

Developed by Heartland Conservation Alliance on behalf of its many Partners and the community, with generous funding from The Conservation Fund and the Nature Conservancy.



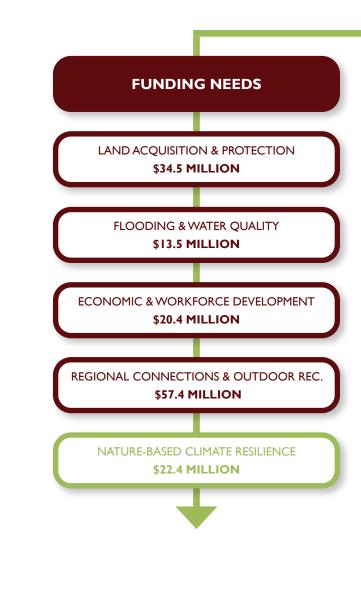


### **PARTNERS**

The Blue River Greenway Vision and Implementation Strategy presented in the following chapters is the culmination of decades of collaboration among numerous regional Partners to serve the residents, businesses, and visitors of the Blue River Watershed by protecting, connecting, restoring, and ensuring equitable access to the Blue River and its many fantastic community benefits. Key Partners are listed below, with the support of many additional community members and organizations. It is the shared Vision of the partners for the partnership to grow as the Blue River Greenway realizes its full potential.

- Black & Veatch
- Blue River Steering Committee
- Bridging the Gap
- City of Overland Park, Kansas
- Clement Waters
- Palestine East Corridor Project
- Economic Development Corporation of Kansas City
- Foundation for Regeneration
- Hoxie Collective
- Jackson County Parks + Rec
- Johnson County Parks & Recreation District
- Johnson County Stormwater
   Management Program
- Kansas City Port Authority
- Kansas City, Missouri Office of Sustainability
- Kansas City, Missouri Parks & Recreation

- Kansas City, Missouri Water Services
   Department (KC Water)
- Marlborough Community Coalition
- Mid-America Regional Council (MARC)
- My Region Wins!
- Nature-Based Climate Solutions Initiative
- Neighborhoods represented in Water Equity Road Map Workshops
- The Conservation Fund
- The Nature Conservancy, Missouri and Kansas Chapters
- University of Colorado Boulder
- University of Kansas Edwards Campus
- University of Missouri Kansas City Center for Neighborhoods
- Vireo
- Wichita State University Environmental Finance Center



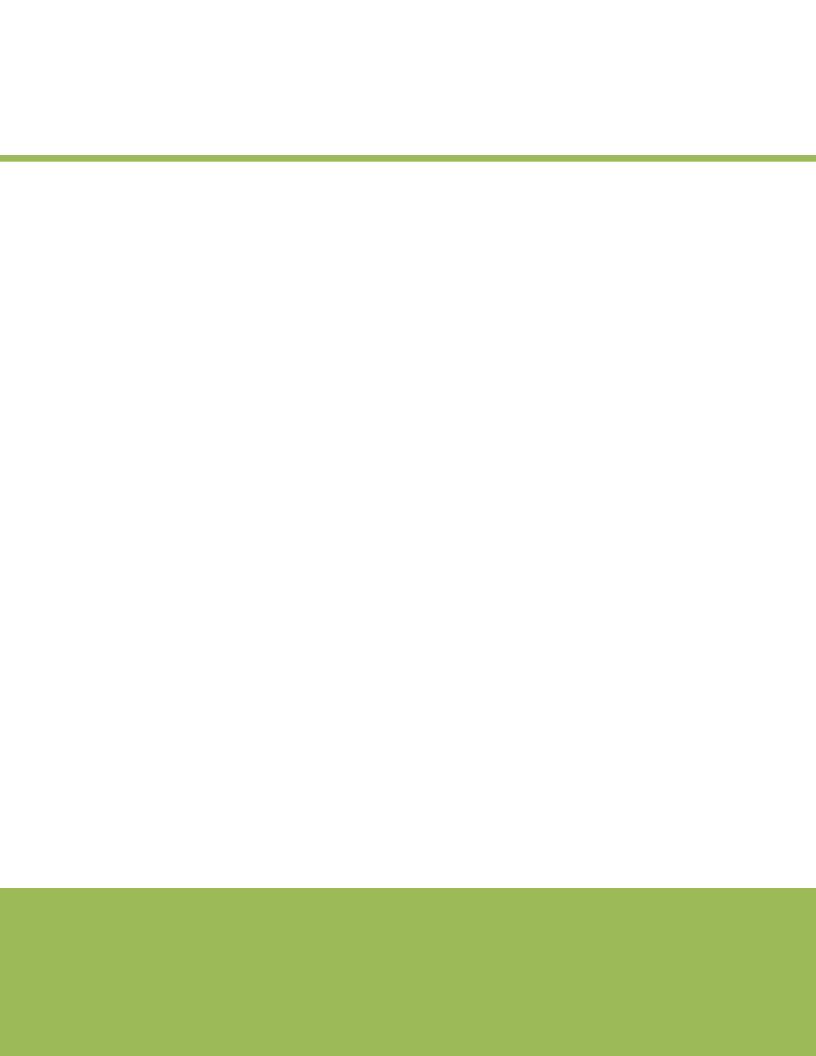
### **EXECUTIVE SUMMARY**

Originating from headwaters surrounded by natural wetlands, forests, grasslands, pasture, and cropland, the Blue River flows through economically, racially, and ethnically diverse suburban neighborhoods and heavily industrialized areas. Marquee regional and local parks are strung along the river like green pearls. Repeated floods decimated its industrial base and neighborhoods, urban runoff pollutes its waters, habitat loss threatens native species, and a lack of physical access prevents Kansas Citians from using it. Some do not even know it exists. This diversity is a challenge and a tremendous opportunity for the river corridor to restore physical, environmental, ecological, ethnic, socioeconomic, and political connections.

When completed, the Blue River Greenway will be the backbone of a healthy, prosperous, connected, and resilient region. Numerous municipal and not-for-profit partners (Partners) are collaborating to fully protect, connect, and restore the Greenway from the Overland Park Arboretum in suburban Johnson County, Kansas, to Corrington Park in urban Kansas City, Missouri, near the confluence with the Missouri River. The completed Blue River Greenway will:

- Become a regional destination to live, work, and play
- Complete the linchpin of our regional greenways
- Strengthen natural, transportation, social, economic, and political connections
- Reduce flooding & improve water quality
- Draw down CO2 and help achieve carbon neutrality
- Improve air quality
- Cool the urban heat island
- Provide equitable access to nature and healthy outdoor recreation
- Promote zero-waste ("circular") economic development and provide green-collar jobs
- Connect residents and workers to local jobs
- · Create a model and catalyst for revitalizing our region's waterways

This Vision and Implementation Strategy is based on decades of collaboration, extensive neighborhood engagement, and the best available data. The program builds on our public lands and trails, identifying gaps and opportunities to secure land and public access, protect and enhance habitat, and fully connect trails and communities. The following pages: I) Present the Greenway vision's many community benefits; 2) outline the implementation program, key projects, and focus areas; and 3) document the funding and resources needed to achieve it.



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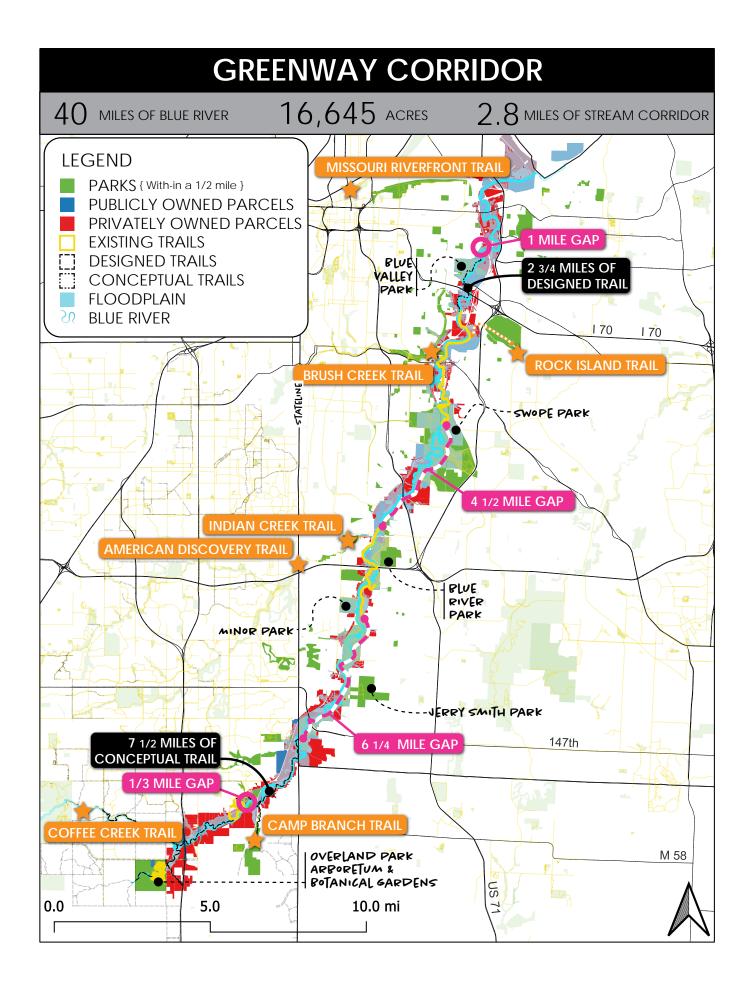


The Blue River flows 40 miles across Kansas and Missouri through 5 counties and 20 municipalities. Two-thirds of the rain that falls in the southern Kansas City area drains into the river, which feeds many tributaries throughout Kansas City and surrounding areas, while eventually flowing into the Missouri River. The Missouri River is the source of drinking water for the Kansas City area.

The Blue River Watershed is an economically, socially, and environmentally diverse place, encapsulating various types of communities, both urban and rural, and many natural habitats and ecosystems. The water the Blue River provides to people, plants, and animals is intrinsic to the greater watershed that stretches throughout the Great Plains and into the Western United States. Creating the Blue River Greenway, a 43-mile linear corridor within this watershed, creates opportunities to connect people and places while preserving greenspace and improving water quality.

The Blue River is a unique urban waterway. Johnson County, Kansas and Cass County, Missouri headwaters are a mix of natural wetlands, forests, grasslands, pasture, and cropland. The river alternately flows through affluent, upper-middle-income, and middle-income suburban neighborhoods, middle- to lower-income, racially and ethnically diverse urban residential neighborhoods, and heavily industrialized areas protected by a levee system. Several regional and local parks are located at various points along the river's pathway. This diversity is both a challenge and a tremendous opportunity for the river corridor to protect and restore physical, environmental, ecological, ethnic, socioeconomic, and political connections and serve as a model and catalyst for our region.

The Blue River Greenway will be the backbone of a healthy, prosperous, connected, and resilient region. Numerous municipal and not-for-profit partners (Partners) are collaborating to fully protect, connect, and restore the Greenway from the Overland Park Arboretum in suburban Johnson County, Kansas to Corrington Park in urban Kansas City, Missouri, near the confluence of the Blue and Missouri Rivers (Figure 1). The project builds on our considerable public lands and trails, identifying gaps and opportunities to secure land and public access, protect and enhance habitat, and fully connect trails.



On behalf of our Partners and the residents, businesses, and visitors to the Blue River Watershed, HCA has developed this concept paper to guide our collective efforts, document past progress and identify current and future needs to fully realize our shared vision. In doing so, we will show the way for our region to reclaim, reconnect, and restore its precious greenways and blueways for the benefit of all.

The Vision draws from and builds upon the Blue River's unique setting within the greater Kansas City region, with its rich and often chaotic history of boom and bust, investment and disinvestment, natural disasters and human impacts, and a rich diversity of industry, parklands, and neighborhoods with unequal access to the levels of power and nature's benefits. The Vision is derived from decades of related plans and studies that pointed to the river's tremendous benefits for our communities and resulted in a patchwork of built projects and identified but unfulfilled needs. Most importantly, the Vision is guided by extensive engagement with Partners and neighborhoods along the river and informed by some of the most extensive data available anywhere in the nation. In our Vision, the completed Blue River Greenway will:

- Become a regional destination to live, work, and play
- Complete the linchpin of our regional greenways
- Strengthen natural, transportation, social, economic, and political connections
- Reduce flooding & improve water quality
- Draw down CO2 and help achieve carbon neutrality
- Improve air quality
- Cool the urban heat island
- Provide equitable access to nature and healthy outdoor recreation
- Promote zero-waste, circular, economic development and provide green-collar jobs
- Connect residents and workers to local jobs

The following pages flesh out the Vision and its many beneficiaries and benefits, key implementation strategies and high-priority projects, and short- and long-term implementation needs. The conclusion summarizes and prioritizes the implementation strategies and their preliminary benefits and costs, describes key partners and roles, and identifies resources needed to realize the Vision.

### HISTORY

The story of the region's growth is the story of its relationship with water, which shaped early settlement and was shaped and manipulated by development. It is also a story of conservation and connection, as farsighted residents sought to protect its natural beauty and preserve a vital corridor for humans and nature from a torrent of development. Through our efforts to protect, connect, and restore the Blue River Greenway, we will finally realize this Vision.

Located in the center of the continent at the confluence of the Kansas (Kaw) and Missouri Rivers, in the ecotone between the great eastern forests and prairies of the Great Plains, what is now the Kansas City region has long been a natural and cultural crossroads. The indigenous peoples, including the Osage, Kickapoo, Kaw/Kanza, and Kaskaskia, inhabited the area. They interacted with Pawnee, the Oceti Sakowin (People of Seven Council Fires, also known as the Sioux Nation), and other traders and travelers. During its westward expansion in the late 1700s and 1800s, the United States government relocated eastern tribes to the area, including the Shawnee and Sac & Fox, and other tribes who traversed the area during their relocation to Oklahoma (Native-Land .ca | Our home on native land). The Reservation of the Black Bob Band of Shawnee Indians occupied much of the upper Blue River watershed until it was parceled off, and the land was purchased or swindled from tribal members (Kansas City Public Library 2021).

For many of the same reasons, the region's central location played a key role as the new nation developed. Trading posts, trail stops, and eventually, the railroad would pave the way for Kansas City's development. Kansas City's expansion significantly increased when the intercontinental railroad first spanned the Missouri River. Warehouses, industry, and ports spawned along the river, and the Missouri still serves a bustling industrial and manufacturing sector.



The Blue River Valley grew in time with the city. During the Civil War, the Blue River was the site of the Battle of Byram's Ford, which was part of a larger battle that resulted in a key Union victory. As the city boomed after the war, investors began purchasing land just east of the city limits in the Blue River valley, and railroads moved in. The industrial towns of Centropolis, Manchester, Sheffield, and Leeds were established. And yet the Blue River also provided swimming, fishing, and camping for the residents of these emerging communities. Cottages and watercraft rental outfitters lined the riverbanks in the summers. Houseboats were used as art studios, weekend picnic retreats, summer cottages, and, for many, year-round homes—the deep, clear water made for good swimming and fishing. By 1908, 65 launches, four boathouses, and fleets of rental craft were operating on the Blue (Kansas City Public Library 2021).

However, as river recreation was booming, there were natural and manufactured elements threatening the river's future as a popular outdoor destination. On the city's western side, industrialization, wastewater, and channelization of Turkey Creek provided a preview of what was to come.

The 1912 A Special Report for the Blue Valley Parkway, Kansas City, Missouri, called for the acquisition of river frontage from 13th Street south to Swope Park for a "pleasure highway" to protect the river from development and create a vital northsouth corridor through the Blue River valley. As part of his design for the City's world-renowned parks and boulevard system, famed landscape architect George E. Kessler proposed a parkway that would rival beautiful waterways like the Charles River in Boston and the Schuylkill River in Philadelphia. Despite endorsement by the Board of Park Commissioners, park officials, city engineers, and transportation authorities, the project died for lack of funding, with the predicted results. In 1920, The Kansas City Star referred to it "as one of the city's most underutilized assets, describing it as a stagnant little stream poisoned by sewers, sick with trash and inaccessible along much of its course" (Kansas City Public Library, 2021).





Credit: kclibrary.org

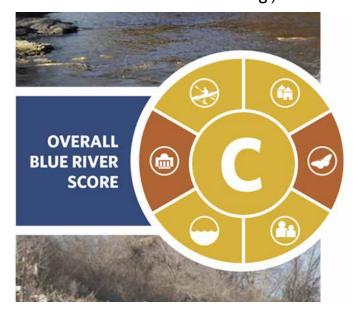
Pleasure Boating on the Blue River? KCQ Navigates This Interesting History

Credit: Heartland Conservation Alliance



With increased development near the river and additional areas higher in the watershed came increased habitat destruction and pollution. Increasingly frequent flooding spurred well-intentioned but ultimately destructive channelization meant to protect manufacturing in the lower valley. This channelization and paving of natural areas and uplands caused the landscape to lose its ability to absorb, slow, and filter water from storms, increasing flooding and pollution in a vicious cycle. Major floods in 1961 and 1977 spurred a massive Federal "flood control" project and more channelization. These changes also resulted in less shading and cooling, increasing the urban heat island effect. Today, habitat loss threatens native species, and a lack of physical access to the river prevents Kansas Citians from using it. Some do not even know it exists.

In 2021, the Blue River Watershed received a grade of "C" in the Blue River Report Card, with an overall score of 46%. The grade reflects the combined scores from six categories. Four categories (Water Quality, Development, Recreation, Community Connections) received "C" letter grades; two categories (Governance Habitat) received and letter grades. (For more information, go to: heartlandconservationalliance.org.)



# **CLIMATE JUSTICE & EQUITY**

What We Heard

The Blue River Greenway should provide regular, welcoming, safe, and easy access to nature in urban and rural areas, regardless of socioeconomic status, race, age, ability, location, or transportation.

Address historical **Environmental** lustice issues.

Provide healthy, carbonsequestering, pollution-reducing, recreationally attractive green and blue space for all.

Create resilience to natural hazards like extreme heat. drought, and flooding.

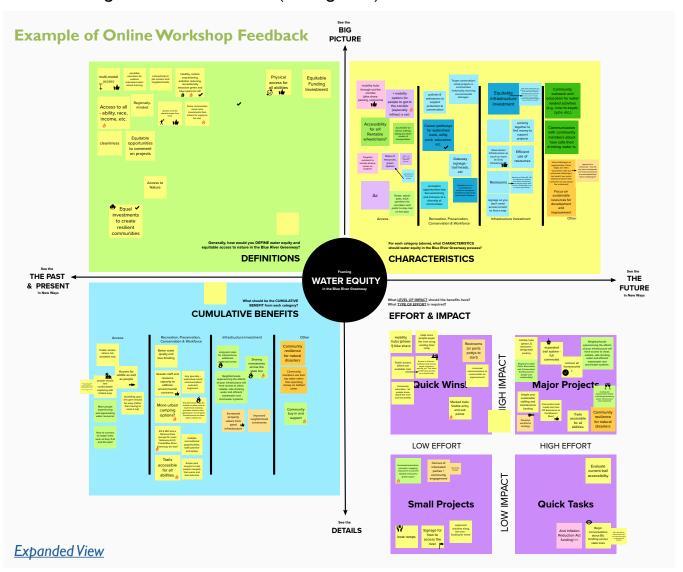
All communities should have knowledge of – and direct, consistent, and reliable access to - clean water, outdoor recreation, and natural resources.

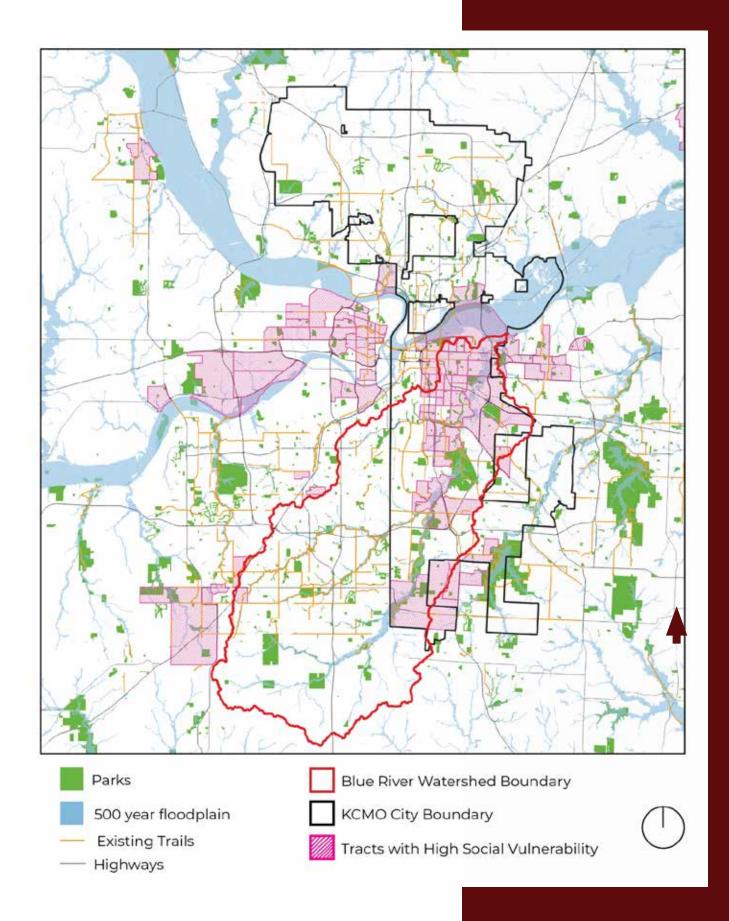
The Vision for Blue River Greenway is to reconnect neighborhoods and people along the corridor to each other, creating healthy natural communities. Neighborhoods, residents, and community organizations throughout the corridor joined the partnership to create a unified vision for Climate Justice and Equity. Protecting, connecting, and restoring the Greenway will alleviate the disproportionate and historical burdens of flooding, pollution, economic decline, and disinvestment on some of our region's most vulnerable residents, helping build resilience to future climate extremes and providing greater opportunity and enhanced quality of life by:

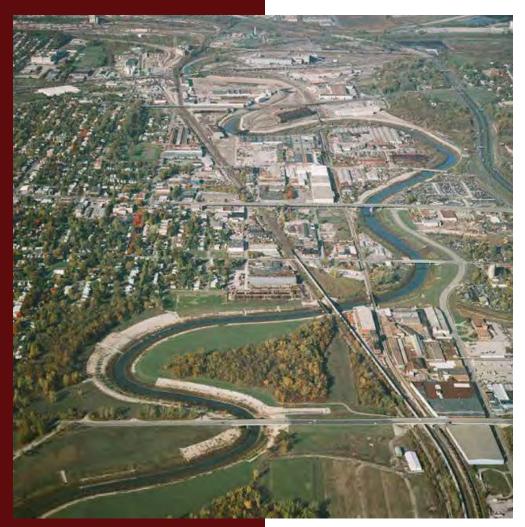
- Reducing flooding and improving water quality
- Filtering air pollutants and improving air quality
- Cooling the urban heat island
- Providing equitable access to nature and healthy outdoor recreation
- Restoring blighted, underutilized, and contaminated properties and public spaces (refer to Highlight Projects)
- Sharing the economic and social benefits of a restorative economy
- Creating real connections and shared interests among residents from diverse backgrounds, races, income groups, and political jurisdictions

#### **Exclusion, Engagement, and Reconnection**

The Blue River Valley plays a significant role in the region's racial, exclusion, and eventual reconnection story. The practice of "redlining" in selling real estate and issuing both private and federally subsidized home loans increasingly concentrated minority communities to the eastern side of Kansas City, which includes the Blue River Valley, while flooding was driving industry and jobs out of the area. Meanwhile, suburban areas of Kansas City upstream boomed after World War II, as the same programs and subsidized mortgages lured homeowners to new suburban developments that were essentially off-limits to all but white residents (Johnson County Parks & Recreation District, 2022). Poverty and disinvestment in the lower and middle Blue River Valley increased the burden of flooding and pollution, habitat loss, and degraded parklands on the remaining residents. Climate change is increasing flooding and heatwaves for some of the region's most vulnerable (see Figure 2).







Credit: US Army Corps of Engineers

In developing this Vision, the Partners actively engaged a diverse range of community groups, neighborhood associations, and citizens to ensure that the Blue River Greenway can fulfill the needs and desires of all residents and stakeholders now and into the future. Experienced facilitators with backgrounds in equity, environmental justice, and community engagement helped shepherd the conversations and solicited dialogue, input, feedback, and guidance. The resulting Water Equity Road Map (WERM), a companion to this Vision, will guide our work, helping to ensure equitable access to nature and healthy outdoor recreation, promote climate justice, and provide shared economic and workforce development driven by continuous neighborhood engagement.

# FLOODING & WATER QUALITY

#### What We Heard

Investment in green infrastructure wherever possible that will provide benefits to downstream communities

**Community resilience for** 

**Neighborhoods** experiencing the effects of poor infrastructure need access to clean, reliable, safe drinking water and efficient wastewater and stormwater systems.

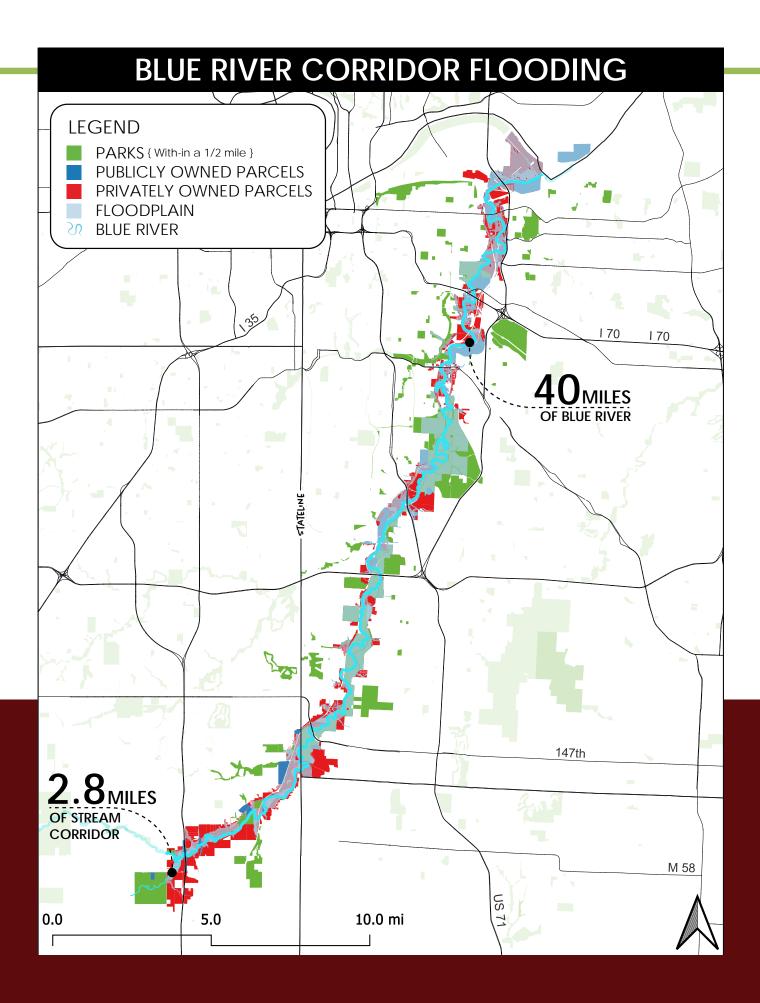
Reducing flooding is the key to reversing the historic decline and revitalizing the Blue River Greenway. Flooding played an enormous role in the Blue River Valley's decline and disinvestment and continues to threaten life, property, infrastructure, and investment. We now know from decades of local and regional research, field assessments and monitoring, and numerous flood studies and watershed management plans that protected, connected, and restored floodplains and fully vegetated riparian (stream) corridors are:

natural disasters

- The #1 strategy to protect stream health, human life, property, and infrastructure
- The most cost-effective way to prevent and reduce flooding
- Critical for preventing stream erosion, bank failures, and infrastructure damage
- Natural buffers that filter pollutants from runoff and stream flows, in addition to reducing sediment from bed and bank erosion
- "Urban air conditioners" that help cool surrounding neighborhoods on hot days
- Important habitat corridors that support all manner of wildlife throughout the seasons and their stages of life

As envisioned, the 43-mile greenway will fully protect, connect, and restore the Blue River's floodplain and surrounding upland areas where practical. Fortunately, much of the Greenway is already publicly owned, including just over half of the floodplains. To ensure that the remaining floodplains and adjacent upland areas are protected and that meaningful trail connections can be made, the Partners are committed to working collaboratively with private landowners using a range of public-private partnerships, incentives, long-term contracts, perpetual conservation easements, or acquisition of key parcels and right-of-way.

	Public	Private
# of Acres	7,499	9,146
# Acres in Floodplain	4,657	4,452
% Acres in Floodplain	62.1%	48.7%



### ECONOMIC & WORKFORCE DEVELOPMENT

#### What We Heard

**Neighborhoods surrounding the river** should have as much if not more access to the resources and share in the benefits generated by revitalization of the river

Growing food in the greenway is important for many communities along the river

> Leverage water and natural resources as assets that generate real community income

**Economic benefits must** be distributed equitably by race, income, location, transportation access, and ability

The fully realized Blue River Greenway will be the backbone and engine of a vibrant and prosperous 21st-century circular economy designed to eliminate waste production. Fully protecting, connecting, and restoring the Blue River Greenway is a generational opportunity to create widely shared prosperity for the residents of the Blue River Valley and our entire region. Circular economic development will sustainably revitalize the area's economic base, naturally connect workers and jobs, create thriving neighborhoods and businesses, and establish the Blue River Greenway as an eco-tourism destination. We will capitalize on this opportunity by:

- Redeveloping brownfields and greyfields
- Restoring and maintaining healthy, native landscapes
- Creating a wide array of well-paying and fulfilling jobs where people live
- Providing affordable and accessible local land and entrepreneurship support to create circular businesses for sustaining and improving communities
- Promoting circular economy industries served by modern green infrastructure
- Infusing regenerative agriculture and agroforestry into the urban environment
- Providing multi-use trails for residents and workers to commute and enjoy
- Developing local outdoor recreation businesses to serve residents and visitors
- Generating income and resources that stay in the community, directly benefit and support neighborhoods and residents, and address gentrification
- Reinvesting in critical infrastructure that serves the entire community

Agriculture and Green Collar Jobs: Hands-on green jobs for our region's residents, creating thriving riparian and wetland communities with a connected trail system stewarded by a new cadre of trained land managers and specialists. Urban gardeners and farmers will grow healthy, sustainable, and native foods and create businesses to provide for their families, neighbors, and communities (refer to Highlight Projects). Agroforestry will grow and harvest native food crops from the Greenway's restored woodlands. All the while, habitat restoration, and regenerative agriculture will build healthy soils that store carbon and retain moisture to enhance climate resilience further.



Ecotourism: The Blue River Greenway's regional and national connections and unique mix of outdoor recreation offerings will draw residents and visitors from across the nation to enjoy and explore the valley and beyond, supported by homegrown ecotourism businesses.

Industrial Ecology: By employing zero-waste strategies that stack together and make the highest use of byproduct synergies to supply local open-source products, "Ecodustrial" companies could line the corridor, catalyzed by small businesses and local start-ups. These new businesses could take root, remediating and restoring productive use of undervalued sites degraded and ultimately abandoned by 19th and 20th-century industries. Modern green infrastructure, native landscaping, and sustainable business practices can further enhance the corridor's natural resources and economy, creating a win-win-win for the region. (Refer to the Blue Valley Plan Case Study)

**Collaborative Education:** Regional educational institutions will collaborate to provide the skills, training, and educational programs to enable workers and entrepreneurs from all walks of life to build this new economy and share in its prosperity. This new educational ecosystem will provide hands-on training, technical and entrepreneurial programs, support research and development, measure success, and propagate the most promising approaches. Service-learning programs will recruit passionate and creative young professionals to support partner organizations and institutions' critical projects and unmet needs, creating a force multiplier and building the skills of our regional workforce while fulfilling their desire to give back to the community.

Financial Innovation: New local business models, financial structures, and markets will be created to enable this transformation and to capture and widely distribute its benefits. By necessity, we will identify and employ new sources of capital funding and financing and new financial partners. We will create innovative tools to capture and monetize a wide range of human health, social, and environmental benefits that will be directly reinvested into the community and its people. Robust public-private partnerships will leverage resources to avoid duplication, reduce costs, and create efficiencies that maximize public and private sector return on investment.

Economic Destination: Ultimately, as the Greenway's success catalyzes broader restoration of our region's greenways and economy, talented entrepreneurs, motivated job seekers, and innovative companies will be drawn to our region for its unsurpassed economic vitality, recreational opportunities, thriving natural communities, and high quality of life.

## REGIONAL CONNECTIONS & OUTDOOR RECREATION

#### What We Heard

Natural spaces should provide access to healthy outdoor recreation, including hiking, cycling, and mountain biking, kayaking and canoeing, rock climbing and skateboarding

> Creating a regional and national destination for tourism, and a recreational asset that drives economic opportunities

Allowing more people to experience and appreciate water resources



The Blue River Greenway will connect, expand, and enhance some of our region's most wonderful outdoor spaces and natural areas while adding new recreational uses that are unique to our region. When completed, the Greenway (and Blueway!) will provide a unique mix of healthy outdoor recreational experiences accessible to residents of all abilities from all neighborhoods and walks of life. With its prime location in our MetroGreen regional greenways system and imminent connections to multi-state and cross-country trails, the Blue River Greenway will draw people from across the region and nation to create an ecotourism destination. Residents and visitors will enjoy the following:

- Over 40 miles of continuous, paved, multi-use trails for cycling, walking, and running
- A network of over 50 miles of mountain biking trails for beginners to highly technical riders
- A 40+ mile "Blueway" for kayaking and canoeing
- Indoor/outdoor rock climbing, bouldering, and skateboarding
- Hiking and nature trails through upland forests and woodlands, glades, prairies, bottomland hardwood forests, wetlands, and stream corridors
- Opportunities for birdwatching, nature viewing, and fishing
- Numerous regional parks with a full range of active recreational activities

Completing and fully connecting the Blue River Greenway will form the linchpin of our regional greenways by completing critical MetroGreen system linkages. It will connect the Brush Creek Trail to The Plaza and Trolley Track Trail with several segments of the award-winning Johnson County Streamway Trails system. Alignment studies anticipate connections to the Missouri Riverfront Trail with access to downtown Kansas City, Missouri and Kansas City, Kansas, and to the Rock Island and Katy trails to metropolitan St. Louis. Plans are in the works to connect to Kansas' Prairie Spirit and Flint Hills Trails. And finally, the cross-country American Discovery Trail will traverse the Blue River Greenway along Bannister Road.

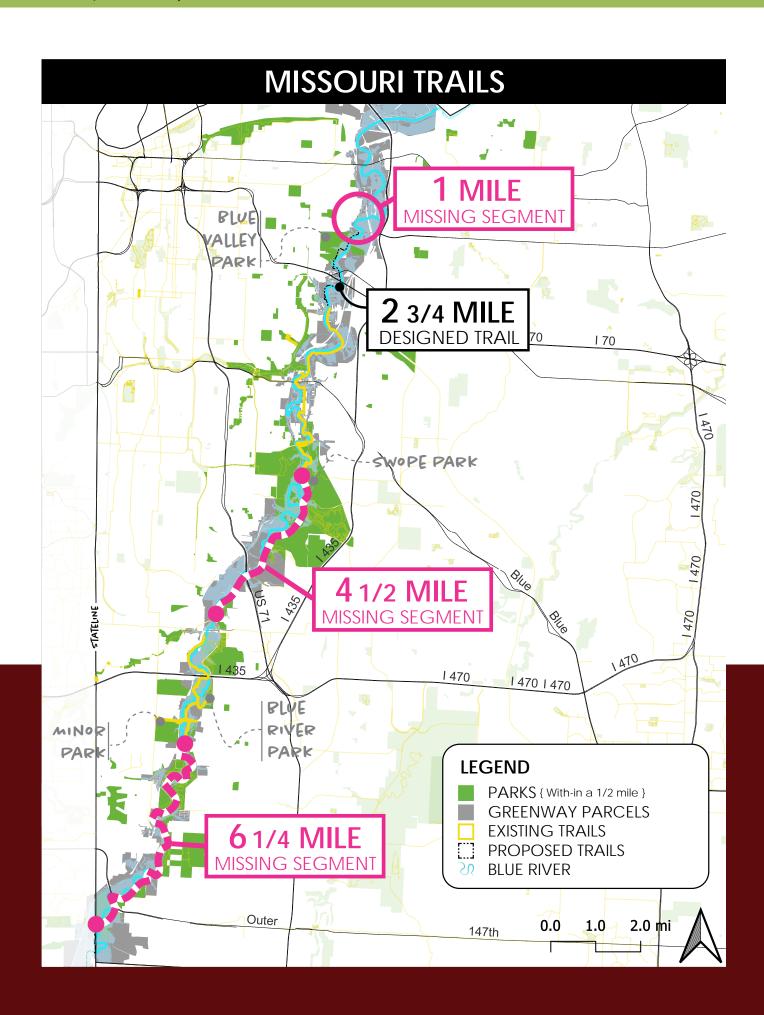
#### Currently, there are:

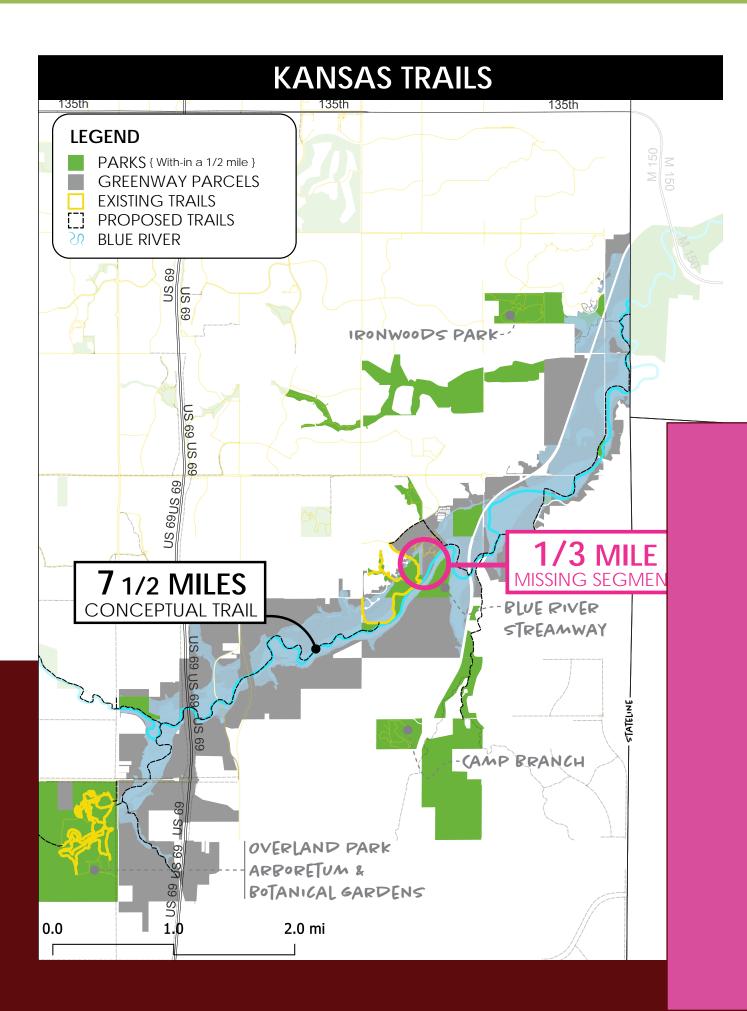
- 19 miles of constructed trail (18 1/2 miles in Missouri and a 1/2 mile in Kansas)
- Construction documents for the 2 3/4-mile Blue River Trail Segment C in Missouri
- 10 1/4 miles of conceptual trail alignments
- Approximately 12 miles of gaps (11 1/2 miles in Missouri and 1/3 mile in Kansas)

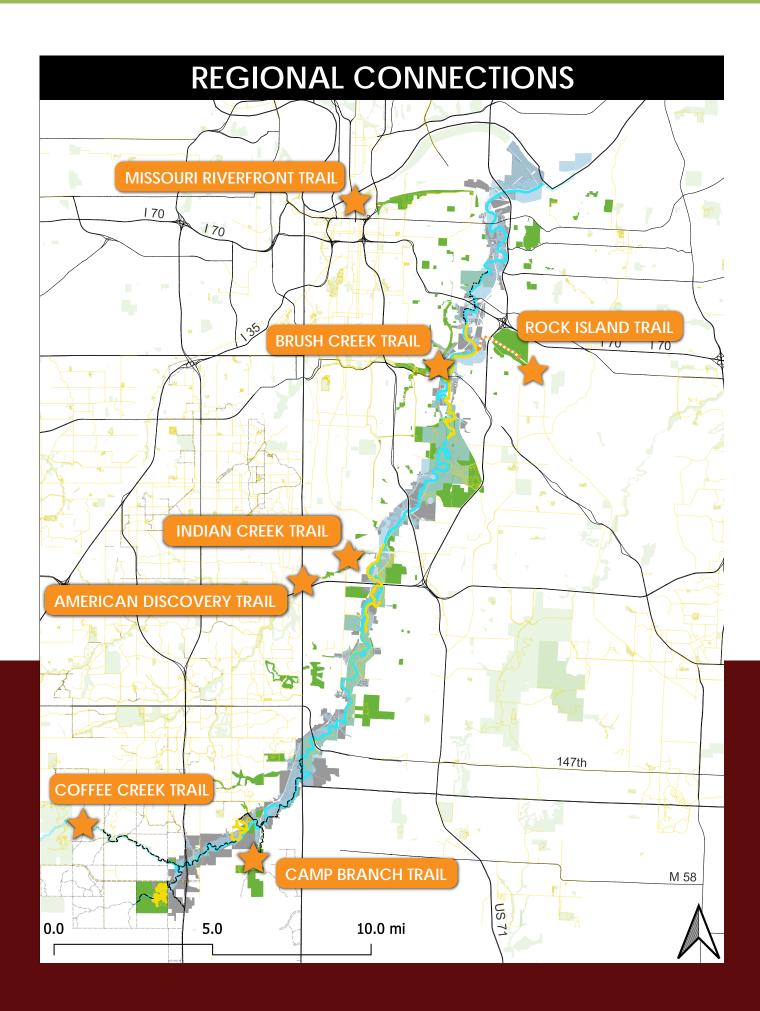
According to Urban Trail Co. today, the Kansas City region has the largest hand-built interconnected mountain bike trail network in an urban environment in the nation, drawing riders from across the U.S. and internationally. Nearly 50 miles of trails lie within the Blue River Greenway, and more are planned within existing parks and future connections. Beginner trails are provided at the Heartland Overlook Preserve and are planned for the Municipal Farm to introduce newcomers to the sport safely.

The Greenway also links many of our region's most exceptional parks, including the Overland Park Arboretum, Jerry Smith Park and Saeger Woods Conservation Area, Alex George Wetlands, Minor Park and Blue River Park, the Blue River Parkway (refer to Highlight Projects), Swope Park (home of the Kansas City Zoo), and Blue Valley Park. Spurs will connect to nearby Camp Branch Glade and Ironwoods Parks in Johnson County. Visitors and users will be able to experience the whole gamut of our region's natural communities and wildlife, including remnant prairies, wetlands, upland and bottomland woodlands and forest, and streamway corridors, along with traditional active recreation like golf, soccer, and disc golf to name a few.

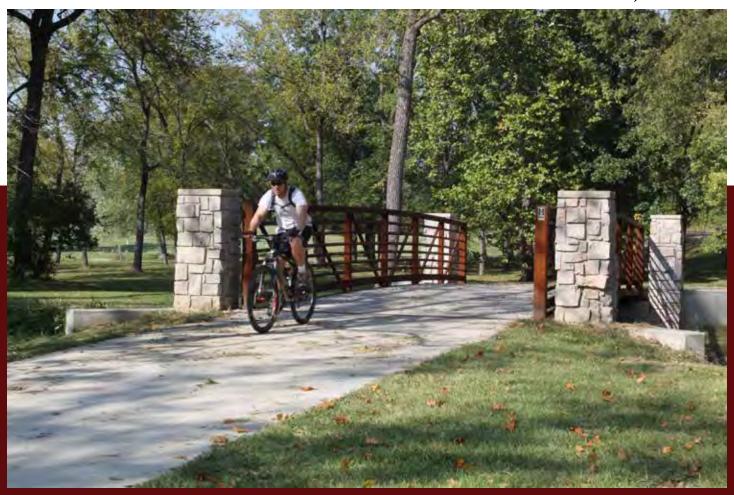
Finally, the Municipal Farm (refer to Highlight Projects) at the confluence of Brush Creek and the Blue River will be a destination for indoor and outdoor rock climbing - the only location in the U.S. with both - along with an urban skateboard park, nature trails, and fishing, canoeing and kayaking on several small ponds. Former limestone mines providing hibernacula for threatened and potentially endangered bats could be developed into a preserve like Hannibal, Missouri's Sodalis Nature Preserve, or other subterranean attractions if surveys determine that bats no longer inhabit the caves.







Credit: Vireo, Blue River Trail



### NATURE BASED CLIMATE RESILIENCE

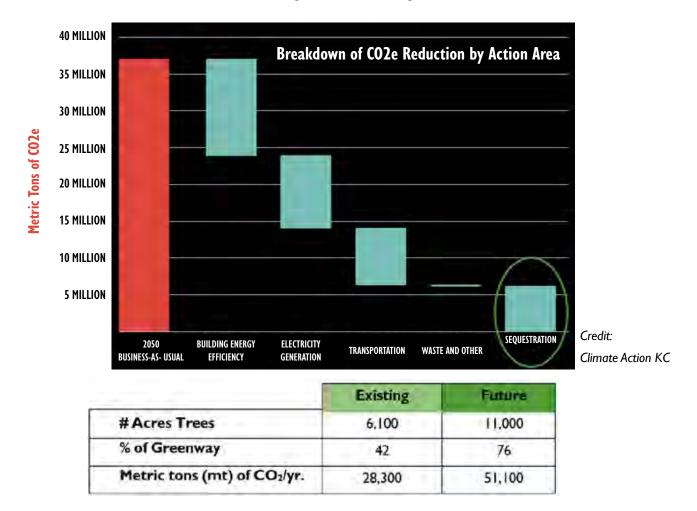
The Blue River Greenway will lead our region's efforts to use nature-based solutions to adapt to and mitigate climate change. Protecting and restoring woodlands, prairies, and native vegetation is one of the most important and effective actions we can take. It is one of the rare strategies that aid our region's ability to adapt to climate change by reducing the impacts of extreme weather on our communities and mitigating climate change by drawing down carbon dioxide and other climate-warming greenhouse gases from the atmosphere and sequestering (storing) them in plants and soils. We will lead the region by successfully:

- Protecting and restoring thousands of acres of existing riparian woodlands on public and private lands
- Beginning restoration on public lands where we can start immediately
- Developing the tools and partnerships to work cooperatively with private landowners, creating and sharing benefits of protection and restoration
- Developing a robust, innovative, and ultimately self-sustaining investment pool dedicated to fund nature-based solutions, protection, restoration, and finance long-term maintenance
- Identifying the beneficiaries and quantifying, monetizing, and reinvesting co-benefits such as carbon sequestration, improved public health, flood damage reduction, wetland mitigation, and other habitat restoration
- Creating a market for corporations and governments to invest in the Blue River Greenway and its people, places, and community to meet their climate mitigation and adaptation goals, keeping the benefits and revenues in our region

Climate Action KC's Regional Climate Action Plan calls green infrastructure, increasingly referred to as nature-based solutions, "the low-hanging fruit of climate adaptation" for the many benefits described previously (reduced flood risk, improved air quality, and urban cooling, and reduced energy use), and goes on to say that:

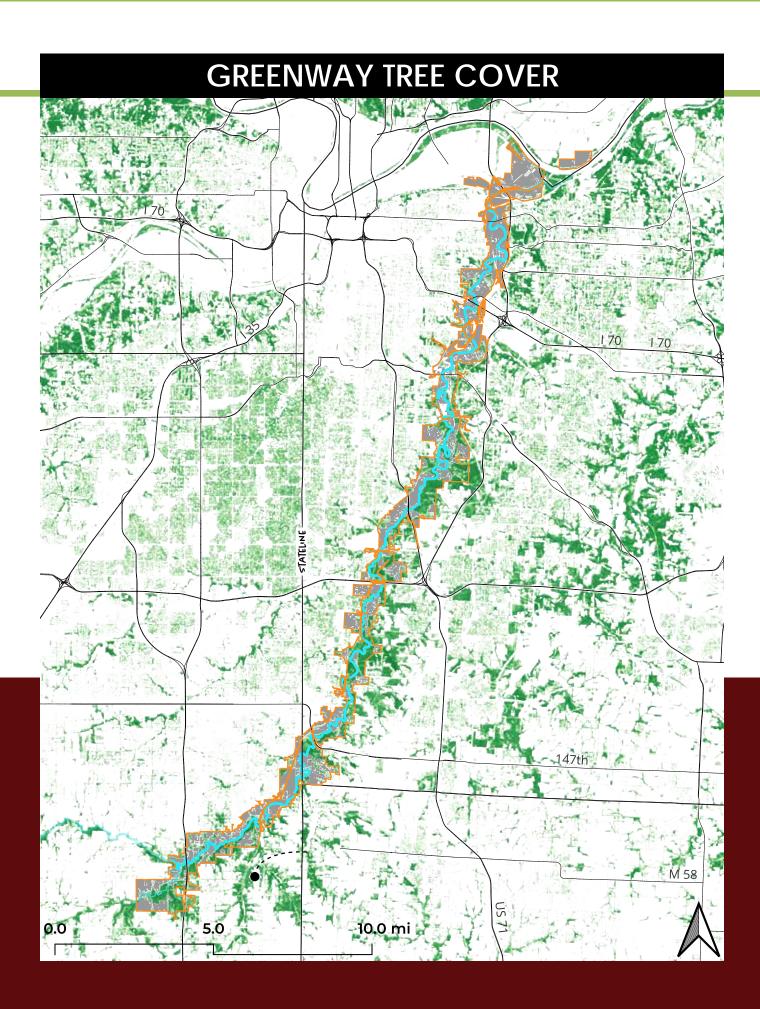
Nature-based solutions present meaningful, scalable opportunities to mitigate greenhouse gas emissions at large and small landscape scales while helping with adaptation and resilience toward critical climate threats of heat and flooding... MARC estimates that our region's riparian forests sequester approximately 600,000 tons of CO2e/year. Doubling well-managed riparian habitat would double carbon sequestration. (CAKC, 2021)

Our region intends to reduce its future greenhouse gas emissions by 80% by 2050, avoiding the emissions of about 37 million metric tons of CO2 and equivalent greenhouse gases (CO2e) per year. Even this ambitious target assumes that we will still emit about 6 million tons of CO2e per year, which must be offset to achieve our region's ultimate goal of "net zero" emissions.

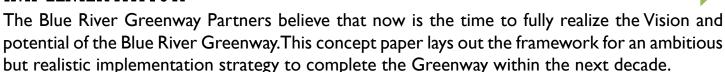


Merely protecting our region's existing floodplain woodlands would offset about 10% of our region's remaining future emissions. If our floodplains were fully re-vegetated, we could offset as much as 2 million mtCO2e, or 1/3 of our estimated future emissions! Conversely, allowing our existing woodlands to be lost would add another 600,000 mt/CO2e per year to the atmosphere.

Using data from the MARC, the same data used by CAKC, the Blue River Greenway's 6,000 acres of trees draw down almost 30,000 tons of CO2e annually. By fully protecting and restoring the Greenway, we can add as many as 5,000 acres of trees and draw down an additional 20,000 tons or more per year! More than a meaningful down payment toward our climate goals, the Blue River Greenway will provide the launch pad and means for Partners across the region to fully connect and restore the greenways across our nine counties.



### **IMPLEMENTATION**



In developing the implementation framework presented in this paper, we took careful stock of existing infrastructure and community assets, reviewing past and ongoing plans and studies, and cataloging proposed projects and identified needs. We built upon this base through deep engagement with residents, neighborhood representatives, City and County staff, and not-forprofit and community organizations, to identify new focus areas, projects, programs, and initiatives to unlock and maximize the Greenway's full potential. We had honest conversations about past failings and missed opportunities and developed the Blue River Greenway WERM to guide our efforts. Finally, we drew on our Partners' decades of experience in conservation, watershed management, recreation and transportation, economic and community development, and naturebased solutions for climate resilience, to map out the implementation steps, program budget, and resources needed to achieve the Vision.

The following outlines a community-based program that will fully protect, connect, and restore the Blue River Greenway. The program is predicated on protecting the remaining Greenway land through a voluntary program of property and easement acquisition, donated conservation easements, and long-term contracts (40- and 100-year terms). Work will begin immediately on existing public and newly protected land to implement watershed management projects, compete greenway and blueway improvements, develop outdoor recreation programs and public greenspaces, and begin protecting and restoring natural landscapes. All the while, we will promote circular economic development and develop the workforce needed to construct, operate, and maintain our new assets, and implement new programs and services.

Implementation is proceeding as Partners complete ongoing and funded projects, comprehensive master plans and studies, identify new (and equity-focused) projects and programs, apply for and secure Federal and state grant funding, and identify traditional and novel funding and financing sources. The next steps include the following:

- Finalizing a strategic funding and finance plan for the Blue River Greenway
- Identifying and securing additional Federal and state grants
- Approaching major regional and national philanthropic funders
- Leveraging City, county, state, Federal, and philanthropic funding and innovative financial instruments
- Developing a comprehensive, long-term funding and financing pool that distributes resources equitably and efficiently, guided by the community's Vision, needs, goals, and desires as documented in this Vision and the Water Equity Road Map

LAND ACQUISITION & PROTECTION						
	(Supports All of the Follo	<del>-</del> ,				
	Floodplain Acres	<u>Upland Acres</u>	Est. Cost (2023 \$			
Land & Right-of-Way Acquisition	2,470		\$20,400,000			
Conservation Easement Donations	990	470	\$5,800,000			
Long-term Protection Contracts	990	4,220	\$8,300,000			
SUBTOTAL			\$ 34,500,000			
FLO	ODING AND WATER	QUALITY				
	<u>D</u>	escription	Est. Cost (2023 \$)			
Floodplain Restoration & Detention	Flood benching, detetnion,	wetlands	¢ 13.500.000			
Streambank Stabilization	Streambank stabilization and vegetation		\$ 13,500,000			
SUBTOTAL			\$13,500,000			
FCONOM	IIC & WORKFORCE D	EVEL OPMENT				
Leonor		escription	Est. Cost (2023 \$)			
Restoration and Maintenance	<u> </u>	<u>escription</u>	LSt. COSt (2023 \$)			
Restoration & Maintenance Crews	Hire train & equip municir	nal NGOs and neighborhoods	\$1,650,000			
Neighborhood Stipend Program	Hire, train & equip municipal, NGOs, and neighborhoods  Fund neighborhood association stewards		\$1,000,000			
Urban Agricultue Program	•	ty training, logistics, & finance	\$2,500,000			
		ve for training, education, research	42,300,000			
Regenerative Landscape Research & Ed.	& development, field statio		\$3,750,000			
Water Ranch	Experiential Water Center		\$2,000,000			
Ecotourism Business Incubator/Hub	Ecotourism businesses dev		\$1,300,000			
Circular Economy Studio	Circular economy business	'	\$1,200,000			
Outcomes-Based Marketplace	Eco-Credit development a	•	\$2,000,000			
MetroGreen Fellows Program	•	ve for training, education, research	\$5,000,000			
SUBTOTAL	. iaid insulation cooperati	re res cramming, education, research	\$20,400,000			
SOBI GIAL			<b>\$20,100,000</b>			
REGIONAL CON	NECTIONS AND OU	TDOOR RECREATION				
Greenways & Blueways	Missouri	<u>Kansas</u>	Est. Cost (2023 \$)			
Paved Multi-Use Trails & Trailheads	18 miles	7.5 miles	\$25,578,000			
Mountain Bike Trails		TBD	\$1,500,000			
Boat Access (@ trailheads above)	\$900,000	\$180,000	\$1,080,000			
Restrooms, Shelters, Benches, Water			\$3,000,000			
SUBTOTAL			\$31,158,000			
Parks & Neighborhood Greenspace	<u>D</u>	escription				
Alex George Wetlands	Outdoor classroom, nature play, pollinator & wetlands		\$366,000			
Blue River Commons	Shelters, playgrounds, trails, games		\$1,426,000			
Blue Valley Park	(Trailhead and bo	oat access included above)	TBD			
M 15	Outdoor classroom, nature & mountain bike trails, I/O rock unicipal Farm climbing, skate park, bat preserve		TDD			
Municipal Farm			TBD			
	Trails, gardens, urban agru	culture, green infrastructure, play				
Palestine East Project	areas, outdoor gathering spaces		\$7,000,000			
Vacant Lots & Neighborhood Spaces	Parklets, community garde	ns, gathering spaces	\$3,000,000			
Native Veg. & Green Infrastruct.	Residential native landcape	restoration & rain gardens	\$1,500,000			
SUBTOTAL			\$13,292,000			
Equitable Access, Wayfinding, & Safety						
Signage & Wayfinding	Physical signage		\$125,000			
Neighborhood Access	Access points for residents	s of all abilities	\$1,440,000			
Outdoor Recreation Programs	Programs, training, 8	outreach to urban residents	\$1,500,000			
Mobility Hubs	Transit access for trails, bli	ueways, & parks	\$1,800,000			
Greenway Rangers	Safety and maintenance par	trols	\$5,000,000			
Anti-Dumping & Litter Control	Waste management and lit	ter/dumping provention	\$2,000,000			
Program Staff & Administration			\$1,137,000			
SUBTOTAL			\$13,002,000			
NATU	DE DASED CLIMATE	DECII IENCE				
NATO	RE-BASED CLIMATE	NESILIENCE				
	<u>D</u>	escription	Est. Cost (2023 \$)			
Riparian Corridor Protection	Woodland protection for	carbon sequestration & offsets	(\$18,433,600)			
Riparian Corridor Restoration	Reforestation for carbon sequestration & offsets		(\$9,649,000)			
Neighborhood Tree Planting	Plant and maintain trees in public spaces & private lots		\$3,956,000			
Invasive Species Management	Eradicate and replace hone	eysuckle & other invasives	\$1,750,000			
SUBTOTAL			(\$22,376,600)			
PROGRAM TOTAL			\$103,475,400			

### **PRIORITIZATION**

Implementation is prioritized into two phases over ten years, with corresponding resource needs.

#### CAPACITY BUILDING

#### (\$5M of \$25M Secured)

Build the organizational capacity to establish the program and secure additional investment, including:

- A Partnership Framework delineating Partner roles, responsibilities, and operational procedures.
- Funding for a program coordinator, development director, and key staff at Partner organizations.
- Seed capital for the funding and finance pool to leverage Federal, state, and philanthropic grants, begin land assembly, and develop carbon offset projects.
- Pilot Project funding for shovel-ready projects:
  - SECURED! \$5 Million American Rescue Plan Act (ARPA) grant for forest and wetland restoration and crew expansion.
  - \$3.0 Million to complete Blue River Trail Segment C 0 from Stadium Drive to Corrington Park.
- Establish the Educational Collaborative, Workforce Training, & Service-Learning Program.
- Launching the Circular Economy, Ecotourism, and Urban Agriculture Business Incubators.

#### PROTECTION, CONNECTION, RESTORATION, & REINVESTMENT (\$100 M)

The fully operational program needs will consist of the following:

- Assembling land, acquiring easements, and securing long-term contracts for carbon offsets.
- Capital projects to construct trails, trailheads, boat access, neighborhood access, parks, and greenspace.
- A full-scale restoration program to reforest and restore wetlands and prairies assembled and contracted land and manage carbon offset revenue.
- Economic and workforce development, neighborhood reinvestment, and investment pool management.
- Administration, monitoring, and maintenance.

# HIGHLIGHT PROJECTS-

The following pages introduce several focus areas and projects that highlight early successes and exemplify the Blue River Greenway's promise.

Use the links below to view additional information on the following case studies.

> **Municipal Farm Palestine East Corridor Project** Blue River Parkway Masterplan **Blue Valley Plan**

### MUNICIPAL FARM

**Expanded View** 

Located on the banks of the Blue River east of the Brush Creek confluence, the 444-acre Municipal Farm has been in City ownership since 1911 and benefits from its proximity to critical regional amenities and natural resources (the Truman Sports Complex, Brush Creek and Blue River greenway trails, and the Rock Island Corridor). Over the last century, the farm has been home to the city's tuberculosis hospital, women's reformatory, "potter's fields" (indigent cemetery), municipal correctional institution and an inmate-run farm, municipal landfills, and hazardous materials storage. The US Army Corps of Engineers have altered the adjacent Blue River to reduce flooding, and the area is surrounded by industry and residential neighborhoods struggling with crime, poverty, and environmental challenges. The Municipal Farm has become overgrown with invasive species, resulting in a monoculture of understory species displacing native wildlife.





After the jail was demolished in 2009, a Municipal Farm Sustainable Reuse Plan was created and adopted in 2012 (Resolution No. 120959). As many partners work to implement the plan, the Municipal Farm helps to revitalize urban agriculture, restore habitat, and provide healthy outdoor recreational opportunities to its under-served community. Expanding community gardens, restored farmland, and a future food hub to train and support urban farmers will provide healthy food and economic opportunities. Over 30 acres of wetland and bottomland hardwood habitat restoration have been completed with plans to double the conservation area, helping to offset historical groundwater contamination in the industrial area downstream. Plans include mountain biking, kayaking and canoeing, fishing, nature viewing, rock climbing, and even skateboarding, creating an unparalleled urban nature park that has the potential to become a regional ecotourism destination.

Photo Credit: Heartland Conservation Alliance





#### **Expanded View**

# PALESTINE EAST CORRIDOR PROJECT







Through a series of community surveys and workshops, HCA learned that nearby residents had significant connections with their backyard forest and a deep desire to protect it. A tree inventory was conducted in 2019 to prepare the way for concept development by the Community Advisory Board (CAB).

Nine individuals with varied backgrounds gathered to build trust and listen to one another's concerns for the site. They created concepts centered around Ecosystem Services and Economic Advance. Each focuses on accessible trails, neighborhood gathering spaces, community food production, and restoration of natural spaces by improving water quality and removing invasive species.

Engaging in community is tough but so worth it. Resident leaders spoke truth to power tonight and we are committed to stellar basic City services to earn their

#GreenInfrastructure #5martSewer \*PeopleFirst









KC Water and their smartsewer program are working with the neighborhood to integrate green infrastructure into this plan.

### BLUE RIVER PARKWAY MASTER PLAN

**Expanded View** 

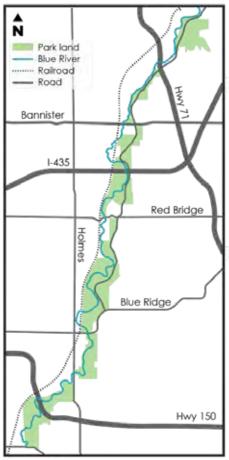
Jackson County Parks + Rec sought to create a master plan for the Blue River Parkway, which stretches from south of Swope Park to Kenneth Road and consists of approximately 2,200 acres. Throughout the citizen-driven master planning process, input from stakeholders, existing partners, and the public was critical in informing and creating the three primary goals and priorities:

- Land management and natural resources
- Enterprise, recreation, and programs
- Park development and improvement

The final deliverable included a master plan document highlighting the Parkway's historic importance, public engagement results, major goals, priorities, and objectives for the future of the Parkway, and capital improvement plans for strategic areas along the Parkway, like the Alex George Wetland.







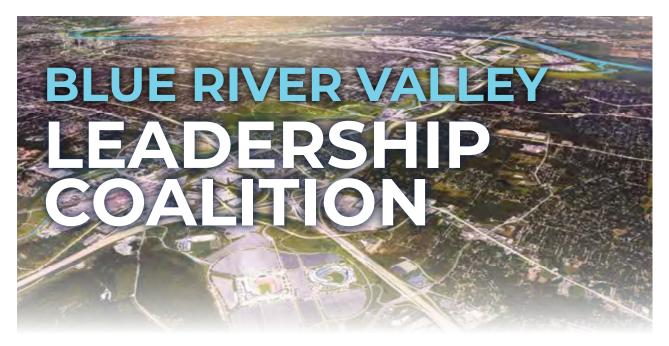




Kenneth Road

### **BLUE VALLEY PLAN**

**Expanded View** 



t this unique time, businesses, communities, and the public sector alike have united in a desire, and an approach, to regenerate the Blue River Valley.

In solidarity, we the stakeholders believe that the following projects, programs, and interventions will serve as a blueprint to revitalize the Blue River Valley to once again serve as an economic engine for Kansas City but this time do so in ways that empower the community and restore ecological assets.

Our approach is made up of economic development best practices for the 21st century.

We come together to wholeheartedly endorse the efforts below and believe that each will help us take a step closer to once again seeing the Blue River Valley become a resilient and productive part of Kansas City's economy for generations to come. The once-thriving corridor now only contributes to the status quo of blight and economic hardship for the area and surrounding communities. The opposite must become the new

reality, especially since this area is Kansas City's front door to the 2026 World Cup games. Reinvigorating a large part of our community, which has experienced decades of underinvestment, will take time and effort. It must begin somewhere though, and we believe that is outlined in these projects.

- · Blue River Greenway led by Heartland Conservation Alliance
- · Economic Development Pilots led by Foundation for Regeneration & EDCKC
- · Missouri River Terminal led by Port KC
- · Wetlands Mitigation Bank led by The Nature Conservancy
- · Infrastructure "GreenSheet" led by KCIC



### **BIBLIOGRAPHY**

AURI. (2005). Eastwood Hills Neighborhood Plan. Prepared for Kansas City, Missouri City Planning and

Development Department. Adopted November 17.

Blue River Urban Waters Federal Partnership. 2023 – 2025 Work Plan. https://www.joinrenewtheblue.org/files/ ugd/97f8ff b5dcbd357f5744d4add72822bad295b8.pdf

BNIM. (2012). The Municipal Farm Sustainable Reuse Plan. Prepared for the Kansas City Planning and Development Department.

Bracker, A., Williams, G., Schulte, S., and Gordon, J. (2015). Municipal Farm – Kansas City, Missouri. Presentation to the American Architectural Foundation Sustainable Cities Design Academy, June.

Brant, Bill (No Date). http://www.blueriver.org/

Brown, Laurie L. (2010). The KCMO Stream Setback Ordinance: Science, Public Involvement, and Water Quality Protection.

Bucher, Willis, and Ratliff Corporation (BWR). 2003. Brush Creek 2020 Masterplan. Prepared for the Kansas City, Missouri, Board of Parks and Recreation Commissioners. Adopted May 13.

City of Overland Park, Kansas. (2019). Greenway Linkages Map. https://www2.opkansas.org/files/dw/api/ Docs/10346? ga=2.17875967.738091637.1684785887-1352438041.1684785887

City of Kansas City, Missouri. (2009a). Kansas City Natural Resources Protection Map - South Kansas City Composite. Prepared by the City Planning and Development Department. January 29.

City of Kansas City, Missouri. (2009b). Overflow Control Plan. Prepared by the Water Services Department, Overflow Control Program. January 30.

City of Kansas City, Missouri. (2009c). Municipal Farm Redevelopment Site Analysis. Prepared by the City Planning and Development Department. August.

City of Kansas City, Missouri. (2014). "Docket Item #6, Case No. 14453-MPD - Municipal Farm Rezoning to MPD." Presentation by the City Planning and Development Department to the City Plan Commission. March 18.

City of Kansas City, Missouri. (2021). Advance KC. https://dashboards.mysidewalk.com/kcmo-advancekc/home-9831830e523d

City of Kansas City, Missouri. (2023). Area Plans. https://www.kcmo.gov/city-hall/departments/city-planningdevelopment/area-plans-list

City of Kansas City, Missouri. (2019). Bike KC Master Plan Draft 2019. City Planning & Development. https:// www.kcmo.gov/home/showpublisheddocument/6992/637684219737100000

Climate Action KC (2021). Regional Climate Action Plan. Climate Action Plan – Net Zero Kansas City Region by 2050. https://climateactionkc.com/plan

Echols, Alexis. (2021). Alex George Wetland Park: Master Plan Assisting the Natural Progression from Lake to Wetland. University of Kansas Capstone Project. December.

Economic Development Corporation of Kansas City. 2017. Blue River Valley Redevelopment Opportunity Assessment. August. http://edckc.s3.amazonaws.com/EDC%20Website/Blue%20River%20Valley%20/KC%20 Blue%20Valley%20Final%20Report 9.2017.pdf

Environmental Advisors and Engineers, Inc. (2012). Area-Wide Brownfields Plan – Municipal Farm Brownfields, Kansas City, Missouri. Prepared for the City of Kansas City, Missouri. October.

Fishel, V.C., Searcy, J.K., & Rainwater, F.H. (1953). Water Resources of the Kansas City Area Missouri and Kansas. https://pubs.usgs.gov/circ/1953/0273/report.pdf

Foundation for Regeneration. (2022). Blue River Valley – Phase I Discovery Results. Prepared by Hoxie Collective. March 4.

Foundation for Regeneration. (2023). Blue River Valley. https://regeneration.us/blue-river-valley/

HAZMED Woolpert, LLP. (2004). Blue River Greenway Master Plan – Phase I Draft Report. Prepared for the Kansas City District, U.S. Army Corps of Engineers, and the Kansas City, Missouri, Public Works Dept. August.

HDR Engineering. (2008). Blue River Channel Modifications Project, Brush Creek to 53rd Street - Refined Conceptual Mitigation and Enhancement Plan. Prepared for the U.S. Army Corps of Engineers, Kansas City District; and the City of Kansas City, Missouri. April 14.

Heartland Conservation Alliance (2022a). Blue River Action Plan. https://www.heartlandconservationalliance.org/ blue-river-action-plan

Heartland Conservation Alliance (2022b). Blue River Greenway Story Map. https://storymaps.arcgis.com/ stories/53294d9b71804c8c821a879a519fe387

Heartland Conservation Alliance (2022c). Heart of the City Assessment and Restoration. https://www. heartlandconservationalliance.org/palestine-east

Heartland Conservation Alliance (2021). Blue River Report Card. https://www.heartlandconservationalliance. org/blueriverreportcard

Heartland Conservation Alliance and Wichita State University. (2023). An Equitable Future for the Blue River Greenway. Prepared by Vireo and Hoxie Collective under United States Environmental Protection Agency assistance agreement #Al97756601 to the Wichita State University Environmental Finance Center. February.

Hutchinson, Stacy, McDonough, Kelsey, Stanton, Jessica, and Thomas, Victoria. (2020). Blue River Watershed Modeling Report. Prepared for The Nature Conservancy – Kansas. May.

Jackson County Parks + Rec (2022). Blue River Parkway Master Plan. https://www.makeyourdayhere.com/files/ assets/ parksrec/parks/documents/jcpr brp masterplan.pdf

Johnson County Parks & Recreation District (2015). Legacy Plan. https://www.jcprd.com/255/Legacy-Plan

Johnson County Parks & Recreation District (2022). Redlined – Cities, Suburbs, Segregation. Museum | Johnson County Park & Rec, KS (jcprd.com)

Kansas City, Missouri Office of Environmental Quality (2022). Kansas City, Missouri Climate Protection & Resiliency Plan. KCMO CRP Final September 2022. https://indd.adobe.com/view/3e643429-e6da-428d-a6d6-00ef730388f5

Kansas City Parks & Recreation (2020). Strategic Plan. https://kcparks.org/strategic-plan/

Kansas City Parks & Recreation (2021). Reference Book. https://kcparks.org/wp-content/uploads/2021/07/2021-Reference-Book.pdf

Kansas City Public Library. (2021). "Pleasure Boating on the Blue River? KCQ Navigates This Interesting History." Pleasure Boating on the Blue River? KCQ Navigates This Interesting History | Kansas City Public Library. https:// kchistory.org/blog/pleasure-boating-blue-river-kcq-navigates-interesting-history

KCWater. (2021). 2021 Water Quality Report. http://www.kcwater.us/wp-content/uploads/2021/04/2021-Water-Quality-Report\_web-1.pdf

Mallott, Christopher. (2023). Reforesting the Blue River Greenway. University of Kansas Capstone Project. May.

Mid-America Regional Council. (2007). MetroGreen Action Plan 2008-2009. Prepared by Patti Banks Associates. December.

Mid-America Regional Council. (2020). Green Infrastructure Metrics - Measuring Resilience. Prepared by Hoxie Collective.

Missouri Department of Conservation. 2008. "Upper Blue River Watershed Conservation Opportunity Area" (Fact Sheet). No Date.

Missouri Department of Natural Resources. (2020). Heartland Conservation Alliance Kansas City Municipal Farm Natural Resources Damages Assessment and Restoration Project. https://dnr.mo.gov/waste-recycling/ investigations-cleanups/natural-resource-damage-assessment-restoration-nrdar/statewide/heartlandconservation-alliance-kansas-city-municipal-farm

Olsson Associates. (2022). Watershed 3 Phase I Watershed Master Plan. Prepared for Johnson County Stormwater Management Program. May.

Patti Banks Associates. (2007a). KC-One Stream Asset Inventory Final Technical Memorandum. Prepared for Black & Veatch and Kansas City, Missouri Water Services Department. November.

Patti Banks Associates. (2007b). Upper Blue River Watershed Implementation Plan. Prepared for Johnson County Stormwater Management Program, Jackson County, Missouri, and the City of Kansas City, Missouri. November

Renew the Blue (2023). Join Renew the Blue. https://www.joinrenewtheblue.org/

Samuel, T. D. (1930). The Water Supply System of Kansas City, Missouri. Journal (American Water Works Association), 22(9), 1236–1246. http://www.jstor.org/stable/41225585

Scott, Matthew A. (2012). An Analysis of Flow Attenuation Provided by Stream Buffer Ordinances in Johnson County, Kansas. http://hdl.handle.net/1808/10201

Schulte, S, Elbert-Noll, P., and Henson, J. (2008). Riparian Buffer Benefits and Kansas City, Missouri's Stream Setback Ordinance. Presented at the StormCon 2008 National Conference. August 21.

Tetra Tech EM Inc. (Tetra Tech). (2003). Brush Creek Natural Resource Inventory – Kansas City, Missouri. Prepared for the U.S. Army Corps of Engineers, Kansas City District. November 4.

Tetra Tech. (2005). Preliminary Summary Report, Water Resources Master Plan, Planning Assistance to States Program, Brush Creek, Kansas City, Missouri. Prepared for the U.S. Army Corps of Engineers, Kansas City District. February 7.

Tetra Tech. (2013a). Phase I Targeted Brownfields Assessment, Rev. 02 – KCMO Municipal Farms, Former Lafarge Site at 4701, 4721, and 4725 East Coal Mine Road in Kansas City, Missouri. February 6.

Tetra Tech. (2013b). Phase II Targeted Brownfields Assessment, Rev. 02 – KCMO Municipal Farms, Former Lafarge Site at 4701, 4721, and 4725 East Coal Mine Road in Kansas City, Missouri. June 10.

Tetra Tech. (2014a). Phase I Targeted Brownfields Assessment – KCMO Public Works East Garage (also known as Municipal Farm area 7), Kansas City, Jackson County, Missouri. January 16.

Tetra Tech. (2014b). Phase II Targeted Brownfields Assessment – KCMO Public Works East Garage (also known as Municipal Farm Area 7), Kansas City, Jackson County, Missouri. May 27.

United Community Services of Johnson County. (2018). Greater Kansas City Community Profile. https://ucsjoco. org/wp-content/uploads/2020/01/2018-Poverty-Economic-Insecurity-in-Greater-Kansas-City-I.pdf

United States Army Corps of Engineers and City of Kansas City, Missouri. (2008). Blue River Channel Modifications Project, Brush Creek to 53rd Street - Refined Conceptual Mitigation and Enhancement Plan. Prepared by the Kansas City District, United States Army Corps of Engineers.

U.S. Army Corps of Engineers (USACE). (2005). Reconnaissance Study, Brush Creek Basin - Flood Damage Reduction and Ecosystem Restoration, Kansas City, Missouri and Johnson County Kansas. February.

USACE. (2008a). Blue River Channel Modifications, Brush Creek to 53rd Street, Jackson County, Missouri - Design Documentation Report, Prefinal Submittal Channel Modifications and Environmental Enhancements Excluding Waterline and Sanitary Sewer Relocation. August.

United States Army Corps of Engineers. (2008b). Blue River Channel Modifications, Brush Creek to 53rd Street - Environmental Enhancement Plans. August.

United States Army Corps of Engineers. (2021). Missouri River Basin Water Management Information. https:// www. nwd-mr.usace.army.mil/rcc/index.html

United States Census Bureau (2022). https://www.census.gov/data.html

U.S. Environmental Protection Agency. (2012). Urban Waters Federal Partnership. https://www.epa.gov/ urbanwaterspartners

US Department of the Interior, Fish and Wildlife Service (USFWS). (1978). "Blue River Channel Habitat Evaluation." November 9.

USFWS. (1979). Letter Regarding the Blue River Channel Habitat Evaluation. From Tom A. Saunders, Area Manager; to Col. Walter C. Bell, District Commander, U.S. Army Corps of Engineers. January 12.

USFWS. (1980). Letter Regarding the Blue River Channel Habitat Evaluation. From Tom A. Saunders, Area Manager; to Col. Walter C. Bell, District Commander, U.S. Army Corps of Engineers. March 18.

USFWS. (2010). National Wetland Inventory Mapping. U.S. Department of the Interior, Fish and Wildlife Service, Habitat Assessment Branch. October 1.

U.S. Geological Survey. (2007). Two-Dimensional Hydrodynamic Modeling and Analysis of the Proposed Channel Modifications and Grade Control Structure on the Blue River near Byram's Ford Industrial Park, Kansas City, Missouri. Prepared in cooperation with the U.S. Army Corps of Engineers.

USGS. (2013). Estimated Flood Inundation Maps for the Lower Blue River in Kansas City. June 24. Available online at: http://mo.water.usgs.gov/indep/kelly/blueriver/. Accessed on October 28, 2014.

Vireo. (2012). Preliminary Summary Report for Blue River Greenways Study - Phase II (Update). Prepared for the U.S. Army Corps of Engineers, Kansas City District. February 7.

Vireo. (2015). Brush Creek-Blue River Confluence Section 206 Preliminary Assessment. Prepared for the U.S. Army Corps of Engineers, Kansas City District. September.

Wilkison, D.H.; Armstrong, D.J.; Norman, R.D.; Polton, B.C.; Furlong, E.T.; Zaugg, S.D. (2002, 2006, and 2009). Water quality in the Blue River basin, Kansas City metropolitan area, Missouri and Kansas, July 1998 to October 2004. Prepared for the U.S. Geological Survey.

Wilkison, D.H., Armstrong, D.J., and Hampton, S. A. (2009). Character and Trends of Water quality in the Blue River Basin, Kansas City metropolitan area, Missouri and Kansas, 1998 through 2007. Prepared for the U.S. Geological Survey.