

# Expanding Public Electric Vehicle Charging in Wilmington

COMMUNITY PERSPECTIVES, RESOURCES, AND IMPLEMENTATION PATHWAYS

## PROJECT OVERVIEW

As part of the Climate Action–Community-driven eLEctric vEHicle chArging solutioN (CA–CLEAN) project, researchers at the UCLA Luskin Center for Innovation worked to improve procedural equity in the siting of public electric vehicle (EV) charging stations by co-designing charging infrastructure with communities. The team partnered with three community-based organizations across the City of Los Angeles, including Coalition for a Safe Environment (CFASE) in Wilmington. Between 2024 and 2025, the team held three workshops in each community to understand residents’ perspectives and preferences regarding EVs and public charging. This guide 1) summarizes what the community shared during the workshops and through written surveys, 2) presents key challenges and opportunities, and 3) provides an overview of pathways to charger installation. It also provides a list of financial resources to support EV purchases and home charging.

## WILMINGTON PARTICIPANT SNAPSHOT

Across the three workshops in Wilmington, an average of **22** participants attended. Many participants shared their insights in Spanish, which we translated to English.

**Who participated.** Approximately 33% of participants identify as White, 3% as Black or African American, and 43% as Other (the majority of whom listed Latinx, Mexican, or Mixed Race). Most participants, 96%, identify as Latinx or Hispanic. Two-thirds of participants are aged 45–60, and the median annual household income is \$20,000. On average, participants have lived in Wilmington for about 25 years.

**Experience with electric vehicles.** The vast majority of Wilmington participants (97%) have never owned or leased an EV.

**Community context.** Participants largely perceive Wilmington to be lacking EVs and charging infrastructure. Our survey found that 53% of participants believe there are not enough people driving EVs in their community, and 57% of participants believe there are not enough EV chargers in Wilmington.

“[We] don’t have any charging stations in Wilmington—[we are] playing catch-up here. Our community needs to advance.”

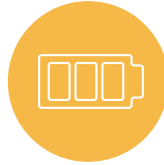
—Workshop participant



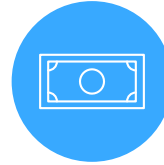
Electric vehicles



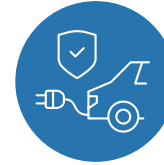
Charging access and availability



Reliability



Affordability



What is needed to rely on an EV



On future opportunities

## THEMES FROM COMMUNITY DISCUSSION

### Perspectives on Electric Vehicles and Charging (Workshop 1)

The first discussion focused on community members' broader desires for clean mobility and perspectives on public EV charging. As many of our Wilmington participants do not own or lease EVs, they entered the first workshop with many important questions about EVs and charging, and outlooks on charging access as residents who are hesitant about the transition to EVs but eager to learn about the technology and opportunities.

**Notably, participants asked many questions during the first discussion.** Participants posed many questions on EVs, including on technology, affordability, and maintenance. Questions ranged from more general topics, such as the expense of repairs for electric vs. gasoline vehicles, to very specific questions, such as the potential dangers of EV batteries.



Photograph from the first Wilmington Community Workshop in June 2024. Yifang Zhu

**On EVs.** Participants' perspectives on EVs were varied and driven by curiosity. Most neutral or negative commentary focused on EV technology, maintenance, and hesitancy stemming from the cultural significance of gas vehicles. Participants largely agreed that technology and its associated maintenance are primary factors making them nervous about purchasing an EV, expressing concerns about batteries dying in the middle of the road, and local mechanics not understanding how to repair EVs. One participant described a prior experience with a hybrid vehicle in which the mechanic was unable to service the hybrid battery, replacement costs were prohibitively high, and they ultimately got rid of the vehicle. They also highlighted a knowledge gap, noting, “[H]ybrid cars have two different types of batteries, and we didn’t know that.”

“If mechanics do not know how to repair [EVs], what does that mean for low-income people who cannot afford going to their dealership?”

—Workshop participant

With respect to the cultural significance of gas vehicles, participants explained that in their community, it is tradition for fathers and grandfathers to show their children and grandchildren how to maintain gas vehicles, with one suggesting, “My dad would be against [EVs] ... it takes away from all of that, the culture.”

Concerns about technology, including personal safety, were emphasized throughout the discussion. One participant asked, “Are there any dangers to new technologies? ... We know there have been explosions with lithium batteries ... [we] have to make sure research for any component is thorough.” This conversation and associated questions underscore the importance of community education and reassurance on the safety of EV technology with respect to human health.

Wilmington residents were also quite interested in understanding the true environmental impact of EVs and deeply concerned about pollution in their community, which is located near the Port of Los Angeles and has experienced disproportionate

environmental burdens. One participant emphasized “need[ing] to take care of Mother Earth” for future generations.

**On charging access and availability.** Despite few participants owning or leasing an EV, participants had insightful comments on charging in Wilmington and nearby communities. Participants were concerned about wasting time at public charging stations. Several participants suggested that more charging stations are needed, with one recounting an experience charging: “We had to wait an hour to get a charger, then waited 30–40 minutes to get a full charge in a different location. If we would have had chargers in Wilmington, we would not have had that problem.”

“We need more charging stations, but also there needs to be a more efficient way to charge cars for people [who] are tight on time—it seems impractical to charge for several hours.”

—Workshop participant

One participant highlighted the sparse charging network as one of multiple barriers to EV purchase, stating, “My son is hesitant about purchasing an EV due to cost and is worried there are not enough chargers in this community. A gas station is more convenient; I just come and go.”

**On reliability.** As most participants do not drive EVs, they did not have experiences to share on charging reliability. However, one participant was concerned about the processes for charger maintenance, stating, “Let’s say you connect the car [at a charging station], and it won’t charge. Will [repair companies] be fast enough to respond to the issue?”

**On affordability.** Affordability was discussed primarily in the context of purchasing EVs, rather than charging. Participants were interested in learning more about the cost of EVs, with one sharing that they believe it is important to educate residents on the most cost-effective options for low-income communities. Participants largely agreed that EVs are expensive and posed questions on maintenance costs.



## Charging Priorities and Location Preferences (Workshop 2)

The second phase of community discussion focused on specific charging priorities and perspectives on potential charging locations (see Figure 2).

A presentation from UCLA summarizing evidence on the health impacts of EVs and charging, as well as community statistics and data from the first workshop, lent itself to a rich discussion about the community’s needs and concerns. Like the first workshop, many questions were posed throughout the second workshop.

**Affordability** was heavily discussed. One participant stated, “At the end of the day, the EV seems to only be a luxury, and the gas car seems to be more feasible ...”, and another asked, “Is there a way to make EV cars more affordable? How are we going to make sure everyone can afford it?” Participants also questioned whether there are plans to make “parking [lots] more focused on charging stations here in this community?” comparing Wilmington with other communities that they perceive to have more charging stations available.

Participants also considered the cost of charging at home, with one sharing that they have heard that electricity bills can skyrocket when you install a charger at home, suggesting that this prospect “makes it scary to get an EV and install a charger at home because I am not sure I would be able to pay for it.”

“Our community is low-income, and we do not have money to buy a luxury car like an EV. In my family, we don’t even make \$30k, and I barely have enough for my bills and rent ... I have to choose between either the EV car, feeding my kids, or living a modest lifestyle ... we are having to choose between our health and our livelihood.”

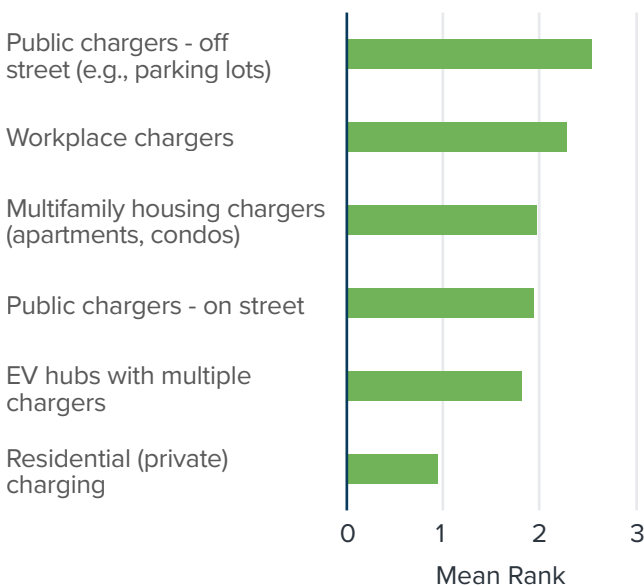
—Workshop participant

Another participant shared a slightly different perspective, stating, “A lot of people complain about the electric car’s price, but overall it’s better for the community because it doesn’t bring out toxic chemicals. And I think [EVs are] better for air pollution, [which is important] since we live near refineries. So it would be better for the environment.”

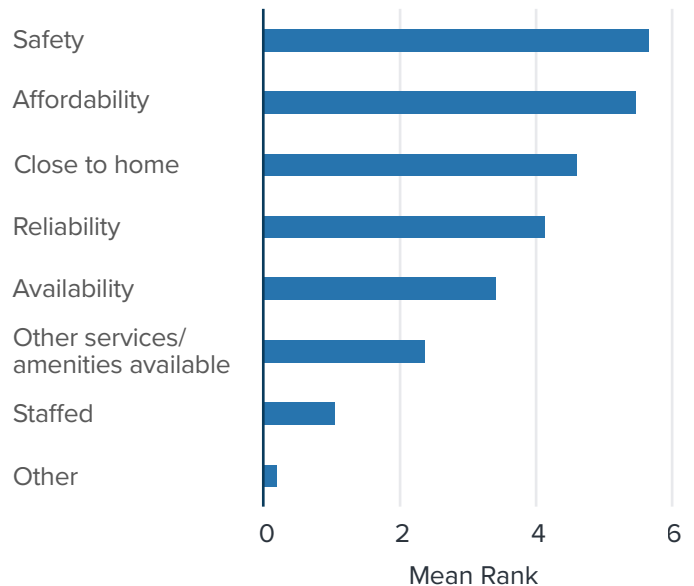
FIGURE 1

### Wilmington Community Priorities for Electric Vehicle Charging.

#### (a) Priority ranking of EV charging infrastructure types



#### (b) Priority ranking of EV charging station features



**Live polls and discussion emphasized key perspectives.** As Figure 1 (b) demonstrates, participants ranked the most important features of a charging station through a poll, selecting reliability as the top choice, affordability second, and safety third.

**Even if I have a charger, [that] doesn't guarantee that I will get to charge [my vehicle]."**

*—Workshop participant*

When asked what public charging advances or innovations participants would prioritize, increasing the efficiency of the charging experience was the top selection, followed by the availability of more fast chargers vs. slower Level 2 chargers, and a universal smartphone charging application for all charging companies, all prioritized over even affordability (i.e., providing the cheapest charging possible).

When asked about **how far participants are willing to drive to access a charging station**, responses varied, but many responses grouped around the 5- to 10-minute range. Several noted the importance of convenience, suggesting that charging needs to be as convenient as pumping gas currently is.

Facilitated discussions and polling on **charging amenities** showed that participants prioritized access to quick, reliable charging above all. Beyond that primary goal, participants were most interested in parks or playgrounds, followed by a two-way tie for indoor spaces with air conditioning and grocery stores. One participant also articulated the need for charging amenities beyond the local community.

**"There are people who are going to travel long distances. I think it's important that there be rest stops with 7-Elevens, restrooms ... with charging. You have to consider this traveling with kids ..."**

*—Workshop participant*

### Action Planning (Workshop 3)

The third community discussion featured a presentation and dialogue on charging pathways facilitated by UCLA, live polling, and a presentation by the Los Angeles Department of Water and Power (LADWP).

LADWP staff shared a statistic in their presentation that 80% of charging occurs at home, 15% at work, and 5% in public. **However, our polling during the workshop illuminates a key difference in the Wilmington community compared to the entirety of Los Angeles.** When workshop participants were asked to prioritize the type of chargers most important to them, off- and on-street public chargers were ranked highest; and importantly, **residential charging was ranked lowest** (Figure 1a).

When explicitly asked what support households would need to rely on an EV to meet their transportation needs, **the lack of familiarity with EV technology and the need for education** were primary takeaways. One participant stated, *"People need to become educated and can make a reasonable decision to know what's best for them. It will take time to understand that."*

They also suggested that if Wilmington residents found out there were designated locations where they could charge for free, then more individuals in the community would purchase an EV.

**"For Wilmington residents, this is all new. Many of us don't have cars or one with gas, so the community is not informed or prepared for EVs. We are low-income families, so we can barely afford one gas car. We need more meetings so that we're aware and can keep up with every step in [technology] advances."**

*—Workshop participant*

The role of youth in the EV transition, which was also discussed in the first workshop, was mentioned again. One participant stated, *"My kids [drive], and they are the new generation, so maybe the information that they garner can be given to me and our neighbors. Soon, everyone will have an EV. We need to go on staying informed because this is all new for us."*

Participants also expressed concerns with battery lifespan and replacement costs, and emphasized the perceived reliability of gas vehicles over EVs.

In another poll, only one respondent provided feedback for government agencies promoting EV uptake in Wilmington, writing, “*We need plenty of charging stations to ensure our cars don’t run out of power,*” and adding a second comment, “*They must be safe and reliable—please remember that some of us have children.*”

Affordability was discussed at this final workshop as well, with several participants expressing hesitancy about whether their families could truly afford to transition to EVs. After LADWP’s presentation, one participant stated, “*I like the technology, and I am willing to save, but since I don’t know the exact costs, I don’t know how realistic this is.*”

**Importantly, participants in the third and final workshop in Wilmington want to be part of future**

**discussions with CFASE** on potential installation incentive applications and planning, unanimously agreeing they would like to continue meeting on this topic. When asked in a written exit survey about how involved they have been in conversations, planning, and decision-making around clean transportation in the community, the average response was 9.6 out of 10. This was higher than both the average score of 5.3 reported in a pre-discussion survey administered at the start of the first workshop to the entire participant group, and the average score of 5.5 reported by a control group surveyed during the same period as the final focus group.

Together, these patterns suggest that participation in the focus group was associated with higher perceived involvement in clean transportation decision-making, although the sample size was insufficient to formally assess statistical significance.

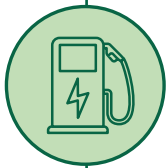
## KEY CHALLENGES AND OPPORTUNITIES



### **Challenge #1: Limited access to clear, reliable information about EVs and charging**

Throughout the workshop series, participants posed many questions about EVs, batteries, purchase incentives, health effects, environmental impact, and more.

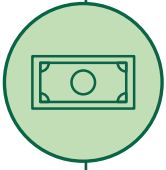
**Opportunity #1:** Increased collaboration among state and local agencies, researchers, and community-based organizations can support the development of educational resources and outreach activities (such as workshops like those hosted in this project) to provide communities with accurate, timely information on EVs and charging.



### **Challenge #2: Limited access to working chargers.**

Public charging options in Wilmington are limited and hindered by long wait times. Though most workshop participants do not yet have EVs, they perceive the community as lacking chargers, which is a stated barrier to EV uptake.

**Opportunity #2:** Cities require clear, actionable means of coordination across agencies with funds to install and maintain chargers. Responsible parties should experiment with measures such as staffed or unstaffed monitoring of chargers, real-time queuing, and reservations for users.



### **Challenge #3: Affordability.**

Affordability, particularly in the context of EV purchase, was discussed in all three workshops in Wilmington, with participants largely perceiving EVs as a luxury. Participants expressed concern with competing financial priorities for low-income households.

**Opportunity #3:** Communities would benefit from more education on incentive program offerings (as well as technical assistance), including upfront grants for EV purchase and fair financing options. Additionally, power utilities taking the lead to install and manage more chargers would have multiple benefits, including affordable electricity pricing for public chargers. Community-based organizations can also apply for funding to own and operate chargers, though technical assistance programs for funding application support are often necessary (and few such programs exist), and community-based organizations may not prefer to own chargers and manage their operations and maintenance. There are also opportunities for community-based organizations to partner with private charge point operators (CPO) to apply for funding to install chargers with affordable pricing.



### **Challenge #4: Lack of meaningful community involvement in this space.**

Our survey suggested there has not been sufficient Wilmington resident involvement in clean transportation decision-making thus far, but Wilmington residents believe it is important, with two-thirds of participants from the first workshop rating participation importance as between 8 and 10 on a 10-point scale.

**Opportunity #4:** Agencies and other partners should make concerted efforts to involve community members in key conversations and decision-making on the siting of chargers. As described above, nearly all participants who attended the final workshop want to continue to be part of this conversation and effect change in Wilmington.

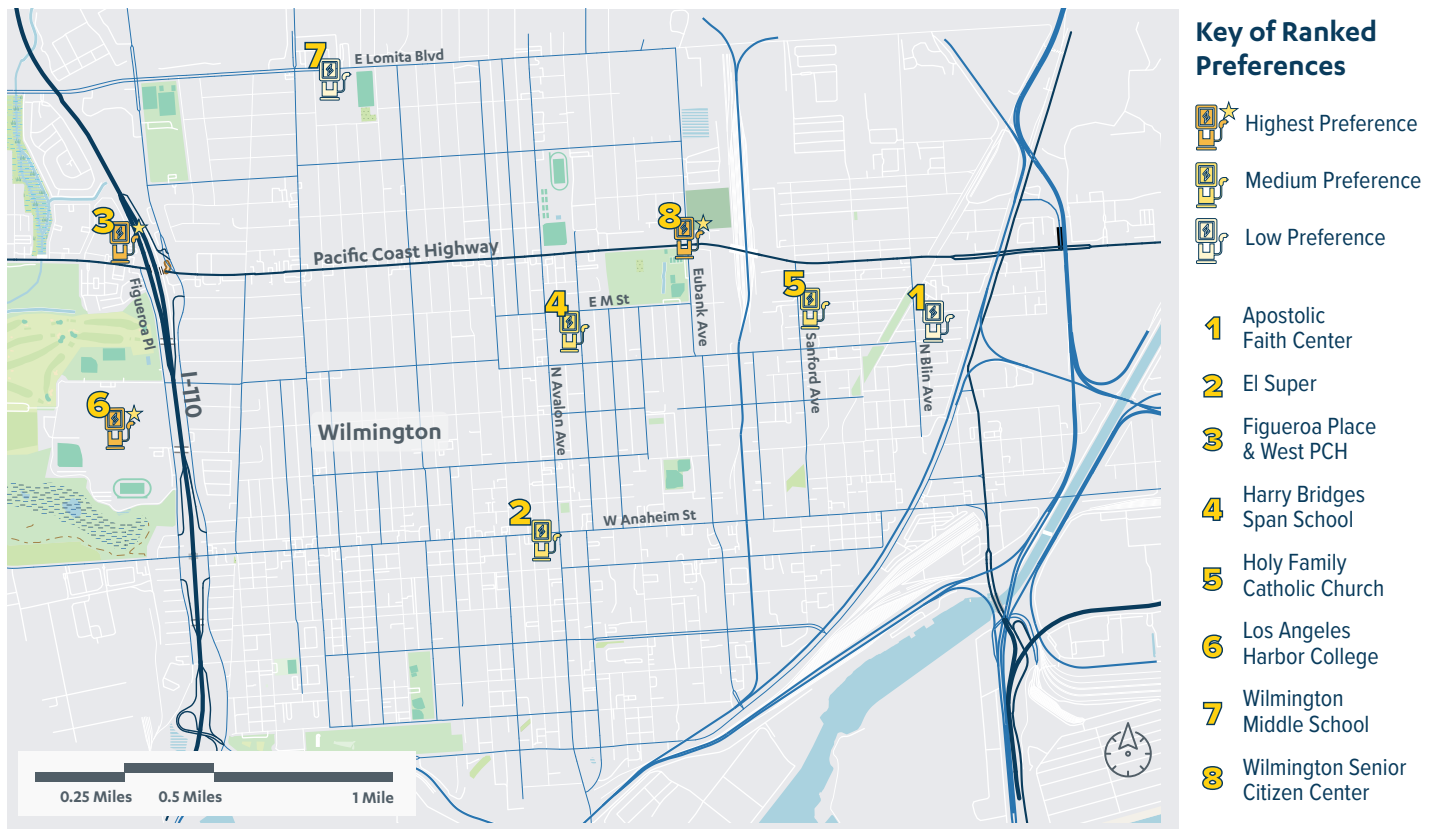
## PRIORITIZED CHARGING LOCATIONS

The map in Figure 2 highlights the top eight EV charging locations selected by Coalition for a Safe Environment (CFASE) and voted on by participants. These results came from two live polls conducted at workshops, in partnership with CFASE, during which community members ranked potential EV charging

stations in terms of neighborhood needs. The highest-ranked locations, in dark gold, included the Wilmington Senior Citizen Center and Los Angeles Harbor College, and the lowest-ranked locations are in light yellow.

FIGURE 2

### CA-CLEAN: Wilmington Charging Location Preferences



## OVERVIEW OF PATHWAYS FOR MORE CHARGERS

Here is a summary of pathways for more chargers in Wilmington and the city of Los Angeles more broadly, as laid out in the final workshop held in each community.

### PRIVATE PROPERTY



#### Personal residential charging

The easiest path with a parking space and land, but not readily available for all; electrical panel upgrades may be required beyond Level 1 charging

**INCENTIVES AVAILABLE** | **PRIVATE USE**



#### Multifamily housing chargers

Landlords can apply for publicly available incentives, including through LADWP, and use private companies for installation, operation, and maintenance; e.g., California Energy Commission (CEC) [Communities in Charge incentives](#)

**INCENTIVES AVAILABLE** | **PRIVATE USE**



#### Workplace charging

Requires employer participation, sufficient parking, and may require electrical panel upgrades

**INCENTIVES AVAILABLE** | **PRIVATE USE**



#### Chargers at businesses

Installed through LADWP request process (LADWP does not own chargers), through available incentives (e.g., CEC [CALeVIP](#)), or private companies (e.g., Tesla)

**INCENTIVES AVAILABLE** | **PRIVATE & PUBLIC USE**

### PUBLIC PROPERTY



#### Off-street property (e.g., parks/libraries)

e.g., [Los Angeles Department of Transportation \(LA DOT\)](#)

**PUBLIC USE**



#### Streetlight chargers

e.g., [Los Angeles Bureau of Street Lighting \(BSL\)](#)

**PUBLIC USE**



#### EV hub sites

e.g., LADWP; two in progress, one in Gardena and another in Panorama City

**PUBLIC USE**



Chargers for public use at **other public sites** (city lots, healthcare facilities, etc.) installed through publicly available incentives

**INCENTIVES AVAILABLE** | **PUBLIC USE**

## NEXT STEPS

- In collaboration with CFASE, our research team is sharing findings back to the community through this document and related resources.
- The team is preparing a **report presenting key findings for three communities across the city of Los Angeles**: South Los Angeles (community partner: [Redeemer Community Partnership](#)), Wilmington/Carson (community partner: Coalition for a Safe Environment), and Pacoima (community partner: [Pacoima Beautiful](#)).
- Researchers will **engage with state and local agencies**, including LADWP, to share deliverables and discuss findings.
- Researchers will continue working with CFASE to identify how our team and other stakeholders can **best support Wilmington in a just transition to clean energy and transportation**.

## FINANCIAL SUPPORT FOR EVS AND CHARGING

### EV purchase incentives

- [South Coast Air Quality Management District \(AQMD\) Replace Your Ride](#): up to \$12,000 to replace an older vehicle with a newer vehicle (Plug-In Hybrid, Battery, or Fuel Cell EV)
- [Driving Clean Assistance Program \(DCAP\)](#): If you do not have a vehicle to scrap and you live in an eligible neighborhood, you can opt for DCAP rather than Replace Your Ride and you can also receive financing assistance through a statewide network of trusted credit union partners.
- [LADWP Used Electric Vehicle Rebate Program](#): up to \$4,000 for the purchase of a used EV

### EV charging incentives

- [LADWP Residential EV Charger Rebate Program](#): up to \$1,000 for a Level 2 charger and \$250 for installation of a meter; additional \$500 for income-eligible customers.
- [South Coast AQMD Residential EV Charging Incentive Program](#): low-income residents only, purchase rebate for \$500 for a new Level 2 charger

View available incentives through a government-operated and maintained website: <https://driveclean.ca.gov/>

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## AUTHORSHIP

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We acknowledge the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), 'Ahihirom (Elders), and 'eyoohiinkem (our relatives/relations) past, present, and emerging.

We dedicate this report to Jesse Marquez, whose decades of leadership, advocacy, and partnership advanced environmental justice in Wilmington and throughout the Harbor Area. We are grateful for his contributions to this project and honor his enduring legacy of community-driven action and environmental stewardship.

The analysis, views, recommendations, and conclusions expressed herein are those of the authors and not necessarily those of any of the project supporters, advisors, interviewees, or reviewers, nor do they represent the University of California, Los Angeles as a whole. Reference to individuals or their affiliations in this report does not necessarily represent their endorsement of the recommendations or conclusions of this report. The author is responsible for the content of this report.

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