



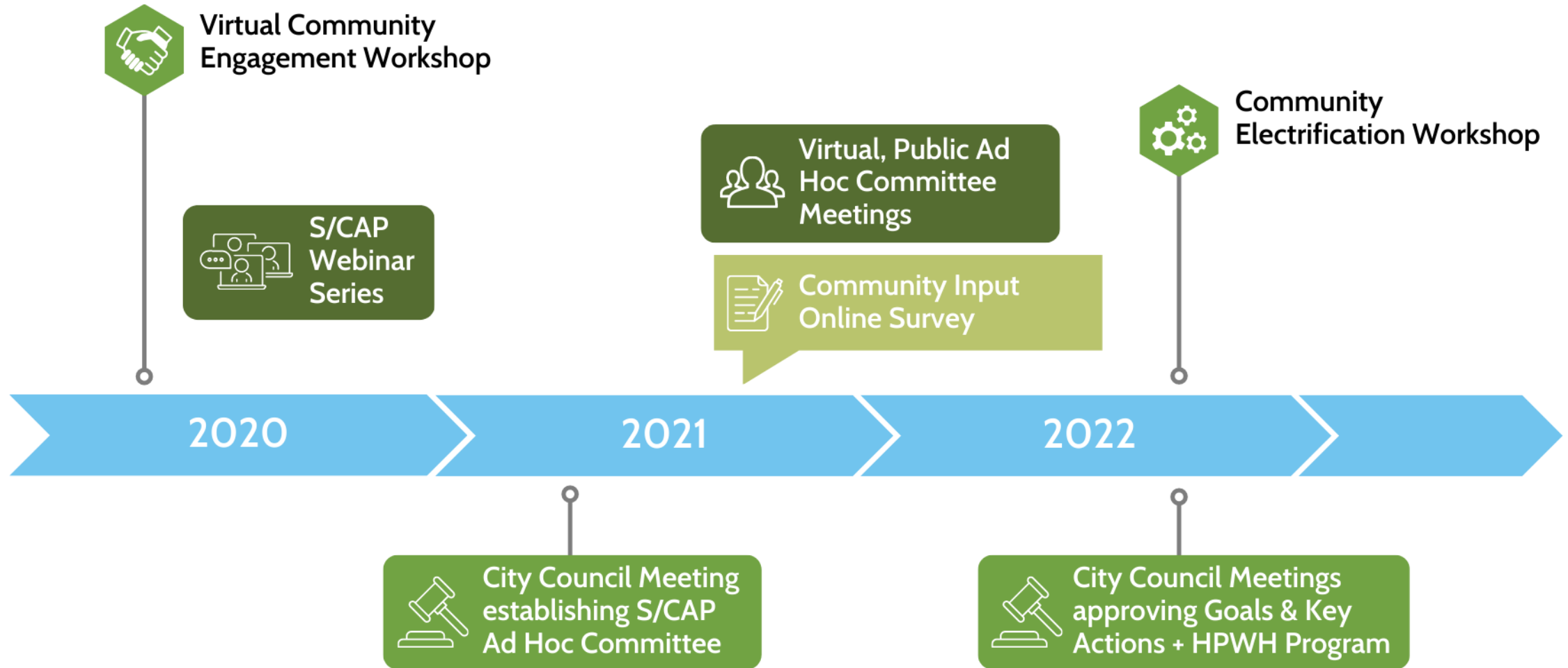
S/CAP Update and Council Action

June 5, 2023



1. Certify the Comprehensive Plan Environmental Impact Report Addendum: Update to the Sustainability and Climate Action Plan
2. Adopt a resolution Approving an Addendum to the Comprehensive Plan Environmental Impact Report and Adopting the Sustainability and Climate Action Plan (Attachments B and C)
3. Accept the 2023-2025 S/CAP Work Plan (Attachment D)
4. Review the 2023 Earth Day Report (Attachments E and F)

S/CAP Update Process

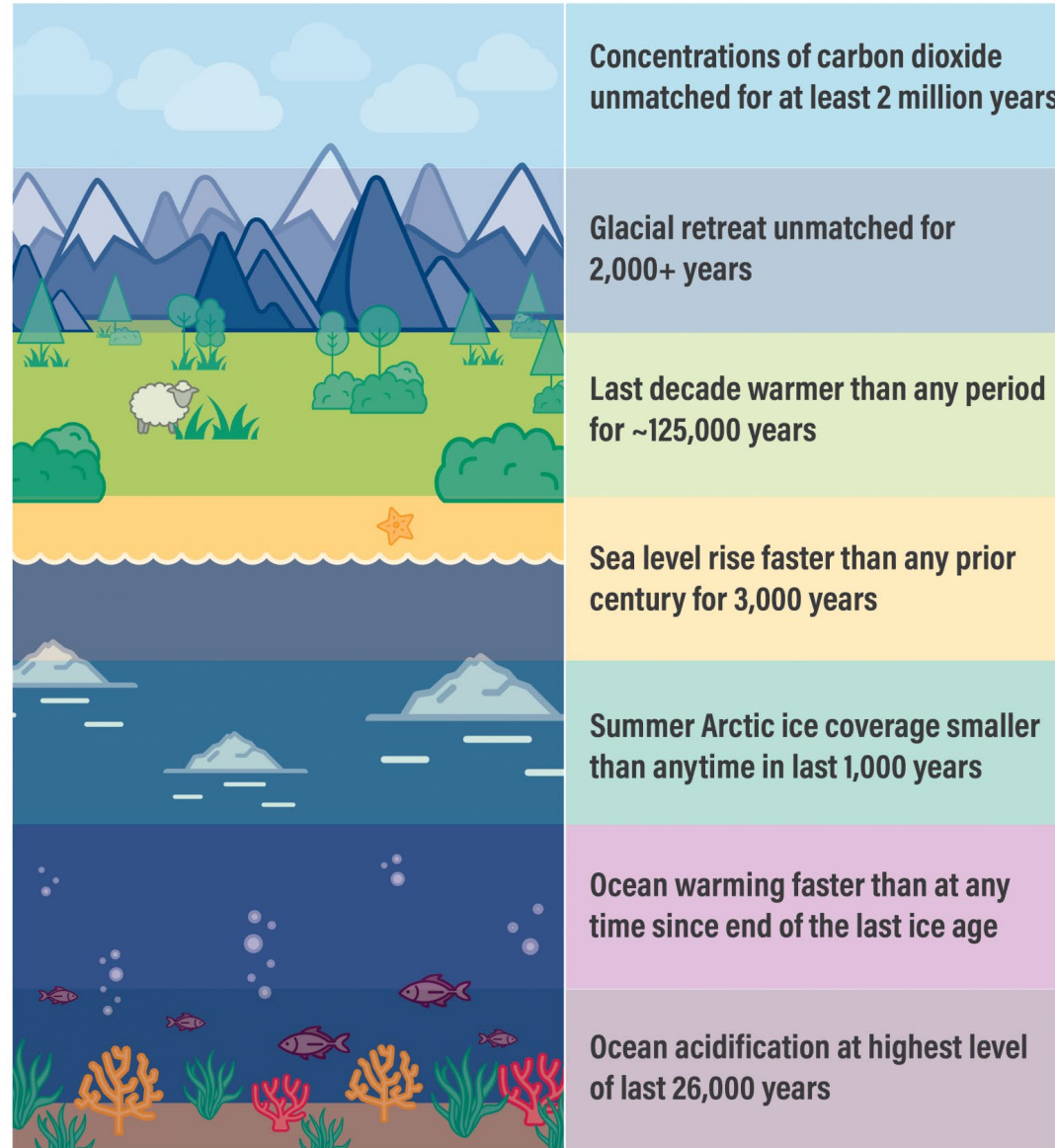


Sustainability and Climate Action Plan (S/CAP)

Acting Now for a Resilient Future



Evidence of Global Warming Already Underway



Can We Limit Global Warming to 1.5°C By 2100?



If we take aggressive action today*...

we can limit temperature rise to 1.6°C by mid-century and reduce to 1.4°C by 2100



If we take a high-carbon pathway**...

temperatures could climb to 2.4°C by mid-century and reach 4.4°C by 2100.

What Actions Are Necessary to Limit Warming to 1.5°C?



Decline global GHG emissions from the 2020s onwards



Reach net-zero GHG emissions by mid-century

Notes: *SSP1-1.9 **SSP5-8.5

Source: IPCC.

21.08.05



WORLD RESOURCES INSTITUTE

California's Goal:

48% **BELOW**

1990 LEVELS
BY 2030

Carbon Neutral
BY 2045

Palo Alto's Goal:

80% **BELOW**

1990 LEVELS
BY 2030

Carbon Neutral
BY 2030



ENERGY



MOBILITY



ELECTRIC
VEHICLES



WATER



CLIMATE
ADAPTATION &
SEA LEVEL RISE



NATURAL
ENVIRONMENT



ZERO WASTE

S/CAP KEY ISSUE AREAS



CLIMATE ACTION

Reduce overall greenhouse gas emissions
80% below 1990 levels by 2030



ENERGY

ELECTRIFY BUILDINGS

Reduce the use of natural gas in buildings



MOBILITY

INCREASE ACTIVE TRANSPORTATION

Reduce overall vehicle miles travelled



ELECTRIC
VEHICLES

SUPPORT EV ADOPTION

Reduce transportation related greenhouse
gas emissions



CLIMATE
ADAPTATION &
SEA LEVEL RISE

PREPARE FOR CLIMATE CHANGE

Reduce impacts of climate change from sea
level rise and wildfires



NATURAL
ENVIRONMENT

ENHANCE BIODIVERSITY

Restore and enhance resilience of the
natural environment



ZERO WASTE

SUPPORT ZERO WASTE

Divert 95% of waste from landfills by
2030, leading to zero waste



WATER

FURTHER WATER CONSERVATION

Decrease water use and improve water
systems

Outcomes Needed by 2030



- Commute travel is reduced 20%
- Vehicle Miles Traveled (VMT) are reduced 12%
- 85% of all Palo Alto new vehicle purchases are EVs (up from 30%) for a vehicle fleet that is 44% EVs (50% in single-family households, 33% in multi-family)
- 40% of commuter trips into Palo Alto and 30% of visitor trips are made by EVs, 35% total (Currently 3%)
- Virtually all single-family gas appliances and virtually all commercial rooftop HVAC units are electrified
- Significant additional multi-family and commercial building electrification and other emissions reductions to be determined



- Proposed S/CAP would not alter conclusions of the Comprehensive Plan EIR
- No new information was identified that suggests the potential for the proposed S/CAP to result in any significant or substantially more severe effects beyond what was previously analyzed in the Comprehensive Plan EIR
- Changes from the proposed S/CAP would provide beneficial actions
- The Addendum permits CEQA streamlining of future projects that conform to the S/CAP

Acting Now for a Resilient Future





- April 19, 2021 Council Meeting

- Staff presented a draft Policy Framework
- Council supported the framework and added additional actions



- August 2021: First Draft of Three-Year Work Plan

- Includes estimates of staff and funding needs for implementation



- December 2021: Second Draft of Three-Year Work Plan

- S/CAP Ad Hoc Committee and Working Group Review

- June 14, 2022: Public S/CAP Working Group Meeting





- 2022 Green Building and Local Energy Codes (Reach Code)



- 2022 State Energy Code: encourages electric heat pump technology for space and water heating in new construction of homes and businesses, also requires electric-readiness for mixed-fuel buildings



- 2022 Palo Alto Reach Code: increases water conservation and reduces water loss, lowers embodied carbon in new construction projects, reduces fossil fuel use in buildings, and facilitates electric vehicle adoption



- Goals are consistent with Palo Alto's sustainability goals, including 80 x 30



- Full Service Heat Pump Water Heater Pilot Program





P1. Complete grid modernization plan



P2. Launch effective programs for emissions reductions with highest impact and lowest cost



P3. Build community awareness and confidence in electrification



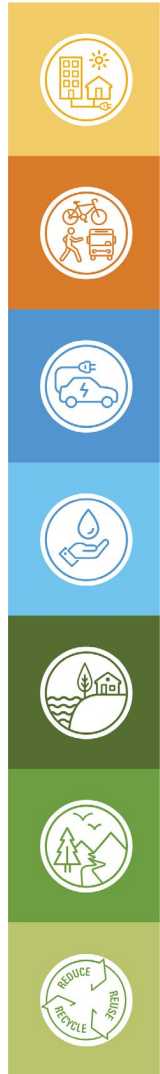
P4. Identify an additional 9% in emissions reduction opportunities to achieve the 80x30 goal



P5. By 2024 identify funding needed and potential funding sources for full scale implementation of highest impact emissions reductions










Climate Action Work Plan Highlights



Priority	2023	2024	2025
P1 (Modernize grid)	<ul style="list-style-type: none">Grid modernization study completion, hire contractorReliability/Resiliency Strategic Plan	<ul style="list-style-type: none">Begin a 5-7 year construction effort to increase reliability and transformer capacityImplement Reliability and Resiliency Strategic Plan	
P2 (Launch programs)	Design and launch programs:		
	<ul style="list-style-type: none">Full-scale HPWH programPilot commercial HVACMunicipal electrificationDowntown parking management programOn-demand transit pilot	<ul style="list-style-type: none">Single-family whole homeFull-scale commercial HVACFull-scale multi-family EV charger program (tentative)	Design and launch additional programs based on the 2024 studies (See P4 for other studies that may result in new programs) and the EV Strategic Plan
	Studies to guide program launches:		
	<ul style="list-style-type: none">EV Strategic PlanMulti-family and income-qualified EV work planBicycle Plan update	<ul style="list-style-type: none">Work plan for commuter and visitor EV charging and EV promotionVision Zero program (tentative)	

Climate Action Work Plan Highlights

      	Priority	2023	2024	2025
	P3 (Build awareness and confidence)	Build awareness of the need for climate action and the City's services and achievements. Drive community actions to achieve S/CAP goals. Build confidence in the City's electric infrastructure. Report results from new and existing programs:		
		<ul style="list-style-type: none"> New program: HPWH pilot Existing programs: <ul style="list-style-type: none"> Existing Mobility programs Multi-family EV charger 	<ul style="list-style-type: none"> New programs: Full-scale HPWH program, commercial HVAC pilot All other existing programs 	<ul style="list-style-type: none"> New programs; Full-scale HVAC, multi-family EV charger Existing programs
	P4 (Additional emissions reductions)	<ul style="list-style-type: none"> Seek ideas from community members and other experts Monitor technologies and medium term opportunities 	<ul style="list-style-type: none"> Multi-family and non-residential electrification study Study highest potential community ideas/technologies 	<ul style="list-style-type: none"> Evaluate new programs based on studies
	P5 (Funding needs and sources)	<ul style="list-style-type: none"> Evaluate implementation cost for full scale high impact / lower cost programs Preliminary evaluations of potential funding sources 	<ul style="list-style-type: none"> Decisions on how to fund priority electrification areas Develop financial and operational plan for gas utility 	<ul style="list-style-type: none"> Implement follow-up from prior-year studies



- Reduce water consumption while exploring water supply alternatives



- Develop and adopt a multi-year Sea Level Rise Adaptation Plan



- Minimize wildland fire hazards



- Increase Palo Alto's Tree Canopy and reduce pesticide usage



- Support the Green Stormwater Infrastructure (GSI) Plan



- Encourage food waste reduction, prevention, and recovery

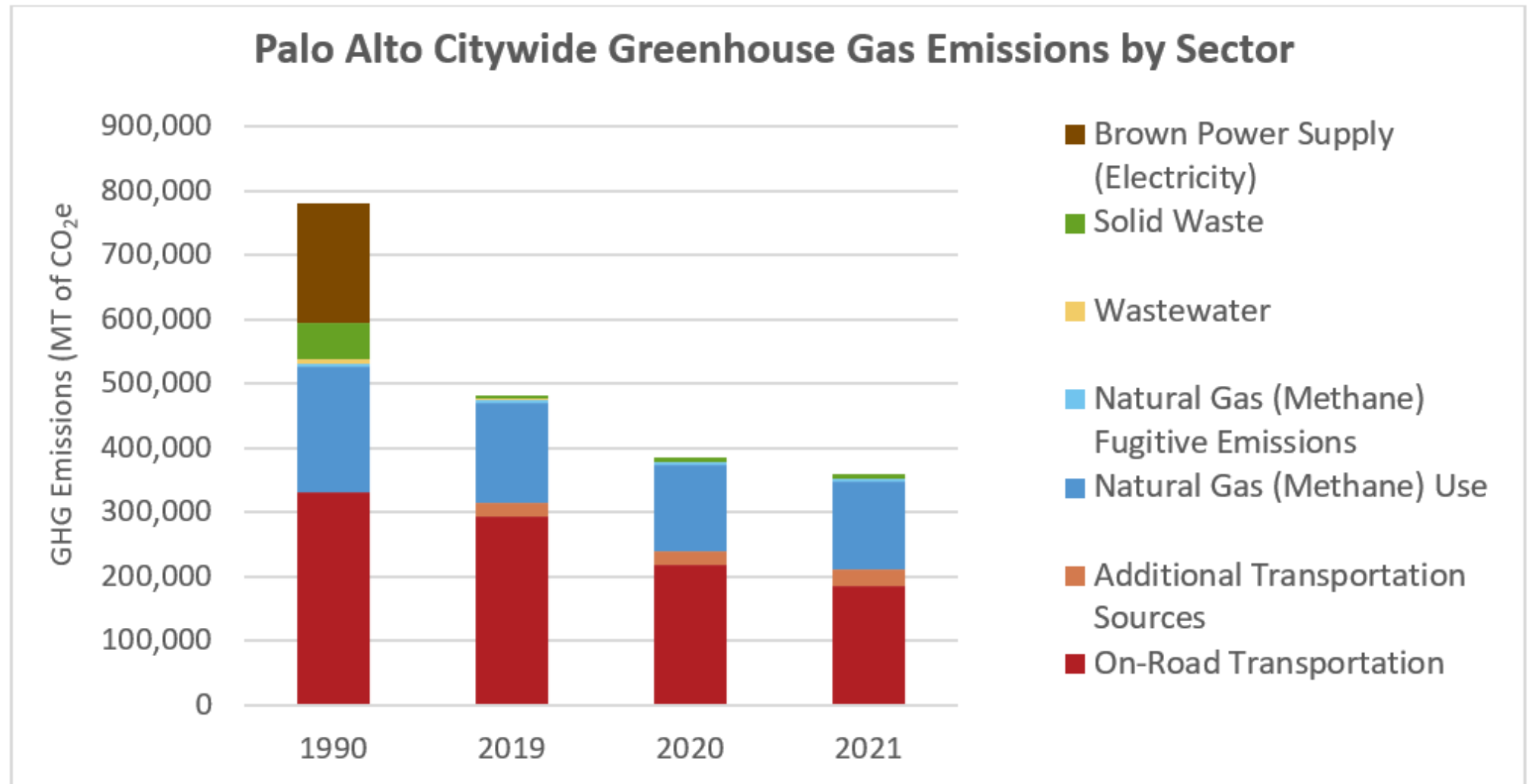


- Eliminate single-use disposable containers and prioritize domestic processing of recyclable materials

Acting Now for a Resilient Future

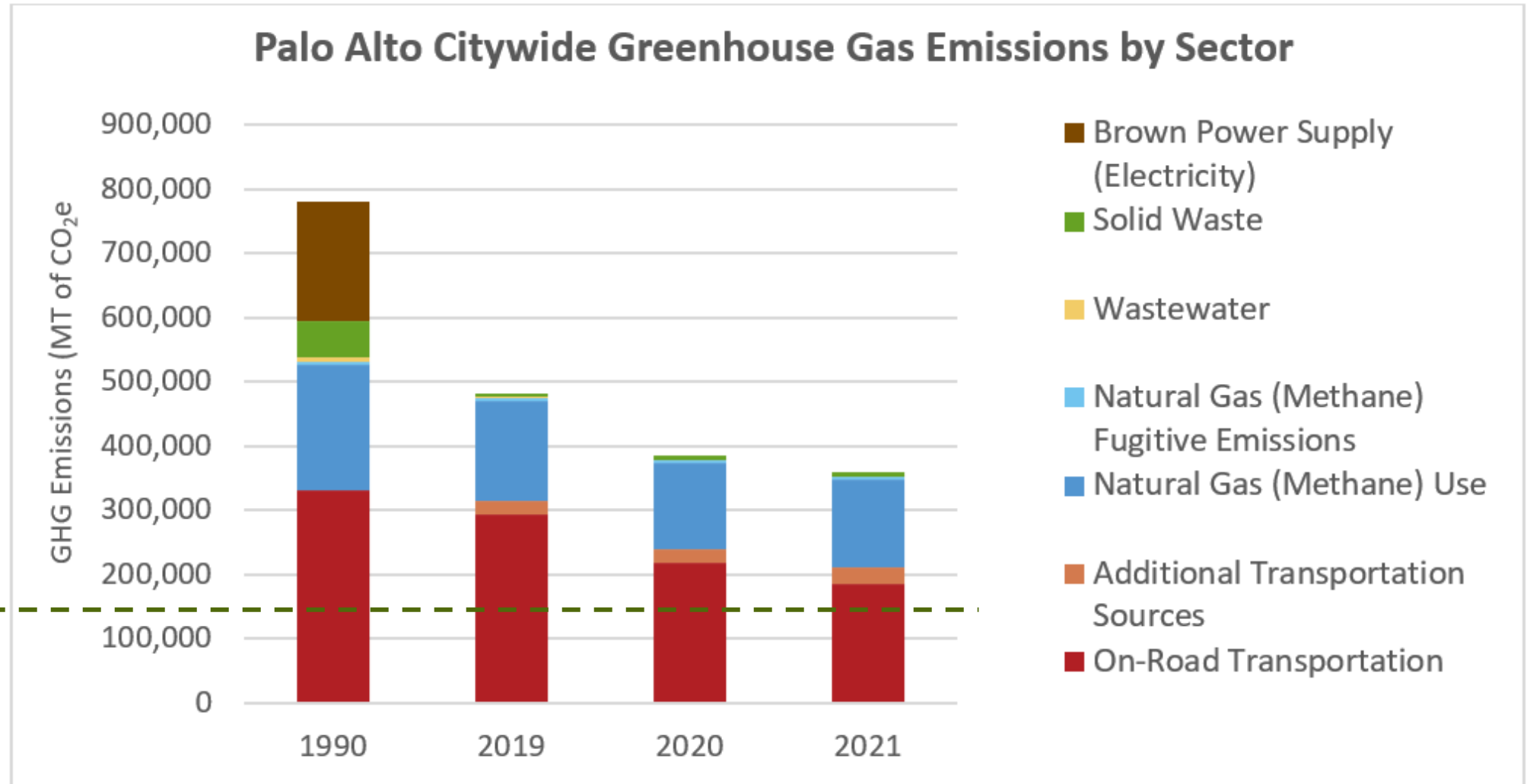


2021 Palo Alto GHG Emissions Down ~54%



Source: 2021 Palo Alto Municipal Operations & Community GHG Emissions

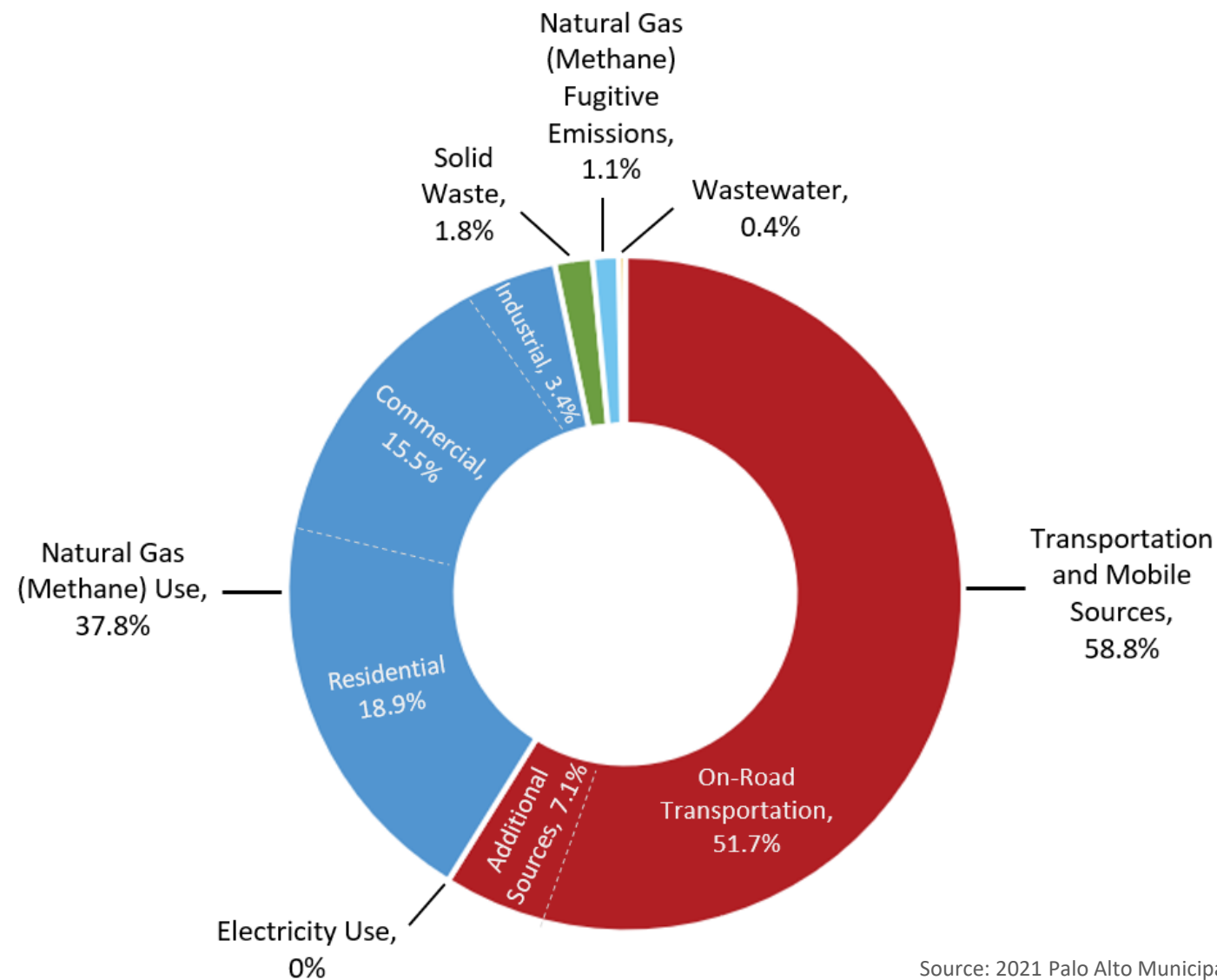
2021 Palo Alto GHG Emissions Down ~54%



80 x 30 Target
(156K MT CO₂e)

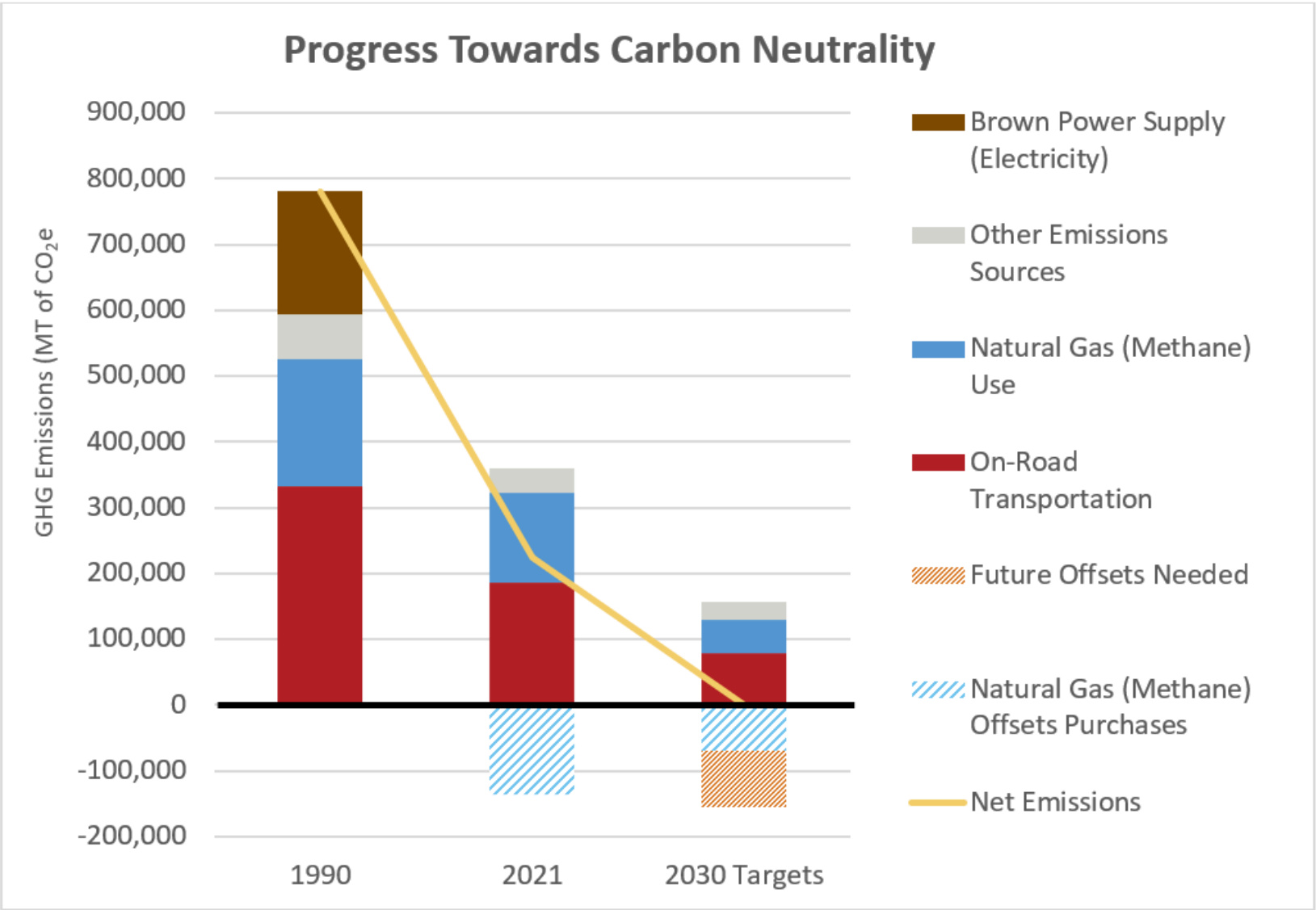
Source: 2021 Palo Alto Municipal Operations & Community GHG Emissions

2021 GHG Emission Sources in Palo Alto



Source: 2021 Palo Alto Municipal Operations & Community GHG Emissions

Progress Towards Carbon Neutrality ~ 71% reductions





- **Climate Action:** Council passed the 2022 Reach Codes which will collectively avoid over 3,420 MT CO₂e per year.



- **Energy:** Launched the Full Service Heat Pump Water Heater Pilot Program. The program could reduce emissions by up to 800 MT CO₂e per year.



- **Electric Vehicles:** One in five households in Palo Alto now drives an EV. In 2022, there were an estimated 6,500 EVs registered in Palo Alto – 6 times more than in 2014 – collectively avoiding ~ 15,600 MT CO₂e per year.



- **Mobility:** In 2021, Palo Alto received the League of American Bicyclists' Gold-Level Bicycle Friendly Community Award. In 2022, Palo Alto made significant progress on the City's 6th Cycle 2023-2031 Housing Element.





- **Water:** In July 2022, the City kicked off a One Water planning process in collaboration with Carollo Engineering.



- **Climate Adaptation and Sea Level Rise:** In 2022, the City completed the Sea Level Rise Vulnerability Assessment.



- **Natural Environment:** In June 2022, City Council adopted an updated Tree Ordinance. In 2022, there were ~35,576 trees in the public right-of-way and City-owned property, collectively avoiding 1,463 MT CO₂e per year and providing \$18.5 million in yearly eco benefits.



- **Zero Waste:** In December 2022 the City extended a successful pilot program which will keep more plastic and paper recyclables in the U.S. New contract changes with GreenWaste of Palo Alto reduce the recyclables sent to be processed internationally from 59 to 39 percent.





- Launch the Full Service Heat Pump Water Heater Pilot Program Marketing Campaign



- Work with the S/CAP Ad Hoc Committee to implement Council Priority: Climate Change & the Natural Environment Items



- Convene S/CAP Ad Hoc Committee Public Meetings to address various components of the 2023-2025 S/CAP Work Plan



- Return to Council to discuss Go Green Financing





Staff recommends that City Council:

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SUSTAINABILITY & CLIMATE ACTION PLAN

Thank You!

Acting Now for a Resilient Future



CITY OF
**PALO
ALTO**