Appendix A. Implementation Roadmaps

This appendix includes implementation roadmaps for each prioritized action from the 2020-2040 CAAP. The roadmaps were largely developed by the City CAAP project management team with important input from City department staff who will help lead action implementation. The roadmaps presented here are a starting point to guide the implementation process and will be further developed with more specific or updated information based on the City's implementation phasing.

The roadmaps include information describing general action information, funding and financing resources, implementation information, performance tracking metrics, and outreach and education opportunities. Items currently marked as TBD are places where additional information will be provided in the future as other action implementation details come into focus.

The roadmaps present the following information (where available).

General action info

- CAAP goal alignment
- Action summary description
- Action linkages (what other CAAP actions are related with regards to implementation)
- GHG reduction context
- Climate hazard addressed

Funding and Resources

- Initial funding needs (Qualitative description of what initial funding is needed to take the first few implementation steps)
- Biennial funding needs (Qualitative estimate of implementation needs on a rolling two-year basis to align with the City's budget cycle)
- Staffing needs (Evaluation if the immediate next steps could require additional staff or if it can be handled within existing workflows)
- Funding opportunities (Potential grant sources, public/private funding, etc.)

Implementation Information

- Lead entity (City department(s) to lead implementation)
- Project lead and staff (Key personnel)
- External partners (Organizations, agencies, etc.)
- Priority level/general timeframe (Statement on when implementation will occur)

- Immediate next steps (Initial implementation steps to kickstart the action over the following 12 months; to be updated by the Lead Entity once a year to define the next set of immediate steps)
- Implementation milestones (Longer-term milestones to be achieved during action implementation, beyond the immediate next steps)
- Initiation timeline (Estimate of when implementation steps will occur)
- Completion timeline (Estimate of when overall aspects of action will be completed)

Performance Tracking Metrics (Example lists of what the city could monitor; assumes that a few key metrics will ultimately be selected for tracking purposes)

- Output metrics (What was achieved by the action?)
- Outcome metrics (What is the effect of those achievements? In some instances, action-specific outcome metric sources are not available; The output and outcome metrics should be evaluated together to help define the action implementation landscape.)

Outreach and Education Opportunities (Key ideas or strategies for how outreach and education can be used to enhance action implementation success)

Action A.1 Building electrification at end of useful life

CAAP Goal	Transition to high efficiency, zero carbon homes and buildings
Action Summary	Adopt requirements for electrification of all building systems that require permits at end of useful life and/or at time of remodel, including space and water heating/cooling equipment, swimming pool equipment, indoor/outdoor fireplaces and major appliances. Include specific provisions for low-income and vulnerable populations. Address financing/incentivize options. Preferred approach is to start immediately with voluntary implementation supported by education and outreach; transition to mandatory requirements by 2025.
Greenhouse Gas Reduction (Mitigation)	Natural gas use in existing buildings comprises 12% of forecast emissions in 2030. Implementation of this action reduces these emissions by 32%.
Climate Hazard Addressed (Adaptation)	Air Quality Extreme Heat
Related CAAP Actions	A.2 Building electrification at time of sale A.3 Energy efficiency and ventilation in rental properties

Funding and Resources

Initial Funding Needs	• Primary funding sources: City budget (for education and outreach) and grant funding (for incentives and financing upgrades). • Grant funding will be sought to fund incentives
Biennial Funding Needs	Funding needs are minimal for voluntary approach during the first three years. Funding for incentives and equity-based financing for private residences and businesses will be sought through federal, state and regional grant opportunities and potentially through financing strategies such as low-interest loans, bonds and public-private partnerships. Finally, consumer incentive programs (listed in Appendix B) may be considered. Increased City funding will be required for mandatory implementation beginning in 2025 to fund staff training, permit documents review, inspections and permitting software for tracking metrics.
Staffing Needs	• No additional staff required for voluntary effort (through 2024) • Additional staff needed for mandatory requirements starting in 2025.
Funding Opportunities	• Building Codes Implementation for Efficiency and Resilience (US Department of Energy) • Energy Efficiency and Conservation Block Grant Program (US Department of Energy) • Energy Partnership Program (California Energy Commission) • This action has the potential to generate revenue depending on whether there will be fines under the mandatory implementation approach. This revenue could be used to support costs for implementing the action.

Implementation Information

Lead Entity	Community Development and Sustainability Department (CDS)
Project Lead (and Staff)	Chief Building Official with Sustainability Coordinator as support
External Partners	Possibly Valley Clean Energy (VCE) and Pacific Gas and Electric (PG&E); private/public partnerships (contractors)
Priority Level/ General Timeframe	Short-term (3 years) Start voluntary implementation immediately (short-term) and work toward mandatory in 3 years (align with 2025 building code cycle).
Immediate Next Steps	1. Chief Building Official to develop materials with the Communication team to initiate public outreach including information provided at the counter for both homeowners and contractors. 2. Train staff to educate the public regarding the value of electrification. 3. Track permitting and metrics of existing and new equipment (size of systems). 4. Identify funding opportunities and initiate grant applications, loans for implementation with an equity lens, or other approaches. Explore options to offer financial support (such as partial or full subsidies) for low-income and vulnerable households to offset the household costs of electrification, such as the costs of new appliances or electric panel upgrades, and to help avoid potential future impacts of natural gas utility price increases. Focus pilot programs on these communities. 5. Address issues of upgrades to affordable housing units and ability to recover energy efficiency investments at time of sale (for example, by allowing affordable homeowners to increase the capped price of unit). Additionally, address the impacts of electrification on the price and availability of affordable housing. Address the issue of landlords passing the costs of electrification to tenants and provide strong tenant protections for both rent increases and lease termination or eviction for remodels. (See the City of San Pablo program.) 6. Develop an ordinance by 2025 for the mandatory approach consistent with California law. Additionally, adopt policies and/or incentive programs to implement energy efficiency retrofits (such as weatherization, lighting upgrades, appliance replacement, etc.). Consider and address possible limitations, “carve outs” or exemptions, such as for large-scale commercial properties or other building types that require use of natural gas or are associated with research and development.
Implementation Milestones	1. Develop materials for the public. 2. Develop tracking method. 3. Develop ordinance with new building code update for 2025.
Initiation Timeline	1. For item 1 of Next Steps, within 3 months of CAAP approval. 2. For item 2, within 4 months. 3. For item 3, within 6 months. 4. For item 4, within 12 months. 5. For item 5, within 12 months. 6. For item 6, by 2025.
Completion Timeline	Voluntary: within 6 months of approval. Mandatory: within 3 years.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of residential homes converted to all electric within measurable time periods. • Size of gas fired equipment removed and electric equipment installed. • Percent of hot water heater building permits that are for electric systems (track by residential and non-residential). • Percent of space heating system building permits that are for all-electric systems (track by residential and non-residential). • Percent of total low-income/vulnerable households participating in program per year. • Total dollar value of financial incentives provided per year.
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total natural gas consumption per year (track by residential and non-residential). • Natural gas consumption per capita per year.

Outreach and Education Opportunities

- Educate community members about heat pumps (HVAC), induction stoves, and benefits and cost savings of other electric systems.
- Provide community electrification workshops and trainings for architects, designers, contractors and local real estate professionals according to recommendations by the California Air Resources Board (CARB).
- Collaborate with financial institutions to motivate residents and property owners to invest in home improvements.
- Work with local partners such as Cool Davis to provide community forums and website information including list of potential contractors to perform renovations or replacement for electrification.
- Provide education and outreach on behaviors to reduce energy use (thermostat use, natural/passive cooling, using shading, air drying clothes, etc.)
- Use testimonials from community members to help drive electrification.
- Work with local community members and artists to develop unique and innovative approaches to education and outreach around electrification.
- Review the City of San Pablo program that requires rental property owners in need of urgent repairs to provide assistance in tenant relocation. Assess Davis provisions and adopt a similar policy, as appropriate.
- Support workforce development to enable local contractors and workers to access local efficiency and electrification jobs.

Action A.2 Building electrification at time of sale

CAAP Goal	Transition to high efficiency, zero carbon homes and buildings
Action Summary	Research and develop an ordinance requiring building energy-efficiency upgrades and electric (or other non-fossil fuel) equipment replacement at time of sale for residential and commercial properties with a defined implementation schedule for ordinance requirements. Develop Home Energy Score (HES) program. Include specific provisions for low-income and vulnerable populations. Address financing/incentive options. Preferred approach is to start immediately with voluntary implementation supported by education and outreach; transition to mandatory requirements by 2025.
Greenhouse Gas Reduction (Mitigation)	Natural gas use in existing buildings comprises 12% of forecast emissions in 2030. Implementation of this action reduces these emissions by 9%.
Climate Hazard Addressed (Adaptation)	Air Quality Extreme Heat
Related CAAP Actions	A.1 Building electrification at end of useful life A.3 Energy efficiency and ventilation in rental properties

Funding and Resources

Initial Funding Needs	City budget (for education and outreach) and grant funding (for incentives and financing upgrades) are likely primary sources for this action. • Current staff can manage initial funding/coordination on Home Energy Score implementation until more detail is developed • Pursue grant funding opportunities now to provide incentives to opt for electrification at time of sale, including for vulnerable populations.
Biennial Funding Needs	Funding needs are minimal for voluntary approach during the first three years. Mandatory implementation beginning in 2025 will require staff training, increased time for permit documents review, new inspections standards and permitting software for tracking metrics. Assess costs for addressing areas of Davis with inadequate electricity infrastructure to allow for necessary panel upgrades to accommodate this action and assist homeowners with excessive costs for panel upgrades as appropriate. Consider subsidies for PG&E customers enrolled in California Alternate Rates for Energy Program (CARE) or Family Electric Rate Assistance Program (FERA) programs or other low-income assistance programs. Seek increased funding for incentives and equity-based financing for private residences and businesses through federal, state and regional grant funding. Evaluate financing strategies such as low-interest loans, bonds and public-private partnerships. Consumer incentive programs (listed in Appendix B) may be considered.
Staffing Needs	• No additional staff required for voluntary implementation. • Additional staff likely needed for mandatory implementation starting in 2025.
Funding Opportunities	• Explore opportunities for use of public goods charge in partnership with PG&E and VCE • Building Codes Implementation for Efficiency and Resilience (US Department of Energy)

	• Energy Efficiency and Conservation Block Grant Program (US Department of Energy) • Energy Partnership Program (California Energy Commission) • This action has the potential to generate revenue depending on whether there will be fines under the mandatory implementation approach. This revenue can directly cover implementation and maintenance costs.

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Chief Building Official with Sustainability Coordinator as support
External Partners	Potential partners include VCE and PG&E; Bay Area Regional Energy Network (BayREN) and Alameda StopWaste Home Energy Score (HES) program; Yolo County
Priority Level/General Timeframe	Short-term/3 years Start voluntary implementation immediately (short-term) and work toward mandatory in 3 years (aligned with 2025 building code cycle). Implement HES pilot by the end of 2023.
Immediate Next Steps	1. Explore opportunities to implement HES at or before time of sale (for example, the City of Berkeley requires HES to be provided when the property is listed on MLS). Meet with BayREN and Yolo County to initiate pilot project to test outcomes and provide metrics for implementation in Davis. 2. Collaborate with local realtors and property managers to opt in to HES ratings to establish energy baselines. Implement HES pilot process to set baselines for property energy use. 3. Chief Building Official to develop materials with the Communication team to initiate public outreach for both homeowners and contractors. 4. Train staff to educate the public regarding the value of electrification according to recommendations by the California Air Resources Board. Work with PG&E and VCE to offer up-to-date information, training and programs. 5. Track permitting for electrified properties and metrics of existing and new equipment (size of systems). 6. Identify funding opportunities and seek grants, loans for implementation with an equity lens, or other funding approaches. Explore options to offer financial support (such as partial or full subsidies) for low-income and vulnerable households to implement these changes. Any pilot programs should focus on those communities. 7. Establish a permanent HES program in Davis or in Yolo County region. 8. Explore options to allow homeowners in affordable housing units to recover costs of upgrades required by this program. Additionally, address the impacts of electrification on the price and availability of affordable housing. Address the issue of landlords passing the costs of electrification to tenants and provide strong tenant protections for both rent increases and lease termination or eviction for remodels. (See City of San Pablo program). 9. Develop an ordinance regarding electrification at time of sale by 2025 consistent with California state law. Consider rolling out requirements over time, such as for owner-occupied single-family homes followed by multi-family and rental properties. Consider requiring upgrades based on criteria such as the relative improvement costs or the age or life expectancy of

	existing systems. Consider providing a checklist of energy efficiency retrofits and upgrades such as building envelope sealing, lighting upgrades, ENERGY STAR equipment, occupancy sensors, smart power strips, equipment controllers, etc. Address ways to prevent housing costs for low-income renters from rising after upgrades. Explore other provisions for low-income and vulnerable populations.
Implementation Milestones	1. Develop materials for the public. 2. Implement HES pilot program. 3. Develop tracking method. 4. Develop electrification at time of sale ordinance and permanent required HES program (in line with 2025 building code update).
Initiation Timeline	1. For item 1 of Next Steps, immediate 2. For item 2, immediate or within 3 months (target October 2022) 3. For item 3, within 3 months of CAAP approval 4. For item 4, within 3 months 5. For item 5, within 6 months 6. For item 6, within 12 months 7. For item 7, within 12 months 8. For item 8, within 12 months 9. For item 9, by 2025
Completion Timeline	Voluntary: within 6 months of approval Mandatory: within 3 years

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of dwellings sold by number of bedrooms per year • Percent of homes sold per year that received financing or incentives from this program • Percent of commercial properties sold per year that received financing/incentives from this program • Percent of total low-income or vulnerable households participating in program per year • Total dollar value of financial incentives provided per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total natural gas consumption per year (track by residential and non-residential) • Total electricity consumption per year (track by residential and non-residential) • Natural gas consumption per capita per year • Electricity consumption per capita per year • Total dollar value of financial incentives provided per year

Outreach and Education Opportunities

See recommendations for Action A.1.

Action A.3 Energy efficiency and ventilation in rental properties

CAAP Goal	Transition to high efficiency, zero carbon homes and buildings
Action Summary	Develop financing and/or incentivize options for rental property owners to make energy efficiency and cooling/ventilation upgrades. Develop policies, and/or modify the rental license program, to require minimum energy efficiency and cooling/ventilation requirements, with a priority on residential rental properties.
Greenhouse Gas Reduction (Mitigation)	Natural gas use in existing buildings comprises 12% of forecast emissions in 2030. Implementation of this action reduces these emissions by 15%.
Climate Hazard Addressed (Adaptation)	Air Quality Extreme Heat
Related CAAP Actions	A.1 Building electrification at end of useful life A.2 Building electrification at time of sale

Funding and Resources

Initial Funding Needs	Initial funding needs will depend on level of effort required to electrify and improve cooling and ventilation of both single-family and multi-family rental properties in Davis. Further cost information to be developed to support grant applications and identify time frame for implementation.
Biennial Funding Needs	Estimated implementation needs on rolling 2-year basis to align with City budget cycle will be developed to identify costs and potential incentives for rental property transition to electrification, energy efficiency, solar PV, cooling/ventilation, window replacement, insulation and air filtration upgrades. This assumes that fossil fuel systems will switch to electric heat pumps; gas stoves (currently 40%), water heaters and other major appliances will switch to electric; and air filtration standards are established and implemented for existing properties.
Staffing Needs	Additional staff likely needed for implementation.
Funding Opportunities	• Building Codes Implementation for Efficiency and Resilience (US Department of Energy) • Energy Efficiency and Conservation Block Grant Program (US Department of Energy) • Energy Partnership Program (California Energy Commission) • This action has the potential to generate revenue depending on whether there will be fines under the mandatory implementation approach. This revenue can directly cover implementation and maintenance costs.

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Chief Building Official with Social Services and Housing Director and Sustainability Coordinator as support
External Partners	VCE and PG&E; Yolo County Housing Authority; federal and state housing agencies as funding sources
Priority Level/General Timeframe	Short-term: Implementation to begin as soon as possible and continue on a rolling basis.

Immediate Next Steps	1. Complete inventory of multi-family properties and current energy efficiency (EE) and cooling/ventilation standards. 2. Chief Building Official and SSH Director to develop materials with the Communication team to initiate public outreach and information about EE, energy conservation, and cooling/ventilation. Create multilingual materials for diverse target audiences such as seniors, immigrants, students, and renters. Consider preparation of a certification system showing the realized savings and total housing cost (including both rent and energy bills) for rentals participating in EE programs. 3. Work with local partners such as Cool Davis to reach out to single family residential property owners and renters with informational materials to identify the value of energy efficiency and cooling/ventilation upgrades for the property as well as potential return on investment. 4. Meet with commercial property owners, realtors, and other professionals to address the "split incentives" issue for owners and renters. Take steps to avoid capital cost burdens being shifted to renters. 5. Facilitate access to (non-City) programs to financially assist owners of affordable residential units to install solar PV and other upgrades. Legally address affordable housing price caps to allow for recovery of energy efficiency, solar PV or other improvement investments at time of sale. Explore options to allow homeowners in affordable housing units to recover costs of upgrades required by this program. Additionally, address the impacts of electrification on the price and availability of affordable housing. Address the issue of landlords passing the costs of electrification to tenants and provide strong tenant protections for both rent increases and lease termination or eviction for remodels. (See City of San Pablo program). 6. Train staff to help educate the public at the counter based on CARB guidance. 7. Work with local contractors and service providers to encourage decreased costs and incentives for upgrades. 8. Develop a method for tracking property upgrades and monitor voluntary participation for three years. 9. Identify funding opportunities and initiate grant applications, loans for implementation with an equity lens, or other approaches. 10. Consider modifying rental license program to include minimum energy efficiency and cooling/ventilation requirements consistent with state law.
Implementation Milestones	TBD
Initiation Timeline	Initiate preliminary actions immediately and continue on a rolling basis. 1. For item 1 of next steps, within 12 months 2. For item 2, within 6 months of CAAP approval. 3. For item 3, within 6 months 4. For item 4, within 6 months 5. For item 5, within 12 months 6. For item 6, within 12 months 7. For item 7, within 12 months 8. For item 8, within 12 months 9. For item 9, within 12 months 10. For item 10, within 5 years
Completion Timeline	Target completion of existing property improvements by 2030, with implementation of incentives and financial support.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of measures implemented by type of measure per year • Program cost of total measures by type and year • Percent of rental properties per year that received financing or incentives from this program • Percent of program participants that made energy efficiency upgrades, cooling/ventilation upgrades, or both (program application can be designed to request this information) • Successful adoption of policies • Percent of housing units constructed per year with air filtration or air conditioning systems
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Energy saved by type of electricity or gas measure per year • Total electricity and natural gas consumption per year • Total electricity and natural gas consumption per capita per year • Total dollar value of financial incentives provided per year • Number of heat related health incidents • Percent of rental properties with air filtration or air conditioning systems (to be tracked through Rental Registration, Education, and Inspection program)

Outreach and Education Opportunities

- Work closely with the Cool Davis energy efficiency team to provide outreach and education to Davis residents, including property owners, renters, low income and vulnerable populations.
- Engage youth and young adults in outreach about energy efficiency and sustainability.
- Consider City development or partnerships (such as with Explorit Science Center or Tree Davis) to create summer programs offering climate education.
- Consider collaborating with Davis Joint Unified School District (DJUSD) and UC Davis to create a Climate Action to empower youth and young adults to advocate for energy efficiency.
- Provide informational materials on energy efficiency and sustainable practices to renters. Address specific needs of immigrants and non-English language speakers for education and outreach. Work with non-profit partners such as ApoYolo, Phoenix Coalition and others.
- See recommendations in Action A.1.

Action A.4 All-electric new construction

CAAP Goal	**Transition to high efficiency, zero carbon homes and buildings**
Action Summary	Continue to update the City's residential and non-residential reach codes to require all-electric new construction and increase electric vehicle charging infrastructure requirements; adopt a requirement that all new municipal building construction must be all-electric.
Greenhouse Gas Reduction (Mitigation)	Natural gas use in new buildings comprises 1% of forecast emissions in 2030. This action reduces these emissions by 36%.
Climate Hazard Addressed (Adaptation)	Air Quality Extreme Heat
Related CAAP Actions	A.1 Building electrification at end of useful life A.2 Building electrification at time of sale A.3 Energy efficiency and ventilation in rental properties

Funding and Resources

Initial Funding Needs	No additional funding needed.
Biennial Funding Needs	No additional funding needed for updating codes and ordinances. No additional funding needed for electrifying new municipal buildings, as cost of electrification will be incorporated into project engineering and construction costs.
Staffing Needs	Staffing needs can be handled within existing workflows.
Funding Opportunities	• Building Codes Implementation for Efficiency and Resilience (US Department of Energy) • Charging and Fueling Infrastructure Grant Program (Federal Highway Administration) • Clean Transportation Program (California Energy Commission) • Energy Efficiency and Conservation and Block Grant Program (US Department of Energy) • Energy Partnership Program (California Energy Commission) • National Electric Vehicle Infrastructure Program (Federal Highway Administration) • This action has the potential to generate revenue depending on whether there will be fines under the mandatory implementation approach. This revenue can directly cover implementation and maintenance costs.

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Chief Building Official with Sustainability Coordinator as support
External Partners	None, other than City Commission review; approval by California Energy Commission and Building Standards Commission
Priority Level/General Timeframe	Short-term (1 year)

Immediate Next Steps	This action includes two components: 1. Update residential and non-residential reach codes by December 1, 2022 for current building code cycle. • Review and incorporate State of California 2022 Cost Effectiveness Studies. • Include additional components as appropriate such as EV charging infrastructure, battery storage, high performance walls, etc. • Once draft is complete, review with Natural Resources Commission; provide outreach/opportunities for input to local stakeholders including architects, builders, and contractors; receive City Council approval. • Develop and implement tracking methods to monitor the success of the reach code related to GHG emissions reduction and adoption of electrification and other sustainability measures. • Concurrently implement other sustainability measures such as water conservation and carbon-embedded concrete. • Plan for next round of reach code implementation, addressing 2025 CalGreen Building Code adoption (effective Jan 1, 2026). 2. Consider adopting an ordinance, consistent with State law, requiring all new municipal building construction to be all-electric, with solar PV and battery storage. Consider EV charging infrastructure and water efficiency requirements to exceed current standards, as a model for community. Work with CDS, Public Works Utilities and Operations (PWUO) and Public Works Engineering and Transportation (PWET) to implement requirements.
Implementation Milestones	1. For item 1, action is immediate and ongoing for 2023 reach code adoption. To be repeated for 2025-26 reach code cycle. 2. For item 2, within 12 months of CAAP adoption.
Initiation Timeline	Immediate
Completion Timeline	Complete both items by December 31, 2023.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of dwellings built by number of bedrooms and year • Number of fully electrified homes by number of bedroom per year (can be used to estimate net impacts) • Capacity of gas equipment removed and electric equipment installed • Percent of housing units constructed per year without natural gas hook-ups, single family and multi-family units reported separately • Percent of non-residential square footage constructed per year without natural gas hook-ups, non-residential project types reported separately (e.g., office, retail, restaurant) • Percent of permitted renovations per year that include electrifying existing building systems (e.g., water heater, space heater), residential and non-residential projects reported separately

Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total natural gas consumption per year (track by residential and non-residential) • Natural gas consumption/capita per year • $MTCO_2e$ saved or avoided per year

Outreach and Education Opportunities

- Contact local stakeholders such as architects, builders, and contractors.
- Provide outreach materials for permit counter.
- Work with local artists to creatively identify the benefits of electrification through verbal, graphic or other forms of art and performance.
- See additional recommendations for Action A.1.

Action A.5 Community solar energy

CAAP Goal	**Transition to high efficiency, zero carbon homes and buildings**
Action Summary	Partner with Valley Clean Energy (VCE) to increase capacity in support of citywide building and transportation electrification, investments in community solar energy, and provide solar battery storage. Encourage all subscribers to enroll in the UltraGreen option. Develop financing/incentive options to support building and transportation energy electrification and energy efficiency improvements.
Greenhouse Gas Reduction (Mitigation)	Electricity generation comprises 7% of forecast emissions in 2030. This action reduces these emissions by 100%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	A.7 Renewable energy in City facilities A.8 Create community microgrids and resiliency hubs B.1 Electric Vehicle Charging Plan

Funding and Resources

Initial Funding Needs	Initial and longer-term funding/staffing needs to be developed.
Biennial Funding Needs	TBD
Staffing Needs	TBD
Funding Opportunities	• Building Codes Implementation for Efficiency and Resilience (US Department of Energy) • Energy Efficiency and Conservation Block Grant Program (US Department of Energy) • Energy Partnership Program (California Energy Commission) • Green Proving Ground Program (US General Services Administration, US Department of Energy)

Implementation Information

Lead Entity	CDS, in collaboration with City Manager's Office and other key departments
Project Lead (and Staff)	Sustainability Coordinator
External Partners	VCE
Priority Level/General Timeframe	Short-term (3 years) through Long-term (related to different components of action)

Immediate Next Steps	This action has three components:
	1. Partner with Valley Clean Energy to invest in community solar energy and provide solar battery storage.
	  • Evaluate creation of a customer electric bill credit that covers the average increase for residential customers.
	  • Consider integration with Action A.8, Create community microgrids and resiliency hubs. Additionally, solar installations may be developed

	as solar farms or related to specific community areas, such as affordable or senior housing. • Assess community needs and potential locations and costs. Address the impacts to low-income communities and other vulnerable populations. • Monitor local, state and federal funding opportunities. • Factor in potential installations that create techno-ecological synergies (for example, pollinator-friendly solar installations, floating solar on irrigation ponds and wastewater treatment, "agrivoltaics," and "rangevoltaics"). 2. Encourage all subscribers to enroll in the UltraGreen option. • A pilot project of automatic transition to UltraGreen for all Davis customers is being evaluated. • Develop outreach strategy to notify customers of the benefits, environmental impacts and costs of the transition to UltraGreen. • In addition to UltraGreen, the City can support VCE's effort to work toward delivering 100% time-coincident (24/7) carbon-free or renewable energy in the next 5 years, in consideration of other factors, and as compared to an annual based procurement approach. This is an effort to reduce demand for fossil-based electricity generation by matching generation and load timing and helping to enable a more rapid and deep decarbonization of the electric grid. Consider portfolio diversification, energy storage, and load shaping/shifting, as currently pursued by Peninsula Clean Energy in San Mateo County. 3. Develop financing/incentive options that would support building energy efficiency improvements and electrification. Develop additional information for implementation of financing and incentives for community properties.
Implementation Milestones	1. For item 1, initiate planning within 12 months of CAAP approval, and roll out programs until reassessment and new goal setting at 2030 interim target. 2. For item 2, complete pilot in 1-2 years following CAAP approval. 3. For item 3, initiate planning within 12 months of CAAP approval, and roll out programs until reassessment and new goal setting at 2030 interim target.
Initiation Timeline	Within 3 months of CAAP approval
Completion Timeline	Complete or re-evaluate all components by 2030.

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Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Capacity of community solar energy installed per year • Battery storage capacity installed in Davis per year, residential and non-residential reported separately • Percent of customers enrolled in program per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total electricity consumption per year (track by residential and non-residential) • MT CO_2e saved or avoided per year

Outreach and Education Opportunities

- Develop community outreach and education about microgrids, community solar energy and solar battery storage.
- Work with VCE to support understanding of community member adoption of UltraGreen. Use City's adoption of UltraGreen as a model for community members.
- Implement a recognition program identifying business and commercial emissions reduction. Include public recognition and awards for leading businesses. Expand the City of Davis Partners for a Greener Davis program.
- Educate community members about the Oakland EcoBlock model. Potentially join with other communities to encourage state legislature and the California Public Utilities Commission (CPUC) to enable implementation of programs like Oakland EcoBlock.
- Work with local artists to creatively communicate benefits of VCE's UltraGreen program, building and transportation electrification through art and performance.

Action A.6 Carbon mitigation fund

CAAP Goal	**Transition to high efficiency, zero carbon homes and buildings**
Action Summary	Establish a carbon mitigation fund to collect voluntary and/or mandatory payments to mitigate local emissions activities, with collected funds used to support a range of local, climate-change-related projects.
Greenhouse Gas Reduction (Mitigation)	No direct GHG reduction. However, GHG reduction projects will be funded and implemented through this program.
Climate Hazard Addressed (Adaptation)	No direct risk reduction. However, projects addressing climate risk will be funded and implemented through this program.
Related CAAP Actions	No direct related actions. However, this program may fund projects that address CAAP actions.

Funding and Resources

Initial Funding Needs	Initial and longer-term funding and staffing needs to be developed.
Biennial Funding Needs	In the long term, the carbon mitigation fund would aim to be self-sustaining.
Staffing Needs	TBD
Funding Opportunities	Staff will work with City's grant funding consultant through the City of Davis Comprehensive Funding Plan to identify grant funding and other financing and funding sources for development and implementation of this program. This action has the potential to generate revenue, which could be used to cover action costs.

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Sustainability Coordinator and Economic Development Coordinator
External Partners	Sacramento Metropolitan Air Quality Management District (SMAQMD) and Yolo Solano Air Quality Management District (AQMD); CARB; Sacramento Area Council of Governments (SACOG); regional city and county partners
Priority Level/General Timeframe	Short-term (3 years) depending on development of approach and regional collaboration efforts
Immediate Next Steps	1. Meet with regional partners (SMAQMD, CARB, SACOG, Sacramento County, City of Sacramento and city-county regional collaboration group, to discuss opportunities for developing a regional carbon mitigation fund to collect funds for local projects. Include agency management, planning, climate action and economic development staff and resources. This can include voluntary funds (such as personal air travel offsets), and/or mandated fees, consistent with state law, such as local GHG mitigation funds or developer impact fees. 2. Identify potential state, regional and local public and private funding resources and opportunities (voluntary and/or mandatory) to establish and manage funds and deploy projects to reduce greenhouse gas emissions, increase resilience and address climate risk.

	3. Identify key sectors and project types eligible for carbon mitigation fund resources, potentially including transportation; building energy, efficiency and electrification; water conservation; equity and climate justice (EJ); or other project types. 4. Identify fund management structure, such as joint powers authority, AQMD or CARB management or other approach. As appropriate, establish memoranda of understanding with participating agencies.
Implementation Milestones	1. For item 1, within 3 months of CAAP adoption 2. For item 2, within 9 months 3. For item 3, within 18 months 4. For item 4, within 24 months
Initiation Timeline	Within 3 months of CAAP adoption
Completion Timeline	Launch of carbon mitigation fund within 3 years of CAAP adoption. Implementation of fund will be ongoing.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Funds collected per year • Funds distributed per year for climate change-related activities (mitigation and adaptation)
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• $MTCO_2e$ per year estimated to be reduced (by emissions sourced) from funded GHG mitigation activities (program application can be designed to request this information) • Climate resilience outcomes (e.g., number of heat/smoke related health incidents, number of critical buildings constructed/renovated above base flood elevation)

Outreach and Education Opportunities

- Use accrued funding to implement creative activities that promote GHG reductions. These activities could include temporary public art interventions in parking areas, parks, and other spaces that impact or benefit from reductions, as well as performances that support GHG reductions, such as Bike City Theatre Company's *Light the Way* children's musical.
- Consider community participation and advocacy for building this implementation tool to address collective GHG reduction and climate resiliency issues regionally (Yolo County or broader). Possible uses of local resources are to strengthen the local grid, provide support to low-income and marginalized households and businesses, and fund unique and innovative local solutions.

Action A.7 Renewable energy in City facilities

CAAP Goal	Transition to high efficiency, zero carbon homes and buildings
Action Summary	Switch from fossil gas to electricity, renewable hydrogen, or other non-fossil renewables in all existing City facilities, and include a provision that the City shall upgrade to UltraGreen (100% renewable energy) with Valley Clean Energy for all municipal accounts.
Greenhouse Gas Reduction (Mitigation)	Natural gas use in municipal buildings accounts for 0.2% of forecast emissions in 2030. This action reduces these emissions by 80%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	A.5 Community solar energy A.8 Create community microgrids and resiliency hubs

Funding and Resources

Initial Funding Needs	Initial and longer-term funding and staffing needs to be developed. Complete review of all City facilities related to switching infrastructure, develop transition plan and cost estimate for implementation (approximately $250,000).
Biennial Funding Needs	TBD; Will be determined based on the assessment
Staffing Needs	Current staffing is likely adequate. Consultant needed to perform assessment.
Funding Opportunities	Energy Partnership Program (California Energy Commission)

Implementation Information

Lead Entity	PWUO
Project Lead (and Staff)	Deputy Directors (Operations & Administration), Facilities Supervisor, Senior Electrician
External Partners	VCE, consultant and contractors
Priority Level/General Timeframe	This project has two components: 1. Short-term (1 year) to enroll City accounts to UltraGreen 2. Long term, medium-to-low priority project to achieve fuel switching in City facilities. Assessment within three years. Implementation over 10-15 years (as buildings are updated).
Immediate Next Steps	1. For municipal facility UltraGreen enrollment, complete assessment of existing accounts to resolve issues, then transition all City electricity accounts to VCE UltraGreen. 2. For fuel switching in City facilities, engage consultant to assess facilities, prioritize facilities for fuel switching, and complete engineering work and funding identification for initial projects.
Implementation Milestones	TBD
Initiation Timeline	Within 6 months of funding approval to start Request for Proposal (RFP)
Completion Timeline	TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Percent of city government electric accounts enrolled in UltraGreen • Percent of city government buildings that are fully decarbonized (i.e., no fossil fuel equipment/appliances)
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total natural gas consumption per year for city government utility accounts

Outreach and Education Opportunities

- Use City's transition to UltraGreen and electrification of municipal facilities as a model for community members.
- Install meters or other visual information with interpretive signage at City facilities to show electricity generated by solar, GHG emissions reduction metrics, and other data.
- Provide an interpretive display at City Hall showing use of an electric vehicle (EV) as battery storage for building electricity.
- Provide an interpretive display at City Hall for Home Energy Score information, Energy Star and other energy efficiency data.

Action A.8 Create community microgrids and resiliency hubs

CAAP Goal	**Expand local renewable energy development and storage**
Action Summary	Address and incentivize the creation of community microgrids, community battery "co-ops", and the networking of local energy sources. Create and/or support resiliency hubs that remain in operation during a power grid outage.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	A.5 Community solar energy D.6 Public resources during extreme weather events

Funding and Resources

Initial Funding Needs	Initial and longer-term funding/staffing needs to be developed. Pilot resiliency hub at Veterans Memorial Center can be funded with existing City funds. Creation of community microgrids, community battery "co-ops", and the networking of local energy sources require additional assessment.
Biennial Funding Needs	See above.
Staffing Needs	See above. Pilot resiliency hub at Veterans Memorial Center can be implemented and managed by existing City staff.
Funding Opportunities	• Building Resilient Infrastructure and Communities Grant Program (Federal Emergency Management Agency) • Local Energy Action Program (US Department of Energy)

Implementation Information

Lead Entity	PWUO with assistance from Parks and Community Services (PCS) and CDS
Project Lead (and Staff)	Project Lead TBD. Staff: PWUO Deputy Director (Operations), PCS Director, Sustainability Coordinator
External Partners	VCE, DJUSD, UC Davis, Yolo County (libraries), and private/third-party businesses
Priority Level/General Timeframe	Short-term (1 year) to initiate Veterans Memorial Center pilot Medium to long-term (3-10 years) for further work on community microgrids, battery co-ops and additional resiliency hub development
Immediate Next Steps	This project has two components: 1. Address and incentivize the creation of community microgrids, community battery storage "co-ops' • Work with local partners such as VCE, and external/private business to incentivize microgrids, solar PV arrays/farms, battery storage and other utility and energy source networking. 2. Create and/or support resiliency hub(s) to remain in operation during power grid outage. • Identify City definition and operation parameters for resiliency hub(s) provided by City.

	• Implement first resiliency hub at existing City facility, currently determined to be Veterans Memorial Center. Provide solar PV and battery storage (existing diesel generator to be decommissioned/used as backup). Provide supplies and operations plan for use as resiliency hub as necessary, given emergent situations.
Implementation Milestones	1. Complete resiliency hub at Vet's Memorial 2. Develop more information for other action components
Initiation Timeline	1. For item 1, within 3 months of CAAP approval 2. For item 2, within 3 years
Completion Timeline	TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of resiliency hubs per year • Number of dwellings within 5 min drive of hub per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Number of heat waves per year • Number of outages during a heat wave per year • Number of hours of outages over the year • Number of people attending hub per year • Number of people within 5 mins attending hub per year

Outreach and Education Opportunities

- Support workforce development to enable local workers to access local efficiency and electrification jobs.
- Work with local partners such as VCE and private businesses to inform residents and businesses about opportunities for microgrids, solar PV arrays/farms, battery storage and other utility and energy source networking.
- Advocate to make sure local distribution grid is upgraded to accommodate the electrification of the transportation sector.
- Partner with VCE to provide educational and outreach materials.
- Engage youth and young adults in outreach and education about energy efficiency and sustainability.
- Consider City development or partnerships (such as with Explorit Science Center or Tree Davis) to create summer programs to provide climate education.
- Consider collaborating with DJUSD and UC Davis to create a Climate Action to empower youth and young adults advocate for community energy resilience.
- Work with community members and artists to provide unique and innovative ways to encourage community involvement.

Action B.1 Electric Vehicle Charging Plan

CAAP Goal	**Adopt zero emissions vehicles and equipment to reduce fossil fuel use**
Action Summary	Update and implement the Davis Electric Vehicle Charging Plan (2017) to determine public and private charging infrastructure needs, time frame, and implementation approach to enable all vehicles to go electric. Identify and implement the first five-year plan including specific locations and feasibility, costs, potential grant funding and partners, electric vehicle adoption needs and opportunities. Include provisions for low-income and vulnerable community members.
Greenhouse Gas Reduction (Mitigation)	On-road transportation accounts for 68% of forecast emissions in 2030. This action reduces these emissions by 17%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.2 Decarbonize municipal fleet B.4 Electric micromobility vehicles B.10 Low Emissions Vehicle Program

Funding and Resources

Initial Funding Needs	$80,000: Initial funding needs for consultant fees to complete the plan update. SACOG grant funding may be used, or grant funding may be sought in collaboration with regional partners.
Biennial Funding Needs	$500,000: Biennial funding needs for City contributions to EV infrastructure; matching funds for grant opportunities for implementation; incentives for community member adoption of electric vehicles, with primary focus on low-income and vulnerable community members.
Staffing Needs	EV Charging Plan Update can be completed with current City staff. Implementation of the plan actions would require approximately one quarter full time employee (FTE) per year in the Sustainability Program to lead the effort (in collaboration with PWET).
Funding Opportunities	• Charging and Fueling Infrastructure Grant Program (Federal Highway Administration) • Clean Transportation Program (California Energy Commission) • Grants for Buses and Bus Facilities Program (Federal Transit Administration) • Green Proving Ground Program (US General Services Administration, US Department of Energy) • Low Carbon Transit Operations Program (Caltrans) • Low or No Emission Vehicle Program (Federal Transit Administration) • National Electric Vehicle Infrastructure Formula Program (Federal Highway Administration) • Sustainable Communities Grant (Caltrans) • This action has the potential to generate revenue, which could cover action costs.

Implementation Information

Lead Entity	CDS and PWET
Project Lead (and Staff)	Sustainability Coordinator and Senior Civil Engineer
External Partners	VCE, Yolo County and regional partners
Priority Level/General Timeframe	Short-term, high-priority project. EV Charging Plan Update consultant to be engaged in FY 2022-23; overall implementation timeframe to be determined, first five-year plan will be identified and implemented as part of project.
Immediate Next Steps	1. Identify funding for electric vehicle (EV) planning consultant. 2. Sustainability Coordinator to develop Scope of Work for 2023-28 Davis Electric Vehicle Charging Plan Update with Commission Input. Include electric micromobility vehicle charging (electric bikes, scooters, motorcycles). Include community outreach and tools to determine how public charging infrastructure will be used and identify needs based on access to charging. Consider addressing permit streamlining, infrastructure siting, consumer education and other jurisdiction support for transportation electrification. 3. Contract with existing on-call engineering consultant or release project RFP; negotiate and execute project professional services agreement. 4. Work with VCE for implementation during and after plan development: a. VCE is planning for a significant penetration of EV charging in their long-term planning. b. VCE is launching an EV rebate program in the summer of 2022 to incentivize EV adoption, with higher rebates for low-income customers. 5. Community Outreach and Engagement with regular Commission Input. Public review of draft plan. 6. City Council adoption of 2023-2028 EV Charging Plan.
Implementation Milestones	• Approve Scope of Work and RFP. • Complete consultant selection and execute PSA. • Outreach and engagement to determine community priorities; Commission presentations and input/expertise. • Complete draft plan and public review; City Council adopts plan. • Complete grant applications and identify pilot projects to begin charging infrastructure implementation and programs for electric vehicle adoption.
Initiation Timeline	1. For item 1 of next steps, within 2 months of CAAP approval 2. For item 2, within 2 months (concurrent with 1) 3. For item 3, within 4 months 4. For item 4, within 4 months 5. For item 5, ongoing collaboration with VCE 6. For item 6, ongoing public engagement during contract 7. For item 7, within 12 months of CAAP approval
Completion Timeline	2023-28 EV Charging Plan: 12 months after action initiation; Implementation of plan: Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Percent of target public charging infrastructure in place per year • Number of chargers in place by type and year • Quantity of energy distributed by type and year • Percent of 100% green energy used by type and year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Number of plug-in electric vehicles (PEVs) registered in Davis per year • Percent of vehicles in Davis that are PEVs per year

Outreach and Education Opportunities

- Needs of low-income and vulnerable community members must be addressed from the outset.
- Implementation of additional EV charging should be an adaptive process over time so that EV space allocation in public areas meets the need of increased EV ownership as it evolves.
- Provide for e-bike charging as well.
- Consider public health benefits of eliminating ICE vehicles.
- Consider developing and implementing a local fuel tax to fund transportation-related GHG reductions that emerge from this process. This intervention may require sponsoring legislation.
- Use creative arts interventions to design welcoming spaces around electric charging stations.

Action B.2 Decarbonize municipal fleet

CAAP Goal	**Adopt zero emissions vehicles and equipment to reduce fossil fuel use**
Action Summary	Develop an aggressive plan to transition the municipal vehicle fleet to alternative fuels (e.g., electric, battery electric vehicle, hydrogen).
Greenhouse Gas Reduction (Mitigation)	On-road transportation by the municipal fleet comprises 0.3% of forecast emissions in 2030. This action reduces these emissions by 50%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.1 Electric Vehicle Charging Plan

Funding and Resources

Initial Funding Needs	$67,000; Funding for Fleet Transition Plan will use current SACOG grant monies. Future funding for implementation will come from other grant opportunities and City budget allocations.
Biennial Funding Needs	TBD. Would need to account for potential increased cost of vehicles and replacement costs, additional electricity charges, as well as support for maintenance of infrastructure; to be offset by cost savings and decreased fuel costs. Annual savings, once fleet electrification is completed, are estimated at $1.2 million per year.
Staffing Needs	Fleet Transition Plan development, coordination and administration available with current staffing. There may be additional contracted vehicle/infrastructure maintenance required for implementation of recommendations.
Funding Opportunities	• Charging and Fueling Infrastructure Grant Program (Federal Highway Administration) • Clean Transportation Program (California Energy Commission) • Grants for Buses and Bus Facilities Program (Federal Transit Administration) • Green Proving Ground Program (US General Services Administration, US Department of Energy) • Low Carbon Transit Operations Program (Caltrans) • Low or No Emission Vehicle Program (Federal Transit Administration) • National Electric Vehicle Infrastructure Formula Program (Federal Highway Administration) • Sustainable Communities Grant (Caltrans)

Implementation Information

Lead Entity	PWET, PWUO, CDS
Project Lead (and Staff)	PWET Senior Engineer; PWUO Deputy Director (Administration), Fleet Manager; Sustainability Coordinator
External Partners	Potential partners include VCE, EV infrastructure contractors
Priority Level/General Timeframe	Short-term project, with high priority for implementing the Fleet Transition Plan. Total fleet electrification timeline is maximum 10 years, based on available technology and funding, and related to vehicle replacement schedule.

Immediate Next Steps	1. City Council to approve scope of work and consultant selection; execute PSA. 2. Complete Fleet Transition Plan; City Council adoption. 3. Adopt policy to require replacement of existing fleet internal combustion engine (ICE) vehicles, beginning with electric vehicles for passenger and light duty vehicles. Include Davis Community Transit (DCT) vehicles. Follow with medium and heavy-duty vehicles and equipment. Exclude exempt vehicles such as fire engines or other emergency or specialty vehicles until viable options are available in the future. 4. Complete construction documents and bid package for infrastructure improvements. 5. Install EV charging infrastructure to support increase in electric vehicles and initiate fleet electrification.
Implementation Milestones	Implement milestones as identified in Fleet Transition Plan
Initiation Timeline	6. For item 1, City Council approval projected June 27, 2022; PSA projected July 15, 2022 7. For item 2, within 6 months, projected December 2022 8. For item 3, within 3 months of City Council Fleet Transition Plan adoption 9. For item 4, first phase installations within 6 months of City Council Fleet Transition Plan adoption, projected June 2023
Completion Timeline	Ongoing roll-out of fleet vehicle replacement with EVs and installation of charging infrastructure. Total time frame 8-10 years, or completion by 2030-2032.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Percent of municipal fleet passenger vehicles that are non-fossil fuel vehicles • Percent of municipal fleet light-duty vehicles that are non-fossil fuel vehicles • Percent of municipal fleet medium/heavy-duty vehicles that are non-fossil fuel vehicles
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Gallons of fuel used in municipal fleet per year, by fuel type (e.g., gasoline, diesel, biodiesel and type, gallons of gasoline equivalent natural gas)

Outreach and Education Opportunities

- Implement creative art or vehicle wraps on alternative fuel vehicles to celebrate their efficiency to the public.

Action B.3 'First mile/Last mile' transportation

CAAP Goal	**Increase opportunities for active mobility in the community**
Action Summary	Address 'first mile/last mile' and short-trip transportation needs by continuing to prioritize, fund, and implement ongoing programs/partnerships and develop new programs/partnerships to provide alternative transportation options within Davis. Include specific provisions for low-income or vulnerable populations. Include specific action recommendations, pilot programs, or other ways to implement actions.
Greenhouse Gas Reduction (Mitigation)	No quantified GHG impact but will facilitate reduced GHG emissions from ICE vehicles.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.4 Electric micromobility vehicles B.5 Pedestrian and bicycle safety B.6 Expand public transit B.7 Strengthen regional transit B.9 Transportation Demand Management (TDM) program

Funding and Resources

Initial Funding Needs	Approximately $50,000 required to contract transportation planning consultant to address realistic high-level opportunities and recommendations for physical or programmatic improvements.
Biennial Funding Needs	TBD. Identify biennial funding needs for implementation with consultant input. Incorporate funding provisions specifically for low-income or vulnerable populations; extending e-bike/scooter contracts beyond pilot; providing additional resources for the Safe Routes to School program.
Staffing Needs	Identify staffing needs for implementation with consultant input.
Funding Opportunities	• Active Transportation Program (Caltrans) • Low Carbon Transit Operations Program (Caltrans) • Rebuilding American Infrastructure with Sustainability and Equity Discretionary Grant Program (US Department of Transportation) • Regional Program (Sacramento Area Council of Governments) • Sustainable Communities Grant (Caltrans) • Transformative Climate Communities Program (California Strategic Growth Council) • Transit and Intercity Rail Capital Program (California State Transportation Agency)

Implementation Information

Lead Entity	PWET
Project Lead (and Staff)	PWET Assistant Director and Safe Routes to School Coordinator
External Partners	Yolo County Transportation District (YCTD), SACOG, DJUSD

Priority Level/General Timeframe	Short Term for certain components: The e-bike/scooter pilot contract (with provided Lime) should be in place on the next 2-6 months. It includes a tiered fee structure for low-income users. Safe Routes to School components should be short-term (1-2 years). Other components will be medium to long-term, as identified by staff, Commissions and consultant input.
Immediate Next Steps	1. City Council to consider pilot program. 2. Consider implementation of City-administered survey on an annual basis, similar to annual UC Davis Campus Travel Survey, to allow for program evaluation. 3. Execute Lime agreement for e-bike and scooter pilot program. 4. Evaluate the action items from "Beyond Platinum Bicycle Action Plan" and determine what additional funding is needed for plan implementation. 5. Evaluate Safe Routes to School program to identify program priorities and funding needs. 6. Educate community about opportunities through Davis Community Transit (DCT), an inclusive paratransit program. 7. Contract transportation planning consultant to address "first mile/last mile" needs (especially for low income and vulnerable populations), opportunities, priorities and recommendations. Consider freight movement and delivery such as food, e-commerce including promotion of neighborhood electric vehicles (NEVs), e-bikes and quadricycles, and e-cargo vans. Identify funding sources for actions and pilot programs for first 3 years.
Implementation Milestones	Additional physical or programmatic improvements to address last mile needs will be medium to long-term, as identified by staff, Commissions and consultant input.
Initiation Timeline	1. For next steps item 1 above, December 2022 2. For item 2, 3 months after CAAP adoption 3. For item 3, 3 months after CAAP adoption 4. For item 4, 3 months after CAAP adoption 5. For item 5, 6 months after CAAP adoption
Completion Timeline	Lime contract pilot completion projected for no later than December 2022. Other components TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Linear feet of bikeway facilities installed or improved, both city-wide and within ½ mile of transit stops and schools. • Linear feet of pedestrian facilities installed or improved, both city-wide and within ½ mile of transit stops and schools. • Number of new or improved bicycle and pedestrian crossings, both city-wide and within ½ mile of transit stops and schools. • Number of annual one-way trips generated within City of Davis by shared micromobility program. • Number of residents/workers within ¼ and ½ mile walk/bike distance of a transit stop/station. • Number of low income or vulnerable residents within ¼ and ½ mile walk/bike distance of a transit stop/station. • Total number of daily commute and non-commute trips by mode. • Non-motorized commute and non-commute trip mode split. • "First mile/Last mile" transit stop/station access mode split.
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total City of Davis-generated VMT and/or VMT per capita. • Daily or annual vehicle trips on key local and regional roadways. •

Outreach and Education Opportunities

- Identify barriers for residents to adopt bicycling or other micromobility use.
- Work with DJUSD to promote and incentivize non-single vehicle student drop off. Work with the Safe Routes to School program and youth/family education to normalize active mobility and reduce use of fossil fuel powered vehicles.
- Prohibit idling on school properties and while delivering goods.
- Consider options for re-establishing third-party pedicab service.
- Publicize and acknowledge existing and emerging businesses that have adopted non-fossil fuel delivery methods.
- Work with local artists and graphic designers to illustrate importance of reducing fossil fuel powered vehicle travel within Davis.

Action B.4 Electric micromobility vehicles

CAAP Goal	**Increase opportunities for active mobility in the community**
Action Summary	Develop financing/incentives for purchasing, using, and maintaining electric micromobility vehicles for personal use (such as bicycles, scooters, trailers). Include specific provisions for low-income and vulnerable populations.
Greenhouse Gas Reduction (Mitigation)	On-road transportation comprises 68% of forecast emissions in 2030. This action reduces these emissions by less than 1%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.1 Electric Vehicle Charging Plan B.3 'First mile/Last mile' transportation

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	Proposed programs can be implemented with current staff.
Funding Opportunities	• Active Transportation Program (Caltrans) • Rebuilding American Infrastructure with Sustainability and equity Discretionary Grant Program (US Department of Transportation) • Regional Program (SACOG) • Sustainable Communities Grant (Caltrans) • Transformative Climate Communities Program (California Strategic Growth Council)

Implementation Information

Lead Entity	PWET
Project Lead (and Staff)	PWET Assistant Director
External Partners	YCTD, SACOG
Priority Level/General Timeframe	Mid-term (3-5 years)
Immediate Next Steps	1. Develop performance measures and costs associated with the project. 2. Review and identify funding sources and product sources (e-bikes and scooters). 3. Identify methods, programs and incentives for low-income and vulnerable populations. 4. Implement programs.
Implementation Milestones	TBD

Initiation Timeline	1. For next steps item 1, 6 months after CAAP adoption 2. For item 2, 6 months after CAAP adoption 3. For item 3, 6 months after CAAP adoption 4. For item 4, begin implementation 12 months after CAAP adoption
Completion Timeline	3-5 years after action initiation

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of electric micromobility vehicles purchased per year for both all residents and low-income and vulnerable residents • Total dollar value of financial incentives provided per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• TBD

Outreach and Education Opportunities

- Provide more biking classes and education for adults.
- Include a program for ancillary family/work needs such as bike trailers, children's bike seats, bike locks, etc.
- Identify barriers for residents to adopt bicycling or other micromobility use.
- Work with DJUSD to promote and incentivize non-single vehicle student drop off.

Action B.5 Pedestrian and bicycle safety

CAAP Goal	**Increase opportunities for active mobility in the community**
Action Summary	Encourage active transportation with infrastructure improvements. Implement roadway and bikeway infrastructure improvements in existing right-of-way, such as "road diets," narrower pedestrian crossing distances, green stormwater infrastructure, etc., to meet Green Streets standards and increase safety for pedestrians and bicycles.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	$50,000 to $100,000 estimated to be required to develop roadway standards that include these elements with a complete review and development of new standards as well as an improvement implementation plan. $150,000 to $200,000 estimated to be required to update the Beyond Platinum Bicycle Action Plan (2014) with identification of needs and locations for infrastructure improvements as well as funding sources for these projects. The City is currently developing a Roadway Safety plan that will identify existing locations with a collision history as well as improvements that would address any identified issues.
Biennial Funding Needs	TBD
Staffing Needs	Implementation can be completed with current staff.
Funding Opportunities	• Active Transportation Program (Caltrans) • Community Design Funding Program (SACOG) • Low Carbon Transit Operations Program (Caltrans) • Rebuilding American Infrastructure with Sustainability and Equity Discretionary Grant Program (US Department of Transportation) • Regional Program (SACOG) • SB1 State Local Partnership Program (California Transportation Commission) • Sustainable Communities Grant (Caltrans) • Transformative Climate Communities Program (California Strategic Growth Council) • Transit and Intercity Rail Capital Program (California State Transportation Agency) • Urban Greening Program (California Natural Resources Agency)

Implementation Information

Lead Entity	PWET, PWUO
Project Lead (and Staff)	PWET Assistant Director; PWUO Environmental Resources Division Manager
External Partners	DJUSD
Priority Level/General Timeframe	Mid-term. Begin planning, project identification and implementation within first two to three years following CAAP adoption
Immediate Next Steps	1. Identify intersections with safety issues. 2. Update the Beyond Platinum Bicycle Action Plan (2014) to identify the needs and locations for infrastructure improvements as well as funding sources for these projects. 3. Identify priority infrastructure improvements in existing development and CIP projects. Assign target dates for completing construction of priority projects not addressed in the current CIP. 4. Update standards for roadway improvements including Green Streets standards, intersection design standards, shade provision over roadways and bikeways with trees or structures, green stormwater infrastructure, etc.
Implementation Milestones	1. For next steps item 1, within six months following CAAP adoption 2. For item 2, within twelve months following CAAP adoption 3. For item 3, within twelve months following CAAP adoption 4. For item 4, within twelve months following CAAP adoption
Initiation Timeline	Within six months of CAAP adoption
Completion Timeline	On-going implementation

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Linear feet of bikeway facilities installed or improved • Linear feet of pedestrian facilities installed or improved • Number of new or improved bicycle and pedestrian crossings • Number of traffic calming projects installed • Number of bicycle-vehicle and pedestrian-vehicle conflicts eliminated or improved
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total and killed or severely injured (KSI) collisions involving people walking or bicycling (total collisions and/or collision rate): citywide, along key corridors (e.g., Russell Boulevard) and at key intersections

Outreach and Education Opportunities

- Consider creative interventions such as bicycle safety haiku (as in New York City), painted crosswalks, traffic calming street murals, etc.
- Engage youth and young adults in outreach and education about active transportation and options and ways to be sustainable, to be safe and to reduce vehicle use.
- Consider City development or partnerships (Bike Davis, Bike Campaign, Cool Davis, etc.) to create summer programs for climate education.
- Consider collaborating with DJUSD and UC Davis to create a Climate Action to empower youth and young adults to advocate for local transportation.

Action B.6 Expand public transit

CAAP Goal	**Strengthen transit service within Davis and among regional neighbors**
Action Summary	Subsidize public transit so it is free for all to use. Promote expansion of public transit routes and increased operation frequency within Davis to support day-to-day travel needs.
Greenhouse Gas Reduction (Mitigation)	On-road transportation comprises 68% of forecast emissions in 2030. This action reduces these emissions by 1%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.7 Strengthen regional transit

Funding and Resources

Initial Funding Needs	TBD: Full annual operational costs for Yolobus and Unitrans.
Biennial Funding Needs	TBD
Staffing Needs	Current staff can implement pilot program
Funding Opportunities	• Grants for Buses and Bus Facilities Program (Federal Transit Administration) • Low Carbon Transit Operations Program (LCTOP) • Rebuilding American Infrastructure with Sustainability and Equity Discretionary Grant Program (US Department of Transportation) • Regional Program (SACOG) • SB1 State Local Partnership Program (California Transportation Commission) • Sustainable Communities Grant (Caltrans) • Transit and Intercity Rail Capital Program (California State Transportation Agency)

Implementation Information

Lead Entity	PWET
Project Lead (and Staff)	PWET Assistant Director
External Partners	Unitrans/UC Davis, YCTD, SACOG; potentially Sacramento Regional Transit District (SacRT) and Amtrak Capital Corridor
Priority Level/General Timeframe	High-priority, short-term (1-3 years) for one-year Yolobus/Unitrans free transit pilot project Mid-term (3-5 years): Full regional implementation of expanded service routes and frequency; implementing free transit
Immediate Next Steps	1. Complete update to Short Range Transit Plan. 2. Meet with YCTD and/or Unitrans and develop estimates for costs to conduct a pilot project that would allow all riders to be fare-free for one year. Develop potential tracking metrics for ridership. 3. Using the data collected on travel patterns, routes and frequencies, determine what the impacts would be to service and what additional service would need to be provided to encourage higher mode shift to

	transit. Consider/prioritize routes that help low-income transit users to access basic needs locations such as grocery stores, pharmacies, and health centers. 4. Secure grant funding to implement pilot project. 5. Complete 12-month pilot.
Implementation Milestones	Following completion of 12-month pilot project, develop statistics and lessons learned for fare-free transit in Yolo County for GHG reduction, including decrease in VMT and transit adoption by both disadvantaged groups and the general population. Address implications at state level and opportunities to extend pilot as well as to scale up the service area beyond Yolo County.
Initiation Timeline	1. For next steps item 1, begin within 3 months (September 2022) 2. For item 2, immediately (July 2022) 3. For item 3, within 3 months (September 2022) 4. For item 4, begin to research now and implement within 6 months after CAAP adoption 5. For item 5: TBD: target FY 2023-24 (July to July)
Completion Timeline	Pilot project completion within two years.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Total number of weekday and/or annual revenue service hours/miles on bus routes and route segments operating within the City of Davis • Number of weekday peak transit vehicles operating within the City of Davis • Number of weekday daily and peak one-way transit trips operating within the City of Davis • Total number of weekday and/or annual one-way rail and Amtrak thruway trips serving the Davis Depot • Ratio of private vehicle vs. transit peak period travel time between key origin-destination pairs • Number of residents/workers within ¼ and ½ mile walk/bike distance of a transit stop/station • Number of residents/workers within ¼ and ½ mile walk/bike distance of a high-frequency transit stop/station (one one-way transit trip every 15 minutes or less) • Number of low income or vulnerable residents within ¼ and ½ mile walk/bike distance of a transit stop/station • Weekday on-time performance for routes operating within the City of Davis
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total number of weekday and/or annual transit passenger boardings and alightings at transit stops/stations within the City of Davis • Total number of weekday and/or annual low income or vulnerable transit passenger boardings and alightings at transit stops/stations within the City of Davis • Total City of Davis-generated VMT and/or VMT per capita

Outreach and Education Opportunities

- Collaborate with UC Davis and regional partners
- Develop communications and outreach plan for free transit. As noted by a community member, students already are big transit users in Davis. This will only increase with better routes and timing and new micro-transit and last mile solutions. UC Davis students who vote to tax themselves to provide adequate transit for all can serve as a model.
- Develop visual materials at bus stops and in vehicles of Unitrans, Yolobus, Amtrak, etc. promoting regional transit use and incorporating humor.
- Consider this program as a model for other state regions; this action may benefit from lobbying and advocating for program changes at the state and federal level.

Action B.7 Strengthen regional transit

CAAP Goal	**Strengthen transit service within Davis and among regional neighbors**
Action Summary	Coordinate with regional transit agencies and cities to promote cohesive transit interconnections, including express buses to Woodland, West Sacramento, Sacramento, etc.
Greenhouse Gas Reduction (Mitigation)	On-road transportation comprises 68% of forecast emissions in 2030. This action reduces these emissions by 1%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.1 Electric Vehicle Charging Plan B.6 Expand public transit

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	Implementation can be completed with current staff.
Funding Opportunities	• Grants for Buses and Bus Facilities Program (Federal Transit Administration) • Low Carbon Transit Operations Program (LCTOP) • Rebuilding American Infrastructure with Sustainability and Equity Discretionary Grant Program (US Department of Transportation) • Regional Program (SACOG) • SB1 State Local Partnership Program (California Transportation Commission) • Transit and Intercity Rail Program (California State Transportation Agency) • Potential revenue generation from this action has yet to be determined.

Implementation Information

Lead Entity	PWET
Project Lead (and Staff)	PWET Assistant Director
External Partners	YCTD, SacRT, SACOG, Amtrak, Unitrans
Priority Level/General Timeframe	Short term, Within first 3 years for planning/collaboration framework
Immediate Next Steps	This will require coordination with several transit providers and service expansion across the region. Need to identify immediate needs and opportunities to start/promote service expansion. City will look to either SACOG or YCTD to help champion the idea.
Implementation Milestones	Coordinate this action with regional partners and in concert with action B.5

Initiation Timeline	TBD
Completion Timeline	TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Total number of weekday and/or annual revenue service hours/miles on bus routes and route segments operating between the City of Davis and other communities/destinations such as West Sacramento and Woodland • Number of weekday peak transit vehicles operating between the City of Davis and other communities/destinations such as West Sacramento and Woodland • Number of weekday daily and peak one-way transit trips operating between the City of Davis and other communities/destinations such as West Sacramento and Woodland • Total number of weekday and/or annual one-way rail and Amtrak thruway trips serving the Davis Depot • Ratio of private vehicle vs. transit peak period travel time between key origin-destination pairs (e.g., Downtown Davis to Downtown Sacramento) • The number of residents/workers located 30- and 60-minutes or less by transit to/from Davis
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total number of weekday and/or annual transit passenger boardings and alightings using intercity services at transit stops/stations within the City of Davis • Total number of weekday and/or annual low income or vulnerable transit passenger boardings and alightings at intercity services transit stops/stations within the City of Davis • Total City of Davis-generated VMT and/or VMT per capita

Outreach and Education Opportunities

- Work with Unitrans, YCTD, SacRT and other regional partners to develop outreach messaging.
- Work with UC Davis graphics arts department in collaboration with Center for Sustainable Transportation and other campus groups to promote regional art related to transportation.

Action B.8 Downtown parking improvements

CAAP Goal	Reduce single occupant vehicle use
Action Summary	Revisit most recent parking pricing study (Downtown Paid Parking, City Council March 5, 2019) and implement pilot projects to test their effectiveness. Reduce or eliminate minimum parking standards in new developments.
Greenhouse Gas Reduction (Mitigation)	On-road transportation comprises 68% of forecast emissions in 2030. This action reduces those emissions by 5%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	B.1 Electric Vehicle Charging Plan B.10 Low Emissions Vehicle Program

Funding and Resources

Initial Funding Needs	TBD. No additional funding required to implement the current plan. Updating the plan would cost between $100,000 and $150,000.
Biennial Funding Needs	TBD
Staffing Needs	Implementation can be completed with current staff.
Funding Opportunities	• SB1 State Local Partnership Program (California Transportation Commission) • Sustainable Communities Grant (Caltrans) • This action has the potential to generate revenue, which could cover action costs.

Implementation Information

Lead Entity	Public Works Engineering and Transportation
Project Lead (and Staff)	PWET Assistant Director
External Partners	TBD
Priority Level/General Timeframe	Short-term (1-3 years) for pilot project implementation
Immediate Next Steps	1. Review Downtown Parking plan and summary to determine potential pilot projects. Work with City Commissions to identify parking goals, recommendations for projects, timeframes and approaches. 2. Develop a proposed approach to convert the parking lots to paid lots, potentially using a mobile app like ParkMobile (as used by UC Davis and the City of Sacramento) to defer costs. Kiosks may still be needed to collect payment. Work with City Commissions to address proposals. As per City Council action on March 25, 2019, initial paid parking lots shall include: • E Street Plaza Lot • Amtrak Train Depot Lot (free on weekends) • North F Street Lot (E-F-3rd-4th) • South G Street Lot

	3. Align new approach with existing permit parking technologies and consider alignment with Amtrak's requested parking pass solution for their customers. 4. Develop costs and target revenue neutral policy. 5. Consider creating a parking authority that can bond to cover the costs and then enforce/operate the program.
Implementation Milestones	TBD
Initiation Timeline	TBD
Completion Timeline	TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Parking supply and peak parking demand at parking facilities located within Downtown Davis and within potential parking spillover areas (e.g., Old East Davis) • Total number of daily commute and non-commute trips to/from Downtown Davis by mode • Non-motorized commute and non-commute trip mode split for trips to/from Downtown Davis
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total City of Davis-generated VMT and/or VMT per capita

Outreach and Education Opportunities

- Work with City Commissions to identify parking goals and objectives.
- Consider Downtown Plan components related to downtown parking and develop further implementation measures and messaging.

Action B.9 Transportation Demand Management (TDM) program

CAAP Goal	Reduce single occupant vehicle use
Action Summary	Address recommendations for developing, funding, and staffing a coordinated Transportation Demand Management (TDM) program to encourage and/or require 'all people, all trips' to implement TDM strategies, such as remote work opportunities, community education and outreach, micromobility, vanpool, rideshare, subsidized transit, employee parking cash-out, etc.
Greenhouse Gas Reduction (Mitigation)	On-road transportation comprises 68% of forecast emissions in 2030. This action reduces those emissions by 1%.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	Assume $150,000 to fund the plan and seed initial TDM strategies.
Biennial Funding Needs	TBD
Staffing Needs	Implementation can be completed with current staff.
Funding Opportunities	• Active Transportation Program (Caltrans) • Low Carbon Transit Operations Program (Caltrans) • Regional Program (SACOG) • Sustainable Communities Grant (Caltrans) • Transportation Demand Management Program (SACOG) • Transit and Intercity Rail Capital Program (TIRCP)

Implementation Information

Lead Entity	PWET, CDS
Project Lead (and Staff)	PWET Assistant Director; Sustainability Coordinator
External Partners	YCTD, SACOG, UCD, Other large employers, Cool Davis, City Commissions (Natural Resources Commission; Bicycling, Transportation, and Street Safety Commission)
Priority Level/General Timeframe	Short term (1-3 years)
Immediate Next Steps	1. Collaborate with UC Davis for current TDM approaches. 2. Develop a TDM plan for Davis, including provisions for remote work opportunities, community education and outreach, micromobility, vanpool, rideshare, subsidized transit, employee parking cash-out and other methods to effect community behavior change. 3. Work with local businesses to incentivize TDM. 4. Implement guidelines for new development projects to provide for TDM. 5. Coordinate with transit providers to implement TDM incentives. 6. Develop tracking methods and metrics.

Implementation Milestones	Develop outreach materials to provide information about TDM. Work with Cool Davis and other partners to reach community members. Seek grant and foundation funding to implement TDM practices and programs.
Initiation Timeline	For item 1 above, begin within 3 months of CAAP approval
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Development and implementation of a City of Davis TDM Plan • Identification of existing staff and/or hiring of new staff for TDM Plan preparation, implementation, monitoring • Development and adoption of VMT impact analysis guidelines (including analysis methodologies and significance thresholds) for use during California Environmental Quality Act review for land development projects. Incorporate elements of TDM Plan for the purposes of VMT mitigation. • Update roadway impact fee program to a VMT-based fee program. Incorporate elements of TDM Plan for future transportation improvements to be funded by impact fees.
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Total City of Davis-generated VMT, residential VMT per capita, and work VMT per job

Outreach and Education Opportunities

- Work with City Commissions to identify TDM goals and objectives.
- Support implementation of State-wide roadway pricing, including Interstate 80 over the Yolo Causeway.
- Support legislation to enable local jurisdictions to implement roadway pricing on local roadways.
- Advocate to the CPUC to modify Rule 21 and other interconnection requirements and “EV as storage” protocols.
- Consider Downtown Plan components related to TDM and develop further implementation measures.
- Engage youth and young adults in outreach and education about TDM and active transportation options.
- Consider City development or partnerships (Bike Davis, Bike Campaign, Cool Davis, etc.) to create summer programs to offer climate education.
- Consider collaborating with DJUSD and UC Davis to create a Climate Action to empower youth and young adults to advocate for transportation.

Action B.10 Low Emissions Vehicle Program

CAAP Goal	Reduce single occupant vehicle use
Action Summary	Research, develop, and establish a low-emissions vehicle program that disincentivizes travel by internal combustion engine (ICE) vehicles.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	TBD based on staffing levels and needs at time of implementation.
Funding Opportunities	• Clean Transportation Program (California Energy Commission) • Low or No Emission Vehicle Program (Federal Transit Administration) • National Electric Vehicle Infrastructure Formula Program (Federal Highway Administration) • Regional Program (SACOG) • Sustainable Communities Grant (Caltrans) • This action has the potential to generate revenue, which could be used to cover action costs.

Implementation Information

Lead Entity	PWET
Project Lead (and Staff)	PWET Assistant Director
External Partners	Potential partners: CARB, SACOG
Priority Level/General Timeframe	Long-term
Immediate Next Steps	• Research other cities' approaches to developing low-emissions vehicle zones (including low- or zero-emissions freight zones) to understand how geographic boundaries are set and expanded over time, what vehicle types are impacted by the program and how (e.g., exclusion, fee to enter), and how the program is implemented (e.g., registrations, automatic license plate readers). • Identify a pilot project low-emissions vehicle zone within the city, such as a higher population area where safety, environmental, or air quality/health risks could be mitigated with the program. • Implement a public engagement/outreach campaign for the pilot project to communicate benefits of the program and build support from residents/local

	businesses, including equity considerations for small businesses and marginalized residents. • Develop a phased implementation plan for expanding the geographic extent and program strictness.
Implementation Milestones	TBD
Initiation Timeline	Within 3 years of CAAP approval
Completion Timeline	TBD

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of low-emissions vehicles purchased per year • Total dollar value of financial incentives provided per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• To be determined

Outreach and Education Opportunities

- Promote “Open Streets” in Downtown Davis, maximizing opportunities for car-free activities.

Action B.11 Develop sustainable housing

CAAP Goal	**Expand opportunities for local housing development to balance local employment opportunities**
Action Summary	Increase housing opportunities to support the jobs/housing balance and decrease vehicle miles traveled. Develop incentive options to increase housing construction in the city, including high-density, mixed-use (especially office space and food service), transit-oriented, and affordable options.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	No additional funding required for initial efforts and policy development
Biennial Funding Needs	TBD
Staffing Needs	No additional staffing needed for initial efforts and policy development beyond filling vacant positions in CDS.
Funding Opportunities	• Community Design Funding Program (SACOG) • Transformative Climate Communities Program (California Strategic Growth Council) • More potential funding opportunities in the housing development space

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	CDS Director and Principal Planner
External Partners	Housing advocates, developers and property owners
Priority Level/General Timeframe	Short-term (1-3 years) Address City policies and practices that constrain the City's ability to provide housing, including the provision of appropriately zoned sites to meet the City's housing needs as part of the implementation of the Housing Element Update. Address zoning and development requirements in the downtown to support the development of increased housing as part of the Downtown Plan implementation.
Immediate Next Steps	Complete the adoption of the Downtown Davis Specific Plan and adoption of the 2021-2029 Housing Element Update.
Implementation Milestones	• Provide sites for at least 2,075 housing units during the current planning period, including at least 580 very low-income units, 350 low-income units, 340 moderate-income units, and 805 above moderate-income units. • Rezone at least 23.6 acres to address the City's shortfall of 472 lower-income RHNA units, plus a buffer of at least an additional 140 lower-income units, by May 15, 2024.

	• Continue discussions with DJUSD about the creation of housing on their headquarters site and start discussions about the creation of housing on surplus school property. • Continue to give priority water and sewer services to units necessary to meet the City's RHNA for this planning period, with specific priority given to affordable housing units. • Through the adoption of the Downtown Davis Specific Plan, provide opportunities for the development of owner-occupied townhouses, small cottages, and condominiums in and near the core area to limit sprawl and provide housing options. • Facilitate lot consolidation to support affordable housing on small parcels by offering reduced parking requirements, additional density bonuses, or other incentives. • Create incentives to the development of affordable housing through measures such as flexible development standards that are compatible with the surrounding neighborhood. The PD zone is meant to foster development flexibility. • Identify and implement one or more sources of robust permanent funding for the City's Housing Trust Fund, establish and prioritize uses for these funds, and establish a procedure for administering the Trust Fund. • Evaluate options for streamlining the development review process and implement options that are determined to be feasible.
Initiation Timeline	Concurrently with CAAP adoption.
Completion Timeline	Time frame varies for above milestones. Consider that implementation will be between 2022-2029, in alignment with Housing Element time frame.

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Successful development of incentive options • Number of housing units constructed per year that received development incentives • Percent of housing units constructed per year within ¼-mile walk of transit stops
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Per capita VMT

Outreach and Education Opportunities

TBD

Action C.1 Climate-ready private landscapes

CAAP Goal	Conserve water in our buildings and landscapes
Action Summary	Develop financing/incentive options with specific provisions for low-income and vulnerable populations that promote climate-ready private landscapes, such as installing drought tolerant, native, climate-ready plants and/or xeriscaping; programs that support turf removal; installing rainwater capture and harvesting equipment; and the use of green stormwater measures to enhance natural water infiltration.
Greenhouse Gas Reduction (Mitigation)	Water-related energy use comprises 0.1% of forecast emissions in 2030. This action reduces those emissions by 9%.
Climate Hazard Addressed (Adaptation)	Drought Flood
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	TBD; work with non-profit partners
Funding Opportunities	• Transformative Climate Communities Program (California Strategic Growth Council) • Urban Greening Program (California Natural Resources Agency)

Implementation Information

Lead Entity	PWUO, PCS
Project Lead (and Staff)	PWUO Environmental Resources Manager and Conservation Coordinators; PCS Parks Supervisor
External Partners	Tree Davis, UC Davis
Priority Level/General Timeframe	Short-term (3 years). High priority for water conservation
Immediate Next Steps	1. Develop City materials for outreach and education to promote water use efficiency and stormwater quality. 2. Develop approaches for targeting and incentivizing low-income and vulnerable homeowners. 3. Develop approaches, financing and incentives for multi-family residential owners and renters which consider the “split incentives” issue. Address standard language for legal authority to make structural alterations (landscaping or otherwise) to rental properties through lease or other legal document. 4. Identify affordable housing complexes in Davis with opportunities to convert turf areas to drought-tolerant landscaping.

Implementation Milestones	Identify water conservation targets and metrics for private landscapes (possibly through AquaHawk) Secure funding for incentives for single-family and multi-family residential properties, with focus on vulnerable and low-income populations.
Initiation Timeline	Immediately upon CAAP approval
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of program participants that received financing/incentives, residential and non-residential participants reported separately • Percent of program participants that removed turf, installed native/drought-tolerant/xeriscape landscaping, installed rainwater capture equipment, and/or installed green stormwater measures (program application can be designed to request this information) • Percent of total low-income/vulnerable households participating in program per year
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Gallons of potable water used per year • Gallons of potable water per capita per year • Total dollar value of financial incentives provided per year

Outreach and Education Opportunities

- Provide education on behavior changes that reduce water use.
- Provide outreach and education on water efficient landscapes.
- Form a volunteer corps to support the City water conservation and waste management goals.
- Provide greywater outreach and education.
- Enhance outreach and education related to water conservation with art, humor, and graphically interesting messaging.
- Continue with public messaging related to water conservation and City water use portal AquaHawk.
- Provide education on drought tolerant tree choices and maintenance. Partner with Tree Davis volunteers or youth organizations for tree plantings.

Action D.1 Cool surfaces

CAAP Goal	**Create a cooler city with more green space for people and habitat**
Action Summary	Develop ordinance(s) to require the use of cool surfaces, reflective materials, coatings, and other emerging technology to reduce the heat island effect. Include building (roof, walls, windows, paint etc.) and transportation (road/bike path surfaces, shade, etc.) measures.
Greenhouse Gas Reduction (Mitigation)	Existing residential building electricity use comprises 4% of forecast emissions in 2030. This action reduces those emissions by less than 1%.
Climate Hazard Addressed (Adaptation)	Extreme heat
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	Current staff can implement action.
Funding Opportunities	• Transformative Climate Communities Program (California Strategic Growth Council) • Urban Greening Program (California Natural Resources Agency) • This action has the potential to generate revenue depending on whether there will be fines under the mandatory implementation approach. This revenue could be used to cover action costs.

Implementation Information

Lead Entity	PWET, PWUO, CDS
Project Lead (and Staff)	PWET Senior Civil Engineer; PWUO Deputy Director (Operations); Chief Building Official
External Partners	SMAQMD (research available); climate advocacy groups
Priority Level/General Timeframe	Short-term/High priority
Immediate Next Steps	• Identify approaches to implementing cool surfaces requirements for roadways and bikeways (surfacing and providing shade). • Improve City facilities to provide cool surfaces on roofs, walls, paving, etc. • Develop new and expand existing ordinances for cool surfaces. • Address bus shelters and other shading of surfaces where people congregate. • Create and identify “shade corridors” for walking and biking. • Monitor impacts of Central Park splashpad project, including more natural shade, use of solar power for the UV sterilization and a gathering place for everyone to cool down by the splashpad.

Implementation Milestones	Adopting new ordinances; improving City facilities for heat island impact and greenhouse gas emissions reduction; using City implementation as a model for community.
Initiation Timeline	Immediately upon CAAP approval
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Successful adoption of ordinance • Percent of buildings with cool roofs, reflective materials, or coatings • Percent of buildings with cool walls, reflective materials, or coatings
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Consider measurement of urban temperatures

Outreach and Education Opportunities

- Provide interpretive information at City facilities about cool surfaces, GHG emissions reductions, and other metrics.
- Develop website information and handouts and provide information at City Hall building and permit counters about various cool surfaces.
- Continue to pilot “Cool Roadways” projects.

Action D.2 Urban forest

CAAP Goal	**Create a cooler city with more green space for people and habitat**
Action Summary	Expand urban forest in parks, greenbelts, and open space with climate-ready species that provide shade. Develop a tree-replacement plan for all City trees, based on assessment of age, and vigor. Provide educational materials to community members to encourage planting and care of climate-ready private trees and landscapes.
Greenhouse Gas Reduction (Mitigation)	This action would remove 150 MT CO_2e/yr from the atmosphere.
Climate Hazard Addressed (Adaptation)	Extreme heat
Related CAAP Actions	C.1 Climate-ready private landscapes D.1 Cool surfaces (due to the shade, cooling effects and greenhouse gas reduction properties provided by the urban forest)

Funding and Resources

Initial Funding Needs	TBD; Funds to implement the initial recommendations out of the Urban Forest Management Plan (staffing levels, tree planting & care etc.).
Biennial Funding Needs	TBD; Adequate funds to ensure ongoing operations as approved by Council from Urban Forest Management Plan recommendations.
Staffing Needs	TBD; As recommended by the Urban Forest Management Plan
Funding Opportunities	• Healthy Soils Program (California Department of Food and Agriculture) • Transformative Climate Communities Program (California Strategic Growth Council) • Urban Greening Program (California Natural Resources Agency)

Implementation Information

Lead Entity	PWUO
Project Lead (and Staff)	Urban Forestry Manager, Deputy Director (Operations)
External Partners	Tree Davis, contractors, partnerships with other jurisdictions in the City (DJUSD, County, etc.) and private property owners
Priority Level/General Timeframe	Already underway, additional effort pending approval of Urban Forest Management Plan
Immediate Next Steps	• Approval of the Urban Forest Management Plan • As part of implementation, consider recommendations of Tree Commission: Consider incentives for increasing the number of trees on private properties (residential and commercial). Consider increasing the rate of tree planting to expand the urban forest meaningfully by making sure to more than offset the rate of tree mortality and removal. Increase urban forestry budget and staffing.
Implementation Milestones	As determined by the Urban Forest Management Plan. Milestones TBD.

Initiation Timeline	Approval of the Urban Forest Management Plan
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Number of trees planted in public landscapes • Number of trees planted in private landscapes • Successful development and adoption of tree-replacement plan • Number of households received education materials
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Percent increase in canopy cover

Outreach and Education Opportunities

- Address opportunities for more community garden space.
- Involve the community in outreach, education and recognition of the value of the urban forest, including opportunities for storytelling and art about trees, landscapes, and ecosystems.
- Work closely with Tree Davis for outreach and education.
- Engage youth and young adults in outreach and education about the urban forest.
- Consider City development or partnerships (Tree Davis, etc.) to create summer programs for climate education.
- Consider collaborating with DJUSD and UC Davis to create a Climate Action to empower youth and young adults to advocate for the urban forest.
- Develop more messaging on trees in Davis to identify benefits.

Action D.3 Green stormwater infrastructure

CAAP Goal	**Protect public health, safety, and infrastructure against damage and disruption from flooding**
Action Summary	Develop policies to increase the use of green stormwater infrastructure and enhance natural water infiltration in public infrastructure.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	Flood
Related CAAP Actions	D.4 Flood resilience of critical infrastructure

Funding and Resources

Initial Funding Needs	TBD; Would need consultant to support for development of policies beyond current NPDES requirements.
Biennial Funding Needs	None anticipated, other than when policy updates are required by State.
Staffing Needs	Vacant stormwater quality position to be filled. This role would manage consultant.
Funding Opportunities	• Healthy Soils Program (California Department of Food and Agriculture) • Transformative Climate Communities Program (California Strategic • Urban Greening Program (California Natural Resources Agency)

Implementation Information

Lead Entity	PWUO, CDS
Project Lead (and Staff)	Environmental Resources Manager, Stormwater Quality position, Planner
External Partners	California Stormwater Quality Association, State, consultant
Priority Level/General Timeframe	Low priority, short-term effort, current regulations exist that require much of the infrastructure to be put in place
Immediate Next Steps	TBD. Next steps could include implementation of components of Resilient Street Lab concept in neighborhoods, downtown and along major streets.
Implementation Milestones	Develop list of potential street improvements to address stormwater and runoff capture. See Action D.4.
Initiation Timeline	TBD
Completion Timeline	Ongoing as policies & state regulations are updated

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Successful adoption of policies • Number of green stormwater infrastructure catchments

Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• Number of gallons of stormwater treated • Percent reduction in incidents of localized flooding/ponding

Outreach and Education Opportunities

- Work with UC Davis landscape design, human ecology and other departments to pilot creative approaches to downtown and neighborhood-based storm water management (for example, Kevin Perry with Toole Design and G Street Plaza).
- Consider Resilient Streets Lab program.
- Work with youth groups such as Girl Scouts, Boy Scouts, RotorAct and others to implement local stormwater projects.

Action D.4 Flood resilience of critical infrastructure

CAAP Goal	**Protect public health, safety, and infrastructure against damage and disruption from flooding**
Action Summary	Relocate/elevate critical public infrastructure out of projected flood areas.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	Flood
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	$30,000 to pilot projects in environmental justice (EJ) neighborhoods in year 1
Biennial Funding Needs	$50,000 per year to implement further pilot projects and develop further feasibility analysis and planning for larger flood resilience projects
Staffing Needs	Once Sustainability Program Manager position is filled, initial projects can be handled within existing staffing.
Funding Opportunities	• Building Resilient Infrastructure Communities Grant Program (Federal Emergency Management Agency) • Flood Mitigation Assistance Grant (Federal Emergency Management Agency)

Implementation Information

Lead Entity	PWUO, CDS
Project Lead (and Staff)	Sustainability Program Manager
External Partners	Caltrans, Yolo County Flood Control & Water Conservation District (YCFCWCD), Sutter Health, Resilient Street Lab
Priority Level/General Timeframe	• Short-term: Pilot projects for EJ flood resilience; initiating studies for project alternatives and feasibility • Long-term: Major flood resilience projects at City facilities
Immediate Next Steps	1. Identify areas and facilities with historic flooding, prone to flooding risk, or are located within the 100- and 500-year floodplain. • Based on the Vulnerability Assessment, critical infrastructure serving the city vulnerable to flooding located within the 100-year floodplain includes Sutter Davis Hospital, potable water wells, all five of the City's stormwater pump stations, approximately one mile of Highway 113, and more than 13 miles of City streets. Additionally, flooding is likely to cause the most impact to community assets such as the Davis Arts center, two churches, and two assisted living/retirement facilities. • Based on the Vulnerability Assessment, approximately 12.8% of areas identified as EJ (Environmental Justice) in Davis are in the 100-year flood zone, and an additional 4.7% of EJ areas are in the 500-year floodplain.

	2. Identify and prioritize specific project areas to address flooding risk and risk reduction projects/approaches, especially for major City facilities and for areas impacting low income and vulnerable populations. 3. Develop alternatives and understand feasibility of projects. 4. Pilot flood resilience projects in environmental justice communities, including implementing and monitoring Resilient Street Lab projects in areas identified in Vulnerability Assessment as both EJ and flood risk areas. 5. Implement major flood resilience projects at City facilities.
Implementation Milestones	1. Within two years of adopting CAAP 2. Within two years of adopting CAAP 3. Within two years of adopting CAAP 4. Short term, immediate small projects ($5-8,000 each) 5. Long-term, TBD with more information
Initiation Timeline	For Action 4 above, within 3 months of CAAP approval
Completion Timeline	TBD/ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Miles of streets no longer in flood plain mapping from 2012 FEMA mapping • Number of critical buildings constructed/renovated above base flood elevation
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• TBD

Outreach and Education Opportunities

- Collaborate with community members to promote neighborhood Resilient Street Lab projects.
- Implement 1% art fund to provide visual art addressing flooding.
- Work with UCD landscape design, human ecology and other depts. to design and pilot creative approaches to downtown and neighborhood-based storm water management (i.e. Kevin Perry with Toole Design and G Street Plaza).
- Consider Resilient Street Lab program.

Action D.5 Funding and staffing for existing efforts

CAAP Goal	**Prepare and respond to climate hazards to ensure that the City is equipped to address current and future challenges**
Action Summary	Allocate funding and staff resources to aggressively implement important existing climate-related programs, policies and management, such as City utility infrastructure (water, wastewater and stormwater) and assets (trees, streets, etc.) Continue to conduct assessments at regular intervals to ensure efficient and effective operations that are at pace with industry improvements, and changing needs due to climate change impacts, and implement recommendations in the assessments as technologically and financially feasible.
Greenhouse Gas Reduction (Mitigation)	Solid waste accounts for 3% of forecast emissions in 2030. This action reduces those emissions by 38%.
Climate Hazard Addressed (Adaptation)	Flood Drought Extreme Heat
Related CAAP Actions	C.1 Climate-ready private landscapes

Funding and Resources

Initial Funding Needs	TBD; Dependent on recommendations from implementation plans.
Biennial Funding Needs	TBD; See above
Staffing Needs	Unknown, but potentially significant additions to various division staff to support recommendations from plans.
Funding Opportunities	This action has the potential to generate revenue, which could be used to cover action costs.

Implementation Information

Lead Entity	PWUO
Project Lead (and Staff)	Assistant to the Director, department division managers as applicable
External Partners	State, consultants, contractors, County, UC Davis, etc.
Priority Level/General Timeframe	Short-term/immediate. High priority Ongoing as part of regular asset management and program operations
Immediate Next Steps	See above
Implementation Milestones	Given the wide variety of suggested actions, no clear milestone actions. Could base milestones on each division within division planning, also could base on submittal of required State reporting
Initiation Timeline	Ongoing
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Implementation of Stormwater Management Plan • Completion of update to the Urban Forestry Management Plan • Implementation of water conservation programs • Implementation of solid waste reduction programs
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• TBD

Outreach and Education Opportunities

- Use existing public art staff and funded opportunities to promote climate-related goals and City actions.

Action D.6 Public resources during extreme weather events

CAAP Goal	**Prepare and respond to climate hazards to ensure that the City is equipped to address current and future challenges**
Action Summary	Develop policies to expand existing public services and resources provided by the City and community-based organizations during extreme weather events, such as high wind, air quality (smoke), cooling, and weather relief centers.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	Air Quality Extreme Heat
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	TBD
Biennial Funding Needs	TBD
Staffing Needs	Staffing can be handled within existing workflows
Funding Opportunities	Building Resilient Infrastructure Communities Grant Program (Federal Emergency Management Agency)

Implementation Information

Lead Entity	CDS, PWUO, PCS
Project Lead (and Staff)	Director of Social Services and Housing and Sustainability Coordinator; PWUO Deputy Director (Operations); PCS Director
External Partners	Yolo Solano Air Quality Management District (YSAQMD)
Priority Level/General Timeframe	Short term. High priority
Immediate Next Steps	1. Analyze public service needs and gaps for extreme weather events 2. Develop two-year plan to address immediate goals and needs, provide timeline staffing and budget approaches. 3. After first year, gather data from community members about services provided, and use to improve services for next two years.
Implementation Milestones	1. Within 3 months of CAAP approval 2. Within 6 months of CAAP approval 3. Within 15 months of CAAP approval
Initiation Timeline	Within 3 months of CAAP approval
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Successful adoption of policies • Number of new cooling/weather relief centers opened
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• $MTCO_2e$ per year reduced through carbon sequestration/carbon removal (reported separately as natural carbon removal and industrial carbon removal)

Outreach and Education Opportunities

- Provide information and education on significant topics, including local conditions and hazards such as wildfire risk, air quality, and extreme heat. etc.
- Provide information and education on water conservation and drought, including climate ready tree/landscape choices and maintenance.
- Partner with volunteers, community-based organizations, youth groups and others for tree plantings.
- Provide extreme weather guides.
- Provide air quality index sensors and education for citizen scientists to monitor and post information.

Action D.7 Carbon sequestration and removal

CAAP Goal	**Demonstrate climate leadership through innovation, education, and investment**
Action Summary	Develop policies to implement carbon sequestration and removal opportunities the City can pursue to balance remaining emissions by 2030/2040.
Greenhouse Gas Reduction (Mitigation)	N/A
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	A.6 Carbon mitigation fund

Funding and Resources

Initial Funding Needs	No funding needed for initial policy development
Biennial Funding Needs	TBD
Staffing Needs	No funding needed for initial policy development
Funding Opportunities	• Green Proving Ground Program (US General Services Administration, US Department of Energy) • Healthy Soils Program (California Department of Food and Agriculture)

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Sustainability Coordinator
External Partners	CARB, YSAQMD, SacMetro AQMD, other state agencies
Priority Level/General Timeframe	Long-term. Low priority for City to conduct research. Certain measures for carbon sequestration and removal will be implemented as part of other actions. Approaches to balance remaining emissions by 2040 will be included in this and subsequent CAAP updates.
Immediate Next Steps	1. Coordinate with other local governments (e.g., Yolo County) and public agencies (e.g., SMAQMD) in the region to evaluate the capacity for nature-based carbon sequestration (e.g., forest expansion, agricultural/soil management practices, etc.) and collaborative approaches that would help maximize implementation of available strategies. 2. Evaluate industrial direct air carbon capture and storage technology options on a regular basis to monitor new project implementation examples and changes in the technology's cost per ton removed; consider opportunities for joint facility development with other local and regional partners to help balance remaining emissions in multiple communities.

Implementation Milestones	1. Within 1 year of CAAP adoption 2. Every two years after CAAP adoption
Initiation Timeline	Within 1 year of CAAP adoption
Completion Timeline	Ongoing

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• TBD
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• TBD

Outreach and Education Opportunities

- TBD

Action D.8 Carbon farm plans

CAAP Goal	**Demonstrate climate leadership through innovation, education, and investment**
Action Summary	Develop carbon farm plans for City-owned agricultural land and seek grant funding to implement recommended strategies for maximum carbon sequestration.
Greenhouse Gas Reduction (Mitigation)	This action would remove 1,450 MT CO_2e/yr from the atmosphere.
Climate Hazard Addressed (Adaptation)	N/A
Related CAAP Actions	N/A

Funding and Resources

Initial Funding Needs	A carbon farm plan costs between $10,000 and $12,000. To create plans for ag land around golf course, and land along South Fork of Putah Creek, the City would need approximately $30,000 to $40,000. A carbon farm plan for Howat/Clayton ranch has already been completed.
Biennial Funding Needs	Unknown. Depends on the recommended strategies. For example, converting Clayton Ranch to a wetland would cost several million dollars.
Staffing Needs	No additional staff is needed.
Funding Opportunities	• Agricultural lease revenue • Grant funds • Possibly Measure O funds (open space parcel tax) • Possibly open space development impact fees • Green Proving Ground Program (US General Services Administration, US Department of Energy) • Healthy Soils Program (California Department of Food and Agriculture)

Implementation Information

Lead Entity	CDS
Project Lead (and Staff)	Open Space Program Manager
External Partners	Tenant farmers, Yolo County Resource Conservation District
Priority Level/General Timeframe	Low/Long-term
Immediate Next Steps	1. Install hedgerows at Howat Ranch. 2. Apply compost at Howat Ranch. 3. Complete carbon farm plans for ag land around golf course and ag land along South Fork of Putah Creek. 4. Confirm all tenant farms are using reduced tillage practices.

Implementation Milestones	1. Install hedgerows on agricultural land around golf course: 5 years. 2. Install hedgerows on Los Rios agricultural land: 5 years. 3. Install hedgerows on ag land south of South Fork Preserve (if possible, since this agricultural land does not have water): 5 years. 4. Apply compost to agricultural land around golf course and along the South Fork of Putah Creek: 5 years 5. Possibly convert Clayton Ranch to a wetland: 8-10 years
Initiation Timeline	Within 3 months of CAAP approval
Completion Timeline	Over next 10 years

Performance Tracking Metrics

Output Metrics – What was achieved by this action?	
Implementation Metrics and Sources	• Linear feet of hedgerow installed • Number of acres where compost is being applied • Number of acres where cover crops are planted • Number of acres converted to wetland • Number of grant applications submitted • Percent of City-owned agricultural land for which a carbon farm plan has been developed
Outcome Metrics – What is the effect of those achievements?	
Implementation Metrics and Sources	• MT CO_2e sequestered • Dollars of grant funding awarded • Percent of City-owned agricultural land managed according to a carbon farm plan • Estimated carbon sequestration ($MTCO_2e$ per year) from carbon farm plan program

Outreach and Education Opportunities

- Outreach to tenant farmers to encourage them to implement farming techniques recommended in carbon farm plan, such as reduced tillage, compost application and cover crop planting, if feasible.