CITY OF WOODINVILLE

CLIMATE ACTION PLAN

ADOPTED JUNE 2023

By Resolution #626

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MESSAGE FROM THE CITY

The current and future health of natural systems in Woodinville is key to ensuring the broader health of the community. Woodinville's open spaces, trees, water, air quality, and scenic views are central to making it a remarkable place to live, work, and visit. In 2022, The Woodinville City Council acknowledged this in the adopted Strategic Plan recognizing the City's responsibility for the stewardship of the natural environment as an essential aspect of local government-responsibility. To identify specific and actionable strategies to achieve our climate-related ambitions, the City Council directed staff to evaluate the city's greenhouse gas emissions and determine ways to address and reduce impacts related to climate change through the completion of this Climate Action Plan. After months of research, community engagement, and deliberation, this adopted plan establishes the City's plan to reduce said emissions and ensure a safe and healthy future for the community.

In recent years, Woodinville has experienced firsthand a shift in the weather patterns impacting the Pacific Northwest. Most notably, the increase in extreme temperature events, and poor air quality. While there is no delusion that the relatively small actions of a small city like Woodinville will solve the issues faced by the world, we can do our part and serve as a positive example for our community and fellow local governments.

To achieve the goals in the Woodinville Climate Action Plan, it will take collaboration among our community stakeholders and residents. The City is committed to implementing the strategies and actions in this plan to safeguard our natural systems and mitigate the impacts of greenhouse gas emissions to create a more resilient Woodinville.

KEY TERMS & ABBREVIATIONS

Carbon sequestration	The process of capturing and storing atmospheric carbon dioxide in soils, oceans, vegetation, and geologic formations. Because carbon sequestration is a passive process and does not reduce the total emissions generated by a community, it should not be considered direct emissions reductions. Instead, sequestration processes can help achieve carbon neutrality.
Circular economy	A model where products are designed to be reused or recycled, which avoids consumption of new raw materials and reduces waste, pollution, and carbon emissions.
Climate Action Plan (CAP)	A comprehensive roadmap developed by an entity that outlines specific strategies and actions that it will take to reduce greenhouse gas emissions and adapt to climate change impacts.
Climate change	The long-term change in global and regional climate patterns due to increased levels of atmospheric carbon dioxide and other greenhouse gases produced by human activities such as using fossil fuels like coal, oil, and gas.
Climate emergency	An extreme weather event caused by climate change, such as wildfire, heatwaves, flooding, and drought.
Climate resilience	The ability of a community to prepare for, respond to, and recover from climate emergencies and impacts. Improving climate resilience is essential to the health and wellbeing of residents.
Commute trip reduction (CTR) program	A Washington State Department of Transportation (WSDOT) program that promotes alternatives to driving alone under the Commute Trip Reduction Law (WAC Chapter 468-63) to improve sustainability and reduce traffic congestion. Common elements of CTR programs include transportation demand management strategies such as provision of bicycle amenities, carpool and vanpool incentives, subsidies for transit fares, and implementation of flexible work schedules.
Decarbonization	The targeted reduction of the amount of carbon dioxide (and other greenhouse gases) emitted into the atmosphere from fossil fuel intensive systems and infrastructure.
Ecological restoration	The process of helping the recovery of an ecosystem that has been degraded, damaged, or destroyed. This can include removing invasive species, planting native species, and remediating soils.

Electric vehicles	Vehicles that derive all or part of their power from electricity. Plug-In Hybrid Electric Vehicles (PHEVs): Vehicles that run by using a combination of electricity and use of an internal combustion engine and plug into the electric grid to derive power. Battery Electric Vehicles (BEVs): Vehicles that run completely on electricity using a battery that can be recharged by being plugged into the electric grid.
Electrification	The transition away from using natural gas and other fossil fuels to electricity (typically generated from renewable energy sources like solar and wind) to power homes and vehicles.
Frontline communities	Those who are most likely to be impacted by the effects of climate change. These are community members that face historic and current inequities, often experience the earliest and most acute impacts of climate change, and have limited resources and/or capacity to adapt to those impacts. They are often excluded from planning efforts even though their voices may be the most valuable because of their vulnerability to climate impacts.
Green space	Green space refers to urban parks and ecosystems, such as public parks and wetlands, that comprise a variety of vegetation located on public land and maintained by the local government.
Green Stormwater Infrastructure (GSI)	Systems where stormwater runoff is slowed, filtered, used, and/or treated using vegetation, soils, and natural processes. Examples of GSI systems include rain barrels, permeable pavement, rain gardens, and bioswales.
Greenhouse gases (GHGs)	Heat-trapping gases that warm the atmosphere such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O).
Greywater	Household wastewater from bathtubs, showers, sinks, washing machines, and dishwashers.
Heat pump	An energy-efficient alternative to furnaces and air conditioners that uses electricity to absorb heat from outside or indoor air, and transfers or releases that heat dependent on its mode (heating or cooling), resulting in the heating or cooling of an indoor space.
ICLEI – Local Governments for Sustainability	The largest global network of local governments devoted to solving the world's sustainability challenges. ICLEI's standards, tools, and programs have been utilized by Shoreline to evaluate and reduce the City's greenhouse gas emissions.
King County-Cities Climate Collaboration (K4C)	A partnership of local governments of all sizes within King County with the goal of working together to accelerate climate action.

Low-impact development	Systems and practices that use or mimic natural processes to manage stormwater runoff. Water is infiltrated into the ground or stored onsite to protect water quality and minimize flooding.
Metric ton of carbon dioxide equivalent ($MTCO_2e$)	A common unit of measurement that represents an amount of a greenhouse gas whose impact on climate change has been standardized to that of one unit of carbon dioxide (CO_2), based on the global warming potential (GWP) of the gas.
Mixed-use development	Development that consists of a mix of uses such as residential, retail, commercial, office, government, and entertainment in the same building or in close proximity.
Multimodal transportation	Accessible transportation through a variety of travel modes, typically pedestrian, bicycle, public transit, and automobile modes.
Net zero	The balance of greenhouse gas emissions produced through human activities and emissions removed from the atmosphere from processes such as carbon sequestration to achieve carbon neutrality.
Science-based targets (SBTs)	Measurable and actionable greenhouse gas reduction targets based on the best available science and developed by individual local governments in collaboration with ICLEI. These targets represent each community's equitable share of GHG reductions needed to meet the Paris Agreement's commitment of keeping warming below 1.5°C (2.7°F). There are several established methodologies used to calculate SBTs.
Shared-use mobility	Transportation resources and services that are shared among users, such as public transit, bike and scooter shares, and rideshares.
Vehicle miles traveled (VMT)	A metric used in transportation planning to measure the cumulative miles traveled by all vehicles in a geographic region over a given time period.

ACKNOWLEDGMENTS

The City of Woodinville thanks its community for their feedback and collaboration throughout the Climate Action Plan development process. Special thanks to those who took the online survey, provided feedback in the virtual open house, and/or volunteered their time to participate in the youth workshops, interviews, and the business roundtable discussion.

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Funding for the Woodinville Climate Action Plan was awarded to the City by the Washington State Department of Commerce through the Early Implementation Climate Planning Grant.

Woodinville's Climate Action Plan (CAP) represents and builds on the City's commitment to environmental sustainability by reducing our greenhouse gas (GHG) emissions and protecting our community from the impacts of climate change. Using the best available science, data and analyses, and inclusive engagement, this plan establishes the City's pathway to achieving tangible and impactful climate action.

Climate change represents an ever-increasing threat to the health and well-being of residents in the City of Woodinville and beyond. GHG emissions from travel, energy for our homes and buildings, and land use within our community are changing our climate in ways that put the community at risk. Projected changes in temperature, snowpack, severe storms, and wildfire risk threaten Woodinville's infrastructure, economy, natural resources, and public health[1].

This CAP establishes a suite of ambitious, yet feasible strategies to reduce Woodinville's GHG emissions to meet emissions targets while preparing the community for future climate impacts. Implementing community solutions and individual actions will enable Woodinville to proactively promote the health and well-being of our community, economy, and environment, while maximizing co-benefits to both the local community and global climate.

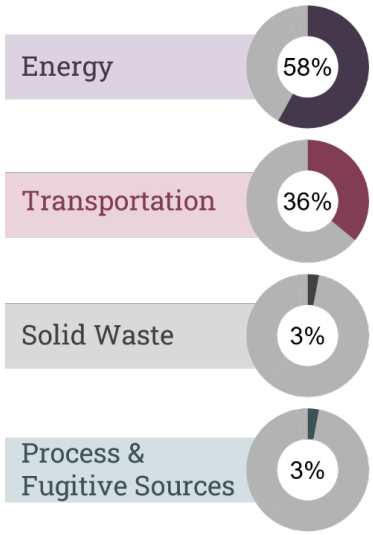
[1] **May**, C., C. Luce, J. Casola, M. Chang, J. Cuhaciyan, M. Dalton, S. Lowe, G. Morishima, P. Mote, A. Petersen, G. Roesch-McNally, and E. York, 2018: Northwest. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 1036–1100. doi: 10.7930/NCA4.2018.CH24

Woodinville's Emissions

The City of Woodinville conducted a GHG inventory to gain insight into Woodinville's key emission sources. An analysis of Woodinville's 2019 GHG emissions revealed the following key insights:

- Woodinville's residents, businesses, and visitors produced approximately **223,392** metric tons of carbon dioxide equivalent ($MTCO_2e$), or about **18** $MTCO_2e$ per capita.
- Woodinville's primary sources of GHG emissions are energy, transportation, solid waste, and use of refrigerants (see Figure 1).

Figure 1. Woodinville's emissions distribution by sector.



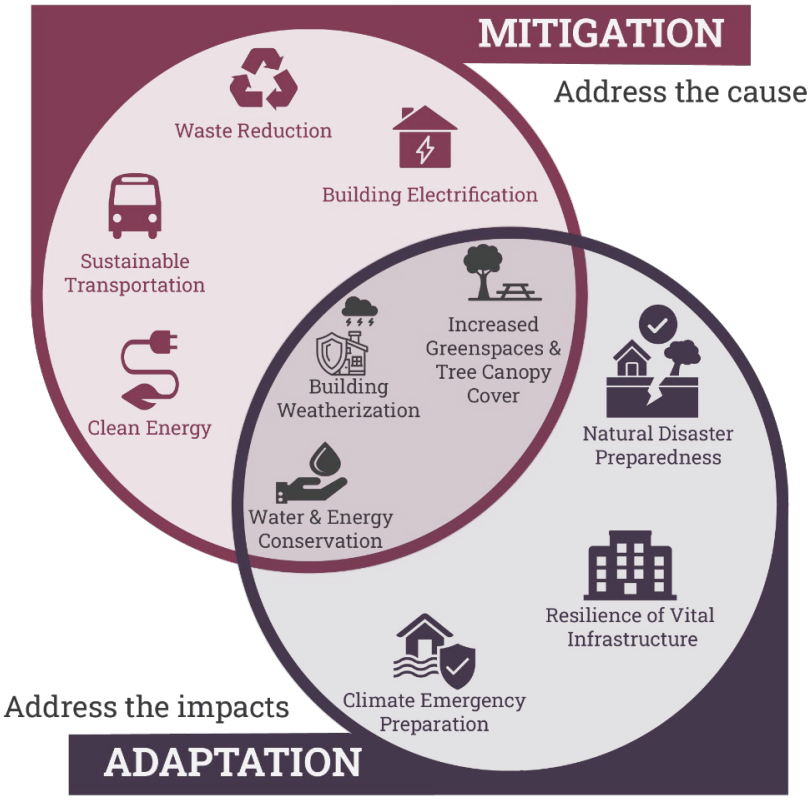
Using the results of this GHG inventory, the City's future greenhouse gas emissions were forecasted through 2050 based on factors such as population and job growth projections, as well as the impact of adopted federal, state, and regional policies.

In alignment with King County's emission reduction targets, this forecast models targets of reducing overall community GHG emissions by **95% by 2050**, from a 2007 baseline, with interim targets of **50% reduction by 2030** and **75% reduction by 2040**.

This GHG inventory and emissions forecast gave Woodinville valuable insight into the sources of our current and future GHG emissions, and helped the City develop the strategies and actions in this CAP that will strategically target the City's key emission sources.

Mitigation and Adaptation

The CAP relies on two types of climate strategies and actions: **mitigation** and **adaptation**. Both are necessary to address and prepare for climate change, and some of the strategies and actions serve as both mitigation and adaptation approaches.



Mitigation actions address the cause of climate change by reducing GHG emissions and increasing carbon "sinks" to store these gases.

Adaptation actions address and manage the impacts of climate change by preparing the community and natural environment to adapt to the unavoidable impacts of climate change we will and are already experiencing.

Woodinville's Strategies and Actions At-A-Glance

The CAP serves as a roadmap to help Woodinville make collaborative and impactful advances towards our vision of a sustainable, resilient, inclusive, and healthy community. The strategies and actions in this CAP are organized by focus areas that incorporate both mitigation and adaptation strategies and actions.

The following tables introduce strategies and the number of actions specific to the five Woodinville CAP focus areas. For a complete list of actions and descriptions, see the "Goals, Strategies, & Actions" section.

BUILDINGS AND ENERGY

GOAL: Reduce building emissions through energy efficiency, building electrification, and renewable energy.

Strategies	Number of Actions
• Strategy BE1: Advance building decarbonization • Strategy BE2: Reduce energy use in new and existing buildings • Strategy BE3: Increase energy resilience to climate impacts	10

TRANSPORTATION

GOAL: Reduce greenhouse gas emissions from transportation by expanding the use of electric vehicles, increasing multimodal transportation options, and improving cycling and pedestrian infrastructure.

Strategies	Number of Actions
• Strategy TR1: Transition to non-fossil fuel vehicles & equipment • Strategy TR2: Reduce vehicle travel • Strategy TR3: Support the reduction of aviation emissions	9

CONSUMPTION AND MATERIALS MANAGEMENT

GOAL: Reduce community waste and the greenhouse gas emissions generated from consuming and disposing of goods and materials.

Strategies	Number of Actions
• Strategy CM1: Divert waste from landfills • Strategy CM2: Reduce waste generation	9

NATURAL SYSTEMS AND WATER

GOAL: Foster climate resilient natural landscapes by preserving and expanding vital habitats, ecosystems, and natural resources, and protecting water resources.

Strategies	Number of Actions
• Strategy NS1: Expand, protect, and improve green spaces and natural ecosystems • Strategy NS2: Protect water quality and improve water management	6

COMMUNITY RESILIENCE

GOAL: Ensure that all Woodinville residents are prepared for current and future climate impacts.

Strategies	Number of Actions
• Strategy CR1: Mitigate climate impacts on communities • Strategy CR2: Engage the community in climate action • Strategy CR3: Mainstream climate change into planning & decision-making	9

INTRODUCTION

The City of Woodinville is home to an active and growing community; supported by a vibrant downtown atmosphere with thriving local businesses, access to green spaces and parks, extensive recreation opportunities, and proximity to major metropolitan areas, like Seattle and Bellevue. The unique community character and the natural environment of Woodinville contributes to the overall sentiment of high quality of life among residents[2], however, climate change impacts such as extreme heat and extreme weather events threaten these values and resources.

Adopting a Climate Action Plan (CAP) is a critical step in preparing our community for the impacts of climate change, which represents an ever-increasing threat to the health and well-being of Woodinville residents and beyond. Greenhouse gas (GHG) emissions from transportation, energy use, land use change, and other sources are changing our climate in ways that can put the community at risk. Projected changes in temperature, snowpack, severe storms, and wildfire risk could threaten Woodinville's natural resources, public health, and infrastructure.

During the 2022 Strategic Planning process, the City Council identified CAP development as a priority, in order to care for the natural environment and ecosystems. Upon adoption of the Strategic Plan, the City Manager's Office initiated the CAP development project and co-developed the Plan with internal and external stakeholders to ensure community concerns and values were represented. This Plan provides a roadmap with strategies and actions specific to Woodinville, encompassing community solutions and individual actions that will reduce the City's emissions, conserve natural resources and ecosystems, and strengthen community resilience to climate impacts. Importantly, the CAP reinforces the goals set by the Woodinville Strategic Plan and will be integrated into the City's 2024 Comprehensive Plan update. By ensuring synergies with other planning documents, Woodinville is committing to build a more resilient, sustainable, and equitable future for its community.

[2] City of Woodinville Strategic Plan (2022-2026)

CLIMATE CHANGE IN WOODINVILLE

Pacific Northwest communities are already experiencing the economic and health impacts of changes to climate patterns, including warming temperatures, changes in rainfall, and reduced snowpack. Without coordinated and ambitious climate mitigation across the globe and climate adaptation at the local level, the impacts of climate change will undoubtedly worsen in the future.

What is Climate Change?

While weather is what we experience on a day-to-day basis, climate describes average weather conditions over a long period of time. As the climate changes, extreme weather conditions, such as extreme heat and precipitation, become more frequent and severe. Climate change is the result of increasing concentrations of greenhouse gases (GHGs) within our atmosphere. GHGs such as carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O) create a greenhouse effect, trapping heat within the atmosphere and causing the gradual increase of global average temperatures. Human activities, such as driving and heating or cooling homes and businesses, emit large amounts of GHGs due to the combustion of fossil fuels.

Woodinville is experiencing climate impacts such as extreme heat, drought, and extreme precipitation. These changes lead to an increase in frequency and severity of natural disasters such as heat waves and flooding. Woodinville already experiences these impacts through extreme weather events such as record-breaking heat waves and poor air quality days caused by wildfire smoke. These impacts are harmful to the natural environment, critical resources, and the overall health of our community.

Who and what are most vulnerable? Woodinville's critical waterways—including the Sammamish River and Little Bear Creek—are vulnerable to flooding, summer low flows, water quality impairment, and loss of suitable habitat for local wildlife and fish. Certain areas in Woodinville may be at increased risk for landslides with changes in rainfall[3]. Agricultural lands adjacent to Woodinville are particularly susceptible to flooding risks and the associated economic impacts. Woodinville's bustling food and beverage, tourism, and recreation economy relies on agricultural lands throughout Washington State and the greater Pacific Northwest, and climate impacts across the region will likely be felt differently.

[3] City of Woodinville of Jurisdiction Plan Annex, Regional Hazard Mitigation Plan. King County, 2019. https://kingcounty.gov/depts/emergency-management/emergency-management-professionals/regional-hazard-mitigation-plan.aspx

HOW IT CAME TOGETHER

Over the last several years, the City of Woodinville has made significant strides toward ensuring that Woodinville is resilient and prepared for the impacts of climate change. Key achievements include completing a Tree Canopy Assessment in 2019, initiating a Transportation Plan update process (update in progress), and adopting a new Strategic Plan (2022). As the next step in Woodinville's climate action progress, the Climate Action Plan development process began in 2023, and will be incorporated into the 2024 Comprehensive Plan update.[4]

CAP Development Process

The CAP was developed through an iterative approach that included quantitative and qualitative processes to ensure that Woodinville's CAP alignment with the latest climate science, community priorities, and regional context.

GREENHOUSE GAS EMISSIONS

Calculated Woodinville's 2019 greenhouse gas emissions and forecasted future emissions through 2050 to identify key opportunities for GHG emission reductions.

COMMUNITY ENGAGEMENT

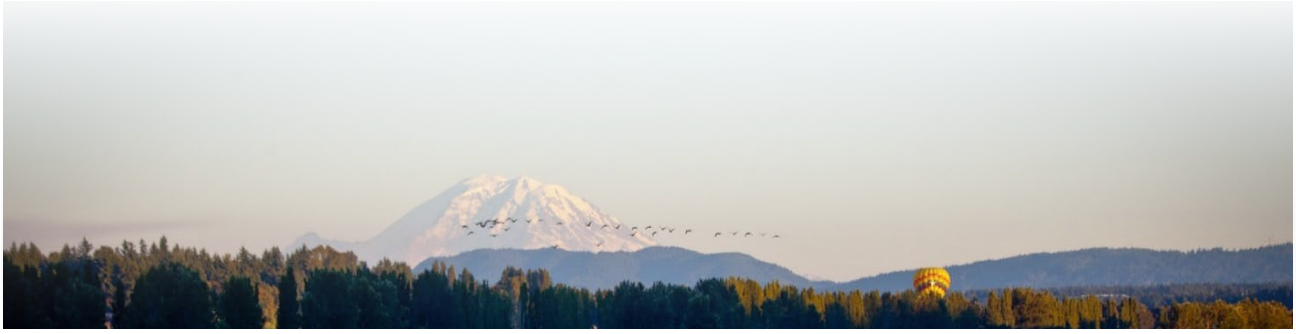
Engaged Woodinville's community and key City staff to understand priorities, insights, and opinions, which were used to inform development of the CAP's goals, strategies, and actions.

GOALS, STRATEGIES, & ACTIONS

Developed goals, strategies, and actions that align with regional initiatives and priorities, and are designed to mitigate GHG emissions and adapt to climate change.

IMPLEMENTATION PLAN

Worked with City staff to develop an implementation plan to serve as a framework for supporting successful and sustainable CAP implementation.



[4] As of June 2023, Woodinville's Comprehensive Plan update is planned to occur in 2024.

GREENHOUSE GAS EMISSIONS

Burning fossil fuels to support transportation and energy needs, solid waste decomposition, and other human led activities are the primary sources of increasing greenhouse gas (GHG) emissions in the atmosphere. These gases trap heat, warming the planet which directly contributes to climate change and increases related risks. Woodinville is joining King County cities, and communities around the world, in analyzing their carbon footprint and identifying strategies and actions that will reduce the City's GHG emissions.

The City of Woodinville conducted a greenhouse gas inventory in 2019 as part of the Puget Sound Regional Emission Analysis (PSREA)[5], a comprehensive 2019 GHG inventory for King, Kitsap, Pierce, and Snohomish counties, as well as all King County cities. This inventory was completed under the guidance of the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions[6] to ensure that the analysis is accurate, complete, and replicable.

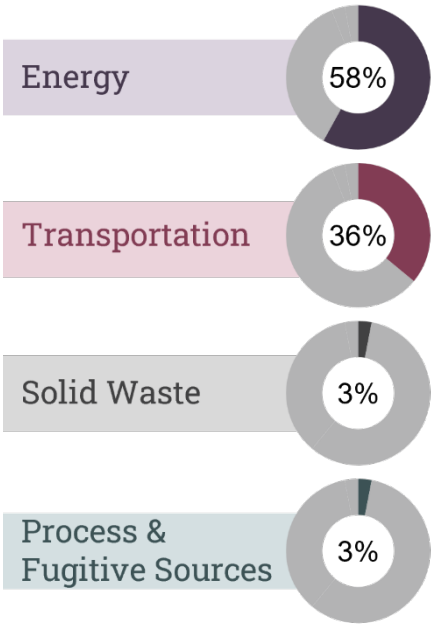
GREENHOUSE GAS INVENTORY FINDINGS

In 2019, Woodinville's residents, businesses, and visitors produced approximately 223, 392 metric tons of carbon dioxide equivalent ($MTCO_2e$), or about 18 $MTCO_2e$ per capita.

These emissions came from a variety of sources including energy consumption, transportation, solid waste generation and disposal, and process and fugitive sources. Woodinville's 2019 emission distribution by sector is shown in Figure 2.

Based on this analysis, the City's largest individual emission sources in 2019 were electricity consumption (**42%**), on-road transportation (**22%**), and natural gas consumption (**15%**).

Figure 2. Woodinville's emissions distribution by sector.

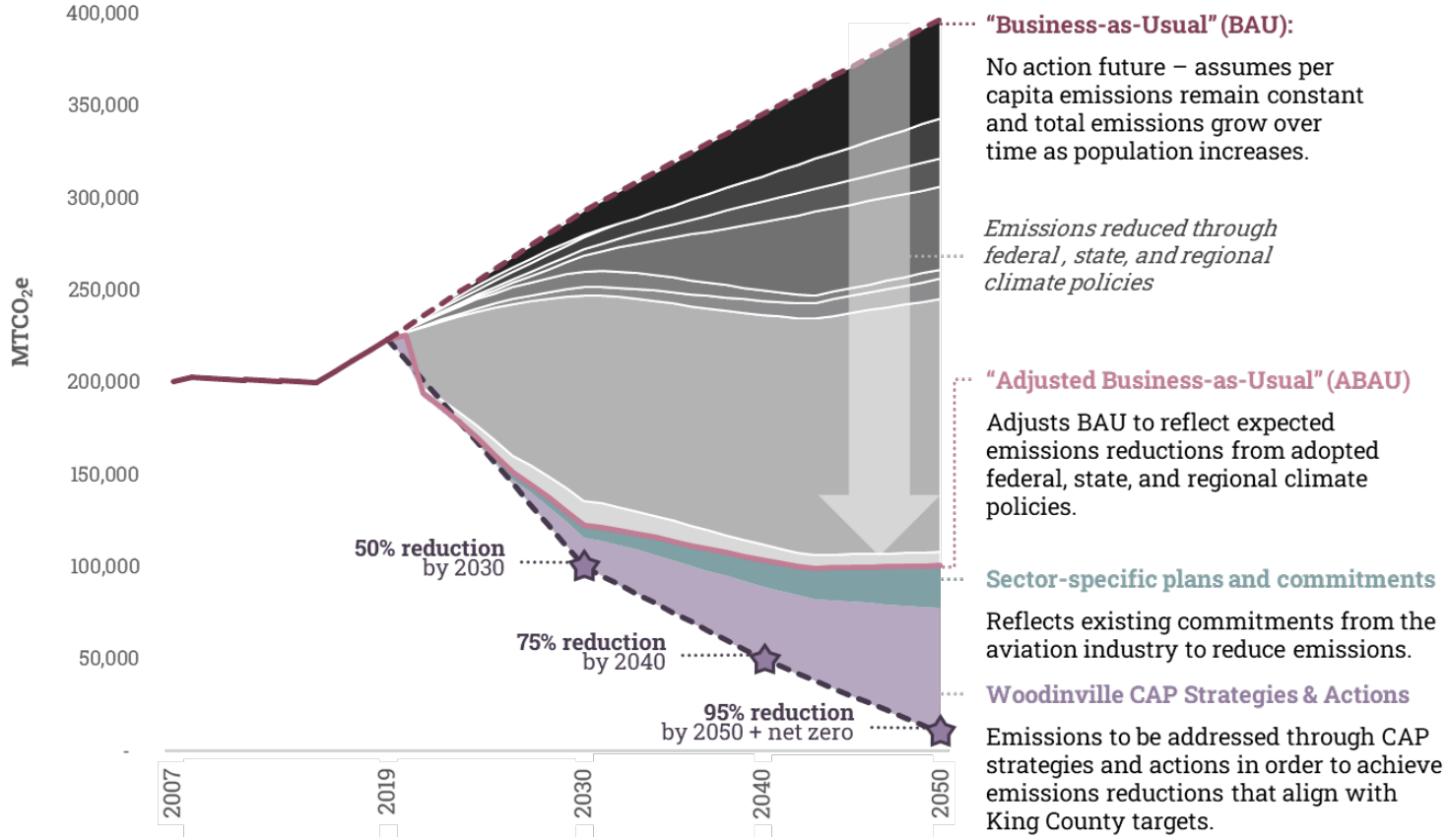


[5] King County greenhouse gas emissions - King County
[6] US Community Protocol | ICLEI USA

FUTURE EMISSIONS

The City of Woodinville's forecasted future emissions are shown using a "wedge analysis", a tool which visually depicts projected emissions and emissions reductions based on various scenarios into the future. This model reflects King County's adopted emissions reduction targets (from 2007 emissions baseline)[7,8]:

Figure 3. Woodinville's forecasted emissions through 2050.



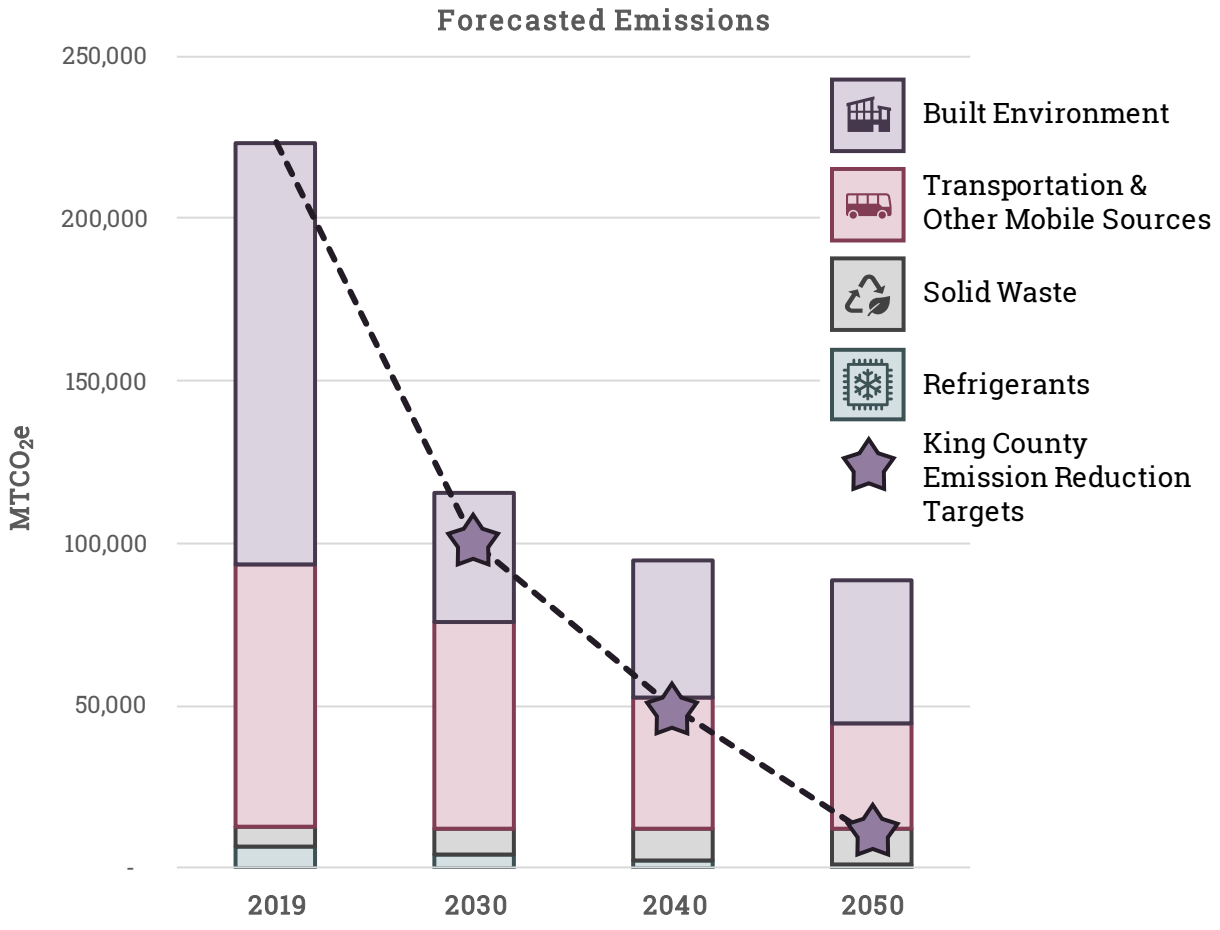
[7] 2021 Adopted CPPs (kingcounty.gov)

[8] As of June 2023, the City of Woodinville has not officially adopted GHG emission reduction targets.

The federal, state, and regional climate policies modelled in the "adjusted business-as-usual" scenario above will have a significant impact on Woodinville's emissions profile. The predicted sources of Woodinville's remaining emissions in 2030, 2040, and 2050 will be addressed through the strategies and actions in this CAP and are shown below in Figure 4.

For a complete overview of the GHG inventory and wedge analysis, see "Appendix B: Greenhouse Gas Inventory Methodology."

Figure 4. Woodinville's remaining emissions under the adjusted business-as-usual scenario.



COMMUNITY ENGAGEMENT

Woodinville's community was engaged throughout the development of the CAP to provide insights and feedback on CAP strategies and actions, and ensure they reflect community priorities. For a complete summary of our engagement efforts, see "Appendix C: Community Engagement Summary."

Internal and external engagement opportunities included:

To encourage community participation, opportunities were advertised on City social media platforms, in-person promotion at community events, flyers at the local library, City Hall, and local businesses, and information in our digital newsletter, the *Woodinville Wire*.

WHAT WE HEARD

Throughout the engagement process, we learned what a sustainable and climate-resilient Woodinville looks like to our community. Some key takeaways we heard the from public engagement included:

Buildings & Energy

- Increase energy efficiency through retrofits and new build requirements/ incentives
- Reduce natural gas usage
- Invest in renewable energy projects

Consumption & Materials Management

- Increase access to composting and recycling
- Educate community and businesses about proper composting and recycling
- Encourage sustainable consumption

Community Resilience

- Prioritize frontline communities in climate action
- Improve natural hazard mitigation
- Assess vulnerability
- Increase access to affordable, green housing

Transportation

- Encourage biking and walking through infrastructure and safety improvements
- Expand access to EV infrastructure

Natural Systems & Water

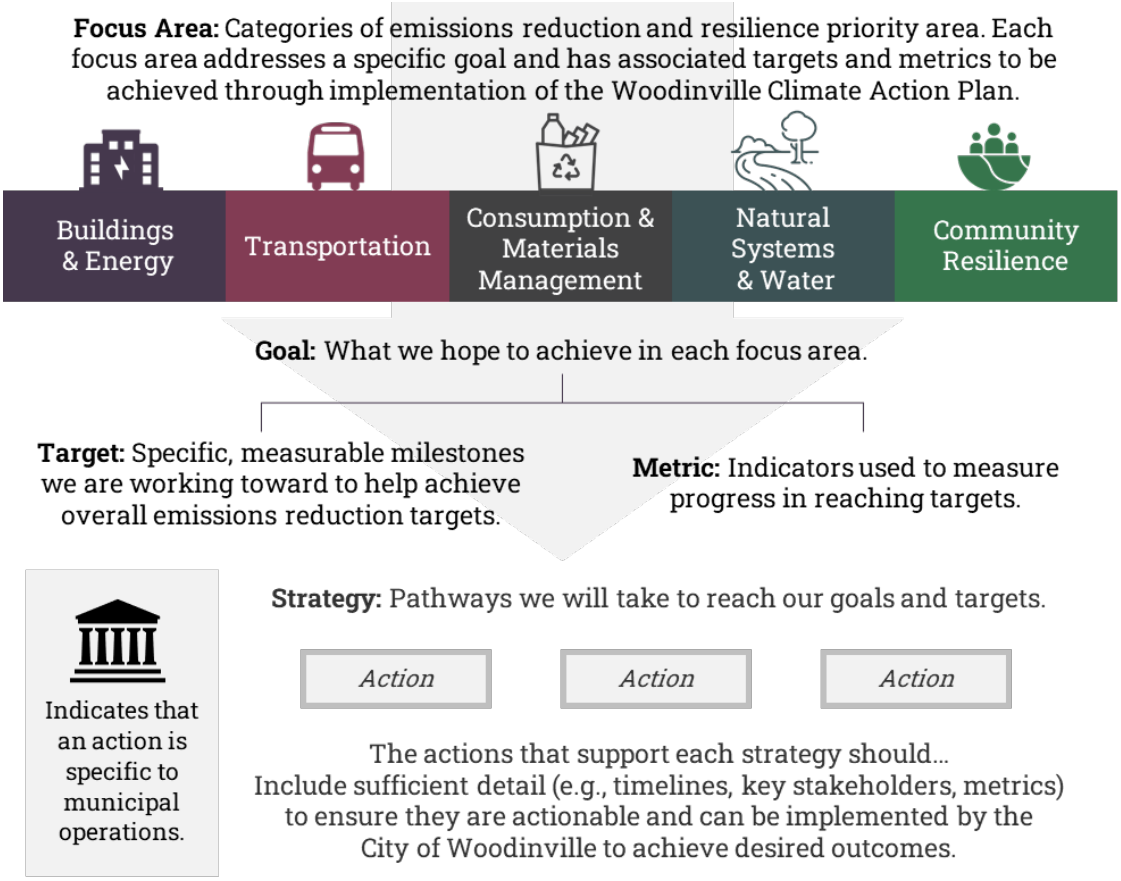
- Encourage pollinator gardens
- Prioritize low-impact development
- Increase green space
- Conserve natural resources
- Protect water quality

GOALS, STRATEGIES, & ACTIONS

STRATEGIES & ACTIONS

The following strategies and actions were developed and refined over the course of the Woodinville CAP process. The project team initially drew from regional resources including King County's Climate Action Toolkit and peer jurisdiction CAPs to ensure that Woodinville's strategies and actions align with regional best practices in climate mitigation and adaptation. Strategies and actions were then tailored to address Woodinville's emissions trajectory and specific projected climate risks. Public input directly informed and guided the goals, targets, metrics, strategies, and actions in this plan. The strategies and actions within the Woodinville CAP are not presented in priority or sequential order; sequencing considerations are outlined in the "Implementation Timeline & Sequencing" section of "Appendix A: Implementation Details".

Figure 5. Climate Action Plan structure.



Buildings & Energy

GOAL: Reduce building emissions through energy efficiency, building electrification, and renewable energy.

Using electricity and natural gas to power our homes and buildings contributes 58% of our communitywide GHG emissions. Washington's electricity grid is expected to become GHG neutral by 2030 through state policy that phases out electric utilities' use of fossil fuels. The strategies and actions within this focus area are designed to facilitate an equitable transition from natural gas to clean electricity in buildings while using energy more efficiently and promoting the use of renewable energy sources.

Target	Metric
Reduce natural gas and other fossil fuel use in existing buildings by at least 10% by 2030 and 100% by 2050. (K4C)	Increase in renewable energy use. Reduction in building natural gas, propane, & fuel oil consumption
Reduce 50% of energy emissions from new buildings and reach net-zero GHG emissions in new buildings by 2031. (K4C)	Reduction in communitywide energy use
Increase local solar by 1 MW by 2030 and 2 MW by 2050.	Energy generation capacity of local community solar projects

Strategy #1: Advance building decarbonization

BE1.1	WA State Building and Energy Code compliance
Support the transition from natural gas in new buildings by implementing building codes that align with the policy's outlined by the Washington State Building Code Council and Washington State Energy Code.	
BE1.2	Heat pump program expansion
Expand regional electric heat pump rebates to replace natural gas-powered furnaces and increase energy efficiency in City and residential buildings. Action will focus particularly on serving low-income residents.	
BE1.3	Contractor incentive & training program
Work with regional jurisdictions and agencies to expand upstream and midstream incentives for building electrification retrofits to local distributors and contractors.	
BE1.4	Green Power promotion
Enroll City facilities and encourage/promote businesses and residents to enroll in Puget Sound Energy's (PSE) Green Power Program.	

BE1.5	Municipal carbon neutrality
	Develop and further invest in a program to achieve carbon neutrality for city facilities, operations, and services. This could include actions such as: • Support all-electric new and existing construction. • Increase solar installation and building renewable energy storage systems. • Integrate green building guidelines into the Woodinville's Municipal Building Code.

Strategy #2: Reduce energy use in new and existing buildings.

BE2.1	Municipal energy efficiency retrofits and weatherization
	Encourage early adoption of efficiency retrofits to City buildings before they are required through local or state mandates. Utilize King County's City Fund to Reduce Energy Demand program which offers low-interest loan funds, pursue state grants in coordination with an energy services contractor, and/or leverage Department of Commerce grant programs.
BE2.2	Residential efficiency retrofits and weatherization
Partner with organizations to provide and promote energy efficiency and weatherization rebates. Additional programs encouraging commercial and residential adaptation measures (e.g., cool roofs, green roofs, cool pavement, ceiling fans, air filters) should also be explored. Build awareness of other state, regional, and national incentive programs.	
BE 2.3	WA Clean Buildings Act education
Promote state resources to increase awareness of the Washington Clean Buildings Act for building owners. This Act requires existing buildings over 50,000 s.f. to reduce their Energy Use Intensity at a minimum of 15% compared to the 2009-2018 average.	

Strategy #3: Increase energy resilience to climate impacts.

BE3.1	Resilient energy operations & infrastructure
Support and coordinate with PSE on the timely expansion, maintenance, operation, and replacement of utility infrastructure in order to meet the anticipated demand for identified growth. As economically and technically feasible, support plans on installation of utility scale battery energy storage system facilitates (BESS) and distributed energy resource (DER) options.	
BE3.2	Community solar projects
Create incentives and continue to explore grant opportunities to support community solar projects. Improve local energy resilience by accelerating improvements to the energy grid and solar energy storage through subsidy and grant programs.	

Transportation

GOAL: Reduce greenhouse gas emissions from transportation by expanding the use of electric vehicles, increasing multimodal transportation options, and improving cycling and pedestrian infrastructure.

Transportation contributes over a third (36%) of our communitywide GHG emissions, and includes emissions produced through fuel combustion and usage by on-road and off-road vehicles and equipment as well as aviation.

Target	Metric
50% of new passenger vehicles purchased are EV by 2030 and 100% by 2050.	% new passenger vehicles purchased that are EV
30% reduction in emissions from offroad equipment by 2030 and 100% by 2050.	Fuel consumed by offroad equipment
Reduce passenger vehicle miles traveled (VMT) by 5% by 2030 and 25% by 2050.	Reduction in overall passenger vehicles miles traveled

Strategy #1: Transition to non-fossil fuel vehicles & equipment.

TR 1.1	Public EV Infrastructure Plan
Develop and implement an EV Charging Infrastructure Plan that guides expansion of EV charging capacity throughout the City. Expand EV charging infrastructure across the City, including at City buildings, multi-family homes, apartment buildings, major employer buildings, and parking garages.	
TR1.2	EV Charging Requirements
Mandate EV charging infrastructure in new residential buildings and EV charging stations in newly constructed apartment buildings.	
TR1.3	Electric vehicles & equipment community education
Create EV and electric equipment communication and outreach programs in the Woodinville Community that explain the benefits of EVs, rebates available for EV or electric equipment purchasing, EV charger locations, and other helpful information.	
TR1.4	Municipal vehicle electrification
As feasible, transition the municipal vehicle fleet to all electric.	

Strategy #2: Reduce vehicle travel.

TR 2.1	Expand multi-modal services
Advocate to expand, maintain, and enhance multimodal transit services and related facilities, including better first-last mile access to transit. Work with third-party	

programs and businesses to increase the availability, accessibility, and convenience of shared mobility options (e.g., bike share, scooter share, shuttles services, car share) and maintain affordability of services.

TR2.2	Promote multimodal development

Promote dense, mixed-use, and multimodal developments through incentives or requirements for developments that minimize parking structures in favor of transit, rideshare, walking, and biking. Ensure future development avoids siting sensitive uses near high-volume roadways, to protect sensitive groups from transportation related air pollution.

TR2.3	Commute trip reduction

Continue to implement and promote the Commute Trip Reduction (CTR) program and encourage work from home and flexible schedules for Woodinville employers and residents that commute out of the City.

TR2.4	Residential walkability and cycling enhancement

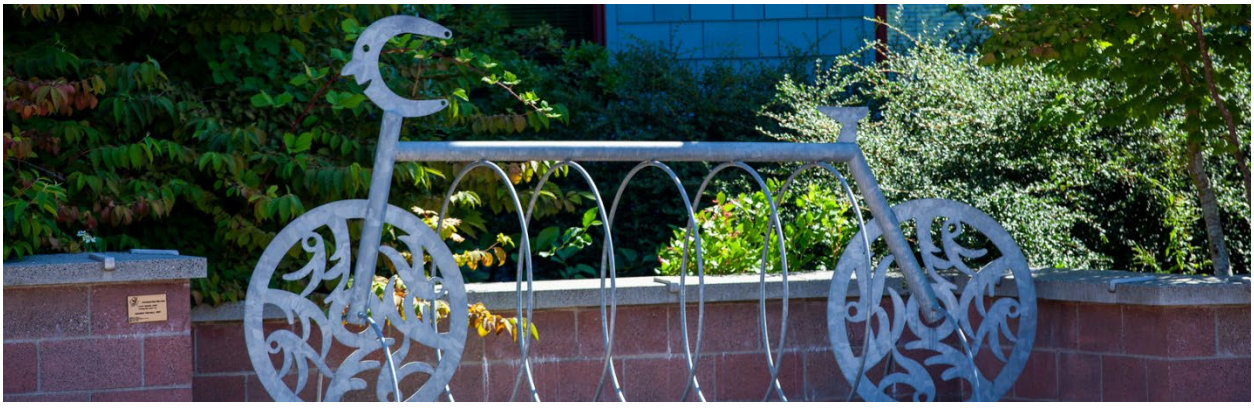
Continue implementation of the Transportation Plan to improve walkability and bicycle paths between residential neighborhoods, schools, commercial areas, and connecting communities. In the Transportation Plan update, consider priority actions such as:

- Requiring pedestrian-friendly sidewalks and parking that minimizes conflicts between pedestrians and automobiles.
- Continue adding bike lanes and bike-friendly shoulders to existing roadways where individual bike paths are not viable.
- Developing affordable communities where work, shopping, schools, and parks are connected through complete pedestrian and cycling networks.

Strategy #3: Support the reduction of aviation emissions.

TR3.1	Regional aviation coordination

Adopt a proclamation in support of regional and industrial efforts to reduce regional aviation emissions by promoting the use of sustainable aviation fuel and aviation fuel efficiency measures.



Consumption & Materials Management

GOAL: Reduce community waste and the greenhouse gas emissions generated from consuming and disposing of goods and materials.

Although solid waste disposal contributes around 3% of Woodinville's communitywide GHG emissions, waste prevention and responsible disposal can avoid significant upstream impacts of goods and services. By using less, reusing what is already available, and salvaging more, we can improve waste diversion and avoid the emissions associated with extracting raw materials to generate the goods we consume. In particular, food waste prevention not only helps reduce methane emissions from organic decomposition in landfills but can help get food to those who need it most.

Target	Metric
Divert 50% of other recyclable and compostable materials by 2030 and 95% by 2050.	% of waste diverted from landfills
Increase in diversion of construction & demolition (C&D) waste and other recyclable and compostable materials from landfills by 85% by 2030 and 2050.	Diversion rate of construction & demolition (C&D) waste and other recyclable and compostable materials from landfills

Strategy #1: Divert waste from landfills.

CM1.1	Increase residential recycling and composting.
Expand recycling and compost service for single-family and multifamily properties and provide technical assistance to support successful composting. Consider the implications of mandating an organics disposal bans and/or requiring services.	
CM1.2	Increase commercial recycling and composting.
Expand commercial recycling and organics collection and service, including making recycling and organics disposal as convenient as garbage and adequate to serve the number of tenants and providing educational materials to owners/mangers. Implement compost requirements for food businesses in accordance with the Organics Management Law (HB 1799). Consider the implications of mandating an organics disposal bans and/or requiring services.	
CM1.3	Strengthen construction and demolition diversion requirements.
Adopt and enforce King County's Construction & Demolition waste diversion requirements. Support policies, tools, and programs to reduce construction-related emissions, including sourcing low embodied carbon materials.	

Strategy #2: Reduce waste generation.

CM2.1	Implement a sustainable purchasing policy for municipal operations.
	Adopt a sustainable purchasing policy that prioritizes products that (1) meet environmental standards or certifications; (2) are locally sourced; (3) can be recycled or composted at end of life; (4) can be repaired to extend the life of electronics and other goods.
CM2.2	Support the transition to a circular economy.
Collaborate with King County's Solid Waste Division (SWD's Re+ Program) and other jurisdictions to develop and implement a circular economy framework to successfully transition to a circular economy by 2050.	
CM2.3	Solid waste emissions reduction.
Collaborate with King County to develop plans to reduce local emissions from the collection, transport, and disposal of Woodinville's waste.	
CM2.4	Sustainable packaging.
Collaborate with local businesses to increase awareness of state-level policies that promote packaging with the lowest lifecycle GHG emissions. Increase awareness of environmental programs, such as EnviroStars, that provide financial assistance for businesses to adopt sustainable practices.	
CM2.5	Garden access and creation.
Support access to and the creation of community gardens at shared spaces and organizations such as schools, churches, parks, etc.	
CM2.6	Reuse of tools and products.
Support community reuse programs like tool libraries or Buy Nothing groups in order to reduce overall consumption rates.	

Natural Systems & Water

GOAL: Foster climate resilient natural landscapes by preserving and expanding vital habitats, ecosystems, and natural resources, and protecting water resources.

Woodinville's community identified protection and expansion of the city's natural resources and green space as a top priority. This focus area prioritizes Woodinville's green spaces and natural ecosystems, as central to carbon sequestration, recreation, and preservation of vital habitats. It also addresses climate risks by protecting water quality and conserving valuable water resources.

Target	Metric
Increase tree canopy from 45% (2019) to 50% tree canopy coverage by 2035.	% of total acreage that is covered by tree canopy

Strategy #1: Expand, protect, and improve green spaces and natural ecosystems.

NS1.1	Enhance Woodinville's woodland character.
Support the implementation of the Community Urban Forestry Plan, including encouraging residents and property owners to expand tree planting on private property. Offer tree-awareness campaigns and classes to educate the community on tree planting best practices and develop tree planting demonstration programs.	
NS1.2	**Expand green space.**
Require open space set asides (such as parks) for new development to increase carbon sequestration potential and enhance community resilience. Ensure equitable access to parks, green space, and recreational services for all residents by evaluating gaps in green space and prioritizing expansion in these neighborhoods.	
NS1.3	**Increase climate resiliency by preserving and restoring ecosystem services.**
Develop a comprehensive urban landscape strategy or framework (for both City and communitywide projects) to develop additional natural areas and preserve the function of existing ones under changing climatic conditions. The strategy should consider actions such as: • Conduct and update a tree canopy assessment to prioritize increasing tree canopy in areas where there are identified gaps and/or areas subject to urban heat island effect. • Where possible, enhance and restore existing flood storage, conveyance, and ecological functions and values of floodplains, wetlands, and riparian corridors.	

Strategy #2: Protect water quality and improve water management.

NS2.1	Low-impact development.
Replace outdated stormwater infrastructure and, using the Department of Ecology guidelines where practical, create low-impact development (LID) policies and guidelines specific to Woodinville. Guidelines and policies may include incentivizing LID for construction and remodels and encouraging the replacement of old stormwater infrastructure with permeable pavement, bioswales, rain gardens, and vegetated roofs to protect water quality.	
NS2.2	Salmon friendly landscape standards.
Continue the "Salmon Friendly" program by funding green solutions that capture and reduce pollution from rainwater runoff, such as rain gardens, cisterns, and native landscapes. The program should seek to reduce pollution in stormwater runoff of both private and public projects.	
NS2.3	Water reuse support and education.
Support King County efforts to expand recycled water reuse for landscape and agriculture irrigation. Educate the Woodinville community on the financial and environmental benefits water reuse and encourage rainwater and greywater use on their residence.	

Community Resilience

GOAL: Ensure that all Woodinville residents are prepared for current and future climate impacts.

The strategies and actions within this focus area are designed to increase community resilience—or the community's ability to adapt to the unavoidable impacts of climate change—while supporting overall wellbeing. Climate resilience rose as a top priority among the Woodinville Community, with an emphasis on protecting the most vulnerable members of our community as well as future generations.

Target	Metric
100% of the community has access to preparedness resources and education by 2035.	Number of individuals receiving preparedness resources/education

Strategy #1: Mitigate climate impacts on communities.

CR1.1	Climate risk evaluation.
Conduct, and periodically update, a climate vulnerability and risk assessment that includes a focus on communities, natural systems, and the built environment. Use assessment findings to educate the community of the most critical climate risks facing Woodinville and evaluate changes to land use planning and building codes to enhance resilience.	
CR1.2	**Urban heat resilience planning & response.**
Develop and implement an urban heat resilience plan or strategy that includes heat mitigation and management actions to prepare for and respond to chronic and acute heat risk in the community. The strategy should be informed by urban heat island mapping and may include coordinated efforts such as cooling centers, early warning systems, development/land use codes, and energy grid resilience. Utilize the King County Extreme Heat Mitigation Strategy to align with county planning efforts.	
CR1.3	**Plan for climate impact hazards and emergencies.**
Partner with King County on the next update to the Hazard Mitigation Plan to ensure specific climate impacts are included in plan update. Update the Emergency Management Plan to ensure specific climate impacts, such as streamlining communication for quick deployment during climate emergencies, are included in plan update.	

Strategy #2: Engage the community in climate action.

CR2.1	Climate education and awareness.
Partner with local schools and organizations to expand climate education campaigns to encourage the Woodinville community to advocate for state and federal legislation that supports local climate mitigation and adaptation efforts. Climate outreach and/or	

education campaigns should support ongoing community engagement in climate actions by creating initiatives such as addressing misinformation in energy use or building climate pledge programs.

CR2.2	Climate partnerships.

Partner with King County, neighboring cities, community groups, and tribes to advance regional initiatives to improve climate mitigation measures and increase community resilience to climate change.

CR2.3	Engagement opportunities & feedback incorporation.

Provide ample opportunities to engage the community around climate and sustainability issues and needs and incorporate feedback into ongoing programs and initiatives. Include periodic community surveys to solicit feedback and understand concerns. Intentionally engage communities that are most affected by proposals and plans.

Strategy #3: Mainstream climate change into planning & decision-making.

CR3.1	Emissions reduction tracking.

Collaborate with King County on regional emissions tracking and maintain a publicly available platform to track CAP and GHG reduction progress.

CR3.2	Climate considerations in government.

Consider climate impacts when reviewing or approving major City developments, infrastructure-changes, policies, etc.

CR3.3	Increase City capacity for CAP implementation.

Establish the position of Climate Action Manager to coordinate implementation of the CAP, communicate efforts within City and with other jurisdictions and entities, and provide engagement and advocacy at the local, regional, and state levels—all actions critical in CAP implementation. Additionally, the City can continue to build City employee climate change awareness and capacity by offering trainings in considering climate impacts in their day-to-day decisions at work.

WHAT YOU CAN DO

Beyond the strategies and actions included in the CAP, climate action will most likely be successful if we all – at an individual level, city, state, and beyond – reduce our carbon footprints. Here is what you can do to contribute to a collective effort in creating a sustainable future:

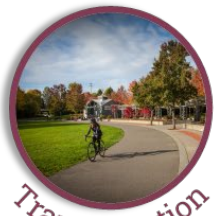
Buildings & Energy

Consider upgrading to electric, energy efficient appliances and heat pumps.

Conserve electricity by turning off lights and electronics when you aren't using them.

Try to drive less. Use public transportation, carpool, bike, or walk whenever possible.

Consider an electric vehicle, hybrid, or more fuel-efficient model.



Transportation

Consumption & Materials Management

When recycling, ensure recyclables are clean, dry, and empty and compost at home.

Support sustainable local businesses.

Take advantage of the local produce next-door! Support local farms and reduce food miles.

Use sustainable yard care practices by planting native vegetation and installing rain gardens.

Participate in tree-planting initiatives or support reforestation projects.

Conserve water by fixing leaks, using water-efficient fixtures, and practicing responsible water usage.

Natural Systems & Water

Community Resilience

Prepare for emergencies by building connections within your local community, creating evacuation plans to, and making emergency kits for you home and car.

Stay informed on the climate actions being implemented in Woodinville and provide feedback on ongoing programs and initiatives.

Importantly, we need to spread awareness about climate change and the importance of reducing GHG emissions. As we work towards becoming carbon neutral and climate resilient, you can engage in conversations, participate in local initiatives, and support policies that promote renewable energy, energy efficiency, and sustainable practices.

IMPLEMENTATION PLAN

Achieving Woodinville's climate goals will require commitment, time, and resources from the City and from the broader Woodinville community. The Woodinville CAP will serve as a strategic roadmap to help us meet our GHG emissions reduction targets and strengthen the overall resilience of Woodinville's communities. The CAP will help guide collaborative and cohesive efforts from the City, community partners, and the public to ensure we make tangible progress towards the goals and targets set forth in the CAP. The following section provides a framework to support successful implementation of the CAP.

Oversight & Accountability

With oversight and guidance from the City Manager and City Council, the Assistant to the City Manager will lead implementation in collaboration with an interdisciplinary team of City staff from the following departments: Community Relations, Development Services, and Public Works. During the 2023-2024 budget process, the City will continue allocating staff resources to support successful CAP implementation. During the budget process, the City will evaluate existing staff workloads and consider methods to support City-wide implementation of the CAP beyond 2023. This may include shifting job responsibilities of existing staff and potentially creating a new position to increase implementation capacity.

Key accountability activities for the City include:

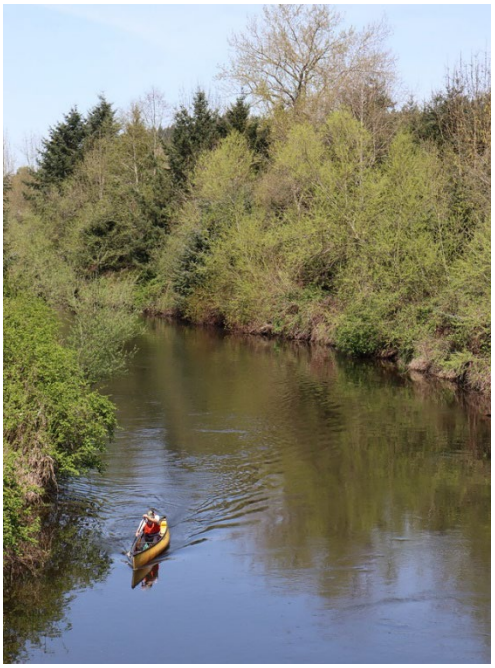
- Conduct GHG inventories every 2-4 years to monitor emissions reductions and evaluate any necessary steps to stay on track to reach the CAP targets.
- Develop recommendations across departments for programs, services, practices, and priorities related to climate change mitigation and adaptation.
- Prepare annual reports for the City Manager and the City Council on progress to date.

The City understands that the goals of the CAP cannot be achieved without advancing equitable outcomes and addressing existing disparities. The City will continually engage the Woodinville community to assess the following questions throughout implementation:

- **Disproportionate impacts:** Does the action generate burdens (including costs), either directly or indirectly, to communities of color or low-income populations? If yes, how can we mitigate these impacts?
- **Shared benefits:** Can we target the action's benefits in progressive ways to reduce historical or current disparities? Are the benefits dispersed equitably?
- **Accountability:** Does the action have appropriate accountability mechanisms to ensure that communities of color, low-income populations, or vulnerable communities will equitably benefit and not be disproportionately harmed?

Monitoring & Evaluation

The City will consider the CAP to be a living document that will evolve between now and the next planned update in 2028. The City will work to incorporate the CAP into Woodinville's Comprehensive Plan over the coming year.



In collaboration with necessary City departments, the Assistant to the City Manager will monitor progress and prepare annual CAP progress reports. If these reports indicate the City is not on track to meet targets, the City may choose to strengthen or add actions as necessary. This direction will be informed by the latest climate science, best practices, and allocated budgets and staffing. To effectively monitor the plan, the interdisciplinary team of City staff (CAP team) will:

- Update the GHG inventory every 2-4 years using Cascadia's GHG Inventory Workbook.
- Evaluate progress towards meeting the following modelled emission reduction targets by quantifying the collective emissions reduction impact of the plan's actions: 50% reduction by 2030; 75% reduction by 2040; and 95% reduction with net zero emissions by 2050.

- Collaborate across departments via CAP team to develop additional systems to track and monitor progress toward meeting CAP goals and targets, as feasible.
- Evaluate financial and risk management considerations and provide recommendations to the City Manager and City Council as requested.
- On an annual basis, track and report progress to the City Manager and City Council on annual implementation progress, including status of the targets and metrics included in the table below:

Targets	Metrics
Buildings & Energy	
Reduce natural gas and other fossil fuel use in existing buildings by at least 10% by 2030 and 100% by 2050 (K4C)	Increase in renewable energy use. Reduction in building natural gas, propane, & fuel oil consumption
Reduce 50% of energy emissions from new buildings and reach net-zero GHG emissions in new buildings by 2031 (K4C)	Reduction in communitywide energy use
Increase local solar by 1 MW by 2030 and 2 MW by 2050	Energy generation capacity of local community solar projects
Transportation	
50% of new passenger vehicles sold are EV by 2030 and 100% by 2050	% new passenger vehicles sold that are EV
30% reduction in emissions from offroad equipment by 2030 and 100% by 2050	Fuel consumed by offroad equipment
Reduce passenger vehicle miles traveled (VMT) by 5% by 2030 and 25% by 2050	Reduction in overall passenger vehicles miles traveled
Consumption and Materials Management	
Divert 50% of other recyclable and compostable materials by 2030 and 95% by 2050.	% of waste diverted from landfills
Increase in diversion of construction & demolition (C&D) waste and other recyclable and compostable materials from landfills by 85% by 2030 and 2050	Diversion rate of construction & demolition (C&D) waste and other recyclable and compostable materials from landfills
Natural Systems and Water	
Increase tree canopy by 45% (2019) to 50% tree canopy coverage by 2050	% of total acreage that is covered by tree canopy
Community Resilience	
100% of the community has access to preparedness resources and education by 2035	Number of individuals receiving preparedness resources/education

Ongoing Community Engagement

Implementing the CAP and achieving Woodinville's climate goals will depend, in part, on continued active engagement with the community. The City will continue to prioritize community input by partnering with residents and businesses to implement CAP actions equitably and to reflect our unique community needs and priorities. The City will work in partnership with community to ensure the following questions are considered:

- **Accessibility**. Are the action's benefits broadly accessible to households and businesses throughout the community—particularly communities of color, low-income populations, and minority-owned, women-owned, and emerging small businesses? Are outreach materials provided in appropriate formats and languages to serve non-English speaking and English as a second language (ESL) residents?
- **Alignment and partnership**. Does the action align with and support existing priorities of communities of color and low-income populations? Are there opportunities to leverage resources and build collaborative partnerships?

The following actions rely on community engagement:

- **BE1.2 Heat pump program expansion**
- **BE1.4 Green Power promotion**
- **BE2.2 Residential efficiency retrofits and weatherization**
- **BE 2.3 WA Clean Buildings Act education**
- **TR1.3 Electric vehicles & equipment community education**
- **CM1.1 Increase residential recycling and composting**
- **CM1.2 Increase commercial recycling and composting**
- **CM2.4 Sustainable packaging**
- **CM2.5 Garden access and creation**
- **CM2.6 Reuse of tools and products**
- **NS1.1 Enhance Woodinville's woodland character**
- **NS2.3 Water reuse support and education**
- **CR2.1 Climate education and awareness**
- **CR2.3 Engagement opportunities & feedback incorporation**

Funding

The City will determine a funding strategy to implement the CAP and may consider funding through a combination of sources including: the City general fund, state and federal grants; and a variety of newly identified sources. Funding for some CAP actions will be an expansion of existing programs with a secured funding source but may require increased or incremental investment to fully execute. Implementation and ongoing efforts of the CAP will require significant additional resources. The CAP team will prioritize identifying and securing funding sources as an early action in the implementation process.

Many climate expenditures will not only reduce greenhouse gas emissions, but will also bring valuable environmental, social, and economic benefits that can provide a positive net return on investment.

For details on specific implementation details, please refer to "Appendix A: Implementation Details".

APPENDIX A. IMPLEMENTATION DETAILS

INTERPRETING THE IMPLEMENTATION MATRIX

The table below provides an overview of the information conveyed in the implementation matrix:

Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
States the action lever required by the City to implement an action. See "Action Lever" below for details.	Provides resources and/or notes the City can consider when implementing an action.	The additional social, economic, and/or environmental benefits of a climate action.	Timeframe for when the City will implement actions. See "Timeline" below for details.	City department responsible for overseeing implementation.	Potential regional partners to support implementation.

Action Lever

Lever ID	Voluntary	Regulatory	Capital Projects	Studies	Planning	Partnerships
Lever	Incentives, behavior change, outreach, education	Policies, regulations, disincentives	Capital projects, infrastructure	Conduct studies	Develop plans	Engage in partnerships

Timeline & Sequencing

The implementation plan considers how the City will strategically phase and sequence implementation to prioritize: (1) early wins; (2) actions that will take longer to implement or have dependent actions that need to be sequenced; or (3) actions that address imminent and/or severe climate impacts. Overarching target commitments (2030, 2040, and 2050) and focus area targets were key factors in determining action implementation timelines. Based on this prioritization, actions are categorized into three general timeframes:

Timeline ID	Description
Ongoing	• Actions that are part of existing City or regional initiatives.
Short term (1-5 years)	• Actions that are easy, early wins and foundational steps. • Actions that may require substantial time or resources, and are important to start as soon as possible. • Actions that align with or could support other City plans, projects, or updates and should be implemented concurrently.
Long-term (5-10+ years)	• Actions that are not as time sensitive as shorter-term actions. • Actions that require substantial infrastructure and resources or build upon foundational short-term actions.

Cost/Benefit Analysis

A quantitative assessment of the actions listed below was completed to provide high-level estimates of the costs, benefits, and impact (i.e., GHG emission reductions). For a detailed overview of analysis results, please see "Appendix D: Cost Analysis Summary".

Cost Analysis: Determines the **net present value**, meaning the anticipated net cost of the action for the City government and Woodinville community, considering current and future costs and cost savings benefits (through 2033).

Cost/Impact Analysis: Estimates cost effectiveness of the action (cost per unit GHG emission reduction achieved)—considering City and community net costs.

Selected Actions

1. BE1.5
2. BE3.2
3. TR1.1
4. TR2.4
5. CM1.1 & 1.2
6. CM2.1
7. NS1.1
8. NS1.2
9. CR1.1
10. CR2.1

Acronyms

KCD: King Conservation District
K4C: King County-Cities Climate Collaborative
OEM (King County): Office of Emergency Management
NPV: Net Present Value
PSE: Puget Sound Energy
PSRC: Puget Sound Regional Council
WSDOT: Washington State Department of Transportation

IMPLEMENTATION MATRIX

Buildings & Energy

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
BE Strategy #1: Advance building decarbonization.							
BE1.1	WA State Building and Energy Code compliance		• Consider implementing codes above and beyond what is mandatory. ○ Review King County energy code changes • Provide educational information for the community on the transition to electric buildings. ○ https://www.buildelectricwa.org/	• Reduces emissions	Short term (1-5 years)	Development Services	• Regional Code Collaboration • K4C
BE1.2	Heat pump program expansion		Resources to share with the community: • PSE Rebates • Inflation Reduction Act Home Energy Rebates ○ Households can qualify for a tax credit of up to $2,000 for the purchase of an electric heat pump. And for households with low incomes, the new law provides a rebate of up to $8,000 on installation. (For the tax credit program, the incentives apply to equipment installed on January 1, 2023, or later.) • WA Subsidies	• Builds community knowledge • Provides cost savings • Promotes equity and justice • Reduces emissions	Short term (1-5 years)	Community Relations	• PSE

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
BE1.3	Contractor incentive & training program		As building codes require more green building standards to be met, Woodinville acknowledges that the building industry requires training to meet the new demands. This action directs Woodinville to start working with larger jurisdictions and organizations that are already running or developing contractor incentive programs. Resources to review: • Emerald Cities Collaborative (ECC) Northwest promotes equity in clean energy, running workforce development programs that support BIPOC communities' inclusion in clean energy trades, and prioritizing minority contractor development. • LEED Green training for contractors, trades, operators and service workers program.	• Promotes economic development	Long term (5-10+ years)	Executive	• Developers • Builders

BE1.4	Green Power promotion		• PSE Green Power Program
			  ○ Residential program
			  ○ Business program
				• Builds community knowledge	Short term (1-5 years)	Administrative Services, Community Relations	• PSE

BE1.5	Municipal carbon neutrality		Explore funding opportunities such as: • Solar Grant Program (during next available funding cycle) • Inflation Reduction Act funding • Energy Retrofits for Public Buildings opportunities	• Reduces emissions	Short term (1-5 years)	Executive, Public Works	• Washington State University Extension Energy Program
			Cost Analysis for Action BE1.5 estimates full implementation would cost the City approximately $6,759,100.				
BE Strategy #2: Reduce energy use in new and existing buildings.							

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
BE2.1	Municipal energy efficiency retrofits and weatherization		Explore funding opportunities such as: • State Project Improvement Grants (during next available funding cycle) • Energy Efficiency Grant Program (during next available funding cycle) • King County's City Fund to Reduce Energy Demand (C – FRED)	• Reduces emissions	Short term (1-5 years)	Executive, Public Works	• King County • Department of Commerce
BE2.2	Residential efficiency retrofits and weatherization		• Inflation Reduction Act Home Energy Rebates ○ Some households are now eligible for a rebate of up to $1,600 just for improving their home's insulation and sealing energy leaks. The rebate for households with moderate incomes covers 50% of these costs. • (Residential) Puget Sound Energy rebate opportunities: https://www.pse.com/en/rebates	• Builds community knowledge • Reduces emissions	Short term (1-5 years)	Community Relations	• PSE • Washington State University Extension Energy Program
BE2.3	WA Clean Buildings Act education		Develop and share educational materials on the Washington Clean Buildings Act for building owners. • Share information on the Early Adopter Incentive Program • Commerce fact sheet • Commerce clean building frequently asked questions	• Builds community knowledge	Short term (1-5 years)	Community Relations	• K4C • Washington State University Extension Energy Program
BE Strategy #3: Increase energy resilience to climate impacts.							
BE3.1	Resilient energy operations & infrastructure		• Partner with PSE to understand Woodinville's anticipated demand for identified growth. • Develop a shared understanding of BESS and DER options and what choices would be best suited for the Woodinville community.	• Enhances resilience	Ongoing & Long-term (5-10+ years)	Public Works	• PSE

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
BE3.2	Community solar projects		Share solar funding opportunities with the community: • Inflation Reduction Act ○ The Residential Clean Energy Credit included in the new law provides a tax credit of up to 30% to households that invest in clean energy such as solar, and it's retroactive to the beginning of 2022. • PSE's Green Power Solar Grant program (during next available funding cycle)	• Enhances resilience • Reduces Emissions	Ongoing	Executive, Community Relations	• PSE • Washington State University Extension Energy Program
			Cost Analysis and Cost/Impact Analysis for Action BE3.2 estimates full implementation would result in the following: • NPV Costs to City: $100,240 • NPV Costs to Community: $108,769 • GHG Reduction: 152 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: $1,374				

Transportation

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
	TR Strategy #1: Transition to non-fossil fuel vehicles & equipment.						
TR1.1	Public EV Infrastructure Plan		Resources: • MRSC guidance on Planning for Electric Vehicles in Washington • U.S. Department of Transportation EV Infrastructure Project Planning Checklist	• Reduces Emissions	Short term (1-5 years)	Executive	• Neighboring jurisdictions • K4C • Department of Commerce • WSDOT
			Cost Analysis and Cost/Impact Analysis for Action TR1.1 estimates developing and implementation of the plan would result in the following: • NPV Costs to City: $331,161 • NPV Costs to Community: $2,443,618 in savings • GHG Reduction: 28,287 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: -$75 (Negative values represent net cost savings per unit GHG emission reduction)				

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships

TR1.2	EV Charging Requirements		• Consider encouraging or incentivizing bidirectional charging stations which can convert solar power from rooftop photovoltaics and store it in stationary battery storage and/or allows owners to send energy from their EV back to their homes to save on utility costs during peak hours or be compensated for selling it back to the grid.
			• Resources:
			  ○ MRSC guidance on Planning for Electric Vehicles in Washington
			  ○ WAC 51-50-0429
				• Reduces Emissions	Long-term (5-10+ years)	Development Services	• Department of Commerce

TR1.3	Electric vehicles & equipment community education		Share EV funding opportunities with the community: • Inflation Reduction Act ○ EV tax credits	• Builds community knowledge	Short term (1-5 years)	Community Relations	• Department of Commerce • King County • K4C
TR1.4	Municipal vehicle electrification			• Reduces emissions	Ongoing	Administrative Services, Executive	• Department of Commerce
TR Strategy #2: Reduce vehicle travel.							
TR2.1	Expand multi-modal services		• Advocate for more transit in Woodinville • Identify third-party programs and businesses that offer shared mobility options (e.g., bike share, scooter share, car share) • Maintain affordability of services • Ensure expanded services reach overburdened communities • Identify and address local transit needs, such as popular districts or popular visitor locations which may benefit from a local shuttle service	• Promotes equity and justice • Reduces emissions	Ongoing	Executive, Public Works	• WSDOT • Sound Transit • Metro Transit • Business partners for shared mobility options • Neighboring jurisdictions • K4C

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
TR2.2	Promote multimodal development			• Improves air quality • Reduces emissions	Ongoing	Development Service, Public Works	• Sound Transit • Metro Transit • WSDOT • Neighboring jurisdictions • K4C
TR2.3	Commute trip reduction			• Reduces emissions	Ongoing	Public Works	
TR2.4	Residential walkability and cycling enhancement		• Ensure expanded infrastructure reaches overburdened communities.	• Improves public health and well-being • Promotes equity and justice • Reduces emissions	Ongoing	Public Works	• K4C
		Cost Analysis and Cost/Impact Analysis TR2.4 estimates implementation would result in the following: • Cost to City: $1,137,199 • Cost to Community: $12,197,517 in savings • GHG Reduction: 30,329 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: -$365 (Negative values represent net cost savings per unit GHG emission reduction)					
TR Strategy #3: Support the reduction of aviation emissions.							
TR3.1	Regional aviation coordination		• Acknowledge that the City of Woodinville has minimal agency over than aviation industry's operations. This action relies heavily on regional coordination and advocacy rather the direct implementation by the City.	• Builds community knowledge	Short term (1-5 years)	Executive	• K4C

Consumption & Materials Management

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
Strategy #1: Divert waste from landfills.							
CM1.1	Increase residential recycling and composting		• Educate and engage residents on recycling and composting. ○ City can host a "Race to Zero Waste" contest similar to the City of Seattle's.	• Builds community knowledge • Reduces emissions	Short term (1-5 years)	Public Works, Community Relations	• King County • K4C • Waste Management
		Cost Analysis and Cost/Impact Analysis for Action CM1.1 and CM1.2* estimates implementation would result in the following: • Cost to City: $8,759,786 • GHG Reduction: 74,645 $MTCO_2e$ savings • Cost per unit GHG emission reduction achieved: $117					

CM1.2	Increase commercial recycling and composting		• Educate and engage businesses on recycling and composting.
			  ○ Coordinate with business owners and managers to provide educational resources or trainings to staff on recycling and composting requirements.
			• Review the requirements of the Organics Management Law
			  ○ All cities and counties in Washington, as well as Ecology, have the authority to investigate complaints and enforce violations. Ecology must develop a forum for complaints and will collaborate with cities and counties to provide technical assistance to retailers, consumers, and producers by July 1, 2024.
				• Builds community knowledge
				• Reduces emissions
					Short term (1-5 years)	Public Works, Development Services, Community Relations	• King County
							• K4C
							• Waste Management
							• Ecology

		*The results of a cost analysis and cost/impact analysis completed for Action CM1.2 have been included in the results of Action CM1.1.					

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
CM1.3	Strengthen construction and demolition diversion requirements		• King County Resources - C&D code templates available for adoption by local permitting jurisdictions, and related forms, have been developed in coordination with the Regional Code Collaboration: ○ Salvage, Recycling, and Deconstruction Codes ○ Deconstruction and Salvage Assessment Form ○ Waste Diversion Report ○ Exterior Structural Lead Removal Form	• Reduces emissions	Short term (1-5 years)	Development Services	• King County
Strategy #2: Reduce waste generation.							
CM2.1	Implement a sustainable purchasing policy for municipal operations.		• Consider using 21 Acres Campus as a model.	• Builds community knowledge	Short term (1-5 years)	Executive, Finance, Administrative Services	• 21 Acres
	 Cost Analysis for Action CM2.1 estimates full implementation would cost the City approximately $204,593.						
CM2.2	Support the transition to a circular economy		• Collaborate with King County's Solid Waste Division (SWD's Re+ Program). ○ Explore funding opportunities through the Re+ City Grant Program • Review the Re+ Strategic Plan	• Promotes economic development • Reduces emissions	Ongoing	Executive	• Re+ Program
CM2.3	Solid waste emissions reduction			• Reduces emissions	Short term (1-5 years)	Executive	• King County • Waste Management
CM2.4	Sustainable Packaging		• Work with the Woodinville Chamber of Commerce to reach out to local businesses. • Investigate and share funding opportunities and/or incentive programs for businesses to be more environmentally friendly, such as Envirostars.	• Builds community knowledge	Short term (1-5 years)	Community Relations	• Woodinville Chamber of Commerce • Local businesses

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships

CM2.5	Garden access and creation		• Engage with community partners to identify opportunities for community gardens.
			  ○ Work with local organizations that seek to increase access and awareness of community gardens, such as Down to Earth.
			• Share funding opportunities:
			  ○ KCD Community Agriculture Seed Money Grant (during next available funding cycle)
			• Assess opportunities to require new large developments to build community gardens as part of their public space set-aside requirements.
				• Builds community knowledge
				• Promotes equity and justice
				• Sequesters carbon
					Long term (5-10+ years)	Public Works	• KCD

CM2.6	Reuse of tools and products			• Provides cost savings	Short term (1-5 years)	Community Relations	• Sammamish Valley Alliance • Neighboring jurisdictions

Natural Systems & Water

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
			Strategy #1: Expand, protect, and improve green spaces and natural ecosystems				

NS1.1	Enhance Woodinville's woodland character		• Partner with KCD to organize a yard tree giveaway that will offer free native trees to Woodinville residents.
			  ○ Funding can be sought through KCD's Urban Forest Health Program
			• Tree awareness resources:
			  ○ KCD Your Yard Matters
				• Builds community knowledge
				• Sequesters carbon
					Ongoing	Development Services	• KCD

			Cost Analysis and Cost/Impact Analysis for Action NS1.1 estimates implementation would result in the following: • Cost to City: $1,853,259 • Cost to Community: $115,311 in savings • GHG Reduction: 49 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: $35,289				

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
NS1.2	Expand green space.		• Consider including incentives, points, and design flexibility to expand green space for new developments that offer the most ecological and equitable benefits. • Ensure training of staff to dialogue with the building community if new requirements are adopted.	• Improves public health and well-being • Sequesters carbon	Ongoing	Development Services	
		Cost Analysis and Cost/Impact Analysis for Action NS1.2 estimates implementation would result in the following: • Cost to City: $5,505,454 • GHG Reduction: 60 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: $91,750					
NS1.3	Increase climate resiliency by preserving and restoring ecosystem services.		• Conduct a tree canopy assessment a minimum of every five years to monitor tree canopy. • Use findings to identify urban tree canopy potential. Target tree expansion in areas most at risk of heat island effect and in overburdened communities.	• Enhances resilience • Improves public health and well-being • Promotes equity and justice	Ongoing	Development Services	• PSRC • KCD • Department of Commerce
Strategy #2: Protect water quality and improve water management.							
NS2.1	Low-impact development		• Use the Ecology LID guidelines to create policies specific to Woodinville.	• Enhances resilience	Ongoing	Public Works, Development Services	• Ecology
NS2.2	Salmon friendly landscape program		• Consider continuing the City's partnership with Mid-Sound Fisheries to continue running the Salmon Friendly Program. • Educate residents on best landscaping practices such as native landscaping and organic gardening, removing the use of non-organic fertilizers and pesticides. This has benefits for salmon species as everything that runs off of a property will go into storm drains, eventually reaching salmon habitat.	• Improves salmon recovery	Ongoing	Public Works	• Mid-Sound Fisheries Enhancement Group

ID	Short Name	Action Lever	Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships

NS2.3	Water reuse support and education		• Coordinate with King County's recycled water team to understand recycled water expansion plan in the Sammamish Valley.
			• Educate Woodinville residents about how their wastewater is treated at the Brightwater and Renton South Treatment Facility. Resources:
			  ○ Brightwater Treatment Plant information
			  ○ South Treatment Plant information
			  ○ Sustainability Wastewater Treatment Division
			• Educate Woodinville residents on rainwater catchment information and resources, including rebates.
				• Builds community knowledge
				• Enhances resilience
					Short term (1-5 years)	Community Relations, Public Works	• KCD
							• King County
							• Woodinville Water District

Community Resilience

ID	Short Name		Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
Strategy #1: Mitigate climate impacts on communities.							
CR1.1	Climate risk evaluation		• A vulnerability assessment (VA) is a tool that can assist a community to prepare and adapt to climate change. A VA can reveal infrastructure, ecosystem, and community vulnerabilities to current and future climatic change impacts. • The VA should specifically seek to identify and expand community-centered anti-displacement strategies and climate-resilient infrastructure that would increase adaptation to reduce housing insecurities exacerbated by climate change in Woodinville. • Once conducted, a VA should be periodically updated every 4-5 years.	• Builds community knowledge • Enhances resilience • Promotes equity and justice	Short term (1-5 years)	Executive	• King County OEM
		Cost Analysis for Action CR1.1 estimates full implementation would cost the City approximately $405,009.					
CR1.2	Urban heat resilience planning & response		• Initiate planning for an urban heat resilience plan to prepare the city for prolonged heat events that are occurring more frequently as the result of climate change. • Utilize the King County Extreme Heat Mitigation Strategy, once available, to align with county planning efforts.	• Enhances resilience • Improves public health and well-being	Ongoing	Executive	• King County OEM
CR1.3	Plan for climate impact hazards and emergencies		• Utilize the results of the Woodinville VA (CR1.1) to inform the update of the Emergency Management plan and the Hazard Mitigation Plan to ensure specific climate impacts are included. • Plans should identify potential "resilience hubs" that will help the community be more prepared to meet the challenges of weather emergencies. Ensure equitable access by referring to the Washington Environmental Health Disparities Map to inform locations. • Consider participation in COAD (Community Organizations Active in Disaster) a program that can help a community make the best use of its resources in a disaster.	• Enhances resilience • Improves public health and well-being	Ongoing	Executive	• King County OEM

ID	Short Name		Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships
Strategy #2: Engage the community in climate action.							
CR2.1	Climate education and awareness		• Coordinate with local organizations to co-develop climate educational campaigns.	• Builds community knowledge	Short term (1-5 years)	Community Relations	• Northshore School District • 21 Acres • Woodinville Rotary Club
		Cost Analysis and Cost/Impact Analysis for Action CR2.1 estimates implementation would result in the following: • Cost to City: $294,189 • Cost to Community: $676,979 in savings • GHG Reduction: 26,341 $MTCO_2e$ • Cost per unit GHG emission reduction achieved: -$15 (Negative values represent net cost savings per unit GHG emission reduction)					
CR2.2	Climate partnerships		• Consider joining the King County-Cities Climate Collaboration (K4C), a partnership of local governments of all sizes working together to accelerate climate action.	• Builds community knowledge	Short term (1-5 years)	Executive	• King County • K4C • Tribal governments
CR2.3	Engagement opportunities & feedback incorporation		• Provide all community members an equitable opportunity to learn about climate impacts, influence policy decisions, and take actions to enhance community well-being and resilience.	• Builds community knowledge • Promotes equity and justice	Ongoing	Community Relations	
Strategy #3: Mainstream climate change into planning & decision-making.							

ID	Short Name		Implementation Considerations	Anticipated Co-benefits	Timeline	Lead Department	Partnerships

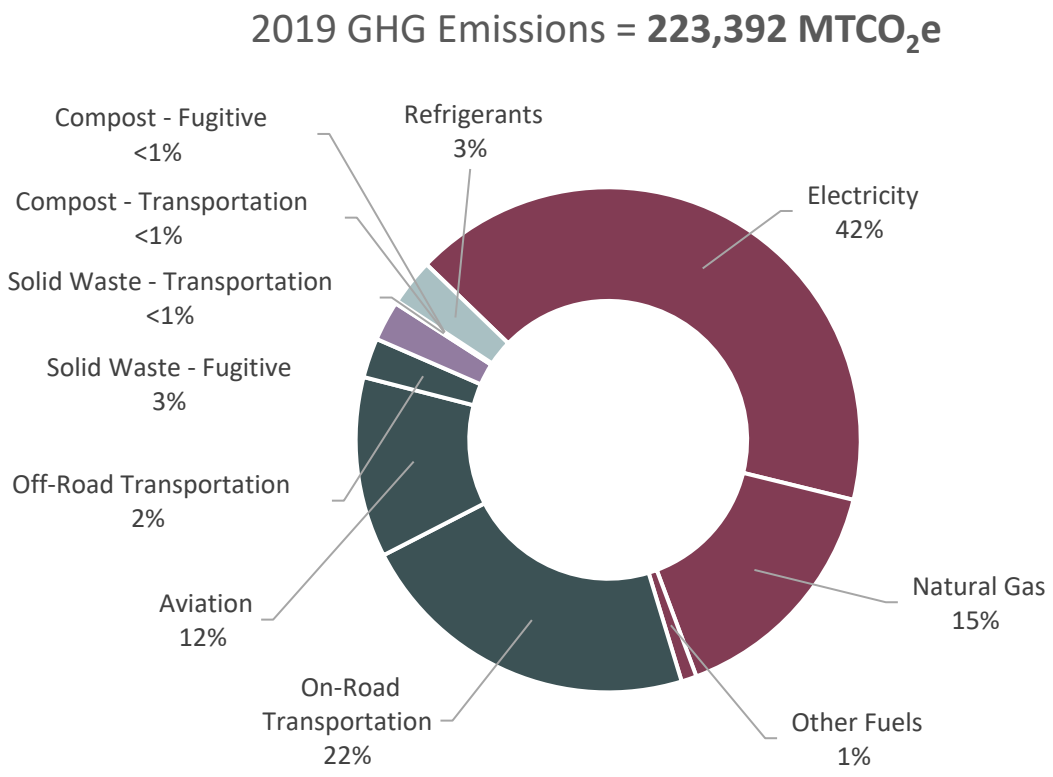
CR3.1	Emissions reduction tracking		• Leverage Woodinville's resources and partnerships to monitor, assess, and report on community-scale GHG emissions.
			• Periodically update the GHG inventory every four years to monitor implementation progress compared to emission reduction targets.
			• Create a City Climate Action Plan/ GHG tracking tool. Examples:
			  ○ City of Issaquah CAP Dashboard
			  ○ City of Edmonds CAP GHG Emission Reduction Tracking Tool
				• Builds community knowledge	Short term (1-5 years)	Executive	• King County
							• K4C

CR3.2	Climate considerations in government		• Integrate climate change into City decision making. • Utilize the finding of the GHG inventory and the VA, once completed via CR1.1, to inform land use planning.	• Enhances resilience • Improves public health and well-being	Short term (1-5 years)	Executive	
CR3.3	Mainstreaming climate change into City planning & decision-making.		• The City should consider hiring or designating Climate Action or sustainability staff to implement and monitor actions consistent with the Woodinville CAP.	• Builds community knowledge • Enhances resilience • Reduces emissions	Long term (5-10+ years)	Executive	• K4C

APPENDIX B. GREENHOUSE GAS INVENTORY METHODOLOGY

In 2019, Woodinville generated 223,392 $MTCO_2e$ from energy, transportation, solid waste, and process and fugitive sources. **Energy (58%)** and **transportation (36%)** are the largest sources of Woodinville's emissions. **Solid waste (3%)** and **process and fugitive emissions (3%)** make up remaining community emissions (Figure 1).

Figure 6. Woodinville's 2019 community emissions



Inventory Results by Sector

The following sections provide a detailed breakdown of emissions by sector.

Energy

The production and consumption of electricity, natural gas, other fuels (propane and fuel oil) to power homes and buildings produces GHG emissions.

- **Energy is the largest source** of Woodinville's communitywide emissions, producing 129,742 $MTCO_2e$ (58%) in 2019 (Figure 2).
- **Electricity** consumption produced **72%** of energy emissions (92,928 $MTCO_2e$).
- **Natural gas** consumption produced **27%** of energy emissions (34,627 $MTCO_2e$).
- **Other fuels** (propane and fuel oil) contribute only **2%** of energy emissions (2,188 $MTCO_2e$).
- The **industrial sector produces the most energy emissions** (69,690 $MTCO_2e$, 54%).
- 31% of energy emissions are from the residential sector (40,294 $MTCO_2e$), followed by 15% from the commercial sector (19,758 $MTCO_2e$).

Figure 7. Energy emissions

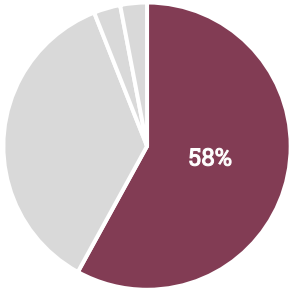


Figure 8. Energy emissions by source

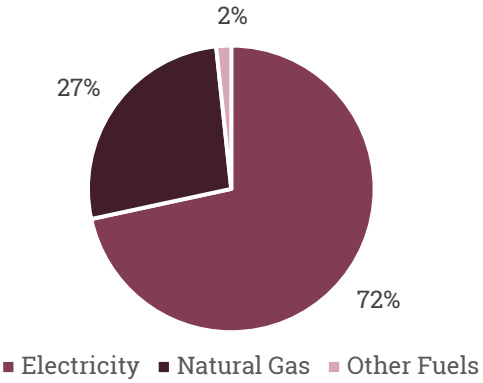
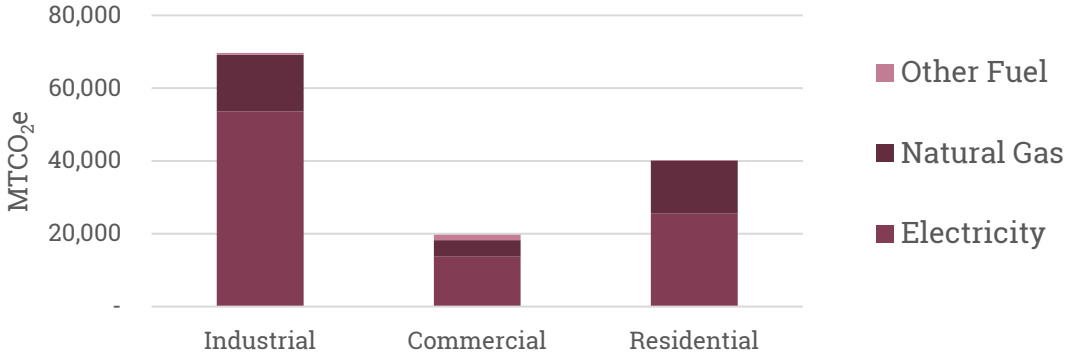
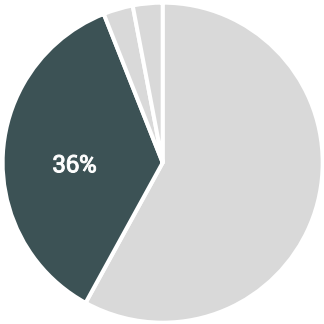


Figure 9. Energy emissions by sector, by source



Transportation

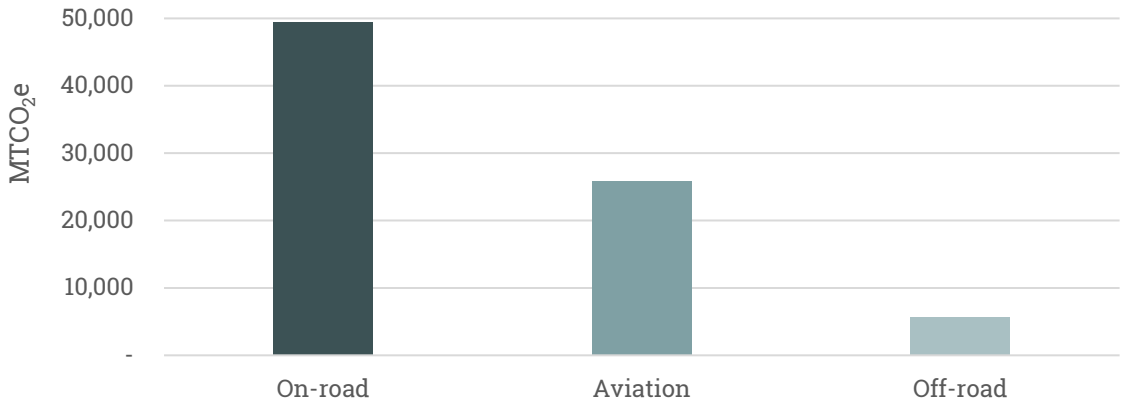
Figure 10. Transportation emissions



Fuel combustion and usage to power on-road, off-road, and aviation vehicles and equipment produce transportation emissions.

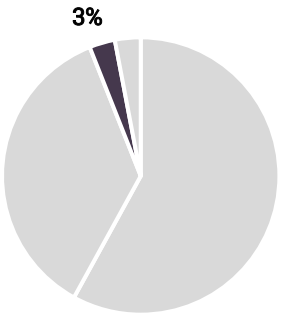
- Transportation activities produced **36%** of Woodinville's 2019 community emissions (80,950 $MTCO_2e$).
- **On-road vehicles (61%)** produced the most transportation emissions (49,475 $MTCO_2e$). On-road sources include passenger, freight, and transit vehicles.
- **Aviation (32%)** produced the second largest amount of transportation emissions (25,809 $MTCO_2e$). Aviation emissions were estimated by proportionately allocating fuel consumption at regional airports to Woodinville. This distribution was completed by allocating fuel consumption at SeaTac Airport and Boeing Field to jurisdictions across the region based on passenger demographics. This analysis assigned a proportionate share of this fuel consumption to each city in King County based on total income, using American Community Survey (ACS) income data and number of households.
- **Off-road vehicles/equipment (7%)** produced remaining transportation emissions (5,666 $MTCO_2e$). Off-road vehicles/equipment include a variety of sources such as construction, commercial, industrial, and lawn/garden vehicles.

Figure 11. Transportation emissions, by source



Solid Waste

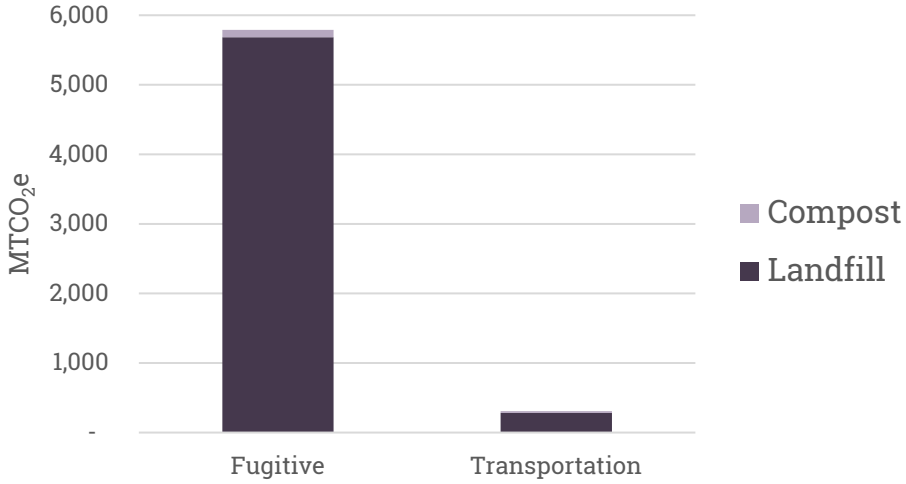
Figure 12. Solid waste emissions



Solid waste emissions result from the transportation of waste to landfill and compost facilities, as well as the decomposition of waste under anaerobic (lack of oxygen) conditions. When solid waste breaks down in an anaerobic environment, like a landfill, methane is released into the atmosphere.

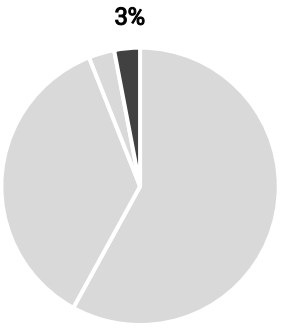
- Solid waste generation produced 3% of Woodinville's 2019 community emissions (**6,097 $MTCO_2e$**).
- A large sum of solid waste emissions occur from the decomposition of waste. The decomposition of solid waste contributed **5,790 $MTCO_2e$ (95%)** of the sector's emissions. The remaining emissions, **307 $MTCO_2e$ (5%)**, occurred from the solid waste transportation (Figure 8).

Figure 13. Solid waste emissions, by source.



Process & Fugitive

Figure 14. Process & fugitive



Process and fugitive emissions occur from the leakage of refrigerants, primarily hydrofluorocarbons (HFCs), which have a high global warming potential. HFCs are widely used for air conditioning and refrigeration equipment.

Refrigerant use produced 3% of Woodinville's 2019 community emissions (**6,601 $MTCO_2e$**). Cascadia used national refrigerant emissions data (scaled down using population) to estimate refrigerant emissions for Woodinville.

Wedge Analysis

A "wedge analysis" is a tool which visually depicts projected emissions and emissions reductions based on various scenarios into the future. Cascadia developed a wedge tool as part of the PSREA project and tailored it to reflect Woodinville's local emissions.

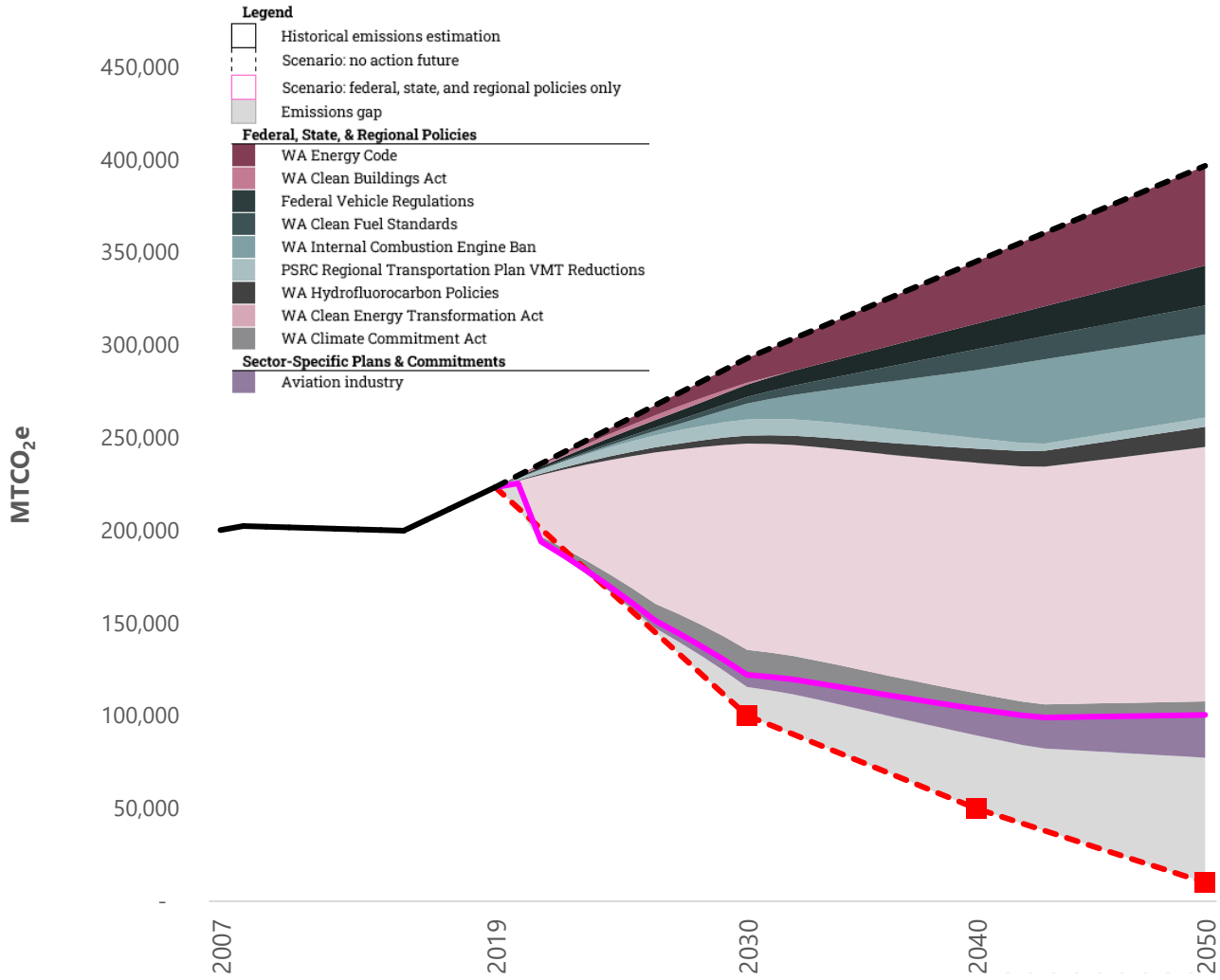
The tool forecasts the scenarios and targets outlined below and in Table 1:

- **"Business-as-Usual" (BAU)**: No action future – assumes per capita emissions remain constant and total emissions grow over time as population increases.
- **"Adjusted Business-as-Usual" (ABAU)**: Adjusts BAU to reflect expected emissions reductions from adopted federal, state, and regional climate policies. Table 2 summarizes the key policies reflected in the ABAU forecast.
- **Sector specific plans and commitments**: Adjusts ABAU to reflect commitments from the aviation industry to reduce emissions.[9]

[9] Assumptions used in model were based on the Air Transport Action Group (ATAG) 2050 Plan. ATAG is made up of representatives of the world's major aviation industry associations and largest aircraft and engine makers. Modeled assumptions from ATAG's Net Zero 2050 Plan (Scenario 0 – most conservative). ATAG plans to achieve targets through accelerated efficiency measures, energy transition and innovation across the aviation sector, and in partnership with Governments around the world.

- **Emissions reduction targets**: Model reflects King County-Cities Climate Collaboration's (K4C) adopted emissions reduction targets (from 2007 emissions baseline)[10]:
    - 50% reduction by 2030
    - 75% reduction by 2040
    - 95% reduction by 2050 + net zero
- **Emissions gap**: Emissions to be addressed through local climate action in order to achieve emissions reduction targets.

Figure 15. Woodinville's forecasted emissions through 2050



[10] As of May 2023, the City of Woodinville has not officially adopted GHG emission reduction targets.

Table 1. Summary of emissions forecast estimates (in $MTCO_2e$).

Description	2019	2030	2040	2050
Business-as-usual (BAU) emissions – emissions forecast based on Woodinville's 2019 GHG emissions profile, assuming no climate action (programs, policies, standards) at the local, state, or federal level.	223,392	293,014	345,198	396,818
Adjusted business-as-usual (ABAU) emissions – adjusted BAU forecast to account for the impacts of adopted federal and state policies (still assuming no climate action at the local level).	223,392	122,165	103,739	100,541
Difference between BAU and ABAU emissions	-	*170,849*	*241,459*	*296,277*
Sector-Specific Plans & Commitments - adjusted ABAU forecast to account for the impacts of regional climate plans and commitments.	223,392	115,586	89,523	77,433
Difference between ABAU and Sector-Specific scenario emissions	-	*6,579*	*14,216*	*23,108*

Table 2. Key federal, state, and regional policies reflected in ABAU forecast.

Policy	Level	Key Assumptions in Forecast/Model
State Energy Codes Requires adoption of state energy codes (new buildings) from 2013 through 2031 that incrementally move towards achieving a 70% reduction in annual net	State	New construction in 2031 and beyond will consume 70% less energy than the 2006 baseline. Used King County's 2008 energy consumption rate as a proxy for 2006 baseline. Assumed this baseline applies to all jurisdictions. Using 2019 energy consumption

Policy	Level	Key Assumptions in Forecast/Model
energy consumption (compared to a 2006 baseline). All new commercial buildings must use electric heat pumps for space heating and electric water heating for 50% of water.		rates, modeled a straight-line reduction in energy consumption rate from 2019 to 2031 to achieve the 70% reduction from baseline (in new buildings only). Assume that any additional energy consumption under BAU compared to 2019 is from "new buildings." This action impacts activity data (reduces energy consumption). All new commercial buildings must use electric heat pumps for space heating and electric water heating for 50% of water. - Assume commercial water heating accounts for 9% of building energy use; assume space heating accounts for 23% of building energy use (total = 32%; Source: EIA 2015). - Assume 75% of current commercial buildings use fossil fuel space/water heating.
WA Clean Buildings Act (HB 1257) Requires all new and existing commercial buildings over 50,000 square feet to reduce their energy use intensity by 15%, compared to the 2009-2018 average.	State	Using 2019 county level commercial energy consumption data, calculated energy consumed per sq ft of commercial building space to arrive at average energy use intensity (EUI - energy consumed per sq ft). Used as proxy for 2009-2018 baseline. Modeled a straight-line reduction in energy use intensity (up to 15%) for Bins 1-3 below for 2020 through respective compliance dates. Assume 15% reduction through 2050. Bin 1: >220K sq ft Bin 2: > 90K sq ft Bin 3: > 50K sq ft Bin 4: 50K sq ft and under (rule does not apply)
Corporate Average Fuel Economy (CAFE) standards National Highway Traffic Safety Administration standards regulate light- and heavy-duty vehicle fuel economy standards (how many miles the vehicle can drive per gallon of fuel).	Federal	Based on PSRC Vision 2050 modeling, assumed the following changes in vehicle emissions intensity (gCO2e/mile): - Light duty vehicles: 33% reduction from 2018 to 2050. - Heavy duty vehicles: 26% reduction from 2018 to 2050.
Clean Fuel Standard Washington state's Clean Fuel Standard (HB 1091) requires a 20% reduction in the carbon intensity of transportation fuels by 2038, compared to a 2017 baseline, beginning January 1, 2023.	State	Reduce gasoline and diesel emissions factor linearly by 20% from 2023 to 2038. Assume 2019 transportation fuel emissions factors are applicable for 2017-2023 (2017 is policy baseline year). Overall, policy calls for 20% reduction in carbon intensity of transportation fuels by 2038; includes reductions from EVs given concerns with WA's short-term ability to scale up low carbon fuels. Compared to baseline, modeled the following for fuel carbon intensities:

Policy	Level	Key Assumptions in Forecast/Model
		- 3.5% reduction in per-gallon gasoline & diesel vehicle (passenger, heavy duty, transit) emissions from cleaner fuels (NOT EVs) by 2030 - 10% reduction in per-gallon gasoline & diesel vehicle (passenger, heavy duty, transit) emissions from cleaner fuels (NOT EVs) by 2040 - Maintain 10% reduction levels to 2050 Given ICE ban, compared to baseline, modeled the following for EV use: - 6.5% transition of gasoline/diesel passenger vehicles to EV by 2030 - 10% transition of gasoline/diesel passenger vehicles to EV by 2040 - Maintain 10% reduction levels to 2050
WA Internal Combustion Engine Ban (SB 5974) Establishes a target that, "all publicly owned and privately owned passenger and light duty vehicles of model year 2030 or later that are sold, purchased, or registered in Washington state be electric vehicles".	State	As part of Move Ahead Washington program, WA would ban sale of gasoline/diesel ICE passenger vehicles starting in 2030. For ICE ban, assuming a 15-year vehicle turnover rate, with the following proportion of new sales EV (a conservative estimate given that the ICE ban is currently a goal and lacks a clear accountability mechanism): - 25% by 2026 - 65% by 2030 - 100% by 2035 - Maintained by 100% thereafter
PSRC Regional Transportation Plan VMT Reductions The Regional Transportation Plan (RTP) is a long-term transportation plan for the central Puget Sound region and is designed to implement the region's growth plan, VISION 2050, outlining investments the region is making in transit, rail, ferry, streets and highways, freight, bicycle and pedestrian facilities, and other systems.	Regional	Assume future passenger vehicle VMT reductions will reflect estimations from the RTP model.
WA Hydrofluorocarbon Policies (HB 1112 & HB 1050) HB 1112 requires that new equipment be manufactured without HFCs or using refrigerants with a lower global warming potential (GWP) in a phased approach through 2024. Equipment covered by the law are being phased in each year, starting with 2020, and penalties apply for non-compliance. In 2021, HB 1050 applied Clean Air Act provisions for ozone depleting substances to HFCs and extended restrictions on higher GWP HFCs to new	State	Aligned model assumptions with Washington State modeling: - 34% reduction from 2019 baseline by 2030 - 85% reduction from 2019 baseline by 2050

Policy	Level	Key Assumptions in Forecast/Model
equipment such as ice rinks and stationary air conditioning.		
Clean Energy Transformation Act (CETA) Requires all electric utilities to eliminate coal-fired electricity from their state portfolios by 2025, be GHG neutral by 2030, and supply customers with 100% renewable or non-emitting electricity by 2045.	State	Electricity will be GHG neutral (electricity emissions factor equals zero) in 2030 and beyond with a straight-line emissions factor reduction from 2019 to 2030. For utilities that rely on coal for electricity generation, additionally model straight-line reduction to 0% coal by 12/31/2025. Assume coal is replaced by renewables.
WA Climate Commitment Act (E2SSB 5126) The Climate Commitment Act (known as Cap and Invest) places an economy-wide cap on carbon to meet state GHG reduction targets and remain consistent with best available science, while minimizing the use of offsets to meet those targets. Every polluting facility covered under the program needs to hold one allowance for every ton of greenhouse gas that it emits. Based on an environmental justice review, 35-40% of investments must be made in overburdened communities to reduce health disparities and create environmental benefits, with an additional 10% allocated for tribal programs and projects.	State	State estimates that CCA will account for 26.2 million MTCO2e in statewide reductions by 2030. 2018 total emissions = 99.57 million MTCO2e. Thus, the state anticipates that CCA will reduce total WA emissions 26% compared to current (2018) levels. Key regulated CCA sectors relevant to the geographic inventory include: - Natural gas (however, this sector will receive directly-allocated no-cost allowances) - Industrial processes (however, Emissions-Intensive Trade-Exposed facilities will received directly-allocated no-cost allowances) - Transportation fuels (however, already covered to some extent by Clean Fuels Standard) Therefore, assume the following for CCA: Assume CETA addresses emissions reductions in electricity sector. Apply -10% emissions factor adjustment to natural gas (assuming increase in hydrogen or RNG in fuel mix) to 2030. Apply -15% emissions reduction estimate (consider applying a reduction factor) to industrial process emissions to 2030. Apply -23.5% fuel emissions factor reduction estimate (consider applying a reduction factor) to transportation emissions to 2030 and -30% to 2040 (includes reductions from CFS).

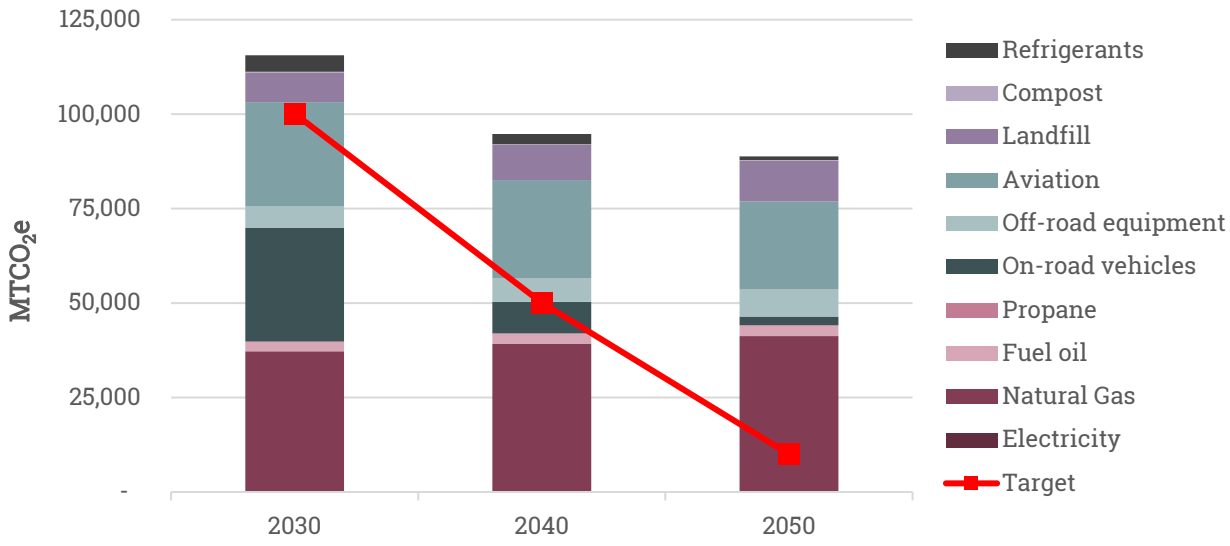
Table 3. Sector-specific commitment reflected in emissions forecast.

Sector Commitment	Key Assumptions in Forecast/Model
Aviation industry Based on the Air Transport Action Group (ATAG) 2050 Plan. ATAG is made up of	Using assumptions from Air Transport Action Group's (ATAG) net zero 2050 plan (Scenario 0, page 23): -10% reduction of 2050 BAU from technology advancements

Sector Commitment	Key Assumptions in Forecast/Model
representatives of the world's major aviation industry associations and largest aircraft and engine makers. In 2021, ATAG committed to a goal of net zero by 2050 for global civil aviation operations. This will be supported by accelerated efficiency measures, energy transition and innovation across the aviation sector and in partnership with Governments around the world.	-9% reduction of 2050 BAU from operations and infrastructure improvements -38% reduction of 2050 BAU from sustainable aviation fuels (adjusted from 31% in published graph to account for action sequencing) Total reduction = 50% of 2050 BAU

Based on the ABAU scenario, Figure 16 represents the Woodinville's projected emissions in 2030, 2040, and 2050, accounting for the impacts of regional, state, and federal policies and existing sector-specific commitments. Figure 16 also highlights key emissions sources for the City of Woodinville to reduce through local action.

Figure 16. Projected GHG Emissions - Target Years 2030, 2040, and 2050



APPENDIX C. COMMUNITY ENGAGEMENT SUMMARY

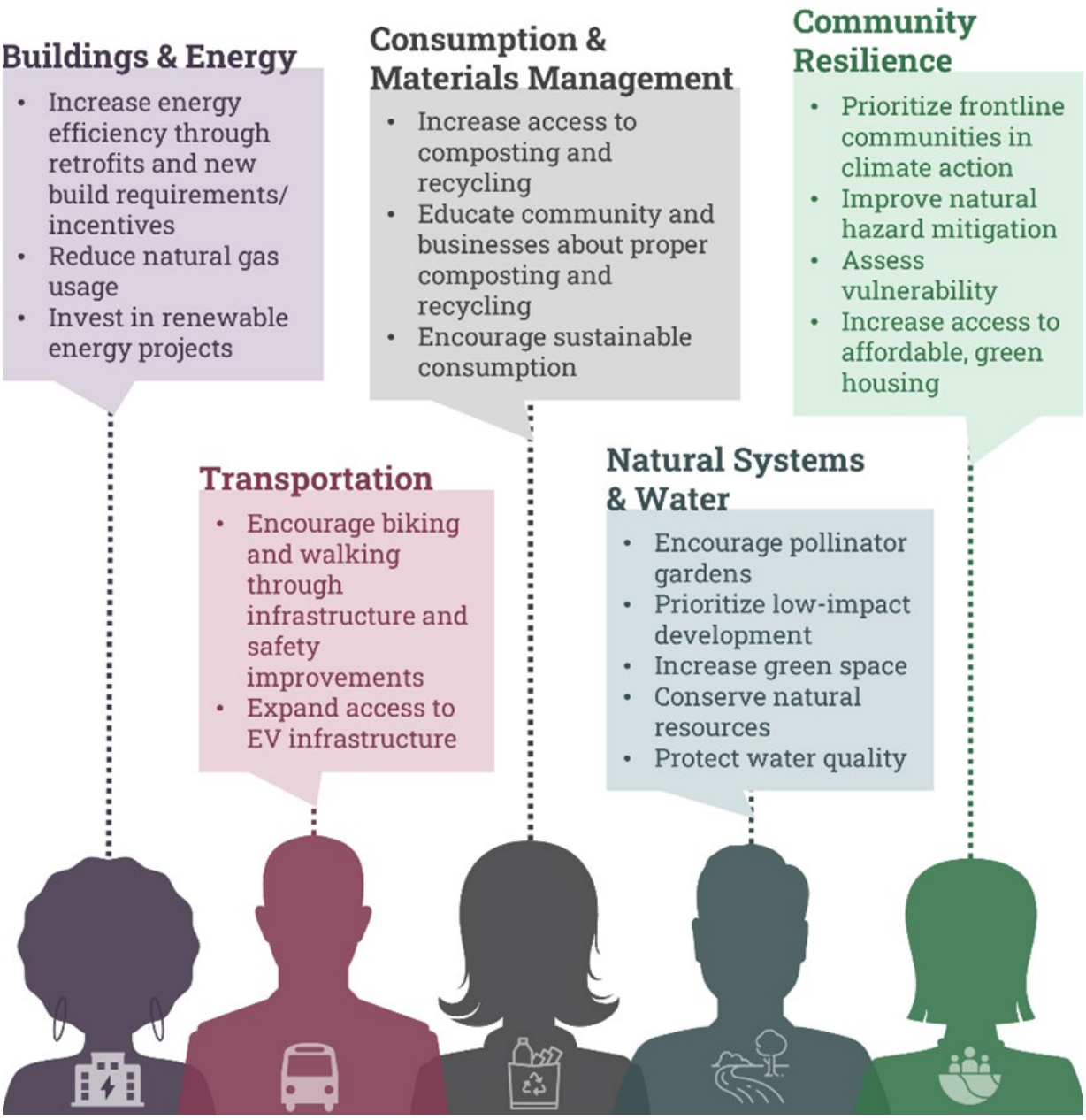
OVERVIEW

Woodinville's community provided crucial input on the City's Climate Action Plan (CAP) through community engagement opportunities offered early and often throughout the planning process. Internal City staff engagement and briefings to the City Council, Planning Commission, and Open Spaces Commission also helped guide the CAP's development throughout the planning process.

Engaging the community ensures that the CAP reflects community priorities and their vision for a sustainable Woodinville. Community feedback was incorporated during the following engagement phases:

Summary of Findings

Woodinville's community and stakeholders shared valuable feedback and insights on what was most important to them to consider including in the CAP. We heard the following key themes:



The following summary provides a detailed overview of public engagement opportunities that helped shape the CAP.

PUBLIC SURVEY

As a core component of the Woodinville Climate Action Plan (CAP), community engagement sought to ground the plan in the priorities of the Woodinville community. In addition to the stakeholder meetings and a virtual open house, the public survey provided an opportunity for community members to give feedback on the CAP.

The survey was open on an online survey tool for 5 weeks, from March 7th to April 10th, 2023. It was published on the project webpage and promoted by the City of Woodinville through their social media channels and newsletters. The City also passed out flyers advertising the survey at the 3/15 King County Northeast Recycling & Transfer Station meeting, the Public Spaces and Planning Commission meetings, at the 21 Acres Farm Market, the Woodinville Chamber of Commerce Business Luncheon on 5/18, as well as at the local library. Additionally, physical copies of the survey were provided to the Woodinville senior living facilities.

Survey Objectives

The main objectives of the survey were to:

- Establish a baseline on awareness of climate change and sustainable efforts in the community
- Gather feedback on climate action strategies and actions
- Understand community priorities, concerns, and interest in new strategies

Survey Key Themes

Most respondents are generally informed about climate change and their top concerns are threats to the well-being of future generations and urban ecosystems.

Respondents would like to prioritize alternative transportation modes, reducing emissions related to buildings, and expanding renewable energy sources to reduce emissions.

Respondents would like to prioritize natural ecosystem health and improve water conservation to increase climate resilience.

Actions should be prioritized based on impact, feasibility, and cost.

Actions that additionally improve environmental justice, social equity, and access to affordable housing should rise to the top.

Respondents feel that Woodinville should adopt targets that are in line with King County's emissions reduction targets. They are most receptive to incentive programs and education surrounding climate action.

Respondents are most likely to participate in solid waste reduction and/or diversion, improving home efficiency, and installing renewable energy.

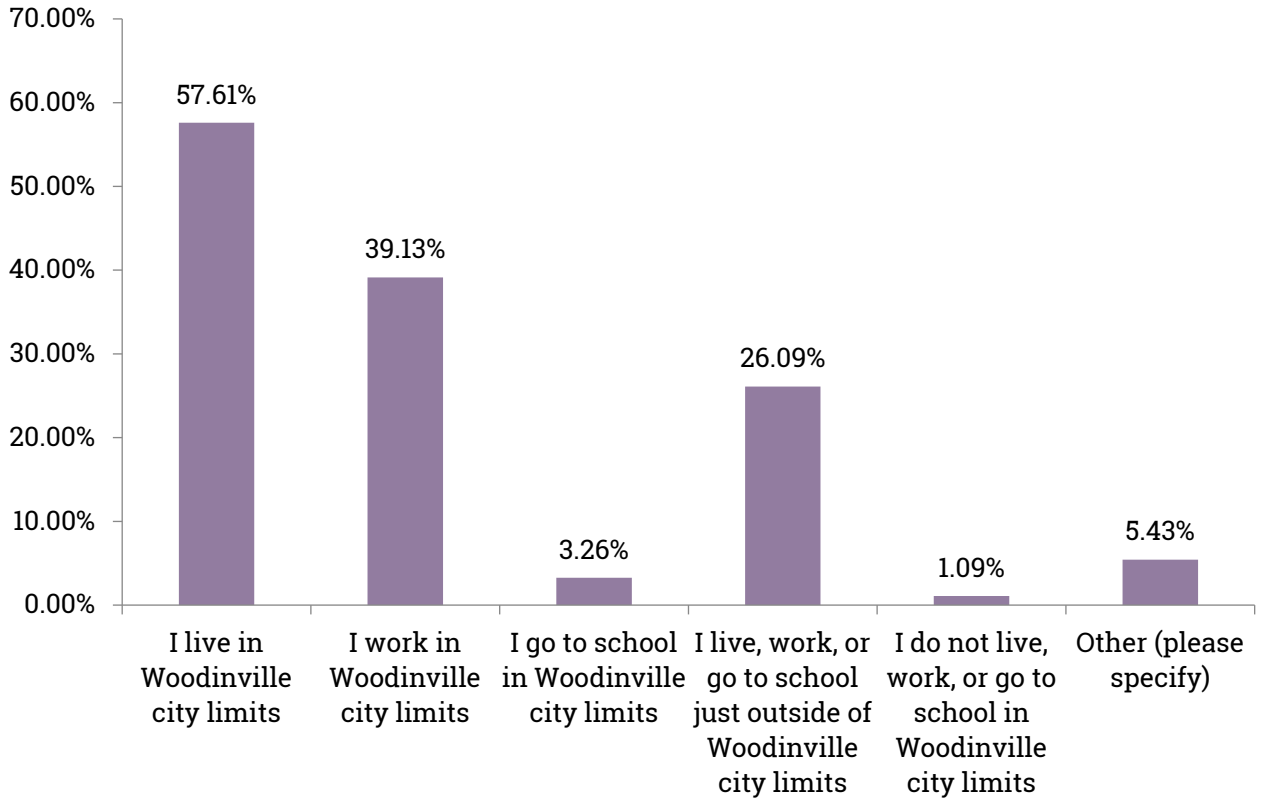
Survey Results

Below is a summary of the responses for each of the questions, organized by section.

Introduction and Concerns about Climate Change

Q1: Do you live, work, and/or go to school in Woodinville? (Select all that apply)
Answered: 92, Skipped: 5

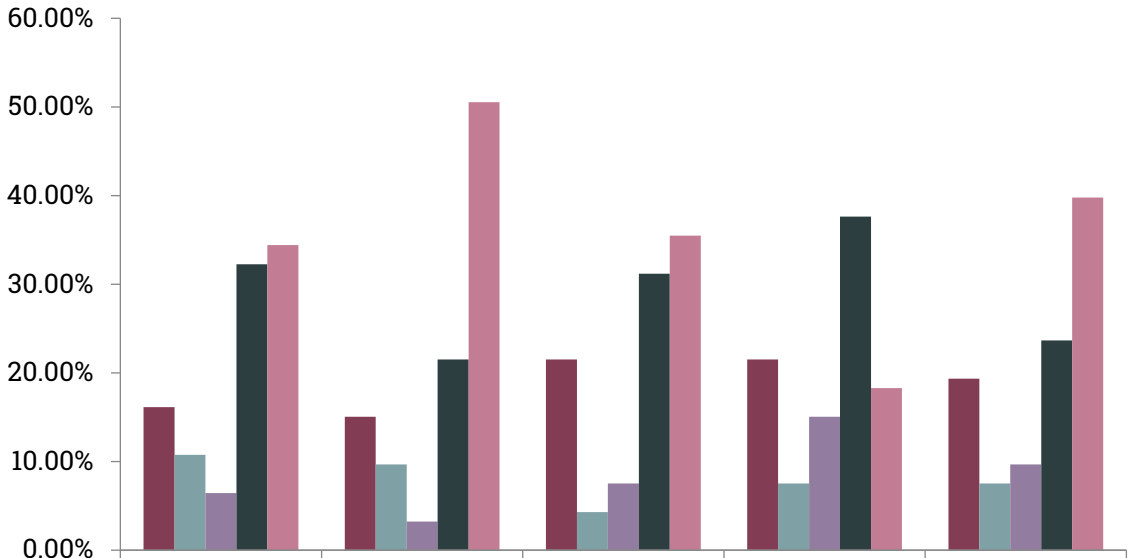
- 57.61% of respondents live in Woodinville, and 39.13% of respondents work in Woodinville.


70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
57.61%
39.13%
3.26%
26.09%
1.09%
5.43%
I live in Woodinville city limits
I work in Woodinville city limits
I go to school in Woodinville city limits
I live, work, or go to school just outside of Woodinville city limits
I do not live, work, or go to school in Woodinville city limits
Other (please specify)

Q2 HOW CONCERNED ARE YOU ABOUT THE FOLLOWING CONSEQUENCES OF CLIMATE CHANGE?

Answered: 93, Skipped: 4

- 50.54% of respondents are very concerned about the threats to the well-being of future generations.
- 39.78% of respondents are very concerned about the threats to urban ecosystems (e.g., trees, maintained landscapes, open space).

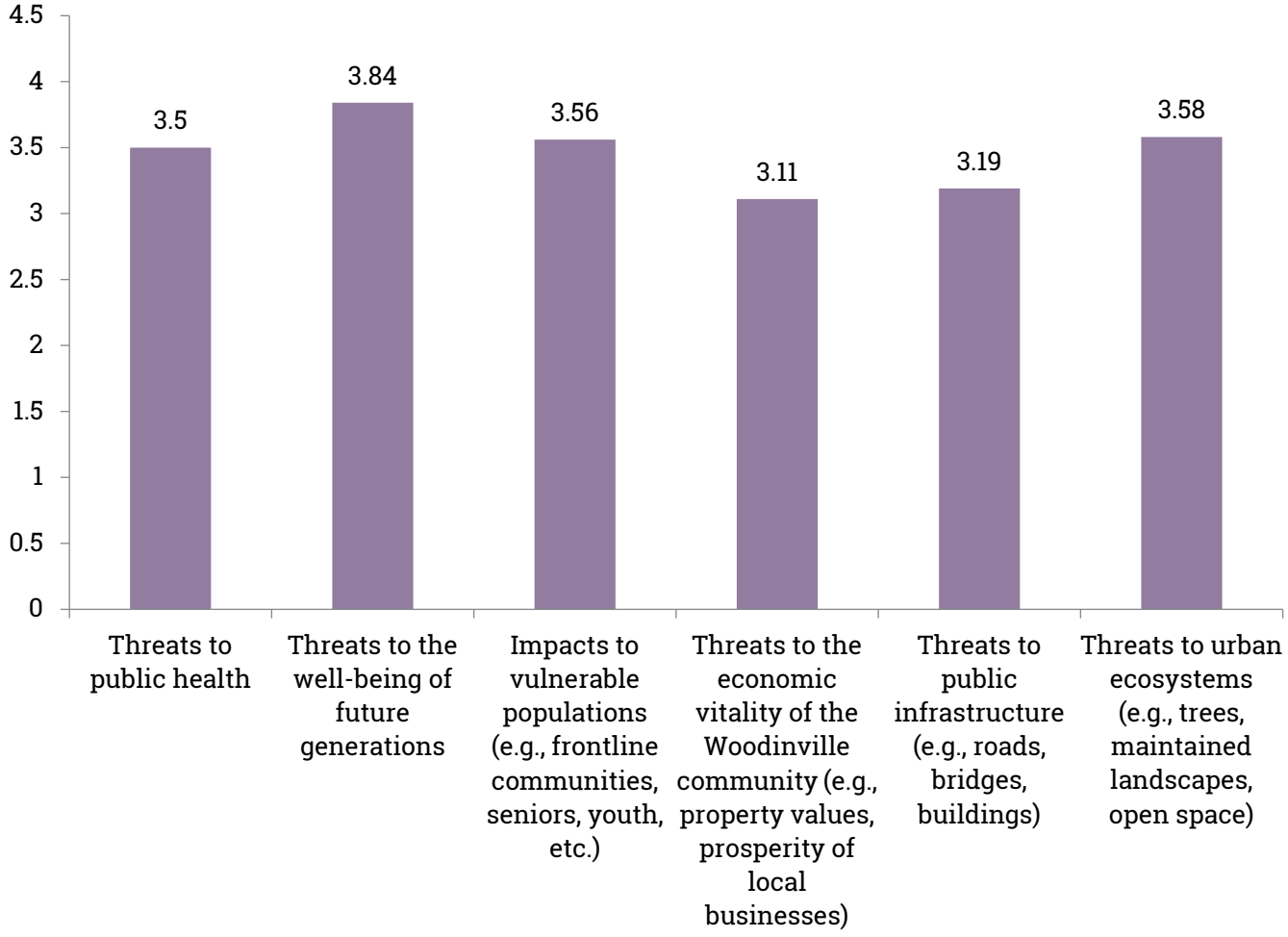


	Threats to public health	Threats to the well-being of future generations	Impacts to vulnerable populations (e.g., frontline communities, seniors, youth, etc.)	Threats to public infrastructure (e.g., roads, bridges, buildings)	Threats to urban ecosystems (e.g., trees, maintained landscapes, open space)
Not concerned	16.13%	15.05%	21.51%	21.51%	19.35%
Slightly concerned	10.75%	9.68%	4.30%	7.53%	7.53%
Neutral	6.45%	3.23%	7.53%	15.05%	9.68%
Concerned	32.26%	21.51%	31.18%	37.63%	23.66%
Very concerned	34.41%	50.54%	35.48%	18.28%	39.78%

Q3 HOW CONCERNED ARE YOU WITH THE FOLLOWING REGIONAL AND LOCAL CLIMATE CHANGE IMPACTS?

Answered: 93, Skipped: 4

- The weighted average of respondent rankings show the top three impacts respondents are concerned about include: threats to the well-being of future generations, threats to urban ecosystems, and impacts to vulnerable populations.

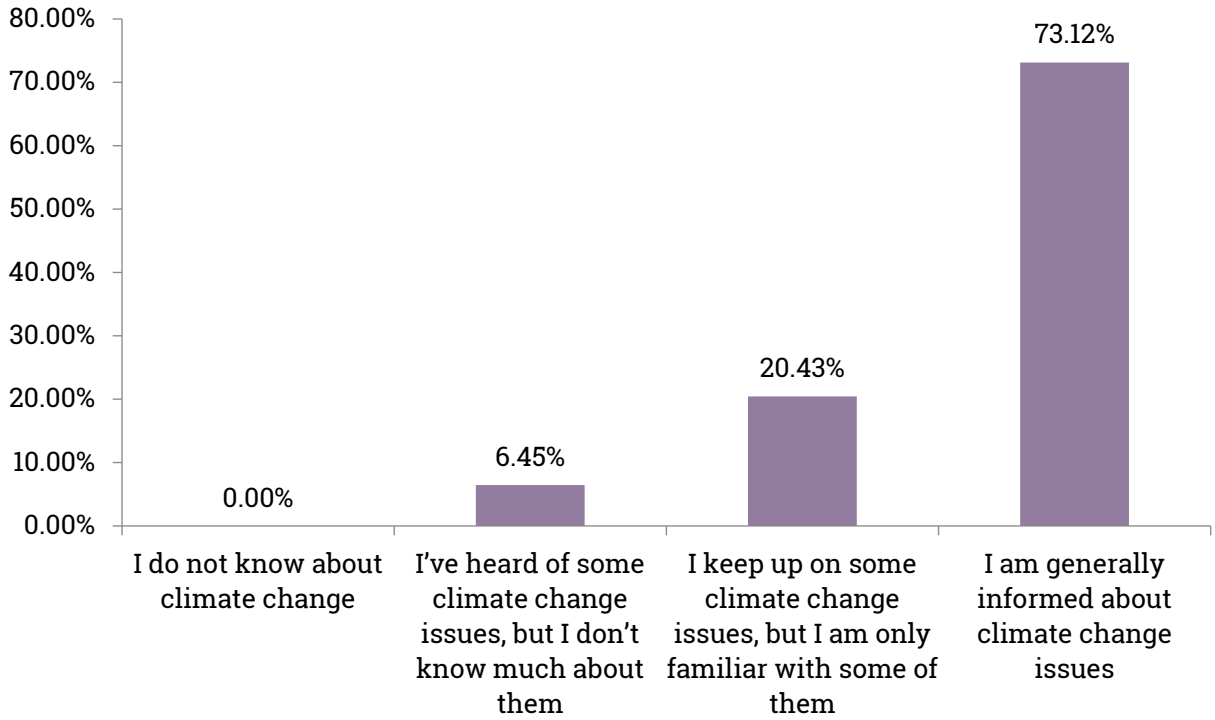


	NOT CONCERNED	SLIGHTLY CONCERNED	NEUTRAL	CONCERNED	VERY CONCERNED	TOTAL	WEIGHTED AVERAGE
Threats to public health	18.48% 17	7.61% 7	9.78% 9	33.70% 31	30.43% 28	92	3.50
Threats to the well-being of future generations	13.98% 13	8.60% 8	5.38% 5	23.66% 22	48.39% 45	93	3.84
Impacts to vulnerable populations (e.g., frontline communities, seniors, youth, etc.)	19.35% 18	4.30% 4	10.75% 10	32.26% 30	33.33% 31	93	3.56
Threats to the economic vitality of the Woodinville community (e.g., property values, prosperity of local businesses)	22.58% 21	9.68% 9	18.28% 17	33.33% 31	16.13% 15	93	3.11
Threats to public infrastructure (e.g., roads, bridges, buildings)	23.66% 22	6.45% 6	16.13% 15	34.41% 32	19.35% 18	93	3.19
Threats to urban ecosystems (e.g., trees, maintained landscapes, open space)	18.48% 17	7.61% 7	10.87% 10	23.91% 22	39.13% 36	92	3.58

Q4 Which of the following best describes your awareness and understanding of climate change issues, such as anticipated climate change impacts, sources of greenhouse emissions, and strategies for addressing them?

Answered: 93, Skipped: 4

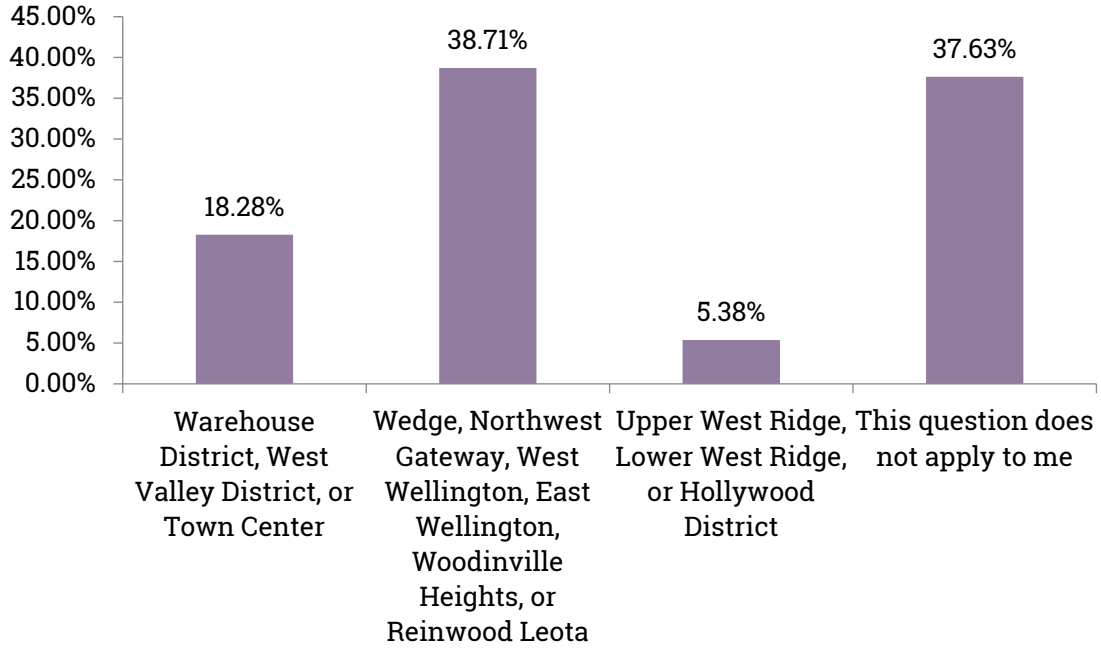
- 73.12% of respondents are generally informed about climate change issues.



Q5 IF YOU LIVE IN WOODINVILLE, WHICH NEIGHBORHOOD BEST DESCRIBES WHERE YOU LIVE?

Answered: 93, Skipped: 4

- See Attachment A for neighborhood map.

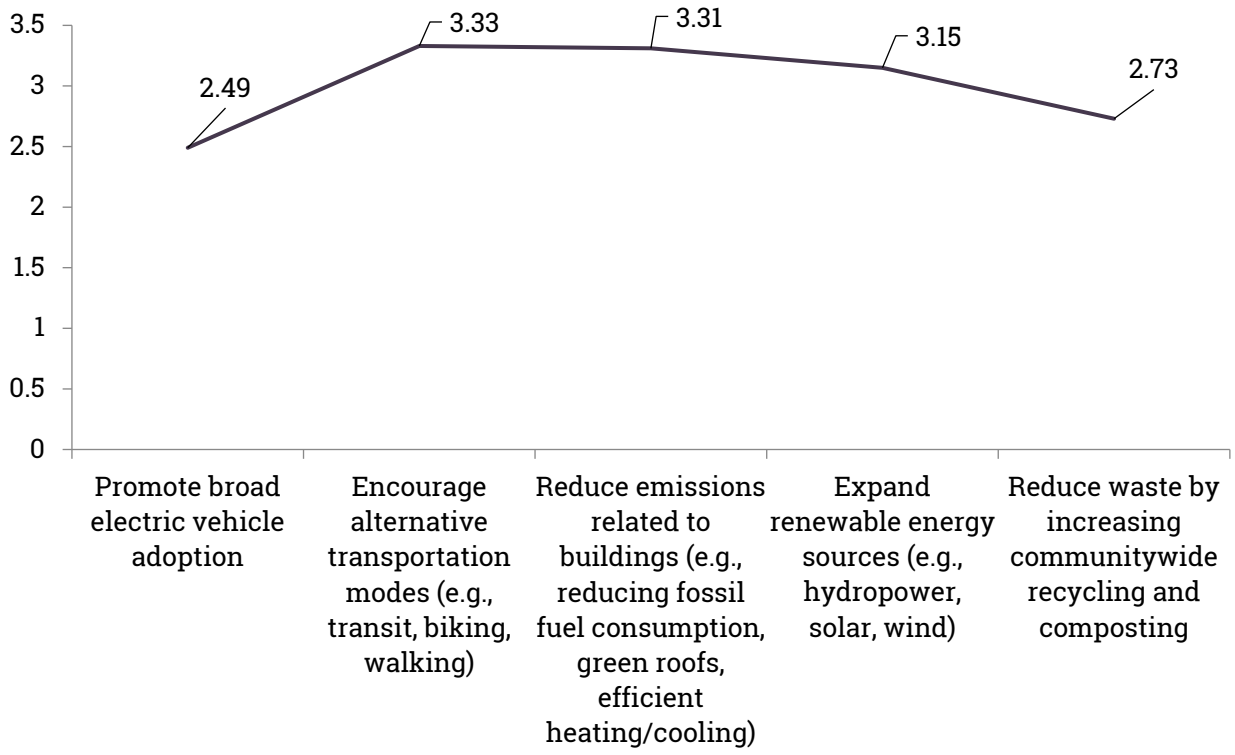


Priorities for the Woodinville Climate Action Plan

Q6 Emissions Reduction Measures (rank 1-5)

Answered: 88, Skipped: 9

- The weighted average of respondent rankings show that the top three ranked emissions reduction measures are: encourage alternative transportation modes; reduce emissions related to buildings; expand renewable energy sources.

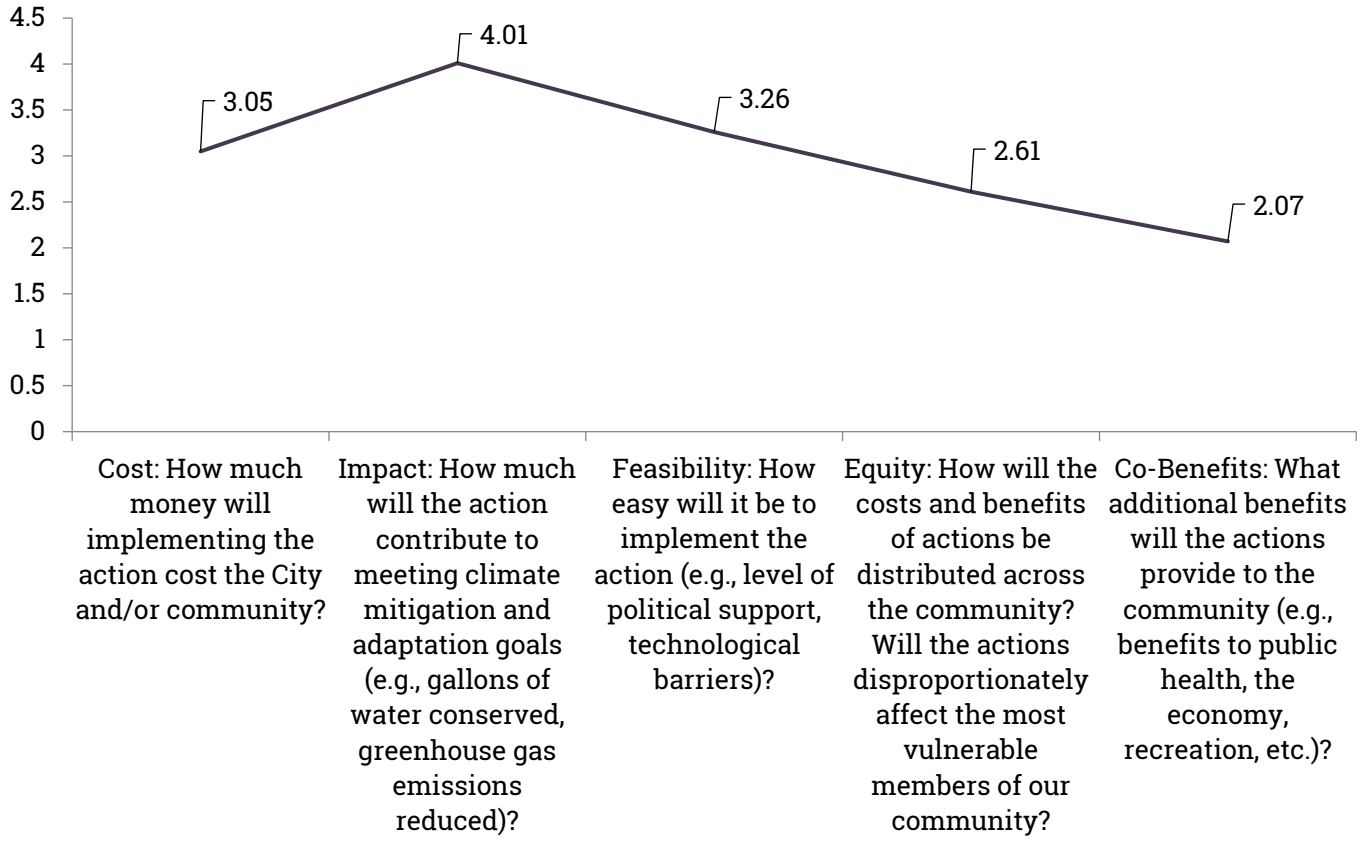


	1	2	3	4	5	TOTAL	SCORE
Promote broad electric vehicle adoption	13.64% 12	14.77% 13	12.50% 11	25.00% 22	34.09% 30	88	2.49
Encourage alternative transportation modes (e.g., transit, biking, walking)	28.41% 25	18.18% 16	25.00% 22	14.77% 13	13.64% 12	88	3.33
Reduce emissions related to buildings (e.g., reducing fossil fuel consumption, green roofs, efficient heating/cooling)	15.91% 14	30.68% 27	26.14% 23	22.73% 20	4.55% 4	88	3.31
Expand renewable energy sources (e.g., hydropower, solar, wind)	21.59% 19	22.73% 20	21.59% 19	17.05% 15	17.05% 15	88	3.15
Reduce waste by increasing communitywide recycling and composting	20.45% 18	13.64% 12	14.77% 13	20.45% 18	30.68% 27	88	2.73

Q7 FROM YOUR PERSPECTIVE, PLEASE RANK THE FOLLOWING CRITERIA FOR SELECTING CLIMATE ACTIONS FROM MOST IMPORTANT TO LEAST IMPORTANT. (RANK 1-5)

Answered: 84, Skipped: 13

- The weighted average of respondent rankings shows that the top three criteria for selecting climate actions are: impact, feasibility, and cost.



	1	2	3	4	5	TOTAL	SCORE
Cost: How much money will implementing the action cost the City and/or community?	25.00% 21	17.86% 15	17.86% 15	15.48% 13	23.81% 20	84	3.05
Impact: How much will the action contribute to meeting climate mitigation and adaptation goals (e.g., gallons of water conserved, greenhouse gas emissions reduced)?	47.62% 40	21.43% 18	19.05% 16	8.33% 7	3.57% 3	84	4.01
Feasibility: How easy will it be to implement the action (e.g., level of political support, technological barriers)?	17.86% 15	27.38% 23	26.19% 22	20.24% 17	8.33% 7	84	3.26
Equity: How will the costs and benefits of actions be distributed across the community? Will the actions disproportionately affect the most vulnerable members of our community?	5.95% 5	23.81% 20	22.62% 19	20.24% 17	27.38% 23	84	2.61
Co-Benefits: What additional benefits will the actions provide to the community (e.g., benefits to public health, the economy, recreation, etc.)?	3.57% 3	9.52% 8	14.29% 12	35.71% 30	36.90% 31	84	2.07

Q8 Are there any other actions or changes you feel would be most impactful in reducing greenhouse gas emissions and/or becoming more resilient to climate change? (Optional open ended)

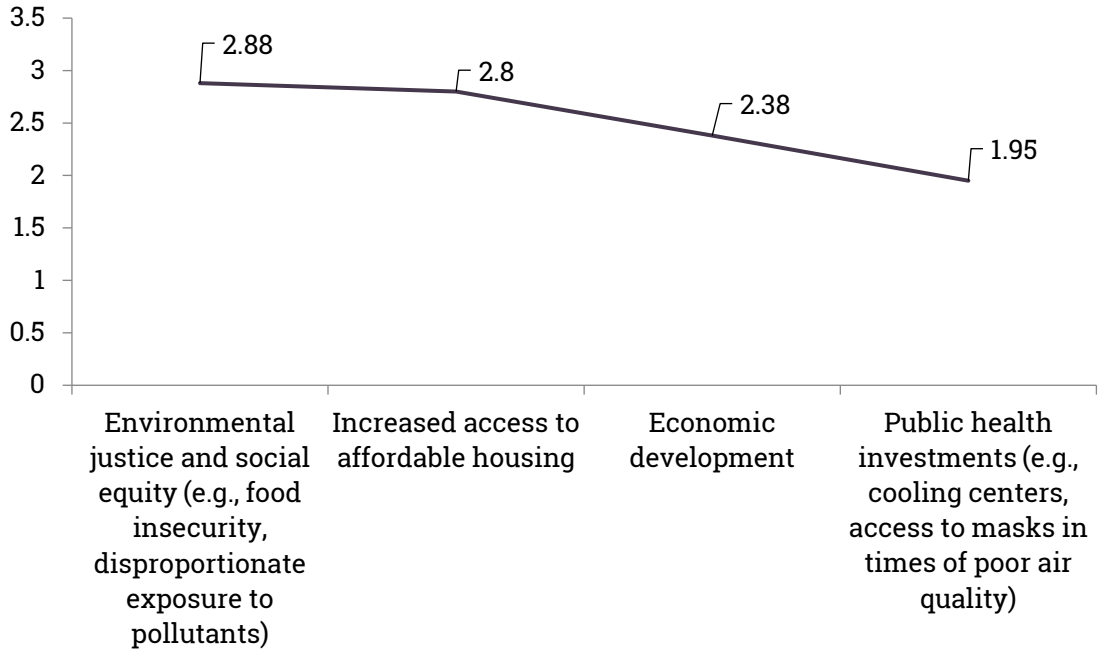
Answered: 31, Skipped: 66

- Communicate local priorities to state and federal decision makers
- Promote bikes and walking with increased safe, pedestrian ways and bike lanes; Expand multi-modal transportation options
- Plan for natural hazard mitigation and emergency preparedness
- Address sustainable agriculture
- Encourage and incentivize for retrofits, renewable energy, and EVs
- Expand and encourage the use of renewable energy and EV infrastructure
- Reduce waste
- Increase and preserve green open space
- Encourage and focus on equitable high-density development

Q9 Co-benefits; additional benefits actions provide to the community (e.g., benefits to public health, the economy, recreation, etc.) (rank 1-4)

Answered: 80, Skipped: 17

- The weighted average of respondent rankings shows that the top two co-benefits the community would like to prioritize are: environmental justice and social equity; increased access to affordable housing.

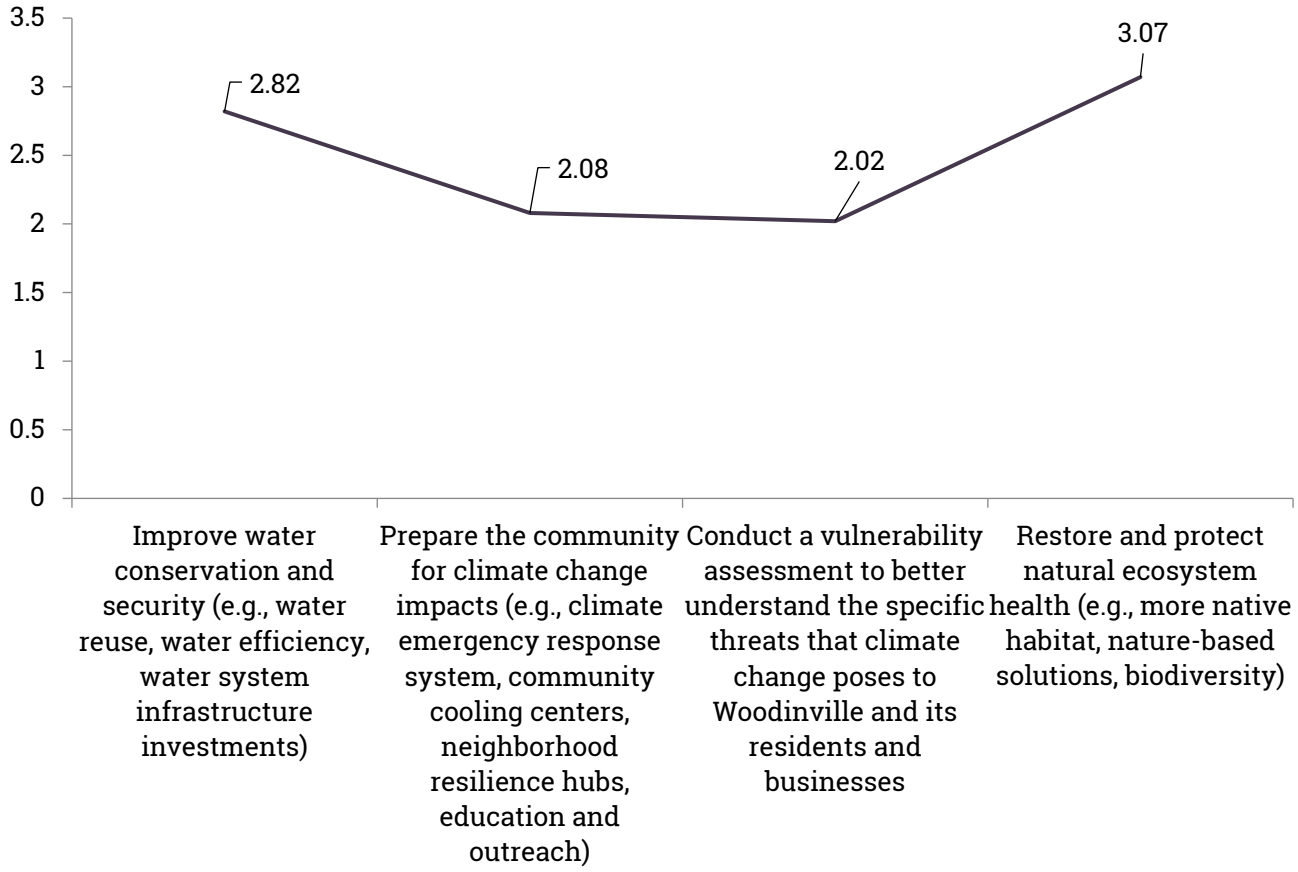


	1	2	3	4	TOTAL	SCORE
Environmental justice and social equity (e.g., food insecurity, disproportionate exposure to pollutants)	36.25% 29	35.00% 28	8.75% 7	20.00% 16	80	2.88
Increased access to affordable housing	23.75% 19	42.50% 34	23.75% 19	10.00% 8	80	2.80
Economic development	35.00% 28	3.75% 3	25.00% 20	36.25% 29	80	2.38
Public health investments (e.g., cooling centers, access to masks in times of poor air quality)	5.00% 4	18.75% 15	42.50% 34	33.75% 27	80	1.95

Q10 Climate Resilience Measures (rank 1-4)

Answered: 84, Skipped: 13

- The weighted average of respondent rankings show that the top two climate resilience measures the community would like to prioritize are: restore and protect natural ecosystem health; improve water conservation and security.



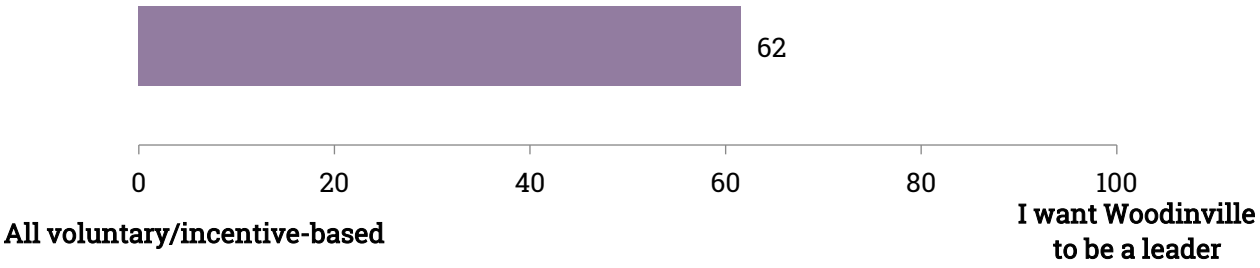
	1	2	3	4	TOTAL	SCORE
Improve water conservation and security (e.g., water reuse, water efficiency, water system infrastructure investments)	27.38% 23	39.29% 33	21.43% 18	11.90% 10	84	2.82
Prepare the community for climate change impacts (e.g., climate emergency response system, community cooling centers, neighborhood resilience hubs, education and outreach)	10.71% 9	15.48% 13	45.24% 38	28.57% 24	84	2.08
Conduct a vulnerability assessment to better understand the specific threats that climate change poses to Woodinville and its residents and businesses	17.86% 15	13.10% 11	22.62% 19	46.43% 39	84	2.02
Restore and protect natural ecosystem health (e.g., more native habitat, nature-based solutions, biodiversity)	44.05% 37	32.14% 27	10.71% 9	13.10% 11	84	3.07

Considering Emissions Reduction Strategies

Q11 How bold do you want Woodinville's emissions-reduction strategies to be? (Sliding scale)

Answered: 84, Skipped: 13

- The average of respondent's answers on the sliding scale reveals they would like Woodinville to at least be on par with King County's emissions reduction targets if not slightly more ambitious.



Q12 Is there anything else you would like us to consider as we develop Woodinville's Climate Action Plan? (Optional open ended)

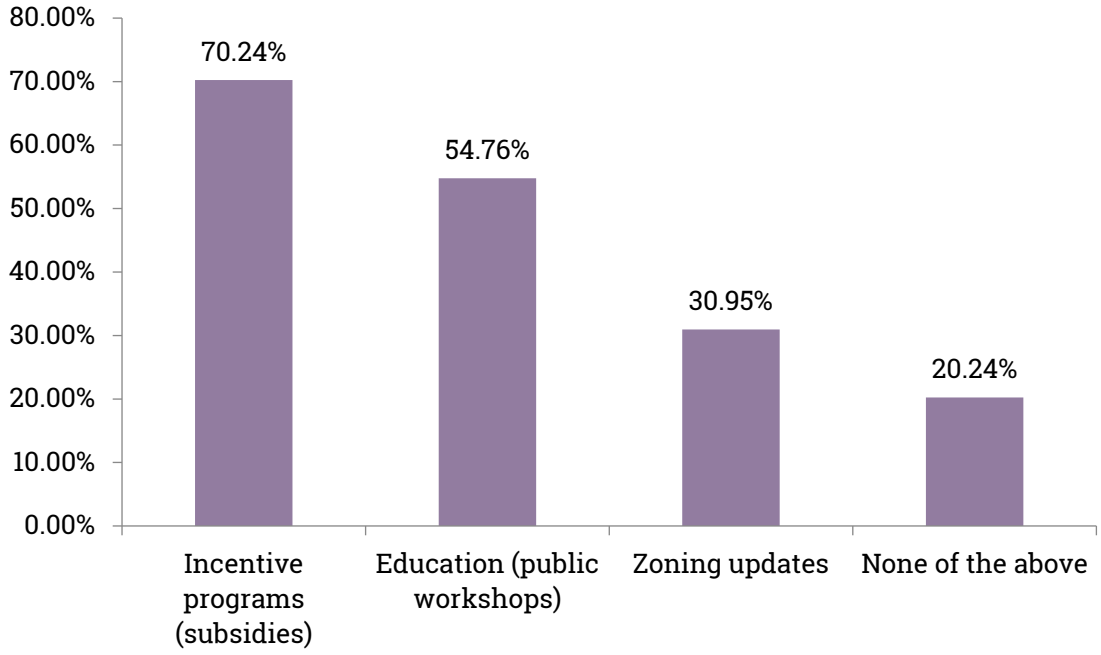
Answered: 37, Skipped: 60

- Expand public access to EV infrastructure
- Improve walkability, access and convenience of public transportation, and protected bike lanes
- Emphasize equitable solutions
- Partner with local schools (would especially like to see solar installed at schools)
- Expand low and medium housing

Q13 How can the City of Woodinville support you in participating in emissions-reduction strategies? (Select all that apply)

Answered: 84, Skipped: 13

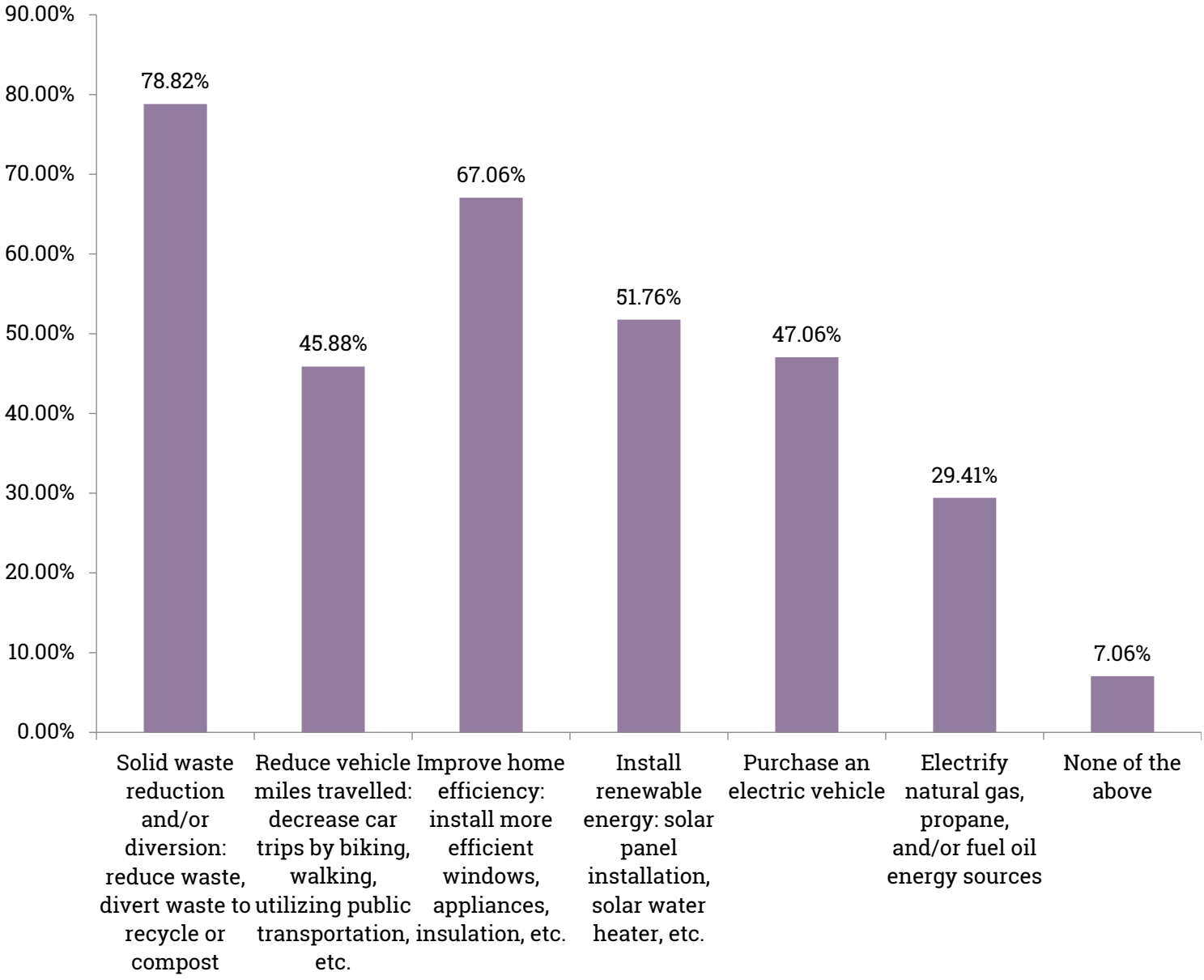
- 70.24% of respondents would like the City to offer incentive programs.
- 54.76% of respondents would like the City to provide education surrounding climate action.



Q14 How likely are you to participate in the following emissions-reduction strategies? (Select all that apply)

Answered: 85, Skipped: 12

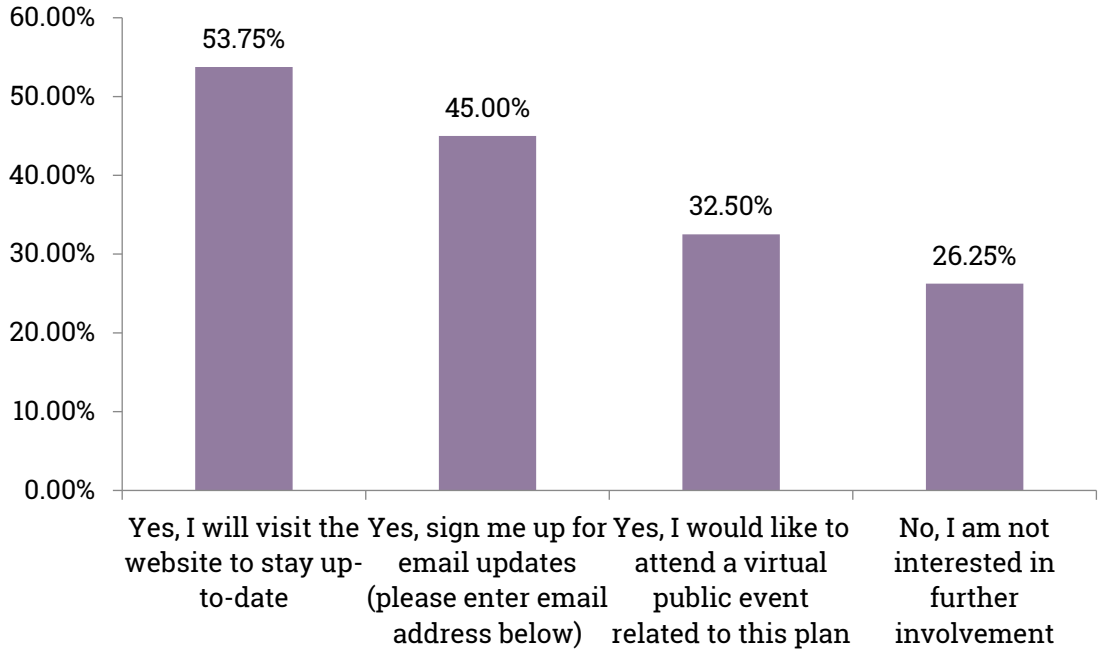
- The top three emissions-reduction strategies respondents are likely to participate in are: solid waste reduction and/or diversion (78.82%); improve home efficiency (67.06%); install renewable energy (51.76%).


90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
78.82%
45.88%
67.06%
51.76%
47.06%
29.41%
7.06%
Solid waste reduction and/or diversion: reduce waste, divert waste to recycle or compost
Reduce vehicle miles travelled: decrease car trips by biking, walking, utilizing public transportation, etc.
Improve home efficiency: install more efficient windows, appliances, insulation, etc.
Install renewable energy: solar panel installation, solar water heater, etc.
Purchase an electric vehicle
Electrify natural gas, propane, and/or fuel oil energy sources
None of the above

Involvement

Q15 Would you like to be involved in the planning process for the Woodinville Climate Action Plan? (Select all that apply)

Answered: 80, Skipped: 17



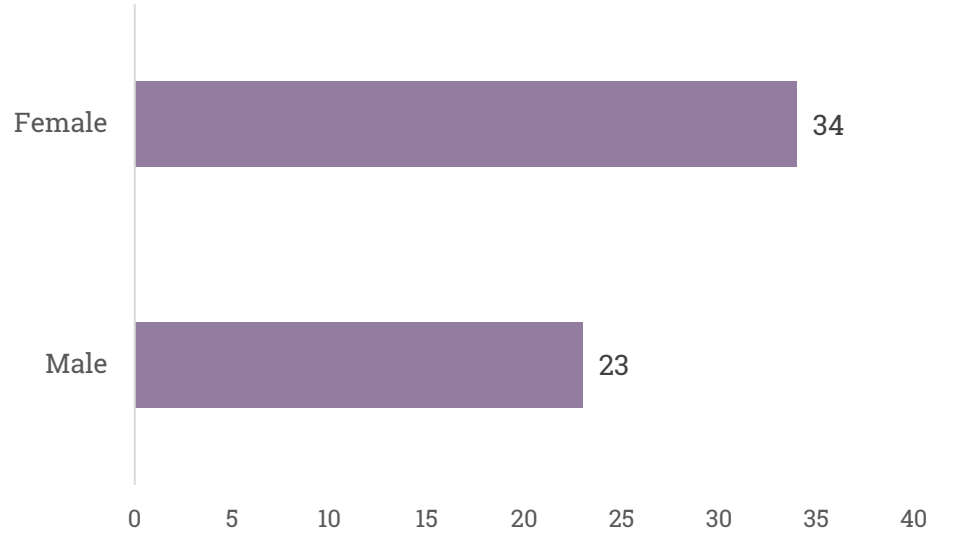
Q16 Please enter your email address if you are interested in email updates. (Optional open ended)

Answered: 37, Skipped: 60

Demographics

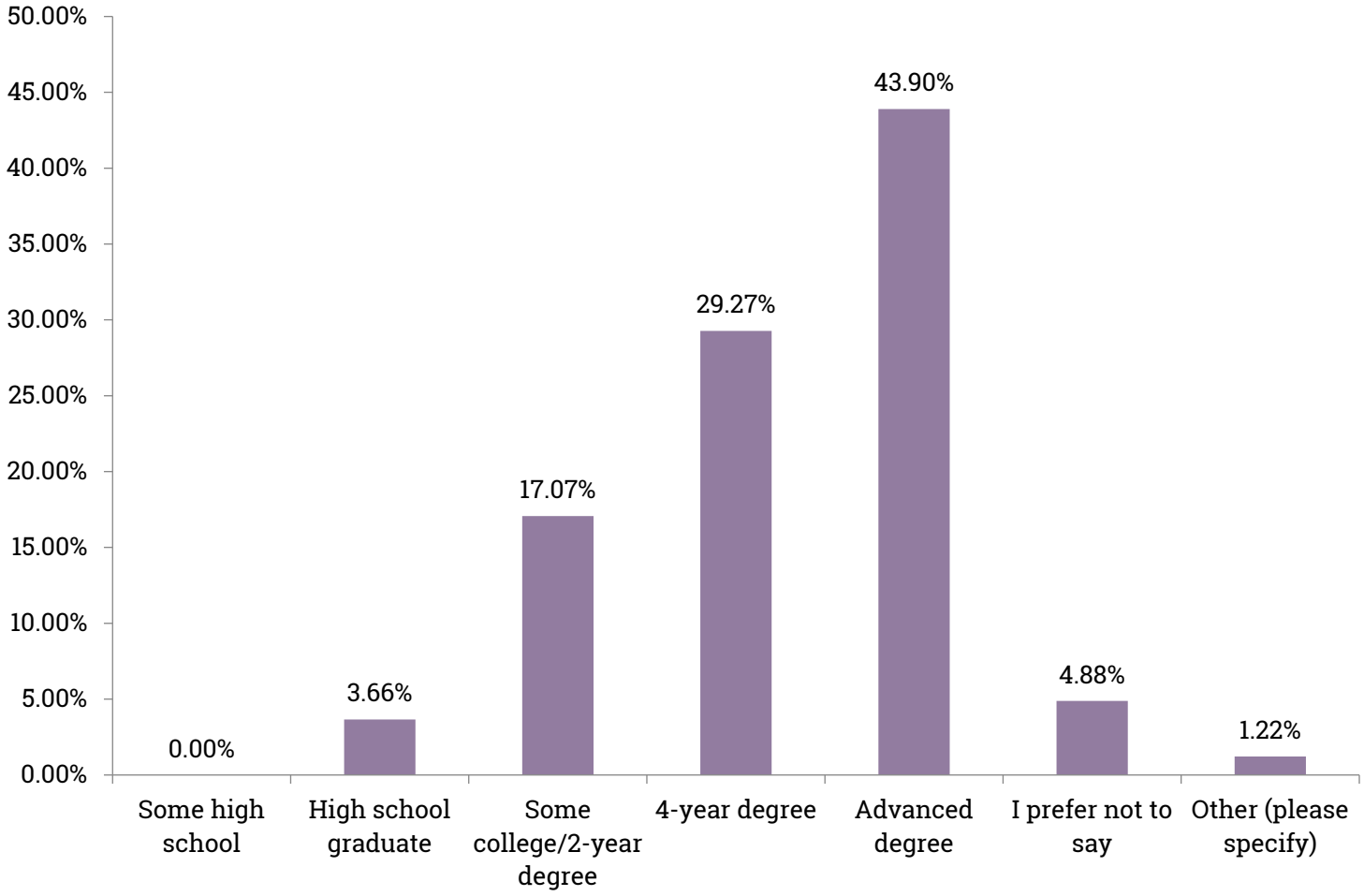
Q17 What is your gender? (Optional open ended)

Answered: 57, Skipped: 40



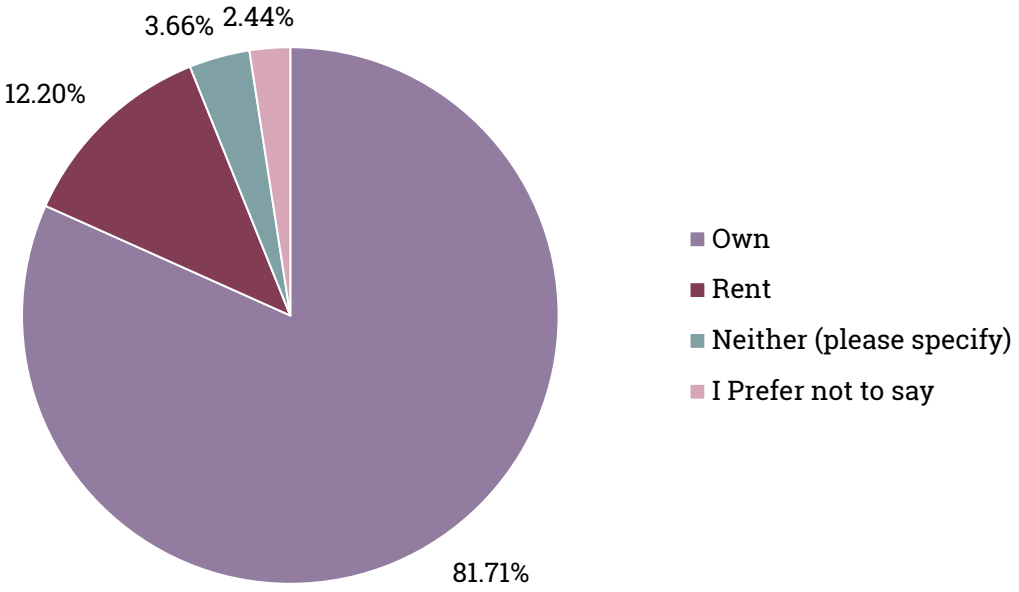
Q18 What is the highest level of education you have completed?

Answered: 82, Skipped: 15



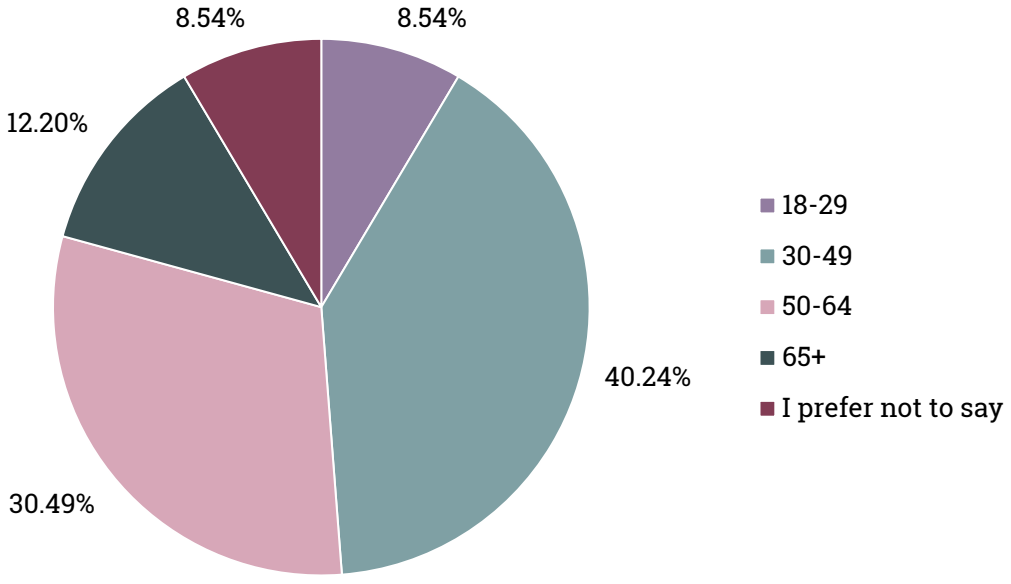
Q19 Do you rent or own the place where you live?

Answered: 82, Skipped: 15



Q20 What is your age?

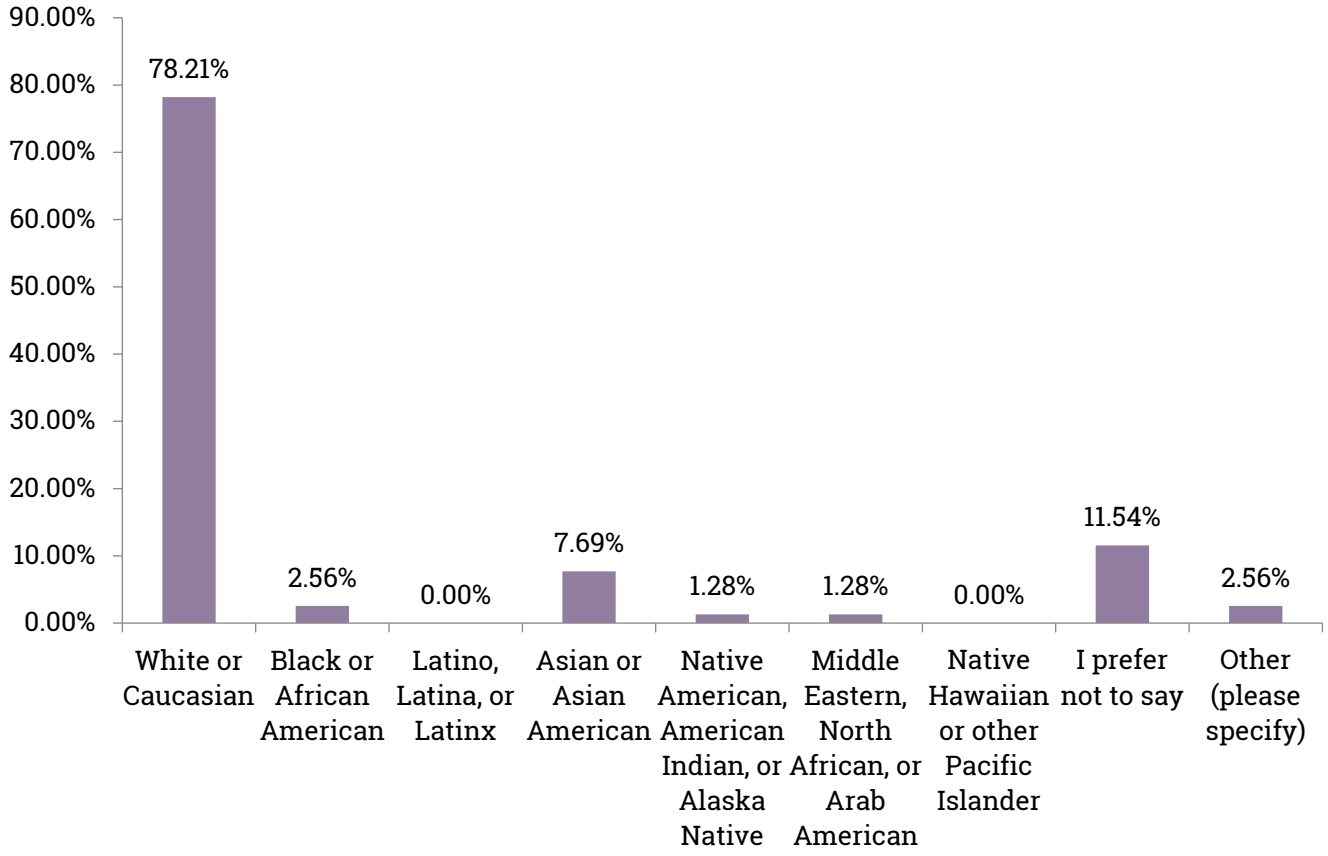
Answered: 82 Skipped: 15



Q21 Which of the following best represents your race/ethnicity? (Select all that apply)

Answered: 78, Skipped: 19

- 78.21% of respondents identify as White or Caucasian.



STAKEHOLDER ENGAGEMENT

As draft strategies and actions for the Woodinville Climate Action Plan (CAP) came together, a series of three stakeholder interviews and a business roundtable discussion sought external feedback on the draft. This engagement provided an opportunity for stakeholders to share detailed and strategic feedback to ensure the CAP reflected community priorities.

Stakeholder Interviews. A series of three one-hour stakeholder interviews, led by Cascadia, took place the week of April 24th with the following groups:

1. The Northshore School Board

2. The Woodinville Rotary Club
3. The Woodinville Garden Club and 21 Acres

Business Roundtable. Cascadia and the City partnered with Woodinville's Department of Commerce to organize a roundtable discussion with local businesses to provide strategic feedback on draft strategies and actions for the CAP. Local business partners had the option of joining the meeting in-person or virtually. The business roundtable was held on May 4th.

Stakeholder Engagement Objectives

- Gather feedback on how ambitious Woodinville's greenhouse gas emissions reduction targets should be.
- Gather strategic and detailed feedback on draft strategies and actions to inform final strategies and actions to be included in the CAP.
- Identify any potential barriers and opportunities the City should be made aware of for implementation feasibility.

Stakeholder Engagement Key Themes

- Adopt targets at least on par with King County, if not more ambitious than
- Support for EV adoption and enhanced charging infrastructure
- Encourage a walkable, dense community through policy and investment
- Promote native gardening, pollinator gardens, and elimination of pesticides
- Support for building electrification
- Access to composting to aid in waste diversion
- Woodinville should lead by example
- Educate and guide the community and businesses on what they can do

Interview Summary

Vision Setting

- Stakeholders provided a wide range of ways they envision a sustainable Woodinville community including:
    - Living in walkable communities with access to public transit
    - Electrification of buildings, reducing dependence on fossil fuels
    - Prioritizing low-impact development
    - Improving and protecting air, water, and land quality
    - Reduction and diversion of waste
    - Encouraging sustainable food production
- Stakeholders identified past successes in implementing sustainability initiatives such as:
    - Receiving City and public support for *Pollinator Fest!,* a community grant funded event in the City.
    - Promoting turnout for native gardening event which gave the public a concrete way to do something.
    - Assisting the City in park development and maintenance
    - Implementing a project to repurpose old wine barrels as planters for pollinators.
    - Progressing on sustainable building strategies

    - Reducing pesticide use within the community
- Stakeholders identified implementation challenges they've run into when promoting sustainable initiatives such as:
    - Changing personal habits within the community, it's been difficult turning knowing into doing
    - Finding leadership to lead by example to promote wider community action

Target Setting

- Stakeholders shared that enhancing sustainability in the context of their organization would include actions such as:
    - Conducting outreach and community building
    - Making a pollinator pledge (including restricting pesticide use and promoting native gardens)
    - Partnering with other organizations that also seek to enhance sustainability
- At the community scale, stakeholders interviewed identified the following actions Woodinville could take to enhance sustainability:
    - Join K4C
    - Conduct outreach and community building, such as promoting rewards/community acknowledgement for groups reaching milestones
    - Prioritize long term gains over short term costs
    - Enhance EV infrastructure
    - Partner with, investing in, and supporting schools to eliminate fossil fuels from heating and busing systems, waste reduction, and increasing local solar
- Stakeholders shared visions of a healthy and resilient Woodinville which included:
    - Smaller footprint houses with increased density
    - Circular economy
    - Access to EV charging infrastructure
    - Living in a 15-minute city
- Stakeholders shared ways they believe this vision could be achieved such as:
    - Thoughtful planning with the use of policy, code, and zoning regulations
    - Education

    - Updating the current septic sewer system (being on septic makes dense development difficult)

Overall, stakeholders agreed that Woodinville's reduction targets should be at least on par with King County, if not more ambitious, because they believe Woodinville has the means and public support to pick up the slack of other communities who may not have the means and support.

Draft Strategies and Action Review

Stakeholders were in support of strategies and actions promoting electrification, EV infrastructure, composting, native planting, and increased micro-mobility infrastructure.

Concerns and/or changes stakeholders raised about draft strategies and actions include:

- Negative impacts of increased use of cement, asphalt, and other impervious surfaces when promoting sidewalk connectivity, bike and pedestrian lanes & trails should be considered, more sustainable alternatives should be prioritized
- TR2.2 should be mindful of "siting sensitive uses", "light industry", vs not, ultimately protecting sensitive environments
- It's recommended to add requirements for new buildings to be all electric and/or use green building certifications
- Concerned about partnership with PSE on BE1.2 since PSE has business interest to retain natural gas
- Could update BE2.3 to say at least 15%, but encourage to go above and beyond
- Should add language to connection with regional bike network for TR2.4, especially for large apartment dwellers
- NW1.3 should include HOAs and installation of native plants in addition to trees (Look to Kirkland for example – each park has a native plant steward plus habitat corridors);
- TR1.4 should replace "as feasible" with "as becomes available".

Stakeholders provided strategies and actions they believe are important to include such as:

- Prioritizing affordable housing because the economy is dependent on service industry jobs and workers need to be able to afford to live here
- Needing actions on improving the storm water and sewer systems
- Preserving of water quality

- Addressing sustainable food production and access
- Engaging local businesses in climate action efforts
- Supporting limitations on using farmland for non-farm purposes in Sammamish (since not in Woodinville would need to use “support” or “advocate”)

Stakeholders shared that the cost-benefit analysis should be focused on building and energy actions as they believed these should be thoroughly explored to optimize return on public dollars.
Stakeholders shared a few closing remarks they believed should be considered including:

- Looking at what Kirkland is doing for walkability and native gardening
- Taking a bottom-up approach, involving social and civic groups to participate to garner local buy-in and avoid dictation
- Allowing for accessory dwelling units to increase density
- Partnering with schools
- Adding elimination of harmful pesticides, sustainable or regenerative agriculture, availability of organic to foods (prioritizing low-income populations), reduction of grass lawns, preserve and restore native habitats (Could be added to Water and Natural Systems via a 3rd goal).

Business Roundtable Summary

High Level

Business representatives provided many visions of a sustainable Woodinville community including:

- Transportation efficiency and carpooling
- An effectively used Pollinator Pathway network group
- Community education and engagement assisted by business leaders
- A community where people can walk from place to place without needing to drive with more sidewalks and more opportunities to gather
- A community that cares about citizens and businesses and works in a responsible way to support both for 10, 20, 50 years
- Prioritized efficient systems for facilities (homes/buildings), waste & recycling management

Target Setting

About half of the business representatives that were in attendance agree Woodinville should be on par, with the other half agreeing Woodinville should be more ambitious.

Open Discussion on Draft Strategies and Actions

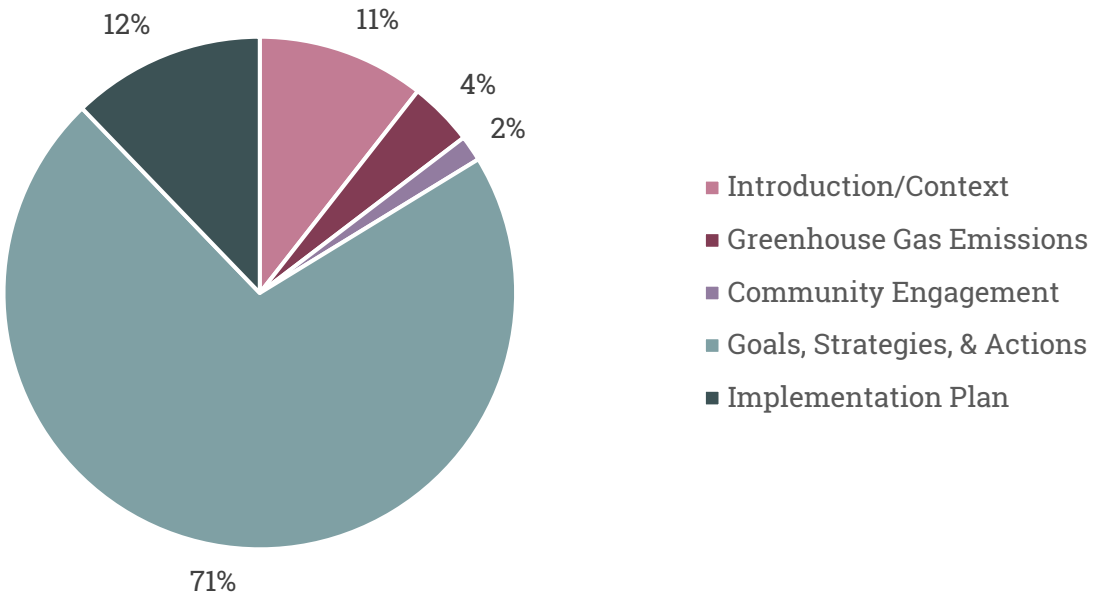
- Business representatives were supportive of recycling and composting for waste diversion and think it's important for the City to:
    - Offer more education to businesses on how to recycle
    - Educate not just restaurants, but also distilleries
    - Provide ongoing education in the form of materials, signage, small training with the management team due to business turnover (KC health department does a good job in doing this, maybe CAP education could piggy back on this)
    - Work towards compostable containers only if there's access to compost
- Business representatives think the City and community needs to be thinking about what is going to happen end of life for:
    - EV batteries
    - Solar panels
    - Compressed natural gas vehicles
- Business representatives provided the following feedback for the "Buildings and Energy" strategies and actions:
    - Need to be very clear about infrastructure requirements in the beginning
    - Provide a road map of what is required vs. what is recommended
    - Consider how industries vary and what exemptions may be needed depending on industry
    - Think about how green building and electrification impacts cost from an affordable housing standpoint
- Business representatives provided the following closing remarks:
    - Timelines may not be feasible and should be explored during implementation
    - Think about what partnership(s) will be sought after for EV charging infrastructure

VIRTUAL OPEN HOUSE

High Level

Woodinville's draft CAP was available for public comment at WoodinvilleCAP.konveio.com from May 10th to June 5th, 2023. During this virtual open house, the community left **123** comments on the draft CAP including questions, suggestions, messages of support, and engagement responses shared by community members. These comments were reviewed and responded to as appropriate by Cascadia Consulting Group during the open house period.

The figure below shows how comments received were distributed by topic area.



Key Themes

The number of comments received are categorized into the following detailed topic areas:

Categories		# of comments
Introduction & Context		13
GHG Emissions		5
Community Engagement		2
Goals, Strategies, & Actions	Buildings & Energy	21
	Transportation	23
	Consumption & Materials Management	15
	Natural Systems & Water	10

	Community Resilience	19
	What You Can Do	10
Implementation Plan		5

All feedback received can be seen in Attachment B: Virtual Open House Comments. Key themes from the public comment period are shown below for each category.

Introduction & Context

- Generally, the community indicated support for the draft CAP as a first step for climate action in Woodinville and felt that it was up to date with new standards.
- The community provided suggestions to improve the specificity and measurability of CAP goals.
- The community provided many suggestions for new key terms to be added to the CAP's "Key Terms" section including "circular economy" and "charging station".

GHG Emissions

- The community had many clarifying questions related to what is included in Woodinville's greenhouse gas inventory and wedge analysis.
- These questions included asking if transportation emissions included only Woodinville's residents or commuter traffic, if the wedge analysis assumed new growth, and how Woodinville's emissions compared to similarly sized cities across the U.S. and around the world.
- The community expressed hesitation surrounding including emissions from aviation in the GHG inventory and the methodology behind these calculations.

Community Engagement

- The community had questions related to engagement statistics and where feedback from engagement events would appear.

Goals, Strategies, & Actions

Buildings & Energy

- The community showed significant support for many actions in this focus area, including BE 1.1, 2.2, and 3.2.

- Suggestions related to the proposed targets for this focus area include reducing the solar target and increasing the natural gas reduction target.
- Many specific suggestions related to individual actions, providing an additional level of detail.
- The community indicated support for sustainable building design options such as white roofs, LEED certification, and orienting buildings to maximize solar potential.
- There were multiple mentions of the Inflation Reduction Act (passed in August 2022) and the funding it may provide for energy use transitions.
- There was discussion related to the transition away from natural gas and both the benefits of this transition as well as the technical and financial needs as it relates to retrofits and new buildings.

Transportation

- There were suggestions for rephrasing and minor modifications to goals, strategies, and actions throughout this focus area.
- There was support for implementation of active transportation options including expanding biking infrastructure, bike and scooter-share options, and improvements to sidewalk safety.
- There was support for specific actions including TR 1.1, 1.2, 2.1, 2.2, and 2.4.
- There was support for first and last mile transportation and connection of transit services to active transportation options such as bike trails and safe sidewalks.
- There was concern expressed regarding current transit route availability and suggestions to expand where possible.

Consumption & Materials Management

- The community supported specific actions including CM 1. 2, 2.1, and 2.5.
- The community made suggestions to expand continual education related to proper waste sorting.
- There were suggestions for the City to encourage the community to do their part by participating in waste reduction activities including properly sorting their waste, bringing their own utensils, etc.
- There was conversation related to waste disposal options, including suggestions to consider waste-to-energy practices and responsible recycling.

Natural Systems & Water

- There were suggestions for new actions to include in this focus area related to preservation of the Sammamish Valley, enhancing native landscaping, and banning harmful pesticides.
- The community demonstrated support for actions NS 1.2 and 1.3.
- There were suggestions to consider the definition and intent of "green spaces" to include native plants that decrease water use and plants that increase pollination.

Community Resilience

- There was support for actions CR 1.1, 2.2, and 3.2.
- The community urged the City to continue to consider elderly and vulnerable populations especially in this focus area to ensure resilience to extreme events, and to give particular attention to inclusion of freezing temperatures.
- There was discussion related to CR 3.3 – some community members indicated strong support for this action, while some community members indicated that this action should not be a priority for Woodinville and this funding should be routed elsewhere.
- There were suggestions for various opportunities for the actions in this focus area, including to utilize volunteers from Woodinville High School, use C.O.A.D. as a resource, and to follow lobbying opportunities for resilience measures.

What You Can Do

- There were suggestions for a variety of actions that the community can participate in to help reduce Woodinville's environmental impact, including volunteering where possible, planting a fruit or vegetable garden and donating surplus produce to food banks, or encouraging work-from-home to reduce emissions from commuting.

Implementation Plan

- There was a suggestion to update the City's greenhouse gas inventory on a more regular basis.
- There was concern related to the cost that actions in the Buildings & Energy focus area may cause to residents.
- There was a suggestion to add ESL-considerations to accessibility of ongoing community engagement.

Youth Engagement

High Level

While the virtual open house was available to the public, City staff connected directly with the Woodinville High School Earth Club and the Chrysalis School's 12th grade Civics class to have an open discussion with high school community members about climate impacts, and ask for them to share their input on the draft Climate Action Plan.

Youth Engagement Objectives

- **Enhance Student Awareness and Understanding:** By seeking their feedback, students can gain a clearer understanding of the proposed actions and their potential impact on addressing climate change. This objective aimed to empower students by making them informed participants in the climate action process.
- **Amplify Student Engagement and Ownership:** During the draft CAP review period, students were encouraged to take ownership of climate change mitigation efforts and become active participants in driving sustainable actions within their school community and beyond. This objective aimed to emphasize the importance of student engagement and how their opinions and ideas can influence the CAP.
- **Ensured Inclusivity and Diversity of Perspectives:** It is crucial to incorporate the voices and opinions of students from different backgrounds, age, and experiences. This objective aimed to promote inclusivity and equity in climate action discussions, resulting in a more comprehensive plan that considered the needs and concerns of our high school community members.

VISION SETTING

- Students were eager to share how they envision a resilient Woodinville future. Examples include:
    - Green buildings and development projects
    - Easy access and increased opportunities to travel via public transportation
    - Interconnecting trails to neighboring cities
    - Walkable downtown areas that allow for the City to maintain the surrounding green spaces (vertical expansion)
    - Access to public p-patches
    - Increase in EV transit vehicles

- Both student groups created posters to illustrate their visions for a sustainable future. Images of the posters can be seen in Attachment C: Youth Engagement Posters.

OPEN DISCUSSION ON DRAFT STRATEGIES AND ACTIONS

- Students expressed their support for the draft strategies and actions, with the following list garnering the highest level of interest:
    - Advance building decarbonization
        - Promoting Green Power
    - Reduce energy use in new and existing buildings
        - Community solar projects
    - Transition to non-fossil fuel vehicles and equipment
        - Public EV infrastructure and community education programs
    - Reduce vehicle travel
        - Expansion of multi-modal services
        - Residential walkability and cycling enhancement
    - Divert waste from landfills
        - Increasing both residential and commercial recycling and composting
    - Reduce waste generation
        - Garden access and creation
    - Expand, protect, and improve green spaces and natural ecosystems
        - Expanding green spaces
    - Mitigate climate impacts on communities
        - Plan for climate impact hazards and emergencies; e.g., poor air quality because of summer fires
        - Engagement opportunities and feedback incorporation

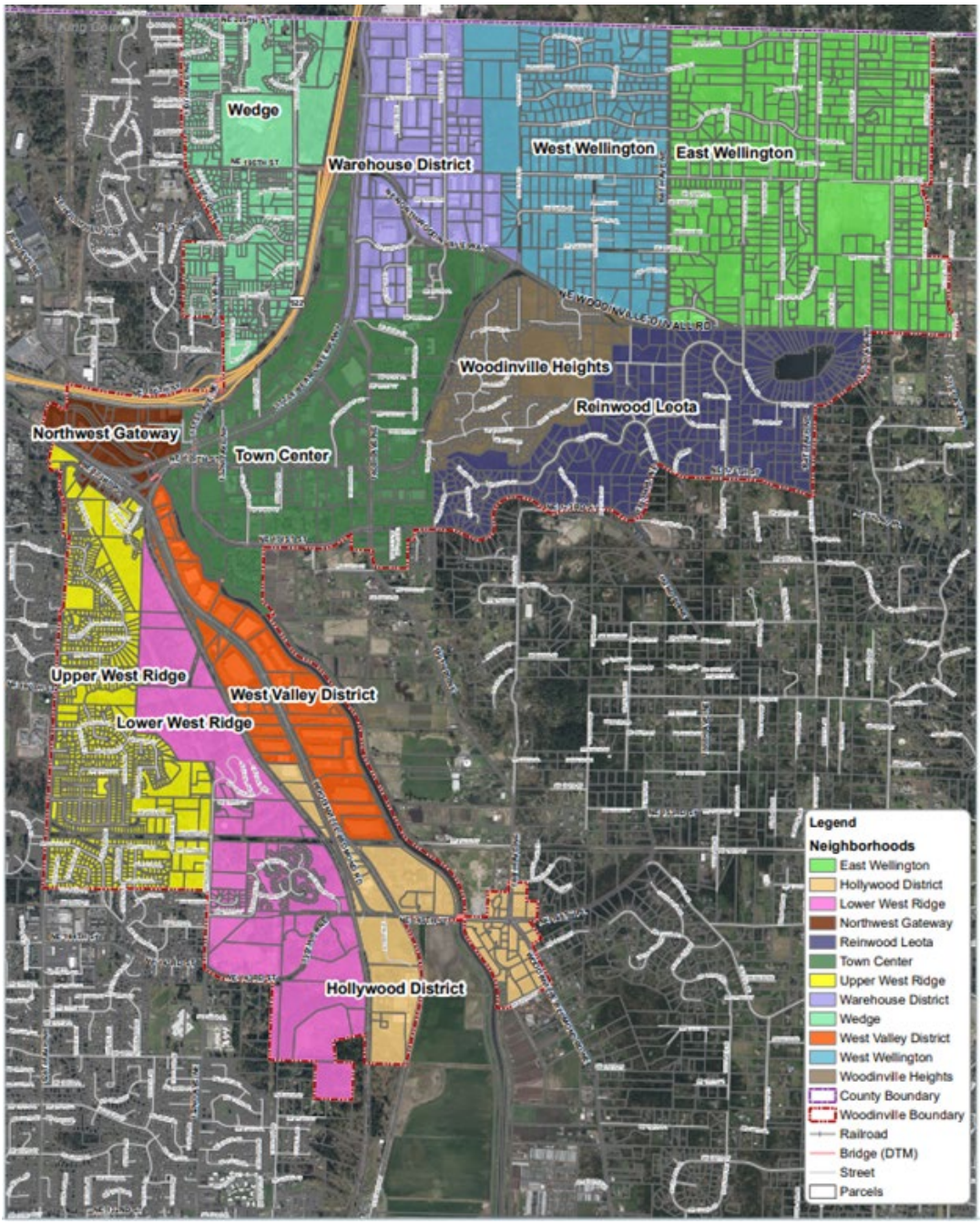
RECOMMENDED ENGAGEMENT OPPORTUNITIES TO PROMOTE CLIMATE ACTION

- Provide student/youth community engagement opportunities
- Provide students with educational material, policy awareness, and best practice updates
- Encourage and incentivize local businesses to provide eco-friendly or zero waste supplies and materials

- Promote pollinator friendly, carbon sequestering, and pesticide-free gardening
- Provide access to community composting bins

ATTACHMENTS

Attachment A: Neighborhood Map



Attachment B: Virtual Open House Comments

This attachment includes the full feedback provided on the draft CAP in the Konveio Open House. Comments have **not** been modified from their original format.

#001

Posted on 05/15/2023 at 6:01pm [Comment ID: 13]

Agree: 0, Disagree: 0

Over all I like the plan. It seems more pretty up to date with new standards. I would like to see more about the responsibility the business have. There's a lot of tourism in via the winery's. Anything that can be done to help with the traffic and footprint that is caused by that would be great. The sections on promotion EV/Public transit is a start. Will the business incur any of those cost?

#002

Posted on 06/05/2023 at 5:09pm [Comment ID: 119]

Type: Suggestion

Agree: 0, Disagree: 0

In general, this is a good beginning. What I do not see, however, are goals that are measurable. A good goal is a SMART goal -- Specific, Measurable, Achievable, Realistic and Timebound. Neither the goals, nor the strategies, nor the Policies meet the SMART criteria. Without specifics, the degree to which the goal is being met or progress being made cannot be measured.

#003

Posted on 05/18/2023 at 4:06pm [Comment ID: 36]

Agree: 0, Disagree: 0

Construction finish materials like quartz & paperstone countertops, Trex decking and Renewal By Andersen windows have emerged as popular "recycled" products over the past few decades. Recycled products tend to be comparably priced to their "earth borne" rivals. Re-using construction materials is generally more labor intensive. The time spent pulling nails out of a 2x4 can be more expensive than grabbing a new 2x4 off the pile. So instead the nail-ridden 2x4 is dumped at a construction disposal yard like DTG Recycling, where it is shredded into hog fuel and metallic remnants are removed with a large magnet.

This process is also nationally-accepted for some siding, carpet, drywall, aluminum windows, etc. The challenge for most builders is having the geographic space and trained personnel to separate the various remnants into piles for recycling. By in large, it all goes to the dump in smaller quantities over time.

#004

Posted on 05/15/2023 at 5:42pm [Comment ID: 10]

Agree: 0, Disagree: 0

This is a key term, certainly on the level of some in this list I think, Charging Station. Description to include the three(?) levels of chargers, city selection (fastest available I think), etc.

> Reply on 05/20/2023 at 8:56am [Comment ID: 56]
>
> Agree: 0, Disagree: 0
>
> How to avoid poor uptime on charging stations?
>
> https://www.bloomberg.com/news/articles/2023-05-18/why-so-many-ev-chargers-in-america-don-t-work-lht2q7w4

#005

Posted on 05/15/2023 at 5:49pm [Comment ID: 11]

Agree: 0, Disagree: 0

This is a little picky, but air conditioners operate the same way heat pumps do “using electricity to move heat around”. Electric heat pumps replacing fossil fuel for heat will reduce building emmisons, and provide air conditioning ability also. (Suggested phrasing, a little different.)

#006

Posted on 05/15/2023 at 2:18pm [Comment ID: 3]

Agree: 0, Disagree: 0

“Typically generated by renewable energy sources” Or nuclear, as the Energy Info Administration data show, both in state and nationally, “ Renewable resources other than hydroelectric power accounted for about 9% of state generation. Wind represented more than four-fifths of that share and biomass fueled almost all the rest, with solar energy supplying a small amount. Nuclear provided about 8% of total in-state generation, all of it from the Columbia Generating Station, which is Washington's only operating nuclear power plant.”

Cannot copy the pic on in, EIA data show national percent of electric generation at 18% for nuclear, 10% for wind, 3% for solar, and 6% for hydro. Nuclear plainly is in

the same league currently as the wind and solar contributions, should be mentioned and not overlooked. This is in part an educational document, along with its operability, I think.

> Reply on 05/21/2023 at 4:36pm [Comment ID: 58]
>
> Agree: 0, Disagree: 0
>
> " A pending proposal from the Biden administration would further streamline permits — making them automatic in some cases as they allow wind-energy projects and power line networks to harm eagles and disturb their nests.". https://apnews.com/article/dead-eagles-wind-turbines-enforcement-biden-53c e35355433e18a27324f9254a2475a

#007

Posted on 05/18/2023 at 5:38pm [Comment ID: 49]

Agree: 0, Disagree: 0

We are in some cases behind 3rd world countries in this regard. On-site storage from roof collection provides for irrigation in drier months.

#008

Posted on 06/05/2023 at 11:43am [Comment ID: 108]

Type: Suggestion

Agree: 1, Disagree: 0

Using Centigrade decreases understanding by the general public. Put Fahrenheit in parentheses. PSE is a for-profit, foreign company that at best will be slow in making desired changes to their business model. Efforts may be better spent exploring a move to a Public Utility District.

No mention of eliminating the use of toxic chemicals to maintain roads & city spaces which affects habitat critical to the wide range of pollinators & wildlife our food system depends on. Education is key to understanding the impact of the loss of native habitat & coupled with misuse of pesticides, fungicides & insecticides a documented threat to our ecosystem & future. The City could be key in galvanizing a regional call to action. The built environment can be a roadblock or part of the solution and leadership in developing an inclusive action plan is essential.

#009

Posted on 05/18/2023 at 5:41pm [Comment ID: 50]

Agree: 0, Disagree: 0

Some 20+ years ago, King County had a plan in Eastgate for low-income housing integrated with the Park & Ride. May be worth looking into the benefit analysis of that proposed project.

#010

Posted on 05/15/2023 at 5:57pm [Comment ID: 12]

Agree: 0, Disagree: 0

To be much more useful, this has to be broken into fossil vs EV doesn't it? EV mileage is free to the atmosphere assuming CO2 energy supply. What this stat wants to present is at what pace is fossil use on the road declining? So not total miles?

> Reply on 05/15/2023 at 6:03pm [Comment ID: 14]
>
> Agree: 0, Disagree: 0
>
> You;ve comment a lot Tom. I agree with pretty much all of your points. I can't tell if you are for or against? Seems like you are pointing out the flaws as a way to make it seem like a bad idea?? or it could be taken that way. A comment on approval or disapproval would be nice as well.
>
> > Reply 05/15/2023 at 6:20pm [Comment ID: 15]
> >
> > Agree: 0, Disagree: 0
> >
> > Have no doubt that I favor reducing carbon emissions, hence carbon free energy applications are a field of interest. Used to participate in designing recycling processes for waste paper, so that arena, recycling, is interesting also.

#011

Posted 05/18/2023 at 4:11pm [Comment ID: 37]

Agree: 0, Disagree: 0

How does this compare to similarly-sized cities across the U.S.? Around the world?

> Reply by Cascadia Consulting on 05/24/2023 at 12:27pm [Comment ID: 69]
>
> Agree: 0, Disagree: 0
>
> Hello - great question! It's difficult to compare per-capita emissions at face value due to differences between the activities in each city. While Woodinville has a small population, it also has a thriving tourism industry which results in increased commercial and industrial emissions. However, for comparison purposes, we have provided a few jurisdictions to compare

Woodinville's emissions to, whose emissions were also analyzed through the Puget Sound Regional Emission Analysis:

Woodinville: 18.1 MTCO2e/capita

Redmond: 19.7 MTCO2e/capita

King County: 12.2 MTCO2e/capita

Additional per capita comparison from other analysis:

United States: 14.1 MTCO2e/capita (Source:

https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=US)

Worldwide: 4.6 MTCO2e/capita (Source:

https://data.worldbank.org/indicator/EN.ATM.CO2E.PC)

#012

Posted on 05/18/2023 at 5:47pm [Comment ID: 51]

Agree: 0, Disagree: 0

Is this figure just taking into account Woodinville residents? Or does it include commuter traffic through Woodinville too? Our region has been battling with getting people to live and work more locally. Affordable housing is an oxymoron.

Reply by Cascadia Consulting on 05/24/2023 at 12:21pm [Comment ID: 66]

Agree: 0, Disagree: 0

Thank you for your question! This figure accounts for on-road transportation occurring within Woodinville's geographic limits, so it does include transportation by non-residents. The on-road emissions included in this calculation were provided by the Puget Sound Regional Council based on their transportation model.

#013

Posted on 05/18/2023 at 4:15pm [Comment ID: 38]

Agree: 0, Disagree: 0

Misleading graph assumes no new residents, businesses nor transportation. Please adjust to align with expected growth projections.

Reply by Cascadia Consulting on 05/24/2023 at 12:25pm [Comment ID: 68]

Agree: 0, Disagree: 0

Hello - thank you for your comment! This wedge analysis does account for increasing population and jobs in Woodinville when forecasting these

scenarios. These assumptions are sourced from the Puget Sound Regional Council (PSRC). Forecasted population growth comes directly from PSRC's forecasts, and forecasted job growth is predicted based on predicted population increases and PSRC's "Covered Employment Estimates" data.

#014

Posted on 05/26/2023 at 9:38am [Comment ID: 73]

Agree: 1, Disagree: 0

Is the feedback from this roundtable somewhere?

Reply by Cascadia Consulting on 05/30/2023 at 9:26am [Comment ID: 76]

Agree: 0, Disagree: 0

Hello, thanks for your question! We will be including an engagement summary as an attachment to the final CAP. This will detail the feedback we received from the survey, stakeholder interviews, and the business roundtable.

#015

Posted on 06/05/2023 at 5:11pm [Comment ID: 120]

Type: Suggestion

Agree: 0, Disagree: 0

How many people came to the Open House? How many people responded to the poll? If the percentage of participation is only a few in a city of 13K residents, not sure it should be cited as "fact."

#016

Posted on 05/24/2023 at 7:09pm [Comment ID: 71]

Agree: 0, Disagree: 0

Are there any volunteer opportunity’s for woodinville citizens to participate in to help the climate plan?

#017

Posted on 05/18/2023 at 4:23pm [Comment ID: 39]

Agree: 0, Disagree: 0

Natural gas produces less CO2 per unit of energy than other fuels. https://www.engineeringtoolbox.com/co2-emission-fuels-d_1085.html

Reply on 05/19/2023 at 9:16am [Comment ID: 54]

Agree: 0, Disagree: 0

Michael, I am curious about this comment. It seems to suggest that natural gas is acceptable because it is the lesser of other evils. The downsides of the methane released by natural gas are well-documented. And that's putting it lightly.

Reply by Cascadia Consulting on 05/24/2023 at 12:19pm [Comment ID: 65]

Agree: 0, Disagree: 0

Thanks for your comment, Michael! This common sentiment from community engagement is referring to reducing natural gas consumption and replacing it with electricity or power generated by renewables. Washington's Clean Energy Transformation Act will require electric utilities in Washington to provide carbon neutral electricity to their customers by 2030. By transitioning away from natural gas, Woodinville's emissions will drop drastically as electricity continues to become cleaner in future years.

Reply on 05/27/2023 at 9:22am [Comment ID: 74]

Agree: 0, Disagree: 0

Termination of natural gas service additions delayed until at least October.

https://www.seattletimes.com/seattle-news/environment/wa-council-delays-new-building-codes-that-would-require-heat-pumps/

#018

Posted on 06/05/2023 at 5:13pm [Comment ID: 121]

Type: Suggestion

Agree: 0, Disagree: 0

REQUIRE all new permits for multi-use development to use "Best Available Science" for "green development." (AKA Leed.) Simply "encouraging" it will only result in lip-service, not real action with tangible results.

#019

Posted on 05/18/2023 at 4:48pm [Comment ID: 41]

Agree: 0, Disagree: 0

The new energy code for residential construction goes into effect July 1, 2023. Insulation companies report that the increased building envelope requirements will have no effect on energy use in this climate. The increase the cost of construction is not yet measured, but predicted to be in the range of 5-8%.

> Reply on 05/24/2023 at 5:47pm [Comment ID: 70]
>
> Agree: 0, Disagree: 0
>
> " Yet the Washington State Building Code Council (SBCC) recently adopted a set of new, even more stringent, codes that will increase the cost of new homes by another $24,070. Even the SBCC's own cost analysis called these changes "cost-ineffective.""
>
> From, https://www.seattletimes.com/opinion/remove-the-barriers-to-building-more-affordable-housing/?fbclid=IwAR0w7TfltBeQM4D55f--EkvVPWoFOH8bAZH-sPCsKjdj1860dm4w4GKViMw

#020

Posted on 06/05/2023 at 5:17pm [Comment ID: 124]

Type: Suggestion

Agree: 0, Disagree: 0

Connect trails to bike routes to bus routes to light rail. While we do not yet have a LIght Rail hub, should be planning now to connect our existing trails, roads, etc. to the two nearest future stations so that we can help make it as easy as possible. Maybe the city looks into buying a shuttle bus and running it to the Redmond train a few times in AM and again in PM?

#021

Posted on 06/05/2023 at 5:14pm [Comment ID: 122]

Type: Suggestion

Agree: 0, Disagree: 0

These are nice -- but super generic. Need to be more specific, measurable.

#022

Posted on 06/05/2023 at 5:15pm [Comment ID: 123]

Type: Suggestion

Agree: 0, Disagree: 0

Keep NERTS out of Woodinville. That will actually help Woodinville meet its CAP goals as transportation expenses from their proposed site to the freeway will be far more expensive than the existing Kirkland site.

#023

Posted on 06/04/2023 at 4:02pm [Comment ID: 102]

Agree: 0, Disagree: 0

Commingled plastic recycling is a foolish endeavor, there isn't a demand for the mixed material. Not to mention the inability to process filmy materials so often mentioned. And processing recycling materials is a hazardous job … sorting, etc. Waste has other processs options that can be implemented cost effectively, reducing volume to landfill by over 85%.

https://www.greenpeace.org/usa/news/new-greenpeace-report-calls-out-toxic-hazards-of-recycled-plastic-as-global-plastics-treaty-negotiations-resume-in-paris/#:~:text=Recycled%20plastics%20often%20contain%20higher,changes%20to%20the%20body%27s%20natural

#024

Posted on 05/18/2023 at 5:50pm [Comment ID: 52]

Agree: 0, Disagree: 0

Do farmers in the Sammamish Valley require additional composting materials from the broader community?

#025

Posted on 05/18/2023 at 4:41pm [Comment ID: 40]

Agree: 0, Disagree: 0

Affordable housing has been perpetually out of reach for 6 decades. The only way our society has been able to provide is with government subsidies. Green building practices and materials increases construction costs. Most custom construction and remodeling customers who want their home Built Green certified ultimately decide not to, in the interest of cost vs. value.

#026

Posted on 06/05/2023 at 5:20pm [Comment ID: 125]

Type: Suggestion

Agree: 0, Disagree: 0

This comment has been made multiple times but doing it again to ensure it is captured in writing. Having Woodinville take part of the "load" of air travel

probably utilized very flawed logic. I'll bet Woodinville has a larger # of seniors as % of residents and they tend to fly less. I'll also bet Woodinville's residents may not "leave the area" for vacations. And in the last 3 years, MANY business events which used to involve travel have been cancelled. For example, MSFT has not had a "real, live" event since very early 2020. And none are planned for the future, either.

#027

Posted on 06/05/2023 at 11:57am [Comment ID: 110]

Type: Question

Agree: 0, Disagree: 0

What RCP scenario are we planning for? (4.5, 8.5, etc) How do we avoid catastrophizing this information? What happens if a less impactful RCP scenario happens(RCP 4.5 becomes more apparent than 8.5)? Does this plan then downgrade?

#028

Posted on 06/04/2023 at 5:28pm [Comment ID: 103]

Agree: 0, Disagree: 0

Just finally found some useful PSE supply side info about natural gas use through 2045. Plus or minus 10% from where we are, meaning the soon to be enacted restrictions on residential and small business took effect, but larger users still use…? The proposed and desired reductions, local thru state and national don't mesh with the suppliers forecasts, in this case. Not surprising. It it's a serious issue, this mismatch. One metric that will address this, is price. You ought to track affordability of these moves to reduce CO2 emissions, it isn't free. https://www.pse.com/-/media/PDFs/IRP/2022/07122022/Presentation--07122022Demand-Forecast-Final.pdf?sc_lang=en&modified=20220727191700&hash=AAEF8DBB60BE37734C92285E032BBF0D Look at pages 20 and 24 for starters, I have only glanced quickly thru this.

#029

Posted on 05/15/2023 at 4:59pm [Comment ID: 5]

Agree: 2, Disagree: 0

Natural Gas is mostly made up of methane. Methane is released during natural gas production, processing, storage, transmission and distribution. Methane is 86 times more potent than CO2 in its first 20 years of release. If Woodinville truly wants to reduce its GHG, it must do better than 10% reduction by 2030.

#030

Posted on 06/05/2023 at 1:08pm [Comment ID: 111]

Type: Suggestion

Agree: 0, Disagree: 0

Rebate amounts should also provide for updates to electrical service to accommodate the additional electrical load of the heat pump.

#031

Posted on 05/16/2023 at 8:34am [Comment ID: 16]

Agree: 0, Disagree: 0

“ a utility-scale solar power plant may require between 5 and 10 acres per megawatt (MW) of generating capacity.”. And other numbers, but here’s a qualifier, it is also in part a function of local sunniness, year ‘round. Space usage, ecology, etc.

#032

Posted on 06/04/2023 at 11:46am [Comment ID: 79]

Agree: 1, Disagree: 0

Thank you, yes imperative new buildings meet the requirements set by the WA State Building Code Council.

#033

Posted on 05/16/2023 at 10:07am [Comment ID: 18]

Agree: 2, Disagree: 0

Not knowing what the current building code is and the phase-out of natural gas, I would strongly suggest no new natural gas installations in new housing. With all of the apartments and growth coming to Woodinville, this is the time to say natural gas will not be a part of it. This will save in retrofits down the line, save in natural gas infrastructure, and help reduce our GHG emissions up front. Not to mention health and safety.

> Reply on 05/18/2023 at 1:01pm [Comment ID: 35]
>
> Agree: 0, Disagree: 0
>
> “ Prohibits any large gas company that serves more than 500,000 retail natural gas customers in Washington as of June 30, 2023, from furnishing or supplying gas service, instrumentalities, and facilities to any commercial or residential location that did not receive gas service or have

filed applications for gas service as of June 30, 2023." HB 1589, passed as above I think.

#034

Posted on 05/18/2023 at 4:56pm [Comment ID: 42]

Agree: 0, Disagree: 0

What is the strategy for backup power when parts or all of Woodinville's power grid goes down?

Reply by Cascadia Consulting on 05/24/2023 at 12:23pm [Comment ID: 67]

Agree: 0, Disagree: 0

Thank you for your question. Ensuring the resilience of the power grid is an essential component of transitioning to all electric construction. Action BE 3.1 seeks to do this through partnering with our utility provider to expand critical energy infrastructure, such as battery energy storage system facilities.

#035

Posted on 05/16/2023 at 10:02am [Comment ID: 17]

Agree: 1, Disagree: 0

The Inflation Reduction Act the US Congress passed in Aug 2022 has money at both the national and state level for transition to heat pumps. State level is forthcoming. transitioning should be relatively easy if it is supported at the city level, and therefore I feel this paragraph should be made stronger.

#036

Posted on 05/18/2023 at 5:54pm [Comment ID: 53]

Agree: 0, Disagree: 0

The average home is fitted with 200A service. Converting gas heating and appliances may require larger service. Multiple homes with larger service may require larger transformers. PSE reports that they obtain their transformers from a single source overseas. The rate at which they are receiving units is not sufficient for current development, let alone retrofit.

#037

Posted on 05/16/2023 at 10:11am [Comment ID: 19]

Agree: 1, Disagree: 0

This section ignores the Inflation Reduction Act and Bipartisan Infrastructure Law. Both have money for cities for energy use reduction, green infrastructure, transitioning away from fossil fuels, etc.

#038

Posted on 06/04/2023 at 11:48am [Comment ID: 81]

Agree: 1, Disagree: 0

Community solar is a great idea! We'll keep you informed if/when we hear of grant opportunities.

#039

Posted on 06/05/2023 at 3:27pm [Comment ID: 112]

Type: Suggestion

Agree: 0, Disagree: 0

Require new buildings to be oriented so that the maximum amount of solar energy could be generated if the owner wants to add solar panels.

#040

Posted on 06/04/2023 at 11:45am [Comment ID: 78]

Type: Suggestion

Agree: 1, Disagree: 0

Encourage new development to lessen building and energy impacts. Encourage builders to work toward LEED certification.

#041

Posted on 06/04/2023 at 11:47am [Comment ID: 80]

Agree: 1, Disagree: 0

Thumbs up!

#042

Posted on 06/05/2023 at 3:32pm [Comment ID: 113]

Agree: 0, Disagree: 0

Include white roofs.

#043

Posted on 05/30/2023 at 4:29pm [Comment ID: 77]

Agree: 1, Disagree: 0

Will the partnership with Sound Transit provide more routes connecting Woodinville and the surrounding cities? Intercity transit could reduce the amount of vehicles commuting to and from Woodinville and reduce car dependence.

#044

Posted on 05/16/2023 at 10:19am [Comment ID: 20]

Agree: 0, Disagree: 0

As Woodinville has no car dealerships to speak of, I think this should be 50% PURCHASED instead of sold.

#045

Posted on 06/04/2023 at 11:49am [Comment ID: 82]

Agree: 1, Disagree: 0

Thumbs up, we need more charging capacity!

#046

Posted on 06/04/2023 at 11:49am [Comment ID: 83]

Agree: 1, Disagree: 0

Definitely!

#047

Posted on 05/15/2023 at 4:08pm [Comment ID: 4]

Agree: 1, Disagree: 0

Assurance of electric supply, might as well be re emphasized here. Some words above in the energy resilience section, but here is where you will need it, supplying EVs hopefully.

#048

Posted on 06/04/2023 at 11:52am [Comment ID: 84]

Agree: 1, Disagree: 0

So important...first mile, last mile. And a public shuttle would have such an impact in our community. Speaking on behalf of SVA's events, and other activities, along the Sammamish River Trail, that have been embracing 'no-car' policies. Limited parking in surrounding areas..shuttles/options from Wood. Park and Ride during these activities is essential.

#049

Posted on 05/27/2023 at 10:20am [Comment ID: 75]

Agree: 1, Disagree: 0

A lot of existing residential streets have poor or no sidewalks. I would love to see efforts to add or improve sidewalks so that pedestrians and kids walking to/from school would be in less danger from inattentive drivers.

#050

Posted on 05/18/2023 at 6:33am [Comment ID: 33]

Agree: 1, Disagree: 0

I asked the exact same question about aviation impact a few weeks ago (47:30 mark). An answer was offered in the video below.

https://woodinville.granicus.com/player/clip/1885?view_id=11&redirect=true&h=2a04dcb3760be24c8a21c60c0ae1f1d4

> Reply on 05/18/2023 at 9:43am [Comment ID: 34]
>
> Agree: 0, Disagree: 0
>
> Thanks! So, a proclamation supporting aviation CO2 reductions where possible. Are the baggage carts, fork trucks, other smaller tarmac vehicles electrified, or plans to? Would it count on the aviation side? And what should the Woodinville proclamation say regarding another airport in the region? Besides Paine.
>
> > Reply on 05/21/2023 at 9:55am [Comment ID: 57]
> >
> > Agree: 0, Disagree: 0
> >
> > Start up end of decade, they say. https://www.seattletimes.com/business/boeing-aerospace/new-800m-sustainable-aviation-fuel-plant-planned-for-washington-state/

#051

Posted on 05/22/2023 at 4:51pm [Comment ID: 59]

Agree: 1, Disagree: 0

incorporate ride-share vehicles in the downtown area, such as scooters and bikes that you can rent! Because Woodinville is so walkable, many people would utilize these (I know I would!)

#052

Posted on 05/17/2023 at 5:33pm [Comment ID: 29]

Agree: 1, Disagree: 0

Where is the contribution of aviation to Woodinville, at 11% in an earlier post? A regionalized average assignment somehow?

#053

Posted on 05/16/2023 at 10:26am [Comment ID: 22]

Agree: 1, Disagree: 0

third priority action suggestion: add bike lanes and bike-friendly shoulders to existing roadways where individual bike paths are not viable.

> Reply on 06/05/2023 at 3:53pm [Comment ID: 114]
>
> Agree: 0, Disagree: 0
>
> Also add some sort of divider between the bike lane and street, such as those short delineator posts that knock down when they are hit.

#054

Posted on 06/04/2023 at 11:53am [Comment ID: 86]

Agree: 1, Disagree: 0

Imperative for a thriving community, work/life balance.

#055

Posted on 06/04/2023 at 11:52am [Comment ID: 85]

Agree: 1, Disagree: 0

Thumbs up!

#056

Posted on 05/16/2023 at 10:20am [Comment ID: 21]

Agree: 1, Disagree: 0

add "and to connecting communities"

#057

Posted on 05/19/2023 at 9:26am [Comment ID: 55]

Agree: 0, Disagree: 0

In addition to the reduction of fossil fuels by encouraging walking and cycling, adding sidewalks, paths and bike lanes will increase safety. The Hollywood Hills neighborhood has no sidewalks even though people, including kids, frequently walk on the shoulder. If sidewalks were installed, I would feel much more comfortable walking to downtown.

#058

Posted on 06/05/2023 at 4:57pm [Comment ID: 118]

Agree: 0, Disagree: 0

Waste to energy. Only tried and true disposal of plastics. Our recycling rate is presumably actually low, commingled plastics are an undesirable feedstock, King Co study shows useful savings for capital investment … landfill will fill by when?

#059

Posted on 06/04/2023 at 11:55am [Comment ID: 87]

Agree: 0, Disagree: 0

Yes, please!

> Reply on 06/05/2023 at 4:05pm [Comment ID: 116]
>
> Agree: 0, Disagree: 0
>
> Absolutely do this!

#060

Posted on 05/22/2023 at 4:53pm [Comment ID: 60]

Agree: 1, Disagree: 0

Do this by educating! Also, would be cool to see a smaller size option for Waste Management's food scraps and yard waste bin. This way, the bins are cheaper and make more sense for families using them for compost. Another way to make composting more accessible is to offer a self-composting apparatus to each residence. These are relatively inexpensive and can be offered to residents so that they can do their own composting, right in their backyards!

> Reply on 06/05/2023 at 4:04pm [Comment ID: 115]
>
> Agree: 0, Disagree: 0
>
> Ongoing education is essential to reduce the amount of contamination in recycling and composting containers, especially in multi-family housing.

#061

Posted on 05/22/2023 at 4:55pm [Comment ID: 61]

Agree: 1, Disagree: 0

Using the "three bin system" is very successful! Group together compost, recycling, and garbage bins in stores/restaurants/etc. so that it is quick and easy to sort your trash.

#062

Posted on 06/04/2023 at 11:58am [Comment ID: 91]

Agree: 1, Disagree: 0

SVA is working toward a community tool share. Of course, issues arise as to insurance, management, maintenance, etc.

#063

Posted on 06/04/2023 at 11:55am [Comment ID: 88]

Agree: 1, Disagree: 0

Thumbs up!

#064

Posted on 06/04/2023 at 11:57am [Comment ID: 89]

Agree: 1, Disagree: 0

So important! Better yet, encourage individuals to supply their own take-away dishes, bowls, etc. Businesses can give a discount, wait to dish up product upon arrival. Refuse plastic utensils.

#065

Posted on 06/05/2023 at 8:22pm [Comment ID: 128]

Type: Suggestion

Agree: 0, Disagree: 0

4) can be repaired to extend the life of electronics and other goods.

#066

Posted on 06/04/2023 at 11:58am [Comment ID: 90]

Agree: 1, Disagree: 0

The two community gardens at 21 Acres have consistent waiting lists every year. More public access gardens would be wonderful, there is a need!

#067

Posted on 06/04/2023 at 12:05pm [Comment ID: 94]

Agree: 1, Disagree: 0

Check for appropriate watering schedules in public spaces. NOT in the middle of the day. Encourage public/private pollinator gardens. New programs via Pollinator Pathway NW (and the aligned Rotary program) should be broadly

promoted! Also, PLEASE share with your public works department to STOP spraying glyphosate (this has been suggested often in years past.) It's toxic and banned in many municipalities. 21 Acres can provide resources/information if needed.

#068

Posted on 06/04/2023 at 12:06pm [Comment ID: 96]

Agree: 1, Disagree: 0

21 Acres has a wonderful wetland for ideas and inspiration. Feel free to share for cthe ommunity to explore during regularly scheduled Farm Tours.

#069

Posted on 06/04/2023 at 12:05pm [Comment ID: 95]

Agree: 1, Disagree: 0

Thumbs up!

#070

Posted on 06/04/2023 at 11:59am [Comment ID: 92]

Agree: 1, Disagree: 0

Thumbs up!

#071

Posted on 05/22/2023 at 4:57pm [Comment ID: 62]

Agree: 1, Disagree: 0

"greenspaces" should not only be grass! Grass is not a pollinator and can actually reverse the effects of a greenspace because of the amount of water they need to be maintained. instead, wildflowers, clovers, or other alternatives should be widely used in green spaces to increase pollination, and to decrease water use.

> Reply on 05/22/2023 at 5:04pm [Comment ID: 64]
>
> Agree: 1, Disagree: 0
>
> On top of this, it would also be great to see a minimum requirement for pollinator plants on residences/personal property. Or even a reduction of grass surrounding new builds, to be replaced with a better option! This could make a huge difference.
>
> > Reply on 06/05/2023 at 4:29pm [Comment ID: 117]
> >
> > Agree: 0, Disagree: 0

> Adopt the goal of Homegrown national park® https://homegrownnationalpark.org/ to replace ½ of U.S. green lawns with native plantings. Publicize native plant options, such as: Audubon has a Native Plant Database to attract birds, with recommendations by zip code, and includes locations that sell native plants. https://www.audubon.org/PLANTSFORBIRDS
>
> National Wildlife Federation has a database that lists keystone plants by Ecoregion, and the number of pollen specialist bee species and caterpillar species they attract: https://www.nwf.org/garden-for-wildlife/about/native-plants/keystone-plants-by-ecoregion

#072

Posted on 05/16/2023 at 10:34am [Comment ID: 23]

Agree: 2, Disagree: 0

suggested NS1.4: Protect the Sammamish Valley from development and preserve farming in the area. My comment can be filed under resilience. The Sammamish Valley may become a necessity in providing food for our area communities in the future. This is a resilience measure.

> Reply by Cascadia Consulting after comment period closed.
>
> The Sammamish Valley is in the Agriculture Production District, which protects agriculture areas. Also see King County Farmland Preservation Program https://kingcounty.gov/depts/dnrp/wlr/sections-programs/rural-regional-services-section/agriculture-program/farmland-preservation-program.aspx
>
> Additionally, because farmland is adjacent to Woodinville and part of unincorporated King County, preservation and protection of agriculture in this area is covered in the King County Strategic Climate Action Plan.

#073

Posted on 06/04/2023 at 12:00pm [Comment ID: 93]

Agree: 1, Disagree: 0

All part of working toward LEED certification for new buildings or retrofitting old.

#074

Posted on 05/16/2023 at 10:40am [Comment ID: 24]

Agree: 1, Disagree: 0

Suggested NS2.4: Enhance native landscaping and organic gardening, removing the use of non-organic fertilizers and pesticides. Educate residents on best landscaping practices.

#075

Posted on 05/18/2023 at 5:06pm [Comment ID: 43]

Agree: 1, Disagree: 0

C.O.A.D. (Community Organizations Active in Disaster) is a good resource for this. The program relies on identifying skills and resources in each neighborhood to become self-reliant under severe circumstances. For example no power for 2 weeks in the middle of winter with no emergency vehicle access.

#076

Posted on 06/05/2023 at 11:52am [Comment ID: 109]

Type: Question

Agree: 0, Disagree: -1

What happens if the assessment comes back lower than expected or requires larger efforts such a statewide involvement? There should be something that would stop these plans from moving forward if the impact is minimal.

#077

Posted on 05/25/2023 at 12:22pm [Comment ID: 72]

Agree: 0, Disagree: -1

One area that will need to be addressed in the near future is zoning. AI driven vehicles are on the horizon, and this will tremendously impact our current zoning structures. Planning should be done to consider the impact of autonomous transportation.

#078

Posted on 05/18/2023 at 5:12pm [Comment ID: 44]

Agree: 1, Disagree: 0

Include freezing temperature planning & response. In the past 50 years, Seattle's average temperature has increased 0.2 degrees Fahrenheit. Last Christmas experienced the coldest day in 31 years.

#079

Posted on 06/04/2023 at 12:07pm [Comment ID: 97]

Agree: 1, Disagree: 0

Yes, please!

#080

Posted on 06/05/2023 at 7:50pm [Comment ID: 126]

Type: Suggestion

Agree: 0, Disagree: 0

This is especially important for elderly and vulnerable populations. It should include transportation options for those unable to get to cooling centers. Early warning systems should include options that don't rely on technology if the power goes out, and also for those who aren't very good at using technology.

#081

Posted on 05/18/2023 at 5:13pm [Comment ID: 45]

Agree: 0, Disagree: 0

Include sister cities in the US and abroad.

#082

Posted on 06/04/2023 at 12:13pm [Comment ID: 101]

Agree: 0, Disagree: 0

Great idea..would love to work with a Climate Action Manager!

#083

Posted on 06/04/2023 at 12:12pm [Comment ID: 99]

Agree: 1, Disagree: 0

Under a separate entity from 21 Acres, there is a team of lobbyists and local staff advocating on both the State and Federal level on climate smart and regenerative agriculture, clean energy, and green building issues. The current Farm Bill is a priority, but priorities are being put in place as we speak for the next session of the WA State legislature. Feel free to ask for more information.

> Reply on 06/05/2023 at 10:52am [Comment ID: 107]
>
> Agree: 0, Disagree: 0
>
> Do you have a link towards this lobbying activity, with respect to clean energy specifically?

#084

Posted on 06/05/2023 at 8:49pm [Comment ID: 129]

Type: Suggestion

Agree: 0, Disagree: 0

City employees should be required to consider climate impacts in their day-to-day decisions at work. The Climate Action Manager can provide ongoing training to do this.

#085

Posted on 06/04/2023 at 12:12pm [Comment ID: 100]

Agree: 0, Disagree: 0

Yes, please!

> Reply on 06/05/2023 at 7:54pm [Comment ID: 127]
>
> Agree: 0, Disagree: 0
>
> Definitely do this!

#086

Posted on 06/04/2023 at 12:09pm [Comment ID: 98]

Agree: 1, Disagree: 0

As always, 21 Acres is willing to be a partner in all things embracing climate solutions!

#087

Posted on 05/22/2023 at 4:59pm [Comment ID: 63]

Agree: 1, Disagree: 0

volunteer opportunities is a great way to do this! At Woodinville Highschool, many are looking for volunteer opportunities in order to fulfill the National Honors Society requirements. Providing ways to help the environment through volunteering is a great way to educate our youth (and the adults!), as well as raise awareness for the issue (and what we can do to help!)

#088

Posted on 05/15/2023 at 5:07pm [Comment ID: 6]

Agree: 0, Disagree: 0

City does not need to form misinformation campaigns. Just use your own facts to make solid, winning cases.

> Reply on 06/05/2023 at 10:20am [Comment ID: 106]
>
> Type: Suggestion
>
> Agree: 1, Disagree: 0

> Agreed, this is a climate action plan. The city should limit its scope to that and not interfere with free speech. Fight bad information with good information.

#089

Posted on 06/05/2023 at 8:17am [Comment ID: 104]

Agree: 1, Disagree: -1

Re: A Climate Action Manager for Woodinville. I think you should become familiar with the scale of the emissions issue, and Woodinville's ability to impact the issue. Let's look at and absorb some numbers. 37860000000. 12470000000. 4750000000. 84200000. 223400. Respectively, these are annual CO2 emissions from, The World, China, USA, Washington State, and Woodinville. It is readily apparent that even if Woodinville eliminated its CO2 emissions, it wouldn't impact any of these larger levels, essentially at all. It really isn't within Woodinville's ability to change this fact, and a Climate Action Manager for Woodinville isn't a sensible expenditure. If dollars are to be spent, they need to go into carbon free energy production or distribution, that's where the impact is. And by the way, we really should assess whether solar dollars are best spent west of the Cascades, or east … one can readily look up solar irradiation, annual, and understand that there is around 30 - 40% more so,at available for one's dollars in Eastern Washington, compared to here.

> Reply on 06/05/2023 at 8:23am [Comment ID: 105]
>
> Agree: 0, Disagree: 0
>
> … 40% more solar …

#090

Posted on 05/18/2023 at 5:33pm [Comment ID: 48]

Agree: 0, Disagree: 0

City development standards have assumed downtown highrise residents commute to work, allowing retail parking during business hours. Shouldn't work from home be encouraged, therefore requiring additional transient parking/transit stops/walking pathways?

#091

Posted on 05/16/2023 at 10:44am [Comment ID: 25]

Agree: 1, Disagree: 0

strike "or more fuel efficient model". Electric or hybrid is good enough. plenty of options and more on their way all the time.

#092

Posted on 05/15/2023 at 5:11pm [Comment ID: 8]

Agree: 0, Disagree: 0

Recyclables as a term includes far more than King County is actually recycling. So the terminology isn't precise in this area. Commingled plastics may be collected as recyclable, but I don't think we are actually doing this. A look at the King County 2019 Comprehensive Waste Plan reveals as much … commingled plastics will be dealt with in concert with municipalities … no leader on this.

#093

Posted on 06/05/2023 at 10:40pm [Comment ID: 131]

Type: Suggestion

Agree: 0, Disagree: 0

Add: Plant a fruit and vegetable garden; donate surplus produce to food banks.

#094

Posted on 05/15/2023 at 5:08pm [Comment ID: 7]

Agree: 1, Disagree: 0

Home thermostat adjustments per the season.

> Reply on 06/05/2023 at 8:52pm [Comment ID: 130]
>
> Agree: 0, Disagree: 0
>
> Also programmable thermostats to automatically lower the temperature at night or when no one is home during the heating season.

#095

Posted on 05/15/2023 at 5:14pm [Comment ID: 9]

Agree: 2, Disagree: 0

Packaging reductions are a must. My opinion, but specialty food deliveries in Woodinville use a ton of packaging especially in summer it seems, and we just seem like an area that consumes a lot of product this way.

#096

Posted on 05/18/2023 at 6:13am [Comment ID: 30]

Agree: 2, Disagree: 0

We're currently not part of any expansion of public transit and our existing transit was made less efficient with terminating buses at UW to transfer to light rail,

change to termination of the 255 to Evergreen. Metro also frequently cancels runs due to lack of workers. No light rail through Woodinville. Will this be addressed?

#097

Posted on 05/18/2023 at 6:18am [Comment ID: 32]

Agree: 0, Disagree: 0

What about geothermal installations?

#098

Posted on 05/18/2023 at 6:14am [Comment ID: 31]

Agree: 2, Disagree: 0

We will need better accessibility to service professionals. Many retiring and not enough new replacing them. Vocational programs to bring new professionals to do this work? Incentive programs to help residents pay for this work?

#099

Posted on 05/16/2023 at 10:49am [Comment ID: 27]

Agree: 3, Disagree: 0

Every 4 years? Shouldn't this be yearly if you're going to keep on track? 2030 is only 7 years away, which means you only conduct GHG inventories once between now and then.

#100

Posted on 05/16/2023 at 10:46am [Comment ID: 26]

Agree: 0, Disagree: 0

border

> Reply on 05/17/2023 at 9:25am [Comment ID: 28]
>
> Agree: 0, Disagree: 0
>
> broader

#101

Posted on 05/18/2023 at 5:24pm [Comment ID: 46]

Agree: 0, Disagree: 0

The increased costs and timeframes for creating a carbon-neutral built environment means ALL residents will no longer enjoy one of the lowest municipal tax rates in the region.

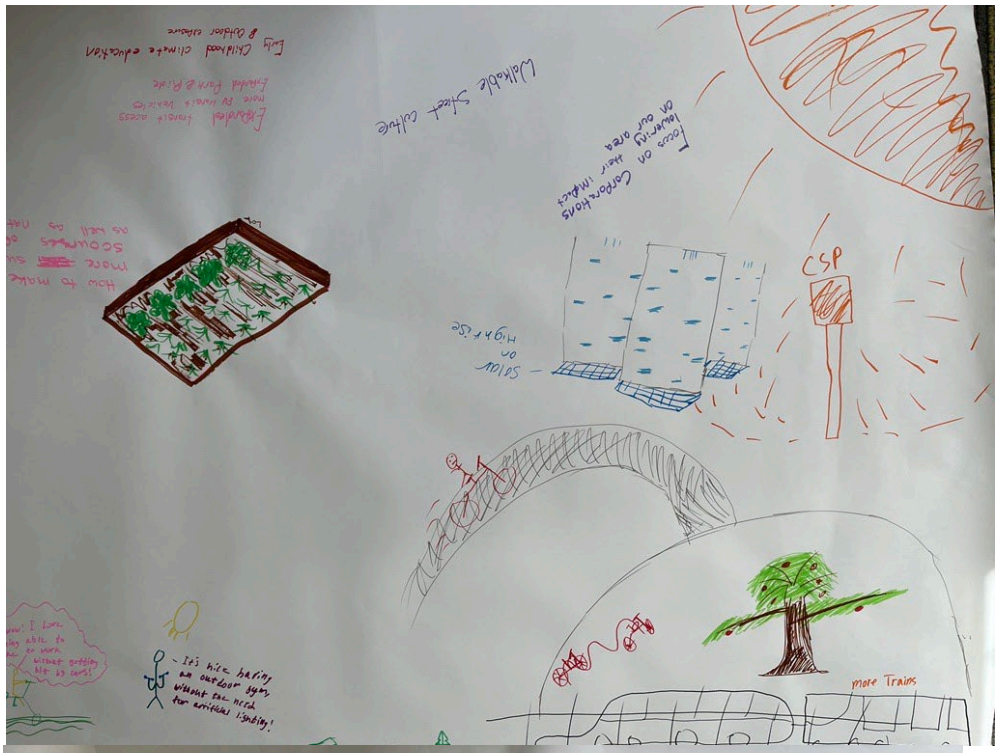
#102

Posted on 05/18/2023 at 5:27pm [Comment ID: 47]

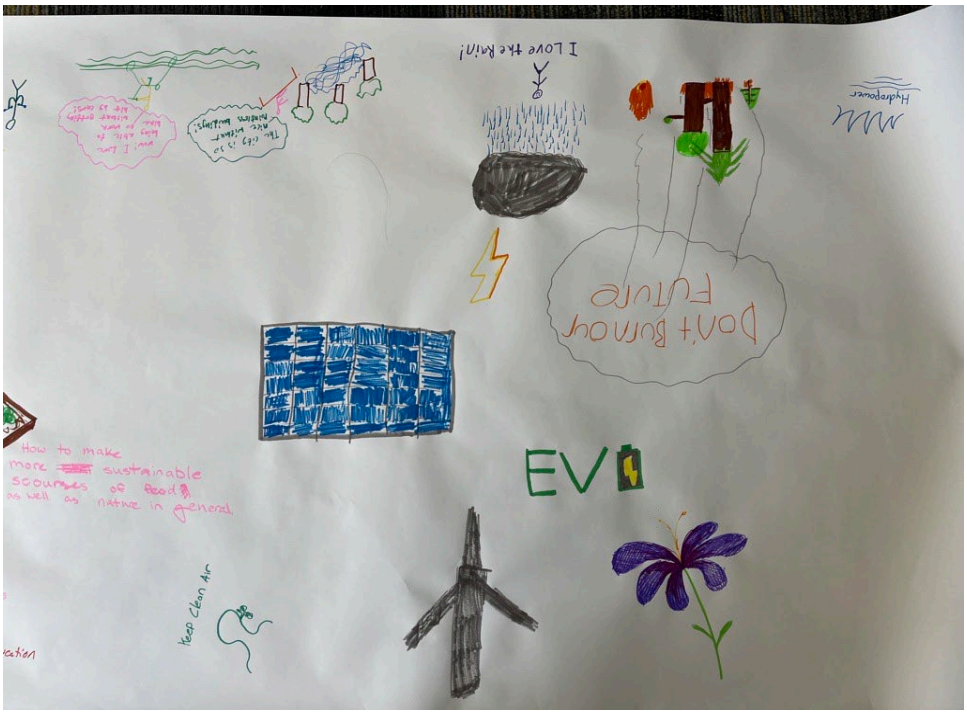
Agree: 0, Disagree: 0

Add ESL

Attachment C: YOUTH ENGAGEMENT POSTERS


Walkable Street Culture
CSP
more Trains


EV
Don't Burn our FUTURE
Hydropower
I Love the Rain!


I Love the Rain!
Don't Burn our Future
EV
How to make more sustainable sources of food as well as nature in general.
Keep Clean Air

APPENDIX D. COST ANALYSIS SUMMARY

CLIMATE ACTION COST-BENEFIT ANALYSIS

For Woodinville Climate Action Plan | Prepared by Cascadia Consulting Group

Executive Summary

This document summarizes findings from a quantitative assessment of select proposed Woodinville Climate Action Plan (CAP) actions. The quantitative assessment provides high-level estimates of the **costs** and **emission reductions** associated with key actions to outline a pathway for meeting the City's emission reduction goals. Key findings of the analyses are summarized below.

- Modeling suggests that implementation of current federal/state/regional policy along proposed CAP measures could result in the following emission reductions as compared to 2019 levels:

Scenario	% Change From 2019 Baseline		
	2030	**2040**	**2050**
Business-As-Usual (no action)	+31%	+55%	+78%
Adjusted Business-As-Usual (federal/state/regional policy)	-48%	-58%	-60%
Adjusted Business-As-Usual *and* Modeled Local Action	-52%	-60%	-63%
King County Target	-50%	-75%	-95%

- The highest and lowest GHG-reducing actions are presented below, along with their estimated, approximate cumulative reductions (in $MTCO_2e$):

Highest GHG Reductions	Lowest GHG Reductions	Not Analyzed (Minimal GHG Benefit)
• Increase recycling & composting (74,000) • Public EV Infrastructure Plan (29,000)	• Community solar projects (152) • Expand green space (50)	• Municipal carbon neutrality • Sustainable purchasing policy

• Residential walkability & cycling enhancement (29,000)	• Enhance Woodinville's woodland character (60)	for municipal operations • Climate risk evaluation

- Modeling suggests that the total net present value (NPV) City cost over the next ten years (through 2033) of implementing proposed actions will be **$25 million**—equivalent to around **$2.9 million per year**. The highest and lowest City cost actions are summarized below, along with their approximate estimated NPV City costs:

Lowest City Cost Actions	Highest City Cost Actions
• Community solar projects ($100,000) • Sustainable purchasing policy ($204,000) • Public EV Infrastructure Plan ($331,000) • Climate risk evaluation ($405,000)	• Increase recycling & composting ($9 million) • Municipal carbon neutrality ($7 million) • Expand green space ($5 million)

- The estimated NPV cost to the community over the next ten years through 2033 of implementing all the actions in the shortlist is a **net savings of $15 million**—equivalent to around **$1.8 million in savings per year**. Many of these savings to the community are in the form of fuel cost savings. The highest- and lowest community cost actions are summarized below, along with their approximate estimated community NPV costs (negative values represent net cost savings):

Lowest Community Cost Actions	Highest Community Cost Actions
• Residential walkability and cycling enhancement (-$12 million) • Public EV Infrastructure Plan (-$2 million)	• Community solar projects ($108,000)

- Given the anticipated GHG reductions and community/City costs, the most and least cost-effective actions are summarized below (in $/MTCO2e reduced):

Most Cost Effective	Least Cost Effective
• Residential walkability and cycling enhancement (-$365) • Public EV Infrastructure Plan (-$75) • Climate awareness and education ($-15) • Increase recycling & composting ($117)	• Expand green space ($92,000) • Enhance Woodinville's woodland character ($35,000) • Community solar projects ($1,375)

- Action implementation will require staff time, averaging approximately **0.43 FTE per year through 2033.** These FTE may be absorbed into existing staff duties or new staff may be hired. We anticipate the action requiring the most City staff FTE will be supporting implementation of the Community Urban Forestry Plan (1.25 FTE).

COST-BENEFIT ANALYSIS LIMITATIONS & CONSIDERATIONS

This cost-benefit analysis is intended to provide a high-level estimate of potential costs and monetary benefits associated with select local climate actions over the anticipated action implementation timeframe. The analysis sought to include all costs and benefits for which quantification methodologies and underlying assumptions were readily available and defensible. Specifically, the analysis generally INCLUDES the following costs and benefits:

- Staff, personnel, and professional services costs
- Infrastructure and equipment costs
- Fuel costs and savings, including those associated with switching from fossil fuel (natural gas, gasoline, diesel) to electric energy sources
- Maintenance cost savings (e.g., for electric vehicles)

The analysis is not comprehensive—it does not incorporate and monetize all social costs and actions associated with action implementation. For example, the analysis DOES NOT INCLUDE the following benefits:

- Potential grants and other external funding opportunities
- Public health benefits associated with air quality and lifestyle improvements

The analysis is not meant to be a substitute for more detailed budgeting processes; we recommend further financial analysis is conducted prior to action implementation and decision-making.

Background

This document summarizes findings from a quantitative assessment of proposed actions for inclusion in Woodinville's Climate Action Plan. The quantitative assessment provides high-level estimates of the **costs** and **emission reductions** associated with each action (detailed below), to provide a defensible plan for meeting the City's emission reduction goals.

Some actions in the CAP are directly **quantifiable**, while others are not. Some actions may not be readily quantifiable, may result in inconsequential GHG reductions, or may have indirect benefits that do not result in emissions reductions as calculated in the City's inventory. These actions, often defined as "**supportive**," may be critical for implementation success even if they are not quantified. For example, actions to enhance energy battery storage are crucial for large-scale implementation of renewable energy and electrification, but do not themselves reduce GHG emissions. Another example is actions addressing City operations GHG emissions, which typically comprise less than 1% of total communitywide GHG emissions.

Some proposed CAP actions are focused on improving community resiliency to climate change impacts rather than reducing GHG emissions. While the resilience benefits of these **"climate adaptation" actions** were not quantified, taking action to build climate resiliency and preparedness are nonetheless critical for addressing climate change in the Woodinville community and should be considered as an important part of Woodinville's climate action strategy.

Action impact was explicitly modelled based on **available information** and **case studies**, including data on historic and projected energy usage, population and development trends, and technology and policy impact. The consultant drew from literature and expert opinions, as well as from available City data and staff input.

Actions were analyzed based on predetermined implementation **timeframes**, which all were within an overall anticipated project timeline of 10 years (2023 – 2033).

Cost Estimation

Action implementation costs were estimated for both costs to the City and community:

- **Community costs** estimate how much it will cost an average resident, business, or developer to implement the measure as compared to a business-as-usual scenario.

- **City costs** estimate costs related to City staff time, consultant services, and procurement.

Unlike the impact analysis, the consultant estimated costs for *all* identified priority CAP actions. The estimated cost was based on consultant experience, available literature, consultation with peer cities, and City staff input, and included the following cost elements:

- **Initial start-up costs**, in the form of consultant and capital expenses.
- **Ongoing costs** over the action implementation timeframe, including continued labor expenses, maintenance, and monitoring/evaluation of resource needs.

City staff time required for action implementation was also included, and does not take into account any current City staff FTE that could be reallocated to support action implementation.

To the extent possible, the consultant provided citations for consulted literature and case studies, although information on climate action costs is very limited at this time.

Where known, the analysis includes consideration of partnerships. However, the analysis does not include potential grants and other funding sources, so estimates here may be conservative representations of the City's final cost.

Emission Reduction Estimation

The consultant explicitly modelled emissions reductions associated with proposed CAP actions. Modeling built from the emissions forecast and considered interacting actions to avoid double counting, such as impacts of EV vehicle use on community electricity consumption. All assumptions are provided for transparency and City/stakeholder review and outcomes are visualized in both table and graphical format.

ACTION-SPECIFIC FINDINGS SUMMARY

Results from the cost and impact analysis are summarized below. Column headings for the summary table are defined as follows:

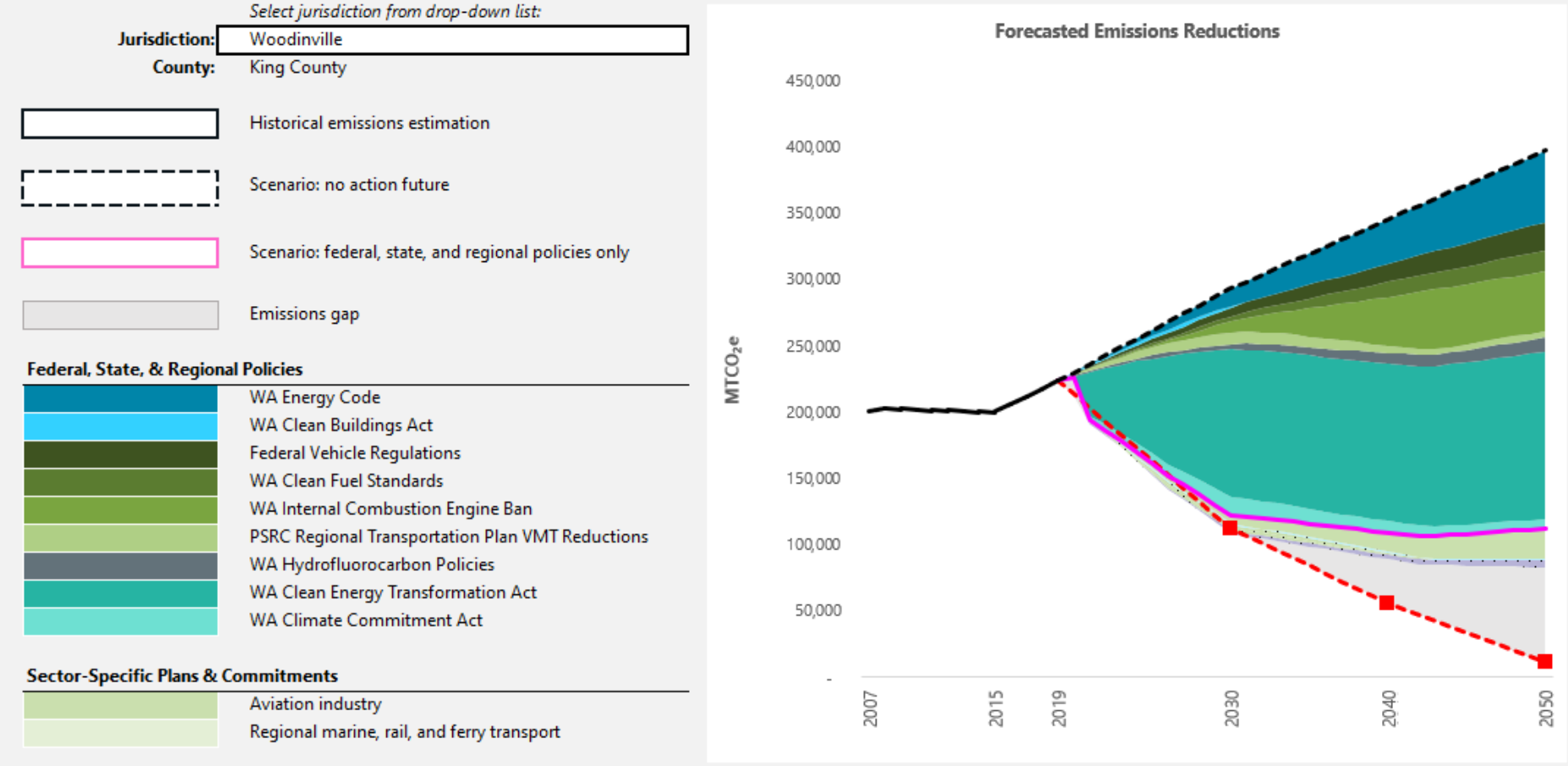
- **Net Present Value (NPV) cost to the City and community:** The anticipated net cost of the action for the City government and Woodinville community, considering current and future costs and cost savings benefits (through 2033). Negative NPV values represent cost savings.

- **Cumulative MTCO2e reduced:** Estimated cumulative GHG emission reduction benefits resulting from action implementation.
- **$/MTCO2e:** Estimated cost effectiveness of the action (cost per unit GHG emission reduction achieved)—taking into account City costs, community costs, and combined (City + community) costs. Negative values represent net cost savings per unit GHG emission reduction.
- **Cost of inaction:** The global societal climate change-associated costs that would be incurred should the action not be implemented and associated GHG emission reductions not realized.
- **Net public benefit:** The net benefit to society of implementing the action, given the estimated costs, cost savings, and avoided costs of inaction. Negative values indicate a net negative public benefit (i.e., cost) to society.

The table below presents actions-specific cost and GHG emission reduction estimations for select CAP actions.

Focus Area	ID	Action	NPV Costs to City	NPV Costs to Community	Cumulative MTCO2e Reduced	$/MTCO2e (City)	$/MTCO2e (Community)	$/MTCO2e (City + Community)	Cost of Inaction (PV)	Net Public Benefit (NPV)
BE	BE1.5	Municipal carbon neutrality	$6,759,100							-$6,759,100
BE	BE3.2	Community solar projects	$100,240	$108,769	152	$659	$715	$1,374	$13,051	-$209,009
CM	CM1.1 & 1.2	Increase recycling and composting	$8,759,786		74,645	$117		$117	$1,216,665	-$7,543,120
CM	CM2.1	Implement a sustainable purchasing policy for municipal operations	$204,593							-$204,593
CR	CR1.1	Climate risk evaluation	$405,009		-					-$405,009
CR	CR2.1	Climate education and awareness	$294,189	-$676,979	26,341	$11	-$26	-$15	$827,935	$1,210,725
NS	NS1.1	Enhance Woodinville's woodland character	$1,853,259	-$115,311	49	$37,630	-$2,341	$35,289	$636	-$1,737,313
NS	NS1.2	Expand green space	$5,505,454		60	$91,750		$91,750	$966	-$5,504,488
TR	TR1.1	Public EV Infrastructure Plan	$331,161	-$2,443,618	28,287			-$75	$1,606,105	$3,718,561
TR	TR2.4	Residential walkability and cycling enhancement	$1,137,199	-$12,197,517	30,329			-$365	$1,729,652	$12,789,970

The figure below shows projected emissions reductions in a "wedge" graphic. The dotted areas represent emission reductions from local action and the red dotted line at the bottom represents King County targets.



The figure below shows projected Woodinville GHG emissions under the action scenario depicted in the wedge graphic above. Primary remaining sources of emissions include natural gas and aviation-related GHG emissions.