

Table 1. GHG Emissions Reduction Actions for the Transportation Sector

CARP Actions	GHG Emissions Reduction (MTCO2e)	Timeframe	Responsible Entities	Progress Made	Next Steps
		expected completion;	<b>B</b> = 2-5 year expected of	completion; <b>C</b> = 5+ expected	completion
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.	2030: 2,968	Ongoing	<ul> <li>Planning, Building and Transportation</li> <li>Economic Development</li> <li>Information Technology</li> </ul>	<ul> <li>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.</li> <li>City leadership developed a telework policy for most employees to follow during shelter-in-place orders.</li> </ul>	<ul> <li>General Plan Update to establish citywide policy to facilitate mixed use zoning.</li> <li>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.</li> <li>Encourage Alameda workplaces to continue beneficial teleworking after shelter-in-place orders are lifted.</li> </ul>
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).	<u>2030</u> : 962	Ongoing	<ul><li>Planning, Building and Transportation</li><li>Public Works</li></ul>	Active Transportation Plan (ATP) draft recommendations published and received public comment on them.	<ul> <li>TCP anticipated completion date is mid-2021.</li> <li>Additional bikeways to be constructed in 2021,</li> </ul>

				Additional bike lanes are being identified as part of ATP.	as feasible, including Pacific (Main to 4 <sup>th</sup> St).
T3. Traffic signal synchronization. By 2030, improve synchronized timing of 25 traffic lights to improve traffic flow by slowing vehicle speeds and reducing idling.	<u>2030</u> : 779	В	■ Public Works	<ul> <li>Hired Traffic Engineer.</li> <li>Solicited consultant for Citywide Traffic Study.</li> <li>Park Street and Webster Street signal timing and coordination projects expected to be complete by February 2021.</li> <li>Solicitation of bids for traffic signal equipment expected by end of 2020.</li> </ul>	<ul> <li>Adopted 2019-2021 budget includes upgrades to 10 signal cabinets and controllers.</li> <li>Implement additional signal synchronization projects.</li> </ul>
T4. Expand EasyPass 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.	<u>2030</u> : 339	Ongoing	<ul> <li>City Council</li> <li>AC Transit</li> <li>Planning, Building and Transportation</li> <li>Public Works</li> </ul>	<ul> <li>The Alameda         <ul> <li>Transportation</li> <li>Management</li> <li>Association (TMA)</li> <li>provided existing</li> <li>tenant employees in</li> <li>Alameda Point with</li> <li>free bus passes.</li> </ul> </li> <li>The City and Alameda         Housing Authority         <ul> <li>(AHA) established a</li> <li>partnership for</li> <li>qualifying residents to</li> <li>obtain free bus passes</li> <li>at their facilities.</li> </ul> </li> <li>In July 2019, the City         <ul> <li>Council approved a</li> <li>new hotel at the Park</li> <li>Street/Clement Avenue</li> <li>intersection, which is</li> <li>required to purchase</li> </ul> </li> </ul>	<ul> <li>Coordinating with AHA and the Alameda TMA to allow for AHA to obtain bulk rate bus passes from Alameda TMA.</li> <li>Coordinating with Alameda Landing and Alameda Point to expand EasyPasses for residents and employees in these developments.</li> <li>City staff recommends increasing the number of EasyPasses for AHA and expanding to Jack Capon Villa residents.</li> </ul>

T5. Ban gas-powered leaf blowers. Ban gas-powered leaf blowers in the City of Alameda.	<u>2030</u> : 76	A	Planning, Building and Transportation	EasyPasses for their employees.  City staff initiated a new free bus pass program for Mastick Senior Center members, which totals about 50 participants.  Ordinance drafted September 2019.  Recreation and Parks Department converted all leaf blowers to electric.	<ul> <li>Circulate draft ordinance to all contractors and businesses with landscape contracts.</li> <li>Discuss two or three year "phase in" process whereby landscape contractors are given several years to buy new replacement equipment.</li> <li>Identify effective means for enforcement of new ordinance. Discuss funding mechanisms to enforce. Identify city department that will enforce.</li> </ul>
T6:¹ Continue to support regional GHG emissions reduction goals and the Regional Sustainable Communities Strategy: Plan Bay Area by planning for and approving higherdensity residential and mixed use	Unquantified	Ongoing	<ul><li>Planning, Building and Transportation</li><li>City Council</li></ul>	Release of Draft General Plan to bring GP into conformance with Plan Bay Area.	<ul> <li>General Plan Land Use Element adoption in 2021 to bring GP into compliance with Plan Bay Area.</li> </ul>

<sup>&</sup>lt;sup>1</sup> 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.				Planning Board Public Forums held in fall of 2020.	<ul> <li>Housing Element and Zoning Amendments in 2022 with Plan Bay Area.</li> </ul>
T7: Investigate the use of goats to maintain public landscapes instead of fossil fuel-powered lawn and garden equipment.	Unquantified	В	<ul><li>Public Works</li><li>Recreation and Parks</li></ul>	The use of goats or sheep for weed control was found to be cost-prohibitive, with costs at \$4,000 per acre.	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><li>Planning, Building and Transportation</li></ul>	<ul> <li>ATP development underway; this program is included as a draft recommendation.</li> </ul>	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> <li>Planning, Building and Transportation</li> <li>Public Works</li> </ul>	<ul> <li>Level 2 charging installation at Seaplane Lagoon Ferry Terminal in progress. Pilot for EV charging in City parking lots in progress.</li> <li>AMP applied vinyl wraps to its two DC fast chargers. The eyecatching wraps serve to increase the chargers' visibility and brand them as AMP's.</li> <li>AMP continues to offer free charging at its two DC fast charging stations.</li> </ul>	<ul> <li>Revisit possible vendors for City parking lot pilot.</li> <li>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.</li> </ul>
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	В	<ul><li>AMP</li><li>City Manager Office</li></ul>	<ul> <li>AMP launched a rebate for used EVs, with higher rebates for</li> </ul>	<ul> <li>AMP has recreated its popular EV 101 workshop in an online format and will begin</li> </ul>

participation is subject to PUB approval.	qualified low-income offering it in December customers. 2020.
арргоча.	<ul> <li>AMP launched a rebate for electric forklifts for commercial customers.</li> <li>AMP launched a new EV-focused section on its website that provides customers with information on</li> <li>AMP launched a new EV-focused section on its website that provides customers with information on</li> </ul>
	how to choose, charge the new California 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.
	<ul> <li>AMP also promoted EV rebates provided by the California Clean Vehicle Rebate Project.</li> </ul>
	<ul> <li>AMP was a sponsor of the Drive Clean Bay Area "Electrify Your Ride Event" on Sept. 26, 2000.</li> </ul>
	<ul> <li>AMP continued to promote EVs throughout the year in its customer newsletter, bill inserts,</li> </ul>

				newspaper ads, social media campaigns, etc.  Alamedans continue to purchase EVs at an increasing rate as shown below with the charger permits issued by the City's Permit Center:  2017: 15 residential  2018: 72 residential and 2 commercial  2019 (1st 11 months): 92 residential and 5 commercial	
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.	2030: 5,314	Ongoing	<ul><li>AMP</li><li>City Manager Office</li></ul>	<ul> <li>AMP staff conducted a webinar in September 2020 to educate customers on the utility's proposed time-of-use rate.</li> <li>AMP launched a calculator on its EV website to help customers determine if a time-of-use rate will be beneficial for them.</li> <li>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.</li> </ul>	<ul> <li>AMP had begun planning for its first Ride &amp; Drive event in 2020 but due to COVID-19 had to cancel. If possible, AMP will host a Ride &amp; Drive event in 2021.</li> <li>Due to COVID-19, the annual car show &amp; EV Alley event was canceled in 2020. AMP will continue its organization of EV Alley when the event resumes.</li> <li>From Dec. 1, 2020 through June 30, 2021, AMP will offer extra</li> </ul>

				AMP continues to offer rebates for level-2 chargers to residential and commercial customers.	cash back to residential customers who purchase a used EV and install a level 2 charger at the same time. Qualified lowincome customers will receive even higher rebates.  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.
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	<u>2030</u> : 691	Ongoing	<ul> <li>AMP</li> <li>Planning, Building and Transportation</li> <li>Economic Development</li> </ul>	<ul> <li>AMP and the city's         Permits office worked         together to streamline         EV charging permits.</li> <li>AMP continued to         promote EVs through         numerous         communications to its         commercial customers         and provided online         EVs presentations to         local business         associations         throughout the year.</li> </ul>	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.
T13: Electrify City's fleet. Convert the light-duty portion of the City's vehicle fleet to EVs and right-size the fleet.	<u>2030</u> : 145	В	■ Public Works	<ul> <li>Adopted vehicle replacement policy prioritizing EV purchases.</li> <li>Purchased hybrid light duty police patrol vehicles.</li> </ul>	Continue to implement replacement policy and monitor market for heavy duty EV equipment.

		Consider additional
		charging facilities for
		fleet vehicles.

Table 2. GHG Emissions Reduction Actions for Energy Use in Buildings

CARP Actions	GHG Emissions Reduction (MTCO2e)	Timeframe	Responsible Entities	Progress Made	Next Steps
E1. Fuel switch in existing buildings. Convert natural gas consumption to electricity use in residential and commercial buildings.	<u>2030</u> : 7,836	Ongoing	<ul><li>Planning, Building and Transportation</li><li>AMP</li></ul>	<ul> <li>Monitoring systems established for tracking extent of fuel switching.</li> <li>Rebate programs increased.</li> </ul>	<ul> <li>Conduct assessment of challenges and potential solutions to fuel switching in existing residential and commercial buildings.</li> <li>AMP will develop and launch a building electrification-focused section on its website in 2021.</li> <li>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.</li> </ul>
<b>E2.</b> Electrification of new residential construction. Prepare ordinances requiring all new residential construction to be 100% electric-powered with no gas hookups.	<u>2030</u> : 1,887	A	<ul><li>City Council</li><li>Planning Board</li><li>Planning, Building and Transportation</li></ul>	Resolution directing staff to seek all-electric development on City- owned lands passed November 2019.	<ul> <li>Ordinance to require all-electric residential construction will go to the City Council in early 2021.</li> </ul>
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	<u>2030</u> : 447	Ongoing	■ AMP	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> <li>In winter 2021, AMP will launch rebates for commercial and residential electric panel upgrades.</li> <li>In spring 2021, AMP will launch an online</li> </ul>

clothes dryers and electric heat pump water heaters.				launch over the two years.  AMP expanded pump water hear rebate to commoustomers, offer to \$4,000 in cast based on the six water heater.  AMP continues rebates for resident pump water heaters and electlothes dryers,  AMP began protection to the residential hear pump water hear rebates in conjumith BayREN's	its heat ater ercial ring up sh back ze of the to offer dential er ctric moting leat ater unction	marketplace where customers will be able to purchase alreadyrebated thermostats, portable induction burners, induction stoves, and heat pump dryers,  In spring 2021 AMP will offer commercial kitchen rebates to businesses that switch from gas to electric ovens, fryers, griddles, stoves and steamers.
<b>E4.</b> 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.	<u>2030</u> : 6	<b>✓</b>	<ul><li>Base Reuse</li><li>Planning, Building and Transportation</li></ul>	Already required City's RWQB per		Action complete.
E5: <sup>2</sup> Promote distributed generation (rooftop solar)	Unquantified	Ongoing	■ AMP	<ul> <li>AMP alerted its customers about changes to the factor tax credit for insignation solar panels.</li> <li>AMP is seeking approval to move forward with the installation of a solar array at the Doolittle landfill.</li> </ul>	City ye 2.1 MW	<ul> <li>AMP will move its popular solar workshop to an online format in 2021.</li> <li>With City approval, the Doolittle solar project will start construction in 2021.</li> </ul>

<sup>&</sup>lt;sup>2</sup> 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.

E6: Draft zoning code amendment to facilitate reduction in energy use by exempting energy-efficient windows and doors from the design review process.	Unquantified	<b>✓</b>	<ul><li>Planning, Building and Transportation</li></ul>	City Council approved revisions to Design Review ordinance in 2019.	Action complete.
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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
<u>Legend</u> : <b>✓ =</b> complete	ed; <b>A</b> = 1-year e	xpected compl	etion; <b>B</b> = 2-5 year expecte	ed completion; <b>C</b> = 5+ expecte	ed completion
S1. Apply compost to Alameda parks and open spaces.	<u>2030</u> : 5,560	В	<ul><li>Recreation and Parks</li><li>Public Works</li></ul>	City is working with ACI (our waste hauler) to build a compost program into the next City-ACI franchise agreement.	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><li>Public Works</li><li>Recreation and Parks</li></ul>	<ul> <li>Planted 175 trees in parks and 163 street trees on streets.</li> <li>Removed 191 street trees.</li> <li>Applying wood chips around trees and in planting areas across parks.</li> </ul>	Launch Master Tree Plan launch in 2021 and complete by 2022
S3: <sup>3</sup> 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	В	<ul> <li>Planning, Building and Transportation</li> <li>Recreation and Parks</li> <li>City Manager's Office</li> </ul>	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	С	<ul><li>Base Reuse</li><li>Planning, Building and Transportation</li><li>Recreation and Parks</li></ul>	<ul> <li>Memorandum of Understanding with East Bay Regional Park District for Northwest Territories for Council approval February 2020.</li> </ul>	Continue collaboration with EBRPD on," SF Bay Trail Risk Assessment and Adaptation Prioritization Plan," which

<sup>&</sup>lt;sup>3</sup> 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.

sequestration, among other benefits such as wildlife habitat creation.	<ul><li>Public Works</li><li>East Bay Regional</li></ul>	identified Alameda Point as initial area of focus.
	Park District	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.

Table 4. Climate Adaptation and Resilience Actions

CARP Actions	Adaptation sector	Timeframe	Responsible Entities	Progress Made	Next Steps
<u>Legend</u> : ✓ = 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	Public Works     Base Reuse	MIP Update complete.	■ Implement the MIP.
Develop shovel-ready shoreline project at Veteran's Court seawall.	Sea level rise	A	■ Public Works	<ul> <li>Preliminary designs complete.</li> <li>Partial funding of Vet's Ct project in FY 2020-21 Budget.</li> </ul>	<ul> <li>Complete project design.</li> <li>Secure grant funding as stand-alone project or as sub-regional project in the San Leandro Bay.</li> </ul>
Conduct study on sea level rise impacts on water table in Alameda and potential contaminant mobilization.	Sea level rise	1	<ul><li>Public Works</li><li>Base Reuse</li></ul>	Study complete and accepted by Council in November 2020.	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><li>Fire</li><li>City Manager's Office</li></ul>	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.	Encourage the public to opt-in to AC Alert and follow the City on social media.

Raise stormwater fees to implement Storm Drain Master Plan.	Sea level rise and storm-driven flooding	<b>√</b>	<ul><li>Public Works</li><li>City Manager's Office</li></ul>	<ul> <li>Successful ballot of property owners for new fee in Nov 2019.</li> <li>Submitted June 2020 budget amendment consistent with new fee study.</li> </ul>	Incorporate stormwater projects into the 2021- 2023 Capital Budget consistent with the fee study.
Finalize, approve, and begin implementing Green Infrastructure Plan.	Flooding, heat, air quality	A	■ Public Works ■ Anyone else?	<ul> <li>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.</li> <li>Met or exceeded GI Plan's 2020 Benchmark values for numbers of completed GI Projects and total redeveloped acres subject to GI features benefits.</li> <li>Promoted GI Plan as a community resource for small-scale project planning.</li> <li>Provided feedback to draft General Plan Update to strengthen Green Infrastructure-related Policies/Objectives.</li> </ul>	<ul> <li>Await Water Board's feedback and/or regulatory direction on modifications to City's GI Plan.</li> <li>Continue planning and permitting development project oversight to promote inclusion of Green Infrastructure project features in public and private projects.</li> </ul>

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