

A young child with curly hair, wearing a light blue polo shirt and khaki shorts, is walking away from the camera on a wooden boardwalk. The boardwalk is flanked by wooden railings and leads through a dense forest of tall trees. Sunlight filters through the leaves, creating dappled shadows on the path.

City of McKinney Sustainability Plan
Shaping Our Sustainable Future

Fall 2011



Office of
Environmental
Stewardship

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Introduction



Purpose of the Plan

On December 4, 2007, the McKinney City Council passed a resolution to support the McKinney Green Initiative, a proposed program to address a broad range of issues in a comprehensive manner, including: energy, waste reduction, urban design, urban nature, transportation, environmental health, and water. The Green Advisory Team (comprised primarily of McKinney businesses) then made recommendations in a 2008 final report to City Council. The primary goal of this report was to develop a framework for a sustainable future. In 2009, as a result of these recommendations, the City Council created the Office of Environmental Stewardship and hired a manager to develop and implement a community-wide sustainability program. In the interim, the City has received almost \$1.5 million in grants and implemented many of the recommendations of the 2008 Green Advisory Team.

The City of McKinney was awarded a grant as part of the Energy Efficiency and Conservation Block Grant (EECBG) program to undertake several activities, including developing a Community Sustainability Plan. The plan's purpose is to identify essential elements of community sustainability as well as provide analysis and guidelines for the implementation and/or furtherance of community initiatives to ultimately achieve a more sustainable McKinney. The plan includes measurable indicators and planning principles for all key areas of the city.



The basic goals of the Sustainability Plan are to:

Build upon and ensure the coordination and continuity of existing efforts currently underway to support sustainability objectives.

Identify and prioritize activities for leveraging fiscal and non-fiscal resources in support of McKinney’s objectives.

Identify and implement strategies to build the capacity of organizations and individuals to participate in sustaining community-wide investment and participation.

Build and nurture a shared, community-wide ownership of and participation in the City of McKinney sustainability vision. This can be accomplished through developing partnerships between individuals, governments, businesses and foundations working to identify physical, natural, and fiscal resources and achieve similar results.

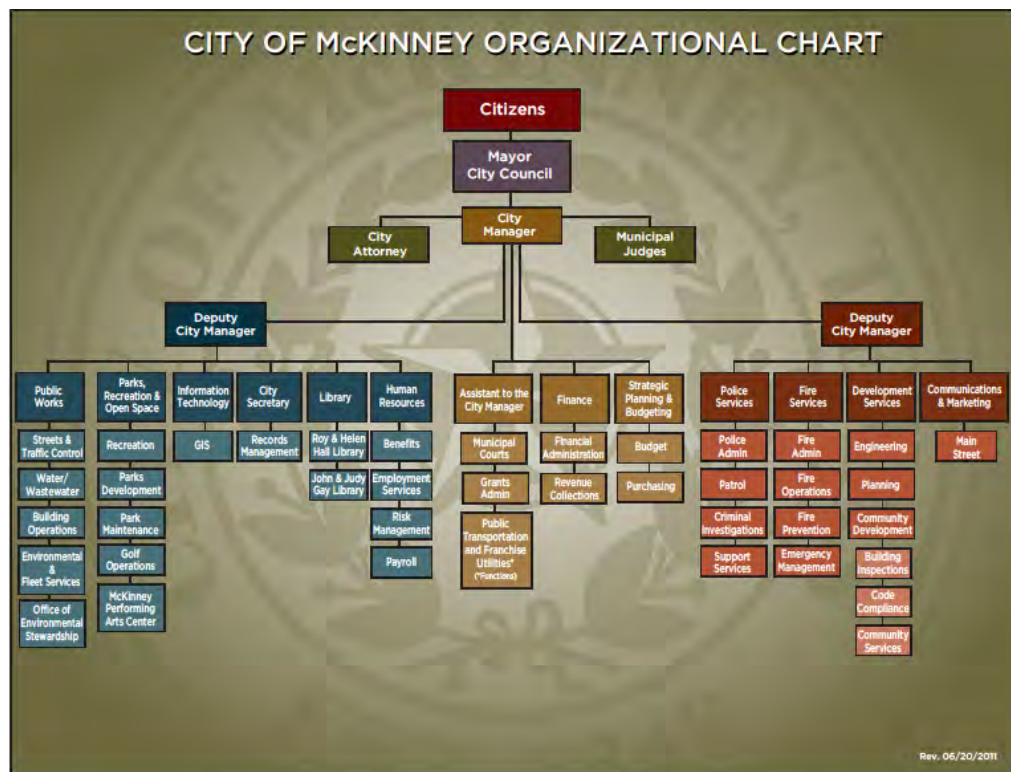
Develop clear and measurable sustainability goals with associated implementation tools and metrics.

This Sustainability Plan represents the comprehensive efforts of four years of research, planning, and community involvement and partnerships and is illustrative of McKinney’s truly unique nature.

Overview of the City of McKinney

McKinney, Texas is located in Collin County and is considered part of the North Texas region. McKinney was incorporated in 1848, and over the years the City has experienced several bouts of rapid population growth including the dramatic growth of the past decade. *(Please refer to the NCTCOG website for growth and demographic estimates: <http://www.nctcog.org/ris/demographics/forecast.asp>)* According to its own planning estimates, in January 2011 the City boasted a population of 133,619 people and remains one of the nation's fastest growing cities. Despite the increases in residents and businesses choosing to call McKinney home, the City is dedicated to upholding McKinney's rich history. The preservation of McKinney's Historic Town Center helps stimulate regional economic development and maintains the community's local charm. McKinney has repeatedly received positive recognition from sources such as *Money Magazine*, *Forbes*, *Best Life Magazine*, and CNN Money, commending the City's economic development, Historic Town Center and high quality of life for the community.

The City of McKinney is a City Manager form of government with 850 employees. The current City Manager serves under the direction of the City Council.



City of McKinney Organizational Chart - Graphic from the City of McKinney Website



The McKinney City Council consists of seven members: four members are elected from single-member districts; two council members, as well as the Mayor, are elected at-large. The City Council meets twice a month at the McKinney City Hall Council Chambers to implement goals and major priorities that have been adopted for the upcoming year.

As an integral part of the Dallas-Fort Worth (DFW) Metroplex, McKinney recognizes the importance of engaging with its sister cities at a regional level. In addition to McKinney's local governmental structure, City Council members serve on several regional boards and commissions including TexasOne, the McKinney Rail Corridor Conceptual Engineering and Funding Study, and Vision North Texas 2050. The Council is also actively involved with the North Central Texas Council of Governments (NCTCOG), a voluntary association of local governments, established to assist in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. The Council participates in various NCTCOG initiatives such as the Regional Transportation Council (RTC).

The City of McKinney is dedicated to providing the community with a variety of services that stimulate economic development, maintain the McKinney character, and ensure a high quality of life. For the 2010-2011 fiscal year, the City's operating budget is approximately \$207.3 million for supporting services, programs and policies. Fostering a strong balanced economy through diverse business development, preserving the McKinney character, providing leisure and recreational opportunities, creating sustainable neighborhoods, and serving as a community resource and information center are just a few of the City's goals that will create the foundation for building a sustainable McKinney.

Current Conditions and Assumptions

To appreciate the genesis and purpose of some of the various recommendations made throughout this sustainability plan, it is helpful to understand the assumptions made with respect to the economic, social and environmental conditions that exist in Fall 2011, as well as some basic assumptions made regarding the future. Obviously, these conditions will change over time and for the assumptions that do not come to fruition, the plan will need to be revisited and revised to keep pace with the changing landscape.



Economic

Beginning in 2008, the United States and several other economies throughout the world experienced a drastic economic downturn often referred to as the “Great Recession.” Over the last year, more economies (both East and West) find they, too, are facing similar or worse economic crises. Though the origins of this phenomenon will be debated for generations to come, the effects have been felt worldwide and have resulted in a sharp drop in international trade, high unemployment rates, a stagnant housing market and declining commodity prices. Though the North Texas region has weathered this economic storm well compared to other areas of the country, as of this writing there is still a significant level of uncertainty among national governments, businesses and individuals regarding the potential for long-term economic recovery versus a second wave of decline. This uncertainty has focused public policy on reducing costs while maintaining — not raising — current tax levels. Cities are rethinking how to do more with less in order to provide the best service possible to the community during challenging economic conditions. For this reason, many of the recommendations within this document rely on dual-purpose actions and initiatives that serve to improve community and environmental services while also saving money, both in capital expenditures and operational costs.



Social

Many individuals are discovering a renewed sense of community and sense of place, seeking opportunities to better balance work and play, and taking advantage of technologies and other advances to allow them to operate more efficiently in their day-to-day lives. Quality of life has become a criterion for employers seeking to locate businesses in terms of being able to attract the necessary employee base. Reacting to a rising rate of health threats such as diabetes and heart disease, providing healthy and active lifestyle choices in a community is also a sought-after criterion. The ability to walk, ride bikes safely, and have easy access to parks and open space becomes very important in this context. This document assumes that this tendency towards more connected, active communities with shared interests will persist, and many of the initiatives proposed seek to facilitate these interactions.



Environmental

When residents in McKinney are asked to identify what is important to them in terms of where they live, they often respond that the trees, creeks, open space, and rolling hills (the natural environment) are some of the aspects they find so appealing. Though environmental issues make up some of the more intense and controversial debate within the U.S., most people can agree that our natural environment is important to us as individuals as well as a community.

Despite the serious disagreement over the cause of environmental degradation, the need to mitigate environmental harm is as much driven by economic forces as by a desire to protect the natural world around us. Clean air and water are not only a requirement for supporting healthy life, they are also a requirement for economic health. Collin County is part of the DFW Non-Attainment Area for Ozone, negatively impacting its ability to attract businesses from certain economic sectors. As of the time of this writing, Collin County is also in the 18th month of a drought of record with no sign of relief. Because water is necessary for most manufacturing processes, lack of it can negatively impact the area's ability to attract businesses. Without a sustainable practice of extracting, transporting, and manufacturing raw (natural) resources (and as importantly reusing those same materials by recycling), the businesses dependent on such resources will fail for lack of material. Conversely, without a healthy economy, preserving the environment becomes difficult if not impossible. This document assumes that regardless of the outcome of the debates over the origins of environmental harm, the initiatives proposed will strengthen the economy because they benefit the environment, and the environment will benefit because the initiatives support a strong economy. A strong economy and a healthy environment go hand-in-hand.

Community Vision



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In order to develop a sustainability plan that truly meets the needs of McKinney, a series of community meetings was held to gather residents' feedback. These meetings provided a forum for residents to voice their ideas, concerns and questions about sustainability. The input received was used to develop a plan that would stimulate economic development, protect McKinney's natural resources and meet the changing needs of the community.

Community Meeting #1

The first sustainability community meeting was held on February 12, 2011 at St. Gabriel Community Center. The purpose of the meeting was to discuss the sustainability plan development process, develop a community sustainability definition and receive input from residents on several sustainability components. The meeting was moderated by a sustainability consultant, retained by the City specifically to facilitate this process. After presentation of the project timeline and examples of sustainability definitions from other organizations, residents broke out into discussion groups where they worked together to create a definition of sustainability for the City of McKinney.

Ultimately, the residents and business representatives in attendance agreed that:

“A sustainable, diverse McKinney understands our community is loaned to us by our children. It balances economy, the natural and built environment, and societal needs to achieve a high quality of life today and tomorrow.”

During the second half of the meeting, residents were divided into the following groups:



Development

- Business Development
- Green Building
- Built Environment



Natural Resources

- Air Quality/Renewable Energy
- Parks/Open Space/Urban Canopy
- Water: Supply and Quality
- Water: Conservation



Infrastructure

- Waste Management
- Disaster Management
- Transportation
- On-Street Bicycle Master Plan



Community Culture

- Historic Preservation/Culture/Town Center
- Community Services
- Recreation/Community Events

The four overarching categories (Development, Natural Resources, Infrastructure and Community Culture) were broken down into 14 discussion groups. Residents participated in four discussion sessions, choosing one topic of interest per category. Staff members were located at each table to record community input.

Teen Sustainability Meeting



A sustainability meeting was hosted on April 8, 2011 at Boyd High School to collect feedback from teenagers on a variety of topics related to sustainability. The teens participated in an exercise where they were given a list of sustainability-related topics and were asked to rank them in order of importance. Results showed that clean air and water were the highest ranked items of importance to teens in McKinney. Of next highest importance was the availability of community events. Also evident was that the teens value access to parks and open spaces and are enamored by such possibilities as light rail. During the meeting, many of the teens expressed the desire for more teen-friendly events such as concerts, festivals, expos, battles of the bands, etc.

The teens were also asked to fill out a survey asking them about which cities they had visited and what they liked most about them. In addition, they were asked how McKinney could be more attractive to younger generations.

The final activity involved teens choosing what they would incorporate into their built environment in order to make it appealing to the community. They participated in a simulated planning charrette, allowing them to virtually design the development of the northwest quadrant of the City. Most students integrated sustainable development patterns, designing pedestrian-friendly communities or incorporating the use of hike and bike trails as a popular mode of transit. They included elements such as dog parks, while paying special attention to preserve creeks and other natural resources. By the time the charrette ended, many of the teens had embraced sustainable terminology as part of their vocabularies, and many expressed an excitement about what a sustainable McKinney could mean for them.

Community Meeting #2



A second community meeting was conducted on April 16, 2011 at the City's Senior Recreation Center. This community meeting drew attention from several council members and was kicked off by Carolyn Corbin, author of *Community Leadership 4.0: Impacting a World Gone Wiki*. After Ms. Corbin's introduction, Karen Walz from Vision North Texas presented on the importance of implementing sustainable initiatives and gave some valuable insight from her group's own award-winning efforts. The consultant then presented a sustainability plan overview and progress report, leading a discussion regarding the development of the plan and its major components, including: the on-street bike plan, urban canopy study, water conservation education and marketing strategy, and the renewable energy development initiatives.

The main purpose of the second community meeting was to solicit detailed feedback and suggestions for development of the sustainability plan. Each community member participated in two of the following discussion groups:

- Water Conservation
- Built Environment/Complete Streets/Town Center
- Bike Plan
- Community Culture and Outreach
- Air Quality/Energy Conservation/Green Building
- Natural Environment/Open Space/Community Gardens

Staff members sat at each table and recorded community input. After the discussion sessions ended, the staff met to discuss the feedback received. Input from each of the community meetings was then compiled into a baseline that was used to develop the content and initiatives outlined in this sustainability plan.

Community Meeting #3



The third and final community meeting was held on Saturday, September 17, 2011, at the Collin College Conference Center. More than 100 individuals registered for this all-day event. Residents and business owners divided into four groups to discuss the 19-chapter draft Sustainability Plan. A subject matter expert moderated each group discussion while scribes documented the participants' feedback. A significant amount of stakeholder input was collected and incorporated into this plan.

In general, those in attendance were supportive of the Sustainability Plan and the various initiatives presented, though they felt it was important to ensure that each was cost-effective. Participants also discussed which initiatives, though driven by the community, should be managed by the City versus those that could and should be accomplished by public-private partnerships, businesses, or non-profits.

Leadership

“The future belongs to those who give the next generation reason for hope.”

-Pierre Teilhard de Chardin (1881-1955)



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Sustainability cannot exist without extraordinary leadership. The ability to look beyond the next quarter, fiscal year, or short-term planning period is a defining attribute for leaders creating sustainable communities. Community leaders must take into account multi-generational, multi-interest concerns in order “to achieve a high quality of life today and tomorrow” that residents and businesses identified as their long-term sustainable vision for McKinney.

As Carolyn Corbin explains, leadership can come from anywhere; it does not only originate within the halls of government. Elected officials are, by definition, leaders of the community, but leaders can also be businesspeople, directors of non-profit organizations, citizen volunteers, members of educational or religious sectors, or grassroots activists. The bottom line is that a leader is anyone who moves a project forward to success and ultimately makes a positive impact.

Though they can come from any background, successful leaders of today’s modern communities share common traits. In her book, *Community Leadership 4.0: Impacting a World Gone Wiki*, Corbin describes some of the most important leadership traits:

- Vision** – a big-picture view of the future
- Purpose** – a clear sense of mission
- Team Orientation** – understands that when the team wins, everyone wins
- Courage** – brave in the face of conflict and stress
- Ethical Character** – best interests of the community in mind
- Selflessness** – not concerned with who gets credit for success
- Flexibility** – adaptable; flow rather than resist
- Responsibility** – acknowledges errors
- Self-Knowledge** – understands personal emotional triggers
- Judgment** – makes intelligent decisions at a rapid pace
- Interpersonal Insight** – has relationship-building skills
- Comfort with Connective Technology** – doesn’t shy away from tools that enhance community connectivity
- Transformational Mindset** – produces robust outcomes and causes change to happen

A great example in action of what true leadership towards sustainability looks like arose from the devastation of a tornado that hit Greensburg, Kansas in 2007. Ninety-five percent of the town was destroyed, and nearly 50% of its citizens relocated elsewhere in the aftermath. Despite the odds of recovery being stacked largely against them, the residents of Greensburg saw the situation as an opportunity to not only rebuild, but to do so in a way that focused less on material things and more on the quality of life within their city. They looked beyond short-term fixes and centered on long-term solutions and benefits. This often meant more time or money invested in the near term, but their commitment to community, the environment, and long-term economic success pushed them to succeed. In doing so, they exhibited a true vision and purpose, courage, flexibility, good judgment, and a true transformational mindset.

In May 2011, the McKinney Chamber of Commerce hosted and sponsored the mayor of Greensburg, Bob Dixson, at the Eldorado Country Club. With a number of City leaders and potential leaders in attendance, Mayor Dixson presented “Going Green from the Ground Up: A Community Leadership Story”, in which he detailed Greensburg’s journey of rebuilding ‘green’ after the tornado. His presentation was both humbling and inspirational and provided unique insight into what true community leadership is.



Document Map

Each chapter in this document is laid out in a consistent manner, allowing users to find the information they need quickly and compare multiple chapters easily. Below are brief explanations of the purpose of the subsections within each chapter.

The Topic Defined

As defined by residents and businesses, “a sustainable, diverse McKinney understands our community is loaned to us by our children. It balances economy, the natural and built environment, and societal needs to achieve a high quality of life today and tomorrow.”

For each chapter, the definition of sustainability is applied to that particular topic, drawing clear parallels between the topic and how it relates to sustainability.

Goal

Each chapter contains a concise goal statement that can serve as the foundation to choose which actions to implement based on the benefits and resources available.

Why This Particular Topic?

True sustainability can only be achieved when the community and environmental-related initiatives undertaken are combined with real and lasting economic benefits. As a city widely known for embracing commerce while still remaining “unique by nature,” McKinney has already exhibited the hallmark traits of a successful sustainable community.

Each chapter in this plan provides an overview of some of the economic, community and/or environmental benefits that can reasonably be expected by implementing the initiatives or programs related to that particular topic.

Current Initiatives (To 2015)

These are programs or initiatives already being undertaken by the City as well as some of the benefits each has achieved or anticipates achieving. Some of these actions were undertaken for reasons seemingly unrelated to sustainability, but impacts from these actions fall well within the definition of what it takes to become a sustainable community. McKinney currently has a few measurable impacts affecting the quality of life within City limits and, moving forward, will continue to develop even more.

Tomorrow’s Opportunities (2015-2020)

These are action items that McKinney residents, businesses, consultants and staff identified to implement during the course of the next three to eight years in order to continue to improve the quality of life for the community.

Future Possibilities (Beyond 2020)

As McKinney looks towards the future, these are long-range considerations that McKinney residents, businesses, consultants and staff identified for consideration beyond the next decade.

Metrics to Measure Progress

Once appropriate action items are identified, it is crucial to select and then track related metrics to ensure that the initiative or program is accomplishing what it was intended to do. Selecting the right metrics is important to tracking progress, recognizing achieved benefits and providing accountability.

Potential Funding Opportunities and/or Partnerships

Municipalities – sustainable municipalities – must continually identify creative strategies to fund both ongoing operations and future sustainability initiatives. Though the creation of this sustainability plan was fully funded through the federal Energy Efficiency and Conservation Block Grant program, some of the initiatives proposed herein are not funded. Both traditional and alternative funding sources to implement the plan were identified for future consideration by City Council. Traditional sources of funding may include the McKinney Economic Development Corp. (MEDC), the McKinney Community Development Corp. (MCDC), bond issuances, capitol improvement plans and the City's operating budget. Alternative sources may include the Tax Increment Financing (TIF), public-private partnerships, grants, and volunteer efforts. Each of the initiatives within this plan, along with their potential funding sources, must be fully vetted within the existing context at the time the initiatives are proposed to Council. Each will require further research and a thorough cost-benefit analysis – including life-cycle costs and operations and maintenance expenses – to determine cost effectiveness and feasibility. Adoption of this plan in no way presumes funding of the initiatives proposed for consideration.

Throughout this plan, the term “incentive” is used to refer to mechanisms to encourage particular policies or initiatives to be adopted or implemented. Incentives may be regulatory, monetary and/or non-monetary in nature. Incentives that have regulatory or monetary components must be vetted and approved by City Council prior to implementation.

Some potential sources of grant-related funding for sustainable initiatives include:

- Community Development Block Grants
- Work Incentive Programs
- Weatherization Assistance Programs
- Federal Transit-Metropolitan Planning Grants
- State Energy Conservation Office
- Department of Energy
- Council of Governments or Metropolitan Planning Organizations
- Health Foundations
- Tax Increment Funding
- Housing & Urban Development

Although grant funding should be targeted for sustainability initiatives, it cannot be viewed as a sole source. As federal, state and local governments continue to tighten their budgets, many of these programs will shrink or cease to exist, and as a result, communities will need to look elsewhere for financial support of their sustainable initiatives.

Fortunately, as Carolyn Corbin describes it, communities are actually made up of multiple socioeconomic subsystems. These subsystems can often be the most direct, effective and efficient way to leverage support for community sustainability, whether through funding, volunteering time or both. The individuals who make up these subsystems have a vested interest in improving the quality of life in their own community, and their no-strings-attached involvement can achieve what is not possible through the use of grants alone.



These socioeconomic subsystems include:

- Businesses
- Citizens
- City Government
- Civic Groups
- Education
- Faith-Based Entities
- Healthcare
- Non-Profit Organizations
- Shared Interest Groups

Resources Used

Each chapter contains a list of resources that were consulted to help form this plan. These include: published studies, reports, books, subject matter experts, other municipal sustainability plans, state and federal agencies, and various other sources.

Of special thanks is the contribution of McKinney Chamber of Commerce member Carolyn Corbin through her book, *Community Leadership 4.0: Impacting a World Gone Wiki*. As an active McKinney community leader and well-respected president of the Center for the 21st Century (C21C), her research and knowledge contributed greatly to the identification of issues and action items that will help ensure this plan's success.

Section 1: Development

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The City of McKinney can boast a vibrant historic downtown area, a well-maintained natural environment that attracts many homeowners and businesses, and charming residential neighborhoods that instill a strong sense of community. As the City continues to grow and expand, it is essential that sustainable land development be utilized to ensure that McKinney remains a unique community offering a high quality of life for all of its residents. The City currently has several initiatives focused on implementing land use patterns that support community needs and economic growth, developing pedestrian-friendly neighborhoods that encourage active lifestyles, and supporting redevelopment of land to maintain McKinney's natural resources.

Chapter 1: Business and Economic Development



Economic development has always been a top priority for McKinney. In 1993, the McKinney Economic Development Corporation (MEDC) was established to assist companies with infrastructure, relocation, training and additional needs using sales tax funds. To date, MEDC projects have contributed more than \$1 billion to the City's tax base. Investing in emerging technologies, facilitating job growth and attracting diverse businesses will give McKinney the tools it needs to prosper in a 21st century, sustainable economy. The McKinney Community Development Corporation (MCDC) was established as a 4B sales tax corporation with the purpose of enhancing McKinney's aesthetic, cultural and leisure amenities.

Chapter 2: Land Use Patterns



The northwest quadrant of McKinney is largely undeveloped, and the City's planning department is actively working to spur regional economic development and enhance the community. McKinney was selected to receive more than \$2.2 million in Sustainable Development Grant Funding from the North Central Texas Council of Governments - Regional Transportation Council. This money will help implement the strategies outlined in the Town Center Study, an initiative that focuses on the redevelopment and revitalization of McKinney's historic town center.

Chapter 3: Built Environment



The Town Center Study, now in Phase 2 of implementation, is a City initiative that focuses on the preservation, revitalization and upgrades that will improve connectivity in the McKinney Town Center. The built environment can stimulate economic growth by attracting visitors and new residents as well as creating a platform for new business development. McKinney was also selected by the U.S. Environmental Protection Agency (EPA) to receive a Brownfields Assessment Grant totaling \$400,000. The City used the funds to establish the McKinney Brownfields Program and is currently in the process of conducting community-wide brownfield site assessments.

Chapter 4: Green Buildings



McKinney is looking to expand its green building initiatives into the community and local businesses. The City has performed energy audits and begun installation of building retrofits to City facilities, as outlined in the Energy Efficiency and Conservation Strategy (EECS). In addition, several businesses within McKinney have developed their facilities to Leadership in Energy and Environmental Design (LEED) standards, and McKinney has since become home to several "firsts" in LEED designed buildings.

Chapter 1: Business and Economic Development



Business and Economic Development Defined

A viable and equitable economy represents one of the three pillars of sustainability (the other two being community and the environment), and is the base of a strong, sustainable community. Economic development encompasses three major areas including:

- economic initiatives such as fiscal policies, regulations of financial institutions, trade and tax policies,
- infrastructure and community service programs for highways, parks, affordable housing and educational programs, and
- job creation and retention through finance, marketing, neighborhood development and small business development.

Traditional and non-traditional economic development strategies can be applied to the development of a sustainable economy such as tax abatements, transit-oriented development strategies, business and job attraction and retention programs tailored for development of the green industry, and TIF. Additional economic growth can be attributed to tourism, regional and local airports, revitalization of downtown historic districts, and through the purchase of locally grown and manufactured products.

Why Support Business and Economic Development?

Goal

Develop a strong local economy that fosters job creation and retention, attracts and promotes diverse industry development, invests in tourism options, and increases educational opportunities.

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Grey boxes denote photos to come at a later date
FPO - For Position Only - Place holder photos for style



Economic

New business/industry development can facilitate job growth and retention

Attracting business headquarters can generate revenue into the local economy. Tourism can boost the local economy through increased consumer purchases (e.g. lodging, food, etc.)

Local food production and consumption can increase locally generated revenue



Community

The availability of diverse retail and commercial development can attract new homeowners to McKinney as well as meet a variety of community needs

Preservation of McKinney's Historic Town Center helps create a sense of ownership in the community

Local food production activities can help connect cultures of McKinney

Good school systems can help attract and retain new businesses and residents



Environmental

Green businesses can positively influence the environment through reduced consumption, reuse of products and recycling practices

Local food production and consumption can contribute to improved air quality and reduced greenhouse gas emissions

Current Initiatives (To 2015)



Capital Improvement Projects

The City is invested in several capital improvement projects such as the new air traffic control tower and the commercial-sized runway. Project areas include public safety, parks, streets, airport, library and drainage. Investing in these projects will prolong necessary infrastructure and bolster the appearance of McKinney while also providing a better place to live for residents.

Diverse industries in McKinney

McKinney's diverse economy can be attributed to a variety of companies ranging from Encore Wire, Vector Systems, Collin County Regional Airport, Raytheon and Erchoria Medical, to Jim Wilson Architects, Diggin' It, and Zynga with Friends, creator of the popular Words With Friends game. Traxxas, a new toy company that will be located at Craig Ranch, manufactures radio-controlled model cars. By having a wide range of businesses, McKinney is more economically competitive and has positioned itself for future business development.



Strong-working partnerships with local, national, and international businesses

The City of McKinney has strong partnerships with local, national, and international businesses, the McKinney Chamber of Commerce, the MCDC and the MEDC, a major contributor to the City of McKinney's economic growth and development. Mayor Loughmiller is working directly with Taiwan to promote future business opportunities. By continuing to build on these relationships, McKinney is building a network that is essential to future economic growth.

Tax Increment Financing (TIF)

TIF is a long-term economic development tool for development and redevelopment. It will help prioritize and finance the cost of needed infrastructure improvements and promote new development and redevelopment within the designated areas.



Historic Town Center

McKinney's Historic Town Center is a major contributor to the local economy. Tourism, the Farmers Market, and many small businesses unique to McKinney are located here. It is the charm of the downtown area that draws many visitors as well as permanent residents to McKinney.

Current Initiatives (To 2015) *continued*



Develop community gardens and support farmers markets

McKinney boasts two locations for farmers markets - Chestnut Square and Adriatica. Both enjoy a robust clientele, evidence of the economic success of such endeavors. Recently, a group of residents has approached the City about developing a community garden where residents can garden together, offer gardening classes, involve students, and give produce to those in need. Local food production and purchases generate revenue for the local economy, reduce greenhouse gases that are emitted during food transport, and connect the community.

Attract and invest in small business development opportunities

Small business development contributes to McKinney's Unique by Nature character and encourages residents to spend their money locally. Programs like the MEDC's Virtual Business Incubator encourage emerging technology companies and make McKinney more attractive to entrepreneurs.



Review City policies, plans, zoning and code regulations

Review and revise planning documents, such as the City's Comprehensive Plan, PROS Plan, Town Center Study Initiative, zoning regulations and development standards as appropriate. Ensure that plans and regulations are compatible with the City's economic development strategies.

Tomorrow's Opportunities (2015-2020)

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Facilitate job growth and retention

Work with local and regional partners to design and implement workforce programs. Collaborate with employers and educators to match training for existing and emerging jobs with employer needs. This will help increase job creation and retention in McKinney.

Invest in local products and goods for City facilities

Increase the use of renewable, reusable, recycled, locally produced and purchased, and environmental preferable products within City facilities and operations. By doing so, the City is contributing to the local economy as well as reducing the negative impacts related to product manufacturing and transport.



Expand tourism attractions

Work with the McKinney Visitor's Bureau to increase tourism opportunities such as hosting green events and conferences that will attract visitors to the City.

Develop education and outreach business program

Develop an education and outreach program that trains businesses on sustainable best practices to reduce their environment footprint on the surrounding community.

Develop a one-stop shop for community members, businesses, and organizations to share information on sustainability to educate and connect the McKinney community.



Future Possibilities (Beyond 2020)

Collin County Regional Airport

Evaluate economic development opportunities through use of the Collin County Regional Airport and develop a list of recommended actions. The airport has the ability to influence the commercial tax base, generate jobs and attract major business headquarters.



Develop a built environment that supports future economic development

Promote walkable, mixed-use, mixed-income, transit-oriented real estate development for both infill and new communities. These types of development account for business development, but also for McKinney's growing population.

Educational Institutions

Increase the amount of educational opportunities in McKinney by attracting higher-learning institutions as well as research facilities that will facilitate job growth and attract younger generations to McKinney.



Metrics to Measure Progress

Multiplier effect per dollar invested for economic development.

Total number of new jobs created in McKinney.

Number of new partnerships developed with local and regional businesses.

Percent revenue increase generated from expanded tax base.



Potential Funding Opportunities and/or Partnerships

McKinney Economic Development Corporation

McKinney Community Development Corporation

McKinney Chamber of Commerce

Local businesses

Local media

Local non-profit organizations

International Economic Development Council



Resources Used

City of McKinney, Comprehensive Plan

McKinney Economic Development Corporation

City of San Antonio, *Mission Verde*, 2009

City of Columbus, *Get Green*, 2010



Chapter 2: Land Use Patterns



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Land Use Patterns Defined

Land use can be described as the management or modification of the natural environment through the arrangements, activities and input of individuals and groups. Land use development plans are implemented through land division and the use of ordinances and regulations adopted by a city, such as zoning requirements. Residential, business, open space, thoroughfare and infrastructure development are examples of common land uses in a community. Sustainable land use patterns support the use of land in a way that does not hinder its ability for future productivity and protects its natural resources.



Why Incorporate Sustainable Land Use Patterns?



Goal

Foster sustainable land use development that will promote economic development, create a greater sense of community, and protect McKinney's natural environment.



Economic

Higher property values from sustainable development patterns.

Increased consumer purchases from higher foot traffic and customers in business areas.

Reduces the cost of urban sprawl development and promotes a high quality of life which can draw new homeowners and businesses.

Lessens the infrastructure demands of an expanding city (i.e. urban sprawl)



Community

Mixed-use and compact developments build a greater sense of community for residents.

Mass transit is easily accessible and affordable.

Transit-oriented development encourages a healthier, pedestrian-based lifestyle.



Environmental

Environmentally friendly development techniques include compact development, reduced impervious surfaces, preservation of open spaces and reduced storm water runoff.

Reduces dependence on non-renewable energy sources such as fossil fuels.

Transit-oriented development contributes to better air quality by reducing air pollution from vehicles.

Current Initiatives (To 2015)



Comprehensive Plan

The McKinney Comprehensive Plan is a document developed from community input and the leadership of McKinney to guide decision making for McKinney's future growth and development. The document is a guide for decision makers — City staff, the City's elected and appointed leadership, residents, and investors in the community — regarding City policies and issues related to land use, transportation, urban design, parks and recreation, and infrastructure. The Comprehensive Plan reflects the vision of what McKinney residents want their community to be and how it should be achieved over the long term. Through implementation of the plan, the goals and objectives outlined within it may be realized. Implementation of the Comprehensive Plan occurs through land use development regulations as well strategic public investments (including capital improvements, incentives, and partnerships). McKinney's current Comprehensive Plan was originally adopted in March 2004. As a living document, the plan has been amended five times since its original adoption. The next amendment is anticipated in early 2012.



Overlay Districts

Recently adopted a Corridor Commercial Overlay District to be utilized as a diverse and sustainable non-residential tax base for the City.

Regional Employment Center (REC) Overlay District was adopted to allow for the development of fully integrated pedestrian-oriented neighborhoods, corridors and districts in the REC.

A Historic Preservation Overlay District was adopted to protect and enhance the district and landmarks that represent distinctive elements of the city's historic, architectural and cultural heritage, foster civic pride and promote economic prosperity and welfare of the community.



Current Initiatives (To 2015) *continued*



Town Center Study

The Town Center Study Initiative is a sector study of the oldest part of McKinney, called for as part of the 2004 Comprehensive Plan. McKinney's Historic Town Center contains neighborhoods and commercial districts that are well-established, eclectic and historic. These places collectively form the core of the City and include some of the oldest developments in McKinney.

However, like many city centers, the challenge is maintaining an emphasis on the authentic form and character of the area while embracing growth and planning for the future. To address these challenges, the City of McKinney launched the Town Center Study Initiative in 2006. More than 300 stakeholders worked together to establish a bold, community-based vision for how McKinney's Historic Town Center should look, feel and function over the long term. The vision includes a number of preferred concepts such as encouraging mixed-use and urban-residential growth, improving pedestrian connectivity, creating compatible physical scales and transitions, and fostering long-term economic development through the concept of place-making. In 2008, the Town Center Study Phase 1 Report, Shared Vision, and Master Plan were approved and adopted by reference into the Comprehensive Plan and now serve as the policy guide for the community when considering decisions in the Historic Town Center.

Currently in Phase 2, the purpose is to analyze, craft, select, relate and phase the appropriate implementation components (e.g. policies, ordinances, fiscal tools) into a comprehensive action plan that will allow the Vision and revitalization of the Historic Town Center to be achieved and sustained over the long term.



Review land use development regulations

Review the City's zoning requirements, policies, ordinances and plans and revise as needed to support the development of walkable and livable communities.

Tomorrow's Opportunities (2015-2020)



Create sustainable land use developments that are mixed-use, transit-oriented and improve walkability

Implement smart growth patterns that spur economic development, increase property values, protect the natural environment and encourage healthy, active lifestyles for McKinney residents.

Encourage a diverse housing mix

Utilizing form-based codes avoids the need to micromanage buildings and their uses and therefore makes it easier for businesses, such as banks and grocery stores, to locate in areas such as the Historic Town Center.



Review and revise parking lot development requirements

Encourage pervious parking areas when site conditions are conducive in order to decrease storm water runoff, improve water quality, and reduce heat island effects.

Northwest Quadrant Study

The Northwest Quadrant Study is a sector study called for as part of the Comprehensive Plan, but not yet initiated. The Northwest Quadrant is approximately 25,000 acres generally located north of U.S. Highway 380 and west of U.S. Highway 75 and represents the largest portion of undeveloped property within the City. The Northwest Quadrant is anticipated to be the focus of new development over the next 30 years. As proposed, the Northwest Quadrant Study would provide a more detailed review of the issues impacting this area. These issues include annexation strategy, sustainable land use patterns, sustainable transportation systems, development design and quality standards, and economic development opportunities, among others.



During the community meetings, McKinney residents expressed a desire to duplicate the feel of downtown McKinney within the Northwest Quadrant - where children can walk to school, restaurants and shops are close by, and concerts are held around a town square. Residents also wanted to provide housing options to serve diverse populations with varying housing needs.

Future Possibilities (Beyond 2020)

Work with the North Central Texas Council of Governments (NCTCOG) to implement transit-oriented land use patterns

Work with NCTCOG to implement transit-oriented development patterns that will increase mass transit options and accessibility, encourage sustainable housing development around transit centers, and attract businesses to the area that will promote sustainable economic development.



Improve connectivity within McKinney neighborhoods

Identify gaps in connectivity in McKinney neighborhoods to improve walkability, help residents connect with fellow community members, and improve air quality by reducing fuel usage.

Review and revise hike and bike plans to accommodate the growing community.

Metrics to Measure Progress

Multiplier effect from land development and impact of infrastructure investments and services provided primarily for public benefit through private investment.

Number of acres of land developed utilizing recently adopted sustainable land use elements such as walkability, compactness, access to transportation, etc.



Potential Funding Opportunities and/or Partnerships

North Central Texas Council of Governments

Texas Department of Transportation

U.S. EPA

U.S. Department of Transportation

U.S. Department of Housing and Urban Development



Resources Used

City of McKinney, Comprehensive Plan

National Association of Local Government Environmental Professionals, Profiles of Business Leadership on Smart Growth, New Partnerships Demonstrate the Economic Benefits of Reducing Sprawl, 1999

U.S. EPA Website, Smart Growth

Smart Growth America



Chapter 3: Built Environment



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Built Environment Defined

The built environment refers to man-made surroundings that provide the setting for human activity. It can range from housing and buildings to neighborhoods and cities, including the supporting infrastructure. The development of a city's built environment is a collaboration between city planners, transportation engineers, zoning and code enforcement, architects, interior designers and industrial designers. There is increased collaboration that takes place between developers in order to achieve compatibility between buildings and zoned areas. Complete streets, mixed-used developments, historic preservation, sustainable design and construction, and transportation infrastructure are all important elements that can contribute to a city's ambiance. The built environment encompasses the look and feel of a city, giving it character while providing a sense of ownership and pride for its residents. It also provides an infrastructure that supports the growing needs of the community, including residents and businesses that may choose to make McKinney their permanent home.



Another opportunity for sustainable development includes property reuses, such as brownfields redevelopment, that are environmentally sound, safe and beneficial to the community. The EPA defines a brownfield site as "real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." Reinvesting in these properties can stimulate economic development, preserve open space, and protect human health.

Why Practice Sustainable Development?



Goal

Foster a built environment that supports the growing needs of the community, stimulates economic development, and protects McKinney's natural resources.



Economic

Increased foot traffic from pedestrian-friendly communities can lead to increased consumer purchases and generation of tax dollars for a city.

Reduced costs associated with thoroughfare construction and maintenance.

Reduced water and wastewater infrastructure costs due to infill development rather than horizontal expansion of a community.

Sustainable design and construction can reduce costs associated with heating, cooling and building maintenance.

The development of complete streets can increase property values of buildings close in proximity.

Brownfields redevelopment can increase the tax base and facilitate job growth.



Community

Creates a sense of pride and ownership for residents by developing a built environment that fits their needs and wants.

The development of mixed-use communities can improve livability as well as promote diversity.

Encourages healthy, active lifestyles through sustainable land use design and mixed-use developments.

Improves public health through the use of green building interior design, increased mass transit options, and the development of pedestrian-friendly communities.

Historic preservation can help maintain the character of a community.

Why Practice Sustainable Development? *continued*

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Environmental

Preservation of open space through the use of sustainable land use patterns such as mixed-use developments.

Sustainable design and construction can conserve natural resources, reduce waste on construction and demolition sites, and reduce pollution from product manufacturing and transport.

Improved air quality from utilization of mass transit options and pedestrian-oriented communities.

A dense urban tree canopy and preserved open spaces can improve air and water quality while protecting natural ecosystems that are unique to McKinney.

Current Initiatives (To 2015)



Crime Prevention Through Environment Design (CPTED)

CPTED is a multi-disciplinary approach to reducing criminal behavior through the use of environmental design which includes natural surveillance, access control, territorial reinforcements and maintenance in the built environment. The City is exploring the development of a CPTED program.

Complete Streets Program

Increase awareness and knowledge of local City technical staff regarding best practices for Complete Streets design and techniques. Incorporate Complete Streets concepts into City development patterns where feasible to improve accessibility and make McKinney neighborhoods more walkable and sustainable.



McKinney Brownfields Program

The City has established a Brownfields Program and is currently in the process of conducting community-wide brownfields site assessments. The Brownfields Program will also create a comprehensive site cleanup and redevelopment plan for identified contaminated areas.

Capital improvement projects

Expand public education outreach efforts, including signage that identifies which projects are currently underway. Develop and provide a link to a master database of all CIP projects online, including costs. Consider developing dedicated links for major economic development projects, such as the Gateway project.



Expand development review

Expand the development review process to include multidisciplinary perspectives in order to ensure that sustainability goals and objectives are met.

Tomorrow's Opportunities (2015-2020)

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Implement sustainable design and construction techniques into new developments

The development of green buildings can provide long-lasting, efficient buildings, reduce costs of building maintenance, provide a healthy indoor environment for tenants, and reduce materials consumption and waste during construction and demolition.

Enhance the character of McKinney neighborhoods

Develop walkable, pedestrian-scale neighborhoods where residents can live, work and play.

Utilize mixed-use, mixed-income developments that will promote diversity.

Build mixed-use developments with public transit in mind to increase ridership and ease the City's demand for fossil fuels.



Evaluate multi-modal transit options

Work with regional partners such as the NCTCOG to identify and implement a multi-modal transit option such as rail transit.

Develop hike and bike trails that improve the connectivity of the McKinney community.

Invest in alternate modes of transportation, which can reduce costs related to thoroughfare construction and maintenance.

Expand crime and fire prevention education

Educating the public on potential crime and fire hazards is an important step in creating a livable community.



Review zoning and code regulations and revise as necessary

Review and revise zoning regulations to allow for sustainable development, attract new businesses and younger generations, and create a better community environment.

Tomorrow's Opportunities (2015-2020) *continued*

Continue to support historic preservation initiatives

By supporting policies, ordinances and additional historic preservation efforts, the City will be able to preserve McKinney's unique charm and historic downtown ambiance.



Encourage business development that promotes cultural diversity and economic stability

The types of business that are located in a neighborhood can directly affect the ambiance of the surrounding community. Supporting a wide range of business developments can create a more diverse, culturally rich community while stimulating economic growth.

Continue implementation of the McKinney Brownfields Program

Support policies and regulations that encourage the redevelopment of brownfields. Identify funding sources that will aid in the future expansion of the McKinney Brownfields Program.



Future Possibilities (Beyond 2020)

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Implement sustainable development techniques

Utilizing sustainable development techniques allows for continued growth while preserving natural resources and expanding business development.



Explore revitalization opportunities

Consider redevelopment options for older and underutilized commercial developments such as strip malls.

Metrics to Measure Progress

Multiplier effect from residential and commercial development and impact of infrastructure investments and services through private and public investment.



Potential Funding Opportunities and/or Partnerships

- North Central Texas Council of Governments
- Texas Department of Transportation
- U.S. EPA
- U.S. Department of Transportation
- U.S. Department of Housing and Urban Development



Resources Used

- City of McKinney, Town Center Study
- United States Green Building Council (USGBC)
- National Complete Streets Coalition
- Texas Urban Forestry Council
- Smart Growth Online <http://smartgrowth.org/why.php>
- Washington Department of Archaeology and Historic Preservation
- City of McKinney Website for Brownfields Program



Chapter 4: Green Building



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Green Building Defined

Because conventional buildings account for almost 40% of total U.S. energy usage and about 68% of total U.S. electricity use, reducing this consumption is imperative. Green buildings, or sustainable buildings, are structures that have been developed to be environmentally responsible and resource-efficient throughout their lifecycle: from siting to design, construction, operation, maintenance, renovations and demolition. Green buildings can reduce a building's environmental footprint through innovative design and construction, the use of sustainable materials, and efficient operations. Leadership in Energy and Environmental Design (LEED), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and the National Green Building Standard are a few examples of green building certification programs that help building owners identify and implement practical and measurable green building design, construction, operations and maintenance solutions.



The City of McKinney's private sector recognizes the impact that rising energy costs can have on overhead and lead the way in green design techniques. McKinney boasts several "firsts" in LEED certifications, including the first Platinum-rated Office Building in the U.S., the first LEED-certified Materials Recovery Facility (MRF), the first auto dealership (Pat Lobb Toyota), and the warm-climate experimental store for Walmart.

Why Practice Sustainable Development?



Goal

Develop City facilities and other buildings within the community into green buildings that will support economic development, conserve natural resources and provide high-quality work environments.



Economic

Green buildings have reduced operating and maintenance costs over conventional structures.

There is an increased return on investment over the life of a green building versus conventional.

Employee satisfaction and productivity are improved by many of the features of green buildings.



Community

Businesses that construct or occupy green buildings develop a positive public image.

Green buildings contribute to better public health through improved indoor environments.



Environmental

These buildings reduce energy and water usage, as well as waste.

Constructing green buildings (or retrofitting existing buildings) can preserve open spaces.

Green buildings improve air quality from reduced emissions related to energy use.

Green buildings can mitigate the effects of urban heat islands.

Current Initiatives (To 2015)

Some of the City-owned green building initiatives include:

Construction

- Building orientation when locating a building footprint on site to maximize benefits
- Balanced fill design to reduce emissions caused by trucks hauling away overburden
- Materials selected within 500 miles to reduce emissions from long-haul trucking
- On-site separation of recyclable construction waste items vs. landfill items
- A 52-kW solar array on Fire Station #6

Landscape

- Drought resistant plantings and trees
- Drip irrigation systems in planting beds (vs. spray heads) and bubblers on trees

Lighting

- Solar tubes to introduce natural lighting into interior spaces
- Shading (natural and man-made) to reduce heat loads
- White or light-colored roofing to reduce energy consumption
- Low-E glazing and other insulating glass units to reduce heating and cooling loads
- Energy efficient lamps for lighting fixtures
- Sensor controlled lighting in offices and conference rooms

HVAC /Plumbing

- Tankless water heaters in lieu of large storage tank water heaters
- Waterless urinals
- Dual control flush valves on toilets
- Ultra-high efficient filters on HVAC systems
- Geothermal systems for HVAC
- Building automation systems to efficiently control HVAC, lighting, etc.
- Energy Star appliances and equipment
- Using materials that are low in Volatile Organic Compounds (VOC)
- Sensor controlled valves on sinks and toilets in public restrooms

Current Initiatives (To 2015) *continued*

Community weatherization program

The City provides a community weatherization program that aids in energy and water efficiency home retrofits for low-income families.

Review codes and ordinances

Review codes and ordinances to ensure they support implementing green building techniques. Work with HOAs to eliminate restrictions on green building residences. Consider adding incentives for non-traditional green building and drought-tolerant plant materials via bid documents and ordinances.

Encouraging construction and demolition recycling by City contractors

The City encourages recycling by contractors from construction and demolition activities to reduce waste and promote reuse of recyclable materials.

Sustainable building development

The McKinney Green Building is the country's first privately developed LEED Platinum office building.

Pat Lobb Toyota is the world's first LEED-certified automobile dealership.

IESI built the first fully automated, LEED-certified, green materials recovery facility for processing commingled residential and commercial recyclable materials.

Renewal Energy Demonstration (RED) project

Solar panels, a wind turbine, and a solar collector will be installed on the Gabe Nesbitt Park's concession stand to demonstrate real-time energy performance.

Construction debris recycling

Develop construction demolition debris recycling program to divert construction waste from landfills.

Tomorrow's Opportunities (2015-2020)

Evaluate the feasibility of the following design initiatives

Using grey water for irrigation and/or toilet flushing

Using bioswales in site design to assist in storm water management

Using daylighting design techniques to reduce the electrical lighting loads on buildings

Providing locker rooms and changing facilities for bicycle users

Using vegetated roofs to assist in storm water management and lessen heat islands and energy usage

Using rapidly renewable materials



Develop a green building program for City facilities

Develop a green building program that mandates all new City facilities are designed to LEED silver standards. By building sustainably, the City reduces their environmental footprint as well as saves money from reduced maintenance and operating costs.

Develop a green building awareness campaign

A green building awareness campaign can help educate the public on the benefits related to sustainable development. By doing so, the business owners and operators can make better informed decisions about existing building maintenance options and for future building as well.



Develop contractor incentives for implementing green building techniques and/or best practices

Develop incentives and a recognition program to acknowledge contractors who implement sustainable best practices on the worksite. The City can publish recognition results which may positively affect the contractor's business and enhance their public image.

Future Possibilities (Beyond 2020)



Develop a voluntary green building program

Develop a voluntary green building program that encourages and incentivizes green building in residential and commercial structures.

Utilize the green building awareness campaign to teach residents about incentives offered by the City and other organizations to aid in sustainable development.

Explore new and emerging renewable energy technologies

City staff will continue to explore renewable technologies that will cut costs and reduce the City's energy dependence on fossil fuels. In addition, it will become increasingly important to attract new hi-tech industries to McKinney to further the City's economic development goals.



Evaluate the feasibility of expanding the installation of more green electronics and appliances at City facilities

By installing green electronics, the City will reduce their costs associated with energy consumption from areas such as computer workstations.

Green electronics reduce the use of hazardous materials and maximize a product's lifetime energy efficiency.

This effort would also promote the use of biodegradable and recyclable products.

Develop a building retrofit program for existing buildings in McKinney

Develop a building retrofit program for existing buildings that make up the core infrastructure in McKinney. This can help manage building costs as they age while helping to preserve McKinney's original character.



Metrics to Measure Progress

- Percent annual change in direct energy consumption by primary energy source (municipal operations).
- Total direct or indirect greenhouse gas emission by municipal department.
- Number of new green buildings developed in McKinney.
- Number of adopted policies that promote green building in McKinney.



Potential Funding Opportunities and/or Partnerships

- Local businesses
- Non-profit organizations
- Educational institutions (Collin County Community College)
- Associated Builders & Contractors
- Associated General Contractors
- National Association of Home Builders
- U.S. Green Building Council
- U.S. EPA



Resources Used

- U.S. EPA Green Building Website <http://www.epa.gov/greenbuilding/pubs/about.htm>
- United States Green Building Council Website <http://www.usgbc.org/Default.aspx>
- City of San Antonio, Mission Verde, 2009
- Yates, Alan, Quantifying the Business benefits of Sustainable Buildings, Centre for Sustainable Construction, BRE, 200
- McKinney Economic Development Corporation
- International Building Code (IBC)



Section 2: Natural Resources

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A clean, healthy, natural environment is essential to ensuring economic growth and social well-being. The U.S. EPA is the primary agency tasked with writing and enforcing regulations that protect human health and the environment. It has the responsibility of maintaining and enforcing national standards under a variety of environmental laws in consultation with state, tribal, and local governments. It delegates some permitting, monitoring, and enforcement responsibilities to states. The Texas state environmental agency that has received EPA delegation is the Texas Commission on Environmental Quality (TCEQ). The TCEQ promulgates and enforces environmental laws, statutes, and regulations, which includes issuing and enforcing water and air-related permits to cities operating in Texas. McKinney currently has several initiatives focused on conserving its natural resources including the preservation of open spaces, creation of a green infrastructure GIS database, water and energy conservation, recycling and litter abatement. The City is dedicated to maintaining McKinney's natural beauty through natural resource conservation, reducing solid waste and increasing recycling rates, responsible development of substrates, and utilizing sustainable development patterns.

Chapter 5: Air Quality



Air quality in McKinney is closely linked to regional practices. In North Texas, 70% of air pollution comes from mobile sources such as cars, trucks, trains, airplanes, and construction equipment. This is one of the factors leading to the region being classified as a non-attainment area. A non-attainment area is considered to have air quality that does not meet the National Ambient Air Quality Standards defined in the Clean Air Act. As part of the DFW Non-Attainment Area for Ozone, there are many proactive programs in the region that address air quality. Many of these programs focus on transportation-related aspects in an effort to address mobile sources. Along with other elected officials of the Metroplex, a McKinney Councilmember serves on the North Central Council of Government's Regional Transportation Council—the governing body that coordinates efforts to develop more efficient means of moving people, cars and trucks in, around and through the Metroplex area.

Chapter 6: Alternative and Renewable Energy



The City's energy contract with TXU includes a renewable energy component that takes advantage of TXU's wind farm. In addition to purchasing renewable energy, McKinney used various grants to install renewable and alternative energy components throughout the City including:

- A wind energy conversion system at Fire Station #8
- A 52 kW solar panel system at Fire Station #6 that provides almost half the energy needed for the facility
- An electric vehicle charging station installed at the Roy and Helen Hall Library, and another one planned for the Senior Recreation Center
- A Renewable Energy Demonstration (RED) project that demonstrates production, cost, and payback for wind, solar, and solar-collected water heater technologies
- Conversion of three City-owned Priuses to electric hybrids
- A methane recovery system at the City's closed landfill (developed by Raytheon in partnership with North Texas Municipal Water District (NTMWD), Oncor, and the City), converts methane gas to electricity for use by five Raytheon facilities.

Chapter 7: Urban Canopy



The City recognizes trees as an asset that provides vital ecosystem services and cost-saving green infrastructure functions, improves the quality of life of residents, and ensures the integrity of the community's natural landscape. This is evident through current initiatives such as McKinney's tree preservation ordinance and the City's participation in the Tree City USA program.

Chapter 8: Water Quality and Storm Water



McKinney and its regional partners are working to proactively protect and improve water quality and reduce sources of storm water pollution. When a waterbody does not meet environmental standards related to acceptable pollutant levels, additional regulations may be enforced that can lead to financial implications for the City, businesses and/or developers. McKinney is improving storm water quality by working with businesses and residents on a variety of programs and initiatives. The City reports annually to the TCEQ on progress made related to reducing storm water pollution and associated programs.

McKinney is responsible for ensuring water is provided to all of its residents. As a part of this process, the City purchases water from, and delivers sewage to, the NTMWD. NTMWD regional wastewater treatment plants have been designed, constructed and operated using wastewater technologies that protect public health, preserve water resources and enhance water quality. With a growing population and frequent drought conditions, water conservation is becoming increasingly important not only to conserve the water supply, but to conserve energy as well.

Chapter 9: Parks, Recreation and Open Space

As stated in the 2009 Parks, Recreation and Open Space Plan approved by the City Council:



“...when determining the location of parks, recreation facilities, and open spaces...[it is important to] take into account not only the economic potential of a piece of land, but also the ecological and social performance and benefits (or lack thereof) that will accompany different types of land development. When all three of these levels of performance are considered, parks, recreation facilities, and open spaces are themselves often the ‘highest and best use’ for a piece of prime developable land because of the benefits of increased property values and tax revenues, habitat protection and storm water management, and mental and physical well-being of nearby residents.”

Consequently, obtaining the right balance of green space and hardscapes is an important goal for the City. Planning for the number and type of parks, the distribution of open spaces, and protecting and promoting the natural ecosystem is key to reaching this goal. By using a green infrastructure approach to help guide future development and strategic open space conservation, land use decisions can be made that enable McKinney to grow sustainably and enhance and protect the natural environment.

Chapter 5: Air Quality



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Air Quality Defined

Clean air is essential to maintain a healthy lifestyle and a high quality of life. The average adult needs about 3,400 gallons of air each day. Collin County, which includes the City of McKinney, along with eight other north Texas counties, is non-attainment for ozone under the Clean Air Act. Though there are numerous emissions sources that contribute to air quality degradation, nearly half of the emissions in the DFW Non-Attainment Area come from on-road mobile sources—the vehicles we use to commute to and from work. Breathing in air that contains unacceptable levels of pollution can cause a variety of health problems including asthma, bronchitis, and cancer as well as eye, nose and throat irritations. In addition, air pollution can be especially harmful to children, the elderly, and those with existing medical conditions such as asthma. On poor air quality days, it is recommended that outdoor activities be restricted. The quality of the air directly correlates to the number and types of activities available to McKinney residents and visitors. Poor air quality also hampers the ability to attract certain economic development opportunities because of the related emissions requirements. Clean air is a vital resource for our community.



Why Be Concerned With Air Quality?



Goal

Improve air quality by reducing emissions from City operations, coordinating with regional organizations on voluntary programs, and providing education to the community.



Economic

The U.S. EPA sets limits on how much of a pollutant is allowed in the air without compromising human health and/or the environment. When a region does not meet the federal standards, the ability to obtain permits to expand and operate new businesses may be restricted, and additional regulations may be implemented to reduce air pollution.

The North Texas region, including the City of McKinney, currently does not meet U.S. EPA standards for ozone (or "smog"). Due to the increased environmental oversight and restrictions (which can be costly and time-consuming to deal with) as well as the public health concerns, businesses may decide to move operations out of the North Texas area to other regions where air quality is better. Potential businesses may decide they cannot afford to locate in McKinney.

The costs associated with poor air quality also extend to individuals and the community at-large. Personal health is negatively affected by repeated exposure to poor air quality, requiring medical care that incurs an economic cost for both individuals and employers.



Community

Clean air enhances the health and quality of life and directly correlates to the number and types of activities available to McKinney residents and visitors.

On poor air quality days, visibility may be limited and outdoor activities may need to be restricted for health reasons. The McKinney Independent School District *Preschool Parent Handbook 2010-2011* specifically states that children will not be allowed outdoors on ozone alert days.



Environmental

The most significant concern with poor air quality is its direct impact on public health. In non-attainment areas like DFW, the number of incidents of asthma, chronic bronchitis, and other related respiratory ailments increase on poor ozone days.

Long-term environmental impacts of air pollution include depletion of the ozone layer, more intense storm events and weather extremes such as drought, floods, or severe weather. The City must be prepared to respond and adapt to these challenges.

Poor air quality also negatively impacts flora and fauna, threatening the health of ecosystems throughout the City.

Current Initiatives (To 2015)



Facilities

Implement a voluntary green building program (see Chapter 4).

Fleet vehicles and other fuel-powered equipment

Utilize vehicles that are clean, cost-effective and fuel-efficient.

Evaluate the feasibility of installing GPS units in City fleets to reduce fuel usage and improve worker efficiency.

Continue the purchase of hybrid and/or electric vehicles as appropriate.

Continue to explore potential partnerships with IESI, Collin County, and MISD for a Compressed Natural Gas (CNG) Fueling Station.

Continue to explore alternative-fueled mowers (CNG or propane).



“No-mow” areas

Establish additional no-mow areas to reduce fuel consumption and reduce staff time dedicated to mowing operations.

Education

Develop and implement an Ozone Action Policy to reduce city-related air emissions on poor air quality days.

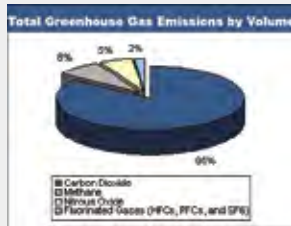
Provide educational opportunities to the public related to ozone, air quality, and disaster management.

Educate and inform through signage and other outreach efforts the negative impact of extended idling particularly in school zones while waiting to pickup children.

Encourage property owners and landscape businesses to purchase and operate landscaping equipment that minimizes air emissions.



Tomorrow's Opportunities (2015-2020)



Community greenhouse gas emissions inventory

Conduct a community greenhouse gas emissions inventory that builds on the existing municipal greenhouse gas inventory.

Green infrastructure initiative

Establish open space protection through a green infrastructure initiative. Such an initiative would identify and protect vegetative landscapes that provide valuable ecosystem services that mitigate air quality concerns typical of urban environments. This initiative should be coordinated with the Urban Canopy efforts outlined in Chapter 7.



Coordinate regional efforts

Coordinate efforts and maximize efficiency by joining organizations such as Texas Clean Air Coalition and Air North Texas. This will allow the City to work with neighboring cities and businesses to promote improving air quality in North Texas.

City operations

Consider implementing an optional four-day work week and work-from-home alternatives to reduce employee vehicular commuting requirements.



Future Possibilities (Beyond 2020)



Land use patterns

Promote land use patterns that encourage walking and biking as well as alternative commuter options to improve connectivity. Also consider employing traffic devices such as roundabouts to avoid stops at intersections.

In order to protect the ecosystem services provided by the lands that makes up the City's green infrastructure, development should be designed in a manner that respects and maintains this land.

Alternative commuting options

Develop and expand mass transit opportunities such as rail, streetcars, bus, and hike and bike trails to reduce employee commute time and fuel consumption.

Coordinate and promote commute solutions programs.

Develop a fuel conservation and education program.



Metrics to Measure Progress

- Percent annual change in number of vehicle miles traveled
- Number of ozone action programs implemented
- Number of ozone action days
- Reduction in fuel consumption; money saved from reduced fuel usage
- Number of partnerships/affiliations with air quality coalitions



Potential Funding Opportunities and/or Partnerships

- North Central Texas Council of Governments
- North Texas Clean Air Coalition
- Air North Texas
- Clean Cities Technical Coalition
- Engine and Vehicle Replacement Grants



Resources Used

- North Central Texas Council of Governments Website <http://www.nctcog.org/trans/air/>
- Air North Texas Website <http://airnorthtexas.org/>
- U.S. EPA Air Website <http://www.epa.gov/gateway/learn/airpollution.html>



Chapter 6: Alternative and Renewable Energy



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Alternative and Renewable Energy Defined

Energy supply, both in the short- and long-term, is one of the most important issues facing society today. Currently, the vast majority of energy supply comes from traditional, non-renewable fossil fuels (oil and coal). Although renewable energy production is increasing—including solar, wind, biodiesel, and hydrogen—it still only provides a relatively small amount of the total energy demand. Non-traditional fossil fuels, such as CNG and propane, are the most promising bridge fuels to help the U.S. transition from a traditional fossil fuel economy to a renewable energy economy. For McKinney residents and businesses, diversifying their energy supply provides more flexibility and a potential for greater cost stability while also reducing the negative environmental effects of traditional, sole-source power.



Why Seek Alternative and Renewable Energy Sources?



Goal

Incorporate renewable and alternative energy technologies into the suite of available energy options in order to reduce costs, contribute to greater energy independence, and improve the environment.



Economic

Secure sources of energy are necessary to maintain a healthy economy.

Depending on fossil fuels as a primary fuel source exposes consumers to the risk of sudden and severe rises in fuel costs as well as disruptions in fuel supply.

Though alternative and renewable energy currently comprises only a small percentage of the overall energy supply, this percentage continues to grow as alternative and renewable sources become more affordable with reduced material and installation costs.

The availability of federal and state grants and local utility rebates assist with offsetting initial costs to increase affordability.

Currently, the payback period for an expensive renewable energy system, such as residential solar panels, can decrease from 25 years to five to eight years after tax rebates and other incentives. TXU also has implemented a leasing program that makes solar panels more practical for the average homeowner. Other forms of renewable energy such as wind and solar tubes offer a much faster return on investment. The economics underlying renewable energy vary widely but even the most expensive alternatives will become increasingly attractive as energy prices continue to climb.

Utility providers offer an option to purchase renewable energy for homes and businesses through energy supply selections on utility bills.

Why Seek Alternative and Renewable Energy Sources? *continued*



Community

Increased alternative and renewable energy providers allow residents to have more choices when selecting a provider.

Use of alternative and renewable energy can improve air quality resulting in improved health of residents and increased economic development opportunities.



Environmental

In the DFW Non-Attainment Area for Ozone, fossil fuel emissions from vehicles are the primary cause. Utilizing alternative-fuel vehicles, such as the City's five hybrid vehicles, reduces these emissions.

Renewable energy sources for supplying homes and businesses offer an alternative to fossil fuel combustion and related emissions.

Current Initiatives (To 2015)



Grant funding

Research and apply for grants to help fund potential renewable energy programs.

Alternative energy demonstration projects

The City recently completed a grant-funded, 52kW solar array for Fire Station #6 that provides one-half of their energy demand.

The RED project will be installed at Gabe Nesbitt Park's concession stand and include a wind turbine, solar panels and a solar collector. These technologies will be real-time monitored and provide educational opportunities to the community for potential application in homes and businesses.

Continue to support NTMWD and Raytheon's methane recovery plant at the McKinney Landfill.

Host renewable energy seminars to educate the community on what energy options are available for installation and/or purchase.



Convert City hybrids to electrical vehicles

The City has converted three of its hybrid-electric Toyota Priuses to include plug-in technology for use at plug-in stations.

Plug-in stations for City vehicles and public use

In partnership with TXU, the City installed an electric charging station at the downtown Hall Memorial Library for the convenience of residents visiting the Library.

A second station is planned for the Senior Recreation Center on College Street.

Three other stations are planned for installation throughout the City.



Involve Office of Environmental Stewardship, Facilities and Building Operations and Maintenance

Include the Office of Environmental Stewardship, Facilities and Building Operations and Maintenance in facility renovations and new construction to help identify potential applications of renewable energy sources and alternative fuels.

Tomorrow's Opportunities (2015-2020)

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Partner with homeowner associations (HOAs)

Work with the HOAs to address concerns related to installation of renewable technologies such as solar panels and wind turbines.

Research renewable energy opportunities

Investigate renewable energy generation opportunities at City facilities to reduce energy costs and gain energy independence.



Public education

Develop renewable energy educational materials for the public.

Future Possibilities (Beyond 2020)



Purchase renewable energy credits

Consider purchasing renewable energy credits to reduce the City's carbon footprint and contribute to better air quality.

Form public-private partnerships

Form a long-term public-private partnership to plan for and address renewable energy opportunities in high-performance buildings.



Identify biowaste-to-energy opportunities

Work with IESI, NTMWD and local businesses to identify and rank various opportunities for biowaste-to-energy projects. As Plano brings their facility on line, consider potential partnership opportunities.

Focus on residential applications

Work with home builders to plan for the application of fuel cells that will provide for 100% of the homeowner's home and vehicle energy needs.

Obtain and offer renewable energy rebates to residents to assist with reducing energy costs.



Metrics to Measure Progress

Number of initiatives to provide energy-efficient or renewable energy-based products and services

Percent annual change in energy consumption directly related to those initiatives

Percentage of renewable energy as a percent of total energy use in municipal operations

Cost savings from the use of renewable energy

Funds leveraged annually by the City through renewable energy funding sources



Potential Funding Opportunities and/or Partnerships

Local energy providers such as Oncor

Local businesses

Entergy Texas

State Energy Conservation Office

Department of Energy



Resources Used

City of McKinney Energy Efficiency and Conservation Strategy

State Energy Conservation Office

U.S. Department of Energy, Energy Efficiency and Renewable Energy
<http://www.eere.energy.gov/>



Chapter 7: Urban Canopy



DRAFT REPORT

Urban Canopy Defined

According to the Center for Watershed Protection, an urban tree canopy “is the layer of leaves, branches and stems of trees that cover the ground when viewed from above.” Every city in the U.S. is encouraged by American Forests to set goals regarding their urban tree canopy. Trees are vital to the quality of life for people in cities. It is important to ensure there is an adequate number of trees, especially in urban and suburban communities.

The size and species of trees matters, too. Older, larger, well-established trees (such as oaks and pecans) offer more ecosystem services than do ornamental understory trees (such as Red Buds and Crepe Myrtles). Conserving existing canopy and planting the right trees in the right place can add positive long-term economic return for the local community, as well as cleaner air and water. The value for stands of existing trees, particularly in riparian corridors, rank highest in terms of the City’s existing green infrastructure based on the ecosystem services these trees provide. Though the City’s urban canopy covers 17% of the land area, half of that canopy is in developable areas and could easily be lost. Other natural threats—the current drought, ash borers, and diseases like oak wilt—also threaten to reduce the existing canopy. By protecting these forested areas from development, the City can maintain its *Unique by Nature* status, as well as realize the long-term economic benefits from air pollution sequestration and storm water quantity and quality management.



Why Focus on the Urban Canopy?



Goal

Increase property values, improve air and water quality, and enhance the community's natural landscape by increasing the extent of the urban tree canopy through proper tree planting and preservation of the existing tree canopy.



Economic

Trees are a valued asset that can contribute to an increase in property values of 5% to 15% when compared to properties without trees, according to the National Forest Service.

Trees strategically planted around homes and buildings can reduce air conditioning needs by 30% and save 20-50% in energy used for heating, according to the National Forest Service.



Community

Trees contribute to a healthier outdoor environment for the community.

Shade from trees makes parks, trails, and natural areas more comfortable for and attractive to residents and visitors.

An urban canopy is aesthetically pleasing to a community and can improve quality of life and offer a sense of well-being for McKinney residents.

Improved mental health and lowered stress levels can be observed in communities that are well-landscaped and have a healthy urban canopy.



Environmental

Trees clean air and water, remove carbon dioxide from the atmosphere, create oxygen, moderate local ground temperatures, provide erosion control, decrease storm water runoff and improve water quality.

Trees create a varied habitat for supporting a wide-range of wildlife and corridors for animals to move from one area to another.

Trees act as a buffer by reducing noise pollution by almost 50%.

Current Initiatives (To 2015)



Complete Urban Canopy Study

Complete the City's current Urban Canopy Study that is funded with federal grant money. Use results of Urban Canopy Study to develop sustainability metrics for associated programs. Based on the outcome of the Study, update tree preservation and landscape regulations, including: street planting requirements, maintenance, and requirements for retention of high quality trees, and recommended land-use patterns that encourage a dense urban tree canopy.

Tie-in to the Storm Water Management Program

Tie the Storm Water Management Program and related ordinances to the urban tree canopy and explain how strategically planting trees properly around areas with a high amount of impervious surfaces can contribute to better storm water management, improved water quality, and provide flood protection.



Tomorrow's Opportunities (2015-2020)



Develop Urban Forestry Program

Establish a Community Tree Committee to guide McKinney's Urban Forestry Program and establish tree planting goals within McKinney neighborhoods.

Develop and implement an Urban Forestry program that will contribute to a vibrant economy and reduce associated environmental costs.

Review and revise the tree ordinance to facilitate development of the Urban Forestry Program.

Utilize the Tree Canopy Study and the future city-wide Tree Inventory to identify and prioritize tree planting initiatives for public properties.

City tree planting requirements

Set tree planting initiatives for City facilities to reduce energy costs and increase neighborhood vibrancy.

Consider adding incentives within the landscaping ordinance to encourage planting trees for energy efficiency around new single-family residential developments as well as commercial and retail developments.



Complete a public tree inventory

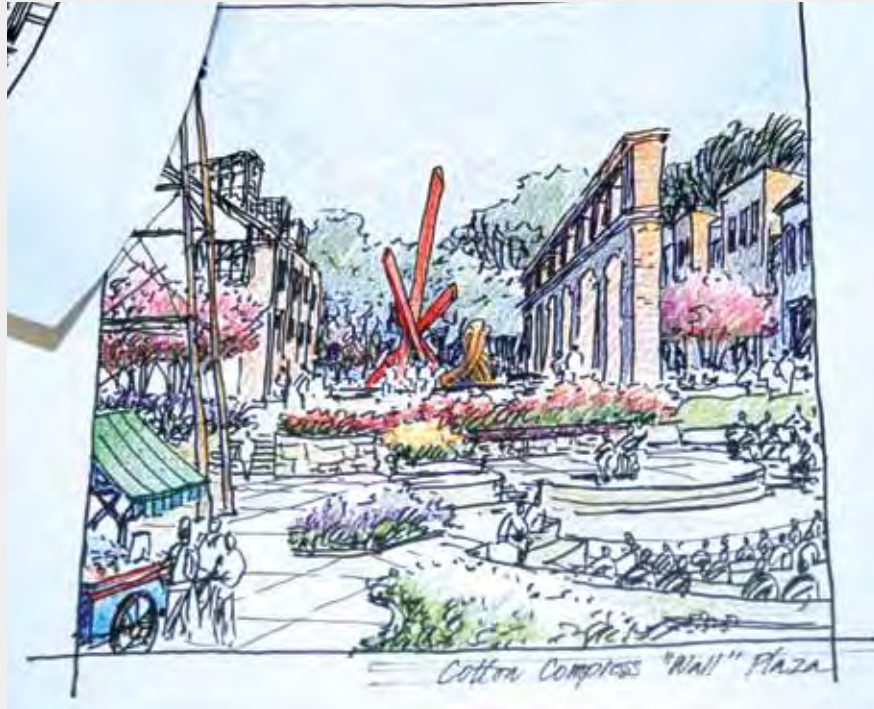
Conduct a public tree inventory that accounts for all trees in the City of McKinney.

Work with businesses and other private organizations to develop tree planting programs and goals to enhance the urban canopy throughout McKinney.

Conduct a follow-up Urban Canopy Study to track how the canopy has changed over time.

Future Possibilities (Beyond 2020)

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Sustainable planning

In conjunction with the review of open spaces and associated development practices, consider sustainable planning techniques to increase open space for tree canopy preservation.

Metrics to Measure Progress

- Number of trees planted annually.
- Carbon sequestration impacts of total trees planted annually.
- Number of tree programs implemented.
- Number of adopted ordinances, policies, and plans related to urban forestry initiatives.
- Percent change in urban canopy cover.



Potential Funding Opportunities and/or Partnerships

- Local non-profit organization (develops and implements tree planting programs for the community to maximize staff efficiency and tree planting efforts.)
- Establish a Sponsor-a-Tree Program (participants can sponsor a tree for an annual fee, which is placed into a fund to pay for additional community tree programs.)
- McKinney Independent School District
- Private organizations
- Keep Texas Beautiful
- Texas Forest Service
- Texas Urban Forestry Council
- Arbor Day Foundation



Resources Used

- Texas Urban Forestry Council
- U.S. Forest Service – Urban and Community Forestry
- Center for Watershed Protection
- Urban Ecosystems and Social Dynamics Program - U.S. Forest Service
- U.S. Department of Agriculture
- American Forests



Chapter 8: Water, Wastewater, and Storm Water



Water, Wastewater, and Storm Water Defined

Like air, water is necessary to sustain life. Our waterways and aquifers are precious to our community as the means for safe and reliable drinking water. When properly treated and integrated, these various sources of water are used to meet the demands in our community each day. Whether for public consumption, fire protection, or industrial uses, our water resources may be impacted through various forms of pollution, drought, and water scarcity, which drives the need for treatment and conservation measures.

Consumed water returned to the natural environment without treatment is otherwise laden with nutrients, organics, and other contaminants that may cripple aquatic habitats and ultimately impact our drinking water supplies and water quality.

As of Fall 2011, North Texas is in the 18th month of a drought of record which may persist as long as 2020. Currently anticipated through the summer of 2012, the drought poses significant challenges to water suppliers. As one of 13 Member Cities of the NTMWD, McKinney's water is managed and treated by NTMWD. NTMWD anticipates serving 700,000 people by 2020. The Executive Director, Jim Parks, is also the Chair of the Region C Regional Planning Group for the Texas State Water Plan. Consequently, McKinney is well-represented at a local, regional, and state level in terms of water planning. The State Water Plan is comprised of regional water plans that outline the steps necessary to ensure water supply will meet water demand as populations grow.

CITY OF MCKINNEY SUSTAINABILITY PLAN

NTMWD also boasts one of the nation's largest wetlands natural treatment systems encompassing nearly 2,000 acres and housing a state-of-the-art nature center—the John Bunker Sands Wetland Center—complete with a classroom working lab for visiting students and various ongoing research projects. Besides providing a much-needed additional supply of filtered raw water, the wetlands are also home to numerous water fowl and migratory bird populations.

Storm water, which is water that results from rainfall, is a critical source of water supply. Storm water flows from rooftops and streets, enters storm drains, and eventually makes its way to creeks, lakes and other waterways. There are two primary issues related to storm water. The first is the volume of water runoff: too much can lead to flooding, too little can result in water shortages. The second issue is the potential for storm water to pick up pollutants (oil, litter, sediment) as it moves across roof tops, parking lots and roads and enters waterways, causing water supply contamination and habitat destruction. As an MS(4)-Phase 2 permitted city, McKinney has an active storm water monitoring and public education outreach program in-place.

Water resources planning, management, treatment, and whenever possible, beneficial reuse, are foundational components of community sustainability. The infrastructure required to treat and deliver community water supplies also consume energy and periodically require asset management to restore the system's capacity and efficiency. Optimizing the treatment and delivery systems afford new opportunities to enhance community sustainability through the implementation of sustainable design initiatives. Sustainable design initiatives provide long-term social, economic, and environmental returns on investment while helping communities maintain affordable water, wastewater and storm water services.

"No one has the right to use America's rivers and America's waterways as a sewer; they belong to all the people. The banks of a river may belong to one man or one industry or one state, but the waters which flow between the banks should belong to all the people."

– President Lyndon B. Johnson

Why Be Concerned with Water, Wastewater, and Storm Water?



Goal

Supply safe, uninterrupted water, storm water and wastewater services by implementing water conservation strategies that ensure water is used as efficiently as possible.

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Economic

A dependable clean source of water is necessary for economic sustainability and growth. As of Fall 2011, the North Texas Region was 18 months into what climate models indicate could be a 9-10 year drought, exceeding the drought of record for Texas (1950-57). Climate models for 2012 strongly indicate that the drought will continue through the summer, driving parts of the state into Stage IV—the most critical stage of drought contingency planning involving water rationing. As Texans watch trees begin to die, the direct impacts of such a drought become more obvious for all aspects of the community. A strong water, wastewater and storm water system contributes to the economic prosperity of the residential, commercial, agricultural and industrial sectors. A clean, plentiful source of water contributes to food production and agriculture.

Healthy, clean lakes and rivers attract visitors for boating, swimming and fishing and can have a significant positive impact on the local economy. For example, the Trout Derby draws visitors from across the region to McKinney who spend money on various items and activities after participating in the event.

Waterfront property values in Collin County can be as much as 30% higher than comparable non-waterfront properties.

Water conservation also conserves energy and reduces related costs.

The more polluted storm water is, the more expensive it is to treat and remove the pollutants. Costs related to treatment of raw water to make it potable are transferred directly to home and business owners.

By conserving water and minimizing pollutant impacts, operating and energy costs can be decreased.

Why Be Concerned with Water, Wastewater, and Storm Water? *continued*



Community

In warm climates like McKinney, Texas, clean bodies of water provide natural gathering places for humans and wildlife alike. For example, Town Lake offers unlimited opportunities for recreational activities and social gatherings. Whether paddling a swan boat, fishing from the shore, or grilling hamburgers nearby, waterbodies provide an ideal gathering spot for friends and neighbors.

Water bodies (e.g., Town Lake, Wilson Creek and Natural Resources Conservation Service (NRCS) flood control structures) also provide a sense of place. McKinney residents associate not only trees and rolling hills with their community, but also water features such as Wilson Creek and Town Lake. These are some of the important features that set McKinney apart from other communities

An adequate water supply is necessary to provide fire protection and protect homes and businesses.



Environmental

Water conservation reduces energy and therefore related air emissions.

Storm water flows directly, without treatment, into creeks, rivers and lakes from storm drains. Litter and other debris can easily be washed into these storm drains. Pet waste, fertilizers, pesticides, gasoline, oil, sediment and hazardous materials from construction sites, and other contaminants found on the ground can be washed into the drains during a heavy rain as well. The resulting pollution causes problems for a waterbody and its wildlife.

As open space decreases in McKinney, the surface area of concrete and asphalt pavement increases. This reduces the ground's ability to naturally absorb the rain and filter the pollutants, leading to more storm water runoff with the potential for more pollution.

Current Initiatives (To 2015)



Water Quality (Storm Water Management Program)

Host annual Project Storm Water Inlet Marking (SWIM) event to label storm drains in an effort to prevent dumping paint, pesticides, etc. down storm drains.

Continue to provide educational lessons for MISD related to water pollution (Freddie the Fish Campaign, Girl Scout and Boy Scout troops, green clubs, high school environmental clubs and similar organizations).

Continue to eliminate trash from our waterways through community clean-up programs.

Continue to monitor and sample outfalls for flow to minimize contaminants from entering the storm system.

Continue to identify potential cross-connections of sanitary sewer lines with the City's storm sewer system through the Sanitary Sewer Evaluation Study (SSES) program.

Continue to reduce construction runoff through targeted ordinances, policies and education to reduce storm water impacts.

Water Conservation

Encourage regular maintenance for irrigation systems:

- Host, in conjunction with Frisco and Allen, the Sprinkler Smarts event where citizens can learn different aspects related to properly maintaining irrigation systems.
- Continue to host seminars for residents on irrigation maintenance.
- The Watersmart McKinney Irrigation Program allows residents to request an irrigation system inspection by a licensed irrigator at a discounted rate to ensure water is being used efficiently.



Current Initiatives (To 2015) *continued*

- City ordinances require landscape irrigation systems be properly designed and installed by a licensed irrigator to ensure systems are not over-pressurized and that they water the appropriate length of time for the plant material in each station. Also, systems must use an ET controller to minimize any potential for over-watering. The City's official irrigation inspectors will confirm irrigation systems have been properly installed.



Identify high water usage sites and work with the residents and businesses to implement water conservation strategies.

Provide rooftop/rain barrel collection seminars for residents.

Continue to provide leak detector tablets to citizens to minimize water loss from household leaks.

Encourage "green gardening" (see Education and Outreach on the following page) by utilizing SmartScape (low-water) landscaping materials and native prairie vegetation as demonstrated at the McKinney Green Garden.

Educate residents and businesses about the City's water conservation and drought contingency strategy. Enforce the City of McKinney's residential and commercial water use restrictions in order to conserve water resources and ensure reliable distribution of water to all customers. The ordinance includes year-round watering restrictions.



Rebate programs

Rain/freeze sensor rebates and evapotranspiration (ET) controllers rebates are currently offered by the City for irrigation systems built before September 17, 2007. ET controllers and rain/freeze sensors must be selected from a City-approved list and installed by a licensed irrigator. The rebates are intended to encourage residents to be proactive in their water conservation efforts.

The ET Controller Program allows residents who have an irrigation system equipped with an ET controller to register the controller with the City and receive a water day exemption from the twice-weekly schedule that the City currently maintains.

Current Initiatives (To 2015) *continued*

Education and outreach

The City is currently developing a water conservation education and outreach campaign for the McKinney community. Water conservation can reduce energy use, resulting in reduced costs for residents and the City of McKinney.

The McKinney Green Gardens demonstrates various irrigation techniques and SmartScape landscape material. As a model low-water garden, it will teach residents about native landscaping and offer another gathering venue for the residents to share gardening experiences. Seminars are periodically offered on-site.



As a member of the NTMWD, the City of McKinney voluntarily participates in selected water conservation initiatives developed by the NTMWD to help preserve and protect North Texas' water resources.

Develop water conservation educational materials for residents of McKinney that include the City's conservation regulations, ordinances, and indoor and outdoor water management information.



Landscape water management regulations

The City has adopted a landscape water management ordinance that promotes responsible use of water as well as provides penalties for noncompliance.

Proactively address MS4 storm water permit

Continue proactive measures as described in the City of McKinney's Storm Water Management Program as required by TCEQ to maintain the Municipal Separate Storm Sewer System (MS4) storm water permit.



Preservation Plan

Increase awareness of the City's Preservation Plan relating to the Honey Creek and Trinity River floodplains.

Tomorrow's Opportunities (2015-2020)



Expand the water conservation education and outreach campaign

Develop a SmartScape program and implement at City facilities to save money, conserve resources and beautify the community.

Develop water conservation programs for commercial and industrial industries in order to help businesses run efficiently and reduce their environmental footprint.

Develop a grease abatement program

Develop a grease abatement program to educate the public on the proper disposal of grease and oils to decrease the amount of fats in the sanitary sewer system.



Review City policies and codes

Review and revise City policies and codes pertaining to water management activities to conserve resources as well as encourage/incentivize residents to implement water conservation techniques at their homes.

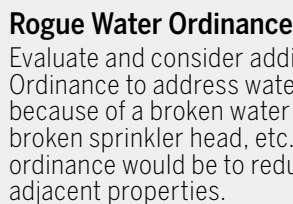
Protect and maintain healthy ecosystems and habitat

Increase the open space within the city and percentage of low-maintenance grasses and native plants used.



Improve the quality of McKinney's creeks and tributaries

Pursue a long-term plan to monitor the health of McKinney's rivers, streams, wetlands and open water bodies through water quality sampling.



Rogue Water Ordinance

Evaluate and consider adding a Rogue Water Ordinance to address water that leaves the property because of a broken water line, overflowing pool, broken sprinkler head, etc. The focus of the ordinance would be to reduce water loss and protect adjacent properties.



Tomorrow's Opportunities (2015-2020) *continued*



Enforcement of water restrictions

Consider using the Citizen Patrol to identify and cite violators of the water ordinance.

Regional partnerships

Participate in regional water events to build regional partners and increase education on sustainable water quality practices.

Engage homeowners associations

Engage HOAs to encourage water collection and storm water practices such as rain harvesting, selection of native plants and low water use vegetation.

Sustainable Backyards Program

Develop programs such as the Sustainable Backyards Program for McKinney residents to educate them on proper gardening and landscaping techniques that will reduce water consumption and storm water pollution from herbicide use.



Low-impact development and green infrastructure

Evaluate and incorporate low-impact development and green infrastructure techniques to reduce storm water impacts and potential for flooding.

Reduce construction runoff impacts through educational efforts

Reduce construction runoff through targeted ordinances, policies and education to reduce storm water impacts.

Tomorrow's Opportunities (2015-2020) *continued*



Work with contractors to implement water conservation best practices at worksites

Create incentives for City contractors who successfully implement water conservation practices at their worksites. Additionally, develop a recognition program that publicly acknowledges contractors who are leaders in environmental stewardship.

Offer additional rebates that support water conservation

Offer rebates to the community that support the City's water conservation goals. Rebates are available for the following appliances: washer/dryer, toilets, dishwashers, and showerheads.



Review and revise the Storm Water Program and Ordinance

Review and revise the City's Storm Water Program and Ordinance to accurately reflect any regulatory changes and effectively manage storm water activities.

Future Possibilities (Beyond 2020)

Identify new water and wastewater technologies that are efficient and cost effective

Research and evaluate emerging technologies for water and wastewater treatment that will save the City and customers money as well as provide safe, reliable water to the community.



Building strong partnerships with local and regional organizations

Building strong partnerships with local and regional organizations to discuss, develop and implement innovative water management programs that will contribute to the economic prosperity of the region.



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Metrics to Measure Progress

Number of regional water events (public outreach) participated in annually by the City.

Number of water conservation (lawn irrigation) rebates offered to residents/businesses.

Number of adopted City policies and ordinances for water-related topics.

Number of individuals participating in SWIM initiatives.

Number of SWIM decals placed at inlets through SWIM events.

Number of pounds of trash removed annually from watershed area during the community clean-up events/programs.

Number of storm water outfalls monitored and sampled.

Number of linear feet of sewer lines tested, the number of detected line breaks, and the number of repairs made based on the Sewer System Evaluation Survey (SSES) program.

Number of construction site inspection enforcement visits/violations.

Changes in annual per capita water usage (taking weather conditions into account).



Potential Funding Opportunities and/or Partnerships

North Central Texas Council of Governments - Regional Storm Water Management Program

TCEQ

NTMWD

City of McKinney Surface Water Drainage Utility System

Texas Water Development Board

Water Environment Association of Texas

U.S. EPA - Region 6

U.S. EPA Storm Water Management Program



Resources Used

TCEQ

U.S. EPA Storm Water

Federal Emergency Management Assistance (FEMA)

McKinney Landscape Water Management Ordinance

NTMWD

The City of McKinney, Public Works Website

Texas Water Development Board

U.S. EPA Wastewater Management Website

City of McKinney Annual Storm Water Permit



Chapter 9: Parks, Recreation, and Open Spaces



DRAFT REPORT

Parks, Recreation, and Open Spaces Defined

The City of McKinney 2009 Parks, Recreation and Open Space Master Plan is a comprehensive planning document for the maintenance of current parks and facilities, development of future parks and facilities, recreational programming, and preservation of open spaces in the City. The purpose of this chapter is to tie the key elements of that plan into the City's overall sustainability efforts.

Parks and open spaces help define the character of a city, providing a unique set of attractive assets. These facilities can include forested and open areas, water features, ball fields, tennis and basketball courts, ice skating rinks, golf courses, picnic areas, playgrounds, monuments, trails, public gathering places, inactive cemeteries and other natural areas. These places provide structure to an urban setting by complementing the residential and commercial fabric and helping to unify and provide identity to and connectivity between various neighborhoods. Parks and open spaces provide residents with access to the natural environment, including opportunities for active and passive recreation, while also protecting unique sites for their natural ecosystem functions and for public use. Future parks and open space decisions can be made in a manner that enhance and support the guiding principles of green infrastructure development discussed in Chapter 10: Green Infrastructure and Chapter 11: Transportation, to ensure connectivity and provision of ecosystem services.



Why Invest in and Maintain Parks, Recreation, and Open Spaces?



Goal

Enhance the sense of community, increase economic development, and protect cost-saving ecoservices by acquiring green space for use as parks and open spaces.

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Economic

Studies show that an average property value increases 15% for properties within 600 feet of a park.

In areas where urban parks have been used as a redevelopment tool, surrounding neighborhood occupancy rates have increased by as much as 40% (City Parks Alliance, 2011).

Millennials, the next generation to be living in McKinney, place a high value on access to parks and gathering venues. To attract tomorrow's residents and businesses, parks, recreation, and open spaces will need to be an integral part of the community.

Increased green space decreases the urban heat island effect, reducing temperatures and thus ozone formation. As a result, energy demands and costs are also reduced.



Community

A comprehensive network of green spaces contributes to building an economically stronger, more close-knit community.

As a community common area, parks and open spaces provide recreational opportunities supporting active lifestyles, living laboratories for students, venues for social gatherings, and natural habitats for wildlife.

Located throughout the City, parks and open spaces—especially linear parks such as Wilson Creek—also connect geographically distinct neighborhoods within McKinney.

Why Invest in and Maintain Parks, Recreation, and Open Spaces? *continued*



Environmental

Undeveloped natural areas retain more rainwater than developed areas and decrease the amount of runoff during rain events. Vegetation in these areas also offers natural buffering and filtering functions to reduce pollutants and the cost necessary to treat them.

Local green spaces help to clean water and air.

Open green spaces reduce flooding and therefore property damage and economic loss during high flow events.

The oxygen provided by vegetation in green spaces helps improve air quality and lowers urban temperatures, which reduces the urban heat island effect.

Current Initiatives (To 2015)

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Purchase and preserve parks and open spaces

Continue the purchase and preservation of open spaces in McKinney to improve property values as well as storm water and floodplain protection.

Develop future parks and recreation facilities for residents as the City continues to grow. The recent construction of the Wilson Creek Hike and Bike Trail and the Bonnie Wenk Dog Park are sustainable additions to the community.

The purchase and preservation of open spaces should consider the ranking system established in the City's green infrastructure study. Often, the ranking systems will complement each other and achieve multiple goals with one acquisition.



Skatepark

McKinney budgeted \$2 million for the development of a 30,000-square-foot skatepark for local teens. The City asked middle school students to design the skatepark "of their dreams." The skatepark was constructed on three acres of land at Gabe Nesbitt Park and includes elements such as a snake run, elevated bridge and specials bowls.

Current Initiatives (To 2015) *continued*

Promote native plant programs

Continue to offer seminars on native plants through the Office of Environmental Stewardship.

Refer residents to existing state programs including:

- Texas Wildscapes, www.tpwd.state.tx.us/huntwild/wild/wildscapes/
- Texas SmartScape, www.txsmartscape.com
- Lady Bird Johnson Wildflower Center, www.wildflower.org
- Heard Natural Science Museum and Wildlife Sanctuary

Continue environmental education activities and events at the Heard Natural Science Museum and Wildlife Sanctuary to encourage protection of McKinney's natural environment.



Funding and private development requirements

McKinney Community Development Corporation sales tax revenues for parks, recreation, and open space acquisition and development.

Community-supported bond initiatives for parks, recreation, and open space acquisition and development.

Developer-provided funding, public infrastructure construction and parkland dedication.

- One acre of parkland dedication required for every 50 units (single family residence, apartment, etc.).
- Cash in lieu of parkland dedication utilizing the recorded land value established by Collin Central Appraisal District.
- Construction of hike and bike trails within development limits.
- Median landscape fees for the total linear footage on median roadways.
- Explore additional developer-required funding for park development.

Tomorrow's Opportunities (2015-2020)



Increase diversity of Park programs

Increase the diversity of Park programs (e.g., fitness, adult and youth sports, cultural programs, workout stations and ADA apparatuses within parks) and venues that are offered to residents to help build a greater sense of community and improve the health of residents.

Develop park facilities with an outdoor education component in mind (i.e., Sonntag Park's Monarch Butterfly Park proposal).

Urban ecosystem analysis

Complete an urban ecosystem analysis to provide a measure of monetary benefits associated with functions carried out by natural resources.

The urban ecosystem analysis should build on the existing McKinney green infrastructure study and GIS database.



Expand trail recreational opportunities

Use existing infrastructure linkages such as parks, hike and bike trails as well as storm water management systems to expand trail recreational opportunities, including a greenbelt trail along the Trinity River floodplain.

Future Possibilities (Beyond 2020)



Consider open space in City development plans

Consider using development patterns that increase density while retaining open space and improving connectivity.

Employ efficient and sustainable management practices

Review and evaluate current parks and open space operational practices for more efficient and sustainable management practices, including low maintenance vegetation.



Metrics to Measure Progress

- Number of habitats protected or restored.
- Number of acres of new urban parks and open space projects.
- Number of new park programs implemented.
- Funds (dollars) leveraged by the City for the use of habitat protection and/or restoration.



Potential Funding Opportunities and/or Partnerships

- Cities adjacent to McKinney City bond elections
- Collin County - Parks and Open Space
- Collin County Open Space funding
- Collin College
- Developer contributions
- Local non-profit organizations
- McKinney Community Development Corporation
- McKinney Independent School District
- Texas Department of Transportation
- Texas Parks and Wildlife
- Texas Recreation and Park Society



Resources Used

- 2009 City of McKinney, Parks, Recreation and Open Space Master Plan
- Texas Parks and Wildlife Department
- McKinney Hike and Bike Trails Map



Section 3: Infrastructure

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The City of McKinney, like many dynamic municipalities, faces challenging infrastructure demands resulting from a growing and expanding community. To support an attractive and desirable business climate, the City recognizes the importance of investing in a sustainable infrastructure. The City of McKinney is committed to providing customer services that support a high quality of life which include affordable and accessible transportation options, safe and reliable water, effective waste management, preservation of open space and thriving economic growth. Leading by example, the City implements internal policies and procedures for municipal facilities to ensure that buildings and operations run as efficiently as possible. Continued strategic investments in sustainable urban infrastructure development will ensure that McKinney can meet the future demands of a dynamic community.

Chapter 10: Green Infrastructure



Green infrastructure is a new concept that recognizes an old, “original” approach –relying on existing natural systems – to manage storm water, water quality, air quality wildlife conservation, and parks and open space. Green infrastructure also offers an opportunity to reconnect communities with their environment. A city functions as a vast ecosystem where multitudes of singular features and processes are functioning together to comprise an incredibly complex system. In this context, a green infrastructure approach seeks to analyze these connections and processes, soften the divide between the natural and the built environment, and illustrate that through thoughtful planning and management, development and conservation can work in concert to create a sustainable urban ecosystem.

Chapter 11: Transportation



McKinney is dedicated to developing multi-modal transportation options and utilizing development patterns that improve the connectivity and enhance community development. Resources are limited, so in order to maximize the benefits of transportation investments many municipalities are exploring alternatives to traditional transportation projects. McKinney is continuously exploring future transportation demands. As the City’s population continues to grow, multi-modal transportation options will be considered as part of the mix to meet the community’s transportation needs.

Chapter 12: City Facilities



In 2010, McKinney developed an Energy Efficiency and Conservation Strategy (EECS) that outlines City initiatives to improve energy conservation and efficiency associated with City facilities, including operations and maintenance. The EECS established baselines for energy and water consumption, greenhouse gas emissions, and fuel consumption for municipal fleet vehicles. Additionally, the EECS identified eight projects for short-term implementation, leveraging the U.S. Department of Energy urban area allocation reserved for McKinney. The projects include:

- Developing a Sustainability Plan
- Installing a remote energy monitoring system for municipal buildings
- Developing a high-visibility renewable energy demonstration project
- Installing LED street lights
- Conducting an Urban Canopy Study
- Developing an On-Street Bicycle Master Plan
- Developing a water conservation education and marketing strategy
- Energy grant coordination

Chapter 13: Waste Management



As the population increases, so does waste generation. Managing residential waste represents one of the most basic services provided by municipalities. Best practices in waste management include innovative strategies designed to reduce waste, such as recycling and reuse.

Currently, the City's waste management services include solid waste collection and disposal, curbside recycling, and management of special wastes such as electronics and household hazardous materials. The City's waste management strategy also includes building strong partnerships with the business community. For example, IESI Waste Management constructed a state-of-the-art Materials Recovery Facility (MRF) in McKinney where recycled materials are sorted and shipped to recycling processors.

Chapter 10: Green Infrastructure



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Green Infrastructure Defined

Green infrastructure is a concept that originated in the U.S. in the mid-1990s. It refers to the interconnected network of open spaces and natural areas, such as greenways, wetlands, parks, forest preserves and native plant vegetation, that naturally manages storm water, reduces flooding risk, provides healthy and diverse habitat, and improves water and air quality. Using natural systems, or engineered systems that mimic natural systems, the intent is to restore the predevelopment natural hydrologic function of an area, provide natural air “filters,” and treat polluted runoff using natural filtration systems. The goal is to design a built environment that remains a functioning part of an ecosystem rather than existing apart from it. The environmental benefits include cleaner water, air and healthier soils, among others. Green infrastructure also typically costs less to install and maintain when compared to traditional forms of infrastructure, and these types of projects foster community cohesiveness by engaging all residents in the planning, planting and maintenance of the sites. (Please see the Littleton Paper contained in the Appendix)



The McKinney green infrastructure network has been delineated using GIS and remotely sensed land cover data. The layers used include existing and proposed parks and open space, the stream network, existing hike and bike trails, FEMA floodplain, 2010 National Agriculture Imagery Program aerial, landcover used in the urban canopy study, and the McKinney zoning map. Using this information, a ranking criterion (please see the Appendix for the preliminary ranking criterion) can be established to identify potential areas for future acquisition as well as currently public-held land that merits inclusion in the green infrastructure network. By applying these ranking criteria, better strategic and management decisions can be made related to future infrastructure plans and land use.

Why Support Green Infrastructure?



Goal

Incorporate and utilize McKinney's green infrastructure network in the decision-making process related to infrastructure and future land use – parks and open space, stormwater facilities, urban canopy, floodplain, urban heat island, and the trail systems throughout the city.



Economic

The City's existing green infrastructure network provides ecosystem services including flood protection, water pollution removal, carbon sequestration (improving air quality), reduced temperatures (microclimate regulation), pollination, food production, and provision of wildlife habitat. By utilizing existing natural systems where appropriate, the higher cost for traditional infrastructure can be avoided. Additionally, low-impact development strategies can be incorporated that simultaneously reduce infrastructure costs and soften the boundary between developed and natural land (please see the Appendix for the CNT calculator paper and methodology).



Community

Because connectivity between hubs, links, and sites is critical to a green infrastructure network, enhancing and protecting the network will automatically provide increased opportunities for McKinney's inhabitants to connect with one another through the natural environment.

By reconnecting the community with nature, green infrastructure also enhances a sense of place.



Environmental

Provide additional paths for residents and businesses to connect to one another and to nature, strengthening the initiatives to protect the community's natural resources that provide tangible benefits to both people and wildlife.

Current Initiatives (To 2015)



GIS green infrastructure development

This includes an inventory of the City's existing natural capital as well as a preliminary ranking criterion that can be used to determine strategic conservation areas and aid in future land acquisition decisions.

Tomorrow's Opportunities (2015-2020)

Internal city staff education

Educate city staff on the fundamental concepts of green infrastructure and how these concepts relate to operations – public works, emergency management, engineering, planning and zoning, etc.



Establish green infrastructure standards and regulations

Establish ordinance measures to permit dedication of conservation easements in lieu of other development related to mitigation measures. (This can be done in concert with urban canopy goals and protection of old growth stands (see Chapter 7, Urban Canopy).

Regional detention

Develop a regional detention approach to managing storm water runoff.

Future Possibilities (Beyond 2020)

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Regional partnering

Work with North Texas Council of Governments and Vision North Texas to maintain connection with the north Texas regional green infrastructure network and initiative.

Metrics to Measure Progress

Number of environmental mitigation measures implemented to minimize negative impacts on the local community.

Number of strategic management goals that promote and enhance the protection and the relative health of the City's overall green infrastructure network.

Annual ratio of acreage utilized or developed compared to conservation easement dedication.



Potential Funding Opportunities and/or Partnerships

North Central Texas Council of Governments

The Heard Natural Science Museum and Wildlife Sanctuary

Trust for Public Land and other similar conservation organizations



Resources Used

City of McKinney, 2009 Parks, Recreation and Open Space Master Plan

Brandyn Littleton Paper



Chapter 11: Transportation



Transportation Defined

Multi-modal transportation in its simplest form can be defined as a connected transportation system that supports automobiles, bicycles, pedestrians and public transit. Multi-modal transportation is one of the foundations of a sustainable urban economy. It can improve connectivity through the development of sidewalks, hike and bike trails, buses, and rail as well as through transit-oriented development (TOD). TOD is a mixed-use residential or commercial area designated to maximize access to public transport and is developed to encourage transit use. Complete streets, bicycling and alternative modes of public transportation are becoming an integral part of vibrant and sustainable urban developments.



Complete streets are roadways that are designed to enable safe, attractive, and comfortable access and travel for all users including pedestrians, bicyclists, motorists and public transit riders. They are designed according to certain key elements that make them accessible to all populations. Complete streets also include bicycle and mass transit accommodations that are made to encourage public transit ridership.

Transportation Defined *continued*

Bicycling is non-polluting, uses less space than automobiles, and is considerably quieter, which makes it one of the most environmentally efficient modes of transportation. Also economically efficient, costs associated with bicycling are only one-quarter as much as driving, resulting in an annual savings of about \$1,100 per motorist according to Transportation Alternatives, an advocacy organization committed to environmentally friendly transportation. Bike plans can provide safe and efficient routes that are easily accessible to the community as well as connect people to many destinations around town.

Fixed-route bus service, streetcars, light rail, rapid transit, and commuter rail are examples of alternative modes of public transportation that can be found in select urban environments, including North Texas. Today, the Collin County Area Regional Transit system provides limited fixed-route and an on-demand bus service to residents of the McKinney Urbanized Area (MUA). The MUA is a federal designation that allows McKinney to access funding for transit service operations. Once McKinney surpasses a population threshold of 200,000, the urbanized designation will change as will funding options for local transit services.

In order to plan for future growth and related funding impacts for public transportation, the McKinney City Council recently endorsed a regional agency effort that included collaboration of TxDOT, NCTCOG, Federal Transit Administration (FTA), and CCART to designate a transportation management authority (TMA) charged with guiding the area’s public transportation system in the future. The TMA will assess the effectiveness of the current transportation routes, collect data related to ridership, and assess CCART’s institutional capacity to administer transportation services now and in the future.

The City of McKinney Planning Department highlights the importance of including rail as a future transportation option:

“...with a population that is expected to exceed 8.5 million by 2030, the need for a reliable transportation system in North Central Texas is particularly important. The proven ability of rail service to improve mobility will play a crucial role in meeting those future transportation needs. The effort to expand passenger rail to North Texas has been a multi-year endeavor...”

Rail transit options require significant capital investments. Not only do infrastructure and corresponding population densities need to be assessed, but the ridership levels must be sufficient to warrant the investment in the first place. The City of McKinney Planning Department recently conducted a commuter survey to gauge the interest of McKinney residents for a special service to provide access via public transit to rail stations in nearby communities. Over 700 residents responded in a six-week period. During the development of this plan, the McKinney City Council directed city administrators to contract with the Texoma Area Paratransit Services to provide McKinney residents with transportation to a Dallas Area Rapid Transit light rail station in Plano.

Why is Transportation an Issue?



Goal

Provide diverse transportation options that are safe, efficient and cost-effective, as well as develop commute solutions that will reduce traffic congestion, lower costs associated with roadway development and maintenance, and improve air quality.

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Economic

TODs can increase property values and thus increase the tax base
Increased transit ridership can defray operating costs
Multi-modal transportation investments can reduce costs associated with thoroughfare construction and maintenance



Community

Encourages active lifestyles by providing biking and walking options
Affordable and accessible transportation options for all community members
Improved public health from reduced greenhouse gas emissions
Creates a “sense of place” in the community
Encourages social interaction
Pedestrian-friendly communities improve safety



Environmental

Pedestrian friendly communities reduce greenhouse gas emissions and improve air quality
Transit-oriented development protects and preserves open spaces
Reduces dependence on energy
Reduces noise pollution

Current Initiatives (To 2015)



On-Street Bicycle Master Plan

Complete the City of McKinney On-Street Bicycle Master Plan as a part of the EECS and provide a blueprint to enhance connectivity and encourage healthy active lifestyles in the community.

Establish an ongoing bicycle coordinating/advisory group of staff and citizens to provide coordination, guidance and feedback on cycling issues and Master Plan implementation.

Modify City plans and codes, as appropriate, to incorporate specific recommendations from the Master Plan, such as thoroughfare plan cross-sections, bicycle parking requirements, maintenance, and other bicycle-friendly policies.

Establish a bicycle education/encouragement program in coordination with various City agencies, independent School Districts and other local organizations, and sponsor at least one cycling safety/education activity per year, such as Bike to Work Week, Bicycle Safety Rodeos, Smart Cycling, or Cycling Savvy.

Develop an outreach and awareness strategy about the Bicycle Master Plan and cycling, including enhancing the City website with information about the Bicycle Master Plan and other cycling resources.

Implement specific bicycle facility projects identified in the Master Plan, as part of ongoing projects and/or as additional funding become available.

Identify and/or conduct training on bicycle planning, multi-modal transportation/land use for City staff and other professionals working in the City.

Evaluate currently funded projects in the work programs of the City and other agencies (e.g., TxDOT and Collin County) for applicability of incorporating bicycle facilities, treatments, and other related items.

Current Initiatives (To 2015) *continued*

Complete Streets

Increase awareness and knowledge of local City technical staff regarding best practices for Complete Streets design and techniques. Incorporate Complete Streets concepts into City development patterns where feasible to improve accessibility and make McKinney neighborhoods more walkable and sustainable.



Multi-modal Transportation

Continue to utilize the City's travel demand management program and expand initiatives to include telecommuting, flex-scheduling, and ride-sharing programs for City employees to reduce fuel consumption and improve air quality. Define scope for the Job Access and Reverse Commute Pilot Program to provide new commuting options for McKinney residents.

Continue implementation of the Job Access and Reverse Commute Grant, Traffic Management Center, and intelligent transportation systems to improve thoroughfares in McKinney and improve regional air quality.

Promote strategic enhancement to the multi-modal transportation network including connecting hike and bike trails with on-street bikeways, and land development patterns that support Transit Oriented Design (TOD) that will enhance neighborhood development and stimulate the City's economic development.

Continue implementation of the Traffic Management Center and intelligent transportation systems to improve thoroughfare travel in McKinney and improve regional air quality. Other ongoing thoroughfare-related initiatives include the Sustainable Development Grant for the State Highway 5 corridor planning study, Capital Improvement Program (CIP), 2010 Municipal Bond Projects, and the McKinney Rail Corridor Study.



Travel Demand Management

The Travel Demand Management program markets alternative forms of transportation to DFW communities. The City is discussing the feasibility of several mass transit options to better serve the community.

Tomorrow's Opportunities (2015-2020)

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Continued implementation of the City's On-Street Bicycle Master Plan

Establish a system to incorporate bicycle facilities and treatments into City capital projects, such as parks and roadway maintenance/construction, and the site plan/development review process.

Identify a consistent wayfinding signage and marking system to brand the City's bicycle network.

Tomorrow's Opportunities (2015-2020) *continued*

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Increase multi-modal transit options

Evaluate the feasibility of implementing multi-modal transportation choices such as buses and light rail to provide residents with affordable and accessible public transit options.



Implement a commute solutions program

Develop a community commute solutions program that offers incentives to businesses that develop ride-sharing programs for their employees to reduce fuel consumption and improve air quality in the DFW region.



Implement beautification initiatives along major highways

Work with regional transportation agencies to implement beautification initiatives along US 75 and other major roadways. Beautification can increase the aesthetic appeal of McKinney and make it a more desirable community for permanent residence. Develop city gateway project initiatives for major entry points into the City.

Improve walkability within the McKinney community

Improve walkability between neighborhoods by completing gaps in the sidewalk/trails network to promote healthy, active lifestyles and reduce fuel consumption.



Future Possibilities (Beyond 2020)



Review and update the City's On-Street Bicycle Master Plan to support economic development and population in McKinney

Consider long-term changes to future land use within the City's ETJ to encourage more urban form that supports multi-modal transportation and accessibility.



Establish a specific Bicycle (and Pedestrian) Coordinator position as a City staff to ensure long-term implementation and coordination of the Master Plan.

Update the Bicycle Master Plan to address changes in the community and the region and reflect new advancements/knowledge in multimodal planning and bicycle transportation.

Coordinate policies and programs with those of NCTCOG, examine achievement of objectives as part of the Long Range Transportation Plan update process.

Examine bicycle crash statistics (types and locations) to determine possible interventions and plans to reduce crashes.

Develop and implement policies that support multi-modal transportation

Develop and implement a Mass Transit Policy that addresses rail, bicycle rental options, timeshare car programs (i.e. Zip Car). Adopt policies that promote land development patterns that support Transit Oriented Design (TOD) to enhance neighborhood development and stimulate the City's economic development.



Transit-oriented development

Implement transit-oriented development patterns to encourage populations that will support public transit opportunities, stimulate the local economy, and reduce greenhouse gas emissions to improve the region's air quality.

Continue to develop transportation options that connect east and west McKinney

Enhance limited bus service which partially connects the two areas.

Develop rail transit, such as a trolley system, that will connect east and west McKinney that will create a greater sense of community and improve connectivity.



Metrics to Measure Progress

- Dollar amount leveraged from diverse funding sources.
- Number of adopted city policies and development standards.
- Number of miles of new hike and bike trails constructed.
- Number of individuals participating in commute solutions programs.
- Number of programs developed and implemented promoting multi-modal transportation options in McKinney.



Potential Funding Opportunities and/or Partnerships

- North Central Texas Council of Governments
- Texas Department of Transportation
- McKinney Economic Development Corporation
- Dallas Area Rapid Transit (DART)
- U.S. Department of Transportation
- U.S. Department of Housing and Urban Development
- Transportation Investment Generating Economic Recovery (TIGER) Grant



Resources Used

- City of McKinney, Comprehensive Plan
- Transportation Alternatives
- Rail Transit in America: A Comprehensive Evaluation of Benefits, Victoria Transport Policy Institute
- Bike Texas: www.biketexas.org



Resources Used *continued*

BikeDFW: www.bikedfw.org

Safe Routes Texas: www.saferoutestx.org

National Center for Bicycling & Walking: www.bikewalk.org

Federal Highway Administration Bicycle & Pedestrian Program: www.fhwa.dot.gov/environment/bikeped/

National Center for Safe Routes to School: www.saferoutesinfo.org

National Complete Streets Coalition: www.completestreets.org

Association of Pedestrian and Bicycle Professionals: www.apbp.org

United States Department of Transportation - Federal Transit Administration

Additional Bicycle Planning/Guidance Resources

League of American Bicyclists: www.bikeleague.org

Cycling Savvy: www.cyclingsavvy.org

Rails to Trails Conservancy: www.railstotrails.org

BicyclingInfo.org/Pedestrian and Bicycle Information Center: www.bicyclinginfo.org

Bicycling Street Smarts handbook: www.bikexpert.com/streetsmarts/

NACTO Urban Bikeway Design Guide: www.nacto.org/cities-for-cycling/design-guide/

Chapter 12: City Facilities



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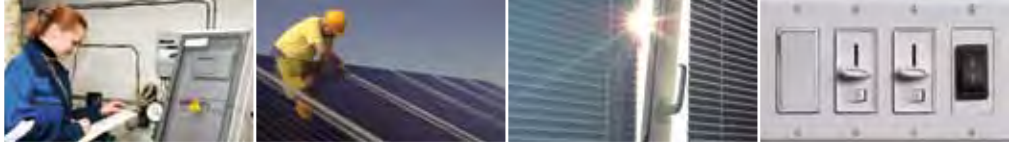
City Facilities Defined

Buildings use large amounts of energy for heating, cooling, lighting and operational functions. Building design, construction, materials and operations consume more energy than any other single facet of the economy. Through facility retrofits, efficient design, and education/outreach, building energy costs can be reduced, which in turn reduces their environmental impact. Energy saving retrofits can include upgrades such as: lighting, HVAC and plumbing systems, building automation systems, and water conservation measures. In addition, building occupants and managers involved in making maintenance and procurement decisions consider best practices that incorporate a solid understanding of the benefits of efficient energy management systems for buildings.



Behavioral habits of employees significantly impact energy consumption. Behavioral change comes from effective training, and education and outreach measures that help employees better understand how they as employees impact the building office environment. Education efforts can increase the awareness of employees regarding best practices of energy efficiency and related benefits.

Why Focus on City Facilities?



Goal

Develop a comprehensive strategy to ensure that City facilities operate at optimal efficiency to reduce energy and water consumption which in turn conserves resources.

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Economic

Energy-efficient City facilities reduce costs associated with energy and water usage.

Sustainable building design and construction can reduce operational and maintenance costs.

A healthier indoor environment increases employee productivity and satisfaction.

Effective energy management can improve the bottom line of building maintenance costs.



Community

Green building materials contribute to a healthier indoor environment for tenants.

A healthy natural environment contributes to the aesthetic appeal of McKinney.

Sustainable building educational programs teach employees about best practices that can also be used at home to reduce their environmental footprint.



Environmental

Recycling and reuse reduce waste generation.

Adopting efficient equipment and employee best practices can reduce energy demands.

A reduction in non-renewable energy sources (e.g. coal plants) improves air quality.

Sustainable building design, construction, maintenance, operations and demolition can conserve natural resources.

Current Initiatives (To 2015)



Energy Efficiency and Conservation Strategy

The City has conducted energy audits for its facilities as well as implemented building and infrastructure improvements such as installing lighting/control system retrofits and energy-efficient window, roofing, and insulation improvements. The Energy Efficiency and Conservation Strategy details the City's baseline metrics and identifies future City retrofits.

City building retrofits

Continue conducting City energy efficiency retrofits such as lighting (facility, traffic and street), HVAC, plumbing, energy and water conservation measures at City facilities.



Recycling

Recycling is conducted at all City facilities in order to reduce waste and conserve resources.

Water Conservation

The City is developing water conservation education/outreach strategies. These strategies include: increasing community awareness regarding the relationship between water use and energy. Strategies will also include tips on reducing water usage.



Current Initiatives (To 2015) *continued*

Monitor energy consumption

Monitor and analyze energy consumption at 14 facilities using data from the PowerLogic® ION Enterprise software.



Implement HVAC equipment replacements and controls

Add standardized HVAC controls to facilities not currently equipped.

Replace existing non-standardized HVAC controls with new standardized Tracer Summit controls.

Replace old inefficient HVAC equipment with new high-efficiency equipment.

Implement hourly temperature monitoring and adjustments using the remote HVAC control system.

Add and update attic ventilation systems in selected facilities.

Continue monthly HVAC periodic maintenance.

Implement lighting retrofits, replacements, and control upgrades

Replace exterior high-intensity discharge (HID) lighting with light-emitting diode (LED) or fluorescent lighting.

Replace interior HID lighting with LED or fluorescent lighting.

Replace interior compact fluorescent lighting (CFL) lights with LED lights.

Replace exterior incandescent lighting with LED lighting.

Replace interior incandescent lighting with LED lighting.

Add or replace timers with astronomic timers for exterior lighting.

Add interior lighting controls in selected areas and facilities.



Current Initiatives (To 2015) *continued*

Sustainable best practices education and outreach campaign

Address resource efficiency across City departments by developing an education and outreach campaign that teaches employees about sustainable best practices in order to increase worker productivity and save the City money by conserving resources.



Green equipment at City facilities

Evaluate feasibility of purchasing green building equipment to help reduce energy use and associated costs in City facilities

City policies and ordinances

Develop City policies and ordinances with incentives and energy performance targets to foster upgrades of existing buildings.

Tomorrow's Opportunities (2015-2020)

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Reduce energy use at water/wastewater facilities

Identify cost effective measures at water/wastewater facilities to reduce energy use and greenhouse gas emissions.



Increase waste diversion rates

Evaluate waste streams and identify opportunities to divert waste from the landfill to be reused as raw materials in new products.

Institute park fees to shift sports, games and other events to daytime

By shifting play to daytime, the City will reduce their energy needs and save money. Offer the daytime use at a discounted price as an incentive for park users.



Review City building codes

Review building codes and ordinances, as necessary, for future

construction and building retrofits that can benefit the City and

community financially, conserve natural resources and enhance

the McKinney community.

Future Possibilities (Beyond 2020)

LEED City facilities

Design all new City facilities to LEED Silver standards that improve building efficiency, create a healthier work environment for City employees and reduce operational and maintenance costs of the building. In addition, develop a schedule for annual building retrofits of existing City facilities to improve their efficiency as well.



Metrics to Measure Progress

Percent annual change in direct energy consumption by primary energy source.

Total water consumption by source.

Percent annual change in tons of waste by type and disposal method.

Number of building upgrades that incorporate energy-efficient retrofits.

Cost savings from reduced energy use.



Potential Funding Opportunities and/or Partnerships

ONCOR

Energy Texas

NTMWD

Non-profit organizations

Texas State Energy Conservation Office (SECO)

U.S. Department of Energy (DOE)



Resources Used

City of Columbus, Get Green Columbus Annual Report, 2010

City of San Antonio, Mission Verde, 2009

City of Vancouver-City Facilities

Quantifying the Business Benefits of Sustainable Buildings, Alan Yates, Centre for Sustainable Construction, BRE, 2001



Chapter 13: Waste Management



Waste Management Defined

Waste management involves the collection, transport, processing and recycling or disposal of waste materials. Almost every activity produces some type of waste. This includes non-hazardous wastes such as food, yard, and packaging from our homes, electronics, medical, and solid and hazardous waste from industrial and manufacturing operations. All waste is regulated by the U.S. EPA under the Resource Conservation and Recovery Act (RCRA).

Waste diversion is an important aspect of waste management in that it is a collaborative effort by residents and businesses in the community to divert waste from a conventional disposal option such as a landfill. Reduce, reuse and recycle, also known as the three R's of waste management, can reduce the amount of waste for disposal, reduce the amount of space required for landfills, save energy and preserve open spaces. Additionally, resource recovery is an activity that involves the collection and separation of certain recyclable materials for processing into new "raw" materials that can be used in the manufacturing of new products.



Why the Emphasis on Managing Waste?



Goal

Provide efficient, innovative waste collection, disposal and recycling services, and increase waste diversion rates through recycling, the reuse of materials, and a reduction in product consumption.



Economic

Recycling and reusing materials to develop new products can contribute to job creation, provide business opportunities, and generate taxable economic activity.

Effective waste management can reduce costs associated with traditional waste disposal.

Recycling can reduce costs that result from hauling waste to distant landfills.

Waste-to-energy generates electricity that can be used internally or sold on the market.



Community

Waste management education and outreach contributes to clean, healthy communities.

Proper hazardous and non-hazardous waste disposal can protect human health.



Environmental

Increased recycling avoids the need for landfills and preserves natural resources.

Recycling saves energy produced from waste disposal.

Recycling leads to greater waste diversion rates.

Recycling improves air quality and reduces water pollution.

Current Initiatives (To 2015)



City facility recycling initiatives

The City has implemented recycling at all municipal facilities and will continue recycling efforts in order to increase diversion rates and reduce costs associated with waste disposal.

Residential waste services

The City provides municipal waste management for residents including solid waste collection and disposal, curbside collection of common recyclable materials and collection of yard waste. In addition, the City provides on-demand residential household hazardous waste collection as well as electronic waste collection.

NTMWD has partnered with the City to develop a composting initiative to further increase community recycling. Known as Texas Pure, the facility is located at the Custer Road Transfer Station at TX Hwy 121.

The City also offers seasonal Christmas tree and additional decorative plant recycling to be used for composting.



Community education and outreach

The City participates with state and regional initiatives that promote community clean up events such as Texas Trash Off and Trinity Trash Bash.

Partner with IESI to offer contests to improve recycling.

Current Initiatives (To 2015) *continued*

Construction and demolition recycling

Construction and demolition recycling efforts are encouraged by the City to reduce waste disposal costs and conserve resources.

Business and commercial recycling

Encourage businesses to increase recycling rates by reducing franchising fees via the City's IESI contract.

Public recycling initiatives

Institute permanent recycling collection at all City parks and recreational facilities to divert the amount of waste going to the landfill.



Implement a green procurement policy

Consider implementing a green purchasing policy to reduce City product consumption that will reduce costs and conserve resources

Tomorrow's Opportunities (2015-2020)

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Develop a multi-family recycling program

Develop and implement a citywide comprehensive multi-family recycling program targeting apartment complexes and other multi-family housing units and ordinance to increase residential waste diversion rates.

Implement recycling initiatives in the McKinney community

Create incentives to increase residential and commercial recycling, such as pay-as-you-throw, that will reduce waste and teach residents about proper disposal and recycling techniques.

Promote, monitor and track recycling efforts at large public events in McKinney and announce results in local media.

Develop a program to store cardboard moving boxes for reuse by residents

Continue efforts for the City to go paperless

Seek support from local grocery stores to provide incentives for customers to bring their own grocery bags.



Tomorrow's Opportunities (2015-2020) *continued*



Develop a waste management education and outreach campaign

Develop education and outreach materials for solid waste collection and disposal, electronic and household hazardous waste collection and recycling, single-stream recycling, and composting.

Host outreach events, such as Litter-less Lunches, to promote recycling and reduce community waste.

Develop partnerships to implement waste management initiatives

Foster collaboration between the City of McKinney and McKinney Independent School District to inform faculty, students and their parents about the economic and environmental benefits of recycling. Work with a non-profit to develop and implement a commercial and residential organics (food scraps) diversion and composting program.

Contractor recycling

Educate and incentivize landscape and construction contractors to implement best-practices for recycling/composting yard waste at worksites to reduce green waste.



Future Possibilities (Beyond 2020)

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Emerging waste management technologies

Research and identify emerging waste management technologies and evaluate feasibility of installation at City facilities.

Metrics to Measure Progress

Percent annual change in tons of waste by type and disposal method.

Number of tons of waste diverted from the landfill (recycling rate).

Number of new recycling initiatives programs.

Number of tons of waste diverted from local businesses recycling initiatives.



Potential Funding Opportunities and/or Partnerships

North Central Texas Council of Governments

NTMWD

IESI

U.S. EPA

Charitable Organizations

Non-profits

MISD



Resources Used

The City of McKinney, Environmental Services Website

City of Plano, Sustainable Environmental Services Website

NTMWD Website

U.S. EPA-Waste

CalRecycle - Department of Resources, Recycling and Recovery in the State of California



Section 4: Community Culture



The foundation for a truly sustainable community lies in the strength of the relationships between neighbor and neighbor, patron and business, and people and their government. McKinney is dedicated to supporting these relationships by respecting the City's unique culture. The City recognizes how important it is to instill a strong sense of community by offering a variety of services to its residents, maintaining and celebrating the original charm of McKinney, promoting healthy lifestyles, hosting events that promote diversity, and educating the public on what it takes to be a sustainable community. The City also places an emphasis on its public art and cultural offerings by hosting numerous events that involve local galleries, local music venues, and the McKinney Performing Arts Center (MPAC). These include summer musicals, music programs for children and teens, the Second Saturdays Art Walk, Jammin' in June, Battle of the Bands, Cinco de Mayo, and Juneteenth, among others. The City works closely with the McKinney Arts Commission to expand and enhance the arts and cultural offerings based on changing community needs.

Chapter 14: Historic Preservation



Since the 1980s, McKinney has made historic preservation a priority in order to maintain its original charm and create a sense of place for its residents. In fact, McKinney employs a full-time Historic Preservation Officer to preserve the City's history and ensure that it remains a significant part of the City's identity. Just a few of the many places of recognized historical significance in McKinney include the Historic Collin County Courthouse, the Burton House & Medical Clinic, Chestnut Square Historic Village, and the Crouch House. The unique character and history of these buildings, along with many others, create an attraction for McKinney that is unlike its neighboring cities. The identity of McKinney is fundamentally dependent on the presence of these historical buildings.



Chapter 15: Community Services

McKinney is proactively promoting policies that contribute to livability and enhanced economic competitiveness, including:

- Supporting reliable access to employment centers
- Expanding business access to markets
- Providing educational opportunities
- Ensuring the availability of affordable housing
- Maintaining neighborhood services and other basic needs



Chapter 16: Main Street and Community Events

McKinney currently hosts a number of popular annual events, such as: Oktoberfest, Scare on the Square, Dickens of a Christmas, Annual Krewe of Barkus, Art Walk, Bike the Bricks and monthly events such Second Saturdays where the community can enjoy art, music, food and more in Downtown McKinney.

The Parks, Recreation and Open Space (PROS) Department is dedicated to creating a sense of community by offering memorable events where the residents can come together and participate in unique social and fitness opportunities.



Chapter 17: Healthy and Active Lifestyles

An active lifestyle and an engaged community atmosphere are evident through the City's many popular recreational and special events, such as:

- Park trails, neighborhood pools and community dance classes
- PROS athletic camps for youth
- Casual Country and Western Dance hosted at the senior center
- Facilities such as Old Settler's and the McKinney Community Center
- Special classes and events for all ages to promote healthy, well-balanced lifestyles

Chapter 18: Farmers Market/Community Gardens



The McKinney Farmers Markets at Chestnut Square and Adriatica in West McKinney offers a variety of local and organic meats, dairy and produce. Community gardens and Farmers Markets are viable options for supporting the local economy, promoting healthy eating and community spirit, and encouraging participation in environmental stewardship.

Chapter 19: Disaster Management



The McKinney Office of Emergency Management (OEM) seeks to address sustainability through an integrated approach that explores multiple types of disasters, vulnerability and social systems and provides potential solutions towards building a more resilient community. OEM is dedicated to its mission and vision of promoting a less vulnerable and more capable city through the use of effective outdoor warning systems and NOAA radio, as well as educating the public on emergency response preparedness through programs such as KnowWhat2Do.

Chapter 14: Historic Preservation



DRAFT REPORT

Historic Preservation Defined

Historic preservation is a broad-based, popular movement that seeks to preserve and protect structures that are of historic significance.

In addition to the vast economic benefits, preserving such structures provides a tangible sense of permanence and community and also gives residents a chance to experience the City's heritage in a direct and meaningful way.

Historic preservation also adds variety and texture to the cultural landscape, enhancing the overall quality of life. These very personal responses have driven the historic preservation movement from the bottom up, making it a true grassroots movement, rather than just another government program.



Why Be Concerned With Historic Preservation?



Goal

Encourage efforts to preserve historical structures in order to maintain McKinney's unique character and heritage.



Economic

Job creation occurs as a result of construction, rehabilitation and maintenance activity.

Preservation often calls for the purchase and use of local native building materials to restore the structures to their original condition.

Historic downtown areas that are preserved experience a revitalization that attracts locals as well as heritage tourists.

Property values are increased, as properties within historic districts appreciate at rates greater than the local market overall.

Many economic incentives are available to help homeowners afford repairs that will not affect the historic integrity of structures.



Community

Adequate and affordable housing can be offered through the reuse and retrofits of existing historic buildings.

Historic areas and buildings provide a physical connection to the past, including architectural, artistic, functional and cultural ties that further enhance cultural sustainability.

People of different races, ethnicities, and social classes reside in historic neighborhoods, making diversity a prominent characteristic of these districts.



Environmental

Reduction in waste generation occurs as a result of the demolition and construction of new buildings.

Historic Preservation is the epitome of reuse, as buildings are repurposed rather than torn down.

Historic buildings are typically located within historic districts, which are pedestrian-scale in nature. These settings make it much more appealing to explore these areas on foot rather than by vehicle, reducing emissions.

Current Initiatives (To 2015)

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Town Center Study Initiative - Phase II

Complete the Town Center Study Initiative - Phase II to identify and prioritize additional historic preservation opportunities in order to further facilitate access and public enjoyment of the Downtown Historic District. (please refer to Chapter 2 - Land Use Patterns for more detail on this Study)

Historic building reuse

Reuse historic buildings to reduce waste and costs associated with demolition and construction, lessen unnecessary demand for energy and conserve embodied energy.

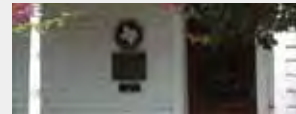


Historic neighborhood programs

The City has adopted a Historic Neighborhood Improvement Zone (HNIZ) ordinance for the purpose of preserving the City's unique and historic neighborhoods while encouraging property owners to maintain and/or rehabilitate their residence. A HNIZ program is created when owners in a defined geographic HNIZ may receive ad valorem tax exemptions based on verified investment meeting specific criteria. The City also has a Neighborhood Empowerment Zone, a Historic Home Recognition Program, and historic preservation regulations within the zoning program in order to help preserve the City's historic neighborhoods.

Historic building marker program

The City of McKinney has developed a Historic Building Marker Application that is to be completed by the owner and submitted to the City. Once the application is approved, the Historic Preservation Advisory Board requests that all plaques be mounted on the front façade of the approved building within 30 days of receipt.



Community outreach and education

The City can develop a program to capture and preserve the oral histories of long-time McKinney families.

The City can also identify churches and church leaders willing to serve at a Mayor's roundtable with the goal of identifying ways to bring different neighborhoods within the community closer together.

A Sustainability Ambassador/Volunteer Program can be developed to promote initiatives amongst residents and businesses.

Historic district preservation

Consider the preservation of historic districts when developing land-use plans in McKinney.

Tomorrow's Opportunities (2015-2020)



Educational materials

Expand materials related to historic preservation for McKinney schools and community members.

Community outreach and education

Expand historic preservation outreach and educational events for the community and host them in the Historic Town Center.



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Future Possibilities (Beyond 2020)



Historic community reinvestment

Reinvest in older and historic neighborhoods that contribute to the economic and social development of McKinney.

Historic building rehabilitation

Retrofit McKinney's existing building stock to reduce their environmental footprint, reduce energy costs, and preserve their historic integrity.



Revolving loan fund

Develop a historic preservation revolving loan fund to provide low interest loans to property owners at various income levels in the Historic Town Center.

Metrics to Measure Progress

Number of historic buildings preserved annually in McKinney.

Dollars leveraged by the City for historic preservation initiatives.

Cost savings realized by reinvesting in existing structures and avoiding the demolition and construction costs of rebuilding.

Number of annual retrofits of historic buildings.



Potential Funding Opportunities and/or Partnerships

Texas Historical Commission

Economic Development Administration

National Trust for Historic Preservation

Department of Housing and Urban Development

McKinney Economic Development Corporation

McKinney Community Development Corporation



Resources Used

City of McKinney, Historic Preservation

City of McKinney, Town Center Study Initiative

“Sustainability and Historic Preservation”
by Donovan Rypkema



Chapter 15: Community Services



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Community Services Defined

As McKinney resident and author Carolyn Corbin explains in her book, a community is formed anytime a group of people simply “do life together.” In the more traditional sense, residents of a particular geographic location belong to a local community, typically supported by a government that provides opportunities for economic growth, resources to promote public health and safety, and overall enhanced quality of life. This enhancement in quality of life can be brought about in any number of ways, but from a community-wide standpoint, the availability of community services that collectively lead to improvements in a variety of areas are a critical component. These services, typically provided by local, state and federal governments often in partnership with community-based groups, should ideally address the needs of community members regardless of income level, age or ethnic heritage.



Why Ensure that Community Services are Available?



Goal

Invest in healthy, safe, livable neighborhoods in order to enhance the quality of life for the McKinney community.

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Successful community development has a direct effect on the vitality of the local economy. Therefore, well-planned and implemented programs that provide health, housing and social services can achieve the following benefits:



Economic

- Increased property values and a subsequent increased tax base
- A community that is more attractive to potential residents and businesses
- Access to employment centers



Community

- Bring people together into a more involved community
- Promote diversity, tolerance and a more welcoming community
- Provide educational opportunities



Environmental

- Identify and remediate environmental hazards
- Bring attention to environmental issues

Current Initiatives (To 2015)



Partnership with the U.S. Department of Housing and Urban Development (HUD), the Texas Department of Housing and Community Affairs (TDHCA) and the local Affordable Housing Partners Program

McKinney obtains funding from HUD, TDHCA and other community development resources to facilitate affordable housing options, encourage neighborhood revitalization projects, and support other public work projects.

The Affordable Housing Partners Program consists of local entities including builders, banks, non-profits, mortgage lenders, title companies, insurance agencies and realtors that work together with the City of McKinney to provide safe and affordable housing.



Educational programs

Such programs provide information on a wide variety of topics from home buyer workshops to public health concerns for residents and businesses. Examples include information on safety, health, best environmental practices, and funding sources for homeowners and businesses. In this way, the Community Services Department serves as an information clearinghouse for the public.



Programs that have been particularly successful are P.R.I.D.E. (Promoting Resident Involvement, Development and Enthusiasm), and coordinating with homeowners associations by City departments on relevant items of interest.

The City should continue to develop an active and engaging environment with internal and external partners to modify and expand community development priorities and funding opportunities.



Housing Rehabilitation Program

Funded through HUD and managed by the City of McKinney, this program is an example of a proactive effort to remove hazardous living conditions for residents and assist community members in bringing dwellings up to a safe, acceptable standard.

Current Initiatives (To 2015) *continued*

Neighborhood revitalization and public services programs

The development of additional programs aimed at boosting community pride, leads to an increase in the property values in McKinney and a greater sense of community pride (such as the Home Investment Program).

The City-wide public service programs, leveraged through community-based organizations (CBOs), have impacts in areas not limited to health, crime prevention, education, child care, senior services, and employment services.



National Night Out

The McKinney Police Department hosts the annual National Night Out, which is an enjoyable way to increase neighborhood spirit, improve police-community partnerships and keep the city safer.

Tomorrow's Opportunities (2015-2020)

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Expand awareness of city services to inspect low to moderate income housing structures for environmental hazards

Continue and expand awareness of inspections of low to moderate income (LMI) housing structures to identify the presence of toxic substances such as lead-based paint. Identifying and remediate these problem areas to achieve environmental and health benefits without placing an additional economic burden on LMI residents.

Provide publicly available Wi-Fi

Provide public Wi-Fi spots in high-activity areas in downtown McKinney. The American public has increasingly come to expect the availability of these hot spots in progressive communities, and its presence can boost economic activity by attracting consumers to the area and giving them reason to stay.



Create volunteer opportunities to implement neighborhood initiatives

Develop a high-impact service plan of community investment in older neighborhoods and coordinate efforts with residents, organizations and businesses. Priority need areas will be taken from the upcoming Cities of Services initiative.

Develop programs based on the health needs assessment completed by area hospitals

Since prevention of health problems and disease is much less expensive than treatment after-the-fact, this initiative can have far-reaching economic and quality of life benefits for the community.



Offer affordable housing tax credits

Offer low-income housing tax credits for historical homes, brownfields development, and/or affordable housing to McKinney residents.

Increase outreach and public education

An increase in the awareness of community services available through the City will lead to greater use of services, which in turn will create greater program impact.

Community safety awareness program

Developing a community safety awareness program will help unite residents of McKinney while building a stronger community and a more attractive place to live and conduct business.

Future Possibilities (Beyond 2020)



Housing energy audits

Encourage the appropriate utilities to provide energy audits and implementation guidelines for low-income and senior citizen housing. Offer rebates and tax credits to help implement recommendations.

Adopt portions of the International Building Code for housing inspection

Adopting portions of this code for the inspection of rental properties will create a better community environment.

Programs to promote disease prevention and management

Engage healthcare institutions and public health agencies in programs to promote lifestyle-related chronic disease prevention and management. Promoting positive lifestyle changes will have far-reaching community health and economic benefits.



Metrics to Measure Progress

Number of affordable housing tax credits distributed to residents.

Number of low-income housing energy audits performed by the City and/or other partners.



Potential Funding Opportunities and/or Partnerships

Faith-based groups (churches, synagogues, The Salvation Army)

Non-profit organizations (Habitat for Humanity, American Red Cross)

Civic groups (Volunteer McKinney, American Legion)

Educational institutions (Center for Parent Education, Collin County Community College)



Resources Used

City of McKinney, Community Services

City of McKinney, Housing and Community Development Consolidated Plan

Community Leadership 4.0: Impacting a World Gone Wiki by Carolyn Corbin

U.S. Department of Housing and Urban Development (HUD) and available grant programs (e.g. CDBG)



Chapter 16: Main Street and Community Events



Main Street and Community Events Defined

Main Street is a national program housed out of the National Trust for Historic Preservation. The national Main Street Center works with communities to revive their historic commercial areas. Main Street development has transformed the way communities address revitalization and management of their downtown areas and neighborhood commercial districts. Many communities across the nation are implementing Main Street programs or incorporating Main Street into economic development, historic preservation, city management and community planning programs. Main Streets are places where those in the community come together to live, work and play.

Like most communities, McKinney faces challenges related to real and perceived barriers between existing neighborhoods. Furthermore, U.S. Highway 75 is an undeniable physical challenge further dividing the City into east and west sectors. U.S. Highway 380 will potentially pose a similar barrier between the southwest and northwest quadrants once the City is built out. Given the repeated desire voiced by residents during the community meetings to re-connect with their neighbors across the City, this Sustainability Plan attempts to offer solutions to the obstacles that otherwise can confound these desired connections.

Resilient, strong communities often have a diverse community base that is connected across political, racial, economic, social and educational boundaries. Community events offer a variety of venues for residents and visitors to gather and share experiences in common areas of interest, helping them make these connections. These public events provide an opportunity to learn about a community's history and cultural influences, participate in recreational activities, enjoy art and music, and countless other offerings. Showing an appreciation of local arts and culture can improve residents' quality of life, complement community development, and enrich local amenities. Target audiences may vary based on the type of event, and may include youth, seniors, local business owners, entire neighborhoods, ethnic groups and many others. The key to public events is the inherent opportunity to enhance the quality of life of those that participate. In the process, community development is strengthened, local amenities are financially supported, and connections among community members occur. This not only helps retain existing residents, but also attracts new residents to the community.

Why are Main Street and Community Events Important to McKinney?



Goal

Promote diversity, enhance community pride and attract younger generations to McKinney by offering a wide variety of multicultural events and the continued development and implementation of the Main Street program.



Economic

Supporting and enhancing the local arts and culture can provide direct economic benefits by creating jobs, attracting real estate investments, generating tax revenues, and stimulating local economies through tourism and consumer purchases.

Improves economic management, encourages entrepreneurship and markets downtown as a fun place to be which can recruit new businesses and attract homeowners to McKinney.

Rehabilitation of downtown buildings increases property values and adds to the aesthetic value of the community.

Strengthens existing economic assets while diversifying the economic base by retaining and expanding existing businesses, converting unused or underutilized space and sharpening the competitiveness and merchandising skills of McKinney's business people.



Community

Opportunities exist to promote the diversity of the community by hosting multicultural events that explore cuisine, music and art.

Community events can offer educational opportunities to learn about a variety of topics. Workshops can be held at community centers on social issues that are important to residents, such as health or recreational activities.

Recreational, educational and cultural events can encourage healthy lifestyle choices and connect cultures by celebrating common interests within the community.



Environmental

Events can be environmentally focused, such as Texas Trash Off and Keep America Beautiful, and provide opportunities for the community to come together to improve the environment.

Recreational events, such as Bike the Bricks, encourage biking and can eliminate vehicle use during a specific timeframe, reducing air pollutants.

Current Initiatives (To 2015)



Expand current offerings

Expand existing cultural and recreational opportunities to educate the public and instill a sense of pride in the community. (Community and City)

Current offerings include:

- Second Saturdays
- Art Walk
- Eggstravaganza (Easter)
- Red, White and Boom (July 4th)
- Jammin' in June
- Oktoberfest
- Bike the Bricks
- Battle of the Bands
- Scare on the Square (Halloween)
- Cinco de Mayo
- Election Night on the Square
- Hawaiian Night
- Valentine Daddy-Daughter Dance
- Earth Day
- Juneteenth

Community clean-up

Develop a community clean-up campaign to inspire community action and instill pride. A clean, well-kept community has the potential to positively influence property values and attract homebuyers.



Educational seminars and workshops

Host educational seminars and workshops related to sustainability that help residents to save money and improve quality of life.

Current Initiatives (To 2015) *continued*

East-West Get-Together

The east side of McKinney contains the Historic Town Center and older neighborhoods while the west side is primarily comprised of newer subdivisions.

There are real and perceived socioeconomic and racial differences between the two regions and the accompanying stereotypes and fictions that have attached over time. At the public meetings, residents commented on their own misperceptions that the East side was dangerous or that the West side did not appreciate the history of the Town Center. These misperceptions were clearly based on false assumptions, but commonly shared nonetheless. In an effort to overcome these barriers and draw different neighborhoods closer together, residents suggested holding an event downtown (or even at Fauvion Middle School - an illustrative microcosm of the issue) focused on bringing the two communities together. The event could host local storytellers who relay the oral histories of long-time McKinney families. This could provide the backdrop for people from different neighborhoods to meet and get to know one another.



Tomorrow's Opportunities (2015-2020)

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Increase participation

Increase participation from residents at civic and public affairs to boost the local economy.

Host multicultural events

Host events that highlight diversity and explore multicultural differences of residents in McKinney. Host these events at different locations across the City to increase participation and promote community pride.



Provide options for young people

Evaluate the feasibility of constructing more youth-friendly hangouts such as water parks, skate parks and other venues that have the potential to generate local revenue.

Appeal to all age groups

Host more events that appeal to all age groups such as carnivals or music and art festivals that will stimulate economic development by attracting visitors from neighboring communities.



Unite the community

Evaluate and consider events that bridge the gap between east and west McKinney.

Future Possibilities (Beyond 2020)



Promote local offerings

Partner with Collin County College, MISD and churches to promote cultural arts, entertainment, and continuing education services offered by local institutions that will generate revenue for the local economy.

Increase offerings for teens and young adults

Produce additional events such as Battle of the Bands, Students Night Out, etc., to instill a sense of community pride and contribute to the local economy.



Metrics to Measure Progress

- Number of non-Main Street sponsored events.
- Number of people in attendance per event.
- Number of teen programs and events implemented.
- Number of arts/cultural events hosted by the City each year.
- Number of businesses relocating to the McKinney Historic Town Center.
- Number of Main Street sponsored events hosted per year.
- Number of participants attending Main Street events (by event).
- Percentage of younger populations relocating to McKinney after high school, community college, or university graduation.



Potential Funding Opportunities and/or Partnerships

- Local businesses (sponsorship opportunities)
- Healthcare organizations (events such as health screenings, a Heart Walk or 5k run)
- Non-profits (charitable events to raise funds and awareness)



Resources Used

- City of McKinney, Parks, Recreation and Open Space (PROS) Department
- City of McKinney, Arts Commission
- McKinney Main Street, <http://www.mckinneytexas.org/mainstreetdefault.aspx>
- Bike the Bricks, <http://www.bikethebricks.com/>



Chapter 17: Healthy and Active Lifestyles



DRAFT REPORT

Healthy and Active Lifestyles Defined

Research shows that a healthy and active lifestyle is key to a long, enjoyable life. In addition to physically feeling better, an active lifestyle contributes to fewer obesity-related diseases, improved heart health, better mental clarity, a stronger immune system, and increased self-confidence. Physicians recommend that the average adult engage in at least 30 minutes of physical activity every day to receive the benefits associated with an active lifestyle. This type of lifestyle is a personal choice, but providing opportunities to join neighbors in special events, walk and bike around town and visit local parks is better achieved by a partnership between the City of McKinney and the community as a whole.



Why are Healthy and Active Lifestyles Important?



Goal

Promote active lifestyles by increasing the availability of parks and trails and offering a variety of recreational and health-related educational opportunities.



Economic

According to the Texas Department of State Health Services, the State spent an estimated \$15.6 billion associated with overweight and obesity issues in 2010. This is an increasing concern for the State as well as for most Texas communities.

Residents who participate in daily physical activity reduce the economic strain on the community for the cost of health services.

Decreased health problems correlate to lower healthcare costs for families, employees and employers.

Increased worker productivity and reduced employee absenteeism can be linked to individuals who are fit and healthy.

A wide variety of parks and recreation services, along with walking and biking options, can motivate business relocation to a community. Many businesses want to locate in areas that provide opportunities for recreation and an active lifestyle for employees and their families.

Many homebuyers select their place of residence based on access to parks, open spaces, and other areas that provide recreational opportunities for their family.

A community that showcases its natural resources and parks attracts visitors who also spend money on related equipment, food, hotels and the like.



Community

Parks and recreational activities provide opportunities for residents to meet and build stronger community relationships.

Outdoor recreation provides affordable and accessible activities that can reduce the incidence of crime related to boredom.

Recreational activities boost self-esteem through the use of positive role models and offer problem-solving and creative thinking opportunities.



Environmental

Residents who invest time and money to protect, conserve and maintain the natural environment become invested in the physical attributes of their community, develop a greater understanding of environmental values, and nurture an increased social responsibility.

By promoting a green infrastructure approach to natural resource management, an environment can be created that connects communities to one another and to their natural surroundings.

Current Initiatives (To 2015)



Focus on facilities

Support the development, rehabilitation and maintenance of park and recreational facilities to encourage the types of physical activity recommended in the PROS Master Plan.

Implement Town Center Study Initiative

By utilizing form-based codes and encouraging a diverse residential and business fabric in the downtown area, citizens and visitors will discover a wider array of shopping and events in the Historic Town Center.



Physical fitness events and programs

Continue to host the health fair for employees and the Live Healthy Program, which improves employee efficiency and health and decreases the City's healthcare costs.

Continue to host health-related events for the public such as Bike the Bricks; youth sports programs; aquatic programs for all ages; golf and tennis tournaments; the Punt, Pass and Kick tournament; and other similar events. In conjunction with local healthcare providers, develop a public health fair in order to better inform the public on major health concerns such as heart disease and diabetes.

Bike trails and lanes

Finalize the On-Street Bicycle Master Plan (2011-2012) and implement targeted on-street improvements such as lanes, signage and maps.

Implement PROS CIP as it relates to the construction of the recreational hike and bike trail system.

Offer bike safety seminars for adults and children to encourage the use of both recreational trails and on-street bike lanes. (See Chapter 11: Transportation, for more information on the Bike Plan)



Tomorrow's Opportunities (2015-2020)



Expand popular programs

Expand recreational programs and activities that appeal to most McKinney residents to provide additional opportunities to enhance their quality of life. The new skate park and tennis complex (scheduled to open in 2011-2012) will offer new opportunities for additional programming.

Consider developing a canoe and kayak event for Wilson Creek.

Partner with the Heard Natural History Museum and Wildlife Sanctuary for community hikes and similar activities.

Health and wellness fairs

Host health and wellness fairs and expositions that are accessible to all McKinney residents and provide educational information for all age groups.



Partner with health clubs

Evaluate the feasibility and implement partnership opportunities between the City of McKinney and local health clubs for discounted services.

Implement Complete Streets

Implement Complete Streets (refer to Chapter 11 of this Plan) that enable safe and convenient travel for pedestrians and bicyclists.



Future Possibilities (Beyond 2020)



Promote safe and healthy transportation alternatives

Promote transportation options that add safety and aesthetic appeal for walking and biking such as targeting trails and sidewalks for shade tree plantings, adding LED lighting to walking paths, and identifying and making safety improvements to challenging multi-modal intersections.

Consider active design features

Consider active design to facilitate more day-to-day movement by employees, shoppers and residents in future new construction and building renovations. Providing opportunities through thoughtful architectural design, to walk or bike to run errands for example, increases the likelihood of physical activity.



Metrics to Measure Progress

- Number of new recreational programs implemented.
- Number of persons participating in new City recreational programs/events.
- Number of community health fairs held.
- Number of individuals attending community health fairs.
- Number of local partnerships developed with local healthcare and wellness organizations.



Potential Funding Opportunities and/or Partnerships

- Healthcare providers
- Local fitness clubs
- McKinney Velo
- Texas Active Living Network
- Texas Parks and Recreation Foundation



Resources Used

- City of McKinney, Parks, Recreation and Open Space
- City of McKinney Parks, Recreation and Open Space (PROS) Master Plan <http://www3.mckinneytexas.org/parks.aspx?id=13814>
- New York City, Active Design Guidelines: Promoting Physical Activity and Health in Design



Chapter 18: Farmers Markets and Community Gardens



DRAFT REPORT

Farmers Market and Community Gardens Defined

A community garden is any piece of land gardened by a group of people. The location and type of each garden is often unique, as they can be located in rural areas, along walking paths or even in schoolyards. Community gardens can be used to grow anything from flowers to produce and they serve as gathering places that, by design, strengthen community ties while working toward a common goal.

Farmers Markets are food venues where farmers and agriculturalists bring produce, meats, and locally-made products for direct sale to the public. Farmers Markets positively impact farmers, the local economy, consumers and the environment. The American Farmland Trust notes that “shopping at farmers markets is one of the best ways to support farms, farmers, and local economies.”

Local food initiatives have become increasingly important to community members due to concerns over rising food costs, increasing popularity of organic produce, and environmental concerns. During the 1930s, victory gardens, or war gardens, were a common sight in the U.S. as locally grown food was viewed as a public necessity to supplement the food supply. Today, there is renewed focus on the benefits and importance of buying and growing food locally.



Why Ensure the Availability of Farmers Markets and Community Gardens?



Goal

Promote The Historic McKinney Farmers Market at Chestnut Square and Adriatica as well as community gardens in order to generate community interest and involvement in locally grown, healthy food options.



Economic

The property value of residential properties within 1000 feet of a community garden significantly increases, especially in most disadvantaged neighborhoods (Been et al., 2006).

The U.S. Department of Agriculture (USDA) reports that 85% of farmers markets are economically self-sustaining.

Spending in Farmers Markets has a high multiplier effect on the local economy. Therefore, spending money at Farmers Markets can influence local economic development and help revitalize communities.

Businesses that choose to buy from local vendors can strengthen links between local businesses, contribute to job creation and offer local job security.



Community

Residents who participate in a community garden can subsidize the family food budget and gain access to otherwise costly organic and nutritious produce.

Farmers markets provide the consumer an opportunity to meet the grower, establishing relationships within the community and beyond. Studies showing that consumers talk longer with their neighbors at a farmers market (about 20 minutes) than at the supermarket (about 5 minutes) support the sense that markets and gardens provide venues for strengthening community relationships.

Community gardens provide a catalyst for neighborhood and community development by beautifying neighborhoods, creating recreational opportunities and helping to reduce crime.

Why Ensure the Availability of Farmers Markets and Community Gardens? *continued*

Community gardens provide opportunities for intergenerational and cross-cultural connections, as well as educational opportunities for children through partnerships with MISD.

Surplus produce can be donated to community service organizations and provide healthy, nutritious food to their clients. These efforts also create a connection between different socioeconomic classes within the same community.

Healthy, local food builds healthy communities.



Environmental

By using shared space, community gardens conserve resources and preserve green space, two critical goals necessary to protect McKinney's green infrastructure.

Through the use of shared space and taking advantage of numerous volunteers, community gardens gain a certain efficiency that is sometimes difficult to reach in individual, backyard gardens. Water conservation and irrigation practices, composting, and careful plant material choices also offer models that easily translate to practices at home and at work.

Because produce often travels hundreds and even thousands of miles from grower to consumer, carbon emissions can be reduced for produce that is grown locally. There is a direct tie between local food production, the reduction of fossil fuel energy use and greenhouse gas emissions, and cleaner air.

Farmers utilizing farmers markets do not have to follow the same supermarket packaging requirements, resulting in less food and packaging waste.

Current Initiatives (To 2015)



McKinney Farmer's Market at Chestnut Square and Adriatica

Continue to support and promote the use of McKinney Farmers Market at Chestnut Square and Adriatica to stimulate the local economy and reinforce local job and business networks.

Community Gardens Program

Continue to plan and implement a community gardens program by partnering with local organizations and stakeholders in order to promote locally-grown produce and stimulate social interaction.

Implement a model community garden using private and volunteer partnerships .



Tomorrow's Opportunities (2015-2020)



Education and outreach efforts

Promote local growers and the use of fresh, locally grown food by residents through education and outreach efforts. Work with the McKinney Farmers Market to host special events at Chestnut Square and the Community Garden to attract community members and expand awareness.

Expand community garden offerings and education

Consider implementing community gardens at different locations including schools, community centers and senior centers to provide recreational activities that can educate the public on gardening.



Future Possibilities (Beyond 2020)



Community garden partnership program

Develop a community garden partnership program for local non-profit and religious organizations who work with the City of McKinney to provide gardening opportunities for residents through charitable donations.

Metrics to Measure Progress

- Number of new community garden sites established.
- Number of persons engaged in community garden projects.
- Number of new farmers markets established.
- Number of visitors to farmers markets.
- Revenue generated from sales at farmers markets.



Potential Funding Opportunities and/or Partnerships

- Native Plant Society of Texas
- Native Prairies Association of Texas
- Texas Discovery Gardens
- National Gardening Association
- USDA - Natural Resources Conservation Service
- Texas A&M/Agri-Life
- Master Gardeners



Resources Used

- USDA, www.usda.gov
- Gardeners in Community Development
- Been, V. & Voicu, I. (2006). "The Effect of Community Gardens on Neighboring Property Values." Law & Economics Research Paper Series Working Paper No. 06-09. Retrieved July 15, 2011, from <http://tpl.org>
- Chestnut Square Historic Village Farmers Markets, http://www.chestnutsquare.org/programs/farmers_market.asp
- Adriatica, <http://www.adriaticamckinney.com/>



Chapter 19: Disaster Management



Disaster Management Defined

The majority of sustainability research relating to disaster management is primarily focused on natural disasters and based on specific hazards. Disaster Management should look holistically at the reduction of large-scale emergencies and disasters by acknowledging the interconnectivity amongst systems. Community preparedness for all disasters requires identifying the necessary resources in advance and planning for their utilization during a disaster. There are four phases of effective emergency management: mitigation, preparedness, response and recovery.

- Mitigation activities involve planning to prevent future emergencies or reduce their impacts within the community. Examples of mitigation initiatives include residents purchasing flood or fire insurance for their homes.
- Preparedness focuses on the development of plans and capabilities to enable effective disaster response through planning, organizing, training, exercising, evaluation and continuous improvement. Evacuation plans, long-term adaptation planning for local and state governments, and stocking food and water are all ways that cities and residents can be prepared for a potential disaster.
- The immediate reaction to a disaster that occurs when the disaster is anticipated and after it begins is called the response phase. Response activities include utilizing emergency services, first responders, Community Emergency Response Teams (CERTs) and activation of the Emergency Operations Center when necessary. Residential response actions may include seeking shelter from a tornado, dialing 9-1-1 during a house fire, or choosing to remain at home during ice/snow events.
- And finally, the recovery phase includes activities that continue beyond the initial emergency period and focuses on restoring community functions back to normal and managing reconstruction. Activities such as rebuilding after a storm event can include aspects of mitigation to increase sustainability and reduce or eliminate future risks.



Why Focus on Disaster Management?



Goal

The McKinney Office of Emergency Management seeks to address sustainability through an integrated approach that explores multiple types of disasters, vulnerability and social systems and provides potential solutions towards building a more resilient community.

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Economic

Improved buildings and infrastructure can reduce the costs associated with rebuilding after a disaster occurs.

Prevention of industrial disasters (e.g. hazardous material release/spill) can protect the economic vitality within a community.

Disaster-related evacuations decrease the consumer base for local businesses.

Significant economic losses due to declines in leisure and recreational visitors, business visitors, conferences, sporting events, etc. in the aftermath of a disaster.



Community

Safety measures in place can provide a safe community for residents.

Well-planned response and recovery actions protect public health.

Enhanced prediction, forecasting and warning systems allow the community more time to take the appropriate actions and get to safety.

Preparedness drills can bring together community members for a common purpose.



Environmental

Well-planned and constructed infrastructure can protect resources such as water supply during disasters.

Proper land use planning and management should be implemented to lessen settlement, soil erosion and depletion of natural vegetation that may lead to increased flooding, drought and famine.

Preventing hazardous or toxic spills with the capacity for widespread impact is a proactive way of protecting the environment.

Current Initiatives (To 2015)

City of McKinney Emergency Management Plan (EMP)

The City maintains a comprehensive all-hazards EMP. The EMP describes the authorities guiding emergency management, identifies community hazards, assigns responsibility to key personnel and outlines direction and control.



Early Warning Systems

The City utilizes an array of tools to alert the community of impending threats and emergency situations such as Outdoor Warning System (OWS) sirens, NOAA all-hazards weather radio, cable interrupt and the Emergency Alert System (EAS).

KnoWhat2Do Program

An education program developed through the collaboration of the North Central Texas regional governments to teach residents how to Think, Prepare, and Act to protect their personal safety and the safety of others. This would include knowing which evacuation routes to use in which situations, the safest places to be during particular events, and where the emergency centers are located.



Community Emergency Response Teams (CERT) Program

CERT is about emergency readiness and response, people helping people during disasters or other major incidents. McKinney CERT is a training program that prepares citizen volunteers to respond to emergency situations that may affect our community. CERT members are trained to be self-sufficient for up to 72 hours following a major

emergency incident and can provide critical support to professional first responders. They provide immediate assistance to victims and organize spontaneous volunteers at a disaster site.

Coordinate with local, regional, state and federal organizations

Coordinate with local, regional, state and federal organizations to build pre-disaster partnerships, support collaboration amongst all levels and integrate planning efforts.

Tomorrow's Opportunities (2015-2020)

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Community Wildfire Protection Plan (CWPP)

Develop a CWPP outlining strategies for protecting our community, identifying the Wildland Urban Interface (WUI) and defining public education programs to reduce the risk wildfires pose to homes, businesses and natural resources.

Expand the emergency management public outreach and education campaign and related initiatives

Host outreach events such as lunch n' learns to educate the public on actions our community can take before, during and after a disaster.

Conduct community-wide preparedness event to better inform the public on what to do during a disaster and provide an opportunity for citizens to view response apparatus and speak to public safety personnel.



Implement mitigation techniques into City infrastructure and land-use developments

Establish mitigation measures such as building codes, zoning ordinances, or land-use management programs to protect the community, the environment and the economic vitality of McKinney.

Future Possibilities (Beyond 2020)



Research new technologies

Research and evaluate emerging technologies that can improve emergency notification, emergency management and response capabilities to increase safety within our community.

Design and construct new Emergency Operations Center (EOC)

Design and construct a new EOC with state of the art technology to ensure the City maintains current capabilities and that our ability to support emergency response matures with the growth of our community.



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Metrics to Measure Progress

Number of disaster emergency practice drills.

Number of participants at disaster emergency practice drills.

Number of outreach/educational events to increase community awareness disaster preparedness.

Number of people in attendance at outreach/educational events to increase community awareness disaster preparedness.



Potential Funding Opportunities and/or Partnerships

- Neighboring local governments
- Local healthcare and hospital facilities
- Faith-based organizations
- McKinney Independent School District
- Public-private partnerships
- Red Cross
- Salvation Army
- Volunteer organizations active in disaster
- North Central Texas Council of Governments
- Texas Division of Emergency Management
- Federal Emergency Management Agency
- Emergency Management Association of Texas
- International Association of Emergency Managers
- Urban Area Security Initiative
- State Homeland Security Program



Resources Used

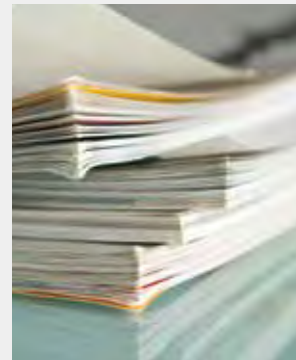
City of McKinney, Office of Emergency Management

KnoWhat2Do, North Central Texas Regional Public Education Campaign

McEntire, David A. and Dorothy Floyd. (2004). "Applying Sustainability to the Study of Disasters: An Assessment of Strengths and Weaknesses." Sustainable Communities Review, 6(1&2): 14-21.

Mileti, D. (1999), Disasters by Design: A Reassessment of Natural Hazards in the United States, Joseph Henry Press, Washington, DC.

FEMA: Disaster Management, <http://www.fema.gov/>



Looking Ahead



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The City of McKinney's Sustainability Plan encompasses the entire community. To successfully implement the goals outlined in this plan, a Sustainability Committee representing the various community stakeholders (staff, McKinney residents, a variety of business owners and sustainability experts) could be formed to guide and support the City's sustainability initiatives and support the ongoing implementation and development of sustainability initiatives within the community. The Sustainability Team will ensure that the sustainability initiatives continue to evolve in line with the community's and City Council's objectives.

The City's internal Green Team (comprised of representatives from all departments) could provide expertise and support to the Sustainability Committee. The Green Team will also aid in the implementation of internal City initiatives outlined in the Sustainability Plan and will continue to support the City's sustainability efforts.

The Office of Environmental Stewardship will be responsible for coordinating internal and external communications, such as resident concerns and questions or meetings with City departments to discuss action plans associated with the implementation of sustainability-related initiatives. The sustainability metrics and indicators referenced in the Plan will be tracked by OES, and progress will be reported semi-annually to the Green Team and the Sustainability Team to ensure that the sustainability program is in-place and effective.

The Sustainability Committee, the Green Team, and the Office of Environmental Stewardship will meet periodically to review and propose revisions for City Council consideration, as necessary, to the Sustainability Plan. Effective plan implementation will position McKinney to be economically competitive in the future global market, enhance and provide opportunities for community enrichment, and ensure that McKinney's sustainable approach means future generations will make McKinney home.

Glossary of Terms

Affordable housing: Any housing unit whose total housing costs are deemed within the financial means of most median income level people. (Ch. 1)

Alternative energy: Energy derived from sources that do not deplete natural resources, such as wind and solar generated energy. (Ch. 6)

Alternative fuel vehicles: Vehicles that operate on fuels other than gasoline or diesel, including those that operate using compressed natural gas (CNG), liquid natural gas (LNG), propane, electricity, hybrid of gasoline and electricity, and hydrogen. (Ch. 6)

Best management practices (BMP): Methods, practices, and maintenance procedures intended to prevent or reduce pollution.

Biodiversity: The variety of all forms of life, from genes to species, through to the broad scale of ecosystems.

Bio-solids: Nutrient-rich organic material resulting from the treatment of sewage sludge.

Brownfield: A real estate property where the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. (Ch. 3)

Business Improvement District: A special tax assessment district where property owners agree to have additional charges placed on their tax bills to fund improvements within the district's boundaries.

Capital Improvement Program (CIP): A short-term plan that identifies major public infrastructure projects and equipment purchases, and works as a planning tool for the City. (Ch. 3)

Commercial: A land use, building, or other activity involving the sale of goods or services. (Ch. 1)

Community Development Block Grants (CDBG): Program of the U.S. Department of Housing and Urban Development that funds local community development activities such as

affordable housing, anti-poverty programs, and infrastructure development. (Intro.)

Compressed Natural Gas (CNG): A substitute for gasoline or diesel fuel that is considered to be an environmentally "clean" alternative. It is made by compressing purified natural gas, and is typically stored and distributed in hard containers. (Ch. 5)

Ecosystem: A biological environment consisting of all the organisms living in a particular area, as well as all the nonliving, physical components of the environment in which the organisms interact. (Ch. 3)

Effluent: The outflow or discharge of liquid such as wastewater.

Energy Efficiency and Conservation Block Grant (EECBG): A program that provides federal grants to units of local government, Indian tribes, states, and territories to reduce energy use and fossil fuel emissions, and for improvements in energy efficiency. (Intro.)

Energy Efficiency and Conservation Strategy (EECS): A basic building block to implement energy efficiency strategies designed to reduce fossil fuel emissions in transportation, buildings, public works, and other applicable public and private sectors. (Ch. 12)

Energy Star: A program helping businesses and individuals protect the environment through the use energy efficient consumer products. (Ch. 4)

E-waste (Electronic waste): Computers, entertainment electronics, mobile phones, and other related items, including used electronics destined for re-use, re-sale, salvage, recycling, or disposal. (Ch. 13)

United States Environmental Protection Agency (EPA): An agency of the federal government of the United States tasked with protecting human health and the environment through the development and enforcement of regulations based on laws passed by Congress. (Ch. 3)

Glossary of Terms *continued*

Evapotranspiration (ET): The return of moisture to the air through both evaporation from the soil and transpiration by plants. (Ch. 8)

Fair housing: The outlawing of discrimination in the rental or purchase of homes and other housing-related transactions, such as advertising, mortgage lending, and homeowner's insurance.

Fats, oils, and grease: By-products of food preparation that when introduced into the wastewater system, can accumulate on the interior of sewer pipes, causing blockages and overflow. (Ch. 8)

Floodplain: An area of low-lying land that is susceptible to inundation by water as a result of flood. (Ch. 8)

Form-based code: A zoning type that uses physical form, rather than separation of land uses, as the organizing principle which allows flexibility in determining land uses within the constraints of a set building type. (Ch. 2)

Fossil fuel: Fuels formed by natural processes such as anaerobic decomposition of organic matter over a geologic time scale. Examples are natural gas, oil, and coal. (Ch. 2)

Geographic Information System (GIS): A computer system designed to capture, store, manipulate, analyze, and manage geographically referenced data. (Ch. 8)

Green Buildings: The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle. (Ch. 4)

Green jobs/green industry: Jobs associated with sustainability initiatives such as renewable power generation. (Ch. 1)

Green infrastructure: A concept that recognizes the interconnected networks of open spaces and natural areas, such as greenways, forest preserves and native plant vegetation, that naturally manage storm water, support ecosystems and improves the quality of local natural resources. (Ch. 10)

Greenhouse gases: Gases that trap heat within the Earth's atmosphere. Common greenhouse gases are carbon dioxide, methane, nitrous oxide, and ozone. (Ch. 1)

Historic Preservation Overlay District (HOD): A zoning district that provides protection through design review for buildings and places that have significance in history and/or unique architectural style. (Ch. 2)

Historic Preservation: An effort that seeks to preserve, conserve and protect buildings, objects, landscapes or other artifacts of historical significance. (Ch. 14)

Illicit discharge: Generally, any discharge into a storm drain system this is not composed entirely of storm water, with the exception of water from fire fighting activities and discharges from permitted facilities.

Impervious surface: Mostly artificial structures, such as pavement (e.g. roads, parking lots, sidewalks) covered by materials such as concrete, asphalt or stone which rain cannot penetrate. (Ch. 2)

Infill: The use of land that has been bypassed, remained vacant, or is underused but is in close proximity to areas that are substantially developed. (Ch. 1)

Invasive species: Non-native plants or animals that have adversely affect the habitats they invade.

Land use: The human use of land that involves the management and modification of the natural environment into the built environment. (Ch. 2)

Leadership in Energy and Environmental Design (LEED): A third-party building rating certification that provides standards for environmentally sustainable construction. (Ch. 4)

Low impact development (LID): A land planning and engineering design approach with a goal to mimic a site's predevelopment hydrology by keeping runoff close to its source. (Ch. 8)

Glossary of Terms *continued*

Materials Recovery Facility (MRF): A specialized facility where components of a mixed waste stream are received, separated and prepared for marketing to end-user manufacturers. (Ch. 4)

McKinney Community Development Corporation (MCDC): A sales tax corporation whose purpose is to enhance McKinney's aesthetic, cultural and leisure amenities and is responsible for promoting and funding community facilities and related projects throughout the city. (Ch. 1)

McKinney Economic Development Corporation (MEDC): MEDC was established in May 1993 after voters elected to permit the Corporation to receive half-cent sales tax to assist companies with infrastructure, relocation, training, and other needs to support economic development. (Ch. 1)

Metric: A measure of an organization's activities or performance.

Metropolitan Planning Organization (MPO): A federally-mandated and funded organization that develops transportation policy in the United States and consists of representatives from local government and governmental transportation authorities. (Intro.)

Multi-modal transportation: The use of multiple forms of transportation, particularly the use of modes like bicycles and buses, to move passengers or freight from one place to another. (Ch. 11)

Municipal Separate Storm Sewer Systems (MS4): A system owned or operated by a public agency, such as a municipality, that collects runoff that does not connect with a wastewater collection system or treatment plant. (Ch. 8)

Natural resources: A material source such as wood, water or mineral deposits, that naturally occur and has economic value. (Sec. 2)

Non-Attainment Area: An area considered to have air quality worse than the National Ambient Air Quality Standards as defined in the Clean Air Act Amendments of 1970. (Ch. 5)

North Central Texas Council of Governments (NCTCOG): A voluntary association of, by and for local governments, that was established to assist local governments in North Texas in planning for common needs and coordinating for regional development and benefit. (Intro.)

North Texas Municipal Water District (NTMWD): A conservation and reclamation district and political subdivision of the State of Texas authorized to acquire, treat, and distribute potable water, and to collect, treat and dispose of wastes, both liquid and solid, in order to reduce pollution, conserve and develop the natural resources of Texas. (Ch. 6)

Overlay Districts: An additional zoning requirement, such as to protect natural resources, promote safety and to protect health, that does not change the underlying zoning of a particular geographic area. (Ch. 2)

Potable: Suitable for drinking. (Ch. 8)

Public art: Works of art in any media that have been planned and executed with the intention of being staged in the physical public domain, usually outside and accessible to all. (Sec. 4)

Regional Transportation Council (RTC): The independent transportation policy body of the Metropolitan Planning Organization. (Ch. 5)

Renewable energy: Energy generated from natural resources such as sunlight, wind, and geothermal sources that are naturally replenished. (Ch. 6)

Resource Conservation and Recovery Act (RCRA): Enacted in 1976, it is the principal Federal law in the United States governing the disposal of solid waste and hazardous waste. (Ch. 13)

Return on Investment (ROI): A performance measure used to evaluate the efficiency of an investment. (Ch. 4)

Re-use water: Wastewater that has been treated and made available for non-potable uses such as for landscaping.

Glossary of Terms *continued*

Riparian: A part of the watershed immediately adjacent to streams, shorelines, and wetlands. (Ch. 7)

Single stream recycling: System in which all recyclable materials are mixed together for collection. (Ch. 13)

Smart growth: An urban planning and transportation method that manages growth within community, and supports the expansion of economic opportunity and protects human and environmental health. (Ch. 2)

SmartScape: A program that teaches concepts of landscaping with native and adapted plants, and is created and endorsed by the North Central Council of Governments, the Regional Storm Water Management Program, the North Texas Municipal Water District and the Texas Commission for Environmental Quality and others. (Ch. 8)

Storm water: Untreated water resulting from the overland flow of rain or snowmelt that does not absorb into the ground. (Ch. 8)

Tax Increment Financing (TIF): A public financing method which has been used as a subsidy for redevelopment and community improvement projects. (Intro.)

Texas Commission on Environmental Quality (TCEQ): The environmental agency for the state of Texas charged with the enforcement of environmental regulations and with issuing air and water operating permits to businesses operating in Texas. (Sec. 2)

Traffic calming: The use of physical measures, such as speed humps, traffic circles, narrow lane widths, or similar devices, intended to slow or reduce motor-vehicle traffic and improve the usability of a street for bicycles and pedestrians.

Transit oriented development (TOD): A mixed-use residential or commercial area designed to provide improved access to transportation and encourages increased transit ridership. (Ch. 11)

Transportation Demand Management (TDM): Programs, plans, or policies designed to encourage changes in individual travel behavior

resulting in reduced traffic congestion and air pollution, and increased efficiency of the transportation system.

Transportation Investment Generating Economic Recovery (TIGER) Grant: A grant managed by the U.S. Department of Transportation to provide funding for capital investments in surface transportation projects such as reconstruction of overpasses and road replacement. (Ch. 11)

Transportation Management Authority (TMA): A designated group tasked with guiding the future public transportation system for McKinney and the surrounding area. (Ch. 11)

United States Green Building Council (USGBC): A non-profit trade organization that promotes sustainability in how buildings are designed, built, and operated. (Ch. 3)

Urban tree canopy: The layer of leaves, branches and stems of trees that cover the ground when viewed from above. (Ch. 7)

Volatile Organic Compounds (VOC): Organic chemicals that have a high vapor pressure at ordinary, room-temperature conditions and contribute to air pollution. (Ch. 4)

Wastewater: Water carrying waste from domestic, commercial, or industrial facilities, and may contain a wide range of potential contaminants. (Ch. 8)

Water conservation: The protection and efficient management of water resources that serve many purposes such as drinking, recreation, irrigation, etc. (Ch. 8)

Watershed: A land area where precipitation is collected and eventually drained into a receiving body of water. (Ch. 8)

Zoning: Local laws used by jurisdictions to regulate the uses of land, buildings, and structures within designated areas. (Ch. 1)

City of McKinney Sustainability Plan
Shaping Our Sustainable Future



Office of
Environmental
Stewardship