



## Appendix B: Phase 2 Recommendations

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### **Buildings & Infrastructure – Green Buildings**

#### **Recommendation #1 – Public and Professional Education**

##### **Estimated Annual GHG Reduction**

**(Unknown) Metric Tonnes**

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#### **Summary of specific issues**

Education of the public is critical to overall success of Kansas City’s climate protection efforts. Everyone is included with this recommendation, but the following list of constituencies could be focused on: faith communities, neighborhood associations, homeowners, school districts, students, energy efficiency and renewable energy professionals, contractors, developers, commercial property owners, public officials and staff, realtors, appraisers, lenders, and property managers. This education initiative should answer the following questions:

- What is your “carbon footprint” and “eco-footprint?” Have you developed a climate protection plan for your home or organization?
- How can you help reduce the footprints of your constituencies or customers?
- How can you influence environmental impacts and carbon emissions of your suppliers?
- How widely is climate performance reporting becoming adopted by business?
- What are the impacts and emissions of new real estate developments and building systems with which you’re involved?
- How important is the carbon footprint of our homes?
- How can you manage resources more effectively? E.g. consumer, construction and demolition resource management (saving Kansas City’s resources from becoming landfill waste).
- Are you aware of the benefits of ENERGY STAR and LEED for homes and businesses?
- Is the information for the general public provided in understandable terms rather than using professional jargon?

#### **Strategy/action plan**

1. Partner with metro-area Chambers of Commerce, utility companies, Mid-America Regional Council (MARC), Bridging The Gap (BTG), Metropolitan Energy Center (MEC), corporate trainers, schools, and other appropriate partners. Develop, promote, and implement a market-wide education campaign on the issues, processes, tools and resources for climate protection initiatives.
2. Develop multi-media approaches: seminars, workshop series, formal presentations, webinars, website tools and word of mouth campaigns.
3. Develop a shared local database of strategies and accomplishments.
4. Follow up educational events with (online) survey of actions planned and completed. Track actual greenhouse gas emission reductions.
5. Explore funding opportunities to pay for North American Board of Certified Energy Practitioners, Home Energy Raters, Energy Star Builders, and other related providers for certification training of PV installers, home builders, and related trades.
6. Facilitate workshops (pay for speakers, etc) on “How to be a Smart Consumer of PV, Solar Domestic Hot Water (SDHW) and Small Wind”.
7. Provide training for tax preparers on solar and energy efficiency tax credits.
8. Co-sponsor a workshop on utility regulation, tariffs, and financing that would encourage energy efficiency and renewable energy.
9. Create a small database of low-cost energy saving programs and tools and promote them to the community.

**Estimated greenhouse gas reduction to be achieved –           (Unknown)           (Metric) Tonnes**

#### **Implementation responsibilities/assignments**

☒ Municipal

Identify public and private partners and capacities of each

Develop a list of organizations that will be targeted for education.

Develop a climate protection protocol for conducting each event type. i.e. demonstrate climate protection with event planning.

Grant application(s) for third-party coordination of this initiative

KCMO Energy Manager

☒ Community-wide

MARC: fold this into the Sustainable Communities Academy curriculum

BTG, MEC, MARC or GKC Chamber: develop climate protection pages on their websites

Professional organizations: promote / offer continued education opportunities and public forums

Heartland Utilities for Energy Efficiency (HUEE); MARC; Metropolitan Energy Center;

Community Colleges; H&R Block

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Market-wide economic efficiency improvements; improved competitiveness;
- ✓ Sharpened market focus on energy efficient and low-emission buildings;
- ✓ Less wasted resources; Supporting our new “green region” branding;
- ✓ More educated public and professional community;
- ✓ Create a green region attractive to people from other areas
- ✓

**Timeline for implementation -** FY 2008 – Identify partners, secure funding & begin rollout. Partners may include, but are not limited to: AIA, APA, ASLA, ASID, AEE, landscape architects and engineers, etc.

**Inventory of Existing Initiatives**

- ✓ This recommendation is related to Phase I Energy Workgroup Recommendations – 6, 8, 11, & 12;
- ✓ Academy for Sustainable Communities; Conversations on the Environment

## **Buildings & Infrastructure – Green Buildings**

### **Recommendation #2 - Incentives**

**Estimated Annual GHG Reduction**

**(Unknown) Metric Tonnes**

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#### **Summary of specific issues**

Buildings have been, and continue to be, built in a variety of ways that are wasteful of energy and harmful to the environment. It is recommended that a variety of incentives be implemented so as to achieve:

1. The improved efficiency of existing buildings so that their impact on the environment can be reduced and their useful lifespan can be extended so as to make them an attractive alternative to new construction.
2. The impact on the environment of new buildings to be minimized during their entire life cycle.
3. Business-as-usual continues development and building in unsustainable patterns. Local government has not exercised its financial power and responsibility by using public funds to promote sustainable development. Green (Tax) Increment Financing (GIF) will be an umbrella program that will encompass existing development finance instruments such as TIF and the various tax abatement programs. The more green the project, the more public assistance will become available. GIF will be the lens through which all plans are viewed. (Also see: Land Use Recommendation #5 on page B-17).

#### **Strategy/action plan**

Provide incentives to residential and commercial building owners so to increase the sustainability of the city's buildings. Incentives to be implemented such as those outlined below.

- Development plans must exhibit minimum green attributes of every project which receives public funds or subsidies. Recognize “silent subsidies” given to developers, such as public infrastructure extended to enable new developments and use financing to provide incentives for green building. (Also see: Land Use Recommendation #1 on page B-7).
- Homeowners – who have increased the energy efficiency of their homes and reduce energy consumption by 25% from their existing consumption at the time of program start.
- Commercial building owners – who have increased the energy efficiency of buildings and reduce energy consumption by 35% from their existing consumption at the time of program start.
- Residential & commercial buildings whose owners have achieved on-site power generation and have reduced their energy consumption from the grid by 70%, compared to 2005 as the baseline year, by 2020. (Also see: Renewable Energy Recommendation #3, on page B-24).
- For residential & commercial participants in the Green Building Permit program, or those who achieve LEED certification
- To those who achieve new and innovative GHG reduction strategies that reduce their carbon footprint by at least 20%.
- For developers who participate in infill development, smart growth, and transit oriented growth projects.
- For residential and commercial building owners that increase the efficiency of their lighting systems by 30%
- Incentives to bring more recyclers and recycled material processors to the KC area so as to reduce the transportation required for the recycled materials from the metro area by 50%. (Also see: No Waste Recommendations #1 on page B-18, and Recommendation #4 on page B-21).
- To homeowners and organizations that reduce their buildings' carbon footprint by 25% by 2010, 50% by 2015, 75% by 2020, and are carbon neutral by 2030. (Also see Renewable Energy Recommendation #3 on page B-24 )
- For contractors and developers who achieve 75% waste diversion during construction and demolition operations. (Also see No Waste Recommendation #4 on page B-2 ).
- For existing buildings that reduce their water run-off load to the storm water system by 75% by handling their storm water detention / retention on-site.
- Incentives built into loans for those consumers purchasing sustainable buildings.
- Incentives to Home Owner Associations which make sustainable improvements to their developments.

**Estimated greenhouse gas reduction to be achieved –**

**(Unknown) (Metric) Tonnes**

**Implementation responsibilities/assignments –**

Municipal

Local, State, and Federal governments can provide incentives; or help subsidize incentives offered by the utility companies.

Community-wide

Utility providers can provide incentives or programs for building energy efficient structures and for making energy efficiency improvements

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Lenders can add incentive programs to their portfolios

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**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Increased awareness by building owners, managers, realtors, etc.

**Timeline for implementation -** Phased roll-out over the next 3 years

**Inventory of Existing Initiatives**

- ✓ Million Lights Campaign;
- ✓ Multiple city and county green building permit programs;
- ✓ KCP&L Developer Subdivision Heat Pump Distribution Program and Economizer Thermostat Program;
- ✓ 2005 & 2006 Homeowners Energy Efficiency Federal Tax Credit

## Buildings & Infrastructure – Green Buildings

### Recommendation #3 - Regulation

Estimated Annual GHG Reduction

(Not applicable)

Metric Tonnes

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#### Summary of specific issues

Buildings and infrastructure represent the single largest GHG reduction opportunity by sector. Best practices must be fashioned from complete and relevant information. Markets rely on information to prosper. We recommend:

- Improved reporting and information sharing regarding carbon generation for all development projects in Kansas City, including new construction, existing structures, and temporary alteration for event purposes:
  - The recommendation includes the implementation of a Carbon Release Inventory which details, in alpha/numeric fashion for the public, the carbon footprint of buildings.
- Achievement of specific reduction goals for buildings and infrastructure

#### Strategy/action plan

##### A. Provision of relevant information

1. Kansas City should adopt a comprehensive carbon release inventory checklist (or calculator) and rating system for buildings and site planning. The checklist should be customized for each major sector (i.e. residential, commercial, industrial academic, event, etc.). The rating system should be based on benchmarks, such as the US-EPA Energy Star Portfolio Manager Tool.
2. Pilot implementation as a voluntary program. Participants will receive positive recognition.
3. Initial implementation via the City's permitting process. The completion of the CRI checklist by all development projects (new, existing, & event) to acknowledge the presence or absence of strategies for:
  - Storm water detention, retention, and infiltration
  - Energy modeling with reference to a benchmark, to include:
    - Anticipated requirements of the site to accommodate development
    - The effects of passive, active, and renewable energy systems
    - An energy analysis of the shell, mechanical systems, lights, and appliance
    - An energy analysis of water fixtures and plumbing strategy, including landscaping
    - A materials analysis for resistance to heat transfer, and lifecycle costs that acknowledge recycled content, embodied energy and transportation for materials and components
    - An observance of policies and best practices that aim to provide healthy indoor environmental conditions, such as the quality of air and light
    - To facilitate enforcement of most recent IECC with amendments at plan review
  - Construction and deconstruction waste management plan, including rates of diversion (Also see: Green Buildings Recommendation #2 on page B-3)
  - Creation of an exit / resale strategy for site and buildings, including the provision of funds to conduct a comprehensive facility commissioning assessment prior to resale to be made available at the time the property id listed for sale.
4. Remove barriers that may prohibit the implementation of GHG strategies in codes or covenants (i.e. home owner association restrictions against renewable energy installations).
5. Expanded implementation via a public—private partnership between policy makers and the lending, assessment, and real estate sector. The creation of a standardized energy consumption/energy efficiency and carbon release disclosure protocol for all properties in Kansas City that ensures that a potential buyer or event organizer will receive a current and complete assessment of the carbon generation associated with the site, structure, or plan.
6. Final implementation requires the creation of an annual reporting protocol to the Carbon Release Inventory. This protocol will establish the reporting requirement and mechanisms for the various sectors.
7. Add Energy Star rating or LEED certification achievements to Multiple Listing Service (MLS) for use by realtors and buyers.

##### B. Achievement of GHG reductions for buildings and infrastructure

1. Observe the diversion rate requirement recommended by the No Waste sub-group
2. Observe the energy consumption reductions requirement recommended by the Renewable Energy sub-group
3. Observe the renewable energy installations requirement recommended by the Renewable Energy sub-group

4. Couple regulation with a financial disincentive that will help fund the implementation of climate protection initiatives

**Estimated greenhouse gas reduction to be achieved – Not Applicable (Metric) Tonnes**

**Implementation responsibilities/assignments**

Municipal

To be required of projects in permitting phase

To be required of all city-sponsored events (e.g., parades, conventions, etc.).

To be required of all city funded / supported community development projects including tax increment and tax abatement projects

Community-wide

To be required of projects in permitting phase

To be required of all city-sponsored events (e.g., parades, conventions, etc.)

To be required of all city funded / supported community development projects

To extend to all properties, specifically to provide information at the time a property is listed for sale

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ GHG reduction from homes, businesses, and event facilities;
- ✓ Market-wide efficiency improvements that will redirect capital from waste to support job creation;
- ✓ Sharpened market focus on buildings and infrastructure that are energy efficient and reduce GHG.

**Timeline for implementation -** FY 2008 – Identify partners and secure funding; begin rollout

**Inventory of Existing Initiatives**

- ✓ KC Chamber of Commerce – KC Climate Protection Partnership Program (for Carbon Release Inventory);
- ✓ No Waste Workgroup Recommendations

## Buildings & Infrastructure – Land Use Planning & Development

**Recommendation #1** - Promote and incentivize development patterns that support alternative modes of transportation, e.g. transit, walking and biking, to minimize greenhouse gas emissions from transportation and land use. Avoid “leapfrog,” sprawl-type development that is typically auto-dependent. Foster walking, biking, and transit as essential elements in all City land use planning and development

**Estimated Annual GHG Reduction**

**(Unknown) Metric Tonnes**

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### Summary of specific issues

According to the 2000 Census, only 3.9% of workers in Kansas City, MO, use transit for their daily commute, 2.1% bicycle or walk, and 2.7% work from home. The regional household travel survey (<http://www.marc.org/transportation/pdf/travelsurveyreport2003.pdf>) indicates that alternative transportation modes are used more extensively in the urban core vs. the suburbs and other areas, suggesting that proximity to destinations and access to transit play a role. Large-scale developments and transportation hubs (airport, rail freight, and interstate roadway) could very likely be at odds with sustainable land use planning practices.

A more adaptive land use pattern in which distances between residences and employment, amenities, and necessities are shorter will reduce the number of vehicle miles travelled by increasing alternative transportation usage and reducing the distance travelled by single-passenger vehicles.

Municipal land use planning, consistent with sound development policies, *should favor and incentivize*:

- Infill development that supports compact, walkable, cost-effective communities that optimize the use of existing built infrastructure and minimize the need to increase basic public services, e.g. police and fire protection;
- New development that supports alternative modes of transportation, including transit, walking, and biking.
- Development that is contiguous to existing infrastructure to minimize costs associated with new infrastructure, e.g. roads, sewer and water, for leapfrog type development.
- Development that incorporates good stewardship of natural resources, e.g. woodlands, which may offset greenhouse emissions.

City policies, programs and incentives should *strongly discourage* development that:

- Diminishes access and/or convenience to alternative modes of transportation.
- Promotes more auto-dependency among residents and users of businesses or services in a new development.

City policies and incentives should be evaluated and directly tied to the “true” cost of “greenfield” development, including public subsidies needed to expand infrastructure to support the development, e.g., new roads, sewers, water service, and expansion of basic public services.

Ideal municipal development “nodes” (geographic subdivisions similar in scope to Brookside, Country Club Plaza, Crown Center, or North Kansas City’s Northgate Village) should be self-sustaining to the extent that there is a diverse mix of land uses, including amenities conducive to a 24-hour “live/work” environment. This should also include mixed-income housing to support multiple stages of a family’s lifecycle. Mixed-use development at the neighborhood scale is important so that residents have easy access to amenities such as food, entertainment, household goods, etc. In discussing the nature and content of live/work nodes, we must consider our fundamental human needs: water, food, shelter, sanitation, a healthy environment, health care, energy, jobs, and education. Access to amenities outside of each “node” should be provided through alternative transportation options. Developments should incorporate sustainable building practices to increase energy efficiency and reduce environmental impact.

### Strategy/action plan

1. Through application of existing codes, incentives to developers, and revision of codes, encourage a more compact, mixed-use, interconnected development pattern structured around existing development and defined centers. This pattern must also provide for increased bicycle/pedestrian access to destinations and transit stops. These measures include, but are not limited to:
  - a. Streamline the permitting process for infill development projects.

- b. Support and adopt ordinances that facilitate infill development, such as reducing parking requirements, especially along transit routes, promoting increased density, zoning for mixed-use development, and increasing walkability (universal access).
  - c. Offer incentives such as tax abatement or exemptions from city earnings taxes in infill areas.
  - d. Support and adopt ordinances that facilitate shared parking at a development scale and reduced parking requirements, especially along transit routes.
  - e. Concentrate utility capital investments in areas that are currently or easily served by existing utilities. City utility expansion should not fuel “leapfrog” development. This should include an audit of the Water Services Department to see where water and sewer lines are being laid, and assess whether the locations promote infill or sprawl.
  - f. Promote the use of grant and loan programs that encourage infill and transit-supportive development. For example:
    - Prime rate development loans for infill.
    - Community Improvement Districts and Neighborhood Improvement Districts – access grants or impose a ½-cent sales tax for neighborhood-scale improvement.
    - Support location-efficient mortgages, which enables borrowers to secure a mortgage (or larger mortgage) if their transportation costs will be lower due to their homes’ proximity to work or transit routes
  - g. Incorporate adequate industrial opportunities, including the handling of municipal solid waste, in land use allocation within the City limits.
  - h. Provide space at key locations for park-and-ride facilities.
  - i. Support a park-and-boulevard system to provide green space, alternative transportation routes, and to enhance neighborhood quality.
  - j. Promote “neighborhood schools” in scale and walkability vs. regional campuses that everyone has to drive to. Work with the KC School District in this effort.
  - k. Provide incentives for and educate about Brownfield redevelopment. Educate businesses, developers and financial institutions on the viability of Brownfield reuse and redevelopment via periodic 'How To' workshops, funded by for-profit Brownfield service providers, including case studies of successful area projects undertaken with support from Brownfields programs.
  - l. In cooperation with developers, assess the climate impact of all major development proposals brought to the City for approval and provide information and assistance to developers who are interested in reducing and/or offsetting any negative climate impact.
2. Support all aspects of the City’s comprehensive plan (FOCUS) and the new development code which foster alternative modes of transportation and more sustainable land use.
- a. Review and update or rewrite the City’s comprehensive plan to reflect a greater emphasis on reducing greenhouse gas emissions, increasing sustainable development, and supporting access to alternative transportation.
  - b. Include a sustainability, greenhouse gas emission, and climate impact analysis in all Area Plans developed by the Planning Department.
  - c. Ensure that City Council and staff are well-trained in implementation of the City’s master plan and the new development code through a comprehensive workshop on the key components of these plans. Clearly identify and emphasize the multiple benefits of implementing these strategies.
  - d. Incorporate a commitment to and responsibility for the principles of sustainable development embodied in the City’s master plan into all high-level City administration positions. This responsibility and accountability should be clearly outlined in currently-existing and future job descriptions, as well as explicitly evaluated during the hiring process.
  - e. Give high priority to interdepartmental communication to insure that all development plans are compatible with its sustainability goals.

3. Engage other municipalities in the region, especially those that have committed to the U.S. Conference of Mayors Climate Protection Agreement, in a regional agreement to promote infill, limit sprawl, and support transit. This agreement should recognize equal opportunities for development and property and sales tax revenues for all municipalities while still promoting a sustainable land use pattern and supporting alternative transportation.
4. Support a public education, marketing, and code-enforcement campaign that fosters alternative transportation use and more compact development and explains the detriments of sprawl-type development. Partners within the financial, development, nonprofit, and business communities should be engaged to support and enhance these campaigns. Elements of this campaign include but are not limited to:
  - a. Publicity and subsidies to increase transit use.
  - b. Reducing subsidies to build roadways and other infrastructure which supports sprawl-type development.
  - c. Demonstration projects, especially in underserved communities.
  - d. Highlighting existing or new local sustainable projects.
  - e. Maintaining strong, effective code enforcement to assure property maintenance.
  - f. Encouraging financial institutions to invest in infill development.

**Estimated greenhouse gas reduction to be achieved –** \_\_\_\_\_ **(Unknown)** **(Metric) Tonnes**

**Implementation responsibilities/assignments**

<p><input checked="" type="checkbox"/> <b>Municipal</b></p> <p>Review and update existing codes.</p> <hr/> <p>Review and highlight FOCUS for alternative transportation-oriented mandates and greenhouse gas reduction strategies.</p> <hr/> <p>Begin training program for City staff and Council members on FOCUS and the development code.</p> <hr/> <p>Streamline permitting process for mixed-use, transit-oriented development.</p> <hr/> <p>Solicit lending agencies to begin providing location-efficient mortgages.</p> <hr/> <p>Continue supporting transit options, including light rail.</p> <hr/> <p>Prioritize bicycle/pedestrian facilities for maintenance or expansion. Ensure maintenance, retrofitting, and expansion is completed in a timely fashion.</p> <hr/> <p>Review and update City master plan.</p> <hr/> <p>Begin education and marketing campaign to highlight transit, walking, biking, trail use, and mixed-use neighborhoods.</p> <hr/> <p>Ensure coordination between Parks and Recreation and Public Works for development and maintenance of park and boulevard system, landscaping, trees, and trails.</p> <hr/> <p>Foster metro-wide cooperation on regional land use planning issues, especially with those municipalities that have signed the U.S. Conference of Mayors Climate Protection Agreement</p>	<p><input checked="" type="checkbox"/> <b>Community-wide</b></p> <p>Participate in regional initiatives such as “Bike to Work Week”</p> <hr/> <p>Participate in public engagement opportunities related to transit</p> <hr/> <p>Participate in public engagement opportunities related to development projects</p> <hr/> <p>Support tax initiatives to subsidize transit</p> <hr/> <p>Municipalities that have signed the U.S. Conference of Mayors Climate Protection Agreement participate in regional collaboration and planning on these issues</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Quality neighborhoods: Walkable neighborhoods are more accessible and attractive;
- ✓ Better air quality: Transportation accounts for 1/3 of smog-forming pollutants;
- ✓ Better water quality: Development and maintenance of parks, greenways, and trees will mitigate runoff and filter pollutants;
- ✓ Better regional health: Those who use walking and biking for transportation typically experience less obesity, diabetes, and other health problems.

**Timeline for implementation - 2008-2009**

2008 - Review of FOCUS; conduct FOCUS-related workshops; update City communication procedures surrounding FOCUS; update City administrative job responsibilities; update permitting process; engage Brownfield development companies; and partner with other municipalities to examine regional growth.

2009 – Review zoning and future land use for suitable locations for infill developments of all types; identify current extent of utilities and plan future utility expansion only to respond to need; choose opportunities for providing incentives for sustainable development patterns; begin outreach and marketing; continue work with other municipalities.

**Inventory of Existing Initiatives**

- ✓ FOCUS KC;
- ✓ Development Code;
- ✓ KCATA (both bus and light rail);
- ✓ Citywide Trails Plan and PIAC recommendations;
- ✓ MARC Bicycle/Pedestrian Advisory Committee and regional bicycle/pedestrian coordination;
- ✓ Resource: Transit-Supportive Development Guidebook:  
[http://www.marc.org/transportation/pdf/TSD\\_Guidebook.pdf](http://www.marc.org/transportation/pdf/TSD_Guidebook.pdf) ;
- ✓ Resource: Creating Walkable Communities:  
[http://www.marc.org/Community/pdf/walkable\\_communities.pdf](http://www.marc.org/Community/pdf/walkable_communities.pdf);
- ✓ Resource: Creating Quality Places: <http://www.marc2.org/cqp/overview.asp>

**Buildings & Infrastructure – Land Use Planning & Development**  
**Recommendation #2 - Preserve and enhance green space and trees**  
**Estimated Annual GHG Reduction**

**7,263 Metric Tonnes**

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**Summary of specific issues**

Trees and green space are being destroyed as development occurs. Also, many existing residential, commercial, industrial and governmental properties and right-of-ways (including those beyond KCMO) are not well-treed. In addition to sequestering carbon, properly placed trees and other vegetation reduce energy use by reducing the urban heat island temperatures, decreasing the energy demand on power plants. For every 1 degree Celsius of temperature increase, a City's demand for electricity increases 3-4 percent.

**Strategy/action plan**

- A. Establish a tree canopy goal for the entire city of at least 40% overall. Canopy cover goals can vary by land use types but overall should exceed 40%. Work to achieve this goal using a combination of efforts on City as well as non-City properties.
- B. Revise, initiate and/or provide support for programs that encourage planting, preservation, and management of city-owned trees and green space.
  - 1. Revise the Kansas City parkland dedication requirements to:
    - a. Give the City the option to take land or cash instead of the developer having that decision and;
    - b. Add parkland dedication requirements for commercial and industrial developments. Nearby green space helps cool the environment, reducing energy needs. This is particularly important in these types of developments where there are large roof areas and/or large paved areas (compared to residential developments).
    - c. Further review the requirements for any other changes that may aid in increasing or maintaining green space.
  - 2. Support development and acceptance of a City-wide urban forestry management plan that includes planting, preservation, and management of City-owned trees and forests. In addition to planting, maintenance of existing trees is essential to maximize the benefits trees provide. Maintaining existing large trees produces more benefits in the short run than planting new trees. Both are important in the long run.
  - 3. Update and revise the current City tree ordinance (circa 1940's – 1960's) to promote and enable City tree management on City-owned properties.
  - 4. Investigate, develop, and support the implementation of strategies for using tree residue created by Forestry Operations and by developers' activities, to store carbon for the long term and to help provide local sources for some wood products.
  - 5. Update the 1893 Park & Boulevard System Plan for Kansas City, Missouri created by George E. Kessler (known informally as the Kessler Plan). Build upon the original *City within a Park* vision to incorporate current issues of sustainability, greenhouse gas reductions, reducing automobile dependence, and promoting infill, then rededicate the Plan and publicize it. Work through MARC to inspire other area municipalities to embrace the *City within a Park* vision. Consider Kessler awards, events, Kessler-certified developments, etc.
- C. Initiate and/or provide support for programs that encourage planting, preservation, and management of non-City owned trees and green space in the city, including commercial, institutional, industrial, governmental (non-City), and residential properties.

1. Develop and implement a tree preservation ordinance to keep existing tree cover. Maintaining existing large trees produces more benefits in the short run than planting new trees.
2. Support stream setback requirements, and promote tree preservation and new plantings adjacent to riparian areas.
3. Public education about trees will be necessary. To encourage tree planting on private property, the City can partner with Heartland Tree Alliance and other community groups. Consider the establishment of a tree fund for neighborhood groups to get more involved in tree-planting programs.
  - a. Tree planting on City property could possibly be a source of carbon offsets for businesses.
4. Review property tax issues and how they affect farmland and green space. Rising assessments due to surrounding development can force owners to sell out. Consider incentives and abatements to help prevent this problem.
5. Review City vacant lot management program for opportunities to increase tree canopy.
6. Explore Transfer of Development Rights (TDR) mechanisms.
7. Establish a Conservation Land Trust for conservation easements and transfer of development rights.
8. Include vegetation in infill.
9. Provide disincentives for green space development.

**Estimated greenhouse gas reduction to be achieved –** 7,263 **(Metric) Tonnes**

**Implementation responsibilities/assignments**

<input checked="" type="checkbox"/> <u>Municipal</u> Revise Kansas City parkland dedication requirements--KCMO Parks and Recreation Department. <hr/> Develop strategies for using tree residue—KCMO Parks and Recreation Department, Forestry Division & KCMO Public Works Department, Solid Waste Division. <hr/> Update the Park & Boulevard System Plan(Kessler Plan)—KCMO Parks and Recreation. <hr/> Develop and implement a tree preservation ordinance to keep existing trees—KCMO Planning & Development Department. <hr/> Review Property Tax issues and how they affect green space—KCMO. <hr/> Review Vacant Lot Management Program to increase tree canopy—KCMO City Managers Office. <hr/> Include Vegetation in infill—KCMO Parks and Recreation Department, Planning and Development Department, CIMO. <hr/> Provide disincentives for green space development—KCMO. <hr/>	<input checked="" type="checkbox"/> <u>Community-wide</u> Public Education about trees—Community Groups and non-profit organizations. <hr/> Establish a Conservation Land Trust for conservation easements and TDR—Community Groups and non-profit organizations. <hr/> Support stream setback requirements—Developers. <hr/> Include Vegetation in infill—Developers. <hr/> <hr/> <hr/> <hr/> <hr/>
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**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Stormwater reduction;
- ✓ Improved air quality;
- ✓ Streets that encourage walking and bicycling;

- ✓ More people spending time outside due to more pleasant conditions, putting more eyes on the streets to help reduce crime as well as build a sense of community;
- ✓ Well-treed residential lots can sell for up to 15% more than similar properties without trees.
- ✓ In addition to being good for the homeowner, this helps increase the property tax base in the City; Reduced cost for pavement maintenance.
- ✓ Shaded pavement has been demonstrated to increase the amount of time between repaving and decrease pavement maintenance costs vs. unshaded pavement

**Timeline for implementation -**

**Inventory of Existing Initiatives**

- ✓ Develop and adopt an Urban Forestry Management Plan—KCMO Parks and Recreation Department, Forestry Division.
- ✓ Update and revise current Tree Ordinance—KCMO Parks and Recreation Department., Forestry Division.

## Buildings & Infrastructure – Land Use Planning & Development

### Recommendation #3 - Promote metropolitan food production using methods that reduce greenhouse gas emissions and sequester carbon

Estimated Annual GHG Reduction

(Unknown) Metric Tonnes

#### Summary of specific issues

The industrial food system is heavily-reliant on fossil fuel inputs to plant, harvest, process, package, and transport food as well as to manufacture and apply synthetic fertilizers and biocides. In order to reduce the ecological footprint of our food supply, we need to increase the percentage of food eaten locally that has been grown within the metropolitan area using methods that build organic matter in the soil—sequestering carbon—and minimize fossil fuel use for farm machinery, transportation, fertilizers, and biocides.

#### Strategy/action plan

1. Create urban agriculture zoning to foster fruit and vegetable production as well as small-scale animal husbandry on vacant land and lots within neighborhoods.
2. Ask the Board of Parks and Recreation to explore the possibility of opening up portions of City parks for use as community gardens, for-profit and nonprofit urban farms, and produce markets.
3. Through the City's website and publications, encourage residents to grow food in home and community gardens using methods that reduce greenhouse gas emissions and sequester carbon and to compost their food and yard waste to provide organic matter for urban gardens and farms.
4. Through the City's website and publications, encourage institutional entities including businesses, churches, and schools to make land available for community gardens and markets and to compost their food and yard waste to provide organic matter for urban gardens and farms. Provide recognition to businesses that participate.
5. Revise City property codes to explicitly allow tall garden plants, front yard gardens, and cover crops.
6. Eliminate City codes that are barriers to produce stands/farmers markets in neighborhoods.
7. Explore the possibility of emulating models being used in other metropolitan areas to help preserve urban farms and farmland, such as Land Trusts, purchase of development rights by municipalities, and conservation subdivisions.
8. Designate the promotion of urban food production using methods that reduce greenhouse emissions and sequester carbon as a priority in Community Block Development Grant appropriations.
9. Provide funding to Kansas City Community Gardens, the Kansas City Center for Urban Agriculture, and other nonprofit organizations to increase their support for community, home and commercial gardens in metropolitan Kansas City.
10. Establish a real estate tax abatement provision for privately-owned lands with no residences or businesses onsite that are operated as nonprofit community gardens.
11. Provide funding to the Kansas City Center for Urban Agriculture to help them expand their efforts to increase the number of urban farms in metropolitan Kansas City.
12. Establish an agricultural real estate tax rate for privately-owned land that is operated by for-profit urban farms.
13. Establish a fund to pay for soil remediation on contaminated lands to enable their conversion to urban farms and community gardens.

Estimated greenhouse gas reduction to be achieved –

(Unknown)

(Metric) Tonnes

#### Implementation responsibilities/assignments

Municipal

OEQ: Coordinate and publicize the efforts of the Parks & Recreation and Finance Departments. Look for opportunities to

Community-wide

For this recommendation to be successful, citizens and commercial farmers must seize the opportunity to grow food in the City

provide recognition to businesses that support the efforts.

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Parks & Recreation: Identify appropriate locations for community gardens and markets on parkland and publicize their availability to the public

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Finance: Explore the feasibility and appropriate levels of real estate tax reductions; administer the soil remediation fund

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### **Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ A growing body of research shows that food grown in healthy soil, fertilized with compost and manure and rich in organic matter, is more nutritious than food grown with synthetic fertilizers. Given that fruits and vegetables begin losing nutrients as soon as they're harvested, shortening the time-lapse between harvest and consumption will also improve the nutritional quality of the food we eat.
- ✓ Community gardens and markets build relationships between neighbors, strengthening community.
- ✓ Converting City-owned land to community gardens and markets will reduce the amount of land that is mowed, producing cost-savings as well as GHG emission reductions.
- ✓ Local commercial production of food for local consumption keeps food dollars circulating in the City's economy
- ✓ Neighborhood composting of food and yard waste will reduce CO2 and other emissions from transportation and methane emissions from landfills, lower waste hauling costs, and extend landfill life.

### **Timeline for implementation -**

#### **Inventory of Existing Initiatives**

- ✓ Kansas City Community Gardens (KCCG.org)
- ✓ Kansas City Center for Urban Agriculture (KCCUA.org)
- ✓ Kansas City Food Circle (KCFoodCircle.org)
- ✓ Growing Growers of Kansas City (GrowingGrowers.org)
- ✓ KC Healthy Kids Food Policy Council initiative

## **Buildings & Infrastructure – Land Use Planning & Development**

### **Recommendation #4 - Lobby for changes in federal and state government policies that result in unsustainable land use patterns and urban sprawl**

**Estimated Annual GHG Reduction** \_\_\_\_\_ **(Unknown)** **Metric Tonnes**

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#### **Summary of specific issues**

The City's efforts to reduce greenhouse gas emissions will have limited effectiveness as long as the federal and state regulatory and economic policies that provide the framework for land use planning and development decisions continue to foster urban sprawl.

#### **Strategy/action plan**

1. Lobby the federal government in support of legislation that will begin to internalize the true costs of fossil fuel use and that reduce GHG emissions, such as a cap-and-trade plan and/or carbon tax. Such legislation could be broadened to internalize the true costs of smog-forming and particulate air pollutants as well as water contamination that result from fossil fuel use.

**Estimated greenhouse gas reduction to be achieved –** \_\_\_\_\_ **(Unknown)** **(Metric) Tonnes**

#### **Implementation responsibilities/assignments –**

- |                                                                                                 |                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>Municipal</u><br>OEQ in coordination with the City's paid lobbyists | <input type="checkbox"/> <u>Community-wide</u><br>Through the Chamber of Commerce's Climate Protection Partnership, engage corporate lobbyists to encourage their support and consistency of message. |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### **Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Higher-density, mixed-use development, as envisioned in the FOCUS-KC plan, will become more appealing to homebuyers and developers
- ✓ Higher-density, mixed-use development fosters neighborhood relationships and healthy communities, reducing crime and the need for law enforcement
- ✓ Reduced and avoided infrastructure expansion and maintenance costs
- ✓ Improved air and water quality
- ✓ True cost internalization will foster the transition to a truly clean and renewable energy economy

#### **Timeline for implementation -**

#### **Inventory of Existing Initiatives**

## Buildings & Infrastructure – Land Use Planning & Development

**Recommendation #5 - The City will assess in advance the climate impact of its own development projects as well as those it provides direct City funding and/or economic development support to in order to promote sustainable land use policies and minimize urban sprawl**

**Estimated Annual GHG Reduction** \_\_\_\_\_ **(Unknown)** **Metric Tonnes**

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### Summary of specific issues

The City itself is a major landowner and engages in its own development projects in addition to providing direct City funding and economic development support to private developments. Some of the City's efforts, such as the KCI-area development and the Richards-Gebaur intermodal development plan, involve very large tracts of land and will have long-range land use consequences for the City. Consequently, the City must lead by example in the way it conducts its own developments and makes funding and economic development decisions.

### Strategy/action plan

1. The City will assess the climate impact of its own development projects in advance and design mitigation measures into the project in order to achieve climate-neutrality.
2. Any development requesting City funding and/or economic development support will be required to conduct an assessment of the climate impact of the project and this impact will be among the criteria evaluated when determining whether or not to grant the request. The City will offer assistance, to developers of such projects, in achieving climate-neutral development plans.

**Estimated greenhouse gas reduction to be achieved –** \_\_\_\_\_ **(Unknown)** **(Metric) Tonnes**

### Implementation responsibilities/assignments –

Municipal

Any City department promoting development of property owned by the City or direct City funding of development projects will conduct an assessment of the climate impacts of the project and be responsible for developing a mitigation plan for the project.

City will select a standard method for assessing the climate impacts related to development projects.

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Community-wide

### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ The City leads by example and demonstrates the change it is suggesting for the development community as a whole. This will encourage others to do the same.
- ✓ Projects such as the KCI area and Richards-Gebaur redevelopment are “Mega” projects that will have profound, long-term impacts on the community. These projects will be conducted in a sustainable manner that will benefit the surrounding residents by preserving green space, minimizing traffic impacts, addressing air quality, water quality, and noise issues.

**Timeline for implementation -** 2008 – Enact a city policy with this requirement.

### Inventory of Existing Initiatives

## Buildings & Infrastructure – No Waste

### Recommendation #1 - Overhaul the Solid Waste Division of Public Works Department

Estimated Annual GHG Reduction

                     (Unknown)

(Metric) Tonnes

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#### Summary of specific issues

A fundamental shift of understanding by governments and populace is required if human society will evolve from a linear “take-make-waste” into the cyclical “reduce-reuse-recycle” model of nature. The existing KCMO Solid Waste Management Division (SWMD) is conceptually antiquated and must be restructured to enable the recommendations of the KC CPP to occur. The Over-arching goal is to flip the “waste” paradigm from the current 80% landfill and only 20% diverted via recycling, to 80% diverted by year 2020; i.e. **80/20 by 2020**. (See No Waste Recommendation #3 on page B-20). While there are no immediate, directly attributable GHG reductions, this fundamental re-structuring will enable all other recommendations to occur.

#### Strategy/action plan

- Reinvent Solid Waste Management Division of Public Works Department into the Resource Recovery Management Department, or RRMD. Change the legal structure to allow for enterprise department style of operation, where “earnings” through innovative operations can support new programs while maintaining costs to the customer. The new department must be freed from the two historical impediments of the earnings tax and the apartment rebate.
- The RRMD will be allowed to operate beyond historically defined residential collection and can be a competitive force in the market. Collection and processing will occur from all segments of society: Residential (single family and multifamily), Business, Institutional, and Industry.
- Establish a city government-wide “Green Innovations Fund” legally separate from general fund, where “earnings” can be reinvested in new, green programs.
- It will be imperative that an extensive education program be designed, for both internal and external application, focused on revising the perception of what this new structure is, what it entails, how it will be staffed and operated and potential revenue sources.
- Of paramount concern is environmental justice issues - the potential impact on different communities.
- First two programs of the new RRMD will be the immediate expansion of household recycling to multi-family dwellings, and collection of paper from business. (Paper is 40% of local waste stream; business responsible for 60% of that 40%; i.e. 25%, of waste is high value business paper.
- Develop programs for home and business, a LEED style point system, to recognize the “low throwers” who have reduced their solid waste set out.

Estimated greenhouse gas reduction to be achieved –

                     (Unknown)

(Metric) Tonnes

#### Implementation responsibilities/assignments –

Municipal

Legal framework changes: may require ordinance  
Green design ordinances requiring C&D planning  
Lobby for a MO statutory waste recovery law

Community-wide

Education programs about “Fee for service” utility-style department.  
Trash is not free; volume-based, “pay as you throw”  
Education program for source reduction  
Initiative petition drive for ordinance

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Enables other recommendations of this work group. Reduced haul time and travel distance

**Timeline for implementation - 2011**

#### Inventory of Existing Initiatives

- ✓ Oregon - 50% waste recovery laws.
- ✓ Alameda County, CA - “Waste Reduction and Recycling Act”: The citizenry passed an ordinance defining a maximum allowable percent of the waste stream to be land filled.

## Buildings & Infrastructure – No Waste

### Recommendation #2 – Regional Resource Recovery & Management Facility

Estimated Annual GHG Reduction

                     (Unknown)

Metric Tonnes

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#### Summary of specific issues

The great percentage of residential, business, institutional, and industrial by-products are wasted due to the lack of adequate sorting and recovery facility. The city is also losing the estimated \$12 million sale value annually of these materials. It is proposed that the city should finance, construct and administer a regional resource recovery and management facility, or “YIMBY”; “Yes, In My Back Yard” will be the concept at the heart of what will evolve into an eco-industrial park.

#### Strategy/action plan

Initiate a bond issue to finance the design and construction. The facility should be on city owned property, in appropriate areas, with direct adjacency to neighborhoods and transportation to create green collar, transit-oriented jobs and should be publicly owned, but privately operated under city oversight.

Expand the “environmental campus” idea to include classroom space and training facilities for the green collar jobs of the new economy.

- Construction and operation of the campus to LEED Platinum standards.
- Include a MRF to sort and recover all curbside collected material, and a super-MRF for construction and industrial left-overs.
- Include one of many organics recycling sites
- Powered by a waste-to-energy co-generation plant.
- Include a “Free Trade Zone” where citizens could leave products with useful life and take items left by others.
- Facilities developed with a central focus on environmental justice issues
- Include managed urban forest
- Support innovative, creative programs focused on reducing use of and recycling of resources

Estimated greenhouse gas reduction to be achieved –

                     (Unknown)

(Metric) Tonnes

#### Implementation responsibilities/assignments –

Municipal

Undertake bond issue

Community-wide

Educate for support of vote

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Neighborhood stabilization by providing jobs and educational opportunities.
- ✓ Green collar, designed-for-environment job training center with employment opportunities on campus.
- ✓ Small business development to feed and harvest from the eco-industrial park: niche material collectors, recyclers, producers of new products from reclaimed materials, re-sellers of remanufactured goods, re-manufacturers, bio-materials composting; chemical and mineral extraction plants, energy companies reclaiming fuel value materials, or generating from bio mass.

**Timeline for implementation -** 2008: implementation of KCMO long term solid waste management plan, which calls for a MRF, a materials recovery facility; 2010 bond issue passes; 2012 MRF complete and master planning of eco-industrial campus.

#### Inventory of Existing Initiatives

- ✓ MARC / BTG By-Product Synergy Initiative;
- ✓ UMKC urban environment and urban planning programs
- ✓ Kauffman Foundation for entrepreneurial support of start ups and market development;
- ✓ MOEIERA grant funding for facility developments;
- ✓ LCRA, Brownfields, etc. agency assist in site procurement and preparation

## Buildings & Infrastructure – No Waste

### Recommendation #3 – 80/20 Diversion – Organics Capture

Estimated Annual GHG Reduction

109,210

Metric Tonnes

#### Summary of specific issues

Organic material – food scrap, plant material, and wood – decompose in an anaerobic environment in a landfill, producing methane, a GHG 20-25 times more potent than CO<sub>2</sub>. Landfill space is burdened by the volume of organic material; methane capture is unreliable; and the energy and resource value of the materials are lost. Composting is an aerobic process which binds the carbon with the by-product, mulch, which is of substantially reduced volume and is a healthy amendment to soils and excellent landscape and erosion control material.

#### Strategy/action plan

- Educate for source reduction
- Education programs about composting and gardening at home and at business; retaining the organic materials where generated, where possible; a powerful message of source reduction.
- Separate organic materials for public and private collection for delivery to commercial scale composting facilities. Multiple facilities are recommended for KCMO to reduce haul time and embedded energy intensity of the product. Emphasize neighborhood-scale composting and home gardens
- All facilities will accept leaf and brush and yard trimming drop off.
- Compost shall be returned to source to close the loop and feed soils.
- Pilot project: City operated; collect bi-weekly from volunteer representatives of each society segment: Residential (neighborhood), Government (city hall cafeteria), big business food service, local grocery chain, local fast food chain, and schools (one each, public and private, at each academic level), and Recreation (stadiums.) (Also see Land Use Recommendation #1 on page B-7).

Estimated greenhouse gas reduction to be achieved –

109,210

(Metric) Tonnes

#### Implementation responsibilities/assignments –

Municipal

Enhance/expand composting facility at Zoo

Return mulch and compost in collection containers

City may need to threaten withholding of annual \$1 million sports authority contribution to force participation.

Strategy: Food Service encouragement to participate by making license contingent upon showing a recycling plan. Inspectors to verify implementation

Community-wide

All society sectors will participate

Ordinance may be necessary to require food service industry to participate

Community wide pressure on stadiums (“shaming”) may be necessary

State and local agency rules need to allow use of mulch for erosion control.

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Reduced illegal dumping;
- ✓ Improved value of dry streams;
- ✓ Increased local food production;
- ✓ Reduced shipping energy for food and pre-packaged mulches

**Timeline for implementation - 80% diversion by 2020** on an accelerating curve: 20% by 2010 (pilot program); 30% by 2012; 50% by 2015; 80% by 2020.

#### Inventory of Existing Initiatives

- ✓ “Zoo Manoo” compost project;
- ✓ 1000’s of households across metro which garden and compost;
- ✓ Missouri Organics: model local company and facility;
- ✓ 10,000 rain garden initiative and other green solutions programs;
- ✓ San Francisco residential “green cart” program:  
<http://www.sunsetscavenger.com/residential/composting.php?t=r>



**Buildings & Infrastructure – Renewable Energy  
Recommendation #1 – Sustainable Funding Sources**

**Estimated Annual GHG Reduction** \_\_\_\_\_ **(Unknown) Metric Tonnes**

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**Summary of specific issues**

Energy efficiency and renewable program initiatives require funding in a stable, sustainable fashion

**Strategy/action plan**

1. City allocate 15% of all utility tax revenues to a renewable energy program or 50% of all new utility tax revenues beyond a base year.
2. City allocate a portion of funds saved by implementation of efficiency measures to pay for additional energy efficiency and renewable energy measures.
3. Promote financing incentives for residential and business renewable energy and energy efficiency projects.

**Estimated greenhouse gas reduction to be achieved –** \_\_\_\_\_ **(Unknown) (Metric) Tonnes**

**Implementation responsibilities/assignments –**

<input checked="" type="checkbox"/> <u>Municipal</u> KC MO Energy Manager _____ _____ _____	<input checked="" type="checkbox"/> <u>Community-wide</u> Lending Institutions _____ MDNR _____ EPA _____ Metro Energy Center _____
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**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Cost savings;
- ✓ Air quality;
- ✓ Economic development and Jobs

**Timeline for implementation -** Immediately

**Inventory of Existing Initiatives**

- ✓ US-Environmental Protection Agency - Sustainable Skylines Initiative
- ✓ MDNR Revolving Energy Loan Fund, Metro Energy Center
- ✓ University of Missouri Industrial Assessment Center – free business energy audits
- ✓ Energy Efficiency Mortgage Loans

## Buildings & Infrastructure – Renewable Energy

### Recommendation #2 – Policies Supporting Renewable Energy & Energy Efficiency

Estimated Annual GHG Reduction (Unknown) Metric Tonnes

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#### Summary of specific issues

Promote local, state and federal policies that encourage energy efficiency and renewable energy

#### Strategy/action plan

1. Policies that require disclosure of building energy consumption. Establish ratings using the US-EPA Portfolio Manager Tool. (Also see Green Buildings Recommendation #1 on page B-1).
2. First-year property taxes forgiveness for solar and solar-ready homes.
3. Policies that provide incentives for attracting renewable energy businesses to the area.
4. Promote state policies that require utilities to generate specific percentages of their power from renewable sources that do not generate GHG emissions.
5. Policies to encourage green buildings.
6. Develop and provide incentives for property tax forgiveness for solar equipped and solar ready buildings.
7. Develop a local carbon offsets program providing a mechanism for local businesses to obtain tax incentives for investing in programs for greenhouse gas emission reductions locally.

Estimated greenhouse gas reduction to be achieved – (Unknown) (Metric) Tonnes

#### Implementation responsibilities/assignments

Municipal  
KCMO Lobbyist

Community-wide  
Utilities  
MARC  
Chambers of Commerce  
Home Builders Association  
Environmental Groups

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Cost Savings;
- ✓ Air Quality;
- ✓ Economic Development;
- ✓ Jobs;
- ✓ Public Education;
- ✓ Funds remain in Kansas City region

**Timeline for implementation -** City should, in the next legislative session, indicate support of specific legislation supporting energy efficiency and renewable energy

#### Inventory of Existing Initiatives

- ✓ Phase 1 Recommendation: Net Metering and Renewable Electricity Standard suggestion;
- ✓ Phase 2: Many new proposals promoting energy efficiency and renewables

## Buildings & Infrastructure – Renewable Energy

### Recommendation #3 – Promote Energy Efficiency and Renewable Energy

Estimated Annual GHG Reduction

21,900

Metric Tonnes

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#### Summary of specific issues

Promote community-wide energy efficiency measures and renewable energy use

#### Strategy/action plan

1. Purchase of 20% of electricity to operate municipal buildings from renewable energy sources by 2015 and 50% by 2030.
2. Promote community-wide purchase of utility green power - at least 50% of utility customers have access to green power.
3. Promote community-wide residential/commercial/non-profit wind and solar generated power.
4. Reduce community-wide building energy use by 30%, compared to the baseline year of 2005, by 2020. (Also see: Green Buildings Recommendation #2 on page B-3).
5. Purchase and retire carbon reduction credits from climate exchange(s).
6. City of Kansas City, Missouri should take the US-EPA Energy Star Challenge
7. Enhance existing partnerships and develop new partnerships to promote activities in the metropolitan region targeting reductions in greenhouse gas emission.

Estimated greenhouse gas reduction to be achieved – 21,900 (Metric) Tonnes

#### Implementation responsibilities/assignments –

Municipal

KC MO Energy Manager

Community-wide

MARC

GKC Chamber of Commerce

Utilities

HBA

Renewable Energy companies

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Cost savings;
- ✓ Air Quality;
- ✓ Economic Development;
- ✓ Jobs

**Timeline for implementation -** Immediately

#### Inventory of Existing Initiatives

- ✓ KCP&L Energy Efficiency Programs;
- ✓ Heartland Utilities for Energy Efficiency;
- ✓ Johnson County, Kansas Climate Protection Plan;
- ✓ EPA Sustainable Skylines Initiative;
- ✓ Mayor's Climate Protection Agreement;
- ✓ Greater Kansas City Chamber of Commerce Climate Protection Partnership;
- ✓ MARC Academy for Sustainable Communities

**Transportation – Business** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #1 - Reduce GHG emissions – by reducing net vehicle miles traveled, by alternate vehicle choices, etc - 20% by 2020 and 30% by 2030**

**Estimated Annual GHG Reduction** \_\_\_\_\_ **525,800** **Metric Tonnes**

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### **Summary of specific issues**

With more than 140 corporations and organizations in the metro committed to climate change through the Greater Kansas City Chamber Climate Protection Partnership, and more joining forces every day, business is the highest leverage “group” with which to work to reduce GHG in Kansas City. The KCMO Climate Protection Planning Process can provide Partners with an alternative transportation “tool kit” to assist them in the design and implementation of their sustainability plans.

With hundreds of thousands of employees affected by their corporate policies traveling to and from work daily, fleet operations (e.g., retail, wholesale, delivery, vehicle traffic between locations, etc.) and control over much of their supply chains, businesses, institutions and organizations are in a better position to influence driving habits with recommendations, policies, incentives and facilities planning.

The Business sub-group of the Transportation Work Group advocates a program of options that businesses can use to reduce vehicle fuel usage and emissions 20% by 2020 and 30% by 2030 relative to 2000.

### **Strategy/action plan**

Collaborate with the Greater KC Chamber of Commerce and other business organizations to engage as many businesses as possible in this challenge. The effort should begin with the development of a presentation to be made to Chamber Climate Protection Partners. It is also recommended that we work with The Chamber to prepare an on-line PDF version of program to be posted on The Chamber, KCMO, Johnson County, MARC, Bridging The Gap and other websites for easy access. This presentation will include a “tool kit” with a menu of options for businesses to choose that will help them in their objective of lowering their net GHG as a corporation, including that of their employees traveling to and from work.

Program strategies include telecommuting, car-pooling, van-pooling, and public transit. A key strategy is supporting the *Flex-Pass* initiative developed by the Transportation Work Group under the leadership of Tim Lawler and Commerce Bank; here passes would be provided for employees and subsidized by employers based on a carefully crafted model being developed with both KCATA and other area transit providers.

The following additional recommendations are made for inclusion in a presentation of the ‘alternative transportation tool kit’ to be made to the Chamber Climate Protection Partners and other business organizations and businesses:

1. Promote, encourage and support alternative transit through internal channels.
  - a. Encourage bus transit through free to employees or at discounted rate.
  - b. Work with transit providers to connect services to employees, including establishing new routes (i.e. bus from Mall of the Great Plains directly to/from Federal Complex at 95th & Troost)
  - c. Educate employees about the importance of climate protection, corporate commitment and individual participation, and local resources to support each:
  - d. ground level ozone issue in Kansas City in the summer and provide notifications when exceedances are expected.
  - e. KCATA Emergency Ride Home Program available when employees buy a monthly bus pass through their employer; Guaranteed Ride Home is a similar program for Johnson County bus riders, car-poolers, van-poolers and bicyclists.
  - f. Rideshare (new MARC on-line data tool available soon)
  - g. Have transit agencies provide training on tools like web based routing maps on Google for employees
  - h. Increase awareness and understanding of key issues with strategies including contests, training, corporate challenges, and special events (i.e. convert 48th street through Plaza into a pedestrian mall for one weekend/month; participating in First Friday car-pooling).
  - i. Provide preferred parking for car-pools and hybrid vehicles.

- j. Encourage bicycling to work through by providing convenient, safe parking racks and showers if possible.
2. Develop and implement policies that support use of alternative transportation and/or telecommuting:
    - a. Discuss and work to remove barriers to alternative transportation
    - b. Allow telecommuting whenever possible for 100% emissions reduction on those days
    - c. Encourage teleconferences instead of meetings, fewer meetings, email/phone contact
    - d. Allow employees to arrive/ leave work at different times to support alternative transit (i.e. establish a 6:30-9:00 AM window to arrive at work, leaving at different times)
    - e. Reduce business travel by 10% by walking to lunch, fewer meetings, etc.
    - f. Encourage flexible scheduling.
  3. Adopt policies that reduce fuel waste and carbon emissions
    - a. Establish no idling policies for fleet operations (car, van and truck, retail, wholesale, etc.).
    - b. Establish no idling policies for vehicles making deliveries or picking up items.
    - c. Shave the peak off the peak by reducing travel by 10% at peak times.
    - d. Develop and implement policies for purchasing and supplier chain in rfp process that support climate protection (i.e., no idling, proof of sustainability measures, alternative vehicle use, etc.)
    - e. Recommend purchase of hybrid and fuel efficient cars through preferred parking.
    - f. If company has a fleet, buy the most efficient hybrid and/or alternative fuel vehicles.
    - g. Increase fuel efficiency of fleet by at least 10% each decade by using strategies such as preferred parking for hybrids and plug-ins, vehicle using low carbon alternative fuels.

**Estimated greenhouse gas reduction to be achieved –** 525,800 **(Metric) Tonnes**

Using the employees of the more than 140 Chamber Climate Partners, ICLEI software can be used to identify 20% reduction in the total number of driving hours of that many employees by 2020 and 30% by 2030.

Each corporation can be provided with their own goal, and as numbers are tracked locally, the Chamber Partnership can use the 20% and 30% targets as key indicators toward their overall success as corporate climate partners.

#### **Implementation responsibilities/assignments**

Municipal

Community-wide

#### **Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Car-pooling: Savings for participating employees, improved employee relations and team development, and reduced parking requirements for employers.
- ✓ Transit: Savings for participating employees and reduced parking requirements for employers.
- ✓ Bicycling: Savings and improved health for participating employees and reduced parking requirements for employers.
- ✓ Reduced idling.
- ✓ Improvements in fuel efficiency.
- ✓ Improved Health (reduced stress, cleaner air, increased exercise).
- ✓ Improved social cohesiveness.

#### **Timeline for implementation - 2008**

Initiate planning immediately, with presentation to Climate Protection Partners during calendar 2008 (subject to Chamber scheduling).

#### **Inventory of Existing Initiatives**

- ✓ MARC Ride-Share Program as the basis for car-pooling
- ✓ Planned Flex-Pass program to promote transit use (KCATA, JoCo, UG transit)
- ✓ KCMO Bike-Ped initiative to make bicycling safer and easier
- ✓ Existing KCATA and JoCo employer bus pass.
- ✓ KCATA Advantage van pool.
- ✓ Department of Labor Flexible Scheduling Program.

**Transportation – Citizens** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #2 – Community-wide idle reduction – “Turn Off the Gas”**

**Estimated Annual GHG Reduction (Unknown) Metric Tonnes**

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**Summary of specific issues**

Greenhouse gases (GHG) released through idling vehicles are completely unnecessary carbon dioxide emissions as well as unhealthy pollution. Major improvement in air quality in Kansas City is possible by dramatically reducing the idling time of all vehicles. Many communities, a number of schools and businesses, as well as the City of KCMO have already established idle reduction policies. This campaign aims to capitalize on existing programs, and replicate successful programs to expand the impact of no idling policies, first with the most willing participating partners.

**Strategy/action plan**

- ✓ Work with The Chamber Superintendents group to identify existing schools and school districts in the area already practicing no idling policies, as well as working with PTA organizations and school board officials to encourage the implementation of similar policies throughout the community.
- ✓ Capitalizing on the influence children that have over the behavior of their parents, art contests will be conducted with children to encourage their parents to ‘go green by turning off the gas’ while sitting in a static vehicle for more than 30 seconds.
- ✓ Completing the school campaign will be strategy of working with school bus companies to enlist their leadership in ‘turning off the gas’ while waiting for students to board and disembark. Similar expectations will be made to other bus transit companies that supply services, including KCATA, JO CO, UG and tour bus firms.
- ✓ Another major source of GHG in our community is exhaust from delivery, repair and service trucks left idling during work for no beneficial reason. Citizen subgroup expects to work with the City Council and staff of Kansas City, Missouri and the Chamber Climate Protection Partnership to encourage businesses, institutions and the City to develop and support ‘no idle policies.’ Policy level support is necessary to enforce this strategy since there are many hundreds of companies that represent vehicles and identifying them all for individual contact could be cost prohibitive.
- ✓ A ‘no idling’ policy for the KCMO community for commercial vehicles should be considered, with enforcement by the police department, with ticket revenues to be used for a dedicated fund to implement other ‘green solutions’ in the Climate Protection Plan.

**Estimated greenhouse gas reduction to be achieved – (Unknown) (Metric) Tonnes**

Estimates will be based on community participation and building momentum through community awareness and voluntary participation of business, government, schools, and residents. Examples should be projected based on a variety of average idle times to be reduced and based on an average MPG for all vehicles.

**Implementation responsibilities/assignments**

Municipal

Community-wide

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

In addition to the concrete benefit in air quality of reduced GHG from less time idling in vehicles, to have 10%, 20% up to 60% or more of our citizens begin take individual action and responsibility for environmental stewardship is very significant. History shows that once people start taking action in environmental stewardship, it becomes a way of life. They will also begin to recycle more, to consider mass transit, to look at other ways preserving our natural resources. They become part of the solution.

**Timeline for implementation - Fall 2008**

Begin identifying pilot schools immediately. Materials must be developed and prepared for implementation at the school level. Research must begin with school bus companies to run a parallel campaign beginning in August with the school buses to complement the parent carpool campaign so there is a unified school message

**Inventory of Existing Initiatives**

## Transportation - Citizens

### Recommendation #3 - Public media campaign created - New "Addy" Award - Green

#### Category

Estimated Annual GHG Reduction

(Unknown)

Metric Tonnes

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#### Summary of specific issues

- ✓ With all the climate protection, financial and political issues around transit now and in the coming years, it is clear that Kansas City must move from a community of single occupant autos and less than 1% ridership on public transit to one with a high percentage of carpooling in the near term and a significant and increasing use of public transit within the next decade.
- ✓ With the specific charge of the KCMO Climate Protection Planning Process, however, being the reduction of GHG in our community, we want to develop ongoing support from the community for carpooling, public transit and other forms of transportation that reduce our dependence on petroleum and reduce emissions. The specific desired outcome is changed consumer behavior in reduced vehicle miles traveled, which is outlined in Transportation Recommendation #4 on page 29.
- ✓ The public media is the consumer corollary to the highest leverage impact player for consumers as the business community is to the employee base in Kansas City. Our objective is to begin to repeat the same messages in the personal lives of Kansas Citians as they are hearing from their employers, as they are hearing from the transit agencies, as they are hearing from the national media.

#### Strategy/action plan

This recommendation envisions a creative contest between advertising agencies for the best multi-media campaign (e.g., tv, radio, internet web-based (You Tube), print, etc.) aimed at getting citizens to change their behavior from one of getting in their cars for every outing to utilizing various forms of alternative transportation.

The 'green advertising' contest will be a competition in itself. We plan to work with the Addy awards for best advertising to create an additional "Green" category beginning in 2009. The campaign will then be launched to the public, as part of the competition.

In addition to the Addy Award competition, we envision designated days for carpooling, partnering with downtown corporate sponsors to run promotions with radio stations at park-n-ride lots, coffee and donut giveaways, etc., 'First Friday' carpooling promotions, including prizes and incentives, parking privileges for carpoolers, etc. (see Phase I report).

Further, we will encourage the promotion of other options:

- Bicycle whenever possible
- Public Transportation
- Walking
- Combining errands/trips. Planning ahead and minimizing the number of trips by vehicle.
- Telecommute. Work from home or close-to-home whenever possible.

Other citizen behaviors that might be included in the campaign for behavior change in GHG emissions include reducing the use of gasoline powered mowers, street sweepers, construction equipment, etc.. Rather than mowing the grass just because it's the day you planned, consider better ways to maintain Parks and reduce GHG at the same time.

#### Estimated greenhouse gas reduction to be achieved –           (Unknown)           (Metric) Tonnes

This will be difficult to determine because we do not know what the ad agency will develop, but we will develop criteria for agencies to compete against, including anticipated GHG emissions based on modeling.

#### Implementation responsibilities/assignments –

Municipal

Community-wide

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

By involving the ad agencies in Kansas City in a competition for a "Best in Green" ad campaign in their own industry's award, it becomes a coveted and important initiative in which to be a part. Certainly, by relying on the best ad agencies to develop the media and public awareness campaigns for citizen and public awareness, the

outcome will be professional and have broad appeal. By incorporating the category of “Green” into the Addy awards, we institutionalize the environmental message into the mainstream, even after the work group has completed its work.

The awareness built within the agencies competing for the award has the residual benefits of impacting those participants’ own driving behavior, and the objective has a multiplier effect.

**Timeline for implementation - 2008**

TBD based on follow-up with “Addy” award staff and board. Contest development should begin immediately, with development of criteria for participation and selection.

**Inventory of Existing Initiatives**

## Transportation - Citizens

### Recommendation #4 - Complete Streets Policy – Streets For All

Estimated Annual GHG Reduction

78,228

Metric Tonnes

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#### Summary of specific issues

Adopt a city-wide complete streets policy. This insures that all new construction and reconstruction of streets takes into consideration the needs of pedestrians of all ages and abilities, bicyclists, transit users, transit vehicles, and other non-motorized users. (Also see: Land Use Recommendation #1 on page B-7 and Land Use Recommendation #2 on page B-11).

#### Strategy/action plan

- ✓ The policy would need to be drafted based on national and state-wide model policies that are available and then passed by the City Council. It should also be incorporated into any future capital improvement tax initiatives or similar legislation. See below for a sample policy that is currently before the Missouri legislature.
- ✓ Restriping of streets to include bike lanes wherever possible on existing streets, and incorporating bike lanes when new roads and streets are developed would become part of this strategy.

Estimated greenhouse gas reduction to be achieved –

78,228

(Metric) Tonnes

#### Implementation responsibilities/assignments

Municipal

City council passes policy; city staff implements it

All future initiatives, plans, or funding sources for transportation infrastructure include the 'complete streets' policy

Community-wide

Work with MARC for adoption of a region-wide Complete Streets policy as part of the Long-range Transportation Plan update

#### Multiple benefits anticipated (in addition to greenhouse gas reductions)

- ✓ Requires no increase or change in the budget. This is simply planning and designing to spend our existing transportation dollars to meet the needs of all users of the transportation system, while simultaneously garnering large greenhouse gas emission reductions.
- ✓ Better accommodation of the needs of the handicapped, elderly, and children in Kansas City's transportation system.
- ✓ Lower congestion and reduction of other pollutants aside from carbon dioxide.
- ✓ Lower cost of building, maintaining, and expanding the road network due to lower usage by motor vehicles.
- ✓ Bicycling, walking, and transit are the simplest and most cost-effective ways to connect people to the destinations they need to reach in an urban environment.
- ✓ Reducing "travel demand" is the easiest, quickest, and most cost-effective way to make large reductions in greenhouse gas emissions. It has been proven to work and be cost-effective in other U.S. cities. Of all the ways to reduce travel demand, Complete Streets is both the least expensive and the most cost-effective. MoDOT's fiscal note on the Missouri Complete Streets legislation came to \$0, because they realize that including bicycle and pedestrian accommodations during initial construction or reconstruction is the best time to do it; incorporating the facilities at any other time will cost more.

#### Timeline for implementation -

2008 - This could be passed by the City Council within the next few months. It can be included in tax initiatives or other similar capital initiatives as the opportunity arises.

#### Inventory of Existing Initiatives

- ✓ A national Complete Streets movement exists and is active. Support comes from many different interests who stand to benefit--climate change advocates and environmentalists, bicycle and pedestrian advocacy groups, advocates for the disabled and elderly, medical and health, and obesity researchers, parks and recreation advocates, and many others.

- ✓ A similar coalition is building around Missouri's proposed statewide policy. Illinois has recently passed a statewide Complete Streets policy. More at [completestreets.org](http://completestreets.org).

**CO2 calculations are based on these assumptions, which experiences in other U.S. cities show are reasonable assumptions and reasonable goals:**

- **Goal: Amount of trips by walking rises by 5% of trips, from the current 3.9% of trips to near the national average of 8.9% of trips.** *Taking KC from half the national average to the national average is a realistic and achievable goal. Most cities of KCMO's size and density have a walking trip percentage well above the national average.*
- **Goal: Amount of trips by bicycling rises from 0.4% to 5.4%.** *This is a realistic, achievable goal within 15 years based on the experience of cities like San Francisco, Portland, Chicago, and others. The Complete Streets policy is a key to making this goal happen*
- **Goal: Amount of trips by transit doubles from 2.8% to 5.6%.** *This is a realistic achievable goal.*
- The Complete Streets policy is an important factor in reaching each of these three goals. However it is not the only factor. **Conservatively we estimate that the Complete Streets policy will be 20% responsible for success in reaching the goals for bicycling and walking trips and 5% responsible for success in reaching the transit goals.** The Greenhouse gas savings estimates for the Complete Streets policy are based on these percentages of the total savings.

Phase 1 of the Climate Protection Plan estimated 3,651,399 metric tons of CO2 emissions annually from transportation in KCMO. Applying the percentages above to that figure gives annual CO2 equivalent savings of 78,228 metric tons.

This is the estimate of CO2 savings at 15 years out. This is based on the experience of other cities in the mode share of walking and bicycling they have been able produce in 15 years by implementing these policies.

However the savings do not stop at that point. The experience of cities in first-world countries around the world who adopted bicycle and pedestrian-friendly policies starting with the energy crisis in the 1970s is that the amount of walking and bicycling continue to mount over the years as these policies are systematically pursued. Many of these cities have walking, bicycling, and transit mode shares approximately double the amount of the highest U.S. cities. This is simply because these cities started implementing their plans in the mid 1970s whereas U.S. cities did not begin implementing their plans until the 1990s.

The end result is, that the estimate of annual CO2 savings given above is for 15 years out, but the estimate for 30 years out would be approximately double that. In that sense the estimate for the Complete Streets Policy should be considered a near-term and conservative estimate.

Sample Complete Streets legislation as introduced in the Missouri legislature:

226.222 1. The department of transportation's plans, programs, and projects shall provide full consideration for safety and contiguous routes for pedestrians, including individuals of all ages and individuals with disabilities, bicyclists, transit vehicles, transit users, and motorists. Bicycle ways and pedestrian ways shall be given full consideration in the planning and development of transportation facilities by the department of transportation, including the incorporation of such ways into State plans and programs.

2. In any road construction, reconstruction, resurfacing, restoration, rehabilitation, relocation, or improvement project, the department of transportation shall provide accommodations for bicyclists, pedestrians, including individuals of all ages and individuals with disabilities, transit users, other users of the public roadways in addition to operators of motor vehicles, and transit vehicles, except:

- (1) Where the lack of population density or other factors indicate an absence of any need for such accommodations now or in the future;
- (2) Where the cost of establishing such accommodations would be excessively disproportionate to the need or probable use;
- (3) Where bicycling is not permitted, bicycle accommodations are not required;
- (4) Where walking is not permitted, pedestrian accommodations are not required;

Exceptions must be approved by the director of the department of transportation and documented with supporting data that indicates the basis for the exemption.

3. In projects where bicycle or pedestrian accommodations are not required because bicycling or walking is not permitted, a greater effort shall be made to accommodate bicyclists and pedestrians along parallel routes or elsewhere as appropriate.

4. The Department shall establish planning, design, construction, maintenance, and operations standards for appropriate accommodations for bicyclists, pedestrians, including individuals of all ages and individuals with disabilities, and transit vehicles and users. These standards may be flexible standards that allow accommodations that fit within the context of the community and take into consideration the scope and type of each individual project. The Department shall establish appropriate training programs for staff to implement these standards and procedures to track progress in implementing these standards and monitoring use of the transportation system by, and safety for, bicyclists, pedestrians, disabled persons, and transit users.

5. As used in this section, "appropriate accommodations" include but are not limited to pedestrian ways, bicycle ways, shoulders suitable for use by bicyclists, lane striping, "share the road" signage, crosswalks, traffic calming measures, pedestrian control signals, curb cuts and ramps, and others as appropriate to the context and needs of the local community.

6. As used in this section, "bicycle way" means a publicly owned and maintained bicycle lane, shared-use lane, shoulder, or way designed and designated for bicycle travel. A bicycle way may be designated for the exclusive use of bicycles or may be shared between bicycles and other transportation modes.

7. As used in this section, "individuals with disabilities" includes those individuals with mobility, sensory, neurological, or hidden disabilities.

8. Beginning August 28, 2008, this Section shall apply to planning and training purposes only. Beginning August 28, 2009, this Section shall apply to construction projects.

**Transportation – Citizens** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #5 – 1% of Transportation Infrastructure Costs for Bicycling**

**Estimated Annual GHG Reduction** 49,836 **Metric Tonnes**

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**Summary of specific issues**

In Portland over the past 15 years the amount of bicycling has been increased from less than 1% to over 5% of trips. Portland has done this while spending approximately 1% of its public works infrastructure budget on bicycling. They consider this to be the most cost-effective portion of their transportation spending and it has simultaneously reduced their transportation-related greenhouse emissions by over 4%. Many people consider what Portland did "impossible" for a place like Kansas City, but in fact Portland's bicycling mode share in 1991 is almost exactly the same as Kansas City's according to our most reliable source (the 2004 Household Travel Survey). So if Kansas City does what Portland (and other similar cities) did, we will have the same results they did over the next 15 years. (Also see: Land Use Recommendation #1 on page B-7 and Land Use Recommendation #2 on page B-11).

**Strategy/action plan**

Kansas City Public Works would adopt a policy of spending at least 1% of the public works infrastructure budget on bicycle facilities. This will be the most important factor in the goal of raising the percentage of bicycling from the current 0.4% of trips to the goal of 5.4% of trips within 15 years. This is not an increase in the city's transportation spending but rather a change of priorities within the city's transportation budget to reach the city's transportation goals in a more cost-effective way while greatly reducing greenhouse gas emissions.

**Estimated greenhouse gas reduction to be achieved –** 49,836 **(Metric) Tonnes**

**Implementation responsibilities/assignments –**

Municipal

City council passes policy and all future public works infrastructure plans or initiatives include at least 1% for bicycling.

Community-wide

Work with MARC for adoption of similar policies by cities and counties region-wide.

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Handling 5% of KCMO transportation trips by spending only 1% of budget is extremely cost-effective.
- ✓ Reduction in congestion and reduction of other pollutants aside from carbon dioxide. Lower cost of building, maintaining, and expanding the road network due to lower usage by motor vehicles. Bicycling is a good transportation solution for many Kansas City residents because it is relatively quick (faster than walking or transit at the distances it is typically used) and capable of covering the distances involved from half a mile up to 10 or 15 miles.
- ✓ Improvement in health and obesity rates by encouraging Kansas Citians to choose more active modes of transportation.
- ✓ Improvement in livability and economic development by creating a network of bicycle routes and trails, and area that employees and employers examine when deciding to relocate and where Kansas City currently lags far behind other cities nationwide.
- ✓ Reducing "travel demand" is the simplest, easiest, quickest, and most cost-effective way to
- ✓ make large reductions in greenhouse gas emissions. It has been proven to work and be cost-
- ✓ effective in other U.S. cities. Building bicycle facilities is even more cost-effective than building pedestrian facilities: though more people walk, the distance covered by bicycle trips is much greater; fewer roads need upgrade to make them bicycle-compatible; bicycle facilities are generally less
- ✓ expensive than pedestrian facilities. Both bicycling and walking facilities are far less expensive than adding extra lane and intersection capacity to deal with congestion.

**Timeline for implementation -** 2008 - This policy could be adopted by the City Council or by staff within the next 6 months.

**Inventory of Existing Initiatives**

- ✓ Kansas City already has BikeKC, a citywide on-road bicycle plan, and the Citywide Trails Plan.
- ✓ This initiative would provide funding to actually implement these existing initiatives.

**CO2 calculations are based on these assumptions, which experiences in other U.S. cities show are reasonable assumptions and reasonable goals:**

- **Goal: Amount of trips by bicycling rises from 0.4% to 5.4%.** *This is a realistic, achievable goal within 15 years based on the experience of cities like San Francisco, Portland, Chicago, Madison, Columbia, and others. The Complete Streets policy is a key to making this goal happen*
- The 1% For Bicycling policy is the most important factor in reaching this goal. We estimate that 20% of the goal will be due to the proposed Complete Streets policy, 20% will be due to needed encouragement and promotion policies, and the remaining 60% will be due to the facilities funded by the 1% for Bicycling policy.

Phase 1 of the Climate Protection Plan estimated 3,651,399 metric tons of CO2 emissions annually from transportation in KCMO. Applying the percentages above to that figure gives annual CO2 equivalent savings of 109,542 metric tons.

This is a 15-year benchmark.

The savings is calculated at the end of the 15 year period because recent experience (over the past 15 years) in other U.S. cities have found that is realistic to build out a network of bicycle facilities and increase the percentage of trips by bicycle to those levels. Over that period of 15 years, the rate of increase of bicycling will increase each year, so the effect will be to phase in the annual greenhouse reductions indicated (109,542 metric tons per year) over a period of approximately 15 years.

There is a strong indication from the experience of European cities that the mode share of bicycling does not stop at 5% if the facilities continue to be built and maintained. The upper limit may be closer to 15%, and that assumes relatively stable fuel and other transportation prices. This would result in final greenhouse emissions savings of at least 3X our estimate over the course of the next 25-50 years.

Thus the estimate of annual greenhouse gas savings of 109,542 metric tons must be considered the near term and conservative estimate.

**Transportation – Citizens** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #6 – 2% of Transportation Infrastructure Costs for Walking**

**Estimated Annual GHG Reduction**

**52,202 Metric Tonnes**

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**Summary of specific issues**

Kansas City, Missouri, residents walk less than half the national average. For most cities of our size and density, the percentage of trips by walking is *above* the national average. One of the main impediments to walking as transportation in Kansas City is the incomplete and inconsistent pedestrian facilities. The main reason these cannot be fixed is because there is no money in the public works budget set aside to do so. (Also see: Land Use Recommendation #1 on page B-7 and Land Use Recommendation #2 on page B-11).

**Strategy/action plan**

Kansas City Public Works would adopt a policy of spending at least 2% of the public works infrastructure budget on walking facilities. The initial emphasis would be on sidewalk infill in high-traffic areas and pedestrian connection to transit. The goal is to increase the percentage of walking trips in Kansas City from the current 3.9% to 8.9%, which is near the national average for walking trips and below the national average of walking trips for cities of our size and density. *This is **not** an increase in the public works/infrastructure budget but rather a change at the policy level to spend KCMO's existing transportation budget on more cost-effective solutions that will help more Kansas Citizens reach their transportation destinations while also creating dramatic savings in greenhouse gas emissions.*

**Estimated greenhouse gas reduction to be achieved –**

**52,202 (Metric) Tonnes**

**Implementation responsibilities/assignments –**

Municipal

City council passes policy and all future public works infrastructure plans or initiatives include at least 2% for walking.

Community-wide

Work with MARC for adoption of similar policies by cities and counties region-wide

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**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ Handling an additional 5% of KCMO's transportation trips by spending only 2% of the public works infrastructure budget is extremely cost-effective.
- ✓ Health benefits of a community that uses active transportation and transit more often. Community and economic development benefits of creating a more livable and walkable community, areas where Kansas City currently lags national trends.
- ✓ Reduction in congestion and reduction of other pollutants aside from carbon dioxide. Lower cost of building, maintaining, and expanding the road network due to lower usage by motor vehicles.
- ✓ Reducing "travel demand" is the simplest, easiest, quickest, and most cost-effective way to make large reductions in greenhouse gas emissions. It has been proven to work and be cost-effective (both in terms of general transportation and greenhouse gas reduction) in other U.S. cities and cities in first-world countries worldwide.
- ✓ Making the city more walkable is one of the most cost-effective possible ways of helping Kansas Citizens reach their transportation destinations and also reducing their greenhouse gas emissions. Only the 1% For Bicycling initiative is more cost-effective (because it achieve approximately the same greenhouse gas reduction at approximately half the cost).
- ✓ The current mode share for walking trips in KCMO is 3.9% and transit trips is 2.8%. Therefore it is very easy to justify spending only 2% of the Public Works infrastructure budget on facilities that will improve both walking and transit trips.

**Timeline for implementation -**

2008 – This policy could be adopted by the City Council and/or by staff within the next 6 months.

## Inventory of Existing Initiatives

- ✓ Kansas City already has a walkability plan and the Citywide Trails Plan. A group has been working to identify locations where sidewalk infill is most needed.
- ✓ This would provide funding to actually implement these existing initiatives.

### CO2 calculations are based on these assumptions, which experiences in other U.S. cities show are reasonable assumptions and reasonable goals:

- **Goal: Amount of trips by walking rises from 3.9% to 8.9%.** *This is a realistic, achievable goal within 15 years based on the experience in other cities. The goal of 8.9% of trips by walking is approximately the current U.S. national average of trips by walking and is lower than the average city of Kansas City's size and density.*
- **Goal: Amount of transit trips doubles from 2.8% to 5.6%.** *This is a reasonable goal over the next 15 years, especially considering the current price of gasoline and projections for future gasoline price increases.*
- The 2% For Walking policy is the most important factor in reaching the goal of 8.9% of trips by walking. We estimate that 20% of the goal will be due to the proposed Complete Streets policy, 20% will be due to needed encouragement and promotion policies, and the remaining 60% will be due to the facilities funded by the 2% for Walking policy.
- The 2% For Walking policy is a relatively more minor factor in increasing Transit trips. We estimate that creating *Pedestrian Connections to Transit* will account for approximately 5% of the increase in transit trips.

Phase 1 of the Climate Protection Plan estimated 3,651,399 metric tons of CO2 emissions annually from transportation in KCMO. Applying the percentages above to that figure gives annual CO2 equivalent savings of 114,742 metric tons.

This is a 15-year benchmark.

There is a strong indication from the experience of European cities that the mode share of walking does not stop at 9% or 10% if the facilities continue to be built and maintained and the city develops in a walking fashion. The upper limit may be closer to 25%-35%, and that assumes relatively stable fuel and other transportation prices; higher fuel prices will drive the percentages even higher. This will result in final greenhouse emissions savings of 2X-3X our estimate over the course of the next 25-50 years.

For this reason the above estimate must be considered a near-term and conservative estimate of the final savings that can be achieved using this method.

**Transportation – Transit** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #7 – Reduce Transportation-related Greenhouse Gas Emissions at Area Schools while Teaching Sustainability**

**Estimated Annual GHG Reduction (Unknown) Metric Tonnes**

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**Summary of specific issues**

Because school districts are always educating the next generation and utilize fleets of buses to transport children to school, special events and trips, we have a unique opportunity to go beyond ‘no idling’ actions to teach transportation sustainability to our children and their families as we reduce fuel use and carbon emissions by encouraging specific actions.

**Strategy/action plan**

Work with The Chamber Superintendents Committee (as part of the plans for Transportation Recommendation #1 on page B-25) to encourage implementation of the following strategies to achieve transportation energy savings and GHG emission reduction at area school districts:

- ✓ Chamber Climate Partnership: Get superintendents/districts join and participate.
- ✓ Idling Reduction: (See Transportation Recommendation #1 on page B-25).
- ✓ Safe Routes to Schools: Substituting school buses with healthy walking routes to schools.
- ✓ School Events: Scheduling activity buses to reduce cars used, emissions and cost for families.
- ✓ Restricted/Limited Parking: Special parking for car-pooling, no lunch exit, etc.
- ✓ Car-Pooling: Recommendations for staff and where bus service is unavailable/not used.
- ✓ Sustainability Curriculum: Teach dollar and carbon savings for buildings and transportation.
- ✓ Take Home Concepts: Capitalize on proven success of children teaching parents new behaviors.
- ✓ Carbon Footprint Reduction: Series of ways to reduce carbon using Chamber software.

**Estimated greenhouse gas reduction to be achieved – (Unknown) (Metric) Tonnes**

Need to develop an estimate based on each activity: school buses eliminated; bus versus cars driven to events with an average of 30 miles roundtrip; hours of idle reduction; vehicles reduced by car-pooling, etc.

**Implementation responsibilities/assignments –**

- Municipal                       Community-wide

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

- ✓ School districts will save funds that can better be utilized to educate our children.
- ✓ By sharing the strategies, participating in the actions and learning the results, the next generation will be better equipped to become ever more sustainable.

**Timeline for implementation - 2008**

Coordination with the Greater KC Chamber as soon as possible, planning meetings with their Superintendents group so that initial district implementation can begin in Fall-2008.

**Inventory of Existing Initiatives**

- ✓ Chamber Climate Protection Partnership, including some school districts.
- ✓ Chamber Superintendents group where the concepts can be discussed and vetted.
- ✓ School districts already undertaking energy efficiency policies.
- ✓ Safe Routes To School/Walking School Bus Program at Bridging The Gap

**Transportation – Transit** (Language of this recommendation focused as a result of discussion by the Steering Committee)

**Recommendation #8 - Collaborate with area elected officials and MARC to create a seamless regional transit system, including fully integrated green solutions and sustainability in the design and development of all systems**

**Estimated Annual GHG Reduction**

**(Unknown) Metric Tonnes**

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### **Summary of specific issues**

Because we need a comprehensive plan for transit to move beyond the existing, limited public system, we must find a way to develop consensus leading to cooperation on the creation of a transit system that serves the needs of the citizens throughout the metro and irrespective of borders. For some time, MARC has been studying the needs of such a system, recently working with One KC Voice to gather public input and updating the needs of the various geographic sectors (Jackson-Cass County needs, Clay-Platte County needs, overlapping Kansas City-Missouri needs, Johnson County needs, Wyandotte County/Kansas City-Kansas needs) and the convergences between them. Further, area mayors and other elected leaders have begun to discuss how they might develop consensus for a plan that will serve area citizens fairly.

### **Strategy / Action Plan**

Work closely with elected officials, MARC, KCATA, JoCo Transit, UG Transit, Regional Transit Alliance and others to develop consensus for a workable regional transit plan that could:

1. Ensure that all transit related decisions are vetted through the KCMO Green Resolution, and integrated with all departments for most cost effective, long term investment of public dollars and in community partnership with needs identified by neighborhoods. (i.e., transit stops culturally competent designed in partnership with neighborhoods, with green solutions to ensure proper stormwater management, etc.)
2. Protect and preserve public transportation where it exists today, and expand the capacity and geographic coverage of public transportation services (e.g., bus route to/from KCI for commuters and travelers, etc.)
3. Develop a process to seek and secure substantial federal funding, and seek increased state funding for public transit coordinated with and in lieu of roads:
  - a. Evaluate local/regional/state/federal transportation funding priorities/distribution of resources.
  - b. Study comparison of long-term cost of highways versus public transit alternatives.
  - c. Consider comprehensive multi-modal options for all highway and road plans to incorporate bike lanes whenever possible.
4. Consider converting public buses to CNG if cost effective, especially if a discount on natural gas can be arranged, and encourage transit agencies to expand and replace fleet with fuel efficient vehicles as cost efficient wherever possible.
5. Examine the role/value of a Light Rail/BRT starter line in KCMO relative to regional plans and plan for more than light rail, including BRT (Bus Rapid Transit) and dedicated bus lanes.
  - a. Revitalize urban movement
  - b. Provide transportation for those in need
  - c. Create status/image for *new* transit
  - d. Encourage interest in regional plan
  - e. Give area citizen a chance to experience a ‘big time’ transit system
6. Consider an immediate Trial For Regional Transit Improvement:
  - a. Share transit passes shared between area bus systems
  - b. Share regional trip planner (now at KCATA website)
  - c. Coordinate marketing-information
  - d. Provide full system map on web and in phone book
  - e. Post big route maps at 6 key locations (showing ‘You are here.’)

**Estimated greenhouse gas reduction to be achieved – (Unknown) (Metric) Tonnes**

Need to work with MARC and transit agencies to develop an estimate vehicle miles at average gas mileage saved by attracting various numbers of riders to public transit.

### **Implementation responsibilities/assignments**

Municipal

Community-wide

**Multiple benefits anticipated (in addition to greenhouse gas reductions)**

Beyond the emissions reduced by replacing the number of vehicle users that public transit can serve, improved public transit provides connections for those without vehicles, who need to reach employment and services, while reducing the wear and tear on our very expensive roads and bridges.

**Timeline for implementation** - Coordination with the various communities, MARC and the transit providers can begin immediately. It is likely that this process will continue to be achieved in phases over the next ten years.

**Inventory of Existing Initiatives**

- ✓ MARC SmartMoves initiative, data, sector meetings currently underway
- ✓ Metro area U. S. Conference of Mayors Climate Protection Agreement signers (20 to date)
- ✓ Discussion by area Mayors of regional rapid transit initiative (suggested by Mayor Funkhouser), incorporate elected officials
- ✓ KCATA Light Rail and BRT planning currently underway
- ✓ Johnson County Transit and Metcalf planning currently underway
- ✓ One KC Voice regional public transit data
- ✓ Transportation Work Group of the KC Climate Protection Planning Process