



## City Council Staff Report

**From: City Manager**

**Report Type: INFORMATION REPORTS**

**Lead Department: Public Works**

**Meeting Date: November 13, 2023**

Report #:2308-1901

### **TITLE**

Quarterly Informational Report on Sustainability and Climate Action Plan (S/CAP) Implementation; CEQA status – Not a Project.

### **RECOMMENDATION**

No Council action is required. This is an update on Sustainability and Climate Action Plan (S/CAP) Implementation Progress through the third quarter of calendar year 2023.

This report provides a status of numerous S/CAP Workplan items and is provided to give the City Council and public an initial overview of this work since the S/CAP was adopted by Council in June of 2023.

### **EXECUTIVE SUMMARY**

Consistent with Council's adoption of "Climate Change & Natural Environment: Protection and Adaptation" as one of the four priorities for calendar year 2023, staff updated the Sustainability and Climate Action Plan (S/CAP) to help the City meet its sustainability goals, including its goals of reducing greenhouse gas (GHG) emissions 80 percent below 1990 levels by 2030 (the "80 x 30" goal) and achieving carbon neutrality by 2030.

In June 2023, Council adopted the 2022 Sustainability and Climate Action Plan, certified the Comprehensive Plan Environmental Impact Report Addendum: Update to the Sustainability and Climate Action Plan, and accepted the 2023-2025 S/CAP Workplan.<sup>1</sup>

Since the 2022 S/CAP was adopted, the city has made progress in implementation of the S/CAP Key Actions and the 2023-2025 S/CAP Workplan items. The S/CAP Goals and Key Actions are divided into eight areas, four of which are climate-focused and include actions to achieve the City's 80 x 30 and carbon neutrality by 2030 goals (Climate Action, Energy, Electric Vehicles, and

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<sup>1</sup> City Council, June 5, 2023; Agenda Item #14; SR #2303-1158

[https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2023/20230605-item14-scap/mini-packet\\_city-council-special-meeting\\_20230526171309606.pdf](https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2023/20230605-item14-scap/mini-packet_city-council-special-meeting_20230526171309606.pdf)

Mobility) and four of which are focused on actions that create a sustainable natural environment and adapting to a warming climate (Water, Climate Adaptation & Sea Level Rise, Natural Environment, and Zero Waste). The Work plan is similarly divided between climate-focused and sustainability-focused priorities.

This is the first of what will be quarterly S/CAP Implementation updates, including the annual Earth Day report and study session that will also include an updated greenhouse gas inventory, progress towards S/CAP Goals, and key performance indicators. Highlights of Q3 2023 progress include:

- Climate Action
  - As of September 28, 2023, 115 residents have signed contracts to participate in the full-service Heat Pump Water Heater Pilot Program, with another 225 residents in the assessment / estimation process. In addition, 37 residents have installed heat pump water heaters on their own, receiving a rebate from the City.
  - Staff began design of the first grid modernization project (upgrade of the neighborhood bounded by Highway 101, Embarcadero, Louis, and Amarillo) with construction expected to be completed in the first half of calendar year 2024.
  - An RFP has been issued for a study (the “S/CAP Funding Study”) to estimate the cost of achieving the 80x30 goal and potential funding and financing sources.
  - Staff began design work on several programs, including a commercial rooftop HVAC advanced pilot program, an expansion of the heat pump water heater program, a whole home electrification program, and expansion of the City’s multi-family EV charger program.
  - Staff completed 22 Electric Vehicle (EV) and e-bike workshops and events so far in 2023, with another 8 planned.
  - Palo Alto Link, the City’s newly launched eco-friendly rideshare service, is encouraging residents to choose shared transit over high-emissions emissions single occupancy vehicles, leading to an estimated 43% reduction in CO2 emissions, assuming passengers are choosing Palo Alto Link in lieu of private single occupancy vehicles to complete the same trip.
  - Twenty-one City internal combustion engine fleet vehicles are planned to be replaced with electric vehicles through approved vehicle replacement capital improvement projects in Fiscal Year 2024.
- Sustainability
  - So far this year, the City has held 8 landscape workshops on topics including rainwater, harvesting, drought-tolerant landscape design, lawn conversion, and information on available rebates.
  - The Sea Level Rise Adaptation Plan will be coordinated with the levee improvements around Palo Alto’s Bay shoreline (known as the Shoreline II Project), and the Palo Alto Flood Basin Tide Gate Replacement Project. Staff is working on sea level rise and shallow groundwater mapping tools for staff planning use.

- Staff is working on various efforts related to improving the City’s Foothills fire management planning in collaboration with Santa Clara County and other allied agencies and entities.

## **BACKGROUND**

In April 2016, City Council adopted the goal of reducing GHG emissions 80 percent below 1990 levels by 2030<sup>2</sup> (the “80 x 30” goal), and in October 2022 Council adopted the ambitious goal of achieving carbon neutrality by 2030<sup>3</sup>. Staff, with community and Council input, referred to the 2016 Sustainability and Climate Action Plan (S/CAP) Framework and 2018-2020 Sustainability Implementation Plan to create a comprehensive S/CAP and Three- Year S/CAP Workplan.

In June 2023, Council adopted the 2022 Sustainability and Climate Action Plan<sup>4</sup>, certified the Comprehensive Plan Environmental Impact Report Addendum: Update to the Sustainability and Climate Action Plan<sup>5</sup>, and accepted the 2023-2025 S/CAP Workplan<sup>6</sup>.

The 2022 S/CAP and 2023-2025 S/CAP Work Plan align with one of the four Council Priorities for CY 2023: “Climate Change & Natural Environment: Protection and Adaptation”. In addition, there are several overlapping Council Priority Objectives, the status of which can be found in the 2023 Council Priority Objectives Q3 Report<sup>7</sup>.

The S/CAP is an ambitious plan to reduce the City and community’s GHG emissions, while also guiding how Palo Alto uses land and natural resources in ways that ensure quality of life for future generations. The S/CAP lists the detailed actions needed to achieve the City’s 80x30 goal but does not provide guidance on task prioritization or implementation timeline. The 2023-2025 S/CAP Work Plan is meant to guide staff efforts on the S/CAP through 2025 by prioritizing and providing more detail on implementation of the S/CAP.

## **ANALYSIS**

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<sup>2</sup> City Council, April 18, 2016; Agenda Item #10; SR #6754, <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2016/id-6754.pdf>

<sup>3</sup> City Council, October 3, 2022; Agenda Item #9; SR #14720, <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2022/20221003/20221003accsm-amended-presentations.pdf#page=131>

<sup>4</sup> 2022 Sustainability and Climate Action Plan; [https://www.cityofpaloalto.org/files/assets/public/v/1/sustainability/reports/2022-scap-report\\_final.pdf](https://www.cityofpaloalto.org/files/assets/public/v/1/sustainability/reports/2022-scap-report_final.pdf)

<sup>5</sup> Comprehensive Plan Environmental Impact Report Addendum: Update to the Sustainability and Climate Action Plan, 2023; <https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2023/2023comprehensive-plan-environmental-impact-report-addendum-update-to-the-scap.pdf>

<sup>6</sup> 2023-2025 S/CAP Workplan, 2023; [https://www.cityofpaloalto.org/files/assets/public/v/1/sustainability/reports/2023-2025-scap-work-plan\\_final.pdf](https://www.cityofpaloalto.org/files/assets/public/v/1/sustainability/reports/2023-2025-scap-work-plan_final.pdf)

<sup>7</sup> City Council, October 23, 2023; Agenda Item #8; SR #2310-2020, <https://cityofpaloalto.primegov.com/Portal/Meeting?meetingTemplateId=13044>

The City is fully committed to a sustainable future. The City owns, operates, and maintains a full-service utilities portfolio that provides electric, natural gas, fiber, water, refuse, and wastewater services to residents and businesses in Palo Alto. Palo Alto's continued leadership in advancing sustainability commitments has succeeded mainly because of the continued collaboration of community stakeholders, City departments, and the leadership of the City Council.

The S/CAP Goals and Key Actions are divided into eight areas, four of which are climate-focused and include actions to achieve the City's 80 x 30 and carbon neutrality by 2030 goals (Climate Action, Energy, Electric Vehicles, and Mobility) and four of which are focused on actions that create a sustainable natural environment and adapting to a warming climate (Water, Climate Adaptation & Sea Level Rise, Natural Environment, and Zero Waste). The Work Plan is similarly divided between climate-focused and sustainability-focused priorities.

### *Climate Action*

Covering the S/CAP Areas of Climate Action, Energy, Electric Vehicles, and Mobility, this section reports on progress based on the Work Plan Climate Action Priority areas.

#### P1. Grid Modernization

The focus of Priority 1 is to complete the grid modernization plan and begin construction to increase reliability and transformer capacity for electrification. The City's grid modernization project is meant to prepare the grid for widespread electrification in support of the S/CAP 80 x 30 goal, as well as to improve reliability, replace aging infrastructure, and modernize the grid to accommodate higher penetration of solar, storage, and other technologies. The first phase of the grid modernization study is complete. Design of the first neighborhood upgrade for grid modernization is underway, with construction expected to start in early 2024 and be completed in the first half of 2024.

Staff also began development of a Reliability and Resiliency strategic plan, which is divided into four components. In September, Staff discussed the scope of the study with the Utilities Advisory Commission.<sup>8</sup> Two components of the study are expected to be completed by the end of 2023, but aspects related to home and neighborhood resiliency and efficient electrification will extend into 2024.

#### P2. Launch Programs

The focus of Priority 2 is to launch effective programs for emissions reductions with the highest impact and lowest cost such as single-family electrification, strategic promotion of EVs, commercial rooftop HVAC, and expanded transportation alternatives.

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<sup>8</sup> Utilities Advisory Commission, September 6, 2023; Agenda Item #4, SR #2308-1934, <https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/agendas-minutes/utilities-advisory-commission/archived-agenda-and-minutes/agendas-and-minutes-2023/09-sep-2023/09-06-2023-uac-packet.pdf>

### P2.1. Residential Emissions Reduction

- Staff launched the Full-Service Heat Pump Water Heater (HPWH) Pilot Program in March 2023. As of September 28, 2023, 115 residents had signed contracts to participate, with another 225 in the assessment / estimation process. New interest in the program is 5-15 new signups per week, but a significantly higher rate of new signups is needed to generate 20 installations per week, the amount needed to reach 1,000 HPWH installations in a single year. Staff continues to expand outreach. Staff is analyzing how to transition the pilot to a full-scale program and expand it to include all gas appliances. A more up-to-date status of the HPWH Pilot Program can be found in Attachment A: HPWH Next Steps, which was presented to the S/CAP Ad Hoc Committee on October 20, 2023.
- Staff held 22 Electric Vehicle (EV) and e-bike workshops and events in 2023 so far, with another 8 planned. Events have included two EV Expos, three financial incentive clinics in multiple languages (Spanish, Vietnamese, Russian, Mandarin and Cantonese), a month-long EV discount campaign, two e-bike workshops, an e-bike test ride event, and two e-bike discount campaigns.
- Staff continues to build out EV infrastructure and expand access in affordable housing and multi-family buildings. Currently there are active EV charger projects in progress or completed in 18 multi-family buildings, representing 948 units (nearly 9% of multi-family units).
- A whole home electrification program is currently in design and expected to be available in early 2024.

### P2.2. Non-Residential Emissions Reduction

- In September 2023, staff presented ideas and concepts to the S/CAP Ad Hoc Committee and S/CAP Working Group for a commercial pilot program to electrify heating, ventilation, and air conditioning (HVAC) units. Staff is working on economic analysis and program design, with the goal of releasing an RFP for a program operator by early 2024.

### P2.3. Citywide Mobility

- In March 2023, the Office of Transportation launched Palo Alto Link, an eco-friendly rideshare service. As of September 2023, Palo Alto Link has completed 23,700 rides with 2,960 unique riders. Since its launch in March, the average number of rides per week has increased steadily, completing 47% more rides in August than March. Palo Alto Link ridership is high among those who traditionally lack high-quality mobility options, with 40% of riders qualifying for discounted fares, including youth, seniors, and low-income and disabled individuals. Palo Alto Link is encouraging residents to choose shared transit over high-emissions single occupancy vehicles, leading to an estimated 43% reduction in CO2 emissions, assuming passengers are choosing Palo Alto Link in lieu of private single occupancy vehicles to complete the same trip.
- In June 2023, Council approved a contract with the consultant Kittelson & Associates to assist with the update of the City's Bicycle and Pedestrian Transportation Plan, which

was last updated in 2012. Entitled “Active Palo Alto”, the project is underway and is expected to be completed in 2025.

- Improving safety for vulnerable road users is key to reducing vehicle miles traveled (VMT) and growing green travel mode shares. In June 2023, Council approved a \$200,000 Safe Streets for All grant agreement with the Federal Highway Administration to develop a road safety plan - Safer Palo Alto - using the Safe System Approach. The Safe System Approach involves improving the safety culture, increasing collaboration across all safety stakeholders, and refocusing transportation system design and operation on anticipating human mistakes and lessening impact forces to reduce crash severity and save lives. Due to similar project timelines, coordination of community engagement for both Active Palo Alto and Safer Palo Alto is ongoing, including sharing a road safety survey and interactive map that are available online through November 2023. With support from consultant Fehr & Peers, Safer Palo Alto plan development is expected to be completed in late 2024.

#### P2.4. Municipal Electrification

- The Facility Electrification Assessment Plan is almost complete. Staff is currently evaluating the feasibility of electrifying equipment at City Facilities each time aging equipment requires replacement.
- Staff has identified City internal combustion engine fleet vehicles that can be replaced with electric vehicles. There are currently 14 EVs in the City fleet. An additional 21 EVs are planned to be added in FY 2024, and Council is expected to consider approving funding for additional EV replacements during the FY 2024 midyear budget review.
- There are currently 92 City owned EV chargers, for a total of 127 charging ports. Only 6 of those chargers are dedicated to City vehicles, while the rest are primarily for public use. Staff is currently testing a low-cost EV charger solution that could be used for future employee charging locations.

#### P2.5. EV Strategic Plan

- In June 2023, Council approved policy guidelines for an Electric Vehicle Strategic Plan. Staff discussed the scope of the study with the S/CAP Ad Hoc Committee and S/CAP Working Group in August 2023 and released a consultant RFP soon after. The goal is to get a consulting contract approved by Council by the end of 2023. This plan is part of the S/CAP Funding Study (see P5. Funding Needs and Sources).

### P3. Build Awareness and Confidence

The focus of Priority 3 is to build community awareness and confidence in electrification through engagement, addressing concerns, and program results.

- As the focus of the S/CAP work has shifted from development to implementation, the S/CAP Ad Hoc Committee and S/CAP Working Group have been the primary venues for public engagement. In addition, Staff has developed and is implementing a comprehensive outreach plan for the Full-Service Heat Pump Water Heater Pilot Program. Staff is developing an Electrification Outreach Plan as well as a comprehensive

S/CAP Implementation Outreach Plan, including development of a community toolkit to engage volunteers to help promote the City's sustainability programs.

- Youth outreach and engagement is a key component of both the Electrification Outreach Plan and the overall sustainability and climate action communications strategy. Staff initiated a "Climate Action & Youth Engagement" special project to develop a strategy to engage youth in implementation of the S/CAP and its associated initiatives, and partner with Palo Alto Unified School District to develop a strategy to educate PAUSD students about the benefits of climate action and the various City programs supporting climate action. Staff has also had on-going discussions with leadership of the Palo Alto Student Climate Coalition on best ways to partner on sustainability and climate action.
- Staff continues to publish a monthly Climate Action Blog and a Sustainability Newsletter. The Sustainability Newsletter has a 51.6% open rate, which is the percentage of readers that open the e-mail you send them. The average open rate for electronic newsletters is 21%.
- Staff worked with students from a Stanford University Sustainable Cities course to establish baseline data on Palo Alto residents and business owners' opinions on climate change in general, knowledge of the S/CAP, and priorities for S/CAP implementation. Staff also included sustainability questions in the annual citywide survey.

#### P4. Additional Emissions Reductions

The focus of Priority 4 is to identify an additional 9% in emissions reduction opportunities to achieve 80 x 30.

- Staff is developing a comprehensive plan to gather ideas from community members and experts about new technologies and potential approaches to additional emissions reductions in Palo Alto. Staff has held several meetings with Stanford University and more work will be done when the S/CAP Funding Study is completed.
- As part of the S/CAP Funding Study, staff plans on identifying potential building electrification measures for commercial and multi-family buildings and to prioritize the most cost-effective approaches to achieving the additional emissions reductions needed to achieve 80 x 30.

#### P5. Funding Needs and Sources

The focus of Priority 5 is to identify, by 2024, funding needed and potential funding sources for full scale implementation of the highest impact emissions reductions.

- Staff released an RFP for a consultant to complete a study of the cost of achieving 80 x 30 and potential funding and financing sources. This study will include development of additional emissions reduction measures, particularly in the non-residential and multi-family sectors, and an EV Strategic Plan. As part of this study, staff will also develop a City resource needs assessments. The study will build on the completed Affordability Study model, which was developed by a consultant for City staff use.
- Staff is also working to retain consulting services to develop a model of the gas system in order to conduct analyses of future gas infrastructure requirements and evaluate

potential impacts of future modifications to the gas system. Utilities staff has started to prepare an RFP to retain consulting services and anticipates commencing work on the model development during the first half of 2024. A staff member has been assigned to manage the development of the RFP, but staff are still being identified for management of the gas conversion program.

### *Sustainability*

The Sustainability section of the work plan includes the following S/CAP Areas: Water, Climate Adaptation & Sea Level Rise, Natural Environment, and Zero Waste.

#### Water: Further Water Conservation

The near-term focus for water is reducing water consumption while exploring ways to capture and store water and increase the availability and use of recycled water.

- So far this year, the City has held 8 landscape workshops on topics including rainwater harvesting, drought-tolerant landscape design, lawn conversion, and information on available rebates. The Utilities Department tabled at 5 neighborhood events to educate residents on water efficiency programs and rebates. The Utilities Department also provides the WaterSmart water management tool which provides residents information about their water consumption and personalized water conservation recommendations. To date, 16% of customers have accessed the portal.
- Staff is planning on building a salt removal facility for the Regional Water Quality Control Plant. Design for the facility is complete. Council approved the finance plan and going out to bid for construction in 2024.
- Staff is currently developing a “One Water” portfolio for Palo Alto, with input from community stakeholders and the Utilities Advisory Commission, which includes stormwater, recycled water, on-site reuse, conservation, and groundwater.

#### Climate Adaptation and Sea Level Rise: Prepare for Climate Change

The near-term focus for Climate Adaptation and Sea Level Rise is to develop and adopt a multi-year Sea Level Rise Adaptation Plan and minimize wildland fire hazards through Foothills Fire Management Plan implementation, zoning, and collaborating with Fire agencies.

- The Sea Level Rise Adaptation Plan will be coordinated with the levee improvements around Palo Alto’s Bay shoreline (known as the Shoreline II Project), and the Palo Alto Flood Basin Tide Gate Replacement Project. Staff is currently reviewing a memo from the U.S. Army Corps of Engineers on Palo Alto specific conditions, which could affect funding opportunities. Concurrently, staff is working on sea level rise and shallow groundwater mapping tools for staff planning use.
- The Newell Road Bridge Replacement project is led by City staff in partnership with East Palo Alto, Valley Water, and the San Francisquito Creek Joint Powers Authority (SFCJPA). Replacing the Newell Road Bridge is the first step in a series of Reach 2 projects necessary to minimize flooding risk from San Francisquito Creek. Staff is working to secure right-of-way certifications, permits, and Caltrans funding through the Highway Bridge Program, to begin construction in spring 2024.



- Staff continues to work with the SFCJPA and its member agencies to coordinate other Reach 2 projects with the Newell Road Bridge Replacement project. The remaining projects are on hold pending creek model redesign based on recent winter storm results. SFCJPA hired a consultant for a third-party review of the hydraulic model for the Reach 2 project design work in September.
- Staff is working on various efforts related to improving the City's Foothills fire management planning in collaboration with Santa Clara County and other allied agencies and entities. Efforts include not only emergency planning, but also early warning technology, and updating operational and procedural elements within the City organization to mitigate the risks associated with a fire in the foothills. The Office of Emergency Services (OES) continues to participate in the South Bay Incident Management Team, lead a multi-departmental Foothills Fire Management Plan group, and lead the Silicon Valley Homeland Security Coordination Group. Equipment improvements include early fire detection, thanks to a partnership with alertwildfire.org. OES is also working on the deployment of solar battery back-up improvements in key locations to keep equipment online when electricity may be disrupted or disconnected during a fire.

#### Natural Environment: Enhance Biodiversity

The near-term focus for Natural Environment is to increase Palo Alto's Tree Canopy, reduce pesticide usage in parks and open space preserves, and support the Green Stormwater Infrastructure Plan and incorporate it in municipal projects.

- In June 2023, Council held a study session reviewing the implementation of the revised Tree Protection Ordinance to date. Staff is evaluating feedback from the study session and will review potential improvements to the ordinance with the Planning and Transportation Commission and the Parks and Recreation Commission before returning to Council.

#### Zero Waste: Support Waste Reduction

The near-term focus for Zero Waste is to encourage food waste reduction, prevention, and recovery and provide waste prevention technical assistance; eliminate single-use disposable containers; and prioritize domestic processing of recyclable materials.

- Staff launched a new Zero Waste Living outreach campaign. New educational information was incorporated into utility bill inserts, newspaper printed and digital ads, and social media.
- Staff is developing waste prevention outreach tools and technical assistance for the commercial sector. The program will launch in 2024.
- Staff is evaluating the cost and effectiveness of the current Deconstruction and Construction Materials Management Ordinance. In collaboration with multiple departments, staff is considering expanding the types of covered projects or increasing diversion requirements, as well as considering including new requirements in the next Reach Code Cycle to be implemented in January 2026.

**FISCAL/RESOURCE IMPACT**

Initiatives will be managed and funded across various departments and funds. The Fiscal Year 2024 work items in the 2023-2025 draft S/CAP Work Plan can proceed with the actions approved in the Fiscal Year 2024 Adopted Budget. Staff expects to submit additional resource requests as part of the annual budget process in subsequent years as the work plan proceeds.

Some items in other work plans are also relevant to the S/CAP Work Plan. The Utilities Strategic Plan, for example, includes workforce development and advanced metering infrastructure (AMI) work items that are directly relevant to the S/CAP. Some of these may involve future budget requests as well.

**STAKEHOLDER ENGAGEMENT**

Stakeholder engagement on S/CAP implementation is wide-reaching and coordinated with multiple departments. Efforts include direct engagement, webinars, social media and other digital marketing/outreach, website updates, public signage, Ad Hoc Committee meeting participation, leveraging the City's communication platforms, and more. Stakeholder engagement efforts were described in the Analysis section, under P3. Build Awareness and Confidence.

**ENVIRONMENTAL REVIEW**

This report is for informational purposes only with no action required by the Council, and therefore it is not a project subject to review under the California Environmental Quality Act (CEQA).

**ATTACHMENTS**

Attachment A: Heat Pump Water Heater Program Next Steps

**APPROVED BY:**

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