6%	2.2%	74.9%	0.8%	71.8%	0.1%
	2015-2019	88.3%	1.9%	84.2%	2.2%	75.3%	0.9%	71.0%	0.1%
	2016-2020	91.2%	7.5%	85.0%	0.6%	75.1%	0.9%	70.6%	0.1%
Percent of housing units for rent that are vacant (B25002 and B25004)	2011-2015	5.1%	1.1%	5.7%	1.4%	2.3%	0.2%	1.8%	0.0%
	2012-2016	3.9%	1.0%	4.4%	1.1%	2.0%	0.2%	1.7%	0.0%
	2013-2017	3.8%	0.9%	4.5%	1.0%	2.0%	0.2%	1.6%	0.0%
	2014-2018	2.7%	0.8%	3.6%	0.9%	1.6%	0.2%	1.5%	0.0%
	2015-2019	2.5%	0.7%	3.4%	0.9%	1.5%	0.2%	1.6%	0.0%
	2016-2020	1.1%	0.6%	3.1%	0.9%	1.5%	0.2%	1.6%	0.0%
Percent of housing units for sale that are vacant (B25002 and B25004)	2011-2015	1.2%	0.6%	1.0%	0.6%	0.8%	0.2%	0.7%	0.0%
	2012-2016	1.0%	0.6%	0.7%	0.6%	0.6%	0.1%	0.6%	0.0%
	2013-2017	1.1%	0.6%	0.8%	0.5%	0.5%	0.1%	0.6%	0.0%
	2014-2018	1.0%	0.5%	0.8%	0.5%	0.4%	0.1%	0.6%	0.0%
	2015-2019	1.1%	0.6%	0.8%	0.5%	0.4%	0.1%	0.6%	0.0%
	2016-2020	1.0%	0.7%	1.0%	0.5%	0.5%	0.1%	0.5%	0.0%

Appendix 7.7: Transportation

Table A7.7.1: American Community Survey (ACS) Transportation Indicators*

	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent of households with a vehicle available (B08201)	2011-2015	N/A	N/A	N/A	N/A	92.9%	1.1%	92.3%	0.1%
	2012-2016	N/A	N/A	N/A	N/A	93.1%	1.1%	92.4%	0.1%
	2013-2017	N/A	N/A	N/A	N/A	93.4%	1.1%	92.6%	0.1%
	2014-2018	N/A	N/A	N/A	N/A	93.6%	1.2%	92.8%	0.1%
	2015-2019	N/A	N/A	N/A	N/A	93.9%	1.2%	92.9%	0.1%
	2016-2020	N/A	N/A	N/A	N/A	94.4%	1.4%	93.0%	0.1%
Percent of workers commuting to work alone by car (B08301)	2011-2015	69.2%	2.2%	74.4%	2.5%	76.6%	0.6%	73.4%	0.1%
	2012-2016	69.9%	2.0%	73.4%	2.3%	76.9%	0.7%	73.5%	0.0%
	2013-2017	73.6%	2.0%	75.1%	2.1%	77.4%	0.5%	73.6%	0.1%
	2014-2018	74.8%	2.1%	77.2%	2.3%	78.2%	0.3%	73.7%	0.0%
	2015-2019	76.9%	2.6%	78.8%	2.3%	78.8%	0.7%	73.7%	0.0%
	2016-2020	80.3%	3.9%	77.8%	2.7%	78.6%	0.8%	72.1%	0.1%
Percent of workers commuting to work by carpool (B08301)	2011-2015	23.1%	2.7%	18.7%	2.4%	14.8%	0.7%	10.8%	0.1%
	2012-2016	22.9%	2.7%	19.0%	2.4%	14.4%	0.6%	10.6%	0.1%
	2013-2017	19.6%	2.4%	17.7%	2.4%	13.9%	0.5%	10.4%	0.1%
	2014-2018	18.9%	2.5%	15.9%	2.3%	13.6%	0.5%	10.3%	0.1%
	2015-2019	16.2%	2.4%	14.3%	2.3%	12.9%	0.6%	10.1%	0.1%
	2016-2020	14.0%	2.8%	14.6%	2.5%	12.2%	0.5%	10.0%	0.1%
Percent of workers commuting to work by public transit (B08301)	2011-2015	1.7%	0.6%	0.8%	0.5%	1.5%	0.2%	5.2%	0.0%
	2012-2016	1.7%	0.6%	1.5%	0.6%	1.4%	0.2%	5.2%	0.0%
	2013-2017	1.5%	0.6%	1.5%	0.6%	1.5%	0.2%	5.2%	0.0%
	2014-2018	1.7%	0.6%	1.6%	0.7%	1.5%	0.2%	5.1%	0.0%
	2015-2019	2.2%	0.7%	1.6%	0.7%	1.7%	0.2%	5.1%	0.0%
	2016-2020	1.8%	0.7%	2.3%	0.9%	1.6%	0.2%	4.6%	0.0%
Percent of workers commuting to work by foot (B08301)	2011-2015	1.2%	0.6%	1.3%	0.6%	1.9%	0.2%	2.7%	0.0%
	2012-2016	1.2%	0.5%	1.6%	0.7%	1.9%	0.2%	2.7%	0.0%
	2013-2017	1.1%	0.5%	0.8%	0.5%	1.6%	0.2%	2.7%	0.0%
	2014-2018	1.0%	0.5%	0.7%	0.4%	1.5%	0.1%	2.7%	0.0%
	2015-2019	0.8%	0.5%	0.8%	0.4%	1.4%	0.2%	2.6%	0.0%
	2016-2020	0.9%	0.6%	0.9%	0.5%	1.3%	0.2%	2.5%	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 LCI 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 interval.

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	Time Period (ACS 5-Year sample)	Estimate for TCC Tracts	MOE	Estimate for Control Tracts	MOE	Estimate for San Joaquin County	MOE	Estimate for California	MOE
Percent of workers commuting to work by bike (B08301)	2011-2015	0.6%	0.4%	1.0%	0.4%	0.5%	0.1%	1.1%	0.0%
	2012-2016	0.6%	0.4%	1.0%	0.5%	0.5%	0.1%	1.1%	0.0%
	2013-2017	0.7%	0.4%	1.1%	0.7%	0.6%	0.1%	1.1%	0.0%
	2014-2018	0.6%	0.4%	1.0%	0.6%	0.5%	0.1%	1.0%	0.0%
	2015-2019	0.5%	0.4%	0.9%	0.6%	0.4%	0.1%	1.0%	0.0%
	2016-2020	0.5%	0.4%	0.4%	0.4%	0.3%	0.1%	0.8%	0.0%
Percent of workers commuting to work by other modes: taxicab, motorcycle, and other (B08301)	2011-2015	2.1%	0.8%	1.6%	0.7%	1.1%	0.2%	1.4%	0.0%
	2012-2016	1.6%	0.6%	1.2%	0.6%	1.0%	0.1%	1.4%	0.0%
	2013-2017	1.3%	0.5%	1.4%	0.6%	1.0%	0.1%	1.5%	0.0%
	2014-2018	1.0%	0.5%	1.3%	0.6%	0.9%	0.1%	1.6%	0.0%
	2015-2019	1.4%	0.6%	0.9%	0.4%	0.8%	0.1%	1.6%	0.0%
	2016-2020	1.1%	0.7%	0.4%	0.3%	0.8%	0.1%	1.6%	0.0%

Table A7.7.2: Plug-in Electric Vehicle (PEV) Registrations*

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	San Joaquin County	TCC Census Tracts	Control Census Tracts	San Joaquin County
Battery electric vehicle (BEV)	2020	55	45	2,882	14.3	9.5	38.3
	2019	35	30	746	7.1	5.2	10.0
	2018	30	24	1,378	6.0	4.2	18.8
	2017	30	19	948	5.8	3.4	13.6
	2016	16	20	740	3.0	3.6	10.4
	2015	5	8	459	0.9	1.5	6.5
Plug-in hybrid electric vehicle (PHEV)	2020	99	69	2,401	25.7	14.6	31.9
	2019	49	53	870	9.9	9.2	11.7
	2018	75	52	1,568	15.0	9.1	21.4
	2017	59	42	1,066	11.4	7.6	14.7
	2016	32	24	591	6.1	4.4	8.3
	2015	20	9	385	3.8	1.7	5.4
Fuel cell vehicle (FCEV)	2020	0	0	19	0	0	0.3
	2019	0	0	4	0	0	0.1
	2018	0	0	10	0	0	0.1
	2017	0	0	2	0	0	<0.1
	2016	0	0	1	0	0	<0.1
	2015	0	0	0	0	0	0
Total EVs	2020	154	114	5,302	40.0	24.2	70.5
	2019	84	83	1,620	17.0	14.4	21.8
	2018	105	76	2,956	21.0	13.3	40.4
	2017	89	61	2,052	17.3	11.0	28.3
	2016	48	44	1,375	9.1	8.0	19.2
	2015	25	17	844	4.7	3.1	11.9

*EV registration data were obtained by request from the California Air Resources Boards (CARB) Online Fleet Database. The EV registration data were normalized with five-year ACS data for the respective year.

Table A7.7.3: Publicly Available Charging Infrastructure[19]

Indicator	Dataset Year	Gross Number			Normalized per 10,000 Residents		
		TCC Census Tracts	Control Census Tracts	San Joaquin County	TCC Census Tracts	Control Census Tracts	San Joaquin County
Level 2 Stations	2021	2	1	55	<0.1	<0.1	<0.1
	2020	2	0	41	<0.1	0	<0.1
	2019	1	0	34	<0.1	0	<0.1
	2018	0	0	34	0	0	<0.1
	2017	0	0	30	0	0	<0.1
	2016	0	0	29	0	0	<0.1
DC Fast-Charging Stations	2021	0	0	26	0	0	<0.1
	2020	0	0	11	0	0	<0.1
	2019	0	0	6	0	0	<0.1
	2018	0	0	6	0	0	<0.1
	2017	0	0	7	0	0	<0.1
	2016	0	0	7	0	0	<0.1

[19] 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.

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