Burien Climate Action Plan

Adopted November 15, 2021

burienwa.gov/climate

Burien

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1 This Climate Action Plan was developed using a template provided by ICLEI – Local Governments for Sustainability, USA. This template and its appendices were published in April 2018.

Figures and Acronyms

Acronym	Definition
CAG	Community Advisory Group
CAP	Climate Action Plan
EV	Electric Vehicle
GHG	Greenhouse Gas
K4C	King County-Cities Climate Collaboration
LEED	Leadership in Energy and Environmental Design
PaRCS	Parks, Recreation, and Cultural Services
$MTCO_2e$	Metric tons of carbon dioxide equivalent
CO_2	Carbon dioxide
CH_4	Methane

Executive Summary

The 2021 Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), written by a panel of thousands of climate experts and scientists, states that anthropogenic or **"human-caused" greenhouse gas (GHG) emissions have unequivocally caused rapid and widespread climate change**.

Burien, along with many other communities in the Puget Sound and the Pacific Northwest, **has already experienced a multitude of climate change impacts**, including more frequent wildfire smoke days, heat waves, extreme precipitation, sea level rise, and flooding events. For this reason, the City of Burien is joining an increasing number of local governments committed to addressing climate change at the local level.

Sustainability, equity, and stewardship are core values for the City of Burien. The City recognizes that our actions need to act boldly and ambitiously to ensure that Burien is a sustainable, affordable, close-knit, and diverse community for all its residents.

To support this vision, the Burien Climate Action Plan (CAP) aims to **reduce its GHG emissions 50% by 2030 and achieve carbon neutrality by 2050** while supporting the community's capacity to adapt to unavoidable future climate impacts. To get there, this CAP takes advantage of commonsense approaches and cutting-edge policies that our local government is uniquely positioned to implement – actions that can reduce energy use and waste, create local jobs, improve air quality, preserve our local landscape and history, reduce risk to people and property, and in many other ways benefit Burien for years to come.

INTEGRATING SOCIAL EQUITY

Social equity is essential part of effective and long-lasting sustainability and resilience. The Burien CAP centered social equity in its approach and along each step of the planning process.

- All workshop materials, surveys, and outreach materials were translated into Spanish and Vietnamese.
- Community Advisory Group members were compensated for their time and expertise.
- Equity was a key criterion to evaluate and prioritize actions.

Aerial view of Burien. Credit: City of Burien

Robust **stakeholder, public, and City staff engagement** informed the CAP's strategy and action development. As part of this process, the City:

- Convened a **Community Advisory Group (CAG)** that provided strategic advice on community engagement and strategy development.
- Held **three (3) community workshops** open to the CAG and the public.
- Held **three (3) City staff working sessions** to refine strategies and develop an implementation plan.
- Conducted a **public survey**, which received 287 responses, to get broad input on CAP strategies.
- Solicited input from **City Council and key advisory boards and commissions**.
- Conducted a **broad communication and outreach campaign** that included social media communication, website updates, and in-person outreach at the Burien Farmers Market.

Focus Area	Focus Area Goals
 Transportation & Land Use	▶ **Reduce transportation emissions** and increase trips made by walking, biking, and transit. ▶ **Support neighborhood nodes** that provide easy access to transit, amenities, jobs, and housing. Prevent displacement and prioritize communities that are transit-dependent and disproportionately impacted by climate change and other stressors.
 Buildings & Energy	▶ **Support efficient building standards**. ▶ **Expand renewable energy production and use**.
 Materials & Consumption	▶ **Reduce community waste generation** and move towards zero waste of resources.
 Water & Natural Systems	▶ **Preserve the health of native habitats**, improve ecosystem health, and enhance natural drainage.
 Community Resilience & Well-being	▶ **Strengthen the capacity** to support climate action. ▶ **Enhance the resilience of populations** that will be disproportionately impacted by climate change.

To achieve the goals and vision of the Burien CAP, the City will need **collective buy-in and collaboration from Burien's residents, businesses, and City departments and leaders**. Key strategic implementation considerations include:

- **Timing and phasing**: The plan is recommended to be implemented over the course of 10 years. Implementation is dependent on council direction and budget appropriations.
- **Lead City department**: The implementation of each action and strategy has been assigned to a City department to lead.
- **Key stakeholders**: Coordination and collaboration with key stakeholders and partners will be essential for effective and successful implementation.
- **Potential funding sources**: Many actions may require new and innovative funding. This plan identifies pathways to fund implementation of CAP strategies.

A Letter from the City Manager

With support from the community, the City Council, and staff, the City of Burien has assembled an ambitious and proactive community level climate action plan. Climate action cannot be delayed, as increasingly severe impacts from climate change are happening now. The science supports the need to take bold action to protect our community's people, resources, and economy from climate-related disasters.

Credit: City of Burien

In recent years, the Pacific Northwest and Burien community have experienced first-hand the consequences of climate change. We have seen increasing numbers of heat waves, more severe and frequent flooding, and harmful air quality caused by more prevalent wildfires in the area.

The Burien Climate Action Plan is a vital roadmap for the future development of the city, protecting Burien's natural environment, as well as creating a healthy community for all. Our plan will guide practices regarding equitable transportation, land use, building codes, clean energy, diversion of waste, and the preservation of our water and natural systems.

At the core of this plan is our commitment to equity. The climate crisis is not only an environmental emergency, but threatens our health, economy, and community resilience. Black, Indigenous, and People of Color (BIPOC) and low-income residents are likely to be hit first and worst by the climate crisis. The Burien Climate Action Plan integrates equity into various aspects of the plan to meet the needs of our community.

In order to achieve the goals in the Burien Climate Action Plan, it will take collaboration among our community stakeholders and residents. It is with confidence that we begin building the resiliency of our community for what the future has in store for us.

City Manager Brian Wilson

Introduction

Why a Climate Action Plan?

Overwhelming evidence from the past decade demonstrates that climate change is the greatest environmental challenge of the 21st century. It poses a serious threat not just to natural resources, but also to our jobs and our health. While climate change is a significant threat, our collective understanding of the changing climate presents opportunities for creating a healthier, safer, and more equitable zero-carbon world.

Climate change is caused by the accumulation of greenhouse gas (GHG) emissions such as carbon dioxide (CO_2) and methane (CH_4) in the atmosphere, primarily resulting from burning fossil fuels and land use changes. In 2021, the Intergovernmental Panel on Climate Change (IPCC) released the first part of the Sixth Assessment Report, *Climate Change 2021: The Physical Science Basis.*[2] The report, written by a panel of thousands of climate experts and scientists representing over 100 countries, **states unambiguously that anthropogenic or "man-made" GHG emissions are causing global climate change.**

VISION FOR THE FUTURE

Developed by the CAP Community Advisory Group

Transform Burien into a climate-smart and climate-resilient city that preserves its cultural diversity, its close-knit community, and its green spaces while increasing affordable housing options, expanding accessible public transportation, and expanding social services to ensure environmental justice and equity as we transition to a carbon-free world.

Carbon emissions from human activities have continued to rise in recent decades. About half of all carbon dioxide emitted between 1750 and 2010 occurred in the last 40 years largely due to the energy industry and transportation sectors.

Scientists expect that with the current trends in fossil fuel use, population growth, and urbanization, we may see more intense heat waves, droughts, rainstorms, floods, wildfires, and landslides in the future. **The impacts of climate change could damage our economy, stress our natural resources, and worsen inequities facing many communities in the United States.** Action is required at all levels, and local governments have a unique role to play in building low-carbon communities.

[2] IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

For this reason, the City of Burien is joining an increasing number of local governments committed to addressing climate change at the local level. **The City recognizes the risk that climate change poses to the community** and is acting now to reduce the GHG emissions, or "carbon footprint", of both its government operations and the community at-large through the innovative programs laid out in this Climate Action Plan (CAP). Furthermore, the City recognizes the need to address existing climate risks such as flooding and heat waves and adapt its systems and infrastructure to new conditions. Ultimately, local action is needed to reduce Burien's contribution toward the climate crisis and adapt to its current and future effects.

Burien City Hall/Burien Library civic building. Credit: City of Burien

This community-level CAP is the first of its kind for the City of Burien. The CAP is Burien's roadmap to mitigating and adapting to climate change impacts. It takes advantage of common-sense approaches and cutting-edge policies that our local government is uniquely positioned to implement actions that can reduce energy use and waste, create local jobs, improve air quality, preserve our local landscape and history, reduce risk to people and property, and in many other ways benefit Burien for years to come.

Purpose and Scope of Plan

Purpose

With more than 80% of Americans living in urban areas, cities play a powerful role in addressing climate change. The design of cities—how we use our land, design our buildings, get around—greatly impacts the amount of energy we use and the volume of GHG emissions we produce.

The Burien CAP is a framework for the development and implementation of actions that reduce Burien's GHG emissions and increase community resilience to future climate impacts. The CAP provides guiding objectives and strategies to realize Burien's GHG reduction goals—**a 50% reduction in GHG emissions by 2030 and achieving carbon neutrality by 2050.** In addition to addressing mitigation concerns, the Burien CAP considers the vulnerability of Burien to hazards that are and will continue to be exacerbated by climate change. Given the critical impacts of climate change locally and globally, the time to act to reduce GHG and our carbon footprint is now.

Climate change protest sign. Photo credit: Markus Spiske on Unsplash

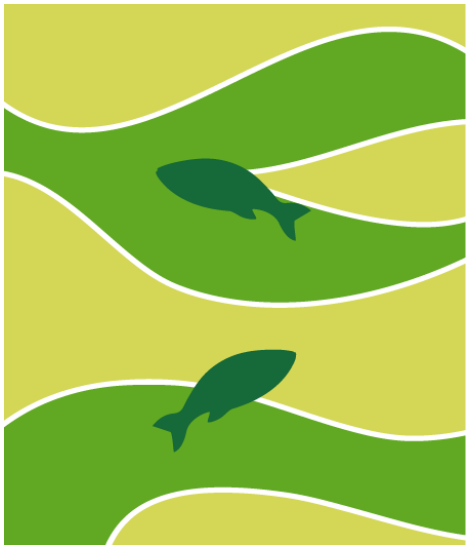
Scope

The Burien CAP covers strategies and actions for reducing GHG emissions resulting from local government and community-wide activities within the city. It addresses the major sources of emissions in Burien and presents strategies and actions in five focus areas that both the City government and community can implement together to achieve GHG reductions. The five focus areas are as follows:

Transportation and Land Use

Buildings and Energy

Materials and Consumption



Water and Natural Systems

Community Resilience and Well-being

Equity and Climate Action

Equity is the full and equal access to opportunities, power, and resources so that all people achieve their full potential and thrive. Equity also means addressing historical harms and barriers that have prevented communities from achieving their full potential.

Climate equity ensures the just distribution of the benefits of climate protection efforts and alleviates unequal burdens created by climate change. This requires intentional policies and projects that simultaneously address the effects of and the systems that perpetuate both climate change and inequity. Government action alone is not enough to address climate change; everyone must be a part of the solution. Currently, however, not everyone has equitable opportunities to participate and benefit.

Throughout this CAP, we will use the term frontline communities. **Frontline communities** include Black, Indigenous, and People of Color (BIPOC) communities, immigrants and refugees, people living with low incomes, people living unhoused, women and gender non-conforming people, LGTBQIA+, outdoor workers, people with limited English skills, the very young, and older residents.[3] **Frontline communities are those that are disproportionately impacted by climate change** due to existing and historic racial, social, environmental, and economic inequities, and who have limited resources and/or capacity to adapt.

Frontline communities, specifically communities of color and low-income populations, **have historically been under-served by programs and investments and under-represented in decision making on climate policy**. Lack of low-carbon, safe transportation options, inefficient housing, and the inability to afford healthy food are examples of disparities experienced by these communities that result in fewer benefits from climate action opportunities. These inequities primarily result from ongoing institutional racial bias and historical discriminatory practices that have resulted in the inequitable distribution of resources and access to opportunities.

Two youth participants in the first Green Burien Day event at the Burien Community Center in 2019. This location has evolved into the Green Burien teaching space. Credit: City of Burien

Youth intern with Partner in Employment (PIE) works in Hilltop Park in 2021. PIE has a green jobs training program funded by the Port of Seattle. PIE youth interns perform quarterly work in various parks in Burien. Credit: City of Burien

[3] Stroble, J., S. Rahman (eds.), and the Climate Equity Community Task Force. 2020. *Section II: Sustainable & Resilient Frontline Communities. In: King County 2020 Strategic Climate Action Plan.* [King County Climate Action Team (eds.)]. King County, Washington.

Communities in different parts of Washington, and particularly in different parts of King County, experience environmental risks and related health effects in substantially different ways. People's income, where they live, their race, and their language ability may put them at a higher risk for exposure to environmental pollution, leading to harmful health effects.[4] In 2018, the Washington State Department of Health developed the Washington Environmental Health Disparities Map.[5] The interactive mapping tool compares communities across Washington for environmental health disparities. Environmental health disparities are measured by:

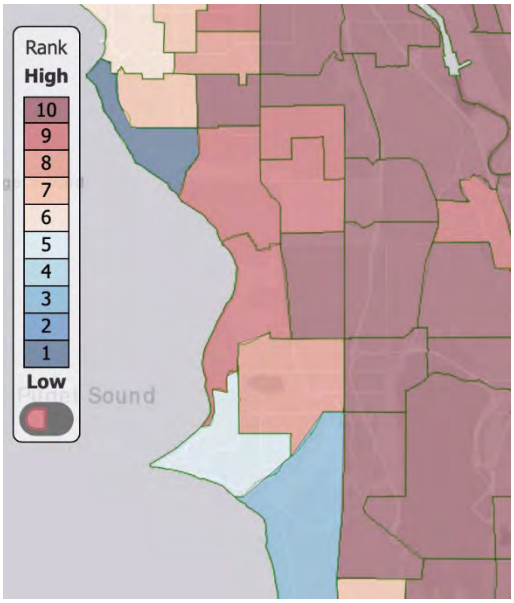


Figure a: Washington State Environmental Health Disparities Map for Burien shows that many of Burien's neighborhoods experience higher environmental risks and related health effects.

- **The cumulation of environmental exposures** such as diesel emissions, toxic releases from facilities, and populations near heavy traffic roadways.
- **Environmental effects** including lead risk from housing, proximity to hazardous waste treatment, storage and disposal facilities, and wastewater discharge.
- **Socioeconomic factors** ranging from limited English proficiency, education, race and ethnicity, unaffordable housing, and unemployment.
- **Sensitive populations** including death from cardiovascular disease and low birth weight. Individuals with pre-existing heart disease are at a higher risk of mortality when exposed to environmental stressors. Children who had a low birth rate are at risk for developing other health morbidities later in life that can be worsened by environmental stressors.

The darker red colors indicate more pronounced health disparities. Based on the most recent data, neighborhoods in Burien that may experience disproportionate impacts from climate change because of their increased risk for other health and climate exposures include Manhattan, Five Corners, Sunnydale, Highline, Beverly Park, and Boulevard Park.

Climate change is likely to amplify the impacts of these existing inequities and frontline communities will disproportionately bear the burdens of climate change effects. In addition, the many economic and health benefits of carbon reduction investments are not shared equitably across the city, especially among frontline communities.

[4] University of Washington Department of Environmental & Occupational Health Sciences. Washington Environmental Health Disparities Map: technical report. Seattle; 2019.

[5] https://www.doh.wa.gov/DataandStatisticalReports/WashingtonTrackingNetworkWTN/InformationbyLocation/WashingtonEnvironmentalHealthDisparitiesMap

The Burien community explicitly expressed the need for the CAP to integrate climate equity. Climate equity shows up in the following ways:

- The CAP was developed with a Community Advisory Group (CAG) made up of a diverse group of stakeholders from business representatives, local environmental groups, youth, and other Burien residents.
- Climate equity is included in the overall CAP vision and objectives.
- Strategies in this plan were evaluated on whether they help to uplift climate equity and reduce disparities. Some actions were called out explicitly in the strategies.

Plan Development Process

The CAP is a product of a yearlong public and stakeholder engagement process that brought internal City staff, community members, and external stakeholders together to advise and provide input on CAP priorities. The objective of the planning process was to develop an achievable, realistic, and technically defensible CAP that resonated with the Burien community and met strong GHG reduction goals.

The planning process included the following key phases:

Phase 1: Plan and Analyze

- Conduct a baseline GHG emissions inventory and forecast for activity in 2019.
- Set emissions reduction targets for the forecasted year (2050).

Phase 2: Engage and Develop

- Develop and implement a community engagement plan that engages the Burien community, reflects the community's priorities and concerns, and brings together City and community goals to inform the development of the CAP.
- Assemble the CAG, composed of youth, environmental groups, residents, and business representatives, to guide the development of the CAP.
- Identify top strategies and actions to meet reduction targets.

Phase 3: Refine and Finalize

- Solicit public feedback on strategies and actions for local climate action.
- Develop an implementation timeline for the final actions.
- Develop and adopt the Burien CAP.

Community Engagement

Community engagement and feedback were essential to the development of the targeted, accessible, and implementable Burien CAP. In this spirit, the City led an extensive community engagement process to hear from as many residents and stakeholders as possible.

Community Workshops

The City facilitated three workshops with the CAG and other Burien residents. All workshop materials were translated into English, Spanish, and Vietnamese, and attended by Spanish and Vietnamese interpreters. The workshop objectives were to:

- Identify the vision and goals for the CAP.
- Gather public input to develop and refine CAP draft strategies and actions.
- Gather feedback on key implementation considerations for CAP actions.

City Staff Working Sessions

The City hosted three working sessions with the internal CAP team. The team is comprised of staff from several different departments, representing a diverse range of city perspectives. The working session objectives were to:

- Refine the focus area goals of the CAP by applying City staff knowledge of Burien on factors driving emissions and understand key facilities, communities, and resources.
- Identify strategies and actions to achieve the desired focus area goals.

Community Advisory Group

The City worked with a group of 15 community members that provided strategic advice on community engagement and helped foster and build strong relationships with the broader Burien community around the CAP. Members of the group served as ambassadors to the CAP and supported distribution of communication materials about ways to get involved. Specifically, this group:

- Defined the vision and priorities for the Burien Climate Action Plan.
- Provided strategic input on draft strategies and actions.
- Provided strategic input on the implementation of the Climate Action Plan strategies and actions.

Burien CAP Survey

The City administered an online community-wide survey soliciting feedback on proposed strategies and actions in the CAP. The survey was open for 30 days and was released on the Burien CAP web page and promoted through the City's newsletters and social media channels. The CAG also promoted the survey with their organizations and connections in Burien. Flyers with QR codes linking to the survey were distributed at community events and displayed at businesses around Burien.

To increase accessibility and garner input from traditionally underrepresented communities, the survey was translated into the two most common non-English languages spoken in Burien, Spanish and Vietnamese.

Boards, Commissions, and Elected Officials

City staff solicited input from all City Advisory Boards and Commissions throughout phase 2 of the planning process. Advisory Boards and Commissions are comprised of community volunteers selected by the Burien City Council to advise on decision-making and policies.

Throughout the planning process, City staff also reported back to City Council to update them on key takeaways from community engagement, focus areas and related goals and strategies, and potential actions for meeting GHG reduction goals.

Communication

The City communicated with community members through a variety of channels during the CAP planning process, including:

- City of Burien website
- Social media
- Community organizations
- Burien Farmers Market
- Fact sheets on the CAP
- Translated documents and information
- Answering questions over email, phone calls, and virtual meetings.

What did we hear?

We heard from a diverse group of stakeholders in Burien about what a sustainable and climate-resilient community means to them. Some key takeaways from the public engagement included:

- Increased education and awareness around climate change impacts is one of the first steps we should take in Burien.
- Climate change impacts are already being felt in the community, especially by frontline communities.
- Burien should be a leader in this space and inspire other communities of a similar size to take action.
- Community members are passionate about taking climate action.

Read more about CAP community engagement in Appendix A on the Burien CAP website.

Community Engagement Highlights

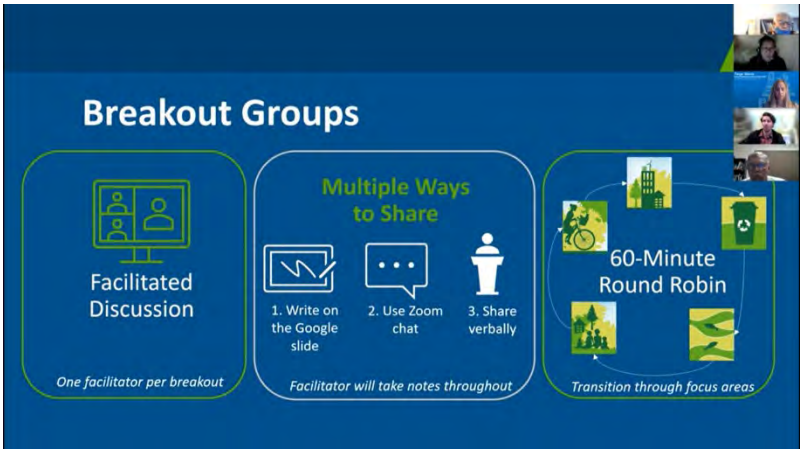
15 CAG Members

105 workshop attendees

287 survey responses

228 interactions at the Burien Farmers Market

9 presentations delivered to City Advisory Boards, Commissions, and City Council



Slide from the third virtual community workshop on September 23, 2021.

Screenshot from the first virtual community workshop held on April 29, 2021.

City staff at the Burien Farmers Market. Credit: City of Burien.

COVID-19 and Climate Change

Between 2020 and 2021, the global community faced significant threats to public health from the spread of the COVID-19 virus. The COVID-19 pandemic has caused an unimaginable death toll, affected most aspects of people's daily lives, and has had long-term economic impacts, both globally and locally. While recovery is underway, there have been spikes in infection rates that threatens more progress. **It is clear that we may never return to our "normal" lives but instead must begin to adjust to a "new normal"**. There are several shared challenges between the COVID-19 and climate change crises.

This pandemic demonstrates the need for taking early action and planning to combat emergencies. Today, climate change has affected the Burien community through increased temperatures and the harmful effects of smoke inhalation from local and distant wildfires. Burien will face increasing temperatures and more frequent adverse weather events in the coming years due to climate change. The spread and management of the COVID-19 pandemic has provided the City with **clear and compelling examples of how early robust planning can drastically affect a community's resiliency** to disaster and uncertainty, and how a lack of action and planning can have lasting economic, social, and human consequences.

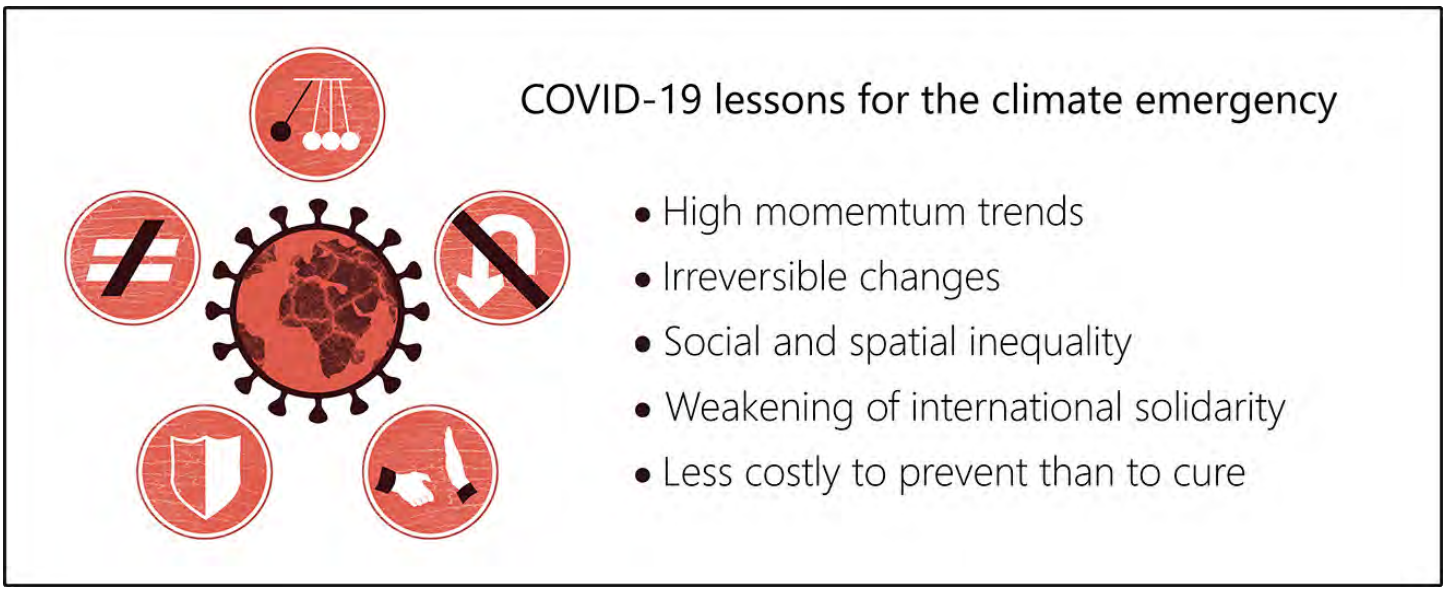


Figure b: Manzanedo, R. Manning, P (2020). Graphical abstract. Elsevier. https://www.sciencedirect.com/science/article/abs/pii/S0048969720340857?via%3Dihub

The COVID-19 pandemic has also shed light on how both public health and environmental crises worsen existing inequities frontline communities, especially low-income, BIPOC communities, the elderly, and youth. The City recognizes the connection between public health and climate change and the urgent need to address our contribution to climate change to protect our natural resources and community.

Building on a Strong Foundation

Before adopting this CAP, the City had already taken significant steps toward environmental sustainability.

Existing City plans the CAP builds upon

- Comprehensive Plan
- Burien Pedestrian and Bicycle Facilities Plan (2004)
- Parks, Recreation and Open Space (PROS) Plan (2018)
- Urban Center Plan (2019)
- Green Burien Partnership Urban Forest Stewardship Plan (2020)
- Stormwater Management Program Plan (2020)
- Housing Action Plan (2021)

Volunteers gather for an environmental restoration project at the Burien Community Center in 2019. Photo credit: City of Burien

Environmental programs, policies, and accomplishments

- Environmental certifications at City Hall (LEED Gold).
- Establishment of the Green Burien Partnership. Through this partnership, the City hosts an annual Green Burien Day where over 550 volunteers have contributed 1578 hours since the program's inception. Over 1000 trees/shrubs have been planted across Burien parks.
- Member of the King County-Cities for Climate Collaboration (K4C).
- Development of the Urban Forest Stewardship Plan, with an ambitious goal to increase tree canopy cover in Burien to 40% by 2032. Currently, the City has restoration activities in 10 parks, nine of which are in environmental justice initiative areas.
- Establishment of rain gardens throughout the city in low-income neighborhoods.
- Adoption of waste reduction ordinances such as the plastic bag ban (2019) and compostables-only serviceware ordinance (2020).
- Member of Tree City USA.
- The completion of the Northeast Redevelopment Area (NERA). This project included the building of regional stormwater facilities that serve 150 acres of commercial/light industrial development plus existing roads through a series of regional water quality and infiltration facilities.
- Restoration of the Seahurst Park beachfront by removing the seawall and restoring aquatic and upland habitats.

The Burien City Hall/Burien Library civic building, opened in 2009, was built to LEED Gold standard. Photo credit: City of Burien

The Miller Creek Trail is in the NERA. Along the trail there is wayfaring signage, park benches, boardwalks, and interpretive signage. Credit: City of Burien

Burien recognizes that climate change actions made locally are compounded by actions accomplished regionally and statewide. Therefore, the CAP also brings together related efforts at the county, regional, and state levels. Some of the most recent notable efforts include:

- Washington's **Climate Commitment Act,** which 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. It works in concert with the state's Health Environment for All (HEAL) Act to assess environmental justice (EJ) impacts and direct 35-40% of investments to overburdened communities. The **HEAL Act defines EJ in state law and embeds it in state agency work** including engagement, budgeting, funding, and strategic planning. Among its requirements are that 40% of investments in climate-related actions be directed to overburdened communities.
- Washington's **Clean Energy Transformation Act** (CETA) requires a phase-out of coal by 2025, carbon-neutral electricity sales by 2030, and **100% clean energy by 2045**. Utilities are the primary implementer of CETA.
- The Washington State **Clean Buildings Act** establishes a **state energy performance standard**, natural gas conservation standard, and other measures for new and existing large buildings over 50,000 square feet with an early adopter incentive program. It also directs the State Building Code Council to develop, by 2021, rules requiring **EV charging capability** at all new buildings with on-site parking. The greater of one space or 10% of spaces must be provided. In 2021, the legislature passed HB 1287 extending these requirements, by rule, to new single-family construction by 2024. HB 1287 also requires the Washington Department of Transportation to develop and maintain a publicly available mapping and forecasting tool with information regarding the location of EV charging infrastructure.
- Washington's **Clean Fuel Standard** reduces the overall carbon intensity of fuels by requiring a **20% reduction in the carbon intensity of transportation fuels by 2038**, using cleaner fuels or purchasing clean fuel credits. Boats, trains, aircraft, and military vehicles, and equipment are excluded. Other legislation supports the Clean Fuel Standard. For example, SB 5811 allows Washington to adopt and implement **California's stringent vehicle emissions standards**. SB 5000 establishes a pilot program to exempt new and qualifying used **fuel-cell-powered EVs** from the sales and use tax between the years 2022–2030.

Photo credit: Phil DuFrene on Unsplash

- Washington passed a **plastic pollution reduction** bill (SB 5022) that **bans Styrofoam** "filler" packaging, coolers, and foodware; requires **single-use foodware be provided only upon request**; and requires minimum levels of post-consumer recycled content in plastic beverage containers, trash bags, and household cleaning and personal care product containers.
- Under HB 1114, Washington has committed to **reduce food waste 50% by 2030,** compared to 2015 levels. The state Department of Ecology is required to develop and adopt a food waste reduction and food waste diversion plan that includes matching edible food with food banks and supporting productive uses of inedible food waste.

Climate Change and Burien

Local Climate Impacts

Burien already experiences many different climate impacts. According to the 2018 National Climate Assessment, our region's water, transportation, and energy infrastructure already face challenges from flooding, landslides, drought, wildfire, and heat waves. Climate change is projected to increase the risks from many of these impacts and extreme events, continuing to compromise the reliability of water supplies, hydropower, transportation, and public health systems and social safety nets across King County and the Puget Sound region.

Specifically, King County communities will experience a diversity of climate impacts, including:

- **Increased heat**: Average air temperatures will warm 5.5 °F by the 2050s, causing more heat-related illnesses and hospitalizations, business closures, and increased deterioration rates of key infrastructure.
- **Less snowpack**: Snowpack is our primary source of water. Snowpack in the Central Cascades will continue to decline due to less winter snow, affecting the water supply and security for people, agriculture, and fish.
- **More heavy rain events**: The intensity of heavy rain events, especially during the winter, will increase flood and landslide hazards throughout the Puget Sound region.
- **Sea level rise**: Burien will see sea level rise between 0.2 feet and 1.5 feet by 2050, leading to more frequent coastal flooding that will affect coastal infrastructure and aquatic habitats.
- **Wildfires and wildfire smoke**: Though the King County region is fairly safe from direct burning from wildfires, there will be a fourfold increase in annual forest area burned in Washington by the 2040s. This will lead to increased community exposure to wildfire smoke.[6]

Increased wildfires will lead to increased community exposure to wildfire smoke. Photo credit: Malachi Brooks on Unsplash

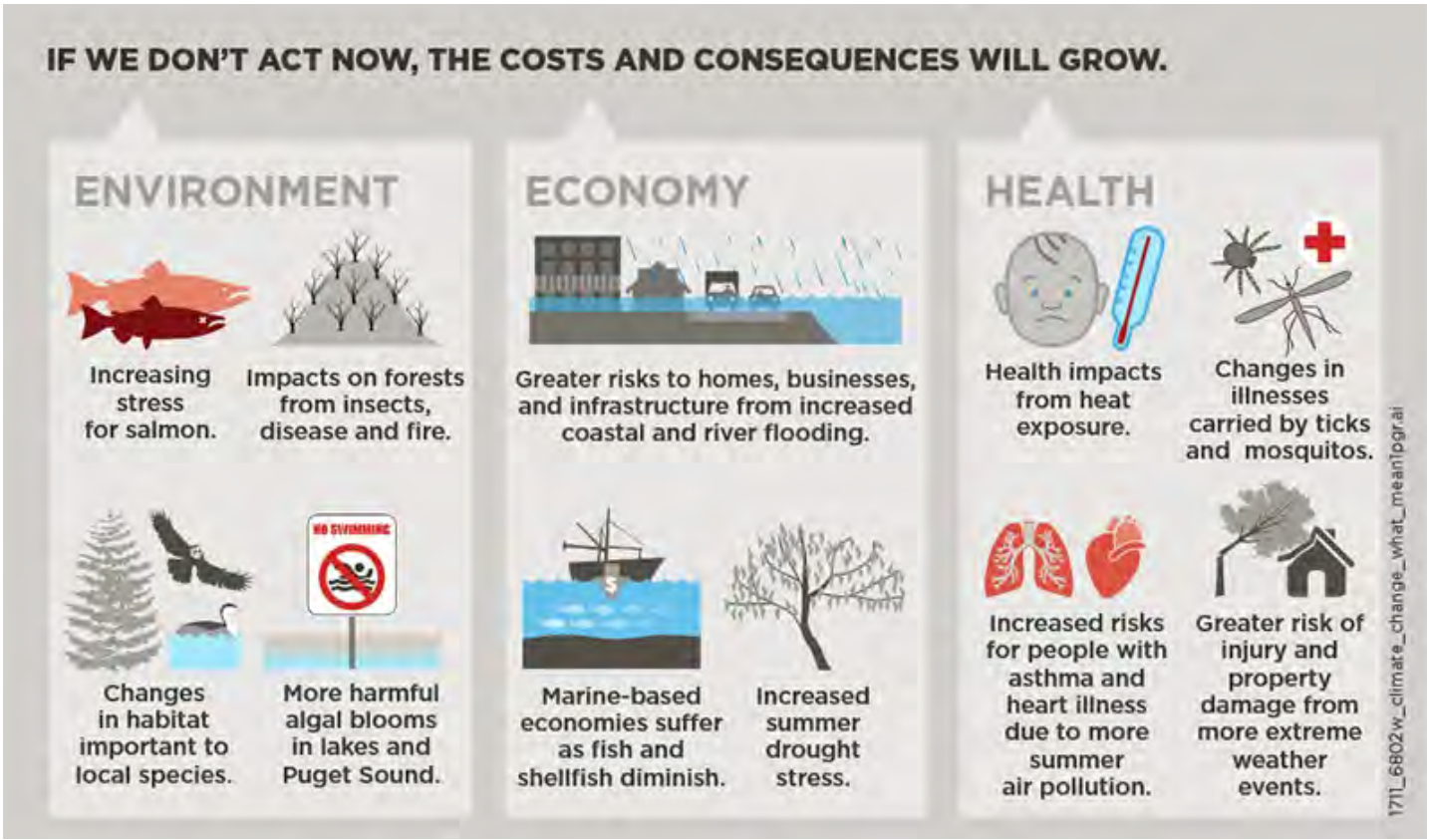
Heavy rain events and sea level rise will lead to more frequent flooding. Photo credit: Vidar Nordli-Mathisen on Unsplash

[6] https://kingcounty.gov/services/environment/climate/our-changing-climate/impacts.aspx

The Puget Sound region, including Burien, is at particular risk for flooding and sea level rise. Several areas around Burien already routinely flood from heavy rains. In addition, even though some colder days can be expected, **climate change will continue the overall warming trend across all seasons, especially during the summer**.

Heat waves and extreme heat days, **such as the heat dome event we experienced in June 2021**, will become more common and will threaten businesses, public health, transportation systems, and local agriculture in Burien and the greater Puget Sound region.

Warmer temperatures and extreme heat also worsen ground-level air pollution such as ozone, which is already a problem that Burien faces due to its proximity to multiple airports and can increase adverse respiratory and cardiovascular health effects for Burien's residents.[7,8]



Graphic from King County, https://www.kingcounty.gov/services/environment/climate/our-changing-climate/impacts.aspx.

[7] https://deohs.washington.edu/sites/default/files/Mov-Up%20Report.pdf

[8] https://nca2018.globalchange.gov/chapter/13/#key-message-1

Burien's Contribution to Climate Change

Through the completion of a local emissions study, also known as a "carbon footprint analysis" or "GHG emissions inventory", Burien has determined emissions levels for the community as a whole. Community-wide emissions represent the sum total of emissions produced within Burien's limits, including emissions resulting from energy use and waste disposal by Burien's residents and businesses, even if the waste is disposed of outside of the city and said energy is generated elsewhere. In this way, the community-wide figures represent all emissions the community and government operations are responsible for, with the exception of emissions from most purchasing of goods and services.

What is $MTCO_2e$?

Metric Tons of Carbon Dioxide Equivalent, or $MTCO_2e$, is a standard unit for measuring emissions. Since GHGs warm the planet at different rates and levels, this unit of measurement represents the impact of different GHGs in terms of the amount of CO_2 that would create the same amount of warming. This allows for different GHGs to be expressed as a single number.

The City followed the U.S. Community Protocol to complete the community-wide emissions inventory for 2019 by using verified local data such as vehicle miles traveled, electricity and natural gas consumption, and tons of garbage disposed of at the landfill. **Burien's 2019 GHG emissions totaled 165,000 $MTCO_2e$.** Some of the largest sources of emissions come from the transportation and energy sectors, mainly gasoline-powered cars and natural gas use in homes and commercial spaces.

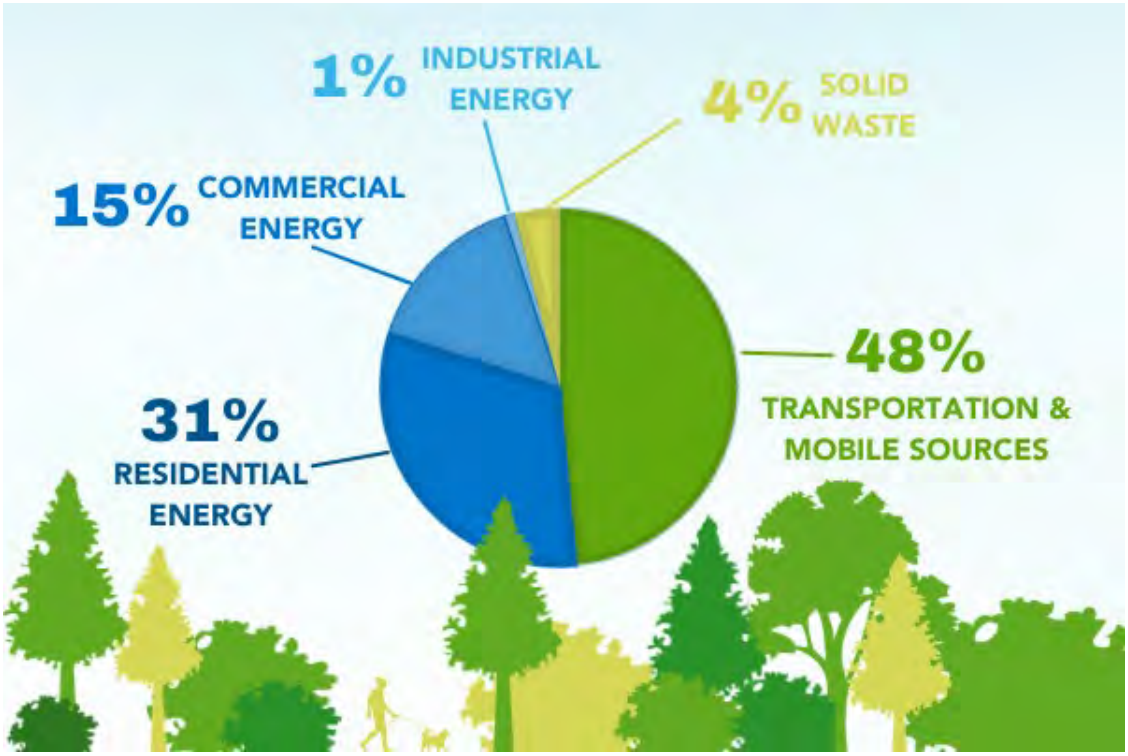


Figure c. Burien's 2019 GHG Inventory details the major sources of greenhouse gas emissions emitted community-wide in Burien. The GHG inventory was developed using ICLEI's software ClearPath along with technical support from ICLEI technical staff. Credit: City of Burien

Building off the GHG emissions inventory, the City completed an emissions forecast to estimate what emissions could look like in the future. This projection is based on current data and expected future trends. The emissions forecast included a "Business-as-Usual" forecast which estimates future emissions levels if no further local action (i.e., projects within this Climate Action Plan) were to take place. The forecast indicates that if the city government and Burien community take no action, GHG emissions will continue to increase, further exacerbating climate change impacts and making it more difficult for Washington state to reach the goal of carbon neutrality.

When talking about climate action, communities know that there is a need to reduce GHG emissions. **The Burien CAP needed to answer the question: how much Burien should reduce and by when?** To help answer this question, the City looked at future emissions to understand how they may change given current federal and state policies (see the gray shades in figure below). Using this context, what remaining emissions reductions are needed at the local level (see the patterned and colored shades in figure below) were identified. The results of this forecast demonstrate that **Burien will need to take action to achieve its emissions reduction goals and cannot rely solely on state and federal policy.**

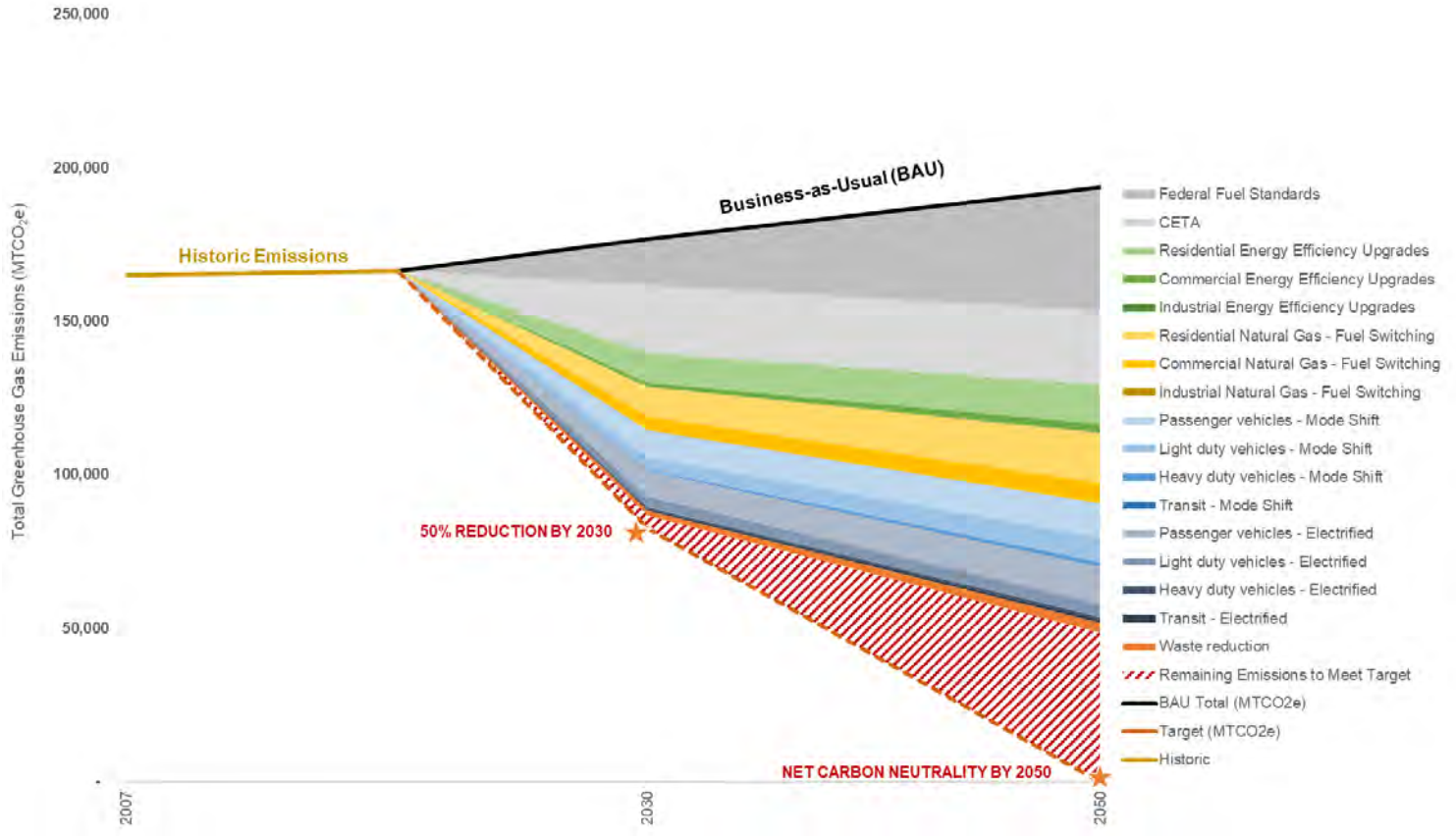
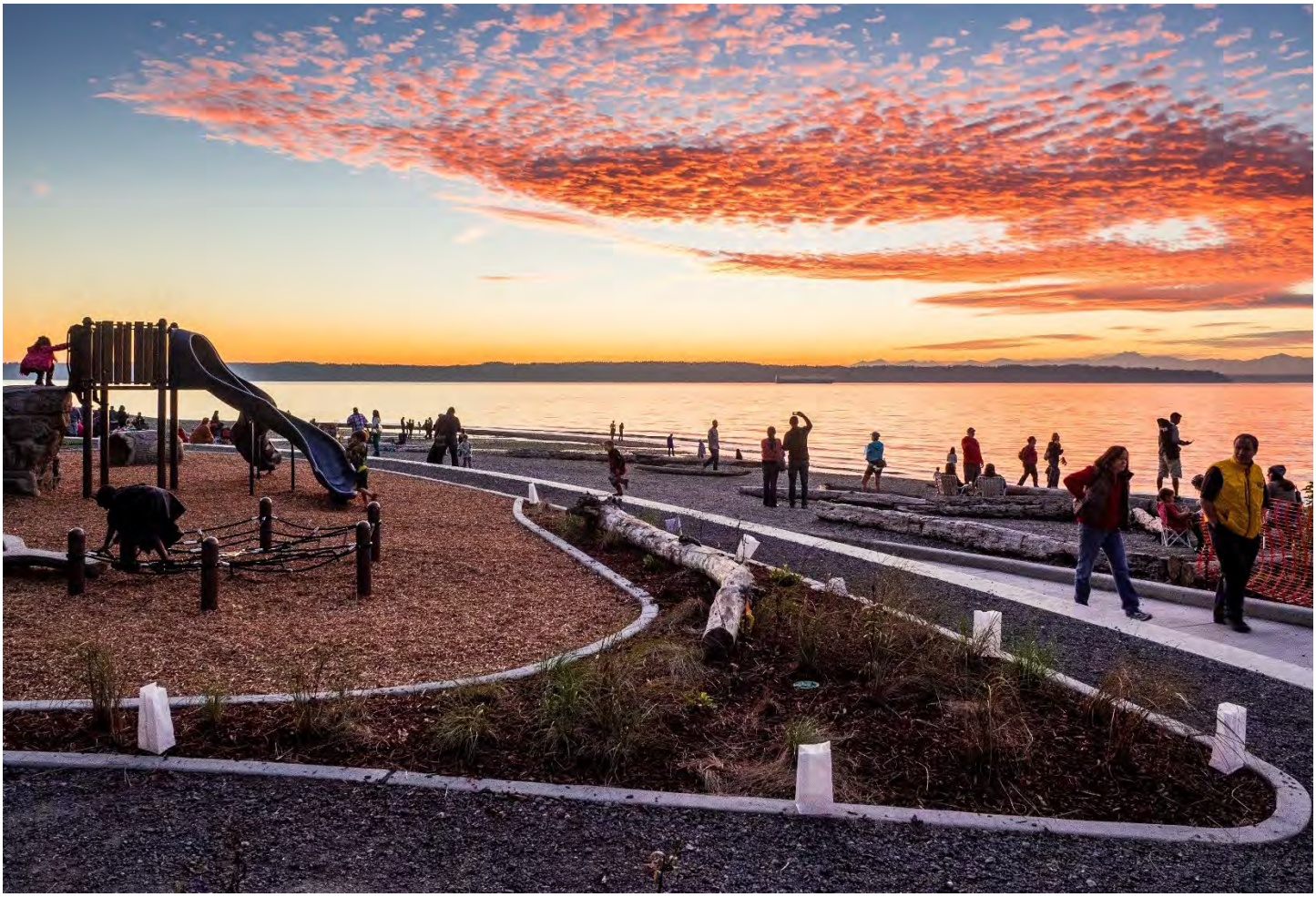


Figure d. Burien's emissions forecast details future emissions and how they may change given current federal and state policies, and what reductions are needed at the local level. Credit: City of Burien

Burien's GHG Reduction Goals

The City has set targets to reduce community wide GHG emissions levels by 50% by 2030 and achieve carbon neutrality by 2050. As shown in the figure above, the City analyzed the impact of different strategies and actions to understand what was needed to reach the targets. This analysis supported the understanding of the tradeoffs in choosing different strategies and actions, as well as the level of aggressiveness needed to reach carbon neutrality.

The combination of measures that Burien has already implemented, are currently planned, and are presented through this CAP are designed to achieve the GHG emissions reduction targets. Reductions in both 2030 and 2050 rely on the best information currently available about population forecasts, future changes to building codes, and vehicle fuel efficiency standards. While this projection is only a starting point for where those emissions reductions will come from, the largest reductions are expected from the energy and transportation sector, consistent with the GHG inventory results and forecast.



Seahurst Park's restored shoreline is at risk from coastal flooding caused by sea level rise. Credit: Michael Brunk

Climate Action Strategies and Actions

The five focus areas of the Burien CAP concentrate efforts on the most impactful opportunities to 1) **reduce GHG emissions and reach carbon neutrality by 2050** and 2) **increase the ability to adapt to future climate impacts**.

To fully support communities within the city and reduce disproportionate harm to frontline communities, there is an increased need for a CAP that works to reduce GHG emissions and impacts from climate change **while also creating valuable socioeconomic benefits that invite more individuals to be part of the climate action process**. These kinds of actions are woven throughout each of the five focus areas.

All actions will require council appropriated budget and/or resources. This is described further in the implementation matrix.

How to read the document

Each of the five focus area sections provide an overview of the topic and its relevance and importance to the CAP. Following each section is a detailed table listing the goals, strategies, and actions.

ID	Action	City Lead	Benefits	Com/Gov
Strategy number and name				
Action ID	Action name and description	The department within the City responsible for implementation	Potential benefits of the action (see below)	The action focuses on either the community or City government operations

Benefit type	Description	Symbol
GHG Emissions Reduction Potential	Action could have high GHG reduction potential because this action targets a large source of emissions.	
Leadership	Action could have high potential for Burien to demonstrate climate action leadership.	
Economic Growth	Action could have a positive impact on the economic growth in the community.	
Public Health	Action could have a positive impact on public health in the community.	
Equity	Action either address inequities or could have a positive impact on equity in the community.	
Feasibility	Action could be technically, socially, or politically feasible under current conditions.	
Affordability	Action could be more cost effective for the City and/or funding is already available.	
Resilience	Action could have a positive impact on community resilience to climate change.	

Transportation and Land Use

As a suburban community, Burien's largest portion of GHG emissions is tied to transportation (48%). These emissions primarily come from driving gasoline-powered cars and light trucks, particularly single occupancy passenger vehicles. Besides emitting greenhouse gases, transportation fossil fuels also produce air pollutants when combusted, reducing local air quality and affecting our health.

Increased use of electric vehicles is one strategy to reduce greenhouse gas emissions. Credit: Michael Fousert on Unsplash

The relationship between transportation and land use in communities is highly intertwined. Compact neighborhoods with a mix of uses allow people to live closer to where they work, shop, eat, and play, thereby reducing the distance people need to travel in a vehicle. Shorter, less frequent vehicle trips and the ability to safely walk, roll, or bike to your destination lead to a reduction in transportation emissions. When there are changes in land use, updates in transportation planning follow. Transit options also play a key role in reducing single occupant vehicle trips and emissions. When combined with land use planning, a multi-modal transportation approach can greatly reduce the reliance on vehicles to get to where you want and need to be.

This chapter focuses on programs and policies to reduce emissions from transportation and land use through the increased use of electric vehicles, alternative modes of transportation such as walking, biking, or public transportation to and from the most common destinations in Burien, and promoting sustainable, dense development that reduces the distance between home, jobs, and other destinations while also ensuring people are not displaced from the changes in land use.

Goal T-1: Reduce transportation emissions and increase trips made by walking, biking, and transit

ID	Action	City Lead	Benefits	Com/Gov
Strategy T-1.1: Transition to the use of energy efficient vehicles				
T-1.1.1	Work with community organizations, homeowners, and renters to identify and address key barriers to electric vehicle ownership in the community.	Public Works		Com
T-1.1.2	Develop an Electric Vehicle (EV) infrastructure plan that: - Reviews current EV infrastructure in the city to identify gaps in charging locations. - Identifies locations for chargers in	Public Works		Both

	commercial, multifamily residence areas, and city facilities. - Reviews feasibility of fast charging stations. - Addresses barriers to charging for homeowners and renters. - Identifies key stakeholders to EV infrastructure use and development. - Identifies partners in the region who can assist with charging station infrastructure to lower. program and construction costs.			
Strategy T-1.2: Reduce transportation emissions associated with government operations				
T-1.2.1	Provide City sponsored bus passes for all regular and temporary employees for commuting to work.	Finance and Administrative Services		Gov
T-1.2.2	Continue to support remote work for employees by: - Updating the City's telecommuting policy to increase the number of days staff work from home. - When feasible, allowing multiple virtual options to employees and city stakeholders.	Administrative Services		Gov
T-1.2.3	Train fleet drivers and employees on best practices for fuel efficiency.	Public Works		Gov
T-1.2.4	Support active transportation options for employees by providing bicycle lockers, showers, and other bicycle infrastructure at City buildings.	PaRCS and Public Works		Gov
T-1.2.5	Invest in transitioning the City's fleet to all electric vehicles where feasible. Where infeasible, pursue short-term approaches (e.g., short-term leases) to acquire fuel-efficient vehicles.	Public Works		Gov
Strategy T-1.3: Enable and provide multiple modes of green transportation				
T-1.3.1	Partner with public transportation services, frontline community organizations, and	Community Development		Com

	surrounding jurisdictions to: - Identify key barriers to increased transit ridership - Identify areas of the community that lack reliable transit service - Focus changes to transit service in areas identified by partners - Pilot new routes and diverse transit options to improve efficiency and reliability throughout the community.	and Public Works		
T-1.3.2	Encourage business owners to offer Commute Trip Reduction (CTR) programs or similar incentives to their employees for using transit or rideshare options.	Community Development		Com

Goal T-2: Support neighborhood nodes that provide easy access to transit, amenities, jobs, housing, prevent displacement, and prioritize communities that are transit-dependent and disproportionately impacted by climate change and other stressors.

ID	Action	City Lead	Benefits	Com/Gov
Strategy T-2.1: Encourage density and mixed land use in strategic areas				
T-2.1.1	Review and update land use, zoning, and planning policy to prioritize the development of affordable ten-minute communities (where work, shopping, schools, and play are within ten minutes of where people live). This can include: - Altering zoning and planning policies to integrate Transportation Demand Management (TDM) standards into Comprehensive Plan code changes for institutional and commercial development. - Using code requirements, incentives, or impact fees as tools to integrate public amenities and services such as parks, open space, public art, street front retail and community services in neighborhoods.	Community Development		Com

	- Incentivizing infill and mixed-use development (e.g., through density bonuses, zoning amendments to increase density, tax benefits, and reduction in parking or other code requirements). - Requiring pedestrian-friendly street frontages with landscaping, ample sidewalks, and parking that minimizes conflicts between pedestrians and automobiles (may require amendments to zoning code and road standards). - Utilizing equitable transit-oriented development (ETOD) planning and investments to increase neighborhood density and use of public transit.			
T-2.1.2	Evaluate the effectiveness of zoning codes and identify incentives to encourage Accessory Dwelling Units (i.e., mother-in-law units).	Community Development		Com
T-2.1.3	Adopt Missing Middle Housing policies and codes for all new development to allow for broader housing types in single family zones, particularly near transit, while ensuring affordability for current and future residents	Community Development		Com

Buildings and Energy

Energy-related GHG emissions come from electricity, natural gas, and other fuels used in homes, businesses, and industrial processes. In Burien, commercial, residential, and industrial energy accounts for about half (47%) of the city's total emissions.

Increased use of solar power in communities is one way to reduce community-wide GHG emissions. Credit: Jeremy Bezanger on Unsplash

Buildings and Energy is a cross-cutting focus area in that nearly all activities that take place in the community require energy of some sort. We use energy to provide light, preserve our food, run our technology, and heat our homes and buildings. In Burien, community members and businesses get their energy from either Seattle City Light or Puget Sound Energy. While each utility works hard to increase the percentage of energy generated through renewable sources, opportunities also exist for community members and the Burien local government to discourage the use of natural gas and produce small-scale renewable energy or fuels, offsetting the need for fossil fuels.

This chapter focuses on opportunities to decarbonize buildings, increase energy efficiencies in buildings and homes, and increase the amount of renewable energy used in Burien.

Goal B-1: Support efficient building standards

ID	Action	City Lead	Benefits	Com/Gov
Strategy B-1.1: Advance the decarbonization of buildings				
B-1.1.1	Adopt or exceed the Washington State Clean Buildings Act to advance energy performance standards and low carbon design for new, renovated, and existing buildings. Specifically: - Require building energy performance disclosure* and benchmarking from all privately-owned commercial buildings by 2030 (at a minimum, any multi-family or non-residential building over 20,000 sq. ft) and set a maximum target for energy per sq. ft. by 2030. (**Existing State policy requires benchmarking and energy*	Community Development and Economic Development		Both

	requirements of new and existing commercial buildings over 50,000 sq. ft by 2028. Incentives available for buildings that adopt early; incentives cover commercial and multi-family residential buildings). - Require EV infrastructure (the greater of 1 space of 10% of spaces) for all new commercial and multi-family property development to increase available EV charging stations in the city. - Require electric heating/cooling pumps in all new builds or renovations (no new natural gas) - Provide incentives for or require the development of new builds to be high-performance certified commercial and multi-family buildings through programs such as LEED (or built to LEED standards), EDGE, or Built Green, with the goal to achieve net zero GHG in new buildings by 2031. Incentives or requirements can be implemented through the zoning code through increased height and floor area.			
B-1.1.2	Put in place a system to regularly update relevant building code ordinances. Specifically: - Educate City planning and permitting staff on new energy codes and methods for incentivizing decarbonization in buildings - Update the permitting process to easily flag and review decarbonization projects - Adopt green codes and mandate implementation - Adopt further local standards to reduce GHG emissions over time.	Community Development		Gov
B-1.1.3	Explore suitable financing mechanisms to finance energy efficiency upgrades for commercial buildings.	Community Development and Economic		Both

		Development		
Strategy B-1.2: Increase energy efficiencies in City-owned buildings and other City infrastructure				
B-1.2.1	Conduct energy audits in all city operated buildings and partner with the local utility and private contractors to make improvements.	Public Works		Gov
B-1.2.2	Assess various options for financing and grants for energy efficiency projects for city buildings and facilities.	Public Works		Gov
B-1.2.3	Join either the Seattle City Light Green Up program or Puget Sound Energy's (PSE) Green Direct program to reduce emissions from government operations. Through Green Direct, Burien can purchase 100 percent of their energy from local, renewable energy resources. The Green Up program allows customers to match up to 100% of their monthly electricity use through Renewable Energy Credits.	Public Works		Gov
B-1.2.4	Continue to implement energy efficient outdoor lighting, such as light emitting diodes (LED) for all streetlights and parks lighting infrastructure in Burien.	Public Works and PaRCS		Gov

Goal B-2: Expand renewable energy production and use

ID	Action	City Lead	Benefits	Com/Gov
Strategy B-2.1: Transition to the use of renewable energy to eliminate fossil fuel use wherever possible				
B-2.1.1	Evaluate and assess the barriers and challenges homeowners face in shifting to renewable energy sources. Based on the results of the assessment, begin to support projects that bring renewable energy to Burien, such as the development of community solar projects that benefit all residents, particularly communities of color, low-income populations, and members of limited-English-speaking communities (e.g. Spark Northwest).	Administrative Services and Public Works		Com
B-2.1.2	Increase community knowledge about renewable energy options and energy efficiencies. This can include: - Implementing incentives for renewable energy projects through the City's permitting process, such as reducing fees and expediting the permitting process. - Partnering with utilities and contractors to provide information to businesses and school districts on renewable energy options along with how to upgrade equipment that improves affordability, comfort, indoor air quality and energy efficiency in all commercial/multi-family buildings and schools. - Promoting incentives for energy conservation and renewable energy for homeowners, with a priority for those who are energy- and housing- burdened. - Supporting Homeowner Energy Efficiency Workshop Events designed to inform the community about green building and efficiency certification programs, project permitting, financing, innovative products, as well as architect and contractor certification resources.	Administrative Services, Community Development, and Public Works		Com

Materials and Consumption

Burien's solid waste is disposed of at Cedar Hills Landfill in Maple Valley, Washington. While the disposal of solid waste only contributes 4% of Burien's community GHG emissions, upstream impacts from the creation of materials, transportation to Burien, and their end of life need to be considered when thinking about sustainable materials consumption. For many materials, most GHG emissions are created during pre-purchase and production, not just at their disposal. Therefore, recycling and composting is not the only answer, but just one piece to sustainable materials management.

Circular Economy

The model where waste is designed out of products or used as an input in a new product, goods are used for longer, and materials are reused or recycled instead of ending up in the landfill.

It is in Burien's long-term interest to not only expand recycling facilities but enable reuse of construction materials and other goods and promote a circular economy.[9] This chapter focuses on opportunities to reduce waste from City purchasing and operations, and promote a circular economy, with a focus on reducing and diverting food waste, and expanding recycling and composting.

Recycling is just one aspect of sustainable materials management. Credit: Alfonso Navarro on Unsplash

[9] Kuharic, M. (ed.) and the Reducing Greenhouse Gas Emissions Team. 2020. *Section I: Reducing Greenhouse Gas Emissions. In: King County 2020 Strategic Climate Action Plan.* [King County Climate Action Team (eds.)]. King County, Washington.

Goal M-1: Reduce community waste generation and move towards zero waste of resources

ID	Action	City Lead	Benefits	Com/Gov
Strategy M-1.1: Reduce waste from City purchasing and operations				
M-1.1.1	Strengthen and implement the City's sustainable purchasing policy focused on end-use for materials, the recyclability of products, and encouraging City staff to solicit bids from local contractors and purchase from local vendors, services, and stores to reduce GHG emissions from commerce-related transportation, food production, and distribution. King County's Sustainable Purchasing Guide is a potential model for internal standards.	Finance and Public Works		Gov
M-1.1.2	Require all three-waste stream (garbage, recycle, and compost) bins at all City facilities to increase waste diversion rates from City operations. Work with the City's waste hauler on a campaign to educate staff and visitors on how to dispose more responsibly through materials, signage, and installations.	Administrative Services, PaRCS, and Public Works		Gov
M-1.1.3	Adopt King County's Construction and Demolition waste diversion requirements.	Community Development		Gov
M-1.1.4	Conduct waste stream audits every two years at all city buildings. Develop a strategy to cut back in consumption of top 5 non-recyclable and other landfill waste stream items identified in the waste audit.	Public Works		Gov
M-1.1.5	Switch to digital for all internal and external paper uses when feasible. - Internal: HR paperwork, meetings, timesheets, presentations, reports, invoices, ext. - External: invoices, payments, contracts, digital signatures, ext.	Administrative Services		Gov

M-1.1.6	Increase City employee education and awareness around waste reduction by hosting annual sustainability events such as Earth Day/Earth Month or Green Office Day. This event serves to educate employees and reinforce commitment to sustainable behavior.	Public Works		Gov
Strategy M-1.2: Promote a circular economy				
M-1.2.1	Promote prevention and redistribution of food waste through: - Expanding and encouraging community and school gardens, urban agriculture, and farmers markets that sell locally produced food. - Once developed, using the Use Food Well Washington Plan as a guidepost to reduce food waste in Burien - Work with local grocery stores to support a food donation program to send surplus food	Public Works and PaRCS		Com
M-1.2.2	Mandate recycling and composting at commercial and multi-family properties by 2026. Use education and incentives to guide building owners, operators, and residents to achieve this goal. Use culturally competent multilingual education and outreach alongside incentives to guide building owners, operators, and residents to achieve this goal while reducing contamination within waste streams.	Public Works		Com
M-1.2.3	Work with King County, K4C, and solid waste haulers to develop a composting master plan to expand the composting infrastructure in the Puget Sound.	Public Works		Com

Water and Natural Systems

Burien and the Puget Sound region are fortunate to have clean, safe, and reliable water for their communities. However, water supply and quality, which are at-risk to climate impacts, must be maintained in a way that is equitable to the community using it, as well as for the long-term health of local watersheds.

Warmer temperatures, changing precipitation patterns, and less regional snowpack in the Cascades will cause more frequent and prolonged water shortages. Extreme storms and rainfall threaten to overwhelm Burien's aging wastewater and stormwater infrastructure, and climate impacts like wildfires will affect downstream water and air quality. Meanwhile, natural systems—including trees, grasses, and soils—naturally store and capture carbon from the atmosphere, making them a valuable tool to combat climate change. Trees also provide natural shade and cooling spaces for both people and biodiversity during extreme heat events, which are projected to occur more frequently in the Burien community.

This chapter discusses ways Burien can enhance and protect water resources and natural systems, including incentivizing green stormwater infrastructure projects, promoting water conservation and sustainable landscaping practices, and adopting new city codes that protect important natural areas, trees, and ecosystems.

Middle school students participate in 2018 StormFest, a hands-on environmental learning program sponsored by Highline area cities. Credit: City of Burien

Goal W-1: Preserve the health of native habitats, improve ecosystem health, and enhance natural drainage systems

ID	Action	City Lead	Benefits	Com/Gov
Strategy W-1.1: Protect and support native habitats, open spaces, and the quality and flow of water resources				
W-1.1.1	Support regional efforts to strengthen, revise, and enforce codes for critical areas including fish, tree, frequently flooded areas, unstable slopes, and associated areas and ecosystems to protect native habitats. Use the best available climate science when strengthening and revising codes (such as future flooding patterns) and update codes as best available climate science changes.	Community Development		Com
W-1.1.2	Value and enhance tree canopy in Burien to address climate impacts by hiring an arborist. The arborist will support the preservation of native trees, educate city staff on best practices, assist in the development and implementation of tree codes, and track and report tree removal to enable the City to effectively manage tree cover.	Community Development, PaRCS, and Public Works		Gov
W-1.1.3	Improve stream resilience to erosion caused by high flows. This can include assessing various financing options such as grants as well as incorporating stream improvements into other City projects.	Public Works		Gov
W-1.1.4	Assess opportunities to retrofit existing untreated stormwater runoff to improve flow control and water quality, with a priority on locations providing the most benefit and areas that are historically under-resourced.	Public Works		Com

Strategy W-1-2: Protect stormwater infrastructure and expand green infrastructure				
W-1.2.1	Incentivize green stormwater infrastructure projects such as rain gardens and other low impact designs, with a priority for frequently flooded areas and paired with policies to prevent displacement resulting from the potential increase in property values.	Public Works and Community Development		Com
W-1.2.2	Maintain or replace aging stormwater infrastructure including pipes, catch basins, ponds, and swales using low impact development where feasible. Explore additional funding opportunities or consider adding City resources to increase replacement frequency.	Public Works		Gov
W-1.2.3	Use climate change predictions for precipitation when replacing, sizing, or adding stormwater infrastructure.	Public Works		Com

Community Resilience and Well-Being

Climate change is one of the greatest threats to our society and is already impacting communities in Burien and the broader Puget Sound region. Climate change is deeply inequitable, and its effects can worsen current vulnerabilities in our community and have disproportionate impacts on Burien's frontline communities—such as communities of color, immigrant communities, low-income households, elders and youth, and non-English speaking residents—due to existing and historical economic, environmental, racial, and social inequities.

Burien Farmers Market provides year-round access to healthy foods. Credit: City of Burien

This chapter focuses on ways Burien can prepare for these and other threats—and simultaneously work to correct existing inequities—through several community initiatives. These actions include improving community awareness of climate impacts, ensuring equitable access to Burien's natural resources and green spaces, and developing targeted campaigns and programs focused on preparing community members who are disproportionally impacted by climate change.

Goal C-1: Strengthen the capacity to support climate action

ID	Action	City Lead	Benefits	Com/Gov
Strategy C-1.1: Build awareness in the community around climate-related impacts				
C-1.1.1	Partner with community organizations and key stakeholders to host culturally competent and multi-lingual educational workshops around aspects of sustainability, including waste reduction, zero waste, upcycling, natural yard care, water conservation, benefits of trees, air quality, energy efficiencies in homes, and energy conservation.	PaRCS and Public Works		Com
C-1.1.2	Implement a sustainable business recognition program to publicly recognize businesses with a commitment to sustainable practices. Coordinate with regional partners such as EnviroStars to	Economic Development		Com

	develop the sustainable business recognition program.			
Strategy C-1.2: Improve City staff knowledge of and capacity for their role in climate action				
C-1.2.1	Educate City staff about their ability to act on climate change in their role. Education efforts can include an assessment of City staff knowledge on climate change in their role through a staff survey. Tailor awareness-building and other capacity building based on survey results.	Public Works		Gov
C-1.2.2	Create a centralized City sustainability coordinator to support CAP monitoring and implementation. The sustainability coordinator would be responsible for developing a cross-departmental group to expand participation across departments in climate action implementation.	City Manager		Gov
Strategy C-1.3: Plan for climate change				
C-1.3.1	Incorporate climate mitigation and adaptation as considerations for all City plans.	Community Development		Gov
C-1.3.2	Support legislation that: - Enhances statewide clean vehicle standards - Provides transportation improvements to support the transition to clean energy - Advocates for Light Rail and enhanced bus services in Burien - Requires climate actions as a component of Comprehensive Plans - Allows local jurisdictions to adopt reach codes that may exceed state energy codes for residential development.	City Manager		Both

Goal C-2: Enhance the resilience of populations that will be disproportionately impacted by climate change

ID	Action	City Lead	Benefits	Com/Gov
Strategy C-2.1: Focus investments on communities that experience disproportionate climate impacts				
C-2.1.1	Identify current and future vulnerable populations (frontline communities) most affected by climate change in Burien. Once identified: - Conduct targeted outreach with these populations to understand their needs, and how the City can best assist them in preparing to meet those needs. - Implement resilience-building actions to support these populations. Resilience-building actions can include jobs training, volunteer opportunities, community organizing, and school and recreation-based activities.	Community Development and Human Services		Com
C-2.1.2	Partner with community organizations to conduct wildfire smoke outreach and education campaigns to increase awareness of how homeowners and renters can prepare for the negative impacts of wildfire smoke. Prioritize communities without air conditioning or air filtration, health co-morbidities, and those who work outside.	Administrative Services and Human Services		Com
C-2.1.3	Ensure equitable access to parks, green space, and recreational services by creating more usable green space in Burien's activity centers and incorporating a higher volume of smaller parks and urban public spaces.	PaRCS		Com

Implementation Plan

What You Can Do!

To fully address climate change, it will take the entire Burien community to act on climate. While many CAP strategies will require the support of the community, there are many changes that residents can independently do to create a more sustainable, low-carbon, and resilient future.

Focus Area	What you can do!	Pertinent CAP Strategies
Transportation & Land Use	• **Embrace more non-car travel**, such as buses, trains, or carpooling.	• T-1.2.1 • T-1.3.1 • T-1.3.2
	• **Continue to telecommute**, if able.	• T-1.2.2
	• **Use active transportation**, such as walking, biking, or scootering.	• T-1.2.4
	• If financially able, **purchase or lease an electric vehicle**!	• T-1.1.1
	• **Purchase direct flights** or **buy carbon offset credits** when you do fly.	• NA
Buildings & Energy	• **Install energy-efficient appliances and fixtures**, such as LED light bulbs or water heaters, to increase energy efficiency and save money on energy bills.	• B-1.1.1 • B-2.1.1
	• **Switch from gas-powered yard equipment to electric equipment** to improve local air quality and lower gas related GHG emissions.	• B-2.1.1
	• **Wash clothes in cold water!** About 90% of energy used in washing machines are used to heat water. Learn more at coldwatersaves.org	• B-2.1.2
	• **Unplug electronics when not in use.** This can help reduce energy bills, especially when you're on vacation or don't use an electronic appliance regularly.	• NA
Materials & Consumption	• **Waste less food!** Food waste, which accounts for 40% of waste in the U.S., produces GHG emissions as they decompose. Freezing leftovers, buying what you need, and storing food can help reduce food waste in Burien!	• M-1.2.1
	• **Purchase local goods** to reduce a product's carbon lifecycle footprint and support local businesses.	• NA
	• **Bring your own reusable bag, water bottle, and utensils** to reduce shopping and take-out waste.	• NA

Focus Area	What you can do!	Pertinent CAP Strategies
	• **Learn what is recyclable and compostable** to prevent contamination of waste streams.	• M-1.1.4 • M-1.2.2
	• **Reduce meat and dairy consumption** – even one day less a week makes a difference!	• NA
Water & Natural Systems	• **Use less chemicals and pesticides** for your yard care!	• NA
	• **Update water appliances and fixtures** to reduce and conserve water!	• NA
	• **Plant native species in your yard and gardens.**	• W-1.2.1
	• **Volunteer in Burien** to clean up streets and parks and learn how to spot non-native species and noxious weeds.	• NA
Community Resilience & Well-being	• **Develop an emergency plan** for your family and neighbors. Climate-related extremes—such as heat waves and flooding—can happen unexpectedly and quickly. Gathering essential supplies and a communication plan for your family and neighbors can ensure everyone stays safe.	• NA
	• **Buy or make an air purifier** to ensure you have healthy indoor air during wildfire smoke days. Learn how to make a box fan air purifier.	• C-2.1.2
	• **Meet your neighbors!** Social cohesion can help increase a community's capacity to adapt.	• C-1.1.1
	• **Talk about climate change and preparing for it** with your family, friends, coworkers, and neighbors. Climate change affects us all and talking about it will help normalize climate preparedness.	• NA

Strategic Implementation by the City

To successfully achieve our GHG emissions reduction goals, the City of Burien will need to strategically phase and implement the strategies and actions in the Burien CAP. Some of the considerations for implementation include:

- **Lever**: A policy mechanism that affects change. These can include mandates, regulations, capital improvement projects, financial incentives, education and outreach, strategic partnerships, or management practice. In this plan, we use four different levers:
    - **Voluntary behavioral change, incentives, and education (Vol).** These actions will use the education, outreach, and incentives levers to engender behavioral change. For example, encouraging businesses to offer Commute Trip Reduction (CTR) programs can incentivize people to use public transportation or active transportation to commute to work.
    - **Regulations, mandates, and disincentives (Reg).** These actions will use mandates and regulations to disincentivize negative environmental behaviors and decisions. For example, adopting energy performance standards the exceed the Washington State Buildings Act's standards can push Burien to be ahead of the curve.
    - **Capital projects and infrastructure (Cap).** These actions will use financial investments into capital projects as the lever to create a more sustainable community. For example, replacing aging stormwater infrastructure can prevent future flooding risks and impacts across Burien.
    - **Plans, studies, and partnerships (Plan).** These actions will use additional studies, plans, and partnerships to improve information and data to inform decision-making. For example, partnering with community organizations can amplify education and outreach to community members on how to mitigate the negative impacts of wildfire smoke.
- **Timeframe**: Some actions may be predecessors for other actions to be successful. Timeframe considerations indicate whether an action should be implemented in the short-term, medium term, or long-term. In this plan:
    - **Short-term actions** are actions that will be implemented in the next two years (2022-2023).
    - **Medium-term actions** are actions that will be implemented in the mid-term, or the next five years (2022-2026)
    - **Long-term actions** are actions that will be implemented in the long-term, or beyond the next five years (2027 and beyond).
- **Lead Entity**: Each action should have a responsible City department to implement and monitor action progress.
- **Potential Partners**: In addition to a lead City department or entity, many actions will likely have community groups, businesses, or stakeholders as key partners.
- **Cost and Potential Funding Strategies**: Many actions will have an associated cost of implementation—such as required FTEs (e.g., 0.25 FTE to support program administration) or specific monetary

investments (e.g., $100,000 to implement an action). It will be important to identify potential funding strategies (e.g., reallocating current budgets, external grant funding, etc.) for actions that require more investments than current capacity allows. In this plan:

  - $: indicates that an action can be completed with minimal financial investments (e.g., through current staff capacity or minimal financial costs, typically less than $25,000).
  - $$: indicates that an action can be completed with moderate financial investments (e.g., will require some additional staff capacity or moderate financial costs, typically between $25,000 and $100,000).
  - $$$: indicates that an action can be completed with significant financial investments (e.g., will require multiple new staff members or significant financial costs, typically over $100,000).

- Considerations and Unintended Consequences: Successful implementation will require thoughtfulness around issues of equity and inclusion to ensure that there are no unintended consequences. Identifying these considerations before implementation initiation can help avoid these unintended consequences.
- Metrics and Indicators: Finally, associating quantitative or qualitative metrics to each strategy or action can help ensure accountability and track success.

Implementation Matrix

The matrix below identifies the key implementation elements for each action. This matrix is a living document and should be continuously updated as more information is gathered or developed. **All actions will require council appropriated budget and/or resources.** City Council will review metrics and progress **biennially** and suggest course corrections as needed.

Implementation matrix last updated: November 8, 2021

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy T-1.1: Transition to the use of energy efficient vehicles								
T-1.1.1	Identify barriers to EV ownership	Plan	Short-term	Public Works		$	• Lack of education regarding what EV vehicles consumers should purchase.	
T-1.1.2	Develop an EV infrastructure plan	Plan	Medium-term	Public Works	• Car dealers • Utilities	$	• Want to prevent the outcome that only certain demographics (e.g., high-income) will have access to EV infrastructure.	
Strategy T-1.2: Reduce transportation emissions associated with government operations								
T-1.2.1	Bus passes for City employees	Vol	Short-term	Finance and Administrative Services		$$		

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
T-1.2.2	Remote work for City employees	Vol	Short-term	Administrative Services		$	• Remote work may have other social and mental health impacts. • This reaches only a small part of the working Burien residents.	
T-1.2.3	Fuel efficiency for fleet drivers	Vol	Short-term	Public Works		$	• This action may be moot if T-1.2.5 is successfully implemented.	
T-1.2.4	Active transportation options for employees	Vol	Medium-term	PaRCS and Public Works	• Bikeworks & other NGOs	$$		
T-1.2.5	Transition city fleet to all EV	Cap	Medium-term	Public Works	• WA Green Transportation Program	$$$		
Strategy T-1.3: Enable and provide multiple modes of green transportation								
T-1.3.1	Enhance public transportation services	Plan	Short-term	Community Development and Public Works	• KC Metro • Sound Transit • Taxi and ride services • Community based orgs.	$		

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
T-1.3.2	Encourage CTR programs	Vol	Medium-term	Community Development	• KC Metro • Sound Transit • Businesses	$	• Should incentivize or recognize businesses that do this. • Some businesses might not have the financial resources to participate.	
Strategy T-2.1: Encourage density and mixed land use in strategic areas								
T-2.1.1	Update land use policies to develop ten-minute communities	Reg	Short-term	Community Development	• Developers • Landowners • Businesses • Arts orgs.	$$	• May be opposition from businesses. • Need to ensure no unintended redlining outcomes.	
T-2.1.2	Encourage Accessory Dwelling Units	Plan	Short-term	Community Development		$	• Need to streamline permitting and zoning processes.	
T-2.1.3	Adopt Missing Middle Housing Policies	Reg	Medium-term	Community Development		$$	• May be opposition from businesses. • NIMBY-ism. • Need to ensure no unintended redlining outcomes.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy B-1.1: Advance the decarbonization of buildings								
B-1.1.1	Adopt or exceed the Washington State Clean Buildings Act	Reg	Medium-term	Community Development and Economic Development	• Realtors • Developers • Builders	$$	• Need to avoid rent increases, displacing low-income households. • Consider banning new gas line for new properties.	
B-1.1.2	Regularly update buildings codes	Reg	Medium-term	Community Development		$$$		
B-1.1.3	Finance energy efficiency upgrades in commercial buildings	Plan	Medium-term	Community Development and Economic Development	• WA DES ESPC	$ Green bonds, impact bonds, C-PACER loans, solar and home energy upgrade loans	• Consider retrofitting old buildings with incentives.	
Strategy B-1.2: Increase energy efficiencies in City-owned buildings and other City infrastructure								
B-1.2.1	Conduct energy audits in City buildings	Plan	Medium-term	Public Works		$$$	• Consider participating in community supported solar projects (e.g., Seattle Aquarium).	
B-1.2.2	Energy efficiency projects in City buildings	Plan	Short-term	Public Works	• School districts	$		

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
B-1.2.3	Renewable energy for City operations	Plan	Short-term	Public Works		$	• Needs to include rented facilities.	
B-1.2.4	Implement LED for outdoor lighting	Plan	Medium-term	Public Works and PaRCS		$$	• Already underway. • Include schools in energy efficient lighting infrastructure. • Consider participating in Dark Skies Project.	
Strategy B-2.1: Transition to the use of renewable energy to eliminate fossil fuel use wherever possible								
B-2.1.1	Evaluate barriers homeowners face in shifting to renewable energy	Plan	Short-term	Administrative Services and Public Works	• CHI Franciscan • Kaiser • Navos • Faith-based organizations	$	• Consider using BuiltGreen and Northwest EcoBuilding Guild as resources rather than utility companies. • Consider using International Living Building Institute as a standard rather than LEED. • City of Shoreline used partnerships to great success.	
B-2.1.2	Increase community knowledge about renewable energy and energy efficiencies	Vol	Short-term	Administrative Services, Community Development, and Public Works		$	• Need more education and resources for renters.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy M-1.1: Reduce waste from City purchasing and operations								
M-1.1.1	Strengthen the City's sustainable purchasing policy	Reg	Medium-term	Finance and Public Works	• Local contractors and vendors	$	• Prioritize purchasing and contracting with BIPOC owned vendors and historically marginalized groups. • Consider cost of embodied carbon in materials. • Integrate equity and education into procurement policies.	
M-1.1.2	Require all three-waste streams at all City facilities	Reg	Short-term	Administrative Services, PaRCS, and Public Works	• Waste haulers • HSD with students and the community	$	• Can use volunteers to help implement. • Should have compost bins all around the city. • Cost of recycling may be a barrier. • Challenge of incentivizing or requiring this at commercial facilities.	
M-1.1.3	Adopt King County C&D waste diversion requirements	Reg	Short-term	Community Development		$		

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
M-1.1.4	Conduct waste stream audits at all city buildings	Plan	Medium-term	Public Works		$$	• Will likely need infrastructure before conducting waste audits.	
M-1.1.5	Switch to digital for all internal & external paper uses	Vol	Short-term	Administrative Services		$		
M-1.1.6	Annual City environmental education event	Vol	Medium-term	Public Works		$	• Residents' lack of concern around waste sorting may be a barrier. • Consider expanding sustainability events to the entire City, not just employees.	
Strategy M-1.2: Promote a circular economy								
M-1.2.1	Promote prevention and redistribution of food waste	Vol	Medium-term	Public Works and PaRCS	• Burien Bark • Local gardeners • Grocers • Food vendor	$$	• Need culturally appropriate, multi-lingual education and outreach.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
M-1.2.2	Mandate recycling and composting at commercial and multi-family properties	Reg	Medium-term	Public Works		$$	• Consider a more ambitious implementation timeline. • Emphasize repair over replacement. • Barrier includes not having current robust recycling infrastructure.	
M-1.2.3	Develop a regional composting master plan	Plan	Long-term	Public Works	• Waste haulers • King County	$$		
Strategy W-1.1: Protect and support native habitats, open spaces, and the quality and flow of water resources								
W-1.1.1	Strengthen critical areas codes	Plan	Medium-term	Community Development	• Tribal partners • Outdoor recreationists (e.g., hikers, fishers) • Developers • Federal and state agencies • Individual property owners	$	• Need to provide more education on tree codes to developers. • Political makeup of City Council may be a barrier.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
W-1.1.2	Hire an arborist	Reg	Short-term	Community Development, PaRCS, and Public Works	• Developers • School districts	$$$	• Consider engaging youth in tree planting. • Consider partnering with volunteer arborist from the Parks Steward Program.	
W-1.1.3	Improve stream resilience	Plan	Medium-term	Public Works	• City Council or City Manager • Port of Seattle	$$$	• Lack of staffing may be a barrier to improving stormwater resilience.	
W-1.1.4	Retrofit existing untreated stormwater runoff	Plan	Long-term	Public Works		$$$	• Dependent on baseline assessment of current state of City stormwater system. • Consider capturing embodied carbon, demolition, and maintenance costs. • Consider posting multi-lingual educational signage around storm drains and bio-swales.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy W-1-2: Protect stormwater infrastructure and expand green infrastructure								
W-1.2.1	Incentivize green stormwater infrastructure	Vol	Medium-term	Public Works and Community Development	• RainWise • Residents in flood zones • Schools	$	• Consider implementing a student led GSI program. • Challenge from developers to use and implement.	
W-1.2.2	Maintain or replace stormwater infrastructure	Cap	Medium-term and Long-term	Public Works		$$$		
W-1.2.3	Use climate change predictions for stormwater infrastructure	Plan	Short-term	Public Works		$	• UW CIG already has a stormwater tool.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy C-1.1: Build awareness in the community around climate-related impacts								
C-1.1.1	Host sustainability workshops	Plan	Short-term	PaRCS and Public Works	• Minority groups • Community organizations • (Master) Gardeners • Schools • Developers • Weed Warriors • Community Colleges • Environmental Science Center CoB programs	$	• Consider using creative engagement methods to build awareness (e.g., plays, creative arts etc.). • Consider creating a peer-to-peer learning network to facilitate sustainability collaboration. • Consider creating incentives aimed at youth climate action. • Lack of time, coordination, and funding may be barriers to implementation.	
C-1.1.2	Implement a sustainable business program	Vol	Medium-term	Economic Development	• EnviroStars • Tin Room owner	$$	• Consider using incentives over recognition to recognize sustainable businesses.	

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy C-1.2: Improve City staff knowledge of and capacity for their role in climate action								
C-1.2.1	Educate City staff about the CAP	Plan	Short-term	Public Works	• Consultant to assess City staff knowledge	$		
C-1.2.2	Create a City sustainability coordinator position	Reg	Short-term	City Manager	• UW CIG	$$	• Need to specify and clearly identify roles of sustainability coordinator position. • Consider making climate action part of all City staff positions. • Funding and enforcement is a barrier.	
Strategy C-1.3: Plan for climate change								
C-1.3.1	Climate action considerations for all City plans	Plan	Short-term and Medium-term	Community Development	King County	$		
C-1.3.2	Support state climate action legislation	Reg	Short-term	City Manager		$		

Action	Action Description	Lever	Timeframe	Lead Entity	Potential Partners	Cost & Potential Funding Strategies	Considerations & Unintended Consequences	Metrics & Indicators
Strategy C-2.1: Focus investments on communities that experience disproportionate climate impacts								
C-2.1.1	Conduct outreach with frontline communities	Plan	Medium-term	Community Development and Human Services	• Groups/organizations in support of minorities • Vulnerable populations e.g., elderly, disabled, poor, unhoused)	$	• Lack of funding may be a barrier.	
C-2.1.2	Wildfire smoke outreach campaign	Plan	Short-term	Administrative Services and Human Services		$	• Lack of trust within the community may be a barrier to effective education. • Consider relying on existing regional data instead of investing in Burien specific research.	
C-2.1.3	Equitable access to parks and greens paces	Cap	Medium-term	PaRCS		$$$	• May be some opposition from landowners and developers.	