



CITY OF KIRKLAND SUSTAINABILITY MASTER PLAN

YEAR 2022 REPORT CARD



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Left (from top to bottom): Park Lane at night; Kirkland Urban Street Fair; Tree Giveaway Event with King Conservation District Staff.

Above (from top to bottom): Meadow Restoration at Juanita Bay Park; Forbes Green Rain Garden installation.

YEAR TWO (2022) OVERVIEW

The Sustainability Master Plan was adopted in December 2020, making 2022 the second year of implementation progress for reporting. Post pandemic protocols in place during 2022 were conducive to virtual, in-person meetings and hybrid meetings and events, and the City government used expanded means of public outreach to significantly advance SMP implementation.

The SMP has over 200 actions organized amongst eight focus areas. These actions range from low to high levels of effort and cost to implement. The SMP is a living plan that can change over time, but was designed with an approximately 10-year timeframe in mind. Staff is keeping track of elements of the plan that would be appropriate to change in the future, as much has been learned about how to improve achieving the goals of the SMP. Any future amendments will make this master plan more relevant over the coming years. It is expected that there will be changes to the SMP that acknowledge changes in legislation, new technology, new countywide planning policies, and process improvements.

In addition to quarterly reports of progress on the SMP, this second report card shows what City Council, City staff, and the larger community are working on to create collective impact and make Kirkland an even more sustainable, equitable and inclusive community. Over 2023, staff will work with subject matter experts to integrate more actions of the SMP into work plans, and build sustainability and equity-driven decision-making into City processes over the coming years so that sustainability continues to evolve into an enduring organizational trait.

Completed Actions

Fifteen Distinct Actions Were Completed in 2022

- Action ES-5.2
- Action BI-1.1
- Action BI-3.5
- Action LT-5.3
- Action EV-1.3
- Action EV-9.1
- Action EV-9.3
- Action SM-4.1
- Action SB-2.2
- Action SG-1.11
- Action SG-2.3
- Action SG-3.2
- Action SG-4.1
- Action HC-4.3
- Action HC-6.2

2022 in numbers



Nearly 448 solar arrays are generating power in Kirkland, a 13% increase over 2021



2 Yard Smart Rain Rewards projects were installed at Kirkland residences along with 5 native landscape projects that manage over 103,000 gallons of rainwater



More than 879 trees were planted in Kirkland parks and natural areas and over 70 trees were given away and planted on private property!



Collected over 9,000 pounds of batteries at City facilities. This is the equivalent to the weight of three medium sized cows!

YEAR TWO (2022) PROGRESS

Action status by focus area. In progress actions indicate one-time actions that staff have started to work on. Ongoing actions indicate recurring and regularly occurring activities that have begun. Ongoing activities encompass multiple services and projects, and are likely to remain ongoing for the entire time period, while actions in progress have a defined completion point.

Energy Supply and Emissions (20 actions)



■ 1 action completed ■ 3 actions ongoing □ 16 actions not started

Buildings and Infrastructure (13 actions)



■ 3 actions completed ■ 0 action in progress □ 10 actions not started

Land Use and Transportation (21 actions)



■ 1 action completed ■ 14 actions ongoing □ 6 actions not started

Natural Environment and Ecosystems (37 actions)



■ 6 actions completed ■ 20 actions ongoing and in progress □ 11 actions not started

Sustainable Material Management (17 actions)



■ 2 actions completed ■ 9 actions ongoing and in progress □ 6 actions not started

Sustainable Governance (35 actions)



■ 6 actions completed ■ 4 actions ongoing and in progress □ 25 actions not started

Sustainable Business (13 actions)



■ 1 action completed ■ 6 actions ongoing □ 6 actions not started

Healthy Community (39 actions)



■ 3 actions completed ■ 8 actions ongoing and in progress □ 28 actions not started



ENERGY SUPPLY + EMISSIONS

Purchased Pipeline Gas

Action ES-5.2 has been completed with the pilot Energy Smart Eastside (ESE) heat pump campaign and its related incentives that educate, encourage and facilitate the purchase of energy efficient, all-electric heat pumps that cost much less to operate than older electric heating. The costs for pipeline gas (AKA natural gas) are expected to increase in the future, so promoting the conversion now will both reduce carbon emissions and reduce household heating and cooling expenses. More than 24,000 customers in Kirkland use pipeline gas.

The ESE heat pump campaign will begin offering additional incentives to property owners in 2023 for switching from heating/cooling appliances using pipeline gas to heat pumps. The campaign incentives will be funded by a Washington State Department of Commerce Community Energy Efficiency Program grant. This additional incentive is important because Puget Sound Energy (PSE) provides a financial incentive to convert from an electric furnace or resistance heating unit to a heat pump, but has historically provided less incentive to switch from a pipeline gas furnace to a heat pump. The City, in its partnership with other eastside cities, will work to encourage PSE to consider offering greater fuel switching incentives to help bridge this funding gap for customers across all income levels.

What's next? The ESE campaign expects to expand beyond heat pumps in 2023 and will consider offering all-electric heat pump water heaters, which may provide another opportunity to switch from a gas-powered water heater to an all-electric and more efficient water heater. Heating of space and water in buildings represents the most significant use of pipeline gas in buildings. Offering the community more ways to eliminate pipeline gas use in the home can provide health benefits to the occupants of buildings and also reduces the community's carbon emissions.



Heatpump Fan Unit



BUILDINGS + INFRASTRUCTURE

High Performing Buildings

The City has completed Action BI-1.1 by improving the existing voluntary priority Green Building program, which expedites the review of single-family homes pursuing Built Green certification, and expanding its reach to include all building types and allowing a variety of 3rd-party certifications. This incentive-based program was implemented through adoption of High Performing Buildings zoning standards, and offers an expedited permit review timeline for all building-types, which will increase energy efficiency, the use of healthy materials and indoor air quality improvements, recycling and reuse of building materials, and renewable (solar) energy production. This program's requirements are all certified by an independent third party. The construction of these certified buildings, which will be net-zero energy ready, helps the community prepare for a clean energy future as electricity in Washington State will come entirely from renewable sources by 2045. The High Performing Building Program will formally launch in March 2023.

Existing Home Energy Efficiency

Action BI-3.5 has been accomplished with the creation of the Energy

Smart Eastside (ESE) heat pump campaign, which seeks to help homeowners learn about more efficient ways to heat and cool their homes. This effort is a collaboration of the Eastside Climate Partnership comprising the cities of Kirkland, Bellevue, Issaquah, Mercer Island and Redmond. The current pilot program educates the community on the benefits of heat pumps, sets households up with a vetted installer, and provides incentives to purchase heat pumps. This action has also created partnerships that will help low-income households equitably access heat pumps. Our partners include Gensco and Mitsubishi of North America, King County Housing Authority, SparkNW (a local Non-profit that is administering the heat pump webinars and marketing), and Hopelink, which is helping handle direct marketing and payment for income qualified clients to get heat pumps at no cost.

What's next? The Energy Smart Eastside Campaign seeks to broaden its offerings in 2023-2024 to include heat pump water heaters, induction cooktops, and to consider ways to offer whole-house energy efficiency audits along with education about the Inflation Reduction Act, which offers incentives to property owners for upgrades that reduce energy use and the use of fossil fuels.



Station Area Planning for Sustainability

In June 2022, City Council adopted a plan for the NE 85th Street Station Area. The Station Area Plan (SAP) and its embedded mobility plan, along with related Comprehensive Plan and Municipal Code amendments, creates the framework for a walkable, equitable, sustainable, and complete transit-oriented neighborhood. The plan seeks to leverage the regional investment being made by Sound Transit’s forthcoming Stride Bus Rapid Transit (BRT) service at NE 85th St. and I-405, and directly addresses several SMP goals by increasing the allowed density of housing, jobs, and services within a 10-minute walk radius of the future high-capacity transit, expanding the supply of affordable housing, creating green streets and infrastructure, and developing new connected open space. Implementation of the plan, through amendments to the Zoning Code for the area, will require compliance with the City’s High Performance Building standards and have enhanced requirements for sustainable landscaping.

5 Ways the Station Area Plan is Advancing Sustainability Master Plan Actions

1. Promotes Smart Growth principles that encourage a mix of building types and uses, diverse housing and transportation options, and infill of existing neighborhoods (Action LT-2.3 and LT 2.4).
2. Focuses housing and jobs growth near future high-capacity transit, and along a major transit corridor, to give more people access to

transit options and retail and services in the district (Action LT-2.3 and LT 2.4).

3. Identifies improvements to the active transportation network (e.g., wider sidewalks, more bike lanes, mid-block connections) that will be completed as the district develops to make it easier for people to walk, roll, and bike to and through the Station Area (Action LT-4.1, LT-4.5, LT-4.6, LT-4.7).
4. Encourages modes of travel besides single-occupancy vehicles by adopting transportation demand management (TDM) standards, reduced vehicle parking requirements, and increased bike parking requirements for new development, and enabling future innovation in first/last mile connections (Action LT-3.3, LT-3.4, LT-5.1, LT-5.2).
5. Creates a sustainability framework to establish the Station Area as a demonstration district that maximizes opportunity for innovation and community benefit around climate action and resilience by requiring all new buildings to be High Performing Buildings and meet a minimum “Green Factor” score, which promotes permeable pavement, green roofs, vegetated walls and preservation of existing trees.

In the midst of substantial station area planning work, Action LT-5.3 : Work with regional transit agencies to provide equitable and inclusive access to fare payment options was completed by offering free Orca passes to youth to ride public transit at no cost.

What’s next? Initial zoning code amendments to implement the Station Area Plan Form-based Code were adopted in 2022, and the complete package of needed amendments will be completed in 2023.

NATURAL ENVIRONMENT + ECOSYSTEMS



Protect and enhance water quality of Kirkland’s streams, lakes and wetlands

Action EV-1.3 (Assess and prioritize watersheds and actions that will improve water quality) was completed in 2022. Juanita and Forbes Creek are the highest priority watersheds. There is ongoing work for the Totem Lake Subbasin (Juanita Creek Basin) to determine actions within the subbasin that can be made to improve water quality. These include short term actions for targeted stormwater program implementation, including inspecting businesses to reduce potential pollution, promoting Yard Smart Rain Rewards and Tree Rebate Programs, and conducting maintenance activities that support pollutant removal. Long term actions include identifying, designing and constructing water quality projects.

Continually improve parks to meet active and passive recreational needs of Kirkland residents by reducing barriers to participation and providing universal access

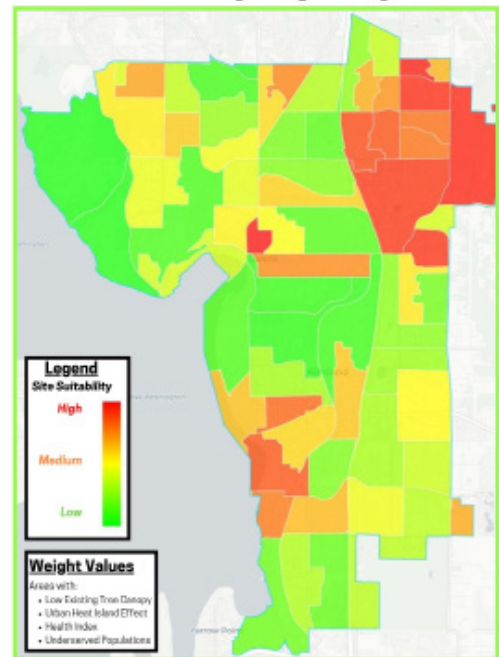
In 2022, Action EV-9.1, to conduct an accessibility and inclusivity review of parks, recreational facilities and facilities, was performed and the information learned was incorporated into the Kirkland Parks, Recreation, and Open Space (PROS) Plan. Action EV-9.3, to update the PROS Plan and Action EV-9.2, to add an accessibility and inclusivity capital project fund to the Parks and Community Services capital improvement program, were both achieved. These successes help Kirkland implement projects that make it easier for all community members to equitably access the Kirkland Park system over the coming years.

What’s Next?

Urban Forestry Focus: In 2023, we will continue to collaborate across departments and utilize new data and tools such as our updated Tree Inventory and Tree Equity Map to secure grant funding to proactively manage and plant trees in both public and private spaces. These efforts will be focused in areas of the City with lower canopy cover and

known socioeconomic and environmental factors such as high poverty levels, increased exposure to warm temperatures, and known health issues relating to poor environmental conditions.

Tree Equity Map



Urban Heat Island: Identifies residential, commercial, and industrial zoned areas with high impervious surface area.
Health Index: Created from self-reported poor mental health, poor physical health, asthma, and coronary heart disease equally weighted and combined to create a score from 0-100. This index was calculated with the CDC PLACES dataset.
Underserved Populations: The percentage of residents living below the poverty level.



SUSTAINABLE MATERIALS MANAGEMENT

Recycling

The City achieved Action SM-4.1 by completing a contract with Waste Management, which includes a multi-family program to recycle larger, difficult items. The free pickup and reduced costs support sustainability by reducing illegal dumping activity and ensuring bulky items with refrigerants like Chlorofluorocarbons (CFC's) in older appliances are managed in an environmentally-responsible way.

Recycling Batteries Helps the Environment in More Ways Than One

In a world of increasing interest and use of technology, batteries play a leading role. They power handheld devices, laptops, and cars, and are the ultimate energy storage capsules. They are precious and disposable, and under the Washington State Universal Waste Rule, batteries are prohibited from being disposed of in a landfill by businesses, and residents are strongly encouraged to recycle batteries. In the U.S. only 12-15% of rechargeable batteries are recycled, and an even lower percentage of single-use batteries are recycled. The City of Kirkland has multiple battery collection sites (Kirkland City Hall and North Kirkland Community Center) and hosts collection events throughout the year. Since 2011, the City has collected 101,016 pounds of batteries averaging around 8,000 pounds per year at a total cost of \$95,485.14.

Rechargeable and single-use batteries contain toxic materials, such as mercury, lead, cadmium, and sulfuric acid, that can leak and pose environmental risks when not properly stored or disposed. With an increase in the number of rechargeable battery products, more batteries are entering the waste stream than ever before. Due to batteries being mishandled or improperly disposed of, there has been an increase in fires at Materials Recovery Facilities (MRF), trucks, and landfills.

Recycling batteries contributes to a more circular economy, encouraging reuse of materials domestically and globally. The National Renewable Energy Laboratory has been researching the potential for electric vehicle batteries to have a “second use” prior to recycling as renewable energy storage. This could potentially reduce the cost to recycle lithium-ion batteries and creates a market for batteries beyond their first use. The Battery Recycling table shows more examples of what batteries are recycled into. The City will continue to accept batteries and encourage more residents to keep recycling responsibly.

Battery Recycling

BATTERY TYPE	EXAMPLES/USED IN	COMMONLY RECYCLED INTO...
RECHARGEABLE > Nickel cadmium (Ni-Cd) > Nickel metal hydride (Ni-MH) > Lithium-ion (Li-ion) > Small sealed lead acid (SSLA/pb)		> Pots and pans > Silverware > Golf clubs > Steel > Stainless steel > New batteries
SINGLE-USE LITHIUM > Lithium		> Silverware > Stainless steel > Golf clubs > New batteries
SINGLE-USE ALKALINE > Alkaline > Zinc-carbon > Zinc-chloride (heavy duty)		> Steel > Silverware > Pots and pans > Road asphalt aggregate



SUSTAINABLE GOVERNANCE

Integrate Sustainability into Every Major Decision the City Makes

Action SG-1.11, to explore creating an anti-idling policy for city-operated vehicles, was completed in 2022 by a combined community effort that was Council-supported. The Public Works Department went beyond exploration and crafted a new policy in the City's Administrative Policy Manual that applies to city vehicles.

Coordinate Sustainability Programs or Policies Across all City Departments

In 2020 and 2021, during the world-wide pandemic, many office-based city staff members worked virtually while keeping city operations going and providing required services. City Hall in-person services were provided for all of 2022, and city departments enacted policies that allowed many office-based staff to work from home (two to three days per week) if the position could be done from home. This approach has allowed the City to complete Action SG-2.3 — to establish a protocol that allows eligible staff to work from home two days per week.

Examine the City's Purchasing Policies to Focus on More Environmentally-Preferable Purchasing

Action SG-3.2 – explore specifying organic compost in City projects — was completed with a compost procurement ordinance (O-4841) that was proposed in 2022 and adopted by City Council in January 2023. The adoption of this ordinance ensures

that Kirkland meets the legal requirements of the Washington State Organics Management Law, and requires the City to consider whether compost products can be used in City projects, such as landscaping, construction, and low impact development. If possible, the City must prioritize purchasing locally-produced compost created from locally collected compost programs.

Ensure Public Processes for Public Participation are Fair, Accessible and Inclusive

Action SG-4.1, which implements a system of civic engagement that more closely coordinates activities across various City departments, was completed when the Diversity Equity Inclusion and Belonging (DEIB) Manager and Communications Program Manager established a monthly meeting of outreach and engagement staff from across departments. This team receives training, collaborates on best practices, and coordinates on community meetings and similar events.

SUSTAINABLE BUSINESS



Economic Diversity and Supporting Local Businesses

Content Several initiatives supported by federal ARPA funds launched to aid the recovery and growth of small businesses. In 2022, Action SB-2.2: Partner with the Greater Kirkland Chamber of Commerce & the Kirkland Downtown Association on promoting “Buy Local”, was accomplished by the integration of the ShopLocalKirkland.com website with the City’s tourism platform. This action has helped strengthen programming, engagement and marketing and the outcome is that more than 300 of Kirkland’s smallest businesses are published on the platform.

Kirkland Ca\$h is a community currency intended to boost the local tourism and hospitality industries, which were negatively impacted by the COVID-19 pandemic. The city launched the first Kirkland Ca\$h program in April 2022. K-Ca\$h incents overnight hotel stays in the city and can only be spent at participating local businesses. More than 120 businesses now redeem Kirkland Ca\$h and benefit from free marketing and new customers. The first Kirkland Ca\$h program generated 300 new nights generated for participating hotels; \$70,000 in revenue generated for hotels from Kirkland Ca\$h bookings; 654 unique certificates generated by hotels; \$9,100 in revenue generated for local businesses; 44.6% average up-spend reported by businesses.



What’s next? A second tourism support Kirkland Ca\$h initiative launched for winter 2023 with a third planned to support arts scholarships summer 2023. Startup425 plans a pivot to support underserved business sectors and training in Washington State’s Office of Minority and Women’s Business Enterprise certification and one-on-one business assistance are planned in partnership with the Small Business Development Corporation.

HEALTHY COMMUNITY



Reduction of Potable Water Usage

In 2022 completed Action HC-4.3 Intensify water conservation through public/private partnerships and outreach and education. Our water purveyor, Cascade Water Alliance distributed 911 dye packet kits to the community to help detect leaks in toilets. Based on a formula of 50% usage of 450 kits, and subsequent repair of 225 toilets and saving an average of 100 gallons of water per day = 22,500 gallons X 365 days = savings of 8 million gallons of water per year. Saving this amount of clean potable drinking water is significant and coupled with more efficient water fixtures and other forms of water conservation could be ever higher next year.

Addressing the Homelessness Crisis in Kirkland

Action HC-6.2 to secure funding for more shelter and day center services for all groups experiencing homelessness on the Eastside was completed in 2022 and this work is ongoing to help more people. The City’s Human Services division was able to secure \$2.6 million per year in human services grant funding for the 2023-2024 budget cycle and 30% of that funding will be used to support housing/homeless programs.

What’s Next for Diversity, Equity, Inclusion and Belonging (DEIB)?

In furthering the work on implementing the DEIB roadmap, the following actions could be considered in 2023 and beyond.

1. Action HC-8.2: Explore partnership programs to implement community learning and dialogue around diversity, equity and inclusion. Some of the activities related to working on this action include:

- The City Leadership Program: Designed to help anybody who wants to learn how the City operates and the relevant opportunities that are available.
 - Equity in Contracting: An examination of how the City seeks out equitable access in awarding contracts and expanding it to offer resources and training to those that would like to do business with the City, and may not know how or have capacity to do so.
 - Equity Assessment Tool: This tool was initially designed to expand equitable outreach for City initiatives, and now has advanced to creating an assessment tool that is easy to use and helps populate relevant data needs for our Financial Managers and others.
 - Welcoming America: The City is seeking this certification and will also be developing a welcoming packet that is a robust list of resources for those arriving in Kirkland. This packet would be published in many languages to reach more community members and would address the needs of people in all economic circumstances.
 - Mobile Pop-Up Cultural Resource Center: A mobile conference center could move around to different city facilities or to other locations such as places of worship. It could help more people by offering services such as translation and assistance filling out forms.
 - City’s volunteer Program: Could be expanded to include Volunteers who are multi-lingual and can translate documents or provide translation services at public presentations.
2. Action HC-8.3: Encourage the strengthening of relationships between various groups and communities in Kirkland:
 - A complementary activity from the DEIB Roadmap could be establishing a proactive network of civically underrepresented community members who are interested in providing input about and from their lived experiences as part of City feedback collection processes.



Community

Community participation plays an essential role in achieving sustainability. Volunteers are vital for restoring Kirkland’s natural areas. The choices residents and businesses make to help the environment add up, like using alternative forms of transportation such as walking, biking or taking public transit, or minimizing unnecessary trips that involve driving. Behavior changes, such as purchasing less or finding used items instead of buying new ones, or even using salvaged building materials or giving away materials not used in home remodeling projects, make a difference. Community-led initiatives can also complement actions the City government is taking to further sustainability.

Community Initiatives

The anti-idling effort in 2022 was very successful. The community-led campaign educated the entire community about wasted gas and increased emissions related to idling and pointed out that idling a vehicle creates more pollution and can be avoided. The governing message “turn-it-off” and flyers were distributed and tabling at events occurred during the year to educate the public.

This community effort encouraged the City evaluate its own operations, which led to a new administrative policy for the City fleet which is in effect now. This was a successful collaboration that went beyond expectations.

Students completed a six-month pilot of the Sustainable Neighborhoods Ambassador Program (SNAP!) using funding from City Council, Cascade Water Alliance, and the King County WaterWorks Grant. The students created impact projects that centered around actions in the Sustainability Master Plan such as solar potential of buildings in Kirkland, heat pump campaign outreach to help get the word out regarding the Energy Smart Eastside Heat Pump Campaign, and the planning of a Town Hall on bicycles planned for April 22, 2023 (Earth Day). The SNAP! Students will make a presentation to City Council in February 2023 to demonstrate what they learned and show the impact of their work.

What’s next? Community members are discussing new avenues to pursue and one idea is providing education about the public health and climate impact of using pipeline gas (natural gas). A majority of Kirkland homes and businesses use pipeline gas, but there are opportunities for users to decarbonize and use all-electric appliances such as heat pumps, heat pump water heaters and clothes dryers, and induction cooktops and ranges.



“Go Idle Free” Display at the Kirkland Library



Homemade Anti Idling Sign



Smart Thermostat User



Left (from top to bottom): Washington Conservation Corp and Mayor Sweet with CM Curtis and CM Falcone at Cafe Juanita stream bank restoration; NE 85th Street Station Area Plan Rendering - Credit Mithun; Father and Daughter at Green Kirkland Partnership Event.

Above (from top to bottom): Rabbit Fencing Around Pollinator Meadow; King County Diversity Recruitment Workshop.