



Sustainability Action Plan

2022 – 2026

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Introduction

King County Housing Authority (KCHA) continues to demonstrate its commitment to employ environmentally sustainable business practices and develop healthy sustainable communities with the 2022 – 2026 Sustainability Action Plan (SAP). The SAP provides a five-year framework for KCHA to advance current sustainability practices, prepare for the impacts of climate change, pursue deeper utility cost savings, and address environmental inequities within its communities. Furthermore, the plan sets the stage for KCHA to decarbonize its buildings and operations to meet its Better Climate Challenge commitment of 50% greenhouse gas reduction over the next ten years.

History of Sustainability at KCHA

KCHA's environmental sustainability work can be traced back decades. Beginning in 2004, the organization began investing resources and developing strategies to reduce its impact on the environment through the following directives:

- Washington State Low Income Weatherization Program established in 1977
- The Sustainability Project (O'Brien & Co.) report in 2004
- KCHA Board Resolution 5005 Commitment to Sustainable Communities Through Excellence in Environmental Stewardship in 2005
- Establishment of Resource Conservation Department in 2005
- Resource Management Plan (2011 – 2016)
- Environmental Sustainability Plan (2017-2021)
- KCHA Board Resolution 5657 - In Support of KCHA's Day of Solidarity Proclamation and Commitment to Equity

Guiding Principles

At the core of KCHA's mission is to provide affordable housing and opportunity to those in need. With KCHA Resolutions 5005 and 5657 in mind (see Appendix E), the guiding principles of the SAP were developed by the Resource Conservation Department (RC), with input from internal and external stakeholders, including KCHA staff, KCHA residents, local governments, and other organizations. They serve as a link between KCHA's core mission and the desired outcomes of the SAP, and align SAP goals with local, County, State, and federal sustainability goals. The guiding principles are:

- Keep KCHA's values and mission at the core of work
- Use best available science
- Account for needs of now and the future
- Seek cost-effective solutions with co-benefits
- Responsibility to equitably serve residents and those disproportionately affected
- Act with intention and urgency

- Contribute to local, County, State, and national sustainability goals
- Build partnerships inside and outside of KCHA
- Support staff in their core functions
- Support residents in a way that provides stability, comfort, and rent stability

Pathway to Carbon Neutrality and Climate Resiliency

Climate change is one of the most fundamental and disruptive emergencies of our time, with large-scale and pervasive consequences. A threat-multiplier, it puts stress on our built environment, substantially disrupts natural provisions (such as fresh water, agrarian cycles, and clean air), increases the frequency and intensity of extreme weather events, reduces economic growth, and exacerbates inequities—all of which make basic needs like housing, utilities, and food, more expensive and scarcer. Simply put, climate change poses a direct threat to KCHA’s core mission to provide affordable, safe housing and economic vitality for those in need.

To stave off the worst effects of climate change, we must both drastically reduce atmospheric greenhouse gas emissions and prepare for the effects of our changing environment. The SAP sets the blueprint for KCHA to act on climate. It sets the foundation for decarbonizing KCHA’s daily operations, as well as preparing properties for the anticipated changes to our natural and built environment.

Equity, Diversity, and Inclusion

Sustainability is not only an environmental issue but also an issue of racial and social justice. Environmental hazards and climate change disproportionately affect low-income communities and communities of color because of direct and indirect results of institutional rules, regulations, policies, and government and/or private decisions. This plan centers its work on undoing systemic environmental injustices through building health and resiliency back into underserved communities. In order to realize this, it is essential that we include and account for the diverse voices of KCHA staff, its residents, and community members.

Sustainability Plan Strategy

To accomplish such a wide scope of environmental initiatives, KCHA will incorporate sustainability into its siting decisions, building designs, capital investments, daily decision-making, and workplace operations. The Sustainability Department will help KCHA realize this by providing internal and externally facing resources, conduct research and assessments of concepts and techniques, collaborate on and troubleshoot sustainability challenges, participate in project planning, set agency-wide environmental standards, and lead sustainability-related educational sessions for staff. The Sustainability Department will identify capital improvement opportunities at specific properties, manage sustainability projects and programs, provide in-depth data analysis and transparency, identify opportunities for collaboration with third parties, coordinate maintenance strategies, and work directly with residents to inform, educate, and support more sustainable living, without any limitations to resident access to everyday power and domestic water usage.

While some components of the SAP are similar to the past Environmental Sustainability Plan (2017-2021), the SAP scope of work expands on resource conservation specifically and examines properties

through a climate change lens. Understanding changing environmental conditions and needs will be essential for a property's longevity, financial viability, safety, and resiliency.

Measuring Success

The SAP scope of work is ambitious in its subject matter and foundational for manageable decarbonization, transformative climate adaptation and sustainable living. While the entire scope of work in the SAP cannot be quantified, each action item directly or indirectly contributes towards achieving the SAP goals and improving cross-departmental sustainability literacy at KCHA. Furthermore, the paybacks of the work within the SAP are long-term, frequently co-beneficial, and compounding; for example, there are several benefits to planting trees that are difficult to quantify but we know of their many qualitative benefits. Reaching many of these goals hinges on the assurance that external partners—like energy utilities, municipalities, King County, HUD, and government departments—live up to their own commitments so their subsequent benefits can be realized.

Sustainability Action Plan Goals

The following six SAP Goals were selected to track KCHA's progress towards improved environmental outcomes. By 2027, KCHA plans to achieve the following goals:

- **35% reduction of operational greenhouse gas emissions (MT CO₂e / sq. ft.).** KCHA has successfully decreased its greenhouse gas emissions from buildings by more than 5% over the past five years. However, transformative and swift decarbonization is imperative to avoid the worst possible outcomes of climate change. KCHA is leading housing authorities across the country in this effort. It has conducted greenhouse gas inventories for the past four years, and in 2021 it joined the Department of Energy's Better Climate Challenge¹—a program that sets a goal for 50% reduction of scope 1 and 2 greenhouse gas emissions by 2032, (compared to 2016, the baseline year), and provides guidance on reduction strategies and measurement methodology. KCHA is committing to reduce its operational greenhouse gas emissions by 35% over the next five years using a variety of reduction strategies, detailed in the Greenhouse Gas Reduction Actions section, setting the stage for a full 50% reduction by 2032.
- **100% of properties meet energy efficiency compliance level by building type (kBtu/sq. ft.).** Energy efficiency remains one of KCHA's top sustainability priorities. It provides residents with energy security, cuts utility bill costs, and reduces our impact on the environment at the energy source. Past plans have resulted in substantial energy efficiency gains to KCHA's overall portfolio, but there is a wide disparity in Energy Use Intensities (EUI – kBtu/sq. ft.) within buildings of the same type and usage. Instead of setting an overall percentage reduction target for energy efficiency, KCHA will set building type-specific EUI thresholds, and meet or exceed the thresholds for each building in its portfolio by 2027. This strategy enables KCHA to focus on the specific buildings that need the attention and resources, while monitoring buildings already measured to have high energy efficiency. Resident energy usage will not be measured on an individual basis and will not be constrained. Currently, we are in the process of conducting a comprehensive review of our energy data across the portfolio to ensure all meter data are reported on a building-by-building level. We will set EUI thresholds in Q2 2022 after the completion of building inventory and utility data review, and the update to EnergyStar Portfolio Manager. *Current Status: EUI threshold levels being evaluated*
- **100% of residences meet water efficiency compliance level.** Of the three major utility types, water and sewer costs are projected to increase the most drastically. It is a priority that KCHA continues to implement water reduction measures at its properties. KCHA will ensure that every residential building will meet the water efficiency threshold of an average of 50 gallons

¹ [DRAFT BCC Factsheet 10-15.pdf \(energy.gov\)](#)

per person per day or lower by 2027, while seeking opportunities to reduce water usage on its landscaping. Residents are encouraged to use, not waste water, and no restrictions on daily water usage will be imposed as a result of this target. *Current Status: 60%*

- **Increase on-site solar energy generation capacity by 300 kW DC.** A growing area of opportunity, on-site solar will become an increasingly important tool to reducing GHG emissions, while cutting electricity billing costs. KCHA commits to adding 300 kW of solar generation capacity by 2027, nearly doubling its overall solar capacity across the portfolio. *Current Status: 117 kW planned in 2022*
- **Divert 50% of solid waste from landfill to recycling or composting facilities.** Solid waste disposal is one of Property Management's biggest ongoing sustainability concerns. The Sustainability Department will continue to lead Property Management in right-sizing collection bins, educate residents on correct disposal methods, and provide residents with useful tools to manage their own solid waste generation and disposal. *Current Status: 45%*
- **100% of qualified properties EnviroStars certified.** Participation in the EnviroStars green business certification program has proven to be a reliable and impactful method of incorporating sustainable property management practices into everyday activities. KCHA will continue to utilize EnviroStars and aim to certify every eligible property. *Current Status: 58%*

2022 – 2026 Goals						
Goal and Description	Baseline	2022	2023	2024	2025	2026
Greenhouse Gas Emissions Reduction: 35% GHG emissions concentration reduction in measured emission (MT CO ₂ e / sq. ft.)	Y2016 3.845 MT CO ₂ e/sq. ft.	23%	26%	29%	32%	35% 2.499
Energy Efficiency: 100% of properties meeting EUI threshold (to be determined in Q1 2021)	Y2019* TBD	80%	85%	90%	95%	100%
Renewable Energy Production: Increase on-site solar generation capacity by 300 kW DC	Y2021 394 kW	460 kW	520 kW	580 kW	640 kW	694 kW
Residential Water Use: 100% of properties meeting Gallons per Person Per Day Threshold (Average of 50 Gallons per Person per Day or lower)	Y2019* 60%	68%	76%	84%	92%	100%
Waste Diversion: 50% waste diversion from landfill	Y2019* 45%	46%	47%	48%	49%	50%
EnviroStars Certified Properties: 100% of all eligible properties certified by 2026	Nov. 2021 58%	60%	70%	80%	90%	100%

*Baseline set using best available pre-COVID19 data.

Focus Areas and Actions

The SAP identifies four sustainability focus areas for, as well as actions to take to advance the focus areas. Many actions, identified below, return co-benefits, meaning their impacts improve KCHA's standing across multiple focus areas. The focus areas are:

- Greenhouse Gas Reduction
- Climate Change Preparedness
- Sustainable Property Operations and Management
- Healthy, Equitable, and Resilient Communities

Building on the success of the Environmental Sustainability Plan (2017-2021), King County Housing Authority's Sustainability Action Plan (2022-2026) elaborates on existing initiatives from past plans and identifies new areas of focus. Through months of stakeholder engagement, scientific research, policy review, and comprehensive evaluation of the efficacy of past sustainability practices, the areas of focus are based on: materiality to KCHA stakeholders; identified opportunity areas; and present and future environmental, social, and financial impacts. Additionally, the areas of focus align with King County's Strategic Climate Action Plan, which serves as a blueprint for the County's approach to addressing climate change, and its desired outcomes. The SAP sets six five-year goals (Appendix A) which guides actions and initiatives. Each goal directly or indirectly addresses one or more of the identified areas of focus:

Greenhouse Gas Reduction

Atmospheric greenhouse gas concentrations are rising beyond levels reflective of a stable climate, and the scientific community overwhelmingly agrees that humans must decarbonize to prevent the worst impacts of climate change. KCHA is committed to reducing its scope 1, 2, and 3 greenhouse gas emissions across its portfolio through multiple decarbonization strategies. For more on greenhouse gas emissions scope levels, please see Appendix A.

We will achieve this ambitious target through: continued energy reduction and decarbonization strategies like weatherization, air sealing, and improved heating systems; strategically phasing out natural gas in buildings and fossil fuel-powered landscaping power tools; electrification of our fleet and development of infrastructure to support EVs; and installation of solar arrays on our properties. While the decarbonization transition requires substantial capital, each of these strategies is considered cost-effective in the long-term, especially as natural gas prices become increasingly volatile, and governments develop and implement a pricing mechanism for carbon. Furthermore, the Sustainability Department will explore external funding sources and implementation opportunities to support KCHA reach its goal.

Actions

Energy Efficiency Measures

Energy consumption in buildings causes the overwhelming majority of KCHA's carbon emissions. Through continued energy reduction strategies like weatherization, air sealing, upgrades to heating systems, and the deployment of energy recovery systems, KCHA can achieve substantial energy savings that translate to reduced GHG emissions and savings on their energy bills. **Partners: Weatherization, Construction, Property Management, Asset Management, Development**

HVAC Equipment Commissioning

Heating and cooling systems that are not properly maintained do not run as efficiently as a regularly commissioned system. Following a HVAC commissioning schedule will ensure that equipment uses less energy, performs at its optimal level, and lasts to its designed lifespan. An effective commissioning regime will save KCHA money on its energy bills and equipment replacement costs. **Partners: Property Management, Asset Management, Maintenance**

Electrification of Buildings

Along with reducing overall energy consumption, phasing out fossil fuels from our energy mix is essential to decarbonization. Replacing natural gas appliances with electric options, as well as phasing out natural gas heating systems will not only cut emissions but also become increasingly clean as the electrical grid decarbonizes in kind. KCHA should anticipate these transitions and take advantage of emerging electricity-powered technologies and the carbon savings they deliver. **Partners: Weatherization, Construction, Property Management, Asset Management, Development**

Solar Array Installations

Renewable energy is a key tool to combating climate change, reducing dependency on grid power, and saving utility costs. On-site solar in King County currently is typically a cost-effective measure (depending on the specific property), with the system returning greater savings over its lifetime than the installation costs itself. Furthermore, solar technology is projected to improve, and its costs decrease over time, while grid power costs rise. KCHA is poised to ramp up its solar installations across the portfolio through grant funding, budgetary allocations, and other funding sources. **Partners: Weatherization, Construction, Property Management, Asset Management, Maintenance, Development**

Commute Trip Reduction

Transportation is one of King County's largest source of greenhouse gas emissions. It is essential that we decrease our dependency on cars to advance a sustainable future. Reducing the number of commutes from single occupancy vehicles by taking advantage of other transit options—such as the light rail or bus—or replacing a portion of commutes with remote work are all effective carbon reduction options, that will lower KCHA's scope 3 emissions. KCHA's new remote work policies will complement these efforts. **Partners: All KCHA staff**

Electrification of Fleet

KCHA owns and operates well over 100 vehicles that are used daily for work-based travel, and field work. Electrifying the fleet of vehicles will replace expensive and price-volatile gasoline as a fuel source with low-carbon electricity that can be delivered to vehicles right on site. Furthermore, the simplicity of electric vehicles translates into fewer breakdowns and less maintenance needs, saving KCHA both time and money. **Partners: Administrative Services**

EV Charging Station Installations

As the KCHA fleet moves toward 100% electrification, the need will grow for the infrastructure at our workplaces to support the electric vehicles. These charging stations are available to residents and the public and will gain more use over the next few years. **Partners: Administrative Services, Construction, Property Management, Asset Management, Development**

Landfill Methane Emissions

Methane, a commonly produced byproduct in landfills, is the most potent greenhouse gas. KCHA's waste diversion strategies aim to mitigate the amount of methane produced from its waste sent to landfill by leveraging recycling and composting options which do not produce methane. Right-sizing waste bins along with successful waste disposal education campaigns ensures that only necessary waste is sent to landfill, while also returning cost savings on solid waste bills. **Partners: Administrative Services, Property Management, Asset Management**

Climate Change Preparedness

While there is still possibility of reducing the worst impacts of climate change through greenhouse gas reduction, the effects of a changing climate are already being felt across King County. Average temperatures are increasing, and extreme weather events, like heavy rainstorms, winter storms, and heat waves, are on the rise in both frequency and magnitude. KCHA must prepare against these conditions to ensure safe, healthy, and comfortable living conditions for its residents. The work we plan to do over the next five years will include the following:

Actions

Heat Pump Installations

Heat pumps are commonly believed to be the best option for energy efficient, low-carbon heating and cooling. They perform well in our climate (even in heat waves) and are more energy-efficient than alternative heating and cooling options.² Advancements in heat pump technology are occurring

² <https://rmi.org/why-heat-pumps-are-the-answer-to-heat-waves/>

rapidly; equipment is getting more affordable while also improving heat pump energy efficiency and efficacy. Currently, they seem to represent the best option for providing energy efficient cooling to residents, and their application potential for multifamily housing is projected to only grow. **Partners: Weatherization, Construction, Maintenance, Property Management, Asset Management**

Energy-Free Cooling Solutions

Through minor building design changes, and utilization of emerging technologies, KCHA can reduce the building cooling load needs of mechanical systems. Providing exterior shading, and using ultra-white and insulating paint will reduce the amount of UV light that the building absorbs in the summer, thus making the cooling load for the HVAC systems more manageable. **Partners: Weatherization, Construction, Maintenance, Property Management, Asset Management**

Flood Mitigation

KCHA will continue collaborating with King County Flood Control and Adopt-a-Stream as we did recently at Illahee, Sandpiper, and Friendly Village to help mitigate issues caused by flooding. All properties will be assessed for current and future flood potential and seek assistance as needed. Furthermore, KCHA will explore the application of retention ponds, sustainable urban drainage systems (SUDS), and other environmentally friendly flood mitigation strategies. **Partners: Construction, Property Management, Asset Management, Development**

Climate Risk Assessments

While regional effects of climate change are well understood, there is a need to assess how these effects could directly and indirectly impact KCHA properties. KCHA will use the U.S. Climate Resilience Toolkit³—a suite of tools designed by a partnership of several federal agencies and organizations—to assess properties’ specific risks and vulnerabilities to our changing climate. These assessments will inform KCHA of what options are available to address the risks, help prioritize and plan, and direct action. **Partners: Property Management, Asset Management, Development**

Urban Heat Island Effect Mitigation

The Urban Heat Island (UHI) effect occurs when natural environments are replaced with the built environment, consisting of dense concentrations of pavements and buildings that absorb and retain heat at higher rates than natural landscapes. This land use change results in increased temperatures, and lower air quality, which drives up cooling energy costs, worsens air pollution levels, and exacerbates air quality and heat-related illnesses. A “threat multiplier”, climate change is and will continue to amplify these effects. UHIs are not uniformly observed; they are more likely to occur in locations that are located near industrial infrastructure and large road systems, and do not have access to green spaces—all more common in low-income communities than in wealthy ones. In King County, UHI poses a risk to residents in South King County, which is also home to the County’s largest population of people of color. Currently, KCHA is partnering with King County Department of Natural

³ Toolkit.climate.gov

Resources and Park and King County Department of Community and Human Services to develop a riverfront park in the Skyway neighborhood, providing nearby residents of multifamily properties access to green space. KCHA will continue to mitigate the UHI in affected communities by creating more natural green spaces, providing more shading to surfaces, and deploying other solar radiation reflection strategies. **Partners: Construction, Property Management, Asset Management, Development**

Sustainable Property Operation and Management

Over the years KCHA has achieved substantial gains in sustainable property operations and management through the deployment of energy and water saving measures, outreach and education campaigns, recycling and composting programs, pollution prevention strategies, and other utility consumption reduction techniques. These strategies have delivered significant environmental benefits and deep cost savings. Over the next five years, KCHA will continue to implement and expand upon existing standardized maintenance and landscaping practices, and provide analytics-driven recommendations and support to properties. Some of the actions we plan to take will occur in the following areas:

Actions

Energy Reduction

Not only does energy reduction equate to a reduction in global greenhouse gas emissions, it lowers our bills, and helps keep residents comfortable in their homes. Over the next five years, we intend to focus on the high energy using properties in our portfolio and prioritize them for energy efficiency measures whether that be insulation and air sealing, adding solar to offset energy use, installing LED lighting, or taking other measures. By focusing on the high-users and reducing their EUI we can bring all properties into a more precise range of energy use. **Partners: Weatherization, Construction, Development, Housing Management, Asset Management**

Water Reduction

With water costs on the rise and potential water shortages in many parts of the state, the Sustainability Department will help KCHA realize greater reductions in water use through the installation of low-flow toilets, “smart” irrigation systems, water-efficient appliances, shower heads and faucet aerators. We intend to offer these water reduction measures to all properties over the next five years with an early emphasis on properties with high gallon-per-person-per-day numbers. We will also look into new technologies such as using rainwater for flushing toilets or watering gardens. **Partners: Weatherization, Construction, Development, Property Management, Asset Management**

Waste Reduction

The management of solid waste at KCHA properties takes much staff time, is very expensive, and can be an eyesore. Over the next 5 years, we will work with resident services and property staff to provide

outreach and education to residents so they can properly recycle and compost and help our staff keep properties as tidy as possible. When we recycle and compost, we reduce our cost as well as the carbon and methane emissions involved with landfilling. **Partners: Property Management, Resident Services, Asset Management**

Chemical Reduction

With well over 100 multifamily properties that all need to be cleaned and maintained—a multitude of hazardous materials and chemicals are a necessary part of this work. Long-term exposure to these materials is harmful to human and environmental health. Through the EnviroStars program, our Green Purchasing Policy, and collaboration with the King County Hazardous Material Program, we plan to engage with property staff and together, come up with a chemical purchasing and use protocol that prioritizes the health of staff members. **Partners: Risk Management, Property Management, Asset Management**

Environmentally Preferable Purchasing

KCHA procures and purchases a wide variety of materials in order to carry out the daily work of housing people and these materials have varying degrees of negative impact on people, environment, and financial bottom line. It is important to be mindful about these upstream and downstream impacts when making all purchases and we plan to provide support for departments and staff to bring awareness and compliance with the KCHA Green Purchasing Guidelines. **Partners: All Departments**

Sustainable Landscaping

Maintaining attractive landscapes can be carried out in low-impact, low-chemical ways that prioritize human, plant, and environmental health or in a way that causes as much harm as it does benefit. We will continue helping property staff to follow the KCHA sustainable landscaping guide and provide trainings and learning opportunities that help instill the importance and the specific skills needed to carry out sustainable landscaping operations at KCHA properties. **Partners: Property Management, Asset Management.**

EnviroStars

The EnviroStars “green business” program provides a well-rounded series of sustainable actions that a property must take, in areas such as energy, water, waste reduction, and the proper use of hazardous materials. This provides property staff with a sustainable property management guide, of sorts, that can help them learn the basics of “being” more sustainable. We will work with EnviroStars staff to make sure that periodic reminders and assessments can be provided to ensure that the sustainable steps taken become engrained in property behavior and not forgotten. **Partners: Asset Management, Property Management**

Healthy, Equitable, and Resilient Communities

Environmental impacts do not affect everyone the same way, with underprivileged communities impacted most disproportionately. Many of KCHA’s properties, the residents they house, and the

communities they inhabit, endure higher rates of air pollution, more heat exposure, less access to less greenspaces, and more stress on their basic infrastructure. When compounded, these results have adverse health and economic impacts. KCHA will alleviate these inequities by identifying those properties that are disproportionately affected and work to develop solutions that benefit KCHA's residents and the community alike.

Actions

Tree Planting

Trees provide a multitude of benefits such as shade for people and buildings, air-filtration, reduction of "urban heat island" effect, edible food, and habitat for wildlife. We will help KCHA adopt a healthy tree removal and replacement program as well as seek opportunities to add more trees to KCHA properties.

Partners: Property Management, Asset Management, Construction

Community Gardens

Reconnecting with our natural surroundings is a critical component of feeling and being inclusive. We will continue to help residents connect with the earth and with fellow residents through community gardens. We will also help connect gardeners with local non-profit garden educators such as Tilth Alliance so they may enjoy free classes, plants and seeds, and volunteer support at community gardens. **Partners: Resident Services, Property Management, Asset Management**

Youth Program Support

A key component of the KCHA mission is to support our young people, from birth through high school, and beyond. Providing rich and diverse opportunities helps kids stay involved, the Sustainability Department plans to continue providing environmental education programming through our youth providers to reach as many of our young people as we can. **Partners: Social Impact, Resident Services, Property Management**

Sustainable Event Support

Parties and social events are a big part of KCHA community culture and provides a great opportunity to keep our "environmental footprint" as small as possible through the use of non-disposable plates, cutlery, etc. and proper disposal containers for recycling, food waste, and garbage. **Partners: Resident Services, Property Management, CO Staff**

Listening Tours and Educational Events

The Sustainability Department is committed to maintaining an open dialogue with residents and staff. We will create opportunities to engage in open conversation sessions and provide education and outreach events to provide awareness and collect feedback on a multitude of sustainability-related topics. **Partners: Resident Services, Property Management, CO Staff**

Ecosystem Preservation

With properties situated throughout King County, it isn't surprising that many of our properties share space with creeks, forests, and other natural surroundings. Being a responsible steward to these ecosystems is important so we will continue working with King Conservation District and King County Natural Lands staff to assess our properties for creek and forest preservation opportunities and resources. **Partners: Property Management, Asset Management**

Healthy Homes/Green Cleaning

Purchasing and properly using household chemicals and cleaning supplies takes can be doubly complicated for residents who cannot easily understand warning labels written in a language they may not read. We will work with resident services to provide "healthy homes" trainings and information so that families and individuals can make informed choices when purchasing and using chemicals and other potentially hazardous materials around the home. This will include connecting with the King County Hazardous Waste Program to provide multi-lingual educational materials and trainings as available. **Partners: Resident Services, Property Management, Asset Management**

Purchase Properties in Gentrified Areas

A property's location, and the nearby opportunities available, play a major role in sustainable living. Through purchasing properties in gentrified areas, KCHA residents have access to high quality schools, healthy food options (i.e. avoiding "food deserts" and "food swamps"), public transportation, and job opportunities. KCHA will continue this practice to ensure that the infrastructure, amenities, goods and services available to the wealthy are also made available to their residents.

Weatherization of Privately Owned Low-Income Properties

KCHA's Weatherization department will continue to weatherize privately owned low-income homes to lower residents' cost burden to heat and cool their homes, and thus alleviating energy poverty in the region. Furthermore, saving energy in privately owned homes will reduce residents' greenhouse gas emissions and support county and statewide decarbonization efforts.

Internships / "Green Jobs" Introductions

The Sustainability Department can engage with and improve equity and diversity at KCHA by identifying and connecting KCHA youth to internship options through partner organizations, municipalities, and contractors, encouraging KCHA youth to apply for Sustainability internships, and connecting them with youth providers and local colleges to find job fair and especially "green jobs" opportunities for residents and youth to explore. **Partners: Social Impact, Resident Services, Property Management, Asset Management**

Green Team

The KCHA Green Team has brought sustainably-minded staff together to share in their common interest and give back to the community through sustainable actions for well over a decade. Beginning in 2022 the Green Team will seek new opportunities to help advance sustainability goals and actions through an open and collaborative relationship with departments, committees, staff, and residents. Providing information/recruitment sessions to build membership and get to know staff will be a priority. **Partners: All Departments and Staff**

Summary of Appendices

Greenhouse Gas Scopes Explained (Appendix A): This table details the six SAP goals, and the annual targets, which will be used to measure the impact of the five-year implementation strategy, and the annual progress towards the goal.

Sustainability Action Plan Overview (Appendix B): This document includes a list of action items to accomplish the SAP goals. The listed items are categorized by impacted area of focus—Greenhouse Gas Reduction; Climate Change Preparedness; Sustainable Operation and Management; and Healthy, Equitable, and Resilient Communities—and are marked as continued or new action items.

Sustainability Action Plan Timeline (Appendix C): This table outlines the estimated timeline to implement the SAP Overview.

Sustainability Accomplishments (Appendix D): This document summarizes KCHA’s past sustainability accomplishments and serves as context to the work that has led the agency to the SAP.

KCHA Board Resolutions (Appendix E): A compilation of KCHA Resolutions approved by the Board of Commissioners that have informed the SAP guiding principles.

Greenhouse Gas Protocol Scopes (Appendix A)

Accounting for GHG emissions can be tricky due to several reasons. Primarily, there are many kinds of GHGs that each interact with the climate in different degrees and durations. Additionally, organizations have varying levels of ownership and responsibility for these emissions which in turn calls for a method which segregates these emissions appropriately.

Organizational boundaries are determined using an equity share or control approach. Under the equity share approach, the reporting organization is only responsible for the emissions proportional to the amount of equity they have in the operation. Under the control approach, the organization accounts for 100% of the emissions from operations over which it has either financial or operational control. For KCHA it becomes important to consider this issue when evaluating certain sources of emissions, like energy consumption, where GHG impacts are due to both technology and management efficiencies. For example, though common area energy bills are paid by KCHA, the agency doesn't have direct control over residents' consumption. However, given that decisions about capital improvement and major appliances are made by KCHA, opportunities do exist for the agency to reduce emissions from residential units' daily use. Since data is not entirely available at this segregated level, this GHG inventory assumes KCHA has operational control over the entirety of their properties and thus all emission sources accounted for are assumed to be fully under KCHA control.

Operational boundaries are based on the emissions generated as a direct or indirect result of the organization's operations. Due to the different types of emissions associated with different kinds of activities and varying control over these emissions, they can be classified into scopes for further consideration. According to the GHG Protocol, operational boundaries can be divided up into three scopes:

- Scope 1: Direct emissions owned or controlled sources. For example, emissions from company vehicles.
- Scope 2: Indirect emissions from generation of purchased energy. For example, emissions from purchased electricity.
- Scope 3: Upstream and downstream emission activities. Emissions associated before and after the creation of a product, such as transportation or capital goods.

Scope 1 and 2 are relatively easy to identify and estimate, since data for these emissions are often accessible. Organizations leading their industries in carbon accounting are now also accounting for Scope 3 emissions, however they are generally much more difficult to quantify. Figure 1 provides a visual representation of these scopes with additional examples.

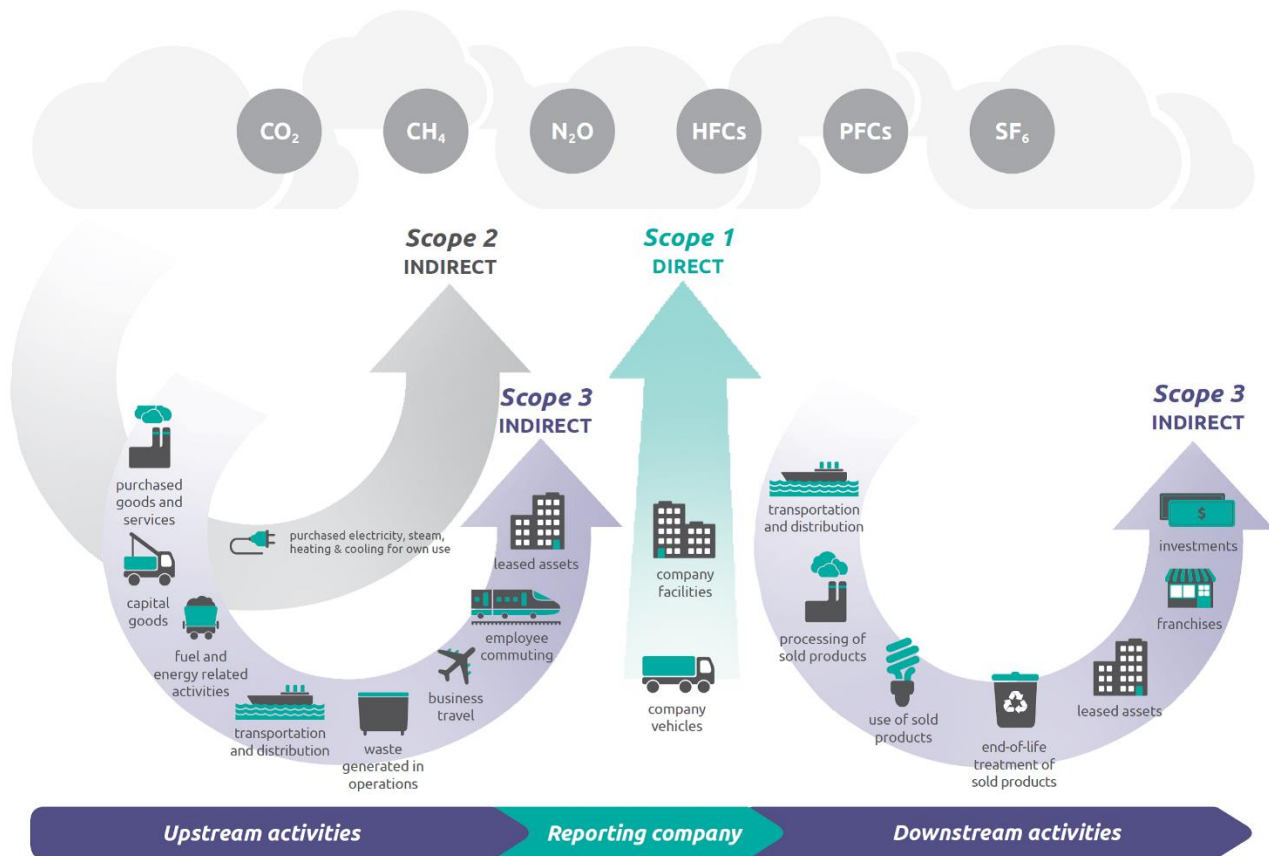


Figure 1 - Overview of GHG Protocol scopes and emissions⁴

⁴ [Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf \(ghgprotocol.org\)](#)

Sustainability Action Plan Overview 2022 – 2026 (Appendix B)

2022-2027 Actions / Initiatives	GHG Reduction	Climate Change Preparedness	Sustainable O+M	Healthy Resilient, Equitable Communities
Energy efficiency measures	• x		• x	
HVAC equipment commissioning	•	• x	•	
Electrification of buildings	x		x	
Commute trip reduction strategies	• x			
Electrification of fleet vehicles	• x		• x	• x
EV charge stations	x		x	x
Landfill methane emissions tracking	•			
Heat pump installations	x	x	x	
Solar array installation	• x	• x	• x	• x
Climate risk assessments		x		
Urban heat island assessments		x	x	x
Water reduction measures		•	•	
Waste reduction measures	•		•	
Environmentally preferable purchasing			•	
Sustainable landscape management practices		• x	• x	• x
EnviroStars	•		•	•
Green team reorganization	x	x	x	x
Tree planting	x	x	x	x
Community gardening			•	•
Youth program			•	•
Sustainable events			x	x
Healthy homes / green cleaning			• x	• x
Wellness program			•	

2022-2027 Actions / Initiatives	GHG Reduction	Climate Change Preparedness	Sustainable O+M	Healthy Resilient, Equitable Communities
Internships and green jobs	x	x	x	x

x : implementation of new strategy

●: Continuation of existing strategy

[illegible]

Sustainability Accomplishments (Appendix D)

KCHA's long history of sustainability efforts has resulted in a variety of environmental achievements. Energy and water efficient building upgrades have saved roughly \$170 thousand since 2011. 100% of KCHA properties have recycling services, which has saved an estimated \$72 thousand per year since 2014. Overall water use per person has dropped by almost 9% since 2010, and since 2012 whole property energy use has been reduced by 5%. KCHA has established green purchasing policies, developed certified green buildings, and engaged with residents about utility bill and healthy home management.

Key Accomplishments and Goals from Past Plans

Energy efficiency

- In 1976, KCHA's established the Weatherization Assistance Program with funding from the U.S. Department of Energy to provide low-income property owners free-of-charge weatherization services. Since 1998, KCHA has spent almost \$47 million in federal, state, and local grant funds to weatherize over 10,000 low-income households in the King County area.
- Since 2012, KCHA has reduced the entire portfolio's whole building energy use per square foot (EUI) by 10%, and lowered common area KCHA paid energy consumption by 19%.
- ENERGY STAR appliances are installed in all residential units, and buildings have been retrofitted with better insulation, more energy-efficient windows and high-efficiency boilers.
- LED lighting has replaced both incandescent and older CFLs to save energy, increase illumination and improve security.
- Since 2011, KCHA has installed more than 500 kW of solar photo voltaic (PV) systems at six properties.

Water Quality and Storm Water Management

- In new developments, permeable surfaces, landscape swales and rain gardens have been installed to filter storm water, and reduce runoff.
- Buffer zones around streams have been added to protect water quality and fish habitat.
- Rainwater harvesting cisterns have been installed at community gardens, and landscapes have been designed to be low maintenance and drought tolerant.

Waste reduction

- 100% of KCHA properties have recycling services, and at least 21 are composting food.
- KCHA manages all files electronically, and encourages two-sided printing.
- Administrative offices provide recycling, food waste composting, plastic bag, Styrofoam and electronic equipment recycling.
- Donation bins are provided on-site at multifamily properties to help divert reusable items from the garbage.

Human Health

- For all new construction and major renovation projects, KCHA uses green-building principles established by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, the Master Builders Association of King and Snohomish Counties' Built Green® program, and/or the Evergreen Sustainable Development Standards.
- Often Energy Recovery Ventilation (ERV) systems are installed to improve air quality and reduce the potential for mold.
- Janitorial services are required to use environmentally friendly products and cleaning techniques.
- 59 qualifying properties have been certified by the King County EnviroStars program for exceptional management of hazardous waste materials.
- 100% of properties are smoke-free.
- Many properties have P-Patch community gardens, and often residents are permitted to garden in front of their units or around the property.

Transportation

- KCHA is growing its motor pool and maintenance vehicles fleet of fuel efficient/hybrid vehicles. By 2033, 100% will be non-gasoline powered.
- Transit subsidies are provided to staff and telecommuting options are available to minimize car use. KCHA also offers a guaranteed ride home program for people who commute via vanpool or public transportation.

- Seven electronic vehicle charging stations have been installed at multifamily properties and administrative offices. Six more are planned for the next few years.

Procurement

- We require that the products we purchase have a lesser impact on the environment and human health. Environmentally Preferable Purchasing Guidelines have been written to support staff in their purchasing decision making.
- We urge staff and contractors to reduce consumption in the office, in the management of our properties and during construction.

Resource Conservation

- KCHA employs three full-time resource conservation staff dedicated to implementing the 2011-2016 Resource Management Plan and 2016-2021 Environmental Sustainability Plan. This staff monitors utility bills, assesses properties for environmental improvements, and educates residents and staff about managing utilities and reducing KCHA's impact on the environment.

KCHA Board Resolutions (Appendix E)

THE HOUSING AUTHORITY OF THE COUNTY OF KING

RESOLUTION NO. 5005

COMMITMENT TO SUSTAINABLE COMMUNITIES THROUGH EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP

WHEREAS environmental stewardship should be an important element in the provision of affordable housing in the communities KCHA serves; and

WHEREAS the Authority, in the course of providing and maintaining affordable housing, undertakes operations that have varying degrees of impact upon the environment; and

WHEREAS the Authority is committed to improving energy efficiency, reducing waste and pollution and operating in a more environmentally sustainable manner; and

WHEREAS *sustainability* is defined as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs; and

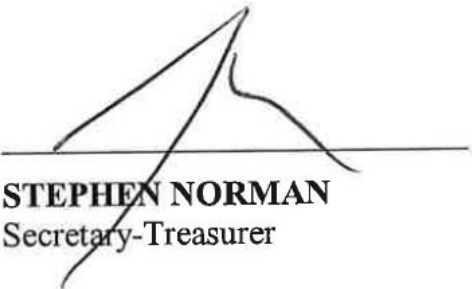
WHEREAS sustainability in Authority operations entails a systemic evaluation of the long-term impacts of our activities on the environment and the community; and

WHEREAS the Authority intends to make continuous progress towards sustainability in all operations; to consistently provide high quality housing that enhances the well-being of residents; to purposefully prioritize the social and economic vitality of local communities; to protect natural resources and demonstrate long-term financial responsibility through creative, environmentally-responsible practices; to empower the participation of employees, residents and other stakeholders in achieving these goals; to effectively communicate progress and celebrate achievements with employees, residents and the communities we serve and to solicit and respond to feedback on our performance.

NOW THEREFORE, BE IT RESOLVED, BY THE BOARD OF COMMISSIONERS OF THE HOUSING AUTHORITY OF THE COUNTY OF KING:

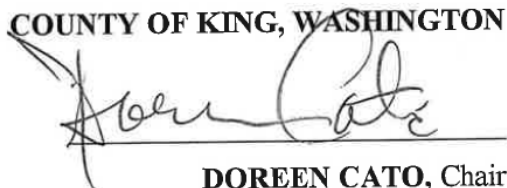
The King County Housing Authority is committed to reducing the environmental impacts of its operations and to creating environmentally sustainable communities as part of its core mission.

ADOPTED AT A MEETING OF THE BOARD OF COMMISSIONERS OF THE HOUSING AUTHORITY OF THE COUNTY OF KING THIS 9TH DAY OF MAY2005.



STEPHEN NORMAN
Secretary-Treasurer

**THE HOUSING AUTHORITY OF THE
COUNTY OF KING, WASHINGTON**



DOREEN CATO, Chair
Board of Commissioners

THE HOUSING AUTHORITY OF THE COUNTY OF KING

RESOLUTION NO. 5657

**A RESOLUTION IN SUPPORT OF KCHA'S DAY OF SOLIDARITY PROCLAMATION
ON JUNE 19TH 2020**

WHEREAS, pervasive and systemic racism, social injustice and barriers preventing equity and equitable opportunity persist in the United States and disproportionately harm Black, Indigenous and Other People of Color; and

WHEREAS, the mission of the King County Housing Authority to transform lives through housing must be based upon a foundation of equity both within our organization and within our programs that serve communities across King County; and

WHEREAS, the King County Housing Authority is committed to ensuring that its policies and programs afford equitable treatment and opportunities for its workforce and the Black, Indigenous, and Other People of Color communities that it serves; and

WHEREAS, the King County Housing Authority will collaborate with our communities to identify and address the longstanding impacts of systemic racial discrimination through outreach to our residents, community partners and program participants; and

WHEREAS, June 19th is observed in Washington State and across the nation as the holiday celebrating the end of slavery in the United States; and

WHEREAS, the Housing Authority celebrated June 19th, 2020 KCHA's first annual "Day of Solidarity"; and

WHEREAS, KCHA's Race, Equity, Diversity, Inclusion (REDI) Team drafted and Executive Director, Stephen Norman, issued a Proclamation on June 19th, 2020 reaffirming KCHA's commitment to racial justice and equity both within the organization and within the communities we serve and calling for June 19th to become KCHA's annual "Day of Solidarity";

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE HOUSING AUTHORITY OF THE COUNTY OF MARTIN LUTHER KING JR., WASHINGTON; as follows:


1. June 19th is hereby established as KCHA's annual "Day of Solidarity" with Black, Indigenous and Other People of Color. The Executive Director and leadership team are directed to establish work hours, events and activities that help recognize and celebrate KCHA's commitment to racial equity and social justice.
2. The Executive Director and leadership team are directed to review KCHA's policies, procedures and processes and eliminate any that disproportionately harm Black, Indigenous, and Other People of Color in our workforce and in our communities.
3. The Executive Director and leadership team are directed to provide the support and resources to the Racial Equity, Diversity, and Inclusion Team needed to carry out its mission.
4. The Executive Director and leadership team are directed to establish group and individual training programs in racial equity, diversity, inclusion and implicit/explicit bias for current and new employees to improve employee competencies, skills and communication with regard to systemic racial and social injustice.

**ADOPTED AT THE MEETING OF THE BOARD OF COMMISSIONERS OF THE
HOUSING AUTHORITY OF THE COUNTY OF MARTIN LUTHER KING JR. AT AN OPEN
PUBLIC MEETING THIS 20th DAY OF JULY, 2020.**

**THE HOUSING AUTHORITY OF
THE COUNTY OF KING,
WASHINGTON**


Douglas J. Barnes, Chair
Board of Commissioners

ATTEST:


Stephen J. Norman
Executive Director and Secretary Treasurer