

Preliminary List of Greenhouse Gas (GHG) Emissions Reduction Measures and Supporting Actions for Consideration for the City of Healdsburg Climate Mobilization Strategy

1 Overview of Measures and Actions

Greenhouse Gas (GHG) Reduction Measures identify specific goals (i.e., Healdsburg activity data targets by 2030) to address amounts of GHG emissions from each sector. A single measure generally addresses a subsector or represents an incremental step towards reducing GHG emissions in an overall sector. For example, three measures may be established under transportation to address active transportation, shared transportation, and single passenger vehicles. **GHG Reduction Actions** identify the supportive programs, policies, financial pathways, and other commitments that will accomplish a measure goal. Measures and actions are organized according to the following hierarchy:

1. **Sectors:** Sectors define the GHG emissions category in which the GHG reductions will take place and include Building Energy, Transportation, Solid Waste, Water and Wastewater, and Carbon Sequestration.
2. **Measures:** Measures are developed under each sector pursuant to the GHG Inventory and Forecast and in line with the Community Protocol and the California Air Resources Board (CARB) 2022 Climate Change Scoping Plan:
 - Building Energy
 - Transportation
 - Solid Waste, Water, and Wastewater
 - Carbon Sequestration

Additional measures developed for the City of Healdsburg Climate Mobilization Strategy (CMS) not quantified in emissions reductions include:

- Municipal Measures (are a part of each sector) ¹
 - Administrative and Funding
3. **Actions:** Actions identify the programs, policies, funding pathways, and other specific commitments that the City of Healdsburg could implement. Each measure contains a suite of actions, which together have been designed to accomplish the measure goal and metrics.

¹ Municipal measures are the City's demonstration of climate action leadership. They contribute only minorly to community-level GHG emissions reductions and are a subset of the community GHG emissions. For this reason, the GHG emissions reductions expected from municipal measures are considered supportive and will not be quantified as part of the CMS.

Measures and actions can be either quantitative or supportive, defined as follows:

- **Quantitative:** Quantitative measures and actions result in quantifiable GHG emissions reductions when implemented. GHG emissions reductions from these measures and actions are supported by case studies, scientific articles, calculations, or other third-party substantial evidence.
- **Supportive:** Supportive measures and actions may also be quantifiable and have substantial evidence to support their overall contribution to GHG reduction. However, due to one of several factors – including a low GHG reduction benefit, indirect GHG reduction benefit, or potential for double-counting– they have not been quantified and do not contribute directly to the expected GHG reduction target and consistency with the state goals. Despite not being quantified, supportive measures/actions are nevertheless critical to the overall success of the CMS and provide support so that the quantitative measures and actions will be successfully implemented.

2 Key Strategy Attributes

In general, measures are designed to encompass six key attributes that are essential to effective climate policy implementation. Together, these specific key attributes have been identified to be specific community impact areas that together will activate or guide the buildout of actions for each measure. In general, the actions under a single measure should collectively address all the key pillars. The suggested key attributes are:

- **Structural Change:** Establishing a program/policy/ordinance that will allow the City to reach the target that we have within a measure (e.g., ordinance or code)
- **Education:** To support a structural action we want to get community buy in and promote the existence of the program and educate stakeholders (e.g., educational events or materials)
- **Equity:** Actions that engage and consider communities that experience the most immediate and worst impacts of climate change (frontline communities) and that may experience secondary impacts or not benefit directly from what the measure's objective is (e.g., actions that ensure the overall community benefit)
- **Feasibility Studies:** Used to understand more about the details/obstacles/feasibility or implementation of a program (e.g., analysis necessary to identify the best path or the feasibility of implementing a specific measure)
- **Funding:** The financial backing to get a program going – a dive into grant funding or financing opportunities (e.g., grants or rebates that help pay for the implementation of a measure, funding to adequately staff the program)
- **Partnerships:** Looking at outside non-profits or agencies that can help with implementation of a measure's actions (e.g., community organizations that are best positioned to move a measure forward consistently or sustainably)

3 Cost of Implementation

Determining cost for measures is a complex process that involves an evaluation of capital cost, marginal cost, cost of inaction, change in cost overtime, and return on investment. Variability in implementation costs depends on the Goals identified, their level of specificity, and the accompanying funding and financing strategies. Costs may vary from capital-intensive investments, like the installation of bike infrastructure to encourage alternative means of transportation, to less capital-intensive but more staff-intensive investments, like conducting outreach and education campaigns to increase organic waste diversion. These costs have been broken down into three categories presented in Table 1. A qualitative cost range for each draft measure are provided in Table 2. ***A more in-depth cost analysis will be completed after measures and actions have been finalized for up to 15 actions.***

Table 1 Cost Categories

Cost Category	City	Community
Low-Cost	Goals associated with low upfront costs and will only require staff time to implement, such as: <ul style="list-style-type: none"> ▪ Policy Updates ▪ Community Outreach 	Goals associated with low upfront costs compared to existing alternatives, such as: <ul style="list-style-type: none"> ▪ Additional energy bill costs for renewable energy compared to fossil fuel-based energy
Moderate-Cost	Goals associated with moderate upfront costs to the City and require moderate capital costs or consultant time along with staff time, such as: <ul style="list-style-type: none"> ▪ Feasibility Studies ▪ Incentive and Compliance Programs ▪ Pilot Projects 	Goals associated with moderate upfront costs that are not comparable to existing costs nor are offset over lifetime, such as: <ul style="list-style-type: none"> ▪ New fees ▪ Upfront costs partially offset by rebate opportunities
High-Cost	Goals associated with high upfront costs and require substantial investments into infrastructure and technology system upgrades, such as: <ul style="list-style-type: none"> ▪ Bike Lanes ▪ Energy Storage Systems ▪ EV Charging Networks 	Goals associated with high upfront costs that are not comparable to existing cost nor are offset over lifetime, such as: <ul style="list-style-type: none"> ▪ New electric vehicle purchase prior to existing vehicle replacement

4 Measures and Actions

Measures presented in Table 2 were developed based on best practices to achieve GHG emission reductions from the 2018 levels used to develop Healdsburg's GHG forecast. Specific goals for GHG reduction were set based on community, City staff, and stakeholder input. Recently the Balancing Act survey was developed to evaluate specific GHG reduction strategies and the degree of emphasis the community would like to prioritize specific strategies in the CMS. Table 2 presents information including the ranking of community-wide measure within an individual sector based on the results of the Balancing Act, an estimation of GHG emission reductions achievable, and notes on additional context and justification for how the measure was prioritized and why it is included in this list.

Tables 3 to 6 provide the actions that accompany each individual measure. Analytics of the Balancing Act survey along with feedback received from the community through other outreach activities and events and feedback received from City staff regarding feasibility and priorities during Departmental interviews were used to draft the actions presented in Tables 3 through 6. Note that measures that were not included in the Balancing Act survey for community prioritization, are municipal measures, or are supportive measures do not include a ranking in this draft measures list.

Table 2 City of Healdsburg CMS GHG Emissions Reduction Measures List

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
Building Energy (5,250 MT CO₂e)					
BE-1	1	2,200	<p>Moderate cost to City and Utility to obtain additional carbon-free or renewable electricity from existing contracts.</p> <p>Moderate community investment associated with rate increases.</p>	Procure 85% of electricity from renewable and zero-carbon sources by 2030 and 100% renewable and carbon-free no later than 2045.	Procuring as much renewable and carbon-free electricity as feasible has been indicated as # 1 priority for the community through surveys and workshops. Achieving this measure will increase the GHG reductions from other electrification measures related to building and transportation. This aligns with resolution 99-2018 specifying a target of 200 lb/MW, and places a date on the target already adopted by Council.
BE-2	3	1,000	<p>Moderate cost to City to update ordinance and enforce in building permitting process.</p> <p>Low community investment for meeting ordinance requirements. Construction cost savings expected related to avoided gas infrastructure.</p>	Continue to adopt an Electrification Reach Code for all new residential and commercial buildings with each triannual code cycle. Update building electrification ordinance to eliminate natural gas consumption in new construction for the 2025 California Building Standards Code and moving forward.	Of the measure options related to the electrification of new construction, electrification of new construction by 100% was ranked the highest in the Balancing Act. This measure is a low lift financially for the City and community as it requires expansion of an existing ordinance and would build off of increasing the renewable sources for the electricity grid mix. Council adopted the current Electrification Reach Code in 2022, to be implemented and enforced beginning in 2023. For the expected residential development during the 3-year code cycle 2023-2025, the Reach Code is estimated to reduce 159 MT CO ₂ e annually. If the current

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
					exemptions remain in future Reach Codes, the estimated 2030 GHG emission reduction would be 800 MT CO ₂ e.
BE-3	2	1,300	Moderate cost to City associated with offering rebates/incentives	Decarbonize residential building stock by 25% by 2030 and 100% by 2045.	Based on community feedback via surveys and workshops, the community most identified the greatest comfort with electrification of 25% of existing building stock. However, many community members are concerned with the elimination of natural gas completely as it is viewed as a necessary power source in the case of emergencies and power outages. To decarbonize a City it will be essential to decarbonize the building stock completely; Therefore, the measure does include actions to plan for 100% decarbonization by 2045 with a focus of a lesser degree of decarbonization by 2030.
BE-4	2	750	Moderate community investment for equipment upgrades and retrofitting of buildings on a voluntary basis	Decarbonize non-residential building stock by 25% by 2030 and 100% by 2045.	
BE-5	Not ranked	Supportive (Municipal Measure)	Moderate to high cost to City depending on availability of equipment and structural needs for retrofits	Lead by example and decarbonize 50% of municipal buildings and facilities by 2030.	Demonstrates municipality's dedication to leading by example and decarbonizing City operations.
Transportation (19,550 MT CO₂e)					
T-1	2	350	High cost to City for infrastructure improvements and expansions Moderate community investment for local taxes that go towards infrastructure	Implement programs that increase access to safe active transportation, such as walking and biking, that achieve 15% of active transportation mode share by 2030.	The community indicated high interest in improved infrastructure for walking and biking. Additionally, tourism in the community also uses the active transportation infrastructure. An increase to 15% mode shift to walking and biking is at the higher end of what studies have been shown is achievable and is supported by community interest. (Current mode share is 2% biking and 4% walking.)

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
T-2	3	2,000	<p>Moderate cost to City to conduct a feasibility analysis and offer incentives to the community</p> <p>Low community investment as City would help off-set voluntary use of transit with incentives</p>	Implement programs for public transportation that achieve 10% of public transit mode share by 2030.	The community indicated that even with improved public transit, there is not an interest in increasing public transit use significantly. Infrastructure for public transit is expensive, therefore, without the interest of the community to switch to an increased usage of the system the cost for substantial increases in public transit infrastructure is not justified. The measure focuses on achieving a 10% mode shift to public transit (from the current 1%).
T-3	Not Ranked	Supportive	<p>Moderate cost to City to conduct feasibility study and developing/maintaining a micromobility program</p> <p>Moderate community investment for local taxes or user fees that go towards program maintenance</p>	Explore the development of a micro-mobility and/or car-share program to support mode shift from single occupancy fossil fuel vehicles to Zero Emission Vehicles.	Based on community feedback during surveys and workshops, the development of a micro-mobility program to incentivize mode shift to less GHG intensive modes of transportation is highly desirable. This measure involves evaluating different micro-mobility opportunities, such as carshare programs or door-to-door shuttle services, and then determining if and how the micro mobility program would be implemented.
T-4	Not ranked	Supportive	<p>Moderate cost to City to conduct feasibility studies, devote resources to developing and enforcing new policies</p> <p>Low to moderate community investment for paid parking</p>	Develop programs and policies to discourage driving single passenger vehicles and to support the bicycle/pedestrian and public transit mode share goals of Measures TR-1 and TR-2.	This measure is included to further incentivize mode shift to less GHG intensive modes of transportation. This includes actions such as establishing parking fees to influence behavior and provide funding support for mode shift.
T-5	1	14,500	High cost to City to expand EV infrastructure in City	Increase passenger zero-emission vehicle use and adoption to 50% by 2030.	The community indicated this as a high priority for the City (1 st for transportation measures), however the prioritization of this

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
T-6	2	2,000	Moderate community investment for EV charging stations in compliance with EV reach code and business fleet conversion (note that some fleets are already required to begin electrifying their fleet per the Advanced Clean Fleets regulation)	Increase commercial zero-emission vehicle use and adoption to 40% by 2030.	measure differed amongst English speaking and Spanish speaking residents, with Spanish speakers prioritizing this effort lower. A majority of the community's GHG emissions are from the transportation sector, so electrifying the vehicles would significantly reduce GHG emissions.
T-7	Not ranked	700	Low to moderate cost to City depending on availability of equipment and state funding opportunities to offset cost Moderate community investment for equipment upgrades, depending on funding available to offset cost	Electrify or otherwise decarbonize 20% of off-road equipment by 2030.	The state is continually updating the mandates on off-road equipment. However, technology has not reached a point that off-road equipment can be 100% decarbonized. Therefore, a goal is set that is in alignment with technology available and the state's efforts. The City currently has 11 off-road assets therefore it is reasonable to assume that 2 to 3 of these assets can be replaced or retrofitted to be electric by 2030.
T-8	Not ranked	Supportive (Municipal Measure)	Moderate cost to City to replace fleet vehicles and purchase ZEVs in accordance with Advanced Clean Fleet Rule. High cost if exceeding the goals of the Rule.	Lead by example and electrify or otherwise decarbonize the municipal fleet in compliance with the state's Advanced Clean Fleet Rule.	Demonstrates municipalities dedication to leading by example and decarbonizing City operations
T-9	Not ranked	Supportive (Municipal Measure)	Moderate cost to City to develop and implement plan.	Develop and implement a Municipal Transportation Demand Management (TDM) Plan by 2027.	Demonstrates municipalities dedication to leading by example and decarbonizing City operations
Solid Waste, Water, and Wastewater (7,780 MT CO₂e)					
W-1	2	50	Moderate cost to City for additional incentives and resources to install water conservation devices.	Reduce per capita potable water consumption by 25% by 2030 compared with 2018 levels through water demand management, implementation of a recycled water	The community is concerned with drought and water resources and motivated to conserve water. Additionally, the City has indicated that in past years the community has reduced water consumption by 50% in drought years

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
			Low community investment to voluntarily engage in water conservation efforts.	pipeline, and greater efficiency of processes.	and is currently implementing a recycled water pipeline that is expected to reduce potable water use by 10%. Therefore, a reduction to 25% compared to 2018 consumption has already been achieved and now just needs to be maintained.
SW-1	1	7,730	Moderate to high cost to City for resources to develop and enforce compliance with State compost requirements Low to moderate community investment due to paying penalties for non-compliance (low or no cost to community members if compliant)	Achieve Zero Waste by 2030 through 90% diversion of solid waste from the landfill.	The community is very interested in continuing to reduce waste sent to the landfill. Additionally, community members have done well at separating organic waste with the City's assistance and providing of free compost and organic waste containers. This measure has strong community support, low cost to the City and community in alignment with SB 1383. Additionally, this measure supports the Resolution 52-2019, adopted by City Council to achieve zero waste by 2030. (Currently the City has a 53% landfill diversion rate.)
Carbon Sequestration (275 MT CO₂e)					
CS-1	2	25	Moderate cost to City for increase tree planting and conducting feasibility study for compost application. Low community investment for voluntary engagement	Increase carbon sequestration by preserving existing mature trees and planting 500 new trees and high emissions reduction potential land cover types throughout the community by 2030.	Community is highly interested in carbon sequestration, ranked #2 of all measures in the Balancing Act. However, the technology to sequester large amounts of CO ₂ requires additional research and technology advancements. Therefore, several measures are included to increase carbon sequestration through greening of the City, maintaining existing carbon stock and investigating the opportunities for additional carbon sequestration as technology improves.
CS-2	1	Up to 1,000	High cost to City for investing in new technology and adopting ordinances.	Explore new carbon sequestration and carbon capture opportunities.	

Measure #	Community Rank by Sector	2030 GHG Emission Reduction (MT CO ₂ e)	Relative Cost	Measure	Context/Justification
			High community investment for compliance with new ordinances		
CS-3	Not Ranked	Supportive	Low to moderate cost to City for increasing restoration projects with partnerships.	Maintain and expand existing restoration projects to sequester carbon in restored lands.	
CS-4	Not Ranked	250	Moderate cost to City in identifying locations for compost application.	Increase carbon sequestration by applying 0.08 tons of compost per capita annually in the community through 2030.	Part of SB 1383 requires jurisdiction procurement of SB 1383 compliant product (e.g., compost, RNG, etc.). Application of compost would satisfy SB 1383 and increase carbon sequestration.
Administration and Funding					
F-1	Not Ranked	Supportive	Moderate cost to City for policy development and implementation. Moderate community investment for local taxes.	Investigate opportunities for a city-wide carbon tax by 2026 to fund community decarbonization.	Other Cities have found success with implementing a city-wide carbon or climate tax to fund related projects and is worth investigating.
F-2	Not Ranked	Supportive	Low to moderate cost to City for policy implementation.	Develop internal carbon pricing policy.	Demonstrates municipality’s dedication to ensuring that budget decisions include an evaluation of the GHG or climate impact.
F-3	Not Ranked	Supportive	Moderate to high cost to City for developing a position for a Climate Program Manager.	Designate a Climate Program Manager by 2025	Establishing a position dedicated to implementing the CMS and planned projects can improve the implementation success and success in identifying grants and establishing programs.
Total Reductions (32,855 MT CO₂e)					

Table 3 City of Healdsburg Building Energy CMS GHG Emissions Reduction Measures and Actions List

Building Energy		
Measure/Action Number	Pillar	Action
Measure BE-1	Procure 85% of electricity from renewable and zero-carbon sources by 2030 and 100% renewable and carbon-free no later than 2045.	
BE-1	Structural	<p>Healdsburg Electric has completed the following projects to increase the renewable and carbon-free power generation sources of the power content label:</p> <ol style="list-style-type: none"> 1. Floating solar at the water reclamation facility 2. South Feather Water & Power hydropower contract 3. Antelope Expansion 1B Solar Project
BE-1.	Structural	<p>Develop a resolution that Healdsburg Electric will exceed the requirements of SB 100 and SB 1020 by 2030 where 85% of the electricity mix is sourced from eligible renewable sources and/or carbon-free sources. As part of this resolution include actions of:</p> <ol style="list-style-type: none"> 1. Establish grid resiliency goals in the City 2. Establish MW capacity goal for battery storage and/or demand response by 2030 3. Continue to offer 100% renewable Green Rate 4. Indicate that geothermal and other low-carbon eligible renewables will continue to make up approximately 30% of the overall electricity mix. 5. Work with City Council to determine the acceptable and available products that may be used to reach this goal.
BE-1.	Feasibility Study	<p>Conduct an electrification infrastructure and capacity feasibility study to identify expected increases in electric utility demand due to building and vehicle electrification, ensure adequate utility capacity to meet that demand, identify any utility infrastructure improvements, analyze resource adequacy, as well as evaluate different technologies for energy storage and energy reliability (e.g., batteries, fuel cell). Identify locations or complexes (i.e., City facilities, parking lots, critical facilities) in the City for installation of local renewable energy generation, energy storage projects, and/or ideal locations for development of a utility scale micro-grids to improve system reliability. Prioritize and schedule projects for implementation. The plan should include an identification of barriers and needs for implementation of the prioritized projects as well as identify funding sources and partnerships needed for successful implementation.</p>
BE-1.	Partnership	<p>Work with other stakeholders of the Lodi Energy Center (LEC) to identify ways to support as well as streamline the Department of Energy grant application to fund the LEC hydrogen-electrolyzer project. This will reduce emissions of Healdsburg Electric electricity and increase reliability of the electricity source.</p>
BE-1.	Partnership	<p>Identify renewable energy developers to develop projects with the City and ensure smooth integration of such renewable energy systems or other individual solar projects into the grid.</p>
BE-1.	Education	<p>Engage with community to advertise/highlight the adoption of the resolution establishing the goal of achieving 85% renewable and/or carbon-free electricity by 2030 and 100% renewable and/or carbon-free no later than 2045. Provide information on the process for providing reliable electricity 24/7 year around and the importance of power</p>

Building Energy		
Measure/Action Number	Pillar	Action
		sources to ensure that reliability of the electricity provided. Additionally, provide information to the community on the importance of achieving this goal and how to meet this goal through city and community actions and involvement. This may include information on the benefits of local generation of renewable energy versus purchasing of Renewable Energy Certificates (RECs) to promote community installation and use of on-site solar and battery storage as a means to limit reliance on the utility and to better achieve local carbon-free electricity community wide. Include information on time of energy use as it factors into carbon intensity and how community members can capitalize on using electricity when it has the lowest carbon intensity (e.g., when to charge electric vehicles and when to run space heating and cooling).
BE-1.	Equity	Partner with community organizations to ensure low/moderate income households are aware of the CARE and State’s HEAP program to receive decreased electricity rates and provide technical assistance.
BE-1.	Partnership, Education	Develop a partnership between Healdsburg Electric and industry experts to help with demand response planning, developing strategies to increase flexibility of the grid, and for informing consumers of carbon intensity of the electricity they are using to promote behavior change.
Measure BE-2	Continue to adopt an Electrification Reach Code for all new residential and commercial buildings with each triannual code cycle. Update electrification ordinance to eliminate natural gas consumption in new construction for the 2025 California Building Standards Code and moving forward.	
BE-2	Structural	Adopted Electrification Reach Code for the 2022 California Building Standards Code requiring electric space and water heating in new construction to be implemented and enforced beginning in 2023.
BE-2.	Structural	In 2025 and every- 3-years thereafter, revisit the existing building electrification ordinance to update the scope and reduce exemptions to align with industry technology advancements. As part of ordinance update, include the following scope changes: <ol style="list-style-type: none"> 1. Minimize the exemptions associated with the ordinance and continue to require the submittal of an infeasibility waiver to review specific end uses where electrification is technologically infeasible. 2. Require that any end-use deemed infeasible for electrification exceed existing Title 24 energy efficiency standards and be electric ready for future electrification. 3. Establish a zero NOx threshold. 4. To limit stranded assets, discontinue approval of permits for new natural gas lines for new construction unless an infeasibility waiver has been approved. 5. Streamline permitting for battery storage for resiliency in the event of power outage. 6. Specify that affordable housing developments will be all-electric to ensure no stranded assets.
BE-2.	Partnership	Partner with an organization like RCPA, the Building Decarbonization Coalition or a similar organization to engage local building industry stakeholders in promoting and educating about new electric appliance options and approaches to building electrification. Provide technical support such as conducting workforce development sessions for installers, contractors, and building owners/operators, to explore the advantages and technical aspects of electrification.

Building Energy		
Measure/Action Number	Pillar	Action
BE-2.	Education	Engage with the community, key stakeholders, and local-based community organization representing communities of color to raise awareness about building electrification before revising the electrification ordinance. Emphasize the economic and environmental advantages of electrification and address concerns related to emergency response to minimize exceptions. Publicize the cost savings, environmental benefits, and flexibility of electrification through the City website and permit counters, targeting builders, property owners, and contractors.
BE-2.	Partnerships/Equity	Engage with interested parties, both internal interested parties, such as City staff and officials, and external interested parties, such as local developers and community groups regarding the purpose and impact of the Healdsburg Electrification Reach Code and to identify and address equity concerns in policy implementation.
BE-2.	Funding/Equity	Engage with affordable housing developers to leverage incentives for new all-electric low-income residential buildings through the California Energy Commission Building Initiative for Low-Emissions Development (BUILD) Program and the Affordable Housing and Sustainable Communities (AHSC) Program. Regularly investigate and leverage other incentive programs available for electrification of new buildings.
Measure BE-3	Decarbonize residential building stock by 25% by 2030 and 100% by 2045.	
BE-3.	Feasibility Study	Develop a residential building decarbonization plan that assesses the feasibility and cost for electrification retrofitting as well as identifies potential equity concerns/impacts. The plan should identify strategies and/or specific projects to electrify 25% of existing residential buildings by 2030 and identify the increased electricity capacity needs for this electrification goal. It would also establish the funding and financing requirements necessary to support the community in this transition. This may include identification of funding needs to develop and enforce a permitting compliance program.
BE-3	Structural	Continue to monitor the 9 th circuit court of appeals of the CRA vs City of Berkley ruling. Based on legal counsel, establish mandatory requirements resulting in 25% decarbonization of residential buildings by 2030 and 100% by 2045 through either development of emissions standards or development of electric-preferred reach code as described below.
BE-3.	Structural (a)	Establish a zero-NOx standard for furnaces and water heaters through a building code amendment or other mandatory requirement, based on current legislative feasibility. This requires that upon replacement, water heaters and furnaces must be replaced with a zero-NOx alternative.
BE-3.	Structural (b)	Once costs and funding/financing options are identified, develop an-electric-preferred reach code for existing residential buildings by 2025 to be implemented through the building code. Include the following aspects in the code development: <ol style="list-style-type: none"> 1. Develop the reach code such that it satisfies the federal Energy Policy and Conservation Act’s (EPCA) seven criteria for an exemption from preemption. 2. Establish a zero-NOx standards for replacement appliances.

Building Energy		
Measure/Action Number	Pillar	Action
		3. Establish a time of renovation energy efficiency performance requirement and electrification requirement that includes a checklist of cost-effective efficiency and electrification options for renovations to be completed based on scale of project.
BE-3.	Structural	Develop a comprehensive permitting compliance program that includes routine training of City staff, dedicating City staff time to building inspections, charging fees for noncompliance, providing easy-to-understand compliance checklists online and with permit applications, and facilitating permitting online. As part of this permitting program, align with SB 379 to implement an online, automated permitting platform that verifies code compliance and issues permits in real time or allows the City to issue permits in real time for a residential solar energy system (<38.4 kilowatts AC) and a residential energy storage system paired with a solar energy system.
BE-3.	Partnership	Work with PG&E to identify opportunities for natural gas infrastructure pruning within the City to reduce the chance of stranded assets, provide potential funding, and establish an efficient transition to carbon neutral buildings.
BE-3.	Funding	Continue to provide incentives available for community members installing solar and battery storage to their homes such as a Net Metering Program with high-compensation NEM rates, and continue to provide incentives for energy efficiency and efficient electrification upgrades. Consider a Disadvantaged Communities-single-family Solar Homes program. Provide resource information to the community through websites, workshops, and partnerships. Include outreach to newly sold homes, when homeowners are more likely to make upgrades.
BE-3.	Equity	Review incentives, rebates, and financing options for procedural equity and ensure that existing and updated incentive programs are being equitably distributed to the community. Hurdles to equitable implementation could include credit checks, excessive procedural hurdles, and lack of targeted outreach.
BE-3.	Structural	Implement a Neighborhood Retrofit Program to improve resiliency in residential buildings (i.e., on-site power generation and storage, weatherization, cooling, etc.), with an emphasis on connecting incentives and resources with rental property owners and low-income residents. Partner with community organizations to utilize existing resources. Develop an appliance direct install program for Multi-Family income-restricted properties.
BE-3.	Equity	Develop a suite of Equity Guardrails with input from the community to ensure existing building electrification improves equity in the community by limiting displacement and promoting equitable distribution of electrification benefits like resiliency, improved health outcomes, and reduced energy burden.
BE-3.	Partnership	Partner with stakeholders to establish funding pathways to ease community costs for electrification upgrades. Including: <ol style="list-style-type: none"> 1. federal and state grants/subsidies 2. financing options 3. metered energy efficiency; and 4. linking electrification to existing weatherization programs 5. development of custom rates for added electric load or all-electric retrofit to encourage all-electric retrofits

Building Energy		
Measure/Action Number	Pillar	Action
BE-3.	Funding	Dedicate staff time or funding of consultants to sourcing funds through CARB, the Investment Reduction Act, and the Infrastructure Investment and Jobs Act including, but not limited to: <ol style="list-style-type: none"> 1. DOE block grants 2. Green bonds 3. Grant Anticipation Notes or Short-Term Loans 4. Tax exempt lease purchases 5. Energy as a service 6. Energy Performance Contracting from Energy Service Companies (ESCOs)
BE-3	Partnership	Continue to conduct periodic energy efficiency rebates reviews. Promote existing available rebates and incentives for energy efficiency and electrification from Healdsburg Electric, the State, and the Federal government through partnership with Climate Action Healdsburg to educate the community on ways to finance electrification.
BE-3.	Education	Work with regional entities (RCPA) and the local contractors, realtors, homeowner associations, landlords, and labor unions to develop a comprehensive building code and compliance training program, including hosting workforce development trainings discussing the benefits and technical requirements of electrification.
BE-3.	Equity	Complete a low income and affordable housing electrification pilot project for an existing development in collaboration with affordable housing owners, utilities, and the community. Offset cost for occupants using incentives and through the sourcing of grant funds to subsidize cost.
Measure BE-4	Decarbonize non-residential building stock by 25% by 2030 and 100% by 2045.	
BE-4.	Feasibility Studies	Conduct a feasibility strategy to identify non-residential building electrification barriers and develop a non-residential building electrification strategy with analysis supporting future adoption of a non-residential building electric-preferred reach code. Feasibility analysis should aim to estimate capacity needs for the transition of 25% of natural gas usage to electric usage based on average natural gas end-uses in the community and average energy efficiency of standard appliances converted from natural gas to electric. As part of study identify staff resources needs to monitor and enforce a building emission limit standard.
BE-4.	Structural	Continue to monitor the 9 th circuit court of appeals of the CRA vs City of Berkley ruling. Based on legal counsel, establish mandatory requirements resulting in 25% decarbonization of non-residential buildings by 2030 and 100% by 2045 through either development of emissions standards or development of electric-preferred reach code as described below.
BE-4.	Structural Change (a)	Either through a building code amendment or other mandatory requirement, based on current legislative feasibility, set a GHG and NOx emissions limit for buildings over 15,000 square feet. As part of this requirement include the following: <ol style="list-style-type: none"> 1. Establish a GHG and NOx per square footage benchmark to be lowered over time. Consider establishing different thresholds for building type (i.e., office, warehouse, restaurant, etc.)

Building Energy		
Measure/Action Number	Pillar	Action
		<ol style="list-style-type: none"> 2. Establish monetary penalties for non-compliance where fees will be used to fund the compliance program. Create incentives for buildings not covered to encourage voluntary compliance. 3. Enforce the permitting of replacement appliances through the same permitting compliance program as for residential building electric-preferred reach code.
BE-4.	Structural Change (b)	<p>Develop an electric-preferred reach code for existing non-residential buildings by 2025 to be implemented through the building code. As part of this reach code include the following steps:</p> <ol style="list-style-type: none"> 1. Develop the reach code such that it satisfies the federal EPCA’s seven criteria for an exemption from preemption. 2. Encourage commercial buildings to comply with the Commercial Energy Performance Assessment and Disclosure Program (AB 1103). 3. Establish a zero-NOx standards for replacement appliances. 4. Enforce the permitting of replacement appliances through the same permitting compliance program as for residential building electric-preferred reach code.
BE-4.	Education	<p>Provide educational materials and workshops to large commercial developers and large business property owners of the benefits of microgrids and energy resiliency. Provide resources to identify opportunities for solar and battery storage installations on site. Identify incentives available for businesses and homeowners to install energy storage systems, such as Self Generation Incentive Program (SGIP) and Equity Resiliency rebates that provides an upfront rebate for battery storage and/or the federal investment tax credit for solar batteries installed.</p>
BE-4.	Education	<p>Develop an education campaign to promote electrification and include items in the program such as:</p> <ol style="list-style-type: none"> 1. Conduct engagement efforts for the commercial sector to identify ways the City can support commercial energy storage installations and neighborhood scale microgrid opportunities. 2. Facilitate funding opportunities for commercial business electrification by identifying and supporting grant opportunities available to the community, prioritizing small and frontline community owned. 3. Implement feedback provided during the community outreach process for small businesses and frontline community-owned businesses to address potential equity impacts of the building performance program. 4. Utility bill inserts to advertise the incentive programs or grants available and the cost benefits of electric appliances 5. Targeted outreach to builders, developers, local contractors, and property managers with an informational brochure describing the financial benefits of replacing natural gas appliances with all electric appliance when they apply for permits 6. Provide informational webinars and an updated website to advertise and promote All-Electric Building Initiative rebates and incentives 7. Promote the use of the Energy Star Portfolio Manager program and benchmarking training programs for nonresidential building owners.

Building Energy		
Measure/Action Number	Pillar	Action
BE-4.	Education/ Partnership	Partner with an electrification/efficiency expert to provide guidance to commercial buildings covered by the new code(s) and/or ordinance(s).
BE-4.	Education/ Partnership	Partner with the Healdsburg businesses and the Chamber of Commerce to inform and facilitate electrification for commercial business owners.
Measure BE-5	Decarbonize 50% municipal buildings and facilities by 2030	
BE-5	Structural	Retrofitted all City street and pathway lights with LED lighting in 2018.
BE-5	Structural	The City replaced the failing gas heater at the Corporation Yard with a heat pump water heater in 2020 and Villa in 2023. All-electric and efficiency upgrades have been made to the City Hall/Utilities Administration/ Community Development Center building in 2018.
BE-5	Structural	Develop a resolution to decarbonize 50% of municipal buildings and facilities by 2030 and 100% by 2045, by retrofitting natural gas appliances with electric alternatives.
BE-5	Feasibility Study	Prepare a plan that identifies the equipment or accounts for municipal facilities that would require decarbonization, identify barriers (e.g., technology, budget, etc.), and establish a schedule for decarbonization/ electrification of the facilities.
BE-5	Feasibility Studies, Funding	Conduct a feasibility study to understand barriers to installing additional distributed energy resources such as solar and battery storage, or other renewable energy generation infrastructure, at municipal facilities. Plan for directing resources through the city for funding, energy storage, and distributed energy resources. Direct municipal efforts to sourcing space for energy storage projects and microgrid implementation.
BE-5	Structural	Require all municipal electrical accounts to remain in Healdsburg Electric’s Green Rate program and purchase renewable electricity.
BE-5	Structural	Gain funding for and complete a Wastewater treatment plant energy efficiency study and implement the highest impact recommendations.

Table 4 City of Healdsburg Transportation CMS GHG Emissions Reduction Measures and Actions List

Transportation		
Measure/Action Number	Pillar	Action
Measure T-1	Implement programs that increase access to safe active transportation, such as walking and biking, that achieve 15% of active transportation mode share by 2030.	
T-1.	Structural	Update the Healdsburg Bicycle and Pedestrian Master Plan by 2025. As part of the update: <ol style="list-style-type: none"> 1. Complete implementation of the City’s 2013 Bicycle and Pedestrian Master Plan goals and identified projects and include a progress update in updated Master Plan. 2. Incorporate a Safe Routes to School plan. 3. Increase biking infrastructure off the main street to enhance connectivity throughout the City 4. In partnership with surrounding communities, identify opportunities for infrastructure improvements or expansions to enhance cross-community active transportation 5. Explore additional streets for permanent through traffic closures to promote walking, biking, and other forms of active transportation with a focus on closing off downtown. 6. Explore areas of the City to remove parking and/or additional traffic lanes to prioritize outdoor seating and make permanent outdoor dining established during Covid-19. 7. Work with Sonoma County Transportation Authority (SCTA) to update the 2013 Existing and Planned Bicycle and Pedestrian Facilities for City of Healdsburg with new planned and completed projects by 2025.
T-1	Structural	Continue to utilize discretionary funds to implement the bicycle and pedestrian infrastructure improvements and updates such as the protected bike lanes along Healdsburg Avenue and reduction of through lanes on Healdsburg Avenue (e.g., Healdsburg Avenue Improvement Project). Select consultant to finalize designs for Healdsburg Avenue Improvement Project by end of 2023 to aim for project completion end of 2028.
T-1.	Education	Work with the Sonoma County Bicycle Coalition and local community groups to facilitate community outreach and education on transportation alternatives and promote infrastructure improvements and expansion, such as Foss Creek Trail. Continually improve methods for engaging the community, gathering input, and utilizing it to prioritize projects from the Bicycle and Pedestrian Master Plan.
T-1.	Education	Increase community awareness of active transportation infrastructure projects occurring and those completed. Work to fund and develop regional webpage and app showing bike lanes, bus time and routes, train times and routes. Distribute active transportation maps and educational materials to hotels and tourism centers to increase visitor use of active transportation.
T-1.	Structural	Complete the following improvement projects to increase safe active transportation: <ol style="list-style-type: none"> 1. Healdsburg Avenue Complete Streets improvements 2. Grove Street improves including ADA compliance 3. Foss Creek & Font Street connections
T-1.	Structural	Develop the Pilot Bike Share Program into a permanent and dependable bike share network that provides access to key destinations throughout the City, and work with regional partners including SMART and others, to assess potential for a regional bike share system. Include educational outreach and campaigns promoting use of the re-inspired program.

Transportation		
Measure/Action Number	Pillar	Action
T-1.	Education, Partnerships	Coordinate regionally through Sonoma County leveraging the regional active transportation plan to facilitate cross-community active transportation improvements. As part of this action include community outreach and education on active transportation improvements to affected areas as well as the community through Public Works and create a continuous feedback loop of public commentary to ensure efficacy and broad awareness of transportation options.
T-1.	Feasibility Studies	Evaluate existing bike parking facilities and evaluate what improvements can be made to increase supply, reduce theft, and increase rider attraction. This would include surveying existing bike parking facilities throughout the city and developing policies to increase and/or improve these facilities with preference given to improving bike parking facilities near public transit stops and expand access to safe transit (i.e., first and last-mile access). Include analysis of last mile limitations and hurdles.
T-1.	Feasibility Studies/Equity	Determine equity barriers to safe bike and pedestrian infrastructure through community outreach and use of data driven analysis with software programs as well as targeted community outreach to better understand nuanced barriers. Include prompts in outreach around ways to improve social, spatial, procedural, and modal equity within Healdsburg’s active transportations systems and programs. Prioritize the development of pedestrian and bicycle infrastructure in historically under-invested communities where there is currently no or limited pedestrian and bicycle infrastructure.
T-2.	Partnerships	Partner with the tourism and business sectors of the greater Healdsburg County region to identify pathways to increase active transportation from tourists and employees.
T-1.	Funding/Equity	Partner with local bike shops to provide subsidies to low-income residents for bicycles, helmets, pumps, and other bicycle equipment.
T-1.	Feasibility Studies/Funding	Conduct a nexus study and develop an ordinance requiring payment of fees from development projects to implement safe active transportation routes and infrastructure citywide.
Measure T-2	Implement programs for public transportation that achieve 10% of public transit mode share by 2030.	
T-2.	Structural	Require all employers to develop a Transportation Demand Management (TDM) Plan through a new ordinance and/or CEQA guidelines update. TDM plans should include money-based incentives for employees to bike, walk, carpool, or take the bus to work. Require large employers (more than 25 employees) to subsidize biking, walking, or bus travel.
T-2.	Feasibility Study	Conduct a feasibility study to inform the development of a tourism-based mobility plan aimed at decreasing tourism-based single passenger vehicle use. In this study: <ol style="list-style-type: none"> 1. Identify community boundary locations for tourism designated parking and optimal route connectivity. 2. Identify opportunities for town shuttle services and park-and-ride locations for residents and tourists. 3. Pilot study on private funded transportation to wineries. 4. Gauge potential of private partnerships with big tourism destinations such as wineries and local businesses to implement direct public transit routes between park and ride and the relevant tourist destinations.
T-2	Study	Conduct local transportation surveys to better understand the community’s needs and motivation for traveling by car versus other alternatives such as the bus. Use survey results to inform policy development and education/outreach campaigns that are transit focused.

Transportation		
Measure/Action Number	Pillar	Action
T-2.	Education	Market and publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.
T-2.	Equity	In the identification of access improvements to transportation include design improvements of seating and shading at bus stops and along active transportation routes. Incorporate design changes throughout infrastructure modifications.
T-2.	Equity	Work with SCT to ensure public transportation access and improvements are prioritized in low-income areas and active aging neighborhoods of the City and at major destinations. This could include surveying existing transportation routes, schedules, and facilities throughout the city and developing a plan to improve these for implementation with preference given to improving public transportation facilities and expand access to transit (i.e., first and last-mile access).
T-2.	Funding	Develop funding and dedicate City staff time for supporting SCT in obtaining grant funding for service expansion and improvements particularly in underserved and marginalized areas and on fleetwide electrification. Include exploration of opportunities for Low Carbon Fuel Standard credit generation from use of low carbon fuels/electricity for fleet vehicles.
T-2.	Studies	Work with local community groups and grant agencies focused on equity projects to conduct a free or subsidized regional public transit pilot program for frontline communities in Healdsburg that makes it free or discounted for participants to travel regionally via SCT.
T-2.	Studies	Partner with SCT to conduct a study to determine public transportation priority corridors and determine best potential locations for expansion and increased service.
T-2.	Partnerships	Work with SCT to improve travel times and shuttle services, conduct education campaigns, expand service to schools, and expand routes to include smaller buses.
T-2.	Partnership	Collaborate and engage with SCT to understand how they are addressing the Innovative Clean Transit Rule and their plan to electrify their bus fleet.
Measure T-3	Explore the development of a micro-mobility and/or car-share program to support mode shift from single occupancy fossil fuel vehicles to Zero Emission Vehicles.	
T-3.	Feasibility Study	Conduct a feasibility and cost analysis for purchasing, operating, and maintaining an on-demand door-to-door e-shuttle. This may include the development of a new on-demand e-shuttle, the expansion of DASH for all residents of Healdsburg, or the development of a program to subsidize the cost for electric car-share programs such as Uber or Lyft. The analysis should include identification of potential funding sources (e.g., grants, local taxes, discretionary funds, etc.) and identification of barriers and opportunities for how such a micro-mobility program may enhance active transportation or public transit use. Present the findings to City Council and the public to determine next steps.
T-3.	Structural	Based on the findings of the feasibility study and the response from City Council and the public, develop and implement a micro-mobility policy that establishes a deployment protocol and permitting process, identifies any restrictions for use for safety reasons, and promotes equitable access through requirements for consistent placement of micro-mobility devices (e-scooters, e-bikes, etc.) in underserved areas or reductions in usage fees for lower-income users.

Transportation		
Measure/Action Number	Pillar	Action
T-3.	Partnership/ Funding	Following the e-bike share pilot program, evaluate opportunities to work with e-scooter or e-bikes companies to develop a permanent e-bike/e-scooter share program in Healdsburg with focus on placing hubs in downtown areas or major residences. Adopt an ordinance to allow and manage the mobility share.
T-3.	Funding/Equity	Continue to offer e-bike rebates with increased rebate opportunities for low-income customers. Implement an income-qualified coupon for the e-bike share program, in addition to the available 50% discounted e-bike share rate.
T-3.	Equity	Facilitate transportation equity through multilingual programs that identify local equity issues and seek to remove barriers for people of color, families of low-income, people experiencing homelessness, and senior populations to use carshare or micro-mobility options.
T-3.	Education	Develop outreach and education materials advertising micro-mobility options and the benefits of use for traveling locally and increasing connectivity of public transit. Provide information on available funding opportunities or subsidies offered for low-income residents.
Measure T-4	Develop programs and policies to discourage driving single passenger vehicles and to support the bicycle/pedestrian and public transit mode share goals of Measures T-1 and T-2.	
T-4.	Structural	Require Transportation Demand Management (TDM) plans for new commercial and multifamily construction to shift travel behavior away from single-occupancy vehicles. TDM reduction strategies could include: <ol style="list-style-type: none"> 1. Telecommuting 2. Parking reductions, minimums, and pricing 3. Bike parking and commuter facilities 4. Transit subsidies and incentives for employees
T-4.	Structural	Reduce future VMT of new development through infrastructure requirements modifying the General Plan and/or specific plans (e.g., Central Healdsburg Avenue Plan) such that the plans for different City areas include policies that support the development of a connected pedestrian and cyclist network. Infrastructure requirements may include: <ol style="list-style-type: none"> 1. Small scale version of park and ride for residents and tourists. 2. Interconnected bike lanes and sidewalks throughout the City. 3. Electric Bike stations or other micro-mobility hubs outside of major residences and shop destinations
T-4.	Structural, Funding	Investigate parking policies to disincentivize single passenger vehicles while enabling alternative options for communities meeting defined equity metrics. Based on City Council and public feedback, implement parking policies to disincentivize single passenger vehicles. This <i>may</i> include options such as, but not limited to: <ol style="list-style-type: none"> 1. Eliminate or severely limit parking options for single-passenger vehicles in downtown and other commercial areas of the city using best available information on implementation. <ol style="list-style-type: none"> a. Implement a parking permit system to reserve available parking for employees of businesses downtown or in commercial areas. 2. Utilize a static or dynamic parking pricing for all downtown parking locations and use revenue to fund active transportation and public transportation projects. 3. Price all public parking spaces for all areas of the city with fees directed towards active transportation

Transportation		
Measure/Action Number	Pillar	Action
T-4.	Feasibility Study	Conduct an analysis of the potential community impacts and benefits of implementing disincentive-based policies for driving single passenger vehicles, including a congestion charge program, limiting parking options, increased local taxes (income tax, gasoline tax, or car registration tax), and rideshare user taxes in line with the general plan. As part of analysis ensure that potential equity concerns are identified.
Measure T-5 Increase passenger zero-emission vehicle use and adoption to 50% by 2030.		
T-5.	Structural	Develop a reach code requiring electric vehicle capable charging spaces. By 2024, amend the Healdsburg Development and Municipal Code to promote EV chargers in both existing and new development (including parking structures), to require at minimum: <ul style="list-style-type: none"> • Single Family – 1 level 2 EV Charger + 1 Level 1 EV Charging receptacle • Multifamily – 100% EV Capable with 40% EV Ready and 5% EVSE • Non-Residential – CalGreen Tier 2 • Expand the designation of EV charging parking spaces to 15% of existing parking spaces within the City by 2030. • Require larger residential rental building owners (more than 20 tenants) and large commercial building owners (more than 10,000 square feet) to install working electric vehicle chargers in 20% of parking spaces for new and existing buildings. • Expediate EV charger permits
T-5.	Structural	Develop an ordinance requiring Healdsburg vehicles to participate in the States Biennial smog check program and contribute towards clean energy standards. Work with the Northern Sonoma County Air Pollution Control District to require biennial smog checks.
T-5.	Funding	Implement a gasoline/diesel car registration tax starting in 2028 to disincentivize single passenger vehicle use based on weight and mile per gallon of the vehicle with exceptions for CARE customers. Re-invest funds into active transportation planning efforts.
T-5.	Education	Develop outreach and education materials and distribute to local businesses and organizations on the financial, environmental, and health and safety benefits of ZEVs. Provide information on available funding opportunities.
T-5.	Equity/Partnerships	Identify private sector partnerships and develop affordable, zero-emission vehicle car share programs to serve affordable housing and/or multifamily developments with a priority to target frontline communities. Continue to promote the EV Monthly Bill Discount Program with increased discount opportunities for low-income customers, and develop an updated or replacement program following program sunset in 2025. Continue to promote affordable EV charging rates at city-owned EV charging stations.
T-5.	Equity	Explore opportunities with CARB, NSCAPCD, or other agencies to start a purchase rebate program and provide higher trade-in value for combustion vehicles to assist lower-income households to purchase EVs.
T-5.	Funding	Utilize the CALeVIP rebate to install new electric vehicle chargers at the Senior Center and downtown Maher lot. Apply for Federal Charging and Fueling Infrastructure (CFI) grant to install electric vehicle chargers at the Community Center, Giorgi Park, High School, and West Plaza.

Transportation		
Measure/Action Number	Pillar	Action
T-5.	Feasibility Study	In addition to the 6 City-owned lots already identified, conduct a survey of existing publicly accessible electric vehicle chargers and their locations and identify a prioritized list of additional locations for new electric vehicle charging stations with consideration for equitable distribution of chargers to residents of multi-family homes, low-income people, people on a fixed income, and communities of color. Study should include an evaluation of capacity needs associated with the installation of new EV chargers and identification of the businesses or stakeholders that own the property to coordinate with for installation of chargers.
T-5.	Funding	Promote incentives and financing options for residential electric vehicle charger installations. Develop programs and policies to add 800 new publicly accessible and private workplace Level 2 and 3 electric vehicle charging stations to the City by 2030 through grants such as the California Energy Commission’s Clean Transportation Program. Develop programs that incentivize residents and businesses to charge during times of abundant solar resources and avoid charging during peak hours and grid emergencies
T-5.	Partnership	Support zero-emission vehicle (ZEV) car share companies in coming to the City. Coordinate with car share companies and community-groups to develop an affordable, ZEV car share to serve affordable housing and/or multifamily developments with a priority to target low-income communities of color.
T-5.	Partnership	Collaborate with neighboring jurisdictions and the Sonoma County Transportation Authority to develop a connected network on ZEV car share.
Measure T-6	Increase commercial zero-emission vehicle use and adoption to 40% by 2030.	
T-6.	Feasibility Studies	Inventory commercial vehicle fleets in Healdsburg and identify employers to target for accelerating zero emission vehicle adoption. Develop a plan for City-supported accelerated fleet electrification.
T-6.	Structural	Adopt a ZEV plan for commercial vehicles more aggressive than state targets and in line with the findings of the accompanying feasibility study. Work with stakeholders to develop and implement the plan for City-supported accelerated fleet electrification. As part of the plan, identify opportunities for accelerated fleet electrification and promote zero-emission vehicle (ZEV) adoption within business and municipal fleets.
T-6.	Education, Partnerships	Provide information to businesses on Low-carbon fuel standard (LCFS) and how businesses can develop LCFS credits or other state and federal programs to help fund conversion of commercial fleets to zero emissions vehicles.
T-6.	Equity, Funding	Identify, implement, and connect vehicle fleet owners, particularly those serving frontline communities to incentivize vehicle electrification. This could include local tax breaks.
T-6.	Funding	Identify incentives for accelerated business fleet electrification (i.e. local tax breaks) and communicate that information to local businesses.
T-6.	Funding	Apply for funding as grant opportunities arise to create a small business truck buyback program to buyback trucks from local small businesses to upgrade to electric.
T-6.	Partnerships	Develop and maintain a collaborative of stakeholders (e.g. local major employers, commercial business) to lead the creation of best practices and the pursuit of funding for EV infrastructure as well as public and private zero-emission business vehicle fleets.

Transportation		
Measure/Action Number	Pillar	Action
T-6.	Funding	Secure funding from state programs (such as the California Air Resources Board's Clean Vehicle Rebate Project and the Truck and Bus Voucher Incentive Program) and federal sources to increase procurement of EV or ZEV cars, trucks, and other vehicles and installation of EV/ZEV charging/fueling infrastructure at municipal facilities.
Measure T-7	Electrify or otherwise decarbonize 20% of off-road equipment by 2030.	
T-7.	Structural	Develop a resolution to align with AB-1346 and develop an ordinance to require the replacement at end of life of all gas powered small offroad engines (e.g., lawn and garden equipment) that begins in 2025 and all remaining gasoline and diesel off-road equipment beginning in 2035 with electric or zero-emission alternatives. As part of the resolution include the following: <ol style="list-style-type: none"> 1. Provide income tiered incentives for burdened residents and businesses (e.g., landscapers). Identify staffing needs for implementation of a tracking program run by the relevant city department. 2. Promote opportunities for use of biofuels, i.e. renewable diesel, for equipment for which zero emission alternatives are not available. 3. Apply for funding opportunities to develop a trade in program for gas or diesel equipment that provides rebates for electric or zero-emission alternatives at time of purchase.
T-7.	Structural	Implement a plan to replace all City owned end-of-life off-road equipment with electric equipment or equipment fueled by alternative fuel. Plan should include evaluation of current City-owned equipment, alternative low or zero-emission options, prioritize equipment to replace first (e.g. largest GHG emission reduction potential), and a timeline for replacements that align with goals and feasibility of replacement.
T-7.	Education	Conduct targeted education campaign to support the transition of local employer's transition to zero emission off-road equipment, including major construction companies, manufacturers, landscapers, and warehouse companies.
T-7.	Feasibility Studies	Inventory off-road equipment fleets in Healdsburg and identify fleets with highest decarbonization potential. As part of study evaluate equity constraints to electrification of off-road equipment.
T-7.	Funding/Partnership	Partner with the local air district and RCPA to identify funding opportunities to incentivize residents to replace gas-powered landscaping equipment and off-road engines with zero emission equipment, such as through rebates or buyback programs.
Measure T-8	Lead by example and electrify or otherwise decarbonize the municipal fleet in compliance with the state's Advanced Clean Fleet Rule.	
T-8.	Structural	Continue to implement the Zero-emission vehicle first purchasing policy for all light-duty municipal vehicles. Purchased hybrid medium duty bucket trucks for electrical utility work to utilize electric batteries for bucket operation.
T-8.	Study	Complete an inventory of all municipal off-road equipment and fleet vehicles and determine which are possible to decarbonize based on existing technologies. Complete a cost analysis for decarbonizing. Continue to purchase electric lawn equipment to replace gas powered lawn equipment for Community Services use.
T-8.	Structural	Develop and implement a City Zero-Emission Vehicle Transition Plan to convert fossil fuel municipal fleet vehicles to electric or otherwise decarbonize the fleet in alignment with the Advanced Clean Fleet Rule, including a short and long-term schedule for completion as well as potential for regional bulk procurement. Plan will be in alignment with the Advanced Clean Fleets Rule, requiring 50% of medium- and heavy-duty vehicle purchases be zero-emissions beginning in 2024 and 100% beginning

Transportation		
Measure/Action Number	Pillar	Action
		in 2027. Also include that by 2035 100% of light-duty fleet vehicle are zero-emissions. Consider aligning the Plan with ACF’s ZEV Milestones Option to establish appropriate goals of obtaining medium and heavy-duty ZEVs to replace existing medium and heavy-duty fleet vehicles. . Maintain exemptions needed to ensure public safety and delivery of critical services.
T-8.	Structural	Install additional ZEV chargers in municipal parking lots for fleet, employees, and public use, pilot curbside to meet projected demand.
T-8.	Structural	As a short-term measure, procure biofuels (renewable diesel and biogas) to operate municipally owned off-road equipment with no existing opportunities for decarbonization. Re-evaluate decarbonization opportunities regularly to ensure biofuels are not being used for equipment that could otherwise be decarbonized.
Measure T-9	Develop and implement a Municipal Transportation Demand Management (TDM) Plan by 2027	
T-9.	Structural	Provide free public transit passes and free access to electric bicycle program to all municipal employees and expand the work trip program to offer carbon-free or carbon-reduced modes of travel for free.
T-9.	Funding/Partnership	Consider partnering with Sonoma-Marin Area Rail Transit (SMART) to subsidize use of the SMART rail for Healdsburg employees. Promote use of SMART once the Healdsburg Station is constructed.
T-9.	Structural	Promote the adopted Telework Program for eligible staff that allows employees to work 1 day remote per 4 day weeks (Friday off) and 2 days remote per 5 day week (Fridays on).
T-9.	Structural	Consider providing incentives for employees to bike, walk, and carpool to work.
T-9.	Feasibility Studies	Conduct a detailed survey of City staff commute data annually including employee feedback to identify both major emission sources and potential gaps in planning.
T-9.	Feasibility Studies	Investigate opportunities for installing bike lockers and showers at municipal office buildings.

Table 5 City of Healdsburg Solid Waste, Water, and Wastewater CMS GHG Emissions Reduction Measures and Actions List

Solid Waste, Water, and Wastewater		
Measure Action Number	Pillar	Measure/Action
Measure W-1	Reduce per capita potable water consumption by 25% compared with 2018 levels by 2030 through water demand management and greater efficiency of processes.	
W-1.	Structural	Continue to enforce the Water Efficient Landscape Ordinance adopted in 2009 that promotes the efficient design and installation of water-efficient landscapes associated with new construction and substantial alterations of existing development where landscapes are proposed.
W-1.	Structural	To ensure compliance with the State’s Making Water Conservation a Way of Life regulations, amend the City’s Water Shortage Contingency Plan to restrict any water waste at any time for households, businesses, industries, and public infrastructure. This would include permanent implementation of demand reduction actions and local water supply projects including the following actions: <ol style="list-style-type: none"> 1. Work with Community Development, Cal Water, large water users, and other stakeholders to develop an On-Site Water Reuse Plan to maximize utilization of local water supplies decreasing energy intensity of distribution. This plan should explore a broad range of water supply, wastewater treatment, and stormwater management strategies such as water efficiency, onsite stormwater capture and reuse, and onsite gray water treatment and reuse in both commercial and residential settings. 2. Engage the entire community on available rebates and water efficiency retrofits for indoor and outdoor water conservation. 3. Implement identified demand reduction actions of the Urban Water Management Plan.
W-1.	Structural	Develop an ordinance for installation of dual-plumbing water systems that utilize greywater or recycled water for irrigation at new residential and commercial construction.
W-1.	Education	Educate the community to understand available incentives or rebates, options, and programs to reduce per capita water use and leverage regional programs and resources available through membership in the Sonoma-Marín Saving Water Partnership.
W-1.	Education	Engage, through regional partnerships, with builders and developers to provide information on the requirements for development projects.
W-1.	Equity	Perform targeted outreach to low-income households to provide free water leakage repairs and water efficiency measures funded through dedicated staff grant applications.
W-1.	Feasibility Study	Complete the Municipal Recycled Water Pipeline to provide recycled water to the City facilities turf areas. Develop a Recycle Water Master Plan that identifies additional locations available for recycled water use and establishes a schedule for potable water replacement with recycled water in appropriate applications residentially, commercially, and municipally. As part of the Plan, identify additional opportunities for expanding the recycled water pipeline to serve other appropriate applications not served by the Municipal Recycled Water Pipeline (i.e., residential, commercial) and determine recycled water user fees.

Solid Waste, Water, and Wastewater		
Measure Action Number	Pillar	Measure/Action
W-1.	Funding	Continue to offer existing residential and commercial water conservation rebates. Expand rebates or other funding and education campaign to target low and medium income homes for installing laundry to landscape, rainwater catchment system, low-flow appliances, lawn conversions, and fixing water leakages.
W-1.	Partnerships	Facilitate changes through Community Development and Utility Departments in partnership with local organizations for expanding outreach of rebates, water use reduction, and locally sourced water options throughout the community.
Measure SW-1	Achieve Zero Waste by 2030 through 90% diversion of solid waste from the landfill.	
SW-1.	Structural	Meet the requirements of SB 1383 to reduce organics in the waste stream by 75% below 2014 levels by 2025 and achieve Zero Waste through 90% solid waste diversion by 2030. Include activities such as: <ol style="list-style-type: none"> 1. Reduce the total pounds per person per day by at least 10% annually. 2. Pilot and evaluate emerging technologies like at source organic waste digestion to reduce organic waste by restaurants and other major food waste producers. 3. Implement enforcement and fee for incorrectly sorted materials with sensitivity to shared collection. 4. Increase bin signage across commercial and residential areas of acceptable landfill, recyclable, and compostable materials. 5. Conduct additional free compost bin giveaways and promote the free curbside compost pickup by Recology 6. Expand existing ban on polystyrene products containing PFAS to include additional items without means of recycling or recycling markets, such as produce bags, plastic packaging, straws, plastics #4-7, mixed materials. 7. Implement pilot project for reusables for restaurant to-go containers. 8. Identify long-term and alternate solutions for the community's wastewater bio-solids to avoid landfills and develop local, beneficial reuse.
SW-1	Structural	Develop City resolution that incorporates increased lid-flipping into the franchise agreement with Recology and enforces organic diversion requirements via penalty fees issued by the City for non-compliance by 2025.
SW-1	Structural	Adopt land use policy to facilitate the siting and permitting of processing and end market infrastructure that will be needed to manage the volume of material from higher levels of diversion.
SW-1.	Education and Engagement	Create a templated training for businesses to educate their employees about circular economy-based practices annually by providing training resources and rebate program to fund employee time for training. Support lower-impact reusable and reduced packaging businesses.
SW-1.	Education and Engagement & Equity	Partner with Zero Waste Sonoma to conduct targeted, multi-lingual, culturally appropriate, and geographically diverse circular economy educational and technical assistance campaigns based on outcomes of waste characterization studies and comprehensive monitoring and quality control program. Topics could include reuse, prolonging the life of common materials and items, and sustainable purchasing. Focus educational campaign on food waste not going to landfill.
SW-1.	Education and Engagement	Partner with Zero Waste Sonoma to conduct a Bring your own (BYO) education and outreach training for the community on reusables and implementing more sustainable packaging into daily use. Provide resources of education on city

Solid Waste, Water, and Wastewater		
Measure Action Number	Pillar	Measure/Action
		website. Educate community on food scraps on resource center. Partner with libraries and other existing facilities to market campaigns about waste reductions, reuse and repair.
SW-1.	Feasibility Studies	Initiate a study partnering with local academic institutions and Recology to identify and research ways to create a circular economy around organic waste and increasing edible food rescue.
SW-1.	Equity	Establish relationships with multi-family property owners/managers to develop signage for their properties. Go door-to-door at each multi-family unit yearly to provide supplies and education for proper sorting.
SW-1.	Partnership	Expand promotion of the free extra bulky-item pick up service (available to all residents) to help minimize illegal dumping. Work with Recology to develop a pick-up schedule to reduce trips by pick-up vehicles and to increase effectiveness of program (e.g., a schedule monthly pick-up day).
SW-1.	Equity & Education and Engagement	Create a training/education program that is free and accessible to all residents and employees to learn about circular economy practices and diversion strategies and effects of overconsumption.
SW-1.	Feasibility Studies/Partnership	Leverage Zero Waste Sonoma 2022 Waste Characterization study and visual characterization conducted at the Healdsburg transfer station to understand the waste stream and create a plan to increase diversion and reduce contamination. Continue to work with Zero Waste Sonoma to conduct a waste characterization study every 4-5 years that includes Healdsburg to inform programs and policies.
SW-1	Funding/ Partnership	Leverage SB-1383-compliant franchise agreement with Recology to pursue funding from CalRecycle to outfit multi-family homes with zero waste infrastructure and expand waste diversions programs within the City.
SW-1.	Partnerships and Structural Change	Collaborate with the County and Resource Conservation District to develop a regional compost trading program to provide farmers with compost to meet organic procurement target set by SB 1383.
SW-1.	Partnership	Continue to support Zero Waste Specialist position at Recology.
SW-1.	Partnerships	Partner with city community gardens to increase community wide access to local compost bins.

Table 6 City of Healdsburg Carbon Sequestration CMS GHG Emissions Reduction Measures and Actions List

Carbon Sequestration		
Measure/Action Number High)	Pillar	Measure/Action
Measure CS-1	Increase carbon sequestration by preserving existing mature trees and planting 500 new trees and high emissions reduction potential land cover types throughout the community by 2030	
CS-1.	Structural	Develop a Street Tree Master Plan to include goals for promoting street tree health, enhancing resiliency, increasing the environmental benefits and co-benefits resulting from street trees and shading, community engagement around the urban forest. Include activity to promote street tree health and maintaining existing trees through partnerships with the community and local non-profits.
CS-1	Structural	Develop a new Tree Protection Ordinance to include protection for native and heritage trees. The ordinance should regulate the removal of not just heritage trees, but native trees that increase the City’s carbon stock and carbon sequestration. Ordinance may include: <ol style="list-style-type: none"> 1) Development requirements to protect or replace one-for-one existing trees and greenspace. 2) Implementation of a tree removal in-lieu fee that provides funding for the City to plant a new tree equivalent to every tree removed from private property. 3) Identification of native tree species and heritage trees to be protected.
CS-1	Structural	Amend the Healdsburg Municipal Land Use Codes to revise shade tree requirements for new development, require greening of parking lots, establish a tree removal in-lieu fee, increase permeable surfaces in new development and place vegetative barriers between busy roadways and developments to reduce exposure to air pollutants from traffic. Identify opportunities for green walls and green roofs in priority locations. Develop standards of plan to ensure implementation of best practices for forest management that protect existing carbon stocks against wildfire risk.
CS-1.	Education	Establish an adopt-a-tree or adopt-a-street program that enables individuals, businesses, and community organizations to plant and care for trees in selected communities. Program should provide formalized information on appropriate trees eligible for planting in Healdsburg (i.e., native, drought tolerant, locations, fire resistant) and their maintenance. Leverage existing plant lists developed by nearby and partner organizations. Evaluate the shade tree giveaway program completed in 2019, and consider for re-implementation or promote similar programs led by external organizations.
CS-1.	Partnerships & Equity	Identify and partner with local community-based organizations with connections to frontline communities to assist in the implementation of the Street Tree Master Plan to ensure equity is prioritized as part of the plan.
CS-1.	Equity	Prioritize low-income areas of the city with less existing tree canopy for tree plantings. Increase shading in gathering spaces.
CS-1.	Feasibility Studies	Identify current baseline urban forest coverage within the city to measure increased coverage as it relates to sequestration as part of the next Street Tree Master Plan update.
CS-1.	Funding	Explore opportunities to use general tax revenues of the municipality, permit fees or surcharges on property owners and business owners, or revenues from the municipal tree ordinance enforcement to fund the Street Tree Master Plan development, implementation, and enforcement.

Carbon Sequestration		
Measure/Action Number High)	Pillar	Measure/Action
CS-1.	Funding	Explore urban and community forestry grant programs (e.g., CAL FIRE) and other sources of state, federal, and philanthropic funding to fund urban forestry programs. As part of this effort, establish a goal to apply for at least one grant every three years
Measure CS-2	Explore new carbon sequestration and carbon capture opportunities	
CS-2.	Partnerships	In a partnership between Healdsburg Electric and other utility owners of the Lodi Energy Center (LEC), investigate opportunities for direct carbon capture and sequestration at the power plant emissions, in place of converting the unit to run off of green hydrogen. Explore opportunities for funding of such a project through state and federal grants.
CS-2.	Feasibility Study	Develop a City-wide, or participate in a regional, natural carbon sequestration analysis and plan to explore opportunities to increase sequestration in the City such as through land management practices, agricultural practices, repurposing biosolids, and compost application. The analysis would identify opportunities for the City to remove GHG emissions from the atmosphere beyond carbon neutrality, including an inventory of locations in Healdsburg which could be used for carbon capture and storage facilities or restoration of natural and working lands or agricultural and land management practices that could be implemented.
CS-2.	Funding	Explore the feasibility of creating a carbon removal fund for the community, through which residents or businesses can contribute money to go towards Healdsburg contracting with companies to remove carbon from the atmosphere on its behalf.
CS-2	Partnership	Work with agricultural and public agency stakeholders to partner on developing carbon farming projects.
CS-2	Structural change	Invest in local or regional carbon sequestration pilot projects as technology becomes available.
CS-2.	Education	Work with local architects, construction trades, and workforce development organizations to expand industry knowledge and adoption of carbon sequestering building materials and techniques.
Measure CS-3	Maintain and expand existing restoration projects to sequester carbon in restored lands.	
CS-3.	Structural	Work with Healdsburg Parks and Recreation to develop and adopt urban park guidelines that: <ol style="list-style-type: none"> 1. Provide flexible solutions for developing urban parks in infill areas where traditional neighborhood and community parks are not feasible; 2. Establishes guidelines for achieving the greatest carbon sequestration potential of parks via design; and 3. Are equitable in ensuring such urban parks are accessible for lower-income residents while avoiding displacement. 4. Establishes a plan for long term maintenance to restoration projects.
CS-3.	Structural	Continue maintenance and expansion of Healdsburg Ridge Open Space Preserve (150 acres), and the Fitch Mountain Park and Open Space Preserve (170 acres).
CS-3.	Education and Engagement	Develop a community-based volunteer program supporting restoration project activity to create a maintained restoration process.

Carbon Sequestration		
Measure/Action Number High)	Pillar	Measure/Action
CS-3.	Feasibility Studies	Facilitate annual reporting as part of the restoration plan mapping the existing restoration projects and open space lands to gauge progress in restoration activities overtime as well as identify any gaps in maintenance activities related to ongoing projects. Incorporate GHG reduction calculations into this monitoring plan.
CS-3.	Funding and Financing	Dedicate staff time or create a staff position for obtaining grant funding for restoration and preservation activities with a focus on projects that have been unable to be fully completed due to funding constraints.
CS-3.	Partnerships	Partner with local community organizations to communicate sequestration opportunities and facilitate volunteer maintenance projects.
Measure CS-4	Increase carbon sequestration by applying 0.08 tons of compost per capita annually in the community through 2030.	
CS-4.	Structural Change	Enforce compliance with SB 1383 and aim to meet the baseline requirement by establishing a minimum level of compost application per year on applicable/appropriate land throughout the City including City-owned land , depending on the feasibly study. Additionally, evaluate opportunities to procure other applicable products, such as SB 1383 RNG, to meet the procurement requirements. Maintain procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.
CS-4.	Education	Work with Recology and ZWS to provide residents, businesses, and developers with educational material on where compost can be taken and how it can be used (i.e., landscaping).
CS-4.	Equity	Provide free compost procurement services to low-income households and small businesses.
CS-4.	Feasibility Studies	Identify additional locations within the City to apply compost to help meet the procurement requirements of SB 1383 and provide household incentives for small-scale implementation.
CS-4.	Funding	Dedicate staff time or create a staff position for obtaining grant funding for SB 1383 compliance.
CS-4.	Partnerships	Collaborate with local schools, Public Works, and Community Services to identify opportunities to apply compost to landscaping potentially in addition to open space land conservation efforts.
CS-4.	Partnerships	Work with Sonoma County and RCPA to identify opportunities for a regional compost procurement program to help meet the organics procurement provisions of SB 1383 as well as streamline hauler routes through regional collaboration.

Table 7 City of Healdsburg Administration and Funding CMS Measures and Actions List

Administration and Funding		
Measure/Action Number High)	Pillar	Measure/Action
Measure F-1	Investigate opportunities for a city-wide carbon tax by 2026 to fund City decarbonization	
F-1.	Feasibility Study	Investigate the feasibility, aptitude, and equity concerns for establishing a city-wide carbon tax from which the revenue would fund decarbonization and carbon sequestration projects throughout the community. Identify potential mechanisms for a carbon tax.
F-1.	Education	Present findings of the study to City Council and the community and gauge aptitude.
Measure F-2	Adopt internal carbon pricing policy	
F-2.	Structural	Adopt a policy to establish and incorporate an internal carbon pricing process on all budgetary decisions made by the City and City council.
F-2.	Structural	Establish a carbon pricing structure based on best practices and successful jurisdictions to incorporate as a line item into budget decisions over \$50,000 at the City level.
F-2.	Structural	As part of reporting on budget or establishing cost for projects include the carbon price and GHG impact of decisions for City Council review and for reporting to the public.
F-2	Administrative	As part of the ongoing Citywide Design Guidelines, update the sustainability practices to encourage development to also evaluate design choices based on the carbon footprint or GHG emissions impact.
F-2.	Structural	Develop a climate disclosure policy requiring City budgetary decisions to disclose information about the GHG emissions generation that would result from the decision made.
Measure F-3	Designate a Climate Program Manager by 2025	
F-3.	Structural	Create a Climate Program Manager position who is responsible for implementing CMS measures and actions by drafting ordinances, managing technical studies, leading outreach efforts, updating online information, managing the webpages and Facebook posts to promote climate programs, networking with partners and stakeholders, and pursuing grant opportunities.
F-3.	Structural	Report progress on CMS implementation annually to the City Council to measure progress and ensure accountability in achieving CMS emissions reduction goals.
F-3.	Structural	Ensure transparency by reporting GHG emission and CMS information to a Public Disclosure Program, such as the Carbon Disclosure Program and SEEC Clear Path.