

10.0 ENVIRONMENTAL INTEGRATION

Transportation projects in the Kansas City region commonly face a range of complex, interrelated environmental and community issues. These often relate to NEPA requirements such as noise, wildlife habitat, floodplain impacts, threatened and endangered species, water quality, air quality (including emissions of ozone precursors, particulate matter and greenhouse gases), impacts on parks and natural areas, energy conservation and heat island impacts, land use, hazardous waste sites, and cultural and historic resources.

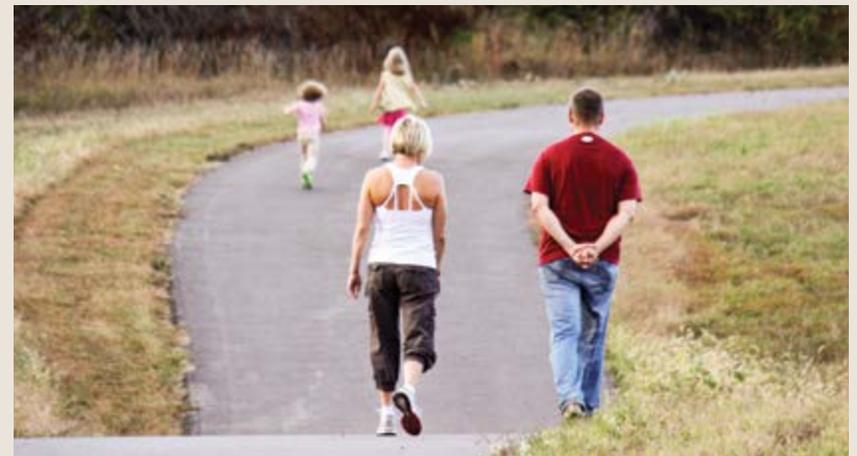
Linking transportation and environmental planning can be achieved through two types of consultation. The first concerns comparing transportation plans with natural and cultural resource information. For these comparisons, state departments of transportation (DOTs) and Metropolitan Planning Organizations consult with state and local agencies responsible for land-use management, natural resources, environmental protection, conservation and historic preservation. In addition, state DOTs must consult with tribal agencies. Consultations should include:

- Comparison of transportation plans with state conservation plans or maps, if available.
- Comparison of transportation plans to inventories of natural or historic resources, if available.

The second type of required consultation concerns mitigation activities. Federal law mandates that long-range metropolitan transportation plans must include a discussion of types of potential environmental mitigation activities and areas to carry out these activities, including activities that may have the greatest opportunity

The MetroGreen™ Action Plan:

- Preserves and protects stream corridors by helping to use floodplain lands to absorb floodwaters, reducing economic loss.
- Links destinations, including home-to-school and home-to-work, with walking and biking enhancements that encourage residents to lead more active lifestyles.
- Links off-road corridors to form an alternative transportation network.
- Allows residents to experience the beauty of natural landscapes throughout the region.
- Protects and restores native habitats and biodiversity.
- Encourages the development of public/private partnerships to make practical decisions concerning the construction and maintenance of future greenways.



to restore and maintain the environmental functions affected by the plan. This discussion is to be developed in consultation with federal, state and tribal wildlife, land management, and regulatory agencies.

MARC's Eco-Logical Action Plan advocates for a pre-NEPA approach to environmental planning, one that considers proactive, ecosystem-based mitigation. Early consideration of environmental issues, well before NEPA processes may be required, provides opportunities to achieve multiple environmental, transportation and land use objectives through more integrated planning and design. This approach further creates opportunities for streamlined compliance, process efficiencies and interagency coordination.

In 2009, the MARC Board of Directors adopted a regional vision of sustainability, which grew out of principles developed through a wide range of programs, policies and plans. In support of that vision, the long-range metropolitan transportation plan includes goals associated with air quality, natural resource conservation, climate change and energy use, placemaking and public health.

Board adoption of other plans that address both transportation and environmental issues — such as MetroGreen™, the Eco-Logical Action Plan and a Complete Streets policy — further reflect strong regional support for integrated planning. The Creating Sustainable Places initiative and Planning Sustainable Places program also articulate triple-bottom-line principles that are important to transportation decision-making.

Needs assessment

While much progress has been made, better integration of environmental conservation with other goals is needed to achieve local and regional priorities and to comply with federal regulations. Advancing the initiatives outlined in this chapter will enable the Kansas City region to achieve progress on multiple fronts through a collaborative, multi-benefit, multi-objective approach.

Environmental considerations include:

- Land-use impacts.
- Farmland impacts.
- Social impacts.
- Relocation impacts.
- Economic impacts.
- Joint development.
- Considerations relating to pedestrians and bicyclists.
- Air quality impacts.
- Noise impacts.
- Water quality impacts.
- Permits.
- Wetland impacts.
- Water body modification and wildlife impacts.
- Floodplain impacts.
- Wild and scenic rivers.
- Coastal barriers (*typically none in the Kansas City region*).
- Coastal zone impacts (*typically none in the Kansas City region*).
- Threatened or endangered species.
- Historic and archeological preservation.
- Hazardous waste sites.
- Visual impacts.
- Energy.
- Construction impacts.
- Relationship of local short-term uses versus long-term productivity.
- Irreversible and irretrievable commitment of resources.

MetroGreen implementation

The MetroGreen Action Plan provides a greenprint for a metropolitan trails system that connects urban and rural green corridors throughout the Kansas City region. Approximately 324 miles of the proposed 1,144-mile MetroGreen system have been developed. From an environmental perspective, active natural resource management along these corridors is necessary to maximize benefits associated with air and water quality, energy conservation and climate protection.

The Greater Kansas City Regional Bikeway Plan adds 128 miles of planned greenways to MetroGreen in Cass and Miami Counties. An overall update to MetroGreen using the Natural Resource Inventory data would facilitate the identification of additional natural resource conservation and restoration priorities. Using this information, an implementation and funding “quilt” could be created to

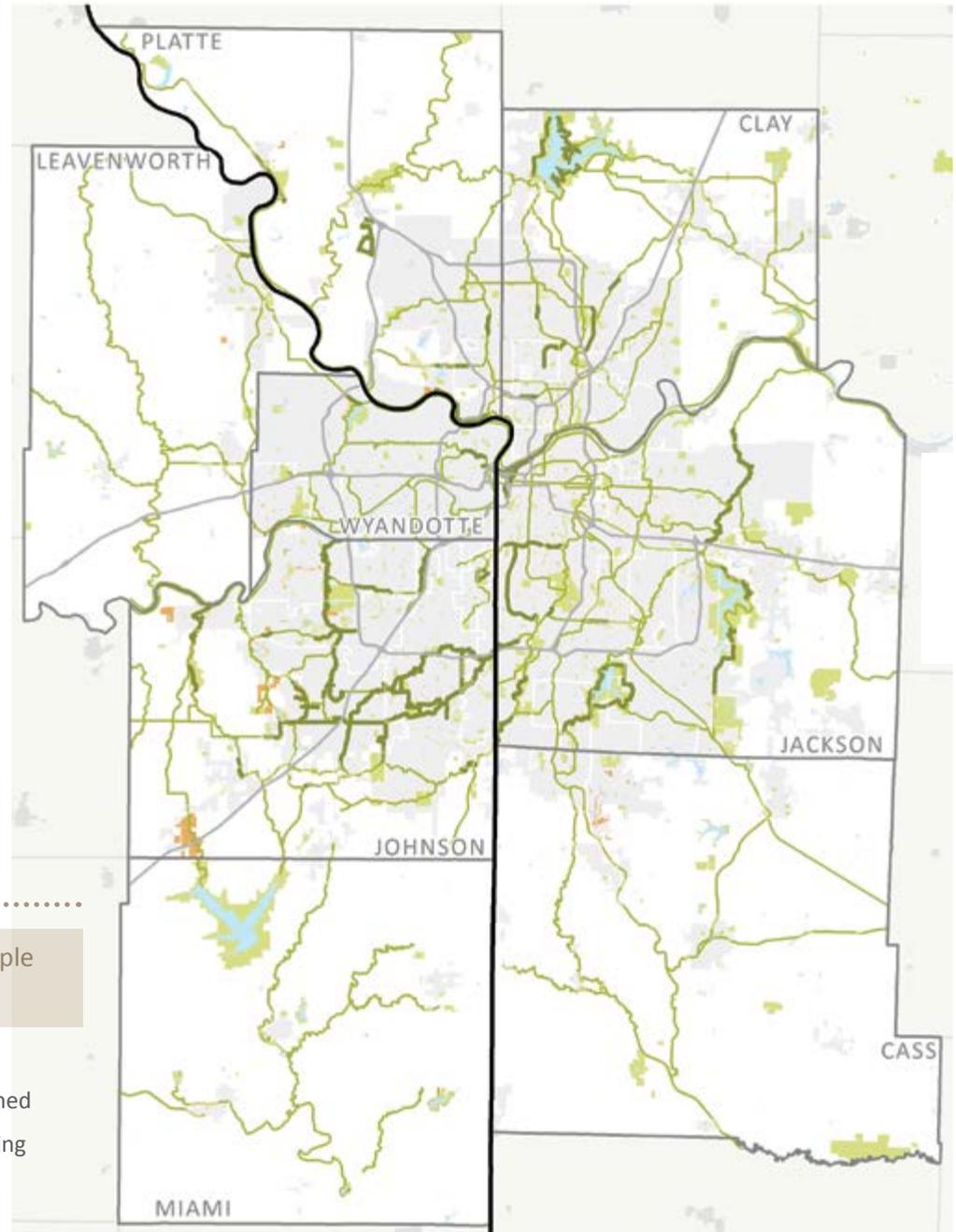
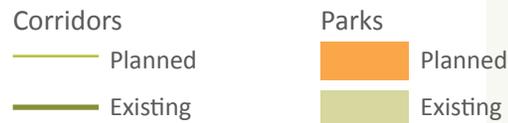
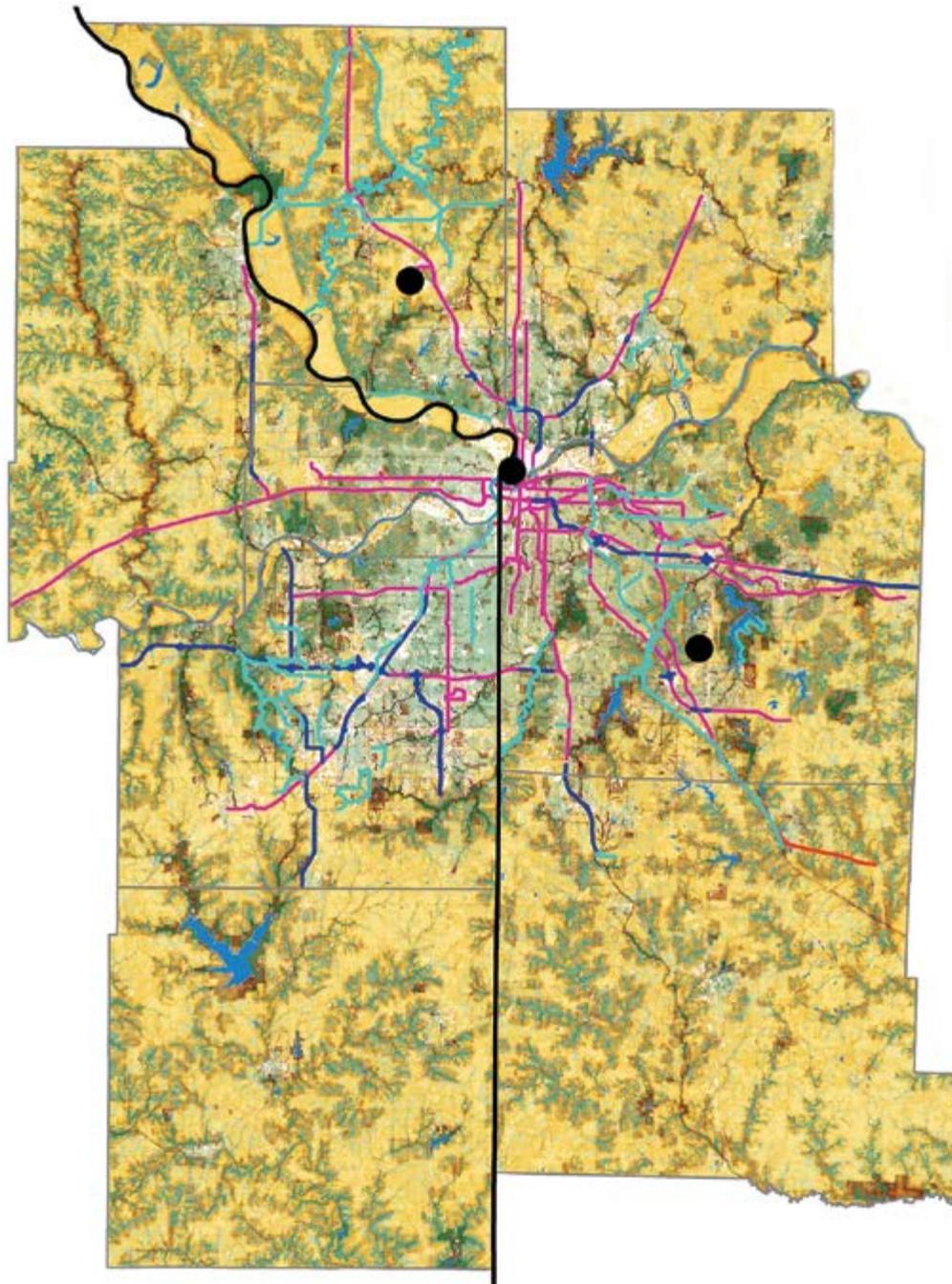


Figure 10.1: MetroGreen corridors

MetroGreen corridors intersect in multiple ways and at multiple scales with the region’s transportation system infrastructure.

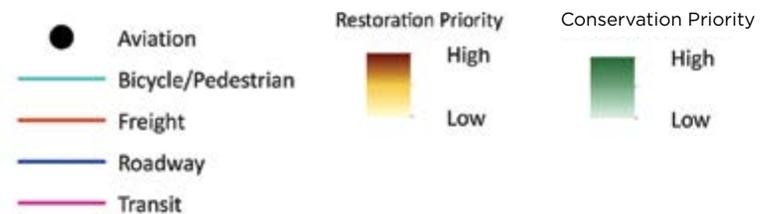




advance strategic priorities, including the development of an ecosystem-based mitigation plan, as called for in the 2009 Eco-Logical Action Plan. Overlays of the MetroGreen and transportation plans would help identify opportunities to protect or restore natural resources. Development of new integrated land-use, transportation and environmental planning approaches could result in new ways to achieve shared goals at the regional and local levels.

Figure 10.2: Restoration and conservation priorities with transportation modes

Local government and environmental experts reviewed and prioritized natural resource and ecosystem benefits data, and used the data to map priority areas for conservation and restoration. Darker green areas have higher value for conservation, while darker brown are more suitable for restoration.



Natural Resource Inventory

In 2013, MARC published an updated Natural Resource Inventory (NRI) for the Greater Kansas City region. The NRI is a GIS (Geographic Information Systems) database of land cover types, soils, topography, hydrography and other resource information that can be easily incorporated into community planning efforts.

NRI data sets can make it easier for planners to visualize how environmental quality may be impacted by future investments in transportation and other development. Analysis of natural resource priorities with proposed transportation programs and projects will enable area communities to refine local strategies to achieve multiple objectives, proactively integrating environmental quality, social equity and economic vitality into planning efforts.

Complete Streets

MARC's Complete Streets policy seeks to "achieve the region's vision of safe, balanced, multimodal, equitable transportation system that is coordinated with land use planning and protective of the environment by implementing Complete Streets with context-sensitive solutions." To date, 12 local communities have adopted complete street policies.

The MARC/APWA Manual of Best Management Practices to Protect Water Quality provides an initial set of planning guidelines to incorporate water quality protection as part of infrastructure development. After the publication of *Assessing Urban Forest Effects and Values: the Greater Kansas City Region*, the MARC Board endorsed a flexible urban forestry policy framework that calls for increased canopy coverage through streetscaping, forest protection and other mechanisms.



Opportunities exist to work with the planning and design communities to integrate Complete Streets concepts into local and regional plans. Strategies associated with stormwater management, urban heat island abatement, streetscaping and urban forestry each could be incorporated to maximize environmental benefits while simultaneously creating transportation facilities that are accessible to all users.

Climate protection, adaptation and resilience

Transportation Outlook 2040 sets a climate change and energy use policy goal to decrease the use of fossil fuels through travel demand reduction, technology advancements and transition to renewable energy sources. The city of Kansas City, Missouri, and Johnson County, Kansas, each recently completed greenhouse gas emissions (GHG) inventories. Kansas City also adopted aggressive GHG emissions reduction goals.

From a transportation perspective, threats of extreme weather events (such as heat, drought, floods and tornadoes) pose substantial environmental, economic, public health and safety risks. An assessment of potential extreme weather impacts on transportation infrastructure could benefit regional planning activities. Often-cited resiliency strategies such as green infrastructure, heat island abatement, alternative fuels and fleets, and alternative transportation may help reduce future risks while creating other near-term community benefits.



Kansas City region recognized as “Climate Action Champion”

In December, the White House and U.S. Department of Energy named the Greater Kansas City region as one of 16 “Climate Action Champion” communities in the United States. The Mid-America Regional Council applied for the designation in partnership with the city of Kansas City, Missouri; Johnson County, Kansas; and Bridging The Gap.

This award means that the Kansas City region will have access to future funding opportunities that are available specifically for Climate Action Champions, as well as a wide range of technical assistance, including access to renewable energy experts, a peer network, validated climate data, participation in resilience planning exercises and partnerships with federal facilities.

Strategies

10-1: Continue to implement the MetroGreen Action Plan.

- a. Identify and adopt MetroGreen conservation and restoration priorities.
- b. Assess opportunities to maximize shared conservation and transportation goals.
- c. Assess the impact of employment and population forecasts on natural resources.
- d. Develop planning and decision-making processes to facilitate implementation of a programmatic mitigation plan. Potential elements might include:
 - Project selection and funding criteria.
 - Integrated project planning and design processes.
 - Use of sustainable infrastructure rating systems and tools such as Envision.
 - Exploration of market-based credit trading.
- e. Leverage the Planning Sustainable Places initiative to facilitate new planning and design approaches.
- f. Conduct targeted workshops with local stakeholders to explore opportunities and challenges associated with implementation.

10-2: Implement complete streets.

- a. Update the regional complete streets policy and consider integration of green streets concepts to promote context-sensitive multi-modal and environmental solutions in the region's transportation planning, project development and project selection processes.
- b. Develop a technical framework to analyze and identify opportunities for incremental Complete Street and green street improvements.
- c. Encourage, facilitate and incentivize the development and adoption of complete street and green street policies by local jurisdictions.

10-3: Promote climate protection, adaptation and resilience.

- a. Build regional partnerships with universities, federal, state and local agencies, and nonprofit organizations to evaluate potential risks and exposures in the transportation system. Use local GHG inventories and climate protection plans as a starting point for analysis.
- b. Conceptualize an integrated, multi-sector, multi-benefit planning framework to maximize climate mitigation, adaptation and resilience benefits.
- c. Identify preliminary implementation action steps, perhaps beginning with the intersection of water resource and transportation system management.

<i>Transportation Outlook 2040</i>			
<i>Policy framework strategies and goals:</i>	10-1: MetroGreen	10-2: Complete Streets	10-3: Climate protection
 Economic vitality	X	X	X
 Placemaking	X	X	X
 Equity	X	X	X
 Transportation choices	X	X	X
 Safety and security		X	
 System condition			X
 System performance		X	X
 Public health	X	X	X
 Environment	X	X	X
 Climate change and energy use	X	X	X