

LINK TO STRATEGIC PLAN AND METRICS

- Sustainability
Strategy 1: AMP will support opportunities in the electrification of the transportation system and buildings to reduce greenhouse gas (GHG) emissions.
Strategy 2: AMP will deliver and maintain 100 percent carbon-neutral energy resources by 2020 and beyond.

EXHIBIT

- A. PowerPoint Presentation
- B. Climate Action and Resiliency Plan (CARP) Annual Report 2021
 - a. Appendix

AGENDA ITEM NO.: 5.A
MEETING DATE: 01/27/2021
EXHIBIT A

CLIMATE ACTION & RESILIENCY PLAN ANNUAL REPORT 2021

Public Utilities Board

Jan. 27, 2021



Climate Action & Resiliency Plan (CARP): overview and timeline

- Framework for climate action and resiliency
- Establishes goals and vision
- Created emissions target and defined actions to reach target
- Assessed citywide vulnerabilities
 - Climate hazards, ex. flooding
- Identified actions to address climate vulnerabilities and build resilience

Feb 2008: Local Action Plan for Climate Protection (climate adaptation not considered)

Dec 2017: City Council referral to develop Climate Action & Resiliency Plan (CARP)

Apr 2018: Work on CARP commences

Mar 2019: Climate Emergency Declaration

Sep 2019: CARP adopted by City Council



CARP Goals and Vision

Vision statement:

Alameda is an innovative leader in achieving net zero carbon emissions and community resilience as soon as possible, and serves as a model for similarly impacted cities to do the same. Our community members are a vital part of this ongoing process.

Goals

1. GHG reduction: Reduce emissions to 50% below 2005 levels by 2030.
2. Climate adaptation: shoreline flooding, inland flooding, groundwater flooding, drought, extreme heat, hazardous air quality, and earthquakes/liquefaction.
3. Effective implementation and capacity building.



Social equity

Social equity in the CARP

- Three pillars of sustainability: economy, environment, equity
- Equity considered when assessing impacts of climate change, weighing costs and benefits of proposed City actions, and prioritizing projects
- Examples: multi-lingual outreach, used EV rebate, bus line 96 expansion

Social Vulnerability Assessment

- Geographic analysis: concentration of socioeconomic indicators that affect vulnerability to climate hazards.
- Used in Active Transportation Planning process



GHG reduction

What we've done

- Expansion of free bus passes
- Conversion of ARPD leaf blowers to all electric
- City working with waste hauler to build compost application program into next franchise agreement
- Planted 338 trees on city-owned land

What we're planning

- Finalize City-ACI franchise agreement
- Launch citywide Master Tree Plan process
- Require new residential construction to be all-electric
- Complete Active Transportation Plan
- Began update to Housing Element with consideration of GHG emissions; complete update to Land Use Element



Adaptation

What we've done

- Completed a study of citywide vulnerability to groundwater flooding
- Completed concept-level planning for De-Pave Park
- Updated the Master Infrastructure Plan for Alameda Point to incorporate CARP goals and projects
- Completed preliminary design for the flood protection project at Veteran's Court

What we're planning

- Complete project design for Veteran's Court flood protection project
- Seek placement of revenue measure on 2022 ballot
- Secure grant funding and complete project design for the Northern Shoreline Adaptation project.

Partnerships

- Task Force: representatives from Boards and Commissions, neighborhood groups, environmental groups, business community
- Community groups: CASA, Bike Walk Alameda, Alameda Backyard Growers
- Agencies: BCDC, Caltrans, Port of Oakland, Stopwaste, EBRPD, AUSD
- Best practice networks: BayCAN, CHARG, Floodplain Management Association, USDN, Stopwaste TAG, Climate Emergency Task Force



Priorities for 2021

GHG Reduction

- Electrification of existing buildings
- Active Transportation Plan
- Parking ordinance amendments

Adaptation and resilience

- Groundwater adaptation strategies
- Flood protection projects

Capacity building

- General Plan update
- Reconvene interdepartmental Green Team
- Revenue measures and climate communication



Recommendation

Accept the 2020 CARP Annual Report





ALAMEDA

Climate Action and Resiliency Plan (CARP) Annual Report 2021

Overview and Project Updates

Overview

The Climate Action & Resiliency Plan (CARP) was adopted by the City Council on September 3, 2019. To guide implementation, annual reports will be presented to Boards and Commissions, and community partners to share information and evaluate options and assist the City Council with setting priorities. CARP annual reports are presented to the City Council in March to align with the presentation of annual reports for the Transportation Choices Plan, which has significant implications for climate, and to allow staff time to make budget adjustments for the upcoming fiscal year(s)

Introduction

2020 was a challenging year. However, the City was still able to meet key implementation milestones for the CARP. Staff evaluated the highly understudied risk of groundwater rise through a region-leading study of emergent groundwater in Alameda. The draft General Plan chapter on Conservation was rewritten to focus on Climate Action and Conservation. Alameda Municipal Power (AMP) introduced a variety of rebates related to electric vehicles (EVs) and electric appliances, including a rebate for used EVs. The De-Pave Park Vision Plan, created with community partners, was adopted and a grant submitted to fund design and planning. Departments across the City completed near-term CARP actions and laid the groundwork medium-term implementation actions in 2021 and beyond.



*Alameda Point.
Credit: Richard Bangert*



*Alameda's Eastshore Drive neighborhood.
Credit: Maurice Ramirez*

Vision & Goals

By promoting both greenhouse gas (GHG) reduction and climate adaptation measures, the CARP is helping Alameda increase resilience to climate change and ensure a sustainable and healthy environment, improved social equity, and a vibrant economy.

The CARP outlines a path to achieve eight targeted goals in support of the overarching vision. These include an ambitious goal for GHG reduction, a set of specific goals for increasing resilience to climate hazards, and a final goal for the City to effectively implement the plan and build capacity.

Vision for the *Climate Action & Resiliency Plan*

Alameda is an innovative leader in net zero carbon emissions and community resilience as soon as possible, and serve as a model for similarly impacted cities to do the same. Our community members are a vital part of this ongoing process.

1. **GHG Reduction:** Reduce GHG emissions to 50 percent below 2005 levels by 2030 and achieve net zero GHG emissions as soon as possible.
2. **Sea level rise and storm surges:** Protect assets from sea level rise and storm surges, plan future land use to avoid impacts, and enhance natural shoreline habitat to mitigate impacts.
3. **Inland flooding:** Increase the resiliency and capacity of Alameda’s stormwater system to prevent flooding of assets during extreme precipitation events.
4. **Drought:** Reduce water consumption and increase drought-resistant landscaping.
5. **Extreme heat:** Reduce the heat island effect and protect vulnerable populations from heat impacts during heat waves.
6. **Wildfires:** Protect public health from unhealthy air quality during wildfire events, especially vulnerable populations.
7. **Earthquakes/liquefaction:** Ensure that building and infrastructure retrofits and new design standards in areas at high risk of liquefaction consider both seismic risk and sea level rise impacts.
8. **Effective implementation and capacity building:** Develop financial and human resources and increase transparency, community engagement, social resilience, and support for effective CARP implementation.

Note that future Annual Reports may include proposed modifications to the CARP.

Implementation Progress

The CARP contains 13 actions related to Transportation, six actions related to Energy Use in Buildings, four Sequestration actions, and 12 high priority Adaptation actions. Of these 35 actions, five have been completed. One project, using goats or sheep to manage vegetation in public landscapes, was found to be cost-prohibitive. Some projects, such as an update to the Street Tree Master Plan, were delayed due to COVID-19. Others, such as the CARP’s goal to increase telecommuting, got an unexpected boost.

The most significant greenhouse gas reduction implementation successes of 2020 include:

- Launching the used EV rebate program;
- Adopting a time-of-use rate for AMP customers; and
- Increasing the size of heat pump water heater rebates.

Though not included in the CARP, City staff is also implementing a major LED streetlight and park pathway replacement project that is projected to save an estimated \$100,000 per year in utility costs and a significant amount of energy, and is scheduled to be complete in the Spring of 2021.

The most significant sequestration implementation successes of 2020 were:

- ARPD collaborated with 100K Trees to host the first Volunteers in Parks events with a tree planting day and mulching in three parks; and
- ARPD planted nearly 200 trees in parks.

The most significant adaptation implementation successes of 2020 were:

- Completing a study of emergent groundwater vulnerability;
- Concept level planning for De-Pave Park;
- Updating the Master Infrastructure Plan for Alameda Point to incorporate CARP goals and projects; and
- Completing a preliminary design for the flood protection project at Veteran's Court.

An important aspect of successful implementation is tracking key metrics. To that end, the City partnered with OpenGov to create a CARP dashboard: www.alamedaca.gov/dashboard. The dashboard presents information on each of the CARP's major topic areas, including maps and charts that visualize the CARP's progress and planned actions.

On a related note, Alameda was awarded the Helen Putnam Award for Excellence in Planning & Environmental Quality by the League of California Cities for the City's work developing and implementing the CARP.

Priorities for 2021

Staff has identified four priorities for CARP implementation in 2021.

1. Electrification of new buildings. In November of 2019, the City Council directed staff to seek all-electric development on City-owned lands. In 2020, the Krusi Park Recreation Center opened as the first newly constructed all-electric City facility. In 2021, staff intend to bring forward an ordinance that will require all-electric development, with limited exceptions, for all new buildings citywide. Constructing new buildings that use fossil fuels locks in new sources of GHG emissions that must be mitigated later.
2. Active Transportation Plan. In 2019, the City Council authorized work on the Active Transportation Plan. In 2020, major progress was made on the plan contents with the Alameda community. In 2021, staff intend to bring forward a final draft Active Transportation Plan for final Council approval. Improving walking and bicycling facilities in Alameda is essential to reducing the 70% of the City's greenhouse gas emissions that are attributed to the transportation system.
3. General Plan update. In 2020, the Planning Board and Alameda community held public forums to review the draft General Plan update and new Climate Action and Conservation Element to support and facilitate implementation of the Climate Action and Resiliency Plan. In 2021, staff intend to bring forward a final draft Climate Action Element for final Council approval.

4. Parking Ordinance Amendments. In 2021, staff intends to bring forward a comprehensive update to the City of Alameda Off-Street Parking Ordinance.
5. Groundwater adaptation strategies. In November of 2020, the City Council accepted a report detailing Alameda's vulnerability to flooding from emergent groundwater as sea level rise pushes up the water table. In 2021, staff will follow up on the implementation recommendations of that report to create more detailed strategies for addressing the risks of groundwater rise. Staff will participate on the Technical Advisory Committee for the regional effort to characterize groundwater response to sea level rise and further consideration of viable strategy solutions.
6. Flood protection projects. City staff are in the process of assessing flood protection projects that would protect the northern shoreline near the Posey/Webster Tubes from current and future flood risks. In 2021, staff intend to submit grants that will fund design of these flood protection projects. Other opportunities might include options for Doolittle Drive, the East Shore neighborhood, and securing grant funding for master plan and detailed design of DePave Park.
7. Reconvene interdepartmental Green Team. The CARP development process was guided by a group of staff from several departments. In 2021, a similar group will be convened, meeting quarterly, in order to ensure that the CARP's 2021 implementation milestones are achieved.
8. Revenue measures and climate communication. In 2020, multiple new revenue measures were up for discussion, including an infrastructure bond. COVID-19 halted many of those discussions. In preparation for the 2022 ballot, staff intend to analyze revenue measures that could fund CARP implementation. Some of these measures will address the City's need for additional flood protection as the Bay rises due to sea level rise. Staff will also design communication strategies that help stakeholders and the public understand the issues at hand and the revenue measures that could address them.

Legislation Update

The City of Alameda supported the following State bills related to climate action and resiliency in 2020 and will continue to support additional resources to assist in the City's implementation of the CARP.

AB 793 (Ting): Establishes a minimum recycled content for plastic beverage containers subject to the California Beverage Container and Recycling and Litter Reduction Act.

Status: The bill was signed by the Governor on September 24.

AB 1080 (Gonzalez)/SB 54 (Allen): Identical bills, also referred to as the California Circular Economy and Plastic Pollution Reduction Act, would have imposed a comprehensive regulatory scheme on producers, retailers, and wholesalers of single-use packaging and priority single-use products, to be administered by CalRecycle.

Status: Both bills failed to move forward in the 2019-20 legislative session, but may be re-introduced in 2021.

AB 1839 (Bonta): Referred to as the California Green New Deal, would have, among other things, created the Green New Deal Council appointed by the Governor and required the Council to submit a specified report to the Legislature by January 1, 2022.

Status: The bill was amended to relate to COVID-19 recovery spending and therefore, did not move forward in 2020. However, the City did express support for the bill as initially drafted.

Partnerships and Staffing

Partnerships

To adapt to the staff and budget constraints of COVID-19, City staff expanded partnerships in order to continue CARP implementation. Staff partnered with Community Action for Sustainable Alameda (CASA) to host nine interns from Brown University, Pomona College, and Seattle University who worked on a variety of research projects: electrification of existing buildings, an Alameda Climate Fund, neighborhood resilience hubs, sea level rise communication, upgrading Alameda's fiber-optic infrastructure, and increasing social equity through new mapping tools.

In order to continue to advance policy work necessary to implement the CARP, the City was able to provide staff support and funding for some of this work.

Staffing

Implementation of the CARP is led by the City Manager's Office, through the Assistant City Manager. In early 2021, the City's part-time Climate Action Coordinator will be replaced with a full-time Sustainability and Resilience Manager who will add additional capacity and structure to Alameda's climate and resilience efforts. The Sustainability and Resilience Manager's first day with the City is January 19th.

Budget and Funding

As we head into the next two year budget, staff will present CARP implementation options – capital and programmatic – for the City Council's consideration, in the context of other needs in the community. Also, as discussed earlier in the report, in the year ahead staff will also contemplate options for longer-term and stable funding streams, which will be presented and discussed by the City Council at the appropriate time(s).

Next Steps

The status and next steps for each GHG reduction project and the top adaptation projects in the CARP are described in an appendix to this report. Staff continue to look for near-term wins while building momentum on longer-term, more complex projects.

There are over 150 actions related to resilience and climate adaptation in the CARP. The table listed in the appendix presents the highest priorities of these. The remainder can be viewed at https://www.alamedaca.gov/files/sharedassets/public/public-works/climate-action-page/alameda_carp_final_091119.pdf, or downloaded from www.alamedaca.gov/carp.

Appendix

CARP ACTIONS: STATUS UPDATES AND NEXT STEPS

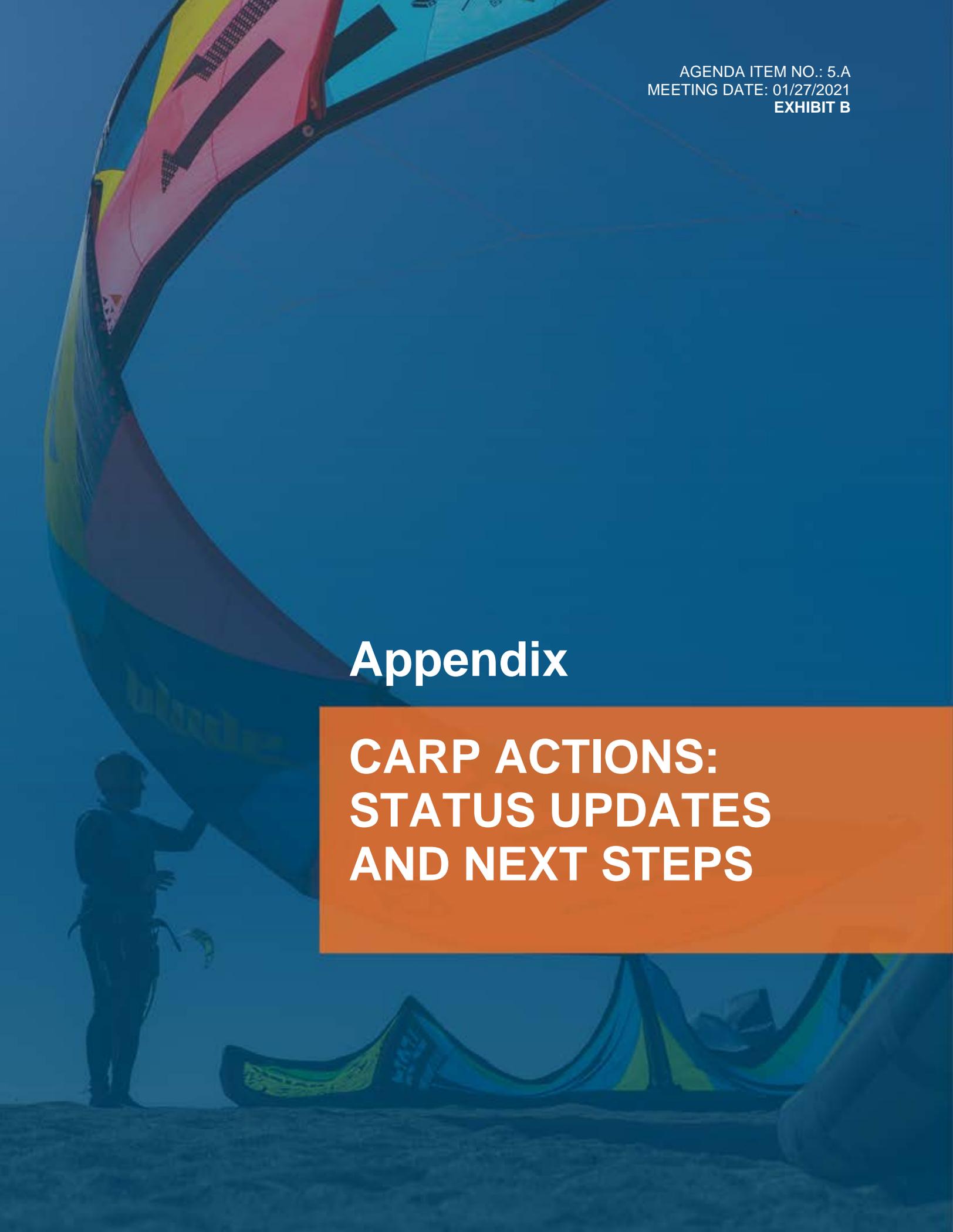


Table 1. GHG Emissions Reduction Actions for the Transportation Sector

CARP Actions	GHG Emissions Reduction (MTCO _{2e})	Timeframe	Responsible Entities	Progress Made	Next Steps
<p>Legend: ✓ = completed; A = 1-year expected completion; B = 2-5 year expected completion; C = 5+ expected completion</p>					
<p>T1. Reduce commute vehicle miles traveled (VMT). Encourage employees and employers to reduce commute trips by telecommuting. In addition, implement a combination of programs that encourage telecommuting and land use decisions that increase work-live and mixed zoning.</p>	<p>2030: 2,968</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> ■ Planning, Building and Transportation ■ Economic Development ■ Information Technology 	<ul style="list-style-type: none"> ■ City Council approved changes to Work Live ordinance to facilitate this type of development. First application to take advantage of new rules received January 2020. ■ City leadership developed a telework policy for most employees to follow during shelter-in-place orders. 	<ul style="list-style-type: none"> ■ General Plan Update to establish citywide policy to facilitate mixed use zoning. ■ Zoning amendments to facilitate mixed use development and work live, such as parking ordinance amendments, housing element zoning amendments, revisions to residential zoning ordinance to revise open space and other requirements that constrain housing development in transit oriented locations. ■ Encourage Alameda workplaces to continue beneficial teleworking after shelter-in-place orders are lifted.
<p>T2. Build additional bike lanes. Construct an additional 10.44 miles of bike lanes on top of bikeway projects already planned in the TCP and Bicycle Master Plan (2020).</p>	<p>2030: 962</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> ■ Planning, Building and Transportation ■ Public Works 	<ul style="list-style-type: none"> ■ Active Transportation Plan (ATP) draft recommendations published and received public comment on them. 	<ul style="list-style-type: none"> ■ TCP anticipated completion date is mid-2021. ■ Additional bikeways to be constructed in 2021,

				<ul style="list-style-type: none"> Additional bike lanes are being identified as part of ATP. 	as feasible, including Pacific (Main to 4 th St).
<p>T3. Traffic signal synchronization. By 2030, improve synchronized timing of 25 traffic lights to improve traffic flow by slowing vehicle speeds and reducing idling.</p>	<u>2030</u> : 779	B	<ul style="list-style-type: none"> Public Works 	<ul style="list-style-type: none"> Hired Traffic Engineer. Solicited consultant for Citywide Traffic Study. Park Street and Webster Street signal timing and coordination projects expected to be complete by February 2021. Solicitation of bids for traffic signal equipment expected by end of 2020. 	<ul style="list-style-type: none"> Adopted 2019-2021 budget includes upgrades to 10 signal cabinets and controllers. Implement additional signal synchronization projects.
<p>T4. Expand <i>EasyPass</i> program. Provide 5,000 additional passes by 2030. This adds on to TCP Project #4, which also aims for 5,000 passes, for a total of 10,000 new passes by 2030.</p>	<u>2030</u> : 339	Ongoing	<ul style="list-style-type: none"> City Council AC Transit Planning, Building and Transportation Public Works 	<ul style="list-style-type: none"> The Alameda Transportation Management Association (TMA) provided existing tenant employees in Alameda Point with free bus passes. The City and Alameda Housing Authority (AHA) established a partnership for qualifying residents to obtain free bus passes at their facilities. In July 2019, the City Council approved a new hotel at the Park Street/Clement Avenue intersection, which is required to purchase 	<ul style="list-style-type: none"> Coordinating with AHA and the Alameda TMA to allow for AHA to obtain bulk rate bus passes from Alameda TMA. Coordinating with Alameda Landing and Alameda Point to expand EasyPasses for residents and employees in these developments. City staff recommends increasing the number of EasyPasses for AHA and expanding to Jack Capon Villa residents.

				<p>EasyPasses for their employees.</p> <ul style="list-style-type: none"> City staff initiated a new free bus pass program for Mastick Senior Center members, which totals about 50 participants. 	
<p>T5. Ban gas-powered leaf blowers. Ban gas-powered leaf blowers in the City of Alameda.</p>	2030: 76	A	<ul style="list-style-type: none"> Planning, Building and Transportation 	<ul style="list-style-type: none"> Ordinance drafted September 2019. Recreation and Parks Department converted all leaf blowers to electric. 	<ul style="list-style-type: none"> Circulate draft ordinance to all contractors and businesses with landscape contracts. Discuss two or three year “phase in” process whereby landscape contractors are given several years to buy new replacement equipment. Identify effective means for enforcement of new ordinance. Discuss funding mechanisms to enforce. Identify city department that will enforce.
<p>T6:¹ Continue to support regional GHG emissions reduction goals and the <i>Regional Sustainable Communities Strategy: Plan Bay Area</i> by planning for and approving higher-density residential and mixed use</p>	Unquantified	Ongoing	<ul style="list-style-type: none"> Planning, Building and Transportation City Council 	<ul style="list-style-type: none"> Release of Draft General Plan to bring GP into conformance with Plan Bay Area. 	<ul style="list-style-type: none"> General Plan Land Use Element adoption in 2021 to bring GP into compliance with Plan Bay Area.

¹ GHG reduction actions have been renamed so that the unquantified actions called “supplemental actions” in the CARP are numbered in the same manner as the quantified actions. T6-T8 were referred to as unnumbered supplemental actions in the CARP.

residential projects on sites in Alameda identified in the Regional Plan, General Plan and Housing Element, and Municipal Code for higher-density, transit-oriented development.				<ul style="list-style-type: none"> ■ Planning Board Public Forums held in fall of 2020. 	<ul style="list-style-type: none"> ■ Housing Element and Zoning Amendments in 2022 with Plan Bay Area.
T7: Investigate the use of goats to maintain public landscapes instead of fossil fuel-powered lawn and garden equipment.	Unquantified	B	<ul style="list-style-type: none"> ■ Public Works ■ Recreation and Parks 	<ul style="list-style-type: none"> ■ The use of goats or sheep for weed control was found to be cost-prohibitive, with costs at \$4,000 per acre. 	<ul style="list-style-type: none"> ■ None at this time.
T8: Consider a rebate program for residents purchasing bicycles. This will be further considered in the forthcoming Active Transportation Plan (ATP).	Unquantified	A	<ul style="list-style-type: none"> ■ Planning, Building and Transportation 	<ul style="list-style-type: none"> ■ ATP development underway; this program is included as a draft recommendation. 	<ul style="list-style-type: none"> ■ ATP anticipated completion date is mid-2021, and will include prioritization of programs.
T9: Increase availability of EV charging stations citywide.	<u>2030</u> : 8,209	Ongoing	<ul style="list-style-type: none"> ■ Planning, Building and Transportation ■ Public Works 	<ul style="list-style-type: none"> ■ Level 2 charging installation at Seaplane Lagoon Ferry Terminal in progress. Pilot for EV charging in City parking lots in progress. ■ AMP applied vinyl wraps to its two DC fast chargers. The eye-catching wraps serve to increase the chargers' visibility and brand them as AMP's. ■ AMP continues to offer free charging at its two DC fast charging stations. 	<ul style="list-style-type: none"> ■ Revisit possible vendors for City parking lot pilot. ■ Pending installation of 10 public level 2 chargers at the new ferry terminal, AMP will provide more than \$30,000 in rebates to Public Works.
T10: Promote purchase of LEVs and ZEVs. Implement communications and outreach activities to promote the acquisition of light-duty EVs. AMP	<u>2030</u> : 6,125	B	<ul style="list-style-type: none"> ■ AMP ■ City Manager Office 	<ul style="list-style-type: none"> ■ AMP launched a rebate for used EVs, with higher rebates for 	<ul style="list-style-type: none"> ■ AMP has recreated its popular EV 101 workshop in an online format and will begin

<p>participation is subject to PUB approval.</p>				<p>qualified low-income customers.</p> <ul style="list-style-type: none"> ■ AMP launched a rebate for electric forklifts for commercial customers. ■ AMP launched a new EV-focused section on its website that provides customers with information on how to choose, charge and purchase an EV. ■ Through its membership in the American Public Power Association, AMP promoted a special rebate for the purchase of a Nissan Leaf. ■ AMP promoted BAAQMD's Clean Cars for All Program, where residents can swap out older cars and receive funds to purchase EVs. ■ AMP also promoted EV rebates provided by the California Clean Vehicle Rebate Project. ■ AMP was a sponsor of the Drive Clean Bay Area "Electrify Your Ride Event" on Sept. 26, 2000. ■ AMP continued to promote EVs throughout the year in its customer newsletter, bill inserts, 	<p>offering it in December 2020.</p> <ul style="list-style-type: none"> ■ AMP will apply vinyl wraps to two of its EVs with designs that promote the utility's EV programs and 100% clean energy. ■ On Dec. 1, 2020, AMP will begin promoting the new California Clean Fuel Reward incentive for the purchase or lease of a new EV.
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				<p>newspaper ads, social media campaigns, etc.</p> <ul style="list-style-type: none"> ■ Alamedans continue to purchase EVs at an increasing rate as shown below with the charger permits issued by the City's Permit Center: <ul style="list-style-type: none"> ■ 2017: 15 residential ■ 2018: 72 residential and 2 commercial ■ 2019 (1st 11 months): 92 residential and 5 commercial 	
<p>T11: Continue programs to encourage new EV purchases. Encourage EV ownership by promoting a manufacturer's suggested retail price rebate. Also, emphasize continuation of programs from AMP, subject to PUB approval, to provide electricity rate discounts and rebates to residential and non-residential customers who purchase a Level 2 EV charging station.</p>	<p><u>2030</u>: 5,314</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> ■ AMP ■ City Manager Office 	<ul style="list-style-type: none"> ■ AMP staff conducted a webinar in September 2020 to educate customers on the utility's proposed time-of-use rate. ■ AMP launched a calculator on its EV website to help customers determine if a time-of-use rate will be beneficial for them. ■ The Public Utilities Board adopted a time-of-use rate at its November 2020 meeting. The new rate will go into effect on July 1, 2021. 	<ul style="list-style-type: none"> ■ AMP had begun planning for its first Ride & Drive event in 2020 but due to COVID-19 had to cancel. If possible, AMP will host a Ride & Drive event in 2021. ■ Due to COVID-19, the annual car show & EV Alley event was canceled in 2020. AMP will continue its organization of EV Alley when the event resumes. ■ From Dec. 1, 2020 through June 30, 2021, AMP will offer extra

				<ul style="list-style-type: none"> AMP continues to offer rebates for level-2 chargers to residential and commercial customers. 	<p>cash back to residential customers who purchase a used EV and install a level 2 charger at the same time. Qualified low-income customers will receive even higher rebates.</p> <ul style="list-style-type: none"> From Dec. 1, 2020 through June 30, 2021, AMP will increase the amount of its rebates to commercial customers who purchase a level 2 charger or electric forklift.
<p>T12: Continue to encourage businesses to install EV charging stations. Implement communications and outreach activities to encourage workplaces and businesses to install EV charging systems</p>	<p><u>2030</u>: 691</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> AMP Planning, Building and Transportation Economic Development 	<ul style="list-style-type: none"> AMP and the city's Permits office worked together to streamline EV charging permits. AMP continued to promote EVs through numerous communications to its commercial customers and provided online EVs presentations to local business associations throughout the year. 	<ul style="list-style-type: none"> AMP will continue to promote EV charging to local businesses and provide on-site consultation services. Provision of on-site services is subject to public health restrictions related to COVID-19.
<p>T13: Electrify City's fleet. Convert the light-duty portion of the City's vehicle fleet to EVs and right-size the fleet.</p>	<p><u>2030</u>: 145</p>	<p>B</p>	<ul style="list-style-type: none"> Public Works 	<ul style="list-style-type: none"> Adopted vehicle replacement policy prioritizing EV purchases. Purchased hybrid light duty police patrol vehicles. 	<ul style="list-style-type: none"> Continue to implement replacement policy and monitor market for heavy duty EV equipment.

					<ul style="list-style-type: none">■ Consider additional charging facilities for fleet vehicles.
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Table 2. GHG Emissions Reduction Actions for Energy Use in Buildings

CARP Actions	GHG Emissions Reduction (MTCO ₂ e)	Timeframe	Responsible Entities	Progress Made	Next Steps
<p>E1. Fuel switch in existing buildings. Convert natural gas consumption to electricity use in residential and commercial buildings.</p>	<p><u>2030</u>: 7,836</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> ■ Planning, Building and Transportation ■ AMP 	<ul style="list-style-type: none"> ■ Monitoring systems established for tracking extent of fuel switching. ■ Rebate programs increased. 	<ul style="list-style-type: none"> ■ Conduct assessment of challenges and potential solutions to fuel switching in existing residential and commercial buildings. ■ AMP will develop and launch a building electrification-focused section on its website in 2021. ■ AMP will conduct induction stove demos and building electrification workshops beginning in 2021. Depending on COVID-19, these workshops may be online or in-person.
<p>E2. Electrification of new residential construction. Prepare ordinances requiring all new residential construction to be 100% electric-powered with no gas hookups.</p>	<p><u>2030</u>: 1,887</p>	<p>A</p>	<ul style="list-style-type: none"> ■ City Council ■ Planning Board ■ Planning, Building and Transportation 	<ul style="list-style-type: none"> ■ Resolution directing staff to seek all-electric development on City-owned lands passed November 2019. 	<ul style="list-style-type: none"> ■ Ordinance to require all-electric residential construction will go to the City Council in early 2021.
<p>E3. Programs to encourage fuel switching in certain appliances. Encourage the PUB to continue implementing AMP rebate programs encouraging residential customers to install ENERGY STAR-labeled electric</p>	<p><u>2030</u>: 447</p>	<p>Ongoing</p>	<ul style="list-style-type: none"> ■ AMP 	<ul style="list-style-type: none"> ■ AMP staff created a building electrification customer program plan and presented it to the Public Utilities Board in September 2020. The plan outlines the programs the utility will 	<ul style="list-style-type: none"> ■ In winter 2021, AMP will launch rebates for commercial and residential electric panel upgrades. ■ In spring 2021, AMP will launch an online

clothes dryers and electric heat pump water heaters.				<p>launch over the next two years.</p> <ul style="list-style-type: none"> ■ AMP expanded its heat pump water heater rebate to commercial customers, offering up to \$4,000 in cash back based on the size of the water heater. ■ AMP continues to offer rebates for residential heat pump water heaters and electric clothes dryers, ■ AMP began promoting the residential heat pump water heater rebates in conjunction with BayREN's rebates. 	<p>marketplace where customers will be able to purchase already-rebated thermostats, portable induction burners, induction stoves, and heat pump dryers,</p> <ul style="list-style-type: none"> ■ In spring 2021 AMP will offer commercial kitchen rebates to businesses that switch from gas to electric ovens, fryers, griddles, stoves and steamers.
<p>E4. Green roof installations on new developments at Alameda Point. Require at least 10% of roof areas on new development in Alameda Point to be installed as green roofs.</p>	2030: 6	✓	<ul style="list-style-type: none"> ■ Base Reuse ■ Planning, Building and Transportation 	<ul style="list-style-type: none"> ■ Already required per City's RWQB permit. 	<ul style="list-style-type: none"> ■ Action complete.
<p>E5:² Promote distributed generation (rooftop solar)</p>	Unquantified	Ongoing	<ul style="list-style-type: none"> ■ AMP 	<ul style="list-style-type: none"> ■ AMP alerted its customers about changes to the federal tax credit for installing solar panels. ■ AMP is seeking City approval to move forward with the installation of a 2.1 MW solar array at the Doolittle landfill. 	<ul style="list-style-type: none"> ■ AMP will move its popular solar workshop to an online format in 2021. ■ With City approval, the Doolittle solar project will start construction in 2021.

² GHG reduction actions have been renamed so that the unquantified actions called "supplemental actions" in the CARP are numbered in the same manner as the quantified actions. E5 and E6 were referred to as unnumbered supplemental actions in the CARP.

<p>E6: Draft zoning code amendment to facilitate reduction in energy use by exempting energy-efficient windows and doors from the design review process.</p>	<p>Unquantified</p>	<p>✓</p>	<p>■ Planning, Building and Transportation</p>	<p>■ City Council approved revisions to Design Review ordinance in 2019.</p>	<p>■ Action complete.</p>
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Table 3. GHG Emissions Reduction Actions for Carbon Sequestration

CARP Actions	GHG Emissions Reduction (MTCO2e)	Timeframe	Responsible Entities	Progress Made	Next Steps
Legend: ✓ = completed; A = 1-year expected completion; B = 2-5 year expected completion; C = 5+ expected completion					
S1. Apply compost to Alameda parks and open spaces.	<u>2030</u> : 5,560	B	<ul style="list-style-type: none"> ■ Recreation and Parks ■ Public Works 	<ul style="list-style-type: none"> ■ City is working with ACI (our waste hauler) to build a compost program into the next City-ACI franchise agreement. 	<ul style="list-style-type: none"> ■ Finalize City-ACI franchise agreement.
S2. Further develop urban forest. Plant 3,500 additional trees in Alameda by 2030, adding 1,500 trees to the existing commitment of adding 2,000 trees.	<u>2030</u> : 356	Ongoing	<ul style="list-style-type: none"> ■ Public Works ■ Recreation and Parks 	<ul style="list-style-type: none"> ■ Planted 175 trees in parks and 163 street trees on streets. Removed 191 street trees. ■ Applying wood chips around trees and in planting areas across parks. 	<ul style="list-style-type: none"> ■ Launch Master Tree Plan launch in 2021 and complete by 2022
S3:³ Encourage urban farming and Climate Victory Gardens as a means of sequestration and resiliency (e.g., create rooftop and vertical gardens, convert vacant lots to community gardens).	Unquantified	B	<ul style="list-style-type: none"> ■ Planning, Building and Transportation ■ Recreation and Parks ■ City Manager's Office 	<ul style="list-style-type: none"> ■ None. 	<ul style="list-style-type: none"> ■ Applying for State Parks grant in March 2021 to fund Phase 3 of Sweeney Park, which would include a 1-acre garden.
S4: Support and fund the vision of coastal dune, grassland, and wetland marsh habitat enhancement and creation at Alameda Point to support sea level rise adaptation and carbon	Unquantified	C	<ul style="list-style-type: none"> ■ Base Reuse ■ Planning, Building and Transportation ■ Recreation and Parks 	<ul style="list-style-type: none"> ■ Memorandum of Understanding with East Bay Regional Park District for Northwest Territories for Council approval February 2020. 	<ul style="list-style-type: none"> ■ Continue collaboration with EBRPD on, "SF Bay Trail Risk Assessment and Adaptation Prioritization Plan," which

³ GHG reduction actions have been renamed so that the unquantified actions called "supplemental actions" in the CARP are numbered in the same manner as the quantified actions. S3 and S4 were referred to as unnumbered supplemental actions in the CARP.

<p>sequestration, among other benefits such as wildlife habitat creation.</p>			<ul style="list-style-type: none"> ■ Public Works ■ East Bay Regional Park District 		<p>identified Alameda Point as initial area of focus.</p> <ul style="list-style-type: none"> ■ Created Vision Plan for De-Pave Park with community partners which was adopted by the City Council. In October 2020, staff applied for a \$1.4M grant to fund the Master Plan process, create a detailed Schematic Design, and secure regional permits. ■ Complete the Northwest Territories lease agreement.
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Table 4. Climate Adaptation and Resilience Actions

CARP Actions	Adaptation sector	Timeframe	Responsible Entities	Progress Made	Next Steps
Legend: ✓ = completed; A = ongoing or 1-year expected completion; B = 2-5 year expected completion; C = 5+ expected completion					
Update Alameda Point Master Infrastructure Plan for consistency with the CARP.	Sea level rise	A	<ul style="list-style-type: none"> ■ Public Works ■ Base Reuse 	<ul style="list-style-type: none"> ■ MIP Update complete. 	<ul style="list-style-type: none"> ■ Implement the MIP.
Develop shovel-ready shoreline project at Veteran’s Court seawall.	Sea level rise	A	<ul style="list-style-type: none"> ■ Public Works 	<ul style="list-style-type: none"> ■ Preliminary designs complete. ■ Partial funding of Vet’s Ct project in FY 2020-21 Budget. 	<ul style="list-style-type: none"> ■ Complete project design. ■ Secure grant funding as stand-alone project or as sub-regional project in the San Leandro Bay.
Conduct study on sea level rise impacts on water table in Alameda and potential contaminant mobilization.	Sea level rise	✓	<ul style="list-style-type: none"> ■ Public Works ■ Base Reuse 	<ul style="list-style-type: none"> ■ Study complete and accepted by Council in November 2020. 	<ul style="list-style-type: none"> ■ Alameda to sit on Technical Advisory Committee for similar work underway in multiple counties as part of a California Resilience Challenge project.
Continue working with Alameda County on community outreach during weather and hazard-related emergencies.	Heat, cold, air quality, flooding	Ongoing	<ul style="list-style-type: none"> ■ Fire ■ City Manager’s Office 	<ul style="list-style-type: none"> ■ The City of Alameda in partnership with Alameda County Office of Emergency Services (OES) uses AC Alert as the County-wide mass notification system to alert community members of weather related issues, as well as posting to social media, and the city website. 	<ul style="list-style-type: none"> ■ Encourage the public to opt-in to AC Alert and follow the City on social media.

<p>Raise stormwater fees to implement Storm Drain Master Plan.</p>	<p>Sea level rise and storm-driven flooding</p>	<p>✓</p>	<ul style="list-style-type: none"> ■ Public Works ■ City Manager's Office 	<ul style="list-style-type: none"> ■ Successful ballot of property owners for new fee in Nov 2019. ■ Submitted June 2020 budget amendment consistent with new fee study. 	<ul style="list-style-type: none"> ■ Incorporate stormwater projects into the 2021-2023 Capital Budget consistent with the fee study.
<p>Finalize, approve, and begin implementing Green Infrastructure Plan.</p>	<p>Flooding, heat, air quality</p>	<p>A</p>	<ul style="list-style-type: none"> ■ Public Works ■ Anyone else? 	<ul style="list-style-type: none"> ■ GI Plan submitted to Water Board in September 2019. Performed active municipal oversight of development project planning approvals and permitting review to ensure Green Infrastructure features in necessary public and private projects. ■ Met or exceeded GI Plan's 2020 Benchmark values for numbers of completed GI Projects and total redeveloped acres subject to GI features benefits. ■ Promoted GI Plan as a community resource for small-scale project planning. ■ Provided feedback to draft General Plan Update to strengthen Green Infrastructure-related Policies/Objectives. 	<ul style="list-style-type: none"> ■ Await Water Board's feedback and/or regulatory direction on modifications to City's GI Plan. ■ Continue planning and permitting development project oversight to promote inclusion of Green Infrastructure project features in public and private projects.

Continue water conservation programs and drought-resistant landscaping programs.	Drought	Ongoing	<ul style="list-style-type: none"> ■ EBMUD ■ Public Works 	<ul style="list-style-type: none"> ■ None 	<ul style="list-style-type: none"> ■ None
Voters consider an infrastructure bond to include resilience and GHG reduction projects.	Sea level rise and flooding	A	<ul style="list-style-type: none"> ■ Public Works ■ City Manager's Office 	<ul style="list-style-type: none"> ■ None 	<ul style="list-style-type: none"> ■ Seek placement of revenue measure.
Adopt and implement an Environmental Emergency Annex to the Emergency Operations Plan.	Heat, cold, air quality, flooding	A	<ul style="list-style-type: none"> ■ Fire 	<ul style="list-style-type: none"> ■ Environmental Emergency Plan Annex draft is in development. 	<ul style="list-style-type: none"> ■ Draft plan will be sent to the team for comment and added as an Annex to the Basic Emergency Operation Plan (EOP) once approved by the team.
Adopt and implement new air quality / smoke response protocols for City staff and employees.	Air quality	✓	<ul style="list-style-type: none"> ■ Human Resources ■ City Manager's Office 	<ul style="list-style-type: none"> ■ Policy has been fully implemented and distributed to all employees. 	<ul style="list-style-type: none"> ■ Provide training on new policy to all employees as required by CalOSHA.
Fill critical information gaps related to shoreline condition and jurisdiction to create additional shovel-ready adaptation work.	Sea level rise	B	<ul style="list-style-type: none"> ■ Public Works 	<ul style="list-style-type: none"> ■ None 	<ul style="list-style-type: none"> ■ None
Design and permit shovel-ready adaptation projects at areas of location-based priority flooding	Sea level rise	B	<ul style="list-style-type: none"> ■ Public Works 	<ul style="list-style-type: none"> ■ Initiated schematic design and project cost estimate for the Northern Shoreline Adaptation project in coordination with Caltrans. 	<ul style="list-style-type: none"> ■ Secure grant funding and complete project design for the Northern Shoreline Adaptation project. ■ Investigate sub-regional approach for adaptation project in the San Leandro Bay, including the Eastshore Drive, Veteran's Court, and Doolittle Drive.