**EMC Recommendations, 2019 Forward**

This report and accompanying documents provide a congratulatory snapshot of current environmental successes and recommendations regarding environmental priorities, opportunities, and challenges for inclusion in the city’s five-year planning cycle from the Environmental Management Commission (EMC) in accordance with its roles and responsibilities.

Much has been accomplished through Kansas City’s integration of environmental considerations as a core value, and we applaud these efforts. Culturally, Kansas City now views natural environments and built environments as full partners working together for the well-being of the community. City staff and officials have demonstrated a commitment to best practices and innovation resulting in formalized intentional policies, procedures and evaluation tools. The City benefits from access to a broad spectrum of community, state and national resource and advocacy groups. Kansas City has made exceptional progress implementing climate protection and energy goals.

Kansas City is capable of expanding its influence well beyond the traditional roles of local government by capitalizing on current opportunities. Through its actions, the City can significantly impact the way people feel and think about sustainable environmental practices. As an early adopter of cutting-edge ideas, Kansas City leads by example through encouraging and amplifying change. By embracing innovation, the City finds new solutions and opens doors to even more possibilities.

It will be necessary to shift our way of thinking to embrace integrated, systems-based, regenerative approaches in order to work our way out of the climate emergency before us. Kansas City can take a lead role in modeling paths forward. Discussions are already underway to make Kansas City’s airport the first climate-positive airport in the world. Another group is exploring how Blue River Valley Opportunity Zone investment and redevelopment projects can be thoughtfully structured to regenerate natural systems and strengthen surrounding neighborhoods and still maximize economic benefits.

The Five-Year Business Plan includes two major planning processes: The Climate Protection and Resiliency Plan and the Focus Plan Update. We must prioritize essential conversationsat the intersection of these planning processes: floods, drought and heat, regeneration of soils and natural systems, climate migration, affordable housing, food demand and production, and waste reduction.

As the upcoming planning processes engage broad local constituencies, the City needs to communicate the integration of environmental stewardship that has already occurred and the challenges that are before us. The EMC encourages Kansas City to expand its messaging and to adopt gardening as a “frame” for environmental demonstrations and education. Gardening - from commercial food cultivation to blooms in a window box - connects intentional human choices to soil, water, seasons, natural cycles, climate change, and more.

Developing climate resiliency will require significant infrastructure investment in clean energy, stormwater, and transportation. Human capital remains paramount. We need more skilled communicators to engage constituents, expanding stakeholder buy-in through information sharing. Kansas City will need to invest in municipal workforce expansion with expertise in green infrastructure and efficient property management. Change will require more trained personnel to advise constituents, motivate compliance and enforce City codes.

Kansas City is already fiscally challenged by demands for traditional services and hamstrung by financing options that exacerbate income inequality. Many of the options currently available for municipal funding fall disproportionately on lower income residents. Sales taxes, utility taxes, property taxes, and fees for essential services could all be structured with exemptions and base service levels that would mitigate hardships for low income residents, but municipalities would need latitude to enact changes and additional revenue streams to fund acceptable service levels. We urgently need viable financing alternatives for local initiatives, preparations, and responses at the heart of climate resiliency. Kansas City should join with other municipalities to influence state and federal policies and programs that could provide additional, viable, local financing alternatives.

There is momentum around addressing the adverse impacts of climate change at the local, regional, national, and global level. Kansas City can continue to benefit from working collaboratively to glean and advance ideas that are applicable here and to inform discussions moving forward.

* As a member of [Mid-America Regional Council](http://www.marc.org) (MARC), Kansas City is engaged in regional policy initiatives in the face of the climate emergency.
* The [Metro KC Climate Action Coalition](http://www.mkccac.org) is working locally and regionally to enact strategies, systems, and structures to [draw down](https://www.drawdown.org/) greenhouse gases, improve climate resilience, and use these as vehicles to improve socio-economic well-being.
* [Green New Deal](https://drive.google.com/open?id=1zDc5ujxzAXPAKFQ4nq1WACe4hJ6RQF-e) is a broad national framework to catalyze city-level action on climate change by massive federal investment in energy efficiency, renewables, transportation, and sustainability.
* In 2017, the United Nations Educational, Scientific and Cultural Organization **(**UNESCO) welcomed Kansas City, Missouri as a [UNESCO Creative City for Music](https://drive.google.com/open?id=1OyXirktPZvP_tcbFYoTuWjAfVQIEt9JP). Designated cities commit to engage in the implementation of [UNESCO Sustainable Development Goals](https://drive.google.com/open?id=1X_pFL4Gi1dN0r2T41VZCdblCV5FkFOYs), notably Goal 11 concerning cities. The Creative Cities network provides an international opportunity to collaborate regarding the use of culture and creativity as strategies for sustainable development.

Previous successes demonstrate that Kansas City is uniquely positioned to confront environmental challenges. We encourage Kansas City to capitalize on current momentum and we look forward to continued conversations that prioritize a sustainable, innovative Kansas City.

**Embracing Innovation**

Innovation is the process of applying novel solutions to meaningful problems. [City leaders throughout the US](https://www.centreforpublicimpact.org/) are working with businesses and residents to identify problems and develop new ways to tackle them.

The accelerated pace of technological and climate changes provide new options and challenges. Change requires deliberate application of [information](https://dynmhx.io/) and imagination with a willingness to test well-crafted ideas. As knowledge is gained, experiences collected and feedback gathered, the original idea becomes more robust, more resilient, and more mainstream.

The EMC has recognized [city employees](https://drive.google.com/open?id=1d__ArVOKC8bOMPIDOG60MeYfdoE0JjB2) that have demonstrated innovation beyond their job requirements, but Kansas City can do more. Solutions can be a combination of what is familiar and what is new, like shade trees and low-e glass. Sometimes better understanding of historical practices is fundamental to fresh ideas about ecosystem solutions, like planting native, perennial plants to restore soils, conserve water, and sequester carbon. New technology can transform the effectiveness of traditional services, like demand-responsive transit.

* Kansas City is the primary agent of innovation when City investments aspire to cutting edge solutions based on the best available ideas.
	+ Kansas City has already established [LEED](https://new.usgbc.org/leed) Gold as a minimum standard for its buildings, conducts [ENVISON](https://sustainableinfrastructure.org/envision/) systems analysis of infrastructure projects, [green solutions](https://app.box.com/s/7o3w5fyhxxf3wvb8zy64e29t0ha91vra) for stormwater management, and signed up for [100% renewable electricity](https://drive.google.com/open?id=1B7-LmGRaCv9VcttLgwZqT8ioSVmZkCt9).
	+ Fully embracing innovative opportunities in conjunction with the new terminal project could make KCI the [first climate positive airport](https://drive.google.com/open?id=1MC0X8FWt4Ruq867kbp55kyh6f7EPCYtQ) in the world.
	+ Continue to update the City’s [energy codes](https://www.iccsafe.org/advocacy/international-energy-conservation-code-resource-page/) to ensure future construction and renovation in residential and commercial buildings requires greater energy efficiency.
* City codes can function to support or inhibit innovation. Planning conversations need to consider how to allow contextual changes.
	+ Although there is a natural inclination toward the familiar, we need [new housing programs](https://www.veteranscommunityproject.org/) that are energy efficient, healthy, affordable and climate positive.
	+ Distributed, [renewable energy generation](https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/), and [microgrids](https://www.csemag.com/articles/implementing-microgrids-controlling-campus-community-power-generation/) for a resilient power supply
	+ [Urban agriculture](https://www.cultivatekc.org/) in combination with new technology for water and power management
* Kansas City can influence significant changes in perception and behavior through its own choices and its ability to negotiate parameters on use of public facilities and festival permits.
	+ The City can showcase [landscapes](https://kcnpi.org/) that purify air and water, absorb storm water, sequester carbon and provide habitat for pollinators.
	+ We can work to support new initiatives that [convert our waste](https://www.rippleglass.com/about/) to useful attractive products.
	+ We can promote the replacement of single use products with reusable and recyclable alternatives.

[**Floods, Drought and Heat**](https://riskybusiness.org/site/assets/uploads/2015/09/RBP-Midwest-Report-WEB-1-26-15.pdf)

[Kansas City](https://drive.google.com/open?id=1gEYQV4jP3hxKxD9jgKR4rs-CI18L8X5e) will experience the adverse effects of floods, droughts, and heat. Specific, pro-active solutions will be necessary along with long-term cultural adaptation.

* **Flooding and Severe Weather:** The vast size of the Missouri watershed makes Kansas City vulnerable to climate impacts from Canada, the Dakotas, Nebraska, Iowa and Kansas as well as their flood control systems. Strategies to combat flooding include:
* The Kansas City regional needs to build more redundancy in our capacity to deliver clean water, power, communications and public safety services during and after emergencies.
* We need to work within the entire Missouri River watershed to improve early warning systems and create relief valves for severe floods.
* **Drought and Heat:** The amount of moisture in the soil in springtime impacts how hot the summer becomes. When there is ample moisture in the soil during the growing season, plants release more cooling water into the air through transpiration. Parched soil creates a negative feedback loop keeping us drier longer. Strategies to proactively reduce these effects include:
* Increase water storage capacity in the upper reaches of area watersheds and in wetlands to facilitate both upstream flood control and downstream drought relief.
* Revise development and construction policies to promote on-site drainage that includes rain gardens and water harvesting.
* Work with regional roofing and guttering contractors to offer water harvesting as part of the default design of new and reconstructed roofs.
* **Hot summer weather** will increase in Kansas City due to climate change. Urban environments also generate and hold more heat than adjacent rural and natural areas. Strategies include:
* Increase the tree canopy and green space on private and public property
* White or green roofs and light-colored pavement
* More efficient lighting, cooling, and power generation
* Shade, misting and fans to cool busy outdoor spaces
* **Cultural adaptation** remains a key innovative solution to combat more frequent, hotter days
* Kansas City’s parks and boulevard system was planned before air conditioning was available. The system provided shady, outdoor space and water features which we have come to view as ornamental when, in fact, the system may again become a primary strategy for comfortable outdoor summer activity.
* Climate controlled public spaces and schools may offer more programming in the summer months.
* Sporting events and training may shift to cooler parts of the day. Game and event schedules may shift to cooler months.
* We may adopt cultural norms from places that historically experience hotter summers. Seasonal and outdoor workers may start earlier or work later with longer breaks during the hottest part of the day.

**Regeneration of Primary Resources**

Clean air and water, and living soils are fundamental to a resilient environment. All our primary resources are vulnerable to pollution and disruption of the natural cycles. Regeneration requires pollution reduction and remedial support for natural systems.

Kansas City needs to have intentional conversations about how our built environment can support and enhance natural systems to regenerate primary resources. Our view needs to be “grounds-up” since whatever washes off or burns from the ground goes into the water and air.

**Healthy soils** contain minerals, nutrients, fungi and micro-organisms in a combination that is aerated and accessible to plants.

* Over-treating soil with chemicals upsets natural balances and kills essential living components. Compacting soils accelerates water runoff and inhibits plant growth.
* Deep root and native landscape plants aerate and build topsoil. Some species work very effectively with microbes to draw nutrients from the air and water and bind them to soil.
* Organic compost and teas can restore nutrients and reintroduce microbes in the soil.

**Clean Water** also contains nutrients, chemicals and organisms at concentrations in balance with natural cycles.

* High volumes of organic waste, toxins and litter can overwhelm waterways’ natural cleaning systems. Even small amounts of pharmaceuticals, chemicals or heavy metals can cause long-term degradation of water.
* Harmful concentrations of organic and industrial wastes must be treated and toxins must be removed before reaching natural drainageways.
* Vegetation along waterways and in the upper reaches of watersheds can slow runoff reducing waste and topsoil washing into the water and give plants time to uptake some contaminates.

**Air** is integral to the same natural cycles that replenish the soil and balance water.

* Disruptions of the chemical balance in the air produce acid rain, thinning of the upper atmosphere, and global climate change.
* Kansas City’s Climate Protection Plan update will detail strategies to reduce carbon pollution.
* Restoration will require drawing carbon back out of the air and into vegetation and soil

COMMUNICATION: The EMC encourages Kansas City to adopt gardening as a “frame” for environmental demonstrations and education. **Gardening - from commercial food cultivation to blooms in a window box - connects intentional human choices to soil, water, seasons, natural cycles, climate change, and more.**

**Climate Migration**

The scope of Climate Resiliency and Focus planning needs to include discussions about how to assimilate climate refugees in ways that build community ties here and strengthen our local economy.

Displacement and movement to urban areas is a significant impact of climate change. People feel compelled to leave when their livelihoods and safety are jeopardized. How do “they” become “us?”

In 2005, Kansas City intentionally welcomed permanent settlement of Katrina victims. They came with few assets and no prospect of returning to their former lives and social connections. Although most climate refugees stay within their own country or region, many are far from all that is familiar to them.

Kansas Citians need to discuss the . . .

* Challenges around people who are involuntarily displaced for any reason:
* Fostering sufficient concentrations of newcomers to preserve their sense of cultural connection without disrupting the underlying social fabric of what will become their new community
* Finding resources to help people who have lost most of their assets get a start here
* Forging economic vitality by connecting the skills people bring with their needs for goods and services
* Mitigating conflict related to competition with long-term residents and previous migrant communities
* Opportunities for voluntary economic investment and relocation to higher ground from low-lying and coastal areas in advance of involuntary displacement

Kansas City is not immune to climate disruption. Adaptation and resilience will be the key to reducing displacement risk, both temporary and permanent, in the forms of early warning systems and flood-defense infrastructure, sustainable agriculture and drought-resistant crops, as well as other protections. Internal migration could involve . . .

* Voluntary relocation of residents and businesses currently located in flood hazard areas
* Inhibiting reconstruction and new investment in areas that flood, using insurance and disaster funding to relocate to higher ground.

**Affordable Housing**

Fully half the variables in Kansas City’s affordable housing equation are related to the financial capacity of residents. Living wages, adequate safety nets, institutional and public services are all determinants of what residents can pay for shelter. We need solutions that reward work, lift up and empower residents, and provide a measure of financial security in times of hardship. Additional conversation needs to occur around the practical circumstances faced by people who are underserved, including recognition of the [alarming income and health disparities](http://kcmo.gov/KCMOreMagazine/2018/Spring-Summer18/article2.html) within Kansas City.

Kansas City needs to understand how the configuration and capacity of our existing housing stock matches up (or fails to match) the size and composition of households and their income. It is also important to anticipate demographic trends in household size and composition.

* Age, condition, configuration, and type of ownership of existing housing
* Economic and physical capacity of existing residents to maintain housing
* Neighborhood-level [information about vacant lots](https://www.heartlandconservationalliance.org/vacant-lot-mapping-tools) and development tracts
* Family size and economic capacity of [persons who are struggling](https://www.veteranscommunityproject.org/) to find housing

Utility costs are an integral part of home ownership or [rental expenses](https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/) that can be lowered by energy efficiency improvements and water conservation that also contribute to a more resilient community.

* Property marketing descriptions could be required to include full disclosure of energy efficiency and water conservation features and historical utility expense records
* Utility costs could be expressly considered in loans applications and efficiency improvements should qualify for coverage in first mortgages.
* Investments in more resilient landscapes, trees, and drainage should be recognized for their contributions to more efficient living spaces and lower monthly expenses.

Proximity to goods, services, and employment factors into living expenses. We should evaluate the efficacy of available [walk](http://www.walkscore.com/methodology.shtml) and [transit](http://www.walkscore.com/transit-score-methodology.shtml) scoring tools and make them part of property descriptions to inform potential buyers or renters, and incentivize improvements in neighborhood services.

The recently completed [Housing Policy Task Force Report](https://drive.google.com/open?id=1s1mB1XQVPS6ffAEu0Z9wU9bzjjKdfpUy) addresses numerous policy issues related to reduction of carbon emissions and environmental risks in housing. Kansas City still needs to address solid waste and recycling service upgrades in general and as well as in the context of supporting affordable housing.

NOTE: Although we don’t experience it as a problem, over-housing consumes more energy and resources than under-housing does. This fact argues for a great deal of creativity and innovation to transition some of the City’s existing market-rate, luxury housing to meet the needs of singles, smaller families, elderly, and underserved households in the context of existing neighborhoods. Kansas City should embrace this challenge, fully consider well-crafted proposals, and resist adopting barriers to change.

**Food Demand and Production**

The Kansas City region is a healthcare hub surrounded by rural food production, wholesale food distribution, urban farming, gardening, and culinary creativity. There is a lot excitement around local food in Kansas City, as evidenced by the number and vitality of [area groups](https://drive.google.com/open?id=13UYmaAPGeMZYA811wsreW3tYixQApmDS) engaged in food production, education, and advocacy.

Despite this landscape, the vectors of climate change present multiple hazards to [our food supply](http://growingfoodconnections.org/about/community-food-systems-planning/). Intentional management of food production and consumption is one of the most effective strategies to regenerate resources and drawdown the carbon imbalance in our atmosphere.

Kansas City must engage key constituencies to communicate the links between food, health, and climate. These strategies can include, for example:

* Engagement with key Kansas City culinary leaders. Culinary leaders, growers, and food marketers significantly influence our attitudes about food and could be the primary advocates for [food resiliency](https://www.ewg.org/meateatersguide/) by:
* Increasing the plant-based portion of our diets
* Increasing the amount of animal protein sourced from species that are lower on the food chain
* Developing a taste for a wider variety of locally produced and seasonal foods
* Making a selection of fresh, healthy food, accessible in all parts of the community
* Dialogue at the municipal level, including communication around:
* Urban landscaping choices that are edible, drought and disease resistant
* Shielding plants, pollinators, insects and animals from toxic pest controls
* Expanding arrangements for management of public lands for food production
* Offering urban farmers more flexibility and water access in response to climate challenges
* Reducing food waste and returning residual organic materials to the soil
* Developing a municipal/regional [food security](https://www.usda.gov/oce/climate_change/FoodSecurity.htm) plan in anticipation of continued disruption of national and global food supply chains
* Cultivating partnerships to promote gardening for educational engagement and community building as well as food production.
* Local food producers, markets, and advocacy groups already offer community demonstrations, resources, and education. They are primary resources for helping residents develop visceral connections between intentional human choices and the vitality of our soil, pollinators and native wildlife, clean water, seasons and climate change.
* K-12 schools can utilize gardening as an interdisciplinary teaching tool.
* The KC Metro includes 1,300,000 acres of agricultural land. Advocacy for programs to educate, demonstrate, and incentivize “carbon farming” practices would impact climate change, potentially build positive relationships between rural areas and urban areas, and expand the interests of urban residents in agriculture.

**Converting Wastes to Resources**

The EMC recommends an engagement with the community and stakeholders in a thorough reassessment of our waste streams from a materials management perspective. Kansas City could expand recovery capacity beyond municipal services to include public/private, private/private and charitable innovation such as The Urban Lumber Company, Ripple Glass, Habitat ReStore, etc.

Below, we outline 3 relevant issues facing waste management, including next steps:

**Enhance and Protect Soil - Urgent**

* Many organic materials can be beneficially returned to the environment to regenerate [soils](https://drive.google.com/open?id=1U8OjZTCmyvVKAr2p8E7RaaujDn6187-9). Develop workable strategies for collection, processing, and re-distribution of different types of organic materials.
* Fertilizers, pesticides, and herbicides pose risks to water, soil, local food, beneficial species and native vegetation. Develop robust internal policies and public education regarding best use practices and safe disposal of these materials.

**Resource Recovery Loops**

* Identify and promote collection of materials that can be regionally processed into recycled feedstock.
* Identify area businesses that import recycled feedstock and determine whether local materials could become a resource for them.
* Develop an information exchange for regional businesses to share information about their byproducts that might be suitable for use in other processes.
* Foster cooperative communication with thrift and reuse markets in the community.
* Assess the volume and content of construction debris and consider whether it makes sense to separate and manage these materials for reuse.

**Waste Reduction**

* Influence consumer choice to switch from single-use plastics to alternatives
* Deploy Water Department, [KC Tap Water Bars](https://drive.google.com/open?id=1LGeXGLsHiQZtEkyWMXrY_6hhTvgtfbhi) to area festivals to re-fill, reusable bottles
* Provide KC Tap in aluminum bottles to vendors at sporting venues and special events
* Promote reusable bags at city venues, conventions, markets and sporting events
* Provide recognition, support and resource references for [plastic-free events and venues](https://www.sierraclub.org/sierra/time-for-pro-sports-ditch-plastic)
* Provide more recycling modules in public spaces accompanied by educational signage
* Identify products that are persistent problems in the waste stream. Work to assign more waste management responsibility to manufacturers or retailers of these products.
* Assess impacts of retail home delivery on the volume and content of the waste stream. Explore opportunities to influence regional distribution operations to reduce, collect, and/or reuse packaging.

**Communication**

The EMC encourages community-facing communication projects to advertise KC’s current environmental assets and increase awareness of relevant environmental concerns. Examples and suggestions provided below.

**Gardening as a frame for environmental demonstrations, communication and education**

Early advocates identified adoption of *recycling* as an entry point for people to become interested in environmental issues. A more recent observation identifies *gardening* as a highly effective path to expanding awareness of our reliance and integral relationship with our environment. The EMC encourages Kansas City to greatly expand its use of gardening as a frame for environmental demonstrations, communications, and education. Gardening, in the broadest sense - from commercial food cultivation to blooms in a window box, connects intentional human choices to soil, water, seasons, natural cycles, climate change, and more.

**Big Community Assets - showcases for innovation**

* Kansas City can continue to showcase best practices that demonstrate environmental leadership.
* Native landscaping, tree planting, stormwater capture, energy efficiency, waste reduction, materials reuse, clean energy, etc. can all be modeled by the way the municipality behaves.
* Effective examples can be showcased by big projects like the airport terminal or simply by providing tap water refills at festivals through the City Water Bar.
* The City can also influence behavior and showcase ideas through its contracts and partnerships, including the following industries:
* The arts: museums, theaters, galleries, convention facilities, arenas, festivals
* Sports culture: stadiums, playing fields, tournaments, runs, golf courses, etc.
* Partnerships with Institutions: Hospitals, universities, schools, churches, etc.

**Popular Media - utilize innovative locations to disperse environmental information**

* **Smart City Kiosks - Learn while you wait**

Encourage the use of short environmental stories on Smart City kiosks. For example, provide a microclimate report by comparing two identical weather stations: one at an urban transit stop and one on a nearby tree-shaded park or lot. Compare temperature and humidity (maybe select other factors like air pollution) on hot summer days with the message: “trees make a difference.”

* **Gaming - Making it fun**

Encourage the development of games that integrate with Smart City kiosks including: transit, trails, recharging stations, gardens, farmers markets, recycling centers, green infrastructure, clean energy installations, native plant and tree identification, etc.

* **Local TV Programming based on popular series - Energy efficiency makeovers**

Perform energy audits and implement energy efficiency improvements in 3 to 5 homes, choosing properties where energy savings will provide significant improvements in quality of life of the residents. Document the process and results on film and share the experience broadly, including features on local TV.

**EMC Recommendations, 2019 Forward - Links within the document**

An electronic document with active links is available at

<https://drive.google.com/open?id=106zv3dTZJDHqQOsFJtB2zI1Z7PJraC_q>

This is a list of links in the document in the order of their appearance. The printed text version of the report is indicated with **bold type**. The underlined text is the location of actual link to the indicated information within the electronic document.

Links within the **Transmittal Letter, Contents** and **EMC preface**

[Kansas City ranks 5th](https://drive.google.com/open?id=13lG6W3NGOYCn_3ky2wfZnbyXpRsZSC9W) Excerpt from <http://stories.weather.com/disruptionindex>

prolonged periods of drought. heavy rain and flooding. KC Water, [Climate Resiliency Report](https://drive.google.com/open?id=16iw-bKG0KTIppORGhWVJYbOtSYOqXQda)

Links within the introduction to **EMC Recommendations**

best practices EMC Areas of interest, with additional informational links

innovation [Environmental Achievement Award Winners](https://drive.google.com/open?id=1d__ArVOKC8bOMPIDOG60MeYfdoE0JjB2)

policies, procedures and evaluation tools KC Green Brochure

[Green Rating and Certification Systems](https://drive.google.com/open?id=1-_T5ExY4s_d6ME4aoCk7CTeVecff7--t)

community, state and national resource and advocacy groups Resource List

climate protection Green House Gas Inventory

energy goals March 29 Report on Feasibility of Clean Energy Initiatives

Climate Protection Climate Protection Plan

**embracing innovation**

climate positive airport Pilot Innovation KCI

 Blue River Valley Opportunity Zone Pilot Innovation Blue River

**floods, drought and heat**

**regeneration of soils and natural systems**

**climate migration**  **There are additional links within the text of**

**affordable housing these topical areas of the report.**

**food demand and production**

**converting wastes to resources**

**communication**

Mid-America Regional Council MARC Environmental Programs

[Metro KC Climate Action Coalition](http://www.mkccac.org) Metro KC Climate Action Coalition

“Drawdown” <https://www.drawdown.org/>

Green New Deal Cities and the Green New Deal

“UNESCO Designation Letter” The letter

"UNESCO Sustainable Development Goals" Summary of Goals

Links within the **topical discussion sheets**:

**Embracing Innovation**

[City leaders throughout the US](https://www.centreforpublicimpact.org/) <https://www.centreforpublicimpact.org/>

[information](https://dynmhx.io/) <https://dynmhx.io/>

city employees Environmental Achievement Awards

[LEED](https://new.usgbc.org/leed) <https://new.usgbc.org/leed>

[ENVISON](https://sustainableinfrastructure.org/envision/) <https://sustainableinfrastructure.org/envision/>

green solutions Green Stormwater Solutions Infrastructure Manual

100% renewable electricity Resolution, 100% Renewable Electricity for City Ops

the first climate positive airport Pilot Innovation KCI

[energy codes](https://www.iccsafe.org/advocacy/international-energy-conservation-code-resource-page/) <https://www.iccsafe.org/advocacy/international-energy-conservation-code-resource-page/>

[new housing programs](https://www.veteranscommunityproject.org/) <https://www.veteranscommunityproject.org/>

[renewable energy generation](https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/) <https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/>

[microgrids](https://www.csemag.com/articles/implementing-microgrids-controlling-campus-community-power-generation/) <https://www.csemag.com/articles/implementing-microgrids-controlling-campus-community-power-generation/>

[Urban agriculture](https://www.cultivatekc.org/) <https://www.cultivatekc.org/>

 [landscapes](https://kcnpi.org/) <https://kcnpi.org/>

[convert our waste](https://www.rippleglass.com/about/) <https://www.rippleglass.com/about/>

**Floods, Drought and Heat** <https://riskybusiness.org/site/assets/uploads/2015/09/RBP-Midwest-Report-WEB-1-26-15.pdf>

Kansas City Excerpt from HEAT IN THE HEARTLAND: Climate Change and Economic Risk in the Midwest

**Regeneration of Soils and Natural Systems**

Soils  Soil Can Store Carbon

our built environment can support and enhance natural systems Pilot Innovation Blue Valley

**Climate Migration**

**Affordable Housing**

[alarming income and health disparities](http://kcmo.gov/KCMOreMagazine/2018/Spring-Summer18/article2.html) <http://kcmo.gov/KCMOreMagazine/2018/Spring-Summer18/article2.html>

[information about vacant lots](https://www.heartlandconservationalliance.org/vacant-lot-mapping-tools) <https://www.heartlandconservationalliance.org/vacant-lot-mapping-tools>

[persons who are struggling](https://www.veteranscommunityproject.org/) <https://www.veteranscommunityproject.org/>

[rental expenses](https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/) <https://greenabilitymagazine.com/blog/2019/03/solar-installations-make-apartments-affordable/>

[walk](http://www.walkscore.com/methodology.shtml) <http://www.walkscore.com/methodology.shtml>

[transit](http://www.walkscore.com/transit-score-methodology.shtml) <http://www.walkscore.com/transit-score-methodology.shtml>

Housing Policy Task Force Report Summary of Environmental Policies

**Food Demand and Production**

area groups Local Organizations with an environmental focus on Foods

[our food supply](http://growingfoodconnections.org/about/community-food-systems-planning/) <http://growingfoodconnections.org/about/community-food-systems-planning/>

food resiliency <https://www.ewg.org/meateatersguide/>

[food security](https://www.usda.gov/oce/climate_change/FoodSecurity.htm) <https://www.usda.gov/oce/climate_change/FoodSecurity.htm>

**Converting Wastes to Resources**

Soils Soil Can Store Carbon

KC Tap Water Bars Image

[plastic-free events and venues](https://www.sierraclub.org/sierra/time-for-pro-sports-ditch-plastic) https://www.sierraclub.org/sierra/time-for-pro-sports-ditch-plastic

**Communication**