

WHERE IS THE BLUE RIVER? The Blue River is Kansas City's river—an essential natural corridor running through the heart of the metro area. It stretches approximately 40 miles across Kansas and Missouri, flowing through four counties and 21 municipalities—making it the most populated watershed in the Kansas City metro.

The **river begins in Kansas** at the intersection of Coffee Creek and Wolf Creek in southern Johnson County near the Overland Park Arboretum. From there, it winds north through suburban and urban landscapes—passing through Overland Park, **entering Missouri** in Jackson County south of Martin City, and continuing through Minor Park, the Blue River Parkway, Swope Park, and the Kansas City Zoo. The Blue River flows past Arrowhead and Kauffman Stadiums, through Blue Valley Park, and eventually **empties into the Missouri River** east of downtown Kansas City.

The Blue River has three major tributaries: Indian Creek, Brush Creek, and Tomahawk Creek. The land area that drains into the Blue River is called the Blue River Watershed, which covers a significant portion of the southern Kansas City metro. In fact, two-thirds of the rain that falls in this region flows into the Blue River system, impacting everything from water quality to flood risk.

WHAT IS THE HISTORY OF THE BLUE RIVER? The Blue River has a deep and dynamic history. Indigenous peoples lived along its banks for centuries, drawn by its natural resources and beauty. European settlement began in the late 1700s when Daniel Morgan Boone, son of famed frontiersman Daniel Boone, arrived in 1787 and trapped beavers along what he called the "Big Blue."

In the **1800s**, the Blue River became a **crossing point for pioneers heading west** on the Santa Fe, Oregon, and California Trails, particularly near Red Bridge Road and Minor Park. The Potawatami Trail of Death also passed through these crossings. During the Civil War, the river played a strategic role in the Battle of Byram's Ford (near 63rd street), part of the pivotal Battle of Westport, a Union victory that helped secure Missouri.

By the early 20th century, the Blue River evolved into a social and recreational hub for many Kansas City residents. Summer cottages, boathouses, and rental outfitters lined its shores. People swam, fished, picnicked, and used houseboats as art studios, weekend retreats, and even year-round homes. The river's deep, clear waters made it a prized destination.

By the mid-20th century, the Lower Blue River subwatershed had become an industrial hub, leaving a legacy of pollution and stripping the river of its recreational value. When the factories closed, the community faced economic decline. Frequent flooding—worsened by upstream development and an aging combined sanitary and storm sewer system—prompting the U.S. Army Corps of Engineers to channelize the river with stone and concrete, further degrading water quality and habitat while severing community connections. Today, under the Environmental Protection Agency (EPA) Consent Decree, Kansas City's Smart Sewer Program provides an opportunity to reverse this legacy by mitigating sewer overflows, restoring habitat, and reconnecting communities.





Blue River historic postcard

**WHY IS THE BLUE RIVER UNIQUE?** The Blue River is a **river of contrasts**—blending wild and urban, preserved and developed landscapes. The River's **headwaters** in Kansas are a **rapidly developing suburban area** that still contains wetlands, forests, grasslands, and agricultural land. The upper watershed provides vital habitat for native wildlife; however, **continued development poses challenges for conservation and flood mitigation**.

As the river flows north into Missouri, the landscape transitions into publicly owned parklands and green spaces, offering natural areas and recreation opportunities in the heart of the city. The middle and lower stretches of the Blue River corridor include urbanized areas, but also feature important publicly accessible natural spaces such as the Blue River Parkway, Swope Park, and Blue River Glades Natural Area. These areas provide trails, fishing spots, wildlife habitat, and nature-based learning opportunities for the public, helping to connect people to nature and history in the middle of a major metro area. In 2025, the Blue River remains a critical ecological, historical, and recreational asset for the Kansas City region—and a focus for ongoing restoration, stewardship, and community connection.



# OUR BLUE RIVER NEEDS PROTECTION

#### WHAT ARE THE CHALLENGES FACING THE BLUE RIVER?

The Blue River faces significant environmental challenges—especially in its **middle and lower subwatersheds** (including Brush Creek) where urbanization has taken a heavy toll on water quality and habitat.

The upper reaches of the river (including Indian, Tomahawk, Wolf, and Coffee Creeks) continue to support diverse wildlife and relatively healthy ecosystems, but rapid development threatens these areas by reducing natural habitats and increasing downstream stormwater flows. Further downstream, the impacts of decades of development are evident, with key challenges including:

- ➤ Stormwater runoff from streets, parking lots, and rooftops, which carries pollutants like fertilizers, road salts, oils, and pet waste directly into the river.
- > Severe erosion in downstream areas caused by fast-moving runoff from upstream developments.
- ➤ Increased flooding, as more of the watershed is paved over and natural ground cover is replaced by hard surfaces, reducing the land's ability to absorb rainwater.
- ➤ Combined sewer overflows (CSOs) during heavy storms, which release untreated wastewater into the river and harm aquatic ecosystems.
- ➤ Loss of natural and native habitat, when land is developed, streams and tributaries are channelized, forested stream buffers are removed, and invasive species out compete natives—reducing critical ecosystem services.
- ➤ Limited public access and awareness, meaning many Kansas City metro residents don't realize the Blue River and its tributaries flow through their neighborhoods or supports community health and resilience. Many urban areas lack access and view the river as polluted or hazardous, though opportunities—like the Berkeley Riverfront along the Missouri River—can show its potential as a valuable natural asset.

#### WHO IS WORKING TO RENEW THE BLUE RIVER?

While Heartland Conservation Alliance (HCA) serves as the EPA-designated Blue River Ambassador for the Urban Waters Federal Partnership, a growing network of local, regional, and federal organizations, agencies, and community members continues to work together to Renew the Blue (see Our Partners section for details). This collective effort includes initiatives focused on:

- ➤ Environmental stewardship habitat restoration, tree planting, trash cleanups, water quality monitoring, etc.
- > Youth and community outreach education and training on watershed health and stewardship
- ➤ Enhanced access and recreation expanding the Blue River Greenway Trail and offering recreational programming
- ➤ Land conservation protecting vital green space, riparian corridors, and biodiversity, particularly in headwaters
- ➤ Urban green infrastructure implementing nature-based solutions to manage stormwater, improve water quality, enhance urban habitats

This **Report Card** incorporates the latest data and insights from an ongoing, collaborative effort made possible through strong partnerships. Details about contributing partners and assessment methods are provided in the **Our Partners** and **Appendices** pages, with additional resources available on HCA's **Report Card webpage**.





In May 2025, Kansas City launched its largest-ever nature-based stream restoration effort along the Blue River. The Renewing the Blue project—led in partnership with Heartland Conservation Alliance, Bridging the Gap, Mid-America Regional Council, and Deep Roots—will restore up to 240 acres of river corridor and is a significant step forward towards a more connected Blue River Greenway. The restoration acreage includes five miles of the Lower Blue River, from Blue Valley Park to the trailhead near 53rd Street (managed by HCA), as well as key sites along the Middle and Upper Blue River, including the Blue River Glades Natural Area, Alex George Wetland, and Minor Park (managed by Bridging the Gap). By removing invasive species, reestablishing native plants, and adding neighborhood trees, the project is revitalizing the river while creating healthier land, water, and community.

**Renewing the Blue** 

## MAKING THE GRADE

## Indicators of Blue River health

Six categories were selected through an expert-led, community process in 2019 to best represent the overall health of the Blue River. Data for this Report Card were collected in 2024 and assessed in 2025, covering the Blue River's main stem, major tributaries, and, when relevant, the broader watershed.



**COMMUNITY CONNECTIONS\*** How do communities relate to the Blue River?

- *Indicator 1:* **Awareness** How knowledgeable are people about the Blue River?
- *Indicator 2:* **Behaviors** Do people participate in activities that improve the Blue River?
- *Indicator 3:* **Intent to Act\*** Will people take action to improve the Blue River?



**DEVELOPMENT** How do development practices impact the Blue River?

- *Indicator 1:* **Impervious Surface**\*\* How much impervious surface (roads, rooftops, etc.) surrounds the Blue River?
- *Indicator 2:* **Protected Open Space** How much land is protected from development and left open for people to enjoy?
- *Indicator 3:* **Urban Tree Canopy**\*\* How expansive is the tree cover in our communities?



**GOVERNANCE** How are local government actions and policies affecting the Blue River?

- *Indicator 1:* Local Ordinances\*\* How many environmentally friendly local ordinances are in place to protect the Blue River?
- *Indicator 2:* Collaborative Governance\* How connected are local governments in planning and protecting the Blue River?



**HABITAT** How much natural habitat exists along the Blue River to maintain a healthy ecosystem?

- *Indicator 1:* Riparian Cover How extensive is the natural forest vegetation along the Blue River?
- *Indicator 2:* **Native Habitat** How extensive are managed native ecosystems in the Blue River?



**RECREATION\*** How does the community interact with and seek enjoyment from the Blue River?

- *Indicator 1:* Trails How extensive are the greenway and trail connections across the Blue River watershed?
- *Indicator 2:* Parks\* How many parks provide recreation within the blue River watershed?



**WATER QUALITY\*** How clean is the water in the Blue River to provide for aquatic life and community recreation?

- *Indicator 1:* Water Quality Index\* How does pollution affect the water quality of the Blue River?
- *Indicator 2:* **Macroinvertebrates** Is the Blue River healthy enough to sustain aquatic life and ecosystems?
- *Indicator 3:* **Stream Visual Assessment** How impacted are the habtiats, riparian ares, banks and stream beds of the Blue River?

\*Denotes categories or indicators that are new,, previously unassessed, or significantly revised, making past comparison difficult. See Appendix A: Methodological Revisions for more details.

\*\*Denotes categories of indicators either corrected due to errors in the 2021 date or not reassessed due to unavailable updates. In these cases, 2021 scores were carried forward. See Appendix B: 2021 Report Card Corrections for more details.

## Report card grades

The Blue River Report Card uses a simple 100-point scoring system divided into five equal sections to determine the overall grade. Unlike a traditional academic scale—where an A is 90% or above and below 60% is failing—this system uses a broader, more sensitive spectrum to better capture changes in environmental conditions.











80-100

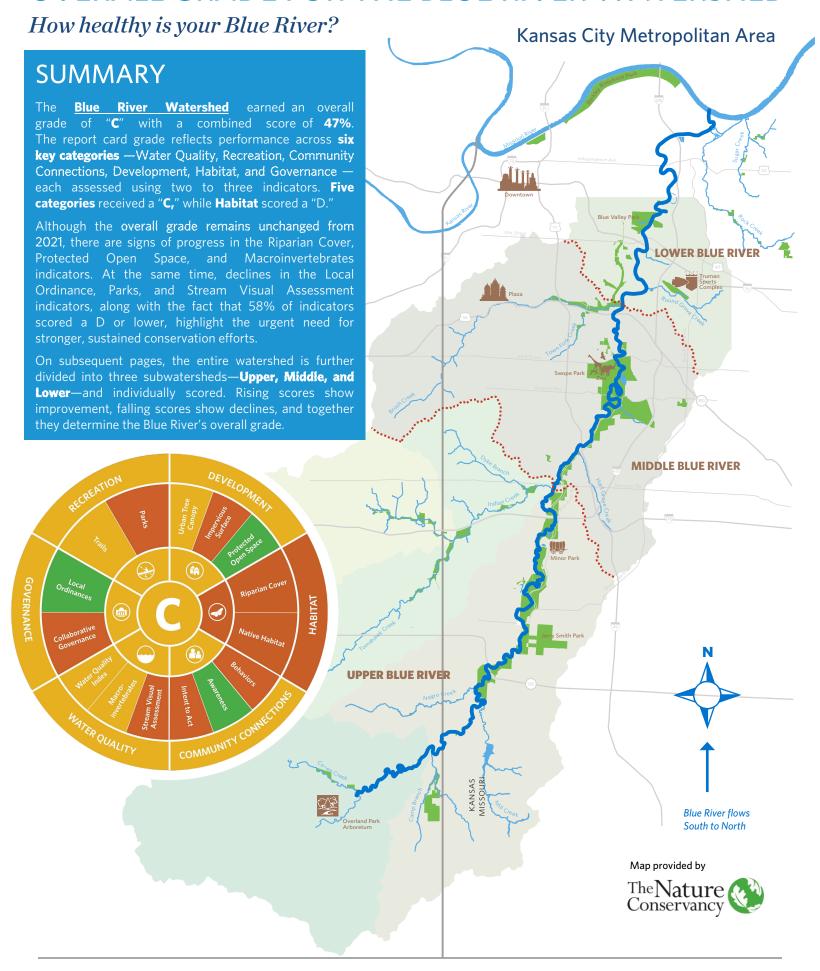
60-79

40-59

20-39

Category and indicator grades are reported as solid letters only, while watershed and subwatershed grades may include a plus (+) or minus (-) for scores within five points of the next grade. For example, 34% is graded "D+" and 45% as "C-." This approach provides a more nuanced and responsive evaluation to compare the three subwatersheds.

## OVERALL GRADE FOR THE BLUE RIVER WATERSHED





# UPPER BLUE RIVER

Wolf Creek to Indian Creek

**SUMMARY** The **Upper Blue River subwatershed** spans approximately **120,000 acres** across Kansas and Missouri, making it the largest of the three subwatersheds. Consistent with the 2021 report card, this area again earned a **"C" grade overall**, reflecting steady strengths in water quality alongside ongoing and emerging challenges related to development.

Key concerns in the Upper Blue River include protecting remaining undeveloped lands, managing existing natural areas, and safeguarding the subwatershed's still-strong water quality. Priority improvements include:

- > Strengthening collaboration among local governments and adopting more ecologically responsible local ordinances  $\rightarrow$  grade declined from "B" (2021) to "C" (2025)
- ➤ Expanding tree canopy and native vegetation along river banks → grade declined from "B" to "C"
- ➤ Strengthening public engagement with the river through increased access to expanded parkland and trails → grade declined from "C" to "D"

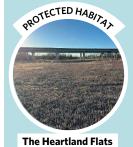
**PAST** The Upper Blue River was once characterized by **shaded streams**, **rolling hills**, **and oak-savannas** that supported several indigenous peoples. With the arrival of European settlers, the subwatershed landscape changed dramatically. Before World War II, agriculture dominated much of the land, while rail lines and early industry began to establish along transportation corridors. **Post-war expansion brought rapid suburbanization**, a trend that continues.

**PRESENT** Today, the Upper Blue River is home to more than 500,000 residents, and suburban and commercial development is accelerating—pushing into remaining rural and agricultural zones. Despite this pressure, nearly 25% of the subwatershed remains undeveloped, offering rare opportunities to preserve natural habitats and protect critical ecological functions. But these opportunities are rapidly narrowing as development accelerates.



**FUTURE** Without significant intervention, the Upper Blue River subwatershed is expected to be **fully developed by 2050**, with serious consequences for both the local environment and downstream communities. Under current development patterns and limited public awareness, natural streams may no longer support wildlife, flood risks will intensify, and once intact habitats could be forever lost. Public health will be harmed as water quality, recreational opportunities, tree canopy cooling, and carbon sequestration benefits are lost and flood risk increases.

This Report Card outlines urgent steps needed to reverse course—including policy reform, increased community engagement, nature-based development practices, and the protection of open space. The choices made today will determine whether the Blue River remains a resilient natural resource or becomes further degraded in the years ahead.



In December 2024, Heartland Conservation Alliance acquired 98 acres of floodplain along the Blue River near Holmes Road and Highway 150—now known as The Heartland Flats along the Blue River Greenway. Formerly agricultural land, this site will be restored to forested wetland habitat, enhancing wildlife corridors and improving water quality. The property, adjacent to Jackson County parkland, strengthens regional conservation goals outlined in HCA's Blue River Greenway Vision, Jackson County's Blue River Parkway Master Plan, and the Mid-America Regional Council's MetroGreen Plan. This type of large-scale land acquisition along the Blue River is an uncommon and especially meaningful achievement—made possible thanks to generous private donors and a Missouri Department of Conservation Land Conservation Partnership Grant's Conservation Land Acquisition Program—marking a rare and significant step forward in protecting the Upper Blue River's natural heritage.





# MIDDLE BLUE RIVER

Indian Creek to Brush Creek

**SUMMARY** The **40,000-acre Middle Blue River subwatershed** tied with the Upper for the highest overall grade among the three subwatersheds, earning a "C." Notably, it provides the **greatest recreational opportunities**—through its Parks and Trails—of any Blue River subwatershed.

All indicators remained stable compared to the 2021 Report Card. Over half (53%) of indicators earned a "D" or "F," signaling urgent need for improvement in key areas — especially Water Quality, Riparian Cover (notably along Brush Creek), Collaborative Governance, and the new Intent to Act indicator. Addressing these areas will be essential to prevent further decline and support long-term watershed health.

**PAST** For centuries, the **Kickapoo and Kansa Tribes** lived in and stewarded the Middle Blue River. Following their forced removal, settlers converted much of the subwatershed to agricultural use during the late 19th and early 20th centuries. Between **1920 and 1960**, **development expanded** upstream from Missouri into Kansas, shaping the urban landscape that exists today.

**PRESENT** Today, the Middle Blue River is home to approximately **200,000 residents**. Most of the subwatershed is **fully developed** in ways that have **degraded water quality, increased flooding, and intensified the urban heat island effect**. Brush Creek, in particular, is dominated by impervious surfaces. Despite these pressures, Kansas City, MO, and Jackson County, MO have preserved significant tracts of forested land, which continue to provide vital ecosystem services and recreational opportunities. There have been some fragmented multiuse trails, mountain biking systems, and watercraft access points built to improve public access.

**FUTURE** Looking ahead, the Middle Blue River faces both vulnerabilities and opportunities. While **parts** of the subwatershed are



highly susceptible to land use impacts and climate change, others could prove resilient. Population growth is expected to continue, though more slowly than in the Upper Blue River, bringing increases in impervious cover, urban heat, flooding, and declining water quality. However, major habitat restoration projects—especially along the river—would boost climate resilience, stormwater retention, and carbon sequestration. The Kansas City Regional Climate Action Plan underscores the importance of conserving and restoring natural areas as a strategy for achieving Net Zero climate goals. Complying with the EPA's Consent Decree through Kansas City's Smart Sewer Program—which includes separating stormwater and sanitary sewer systems—will play a critical role in reducing overflows and improving water quality in the middle Blue River watershed (including its tributaries) and downstream.



**Overlook Preserve** 

Since 2019, the 40-acre Heartland Overlook Preserve (HOP) has offered the community a place to connect with nature along the Blue River Greenway. Its oak-hickory woodland, 2.2 miles of hand built trails (by Urban Trail Co.), and bursts of spring wildflowers make it a seasonal favorite for hikers and bikers alike. yet, the woodland has also faced challenges from invasive bush honeysuckle. In 2024, the Heartland Conservation Alliance launched a more aggressive land stewardship plan, and with the help of volunteers and partners, has already restored 13 acres—with more progress underway. Supported by the National Fish and Wildlife Foundation, Missouri Department of Natural Resources, and Missouri Department of Conservation, these efforts are ensuring this special place will continue to thrive for generations to come.





# LOWER BLUE RIVER

Brush Creek to Missouri River

**SUMMARY** The **20,000-acre Lower Blue River subwatershed** earned a "**D+**," the lowest grade of the three segments, with no change since the 2021 Report Card. As the most impacted subwatershed, it **urgently needs focused action** to restore water quality and habitat, expand community access, and mitigate the impacts of aging infrastructure, development, industrial sites, and channelization.

While a few indicators showed modest gains—Riparian Cover and Protected Open Space rising from "F" to "D," and Macroinvertebrates improving from "D" to "C"—three failing indicators (Native Habitat, Stream Visual Assessment, and Parks) continue to reflect long-standing human impacts, including river channelization, widespread impervious surfaces, flood-control projects, and historic industrial development. These areas highlight critical opportunities for future improvement.

PAST The Lower Blue River has been developed the longest. In 1912, as Kansas City's park system was being envisioned, planner George Kessler described the Blue River as a place of "great natural beauty" with the potential to become one of the nation's most useful and scenic waterways. In the decades that followed, however, the subwatershed's trajectory shifted. After World War II, heavy industry concentrated along the river, degrading water quality. By the 1970s, the U.S. Army Corps of Engineers had extensively modified the channel with stone and concrete to control flooding. Around the same time, population in the lower subwatershed began to decline, leaving abandoned homes and industrial sites that became dumping grounds, further polluting the river.

**PRESENT** Today, about 100,000 people live in the Lower Blue River subwatershed. While much of the area is built out, thousands of vacant houses, industrial buildings, and lots remain. These create visible blight but also present opportunities for renewal. Designated Opportunity Zones are attracting investment in redevelopment, while local organizations are transforming vacant spaces into parks,



**community gardens, and green infrastructure**—restoring vitality to neighborhoods and delivering environmental and social benefits where they are most needed.

**FUTURE** The Lower Blue River stands at a crossroads. As the **most vulnerable subwatershed** segment to both **climate change** and **land use pressures** upstream, its challenges are significant—but so are its opportunities. Large new public and private developments under consideration, such as a multimodal transportation terminal where the Blue River joins the Missouri River, could include green infrastructure and trail connectivity. With thoughtful redevelopment, habitat restoration, and renewed community engagement, the Lower Blue River can be **transformed from a symbol of decline into a source of resilience** and pride for the people who call it home.



The 440-acre Municipal Farm (see storymap with documentary), a former jail and working farm owned by Kansas City, Missouri, sits in the Eastwood Hills neighborhood along the Blue River Greenway. A historic and environmental asset, it holds significant potential for the community. With support from a Missouri Department of Natural Resources grant, 28 acres were restored by Habitat Architects under a new conservation easement, removing invasive species and establishing native woodlands and wetlands—efforts that even brought beavers back to the site. In 2024, the Heartland Conservation Alliance shifted from managing restoration to serving as the conservation easement monitor, with KC WildLands of Bridging the Gap assisting in early restoration maintenance efforts. This conservation easement also annually serves as one of the clean-up sites for Project Blue River Rescue clean-up, further strengthening its potential as a community conservation hub.



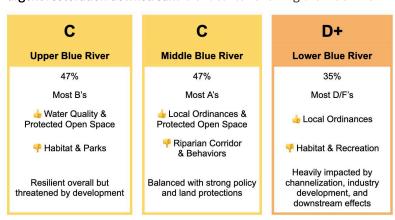


# TOGETHER WE CAN RENEW THE BLUE

#### **SUBWATERSHED SCORECARD SUMMARY**

This Report Card shows a watershed of contrasts. The Upper and Middle subwatersheds are holding steady with "C" grades, showing resilience through stronger water quality, land protection, and local policies. In sharp contrast, the Lower subwatershed continues to struggle with a "D+," weighed down by habitat loss, recreation gaps, and decades of industrial and channelization impacts.

The message is clear: protecting strengths upstream while prioritizing urgent restoration downstream is critical to renewing the Blue River.



For the above graphic, the thumbs up icon indicates subwatershed strengths whereas the thumbs down icon indicates weaknesses.

Grades have changed little since the 2021 update, reflecting both slow progress and the short time frame for measurable improvements. To better capture long-term change, we plan to move to a five-year update cycle. But time alone won't deliver results—urgent, coordinated action is essential to raise future scores. Communities deserve a healthier, more accessible river protected for generations to come.

## Call to Action

These grades underscore the **urgent need for collective action** to protect and restore the Blue River. Key improvements include:

- > Safeguarding open land from development while managing it to protect native ecosystems and biodiversity.
- ➤ Restoring degraded habitat and riparian cover to strengthen ecological resilience.
- ➤ Engaging communities to increase participation and inspire behavior change.

- ➤ Improving water quality and health downstream through better stormwater management, pollution reduction, and riparian restoration.
- > Strengthening governance and collaboration to unify efforts.

Together, we can "Renew the Blue" by investing in conservation, strengthening community stewardship, and reconnecting people with nature. The Blue River doesn't just need protection—it needs partnership. With intentional care and collective action, we can transform it into a healthier, more resilient river that sustains both people and wildlife for generations to come.



**COMMUNITY CONNECTIONS** Although the Awareness of watershed issues is improving ("B" grade), lagging Behavior and Intent to Act (both "D" grades) highlight the need for greater partner and community participation in the "Renew the Blue" campaign to turn awareness into meaningful action for the river's health.



**DEVELOPMENT** To balance growth with sustainability, the Metro must prioritize smarter land development by integrating green infrastructure preserving open spaces, and embracing nature-based solutions.



**GOVERNANCE** We urge every city in the Blue River Watershed to adopt Local Ordinances and a Healthy Watershed Resolution—demonstrating a united commitment to Collaborative Governance ("D" grade) and collective action for a healthier river.



**HABITAT** Native Habitat and Riparian Cover remain among the lowest-scoring indicators (mostly "D" and "F" grades), underscoring the urgent need for park departments, neighborhoods, and city planners to unite around the Renew the Blue partnership to restore ecosystem health and boost climate resilience.



**RECREATION** We encourage public landowners across the subwatersheds to collaborate through the **Blue River Greenway Vision** to prioritize Parks and Trails, reconnect communities with nature, and enhance both watershed and community health.



**WATER QUALITY** With all indicators worsening downstream, urgent action is needed to reduce pollution, mitigate stormwater peak flows, restore riparian zones, and strengthen community stewardship.







# **OUR PARTNERS**

### **CREATING A REPORT CARD**

Developing a report card for a large and complex geographic region was a challenging task. Thanks to the expertise and dedication of our team, partners, and volunteers, we were able to focus on and refine categories and indicators that: 1) resonate with a broad range of community members, 2) accurately reflect the health of the Blue River, and 3) highlight factors where meaningful improvement is possible. More than 1,000 hours were devoted to data collection and analysis in 2024, while 2025 efforts centered on finalizing grades and disseminating results.

#### **HUGE THANK YOU TO REPORT CARD:**

#### **PARTNERS**

Bridging The Gap, City of Kansas City Missouri, City of Overland Park, Environmental Protection Agency, Heartland Conservation Alliance, Jackson County Parks + Rec, Johnson County Parks & Rec, Kansas City Parks & Rec, Metropolitan Community College, Mid-American Regional Council, Missouri Department of Conservation, Missouri Department of Natural Resources, The Conservation Fund, The Nature Conservancy in Kansas, United States Geological Survey, University of Kansas Edwards Campus, University of Missouri–Kansas City, and Vireo.

#### **COMMITTEE MEMBERS**

**Community Connections:** Natalie Unruh (Co-Chair), Jess Hartel (Co-Chair), Rachel Hanson, Hunter Moore, Josh Tapp, Magali Rojas, Angela Elay;

**Development:** Ian Fannin-Hughes (Co-Chair), Regan Tokos (Co-Chair), Scott Schulte, Kourtney Parks, Stephanie Dresen;

**Governance:** Logan Heley (Co-Chair), Brian Nowotny (Co-Chair), Jenny Witt, Kevin Baugh, Amelia Lane, Natalie Unruh, Hannes Zacharias, Ian Fannin-Hughes;

*Habitat:* Ian Fannin-Hughes (Co-Chair), Regan Tokos (Co-Chair), Scott Schulte, Kourtney Parks;

**Recreation:** Bill Blessing (Co-Chair), Jess Hartel (Co-Chair), Jalen Holloway, Wes Hauser;

**Water Quality:** Ian Fannin-Hughes (Co-Chair), Jess Hartel (Co-Chair), John Schumacher, Darius Uche, Cloey Adrian, Julie Roberts, Chris Luther, Cara Coates, Jacobo Barriga, Kevin Baugh, Hunter Strom.

## Viewing a Printed Copy?

# Heartland CONSERVATION ALLIANCE



To access a digital copy of this Report Card, please use heartlandconservationalliance.org/blueriverreportcard or the QR code above. The digital version and webpage includes hyperlinks to additional resources and prior report cards.





More information about ongoing initiatives to **Renew the Blue** also available at **joinrenewtheblue.org** or by scanning QR code.





## **APPENDICES**

## Appendix A: Methodological Revisions

For this report card update, we updated methods and analyses to better assess the Blue River's health, including new, previously unassessed, and revised indicators. Some indicators could not be reassessed due to unavailable data. Key changes from the 2021 report card are outlined below.

- A new Intent to Act indicator and updated methods affected Community Connections scores, so apparent changes—like shifts in Public Awareness and Behavior—likely reflect methodology rather than real progress. Consistent methods in future updates will allow for meaningful comparisons.
- ➤ The Water Quality Index indicator in the Water Quality category was assessed for the first time, using Escherichia coli (*E. coli*) prevalence as the primary indicator. Both the U.S. EPA and the states of Missouri and Kansas set the standard for primary contact recreation at 126 MPN/100 mL, a threshold linked to an acceptable illness risk of about 36 cases per 1,000 swimmers. Our index measured the percentage of samples exceeding this standard from a set of 409 publicly available samples that were collected during 2022-2024 by various federal, state, and local agencies or HCA and its partners.
- ➤ We refined our method for assessing the Parks acreage indicator in the Recreation category by excluding non-park greenspaces—such as cemeteries and golf courses—that may have been mistakenly included in past assessments. As a result, reported park acreage decreased across all subwatersheds, reflecting methodological improvements rather than actual loss. For example, although hundreds of park acres were added in the Upper watershed, the overall acreage still shows a slight decrease compared with 2021, which also affected the grade—again an artifact of the updated methodology, not real change.
- ➤ Updated satellite data were unavailable for the Impervious Surface and Urban Tree Canopy indicators in the Development category, leaving their grades unchanged from prior report cards despite the likelihood of real changes in both metrics.

# AppendixB: 2021 Report Card Corrections

During the current assessment process, we identified errors in the 2021 report card that made some comparisons misleading—at times suggesting grade changes where none actually occurred. The following corrections have been issued to set the record straight.

- ➤ The method used to calculate Parks acreage for the Recreation Category in the 2021 Report Card was not reproducible, prompting a refinement to exclude non-park greenspaces that had likely been erroneously included in 2021, inflating 2021 results for the Upper and Lower subwatersheds. Corrected 2021 analysis adjusted grades for the Middle (C → B) and Lower (B → D) subwatersheds, while the Upper remained a C. Additional refinements in 2025 show further reductions in acreage, reflecting improved methodology rather than actual loss (see Appendix A).
- ➤ In the Middle Blue River subwatershed, Local Ordinances in the Governance Category was mistakenly scored as a "B" in 2021 but should have been an "A", meaning there was no real improvement between the 2021 assessment and this update.

