



Bay Area Air Quality Management District
Mobile Source Committee

Projects and Contracts with Proposed Grant Awards Over \$100,000

March 28, 2019

Michael Neward
Staff Specialist



- ❖ Background
- ❖ Proposed projects with awards over \$100,000
- ❖ Overview of Fiscal Year Ending (FYE) 2019 funds:
 - Awards by project type
 - Awards by county
 - Available
- ❖ Recommendations



❖ Carl Moyer Program (CMP)

- Created in 1998 to reduce emissions from heavy-duty engines
- Voluntary program that funds surplus emission reductions

❖ Mobile Source Incentive Fund (MSIF)

- Assembly Bill (AB) 923 allowed for additional \$2 motor vehicle registration fee surcharge (12/04)
- CMP and Lower Emission School Bus Program (LESBP) projects eligible for MSIF funding



Community Health Protection Grant Program (CHP)

- ❖ Created by AB 134 appropriation of \$250 Million (M) from the Greenhouse Gas Reduction Fund (GGRF) to reduce mobile source emissions including criteria pollutants, toxic air contaminants, and greenhouse gases in AB 617 communities
- ❖ Bay Area Air Quality Management District (Air District) allocated \$50M of these funds for emission reduction projects under the CMP, and optionally under the Proposition 1B Goods Movement Emission Reduction Program



CMP/MSIF & CHP

❖ On 2/21/18 Air District Board of Directors:

- Approved participation in CMP Year 20
- Authorized Executive Officer/APCO to execute contracts and amendments with grant awards up to \$100,000

❖ On 12/20/17 Air District Board of Directors:

- Approved acceptance of \$50M in AB 134 funding for the Community Health Protection Grant Program (CHP)



Project Recommendations Over \$100k

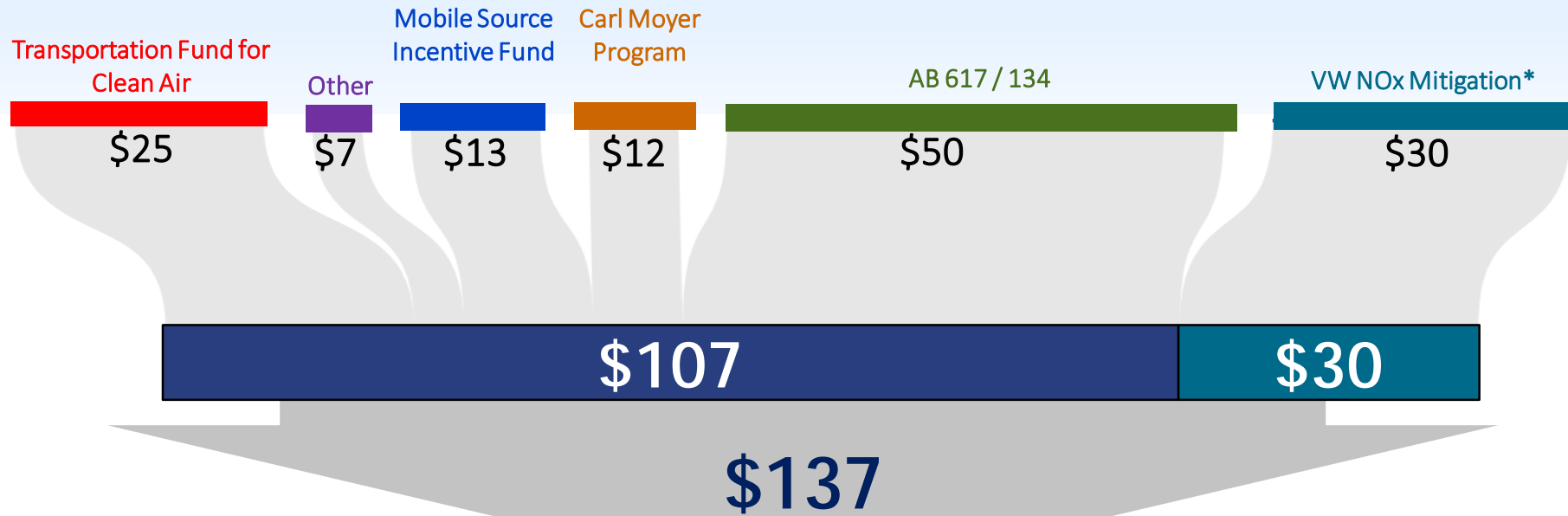
- ❖ **\$1,024,264 in total awards for two projects:**
 - Five pieces of agricultural equipment
 - Four school buses

- ❖ **Emission reductions:**
 - Over 1.706 tons per year (TPY) of criteria pollutants



Projected Grant Revenues for FYE 2019

\$137 (in Millions)



Carl Moyer Category Includes Funding From:

- CMP Year 20
- CMP Statewide Funds
- FARMER (agriculture only)
- LCFS - Low Carbon Fuel Standard

Other Funding Sources:

- EFMP – Enhanced Fleet Modernization Program
- RFG – Reformulated Gasoline Settlement Fund
- DERA – Diesel Emissions Reduction Act
- Zero-Emission Hydrogen Ferry Demonstration Project

*Total Volkswagen funding is \$423M statewide, which will be dispersed over ~5 year period. Staff projects that as much as 33% of funding could go to projects located in the Bay Area.



Funds Recommended & Awarded by Project Category Since July 2018

Total = \$45M

List of projects is shown in Attachments 2 and 3



Light-duty
Cars &
Infrastructure

On-road
Trucks &
Buses

School
Buses

Off-road

Off-road
Marine &
Locomotive

Trip
Reduction

\$557,900

\$3,330,100

\$13,785,445

Ag:
\$3,253,312
Non-Ag:
\$3,909,458

\$15,556,500

\$5,279,069

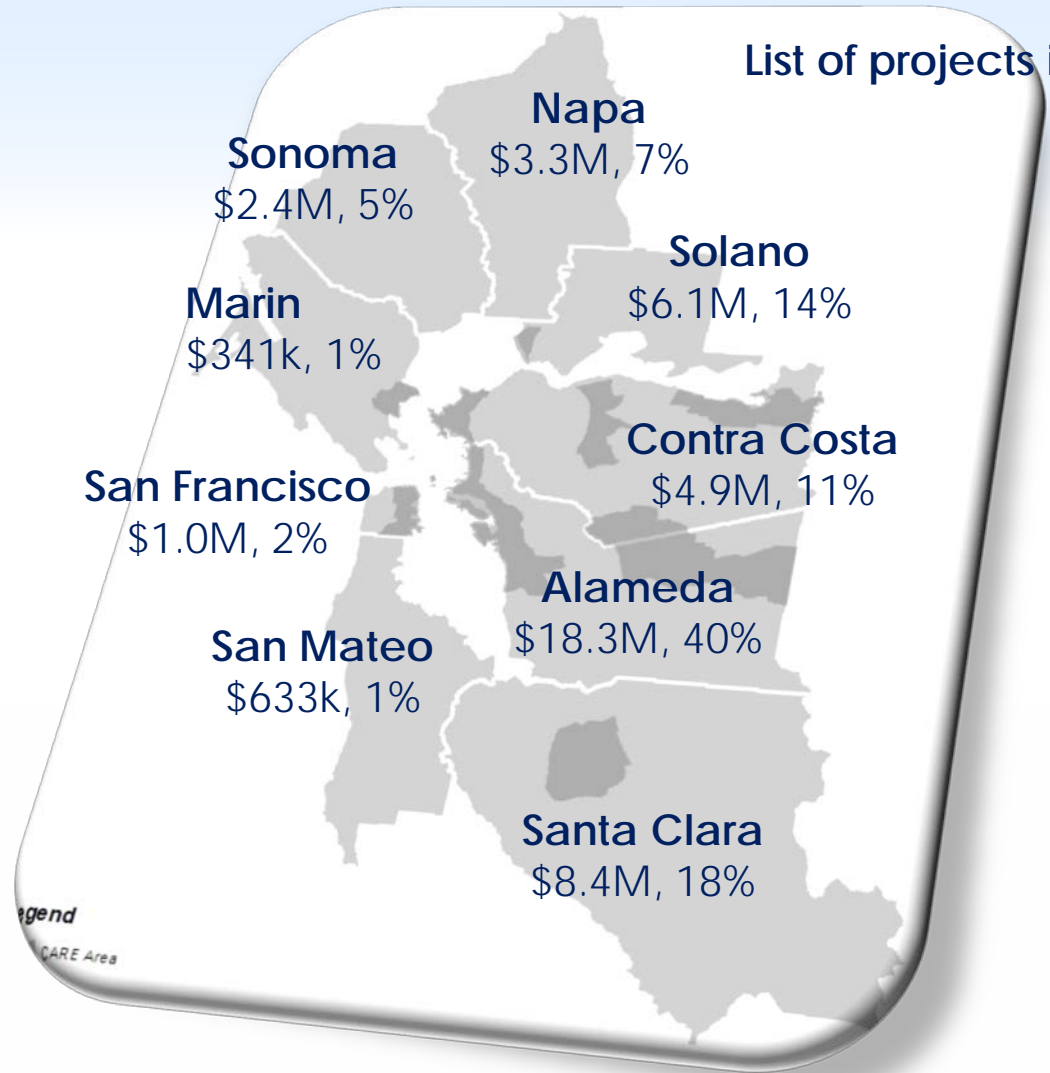


Funds Recommended & Awarded by County Since July 2018



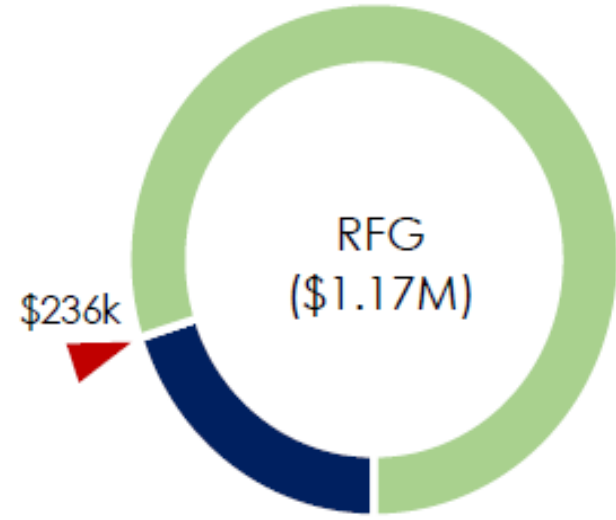
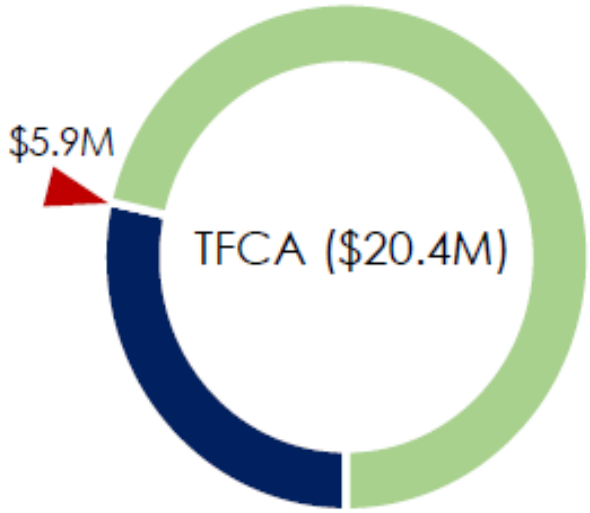
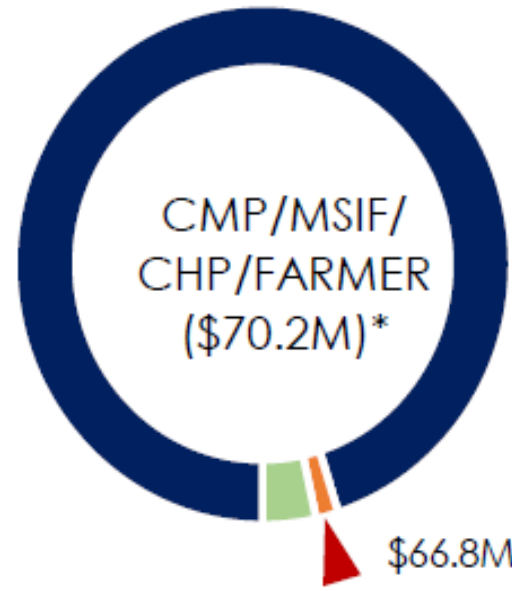
List of projects is shown in Attachments 2 and 3

Total = \$45M





Status of Incentive Funding Awarded Since July 2018, by Funding Source



■ Previously Awarded
 ■ Recommended
 ■ Available

* Includes awards from FYE 2018

■ Awarded or Passed-through
 ■ Available
 ■ Recommended
 ▲ Awarded to date (since July 1, 2018)

*Includes funding and awards made in FYE 2018

** includes passed-through funding from TFCA County Program Manager, ARB-funded Hydrogen Ferry Demo, EPA-funded DERA, and MTC for EV Outreach, and other funding that is not yet available from the Volkswagen NOx Mitigation, and ARB-funded EFMP.



Open Solicitations & FYE 2019 Funding

Program Name, Description, and Website	Funding Available	Status	Source
Carl Moyer Funding to replace heavy-duty on- & off-road vehicles and equipment www.baaqmd.gov/moyer	\$8M	Open until funds exhausted	CMP, MSIF, CHP, FARMER
Vehicle Buy Back Funding to scrap 1996 or older light duty cars www.baaqmd.gov/vbb	\$6M	Open until funds exhausted	MSIF
Clean Fleets Funding to purchase Light & Medium Duty ZEVs www.baaqmd.gov/cleanfleets	\$5M	Open until April 30, 2019	TFCA
Charge! Funding to install public charging stations www.baaqmd.gov/charge	\$5M	Open until June 30, 2019	TFCA
West Oakland Zero Emission Grant Program (Round 3) Funding to purchase zero-emission vehicles & equipment www.baaqmd.gov/WestOaklandZEV	\$600k	Open until June 30, 2019	RFG



Recommended Action

Recommend the Board of Directors:

1. Approve recommended projects with proposed grant awards over \$100,000 as shown in Attachment 1; and
2. Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.



Bay Area Air Quality Management District
Mobile Source Committee

2019 Greenhouse Gas Reduction Funds (GGRF)

March 28, 2019

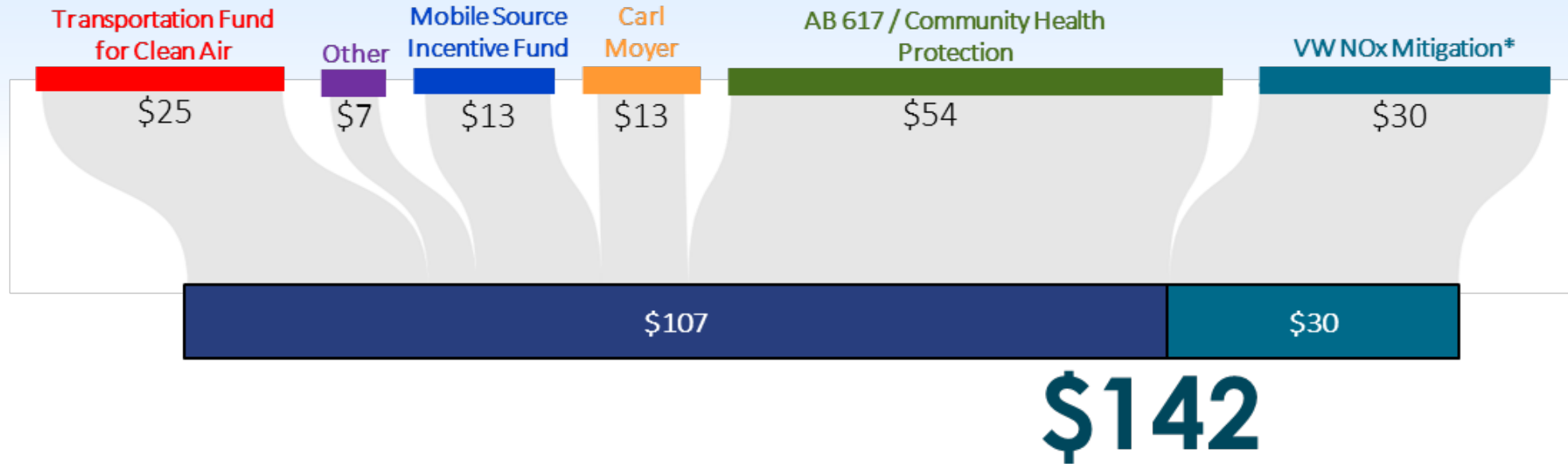
Anthony Fournier
Air Quality Program Manager



- Background
- 2019 Greenhouse Gas Reduction Funds
- Recommendations



2019 Projected Grant Revenues (in Millions) January - December 2019



Carl Moyer Category Includes Funding From:

- CMP Year 21
- CMP Statewide Funds
- FARMER (agriculture only)
- LCFS - Low Carbon Fuel Standard

Other Funding Sources:

- EFMP – Enhanced Fleet Modernization Program
- RFG – Reformulated Gasoline Settlement Fund
- SEP – Supplemental Environmental Project

*Total Volkswagen funding is \$423M statewide, which will be dispersed over ~5 year period. Staff projects that as much as 33% of funding could go to projects located in the Bay Area.



Senate Bill (SB) 856 (2018)

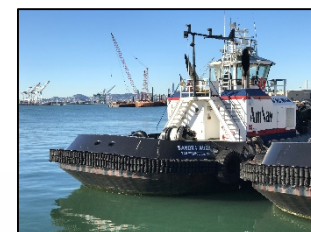
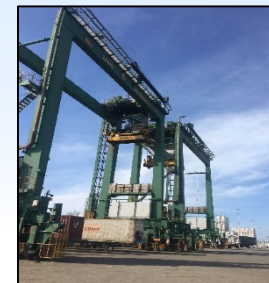
- Signed into law on June 27, 2018
- Added provisions to the 2018 State Budget Act related to GGRF expenditures
 - \$245 Million (M) for projects that primarily benefit Assembly Bill (AB) 617 communities
 - \$132M for agricultural projects
- Continues programs created by AB 134 (2017)
- Funds to be encumbered by June 30, 2020, and fully liquidated by June 30, 2022





2019 Community Health Protection Grant Program

- SB 856 provides \$245M statewide –
Estimated \$40M for Bay Area projects
 - **Mobile Sources:** For projects eligible under Carl Moyer Program & Goods Movement Bond Program guidelines
 - **Stationary Sources:** For replacement of equipment with technologies that will reduce emissions of toxic air contaminants and criteria air pollution
 - **Other Projects:** For projects in community emission reduction programs





2019 Community Health Protection Grant Program (Continued)

- Focus on projects benefitting AB 617 Community Health Protection areas
- Emphasis on cleanest available technologies
- Up to 6.25% for admin costs



2019 Funding Agricultural Reduction Measures for Emission Reductions (FARMER) Program Funding

- SB 856 appropriated \$132M from the State Budget for Fiscal Year Ending 2018-19 to the California Air Resources Board (CARB) for the reduction of criteria, toxic, and greenhouse gas emissions from the agricultural sector
- For projects eligible under CARB's Carl Moyer Program guidelines
- Air District applied for \$5M in FARMER funding
- Up to 6.25% for admin costs





Recommended Action

Recommend the Board of Directors:

Authorize the Bay Area Air Quality Management District (Air District) to accept, obligate, and expend new funding for the Funding Agricultural Reduction Measures for Emission Reductions (FARMER) Program and the Community Air Protection Grant Program, and approve corresponding authorizing resolutions.



Bay Area Air Quality Management District
Mobile Source Committee

Fiscal Year Ending (FYE) 2020 Transportation Fund for Clean Air (TFCA) Funding Allocation

March 28, 2019

Chengfeng Wang
Air Quality Program Manager



- Background
- Proposed FYE 2020 TFCA funding allocation
 - TFCA Regional Fund and Bay Area Air Quality Management District (Air District) -sponsored programs
 - Cost-effectiveness limits for Air District-sponsored programs
- Recommendations



- Established in 1991 to reduce on-road motor vehicle emissions
- Funded by \$4 Department of Motor Vehicles (DMV) registration surcharge
 - 60% to Regional Fund & Air District-sponsored projects
 - 40% to County Program Manager Fund
- Statutory authority set forth in California Health and Safety Code Sections 44241 & 44242
- Air District Board of Directors (Board) allocates funding and adopts cost-effectiveness criteria annually





Strategies to Reduce On-road Vehicle Emissions





Proposed FYE 2020 TFCFA Funding Allocation

Program Categories	Estimated New TFCFA Monies (millions)	Estimated Carryover (millions)	Total Estimated Funds Available (millions)
Trip Reduction	\$5.96	\$3.00	\$8.96
Clean Air Vehicles	\$5.50	\$15.30	\$20.80
Spare the Air	\$2.31	\$0.00	\$2.31
Enhanced Mobile Source & Commuter Benefits Enforcement	\$0.08	\$0.00	\$0.08
Vehicle Buy Back	\$0.15	\$0.00	\$0.15
Total Funding Available for Projects & Programs:	\$14.00	\$18.30	\$32.30
Administrative & Audit	\$1.62		\$1.62

**Carryover funds are unobligated TFCFA funds from prior years and funds from projects that were recently completed under budget or canceled.*



Trip Reduction \$8.96 Million (M) Total

- **Existing Shuttle and Ridesharing**
 - Carpool, vanpool and rideshare
 - First- & last-mile connections to mass transit
- **Active Transportation Facilities**
 - Bikeways and secure bicycle parking
 - Short connections to mass transit





Clean Air Vehicles \$20.8M Total

- **Zero-Emission Light-duty Vehicles**

- Electric vehicle charging stations
- Zero-emission light-duty fleets
- Clean Cars for All
- Hydrogen dispensing facilities



- **Zero-Emission Medium- & Heavy-Duty Vehicles**

- Trucks & buses
- Refueling infrastructure





Air District-Sponsored Programs

\$2.54M in new TFCAs monies

- **Spare the Air - \$2.31M**

- Summer outreach to modify travel behavior

- **Enhanced Mobile Source Inspections & Commuter Benefits Program - \$0.08M**

- Inspection patrols for smoking vehicles & enforcement of state truck/mobile source regulations
- Education, outreach & monitoring

- **Vehicle Buy Back - \$0.15M**

- Pays residents to scrap operable model year 1996 or older vehicles



Bay Area
Commuter Benefits Program
Find a better way to work!





Proposed Cost-Effectiveness Limits Air District-Sponsored Programs

Program Categories	Max. C/E (per ton of emissions reduced)	Project Operational Period (in Years)	Notes
Bicycle Racks	\$250,000	3	No Change
EV Charging Stations	\$500,000	4	Increased Max. C/E
Spare the Air	\$90,000	1	No Change
Enhanced Mobile Source & Commuter Benefits Enforcement	\$90,000	1	No Change
Vehicle Buy Back	\$90,000	3	No Change

**C/E is calculated by dividing TFCA funds awarded by the sum of surplus emissions reduced of reactive organic gases (ROG), nitrogen oxides (NOx), and weighted particulate matter (PM10) over the project operational period.*



Recommended Action

Recommend the Board of Directors:

1. Approve the proposed allocation of \$14 million in new TFCA monies to the programs and projects listed in Table 1;
2. Authorize the proposed cost-effectiveness limits for the Air District-sponsored programs and projects listed in Table 2; and
3. Authorize the Executive Officer/APCO to enter into funding agreements and contracts up to \$100,000 for projects and programs listed in Table 1.

Electric Vehicle (EV) Ecosystem Update: Status of Light-Duty EV Adoption in the Bay Area



Rebecca Fisher
Program Lead for EV Outreach and Partnerships (Staff Specialist)
Technology Implementation Office

Mobile Source Committee Meeting
March 28, 2019

Electric Vehicle (EV) Ecosystem Update



Part 1 - March 2019

Status of Light-Duty EV Adoption in the Bay Area

Part 2 - April 2019

EV Programs: Incentives and Awareness

Part 3 – May/June 2019

EV Equity

Part 4 – Fall 2019

Heavy Duty Market update

46 EV Models are Now Available to Bay Area Residents



Battery Electric Vehicles (BEVs)



Battery



Plug-in

Plug-in Hybrid Electric Vehicles (PHEVs)



Gas



Battery



Plug-in

Hydrogen Fuel Cell Electric Vehicles (FCEVs)



Hydrogen



Fuel cell

Average MSRP:
Average Range:

20 models

\$58,000
202 miles

23 models

\$55,000
23 miles

3 models

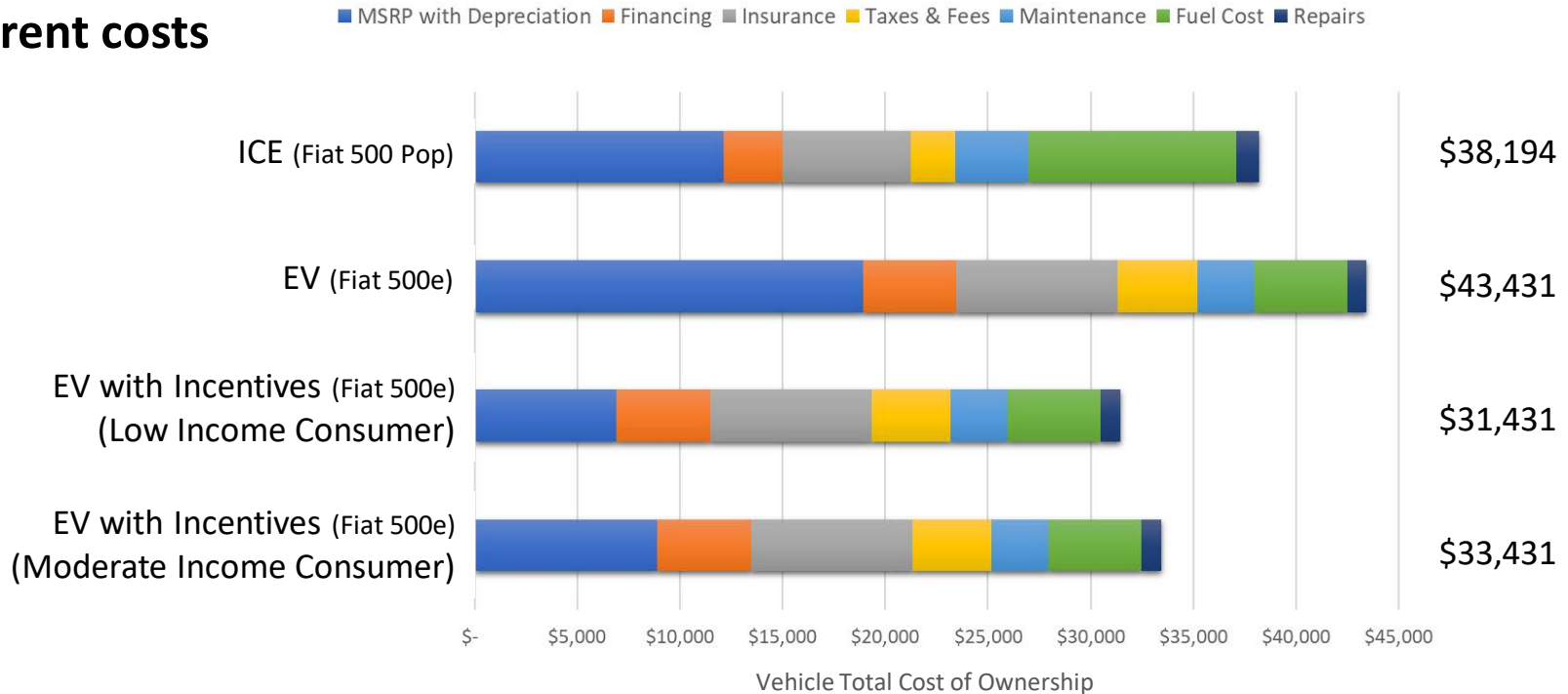
\$16,193*
353 miles

**For a three year lease*

Incentives are Still Needed for EVs to be Cost Competitive with Traditional Vehicles



Current costs



Future costs

- Federal tax credits are projected to phase out for all manufacturers by 2025.
- EVs are projected to become cost-competitive on a non-subsidized basis between 2024 and 2029.

The Bay Area is a Leading Region for EV Adoption in the U.S.



At least **180,000 EVs** in the Bay Area (January 2019)

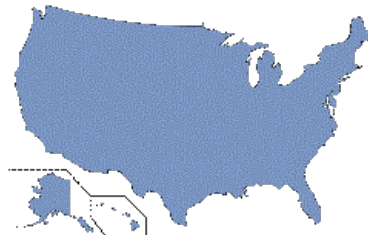


3% of Bay Area light duty vehicles

Equivalent to:



1/2 of EVs in California

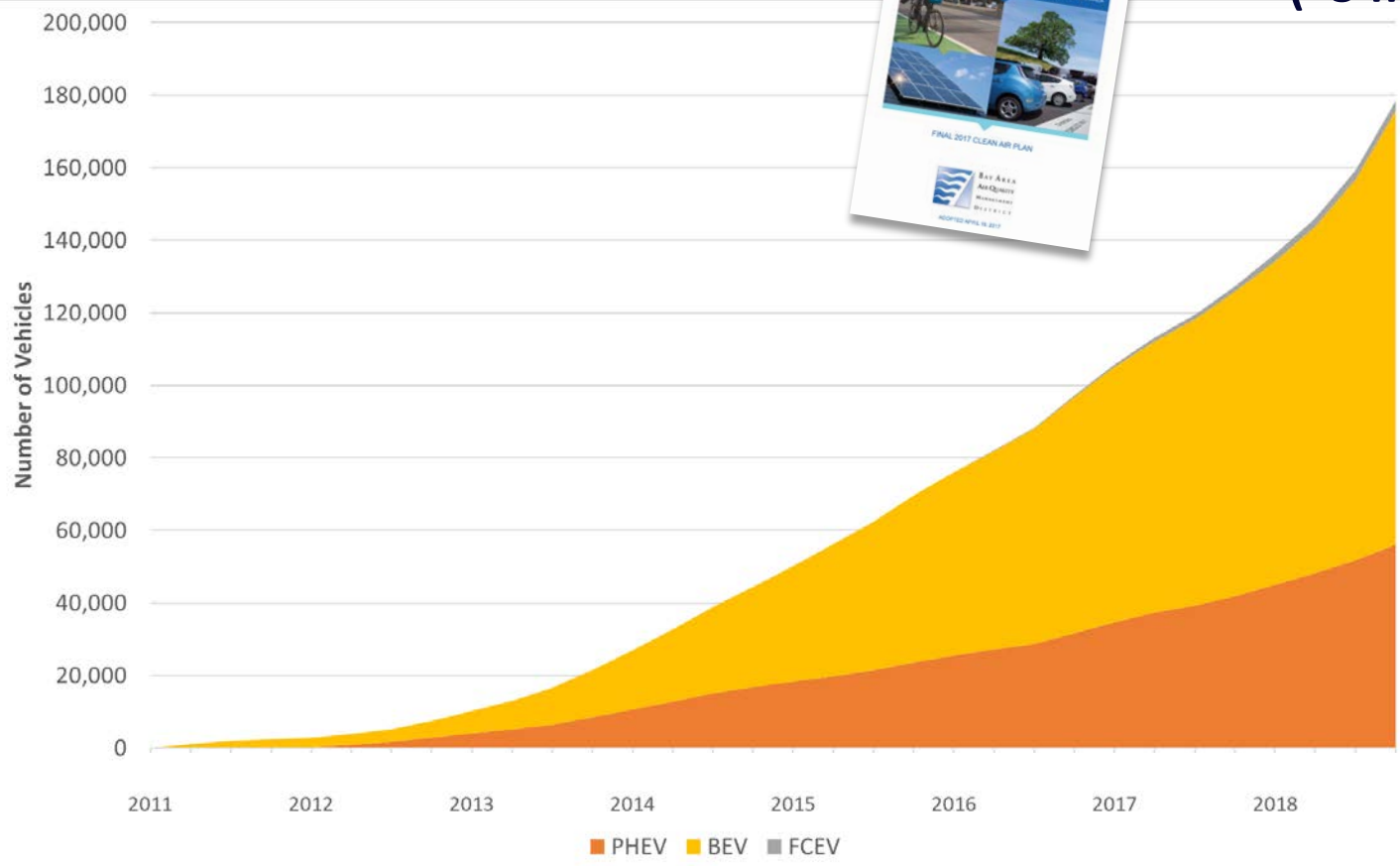


1/4 of EVs in the U.S.

Despite Significant Growth in Last Eight Years, We Need to Accelerate to Reach our Goals

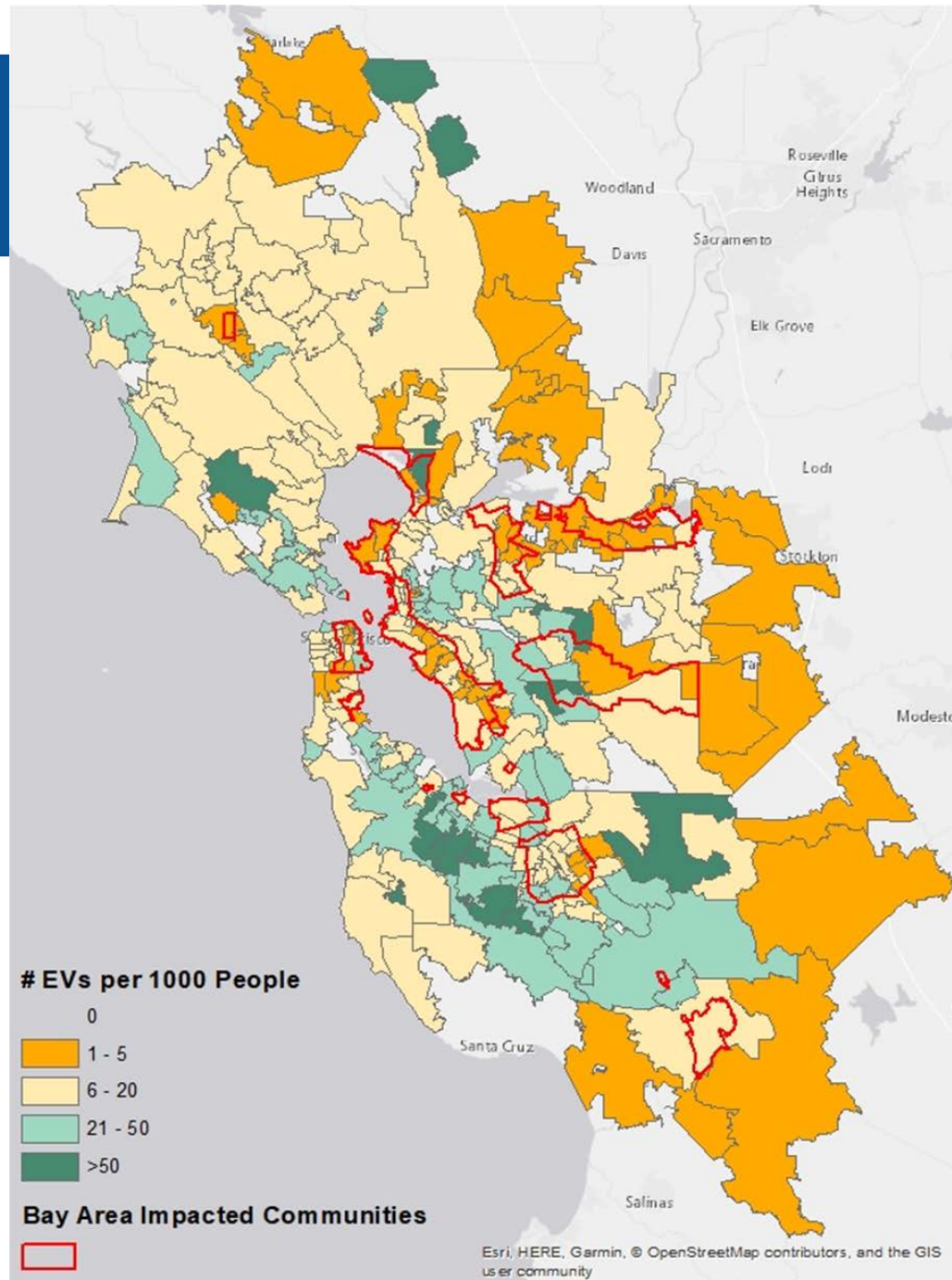


**90% of fleet by 2050
(~5 million EVs)**

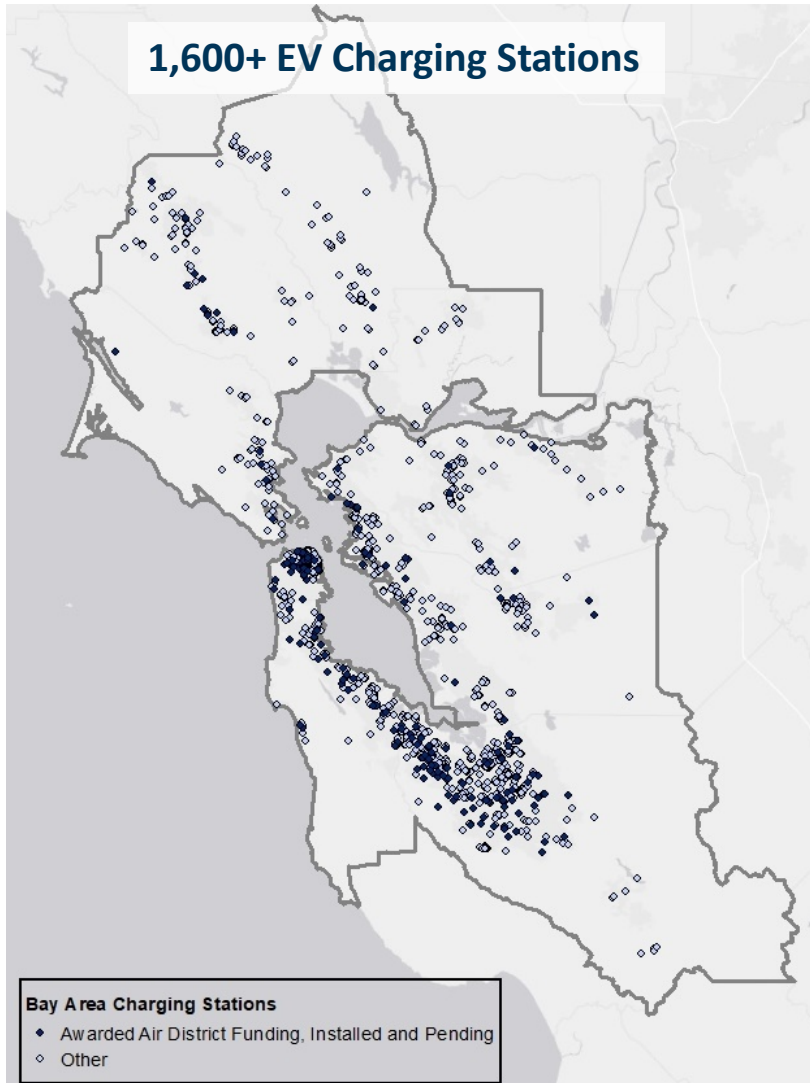


Data from Clean Vehicle Rebate Program, Jan 2019

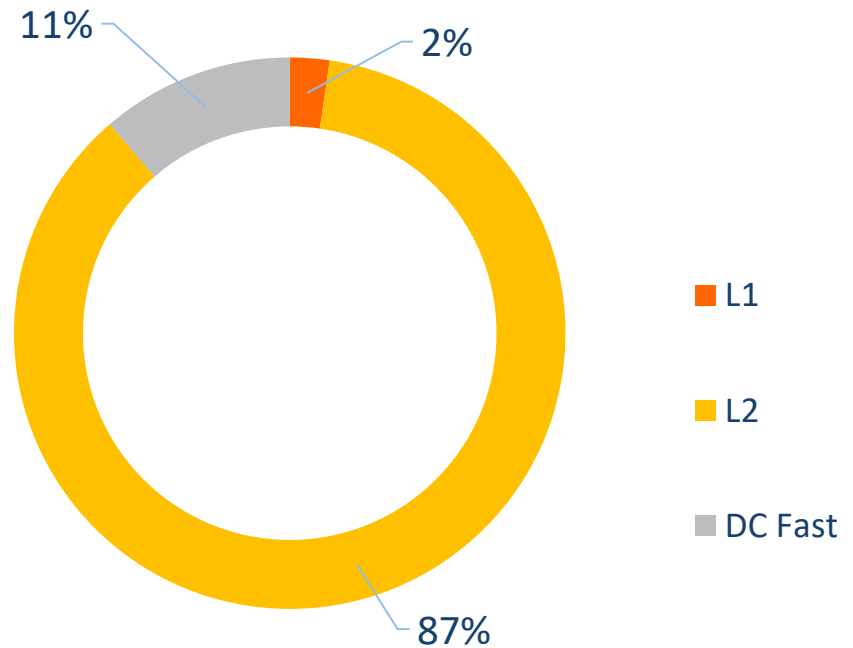
Uneven Adoption of EVs in Bay Area



Charging Infrastructure in the Bay Area

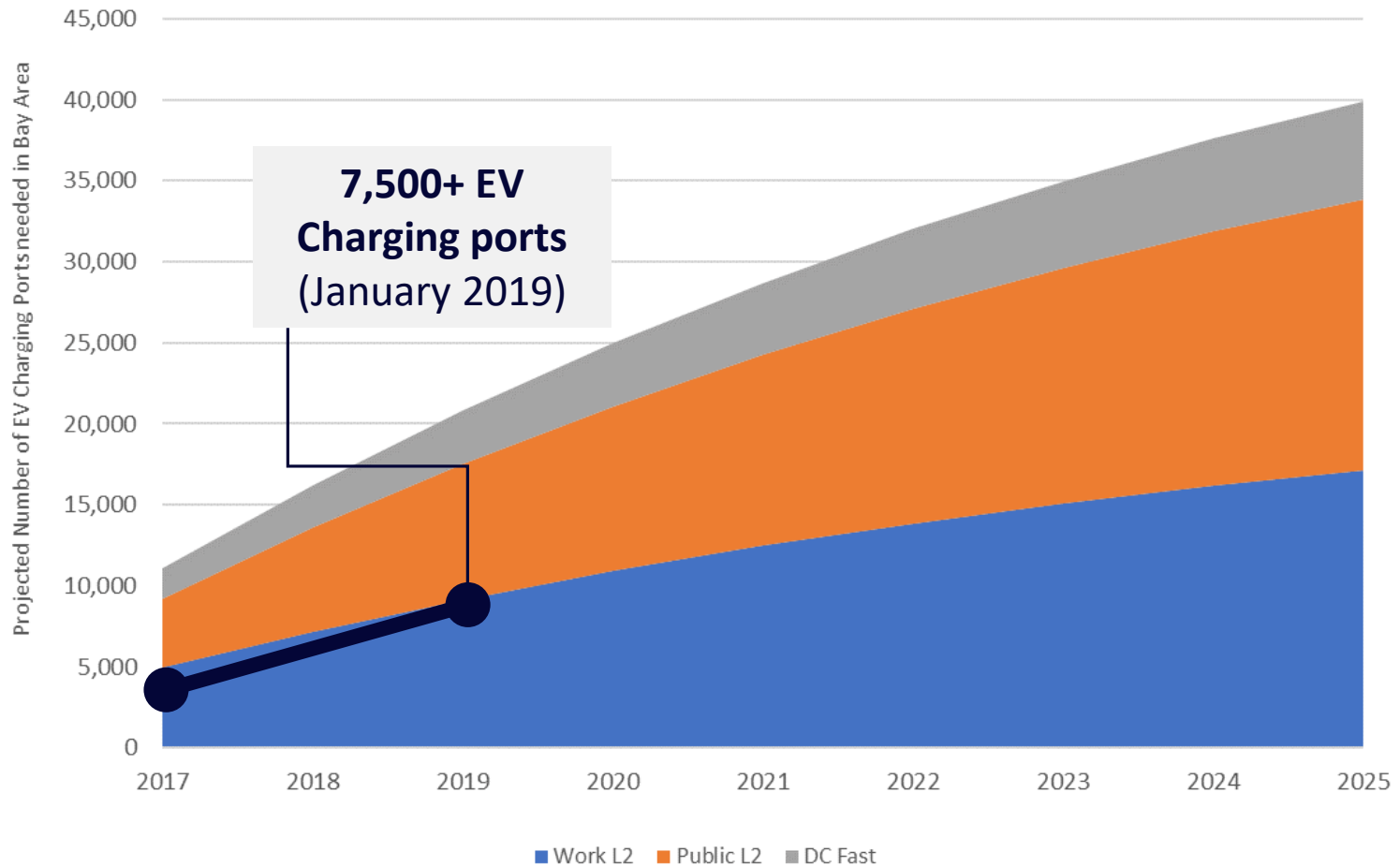


7,500+ EV Charging Ports



Alternative Fuels Data Center, <https://afdc.energy.gov/stations>
Air District Charge! Program, January 2019

Current Bay Area EV Charging Infrastructure Is Lower Than Projected Need

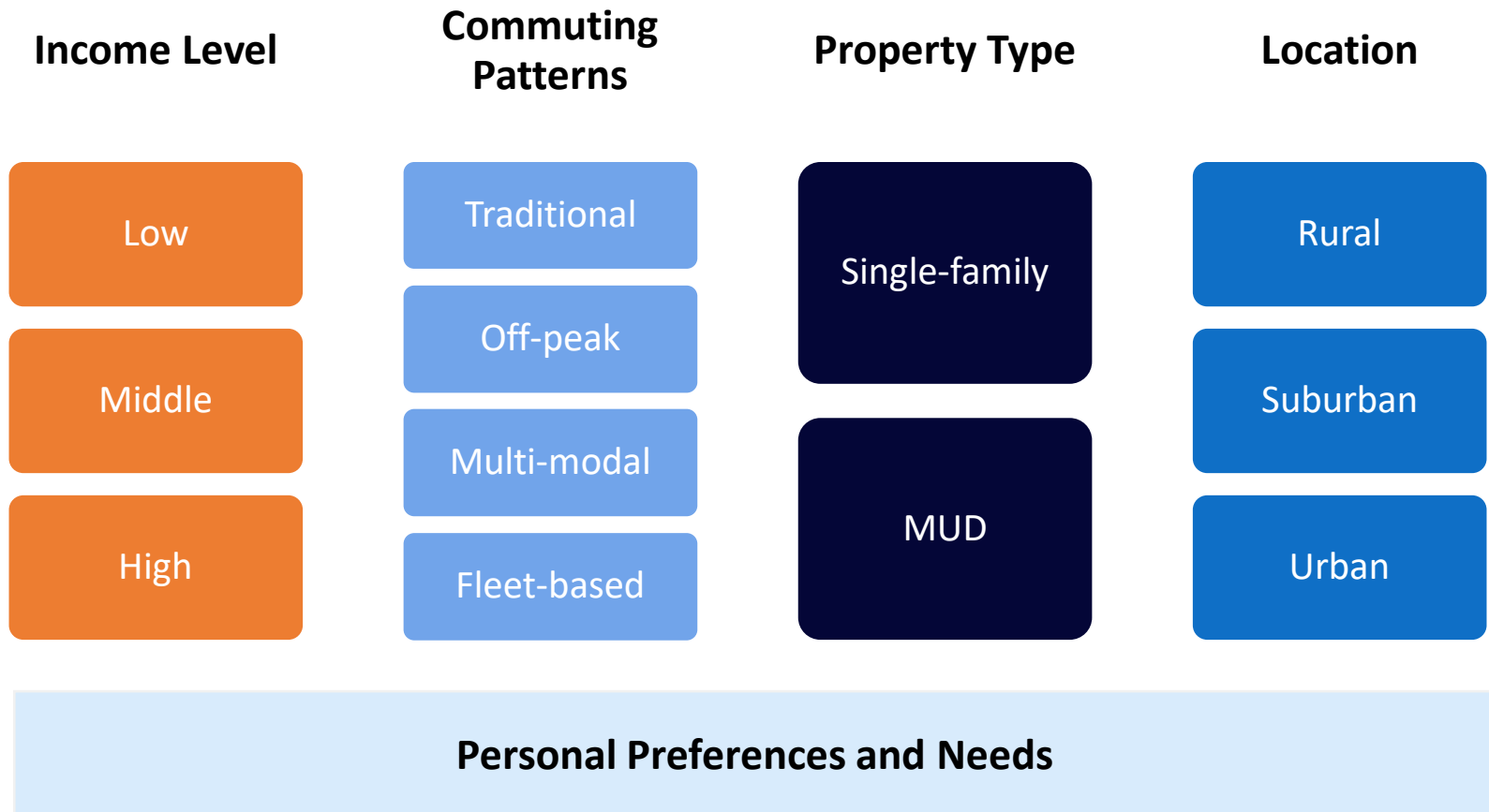


Current and Future Priorities to Accelerate the EV Market



- 1** **Market research on consumers and EV market actors**
- 2** **Updated Bay Area EV Acceleration Plan**
- 3** **Move beyond early adopters and achieve equitable access to EVs**
- 4** **Expand and fill in gaps for charging infrastructure**
- 5** **Action-oriented and effective partnerships**

Projected Charging Infrastructure Needed is Based on Diverse Transportation Needs



Consumers' Most Common Perceived and Actual Barriers to EV Adoption



Strategies to Address Barriers

Cost

- Higher up-front costs
- EVs are “not for me”



Vehicle Incentives

Range

- Overestimation of range needs



Infrastructure Incentives

Awareness of Vehicles and Infrastructure

- Low-levels of awareness of EV category and available models
- Lack of awareness of EV infrastructure



Outreach and Education

EV Market Research Study



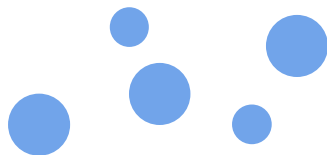
Understand **majority adopters** to move market beyond early adopters

- Middle and Lower income
- Residents who live in multi-unit dwellings (1/3 of units in Bay Area)
- Different commuting patterns

Understand priorities and barriers of key **market actors** that affect EV market and infrastructure

- Property Owners
- Dealerships
- Fleet owners and managers
- Taxi and ride-hailing drivers

Anecdotes



Data



Outreach Messages



Bay Area EV Acceleration Plan

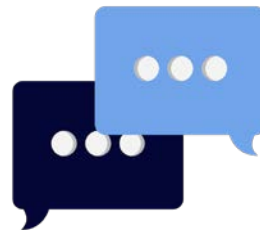


- Update to 2013 Bay Area EV Readiness Plan
- Current EV market trends and barriers
- Results of the market research study
- Outreach strategies and resources to address majority adopters and market actors
- Establish coordinated programs and partnerships for Air District and regional organizations



EV Market Research Study

Spring 2019



Stakeholder Consultation

Throughout 2019



Acceleration Plan

Winter 2019

Current Programs, Policies and Incentives



<p>Incentives</p>	
<p>Plans & Policies</p>	<p>Local government codes</p>
<p>Awareness Campaigns</p>	



Thank you

