Livable City Sustainability Plan

City of El Paso Sustainability Program

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Table of Contents

Executive Summary ***1***

1.0 Introduction ***3***

1.1 Just What is Sustainability? *5*

1.2 Why Pursue Sustainability? *6*

1.3 How are we pursuing sustainability? *7*

1.4 Our Vision and Mission *7*

1.5 City-Wide Issues *7*

1.6 Focus Areas *7*

2.0 Air ***9***

2.1 Where are we? *9*

2.1.1 Border Crossings 10

2.1.2 Bi-National Issue 11

2.1.3 Climate Change and Greenhouse Gasses 12

2.2 Key Issues *14*

2.3 Improvement goals *14*

3.0 Community ***15***

3.1 Where are we? *15*

3.1.1 Let's Get to Work 16

3.2 Key Issues *17*

3.3 Improvement goals *18*

4.0 Development ***19***

4.1 Buildings *19*

4.2 Where are we? *20*

4.3 Key Issues *25*

4.4 Improvement goals *25*

5.0 Energy ***26***

5.1 Where are we? *26*

5.2 Key Issues *28*

5.3 Improvement goals *28*

6.0 Transportation ***29***

6.1 Where are we? *29*

6.1.1 Transit 29

6.1.2 Fleet 30

6.2 Key Issues *30*

6.3 Improvement goals *31*

7.0 Waste and Resources ***32***

7.1 Where are we? *33*

7.2 Key Issues *34*

7.3 Improvement goals *34*

Appendix A – City-Wide Issues Strategic Plan ***1***

Appendix B – Focus Area Strategic Plan ***1***

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Executive Summary

In El Paso, City leaders, staff and partners have been investing their efforts into projects and plans to improve the community's quality of life. At times, these ideas have developed in many directions without a consistent overall strategy. This "Livable City Sustainability Plan" provides the overall strategy for future efforts to improve quality of life.

The plan was inspired by the City Council's strategic goal to make El Paso "the most livable city in the United States." El Paso has chosen to embrace sustainability as the road to becoming a model livable city. Sustainability can often be a confusing or vague concept. Sustainability is an approach that accounts for environmental, economic and social impacts when considering new policies or programs.

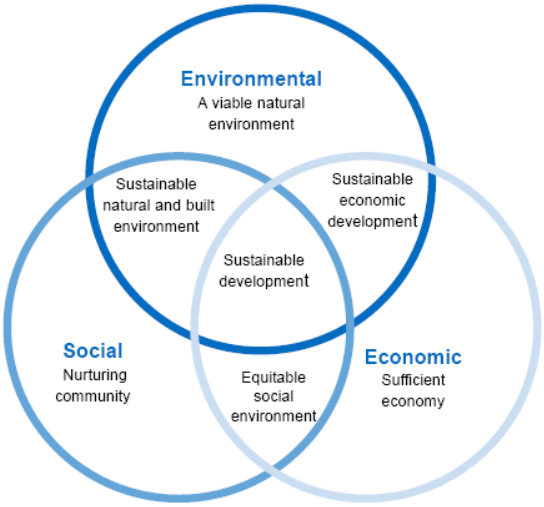
The "Livable City Sustainability Plan" is the result of a collaborative City-wide effort to define an integrated, strategic framework for sustainability. This plan is a living document, or roadmap, that will need periodic updates as El Paso grows, technology evolves and we reevaluate our priorities.

El Paso's strategic vision for sustainability is captured in the following statement:

> *In El Paso, we balance what we have, what we use and what we want for today and tomorrow.*

El Paso's mission statement for achieving sustainability is:

> *By 2014, El Paso will be a model of sustainability and smart growth by building on its roots as an international hub, promoting sustainable enterprises and wisely using natural resources.*



El Paso must address the following three City-wide key issues to make our vision and mission a reality:

- Stakeholder Engagement & Education: The citizens of our community/region and our employees must be educated and engaged to support the City's sustainability direction.
- Triple Bottom Line (TBL): All city processes and procedures must employ a triple bottom line – economic, environmental, and social – approach.
- Leadership & Workforce: City leadership and the workforce must have the knowledge and skills necessary to support sustainability.

El Paso is focusing on the following six areas of operation for detailed implementation steps: Air, Community, Development & Buildings, Energy, Transportation, and Waste Resources.

The most pressing issues for each of the focus areas are summarized below:

Air The Paso del Norte region must continue to collaborate to improve local air quality that will provide a healthier place to live and better place to do business.

Community The message that a sustainable lifestyle is both attainable and attractive must be delivered to our entire community.

Development Smart and sustainable development that decreases urban sprawl and encourages adaptive reuse of buildings must be achieved.

The Path Forward:

The "Livable City Sustainability Plan" is only the beginning to making El Paso more sustainable. This plan is a roadmap, not a railroad. We have many challenges, however our goal of becoming "the most livable city in the United States" is a within our grasp. This plan lays the groundwork necessary for success.

Energy El Paso must take advantage of its renewable resources to generate clean cost-effective energy and become an internationally recognized clean energy center for research, development, manufacturing and generation.

Transportation An integrated, regional approach to transportation that is directed and approved by City leadership must be developed.

Waste Resources A City-wide procurement program that minimizes waste and increases the use of recyclable materials and environmentally friendly products must be implemented.

While a number of targets were developed in the different focus areas, the following goals have the broadest impact and highest priority:

- ✓ Complete a greenhouse gas inventory and establish the 1990 baseline by 2010.
- ✓ Develop a plan by 2010 that details plans to meet Kyoto protocol requirements.
- ✓ Become one of the least car dependant city in the United States by promoting smart growth and integrated user-friendly transit systems.
- ✓ Establish green building practices as the standard business practice in El Paso by 2012.
- ✓ Reduce energy consumption by 30% by 2014.
- ✓ Implement 20 renewable energy projects by 2015.
- ✓ Transition 20% of City energy supply and 10% of community supply to renewable sources by 2020.
- ✓ Clean energy will become a core business sector in El Paso through the aggressive use of partnerships and incentives.

El Paso will achieve these goals by changing our business practices. Specific projects will be evaluated based on their enduring economic, environmental and social impacts. Appendix B details the specific strategies and tactics that will be employed to achieve these goals.

1.0 Introduction

This Sustainability Plan is the City of El Paso's strategic plan to move towards sustainable operations. Our intention is to demonstrate that sustainability is both possible and beneficial in El Paso. We do this with the hope and vision of moving the entire Paso del Norte region towards a more sustainable future.

As part of an extensive planning process in early 2006, our Mayor and City Council developed a strategy that included a mission, vision and set of public policy goals that guide the City organization in a positive and productive direction. This plan aligns with their vision.

As part of that effort, the council adopted the following vision statement:

To establish El Paso as the premier community of the Southwest

The City Council also crafted this mission statement:

To create a more vibrant, harmonious and sustainable city by building on existing strengths, exploring new opportunities, fostering regional partnerships and responding to change.

Some of the specific policy goals resulting from the strategic planning process include the following statements:

To become the most livable city in the United States and be recognized as an international city.

To establish a comprehensive transportation system and become the lowest car dependent city in the Southwest.

To become the city with the lowest unemployment rate and highest per capita wages in the United States.

To facilitate opportunities for citizens to be involved in local government.

While individual City departments have developed strategic plans and implementation steps to achieve City Council's goals, there has not been an integrated effort to work towards city-wide implementation of the goals mentioned above. This Sustainability Plan is our strategic plan to guide and focus city-wide efforts to become more sustainable and reach the goals laid out by the City Council. The plan is the result of a collaborative effort to move us towards these goals by changing the way we think and act about most every aspect of our business.

Much of our effort towards sustainability is driven by our recognition of the urgent need to address the local causes and effects of global climate change. Recognizing this urgency, City Council also unanimously passed a resolution in March of 2008 authorizing Mayor John Cook to sign the U.S. Mayors Climate Protection Agreement. A copy of the agreement is included here.

The U.S. Mayors Climate Protection Agreement

We urge the federal government and state governments to enact policies and programs to meet or beat the target of reducing global warming pollution levels to 7 percent below 1990 levels by 2012, including efforts to: reduce the United States' dependence on fossil fuels and accelerate the development of clean, economical energy resources and fuel-efficient technologies such as conservation, methane recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels;

We urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that 1) includes clear timetables and emissions limits and 2) a flexible, market-based system of tradable allowances among emitting industries; and

We will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and communities such as:

1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan.
2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities;
3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit;
4. Increase the use of clean, alternative energy by, for example, investing in "green tags", advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology;
5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money;
6. Purchase only Energy Star equipment and appliances for City use;
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system;
8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel;
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production;
10. Increase recycling rates in City operations and in the community;
11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2; and
12. Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

1.1 Just What is Sustainability?

Sustainability is more than just environmental programs, more than just "going green", more than a lot of new programs and more than just talk. Moving towards sustainability requires changing the way we approach our operations. To move towards a sustainable future, we must recognize that environmental benefits don't have to hurt our pocket book. Our success will also require that we acknowledge that economic gains do not have to come at a cost to our natural resources. A sustainable El Paso will require that we consider the long-term environmental, financial and human impacts of all our decisions (see Figure 1).

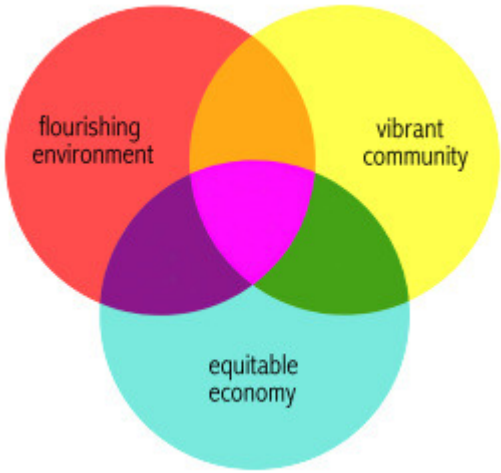


Figure 1—Balance of Sustainability

Many point to the United Nations Brundtland Commission's work in 1987 as the 'birth' of the sustainability movement. In reality, sustainability is a concept that our predecessors have pursued throughout history. Sustainability is not a new concept. In 1789, Thomas Jefferson declared "Then I say the earth belongs to each generation during its course, fully and in its own right, [but] no generation can contract debts greater than can be paid during the course of its own existence." In 1910, Theodore Roosevelt stated "I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us." Unfortunately, a quick reflection also reveals examples of societies that did not embrace sustainable practices, and their children suffered the consequences (e.g., societies like the Mayans and Anasazi described in Jared Diamond's book 'Collapse'). We are faced with those same choices. Will we look beyond the urgent and outside our budget constraints to see the long-term, wide-ranging effects of our policies and practices?

In recent years, sustainability has become popular subject. Organizations across the globe have started initiatives to pursue sustainable operations. The United Nations World Commission on Environment and Development (the Brundtland Commission) official definition of sustainable development reads:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

More specifically, here in El Paso we have chosen to define our approach to sustainability as:

In El Paso, we balance what we have, what we use and what we want for today and tomorrow.

Sustainable development can be defined as an approach that evaluates and balances long-term environmental, economic and social aspects. Moving towards sustainability involves expanding the definition of cost beyond just short-term economic implications to include long-term economic, environmental and social concerns.

Many other local governments have begun to implement sustainability principles. Well known examples would include San Francisco, Portland, Seattle, and New York City. In the Southwest, Albuquerque, Austin, Phoenix and Tucson all have well-developed sustainability initiatives.

Cities aren't the only organizations pursuing sustainability. Many major corporations have learned that a sustainable approach doesn't just involve 'going green', but can also 'save green.' A major corporation's web site states "We know that being an efficient and profitable business and being a good steward of the environment are goals that can work together." This corporation saved $1.2 million in energy alone by following an employee's suggestion to take the light bulbs out of its Coca Cola vending machines in break rooms. The business world has figured out that a sustainable approach is good for business. Another corporation recently changed shipping crates from cardboard to plastic, which can be reused about 60 times, reducing waste and carbon emissions while saving $4.5 million a year.

1.2 Why Pursue Sustainability?

As illustrated in Figure 2, here in El Paso, we are motivated by all three of the 'pillars' (see Figure 2) (the surrounding natural environment, our economy and human equity) to move towards sustainable practices. Environmentally, El Paso is blessed with spectacular climate. We are surrounded by the rugged beauty of the Chihuahuan desert with the Franklin Mountains in our midst. However, we are challenged by degraded air quality, rampant sprawl and rapidly diminishing open space and habitat.

Figure 2—Pillars of Sustainability

Economically, El Paso's economy is underpinned by the Army's commitment to Fort Bliss, the maquiladora sector and a growing health care industry. However, El Paso is also the 4th poorest community in the United States.

Socially, El Paso is renowned for our diverse, multinational heritage and hospitable southwest spirit. However, our community is threatened by low wages and rampant crime across the border in Mexico.

Expansion at Fort Bliss is expected to bring a total of 30,000 new soldiers and 50,000 family members to El Paso. This growth poses both opportunities and challenges for our community. We have the opportunity to use this development to create a more livable City for generations.

The dramatic escalation in energy prices has also opened doors for innovation and efficiency throughout the City. Higher energy prices and improvements in technology give us the opportunity to rethink the way we drive, the way we construct our facilities, and how we deal with waste.

Beyond the borderland, there are even more compelling reasons to both think and act in a sustainable manner. Nations like India and China are experiencing huge economic growth and world population continues to climb. Many of the inexpensive resources that fuel our economy have already been tapped. These pressures on our resources led to recent worldwide food shortages

and unprecedented oil prices. Finally, the compelling evidence that our climate is changing can be seen from the Antarctic to Greenland. Coupled with clear evidence that atmospheric carbon dioxide levels are reaching unprecedented levels in unison with rising temperatures and diminishing icepack, we are driven to act and act now.

1.3 How are we pursuing sustainability?

This plan is the result of a strategic planning process that will focus and sharpen our efforts. The plan was developed with collaborative participation from portions of the community and departments across the City organization. To guide our efforts, the plan team developed a vision statement to describe our perspective of sustainability for El Paso, defined a mission statement. The team also detailed key issues, defined focus areas and set goals that will lead us towards sustainability.

1.4 Our Vision and Mission

The sustainability planning group developed the following vision statement:

In El Paso, we balance what we have, what we use and what we want for today and tomorrow.

The team also developed the following mission statement:

By 2014, El Paso will be a model of sustainability and smart growth by building on its roots as an international hub, promoting sustainable enterprises and wisely using natural resources.

1.5 City-Wide Issues

El Paso must address the following three key issues necessary to achieve our vision and mission:

1. Stakeholder Engagement & Education: The citizens of our community/region and our employees must be educated and engaged to support the City's sustainability direction.

2. Triple Bottom Line (TBL): All city processes and procedures must employ a triple bottom line – economic, environmental, and social – approach.

3. Leadership & Workforce: City leadership and the workforce must have the knowledge and skills necessary to support sustainability.

The strategic plan to address these issues is included in Appendix A.

1.6 Focus Areas

The six areas that we will define progress and set goals in are:

- ✓ Air
- ✓ Community
- ✓ Development
- ✓ Energy

- ✓ Transportation
- ✓ Waste Resources

The remainder of this plan will focus on these six areas. We will define what these focus areas encompass, summarize how well the City is doing in the pursuit of sustainability in each area, lay out our vision for what we would like El Paso to look like in each of the areas, and then describe those larger scale goals that we feel will push us towards that vision.

2.0 Air

Air, a fundamental building block of life, impacts our health, aesthetics, economy, and climate; it knows no boundaries. Air quality is often defined in terms of the presence of common pollutants. Policy makers often refer to the levels of sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), suspended particulates, and ground-level ozone (O_3). These scientific terms may define air quality in technical terms, but questions that our residents commonly ask relate more to daily life. Does our air quality allow us to thrive or is it hindering us? Can we see the desert beauty around us without looking through haze? Are our children at risk for asthma or other breathing issues?

In a single day the average person breathes enough air to fill a modestly sized tanker truck. The number of deaths in the United States associated with air pollution has been estimated to range from 50,000 to 100,000 per year. Children, the elderly, those with respiratory illness and those who work and exercise outdoors are at highest risk of developing medical complications caused by air pollution.

2.1 Where are we?

El Paso's climate and air quality used to be community assets. At the turn of the century, local boosters claimed "The climate of El Paso is the finest in the Union, and the dry refined air of the region is a luxury to breathe."

By 1991, the reviews weren't as complimentary. A 1991 New York Times article painted the following picture. "On still winter days a mousy brown haze begins forming in the air above the Rio Grande, and as it grows into a cloud that obscures the sky, this city on the edge of the desert becomes one of the most polluted places in the United States." As recently as 2005, the American Lung Association continued to give us a grade of "F" for both High Ozone and Particle Pollution.

The Paso del Norte airshed basin is formed by the mountains that surround El Paso, Sunland Park, New Mexico, and Ciudad Juarez, Chihuahua. With the largest metropolitan area along the border, visibility is frequently poor, especially in winter, and respiratory problems can be common. Recently, an index was developed to reflect long-term exposure to air pollutants. U.S. cities were ranked according to a weighted estimate of exposure to criteria air pollutants; El Paso was ranked sixth worst in the nation, following Los Angeles, California; Phoenix, Arizona; Riverside, California; Orange County, California; and New York City, New York.

El Paso was the 7th fastest growing city in the nation from 2000 to 2006, it is currently the sixth largest city in Texas and the 21st largest city in the U.S. Ciudad Juárez, El Paso's sister city across the U.S.-Mexico border, is the largest city in the state of Chihuahua and the fifth largest city in all of Mexico. We live in a common airshed that sustains over 2 million people, including:

- ✓ 609,000 in El Paso,
- ✓ 127,000 in outlying communities
- ✓ 1,313,000 in Ciudad Juarez.

In addition, Ciudad Juarez population has been projected to grow to 2.4 million by 2020.

Paso del Norte's growth has had serious environmental consequences, particularly for air quality, which is among the worst on the U.S.–Mexico border. An overwhelming body of evidence links such air pollution to respiratory and cardiovascular disease, and to premature mortality.

In addition, air pollution damages visibility, materials, and agriculture. Surveys show that Paso del Norte's residents are more concerned about air pollution than any of the region's other environmental issues.

2.1.1 Border Crossings

Our region continues to face serious air quality challenges particularly due to the large number of trucks that circulate between Ciudad Juarez and El Paso. The El Paso-Ciudad Juarez region is served by three major truck ports of entry. The El Paso – Ciudad Juarez border crossing is one of the busiest in the world, with an estimated daily average of 250,000 people going through the checkpoints and the adjacent bridges spanning the Rio Grande.

Following the implementation of the North American Free Trade Agreement (NAFTA), trade between the U.S. and Mexico increased substantially. Northbound truck movement (imports into the U.S.) through Ciudad Juarez-El Paso gateways grew from less than 600,000 per year in 1994 to more than 700,000 per year in 2004. Total surface trade (rail and truck) between the two countries increased at an annual average rate of approximately 10% in the 10-year period since NAFTA started. Trade by road between the two countries reached a historic high in 2004 with $195 billion.

The number of trucks crossing the U.S.-Mexico border is expected to continue growing creating higher congestion levels and increased emissions. Over 5 million trucks crossed from Mexico into the United States in 2005. This represents 17 percent growth from 2001, and the number of crossings is expected to continue growing as trade between the two North American Free Trade Agreement (NAFTA) partners continues to grow.

Northbound trucks face long waiting times due to multiple security and safety inspections that occur during the process. Border security has caused the average waiting time to leap from 45 minutes to two or three hours on an ordinary day. On days with heightened restrictions, waits can easily stretch to four hours or more. These delays result in tens of thousands of vehicle engines idling in the snake-like lines, each waiting to inch forward, and collectively spewing tons of pollutants into the air.

Border traffic leaving children in respiratory distress

Free trade between Canada, Mexico and the US has brought a wealth of goods flowing across the borders. But the pollution created by tens of thousands of idling vehicles waiting at busy border crossings is causing more than just pretty sunsets.

Nearby, children are paying for that wealth with their health.

A new study funded by the North American Commission for Environmental Cooperation has found a "significant association" between days of elevated ozone readings in Ciudad Juárez, Chihuahua, and corresponding spikes in the numbers of youngsters rushed to the border city's emergency rooms in respiratory distress. Youngsters under five years appear to be especially sensitive to ozone, says the study's principal investigator, Dr. Isabelle Romieu of the Mexican National Institute of Public Health.

The study observed that when the levels of PM_{10} (particulate matter smaller than 10 microns in diameter that can lodge deep in the lungs when breathed) were elevated for two consecutive days, respiratory deaths among underprivileged infants between a month old and a year old increased in the following days. But youngsters of higher socio-economic status suffered no similar increase in mortality.

Equally disquieting was the finding that other serious respiratory problems are showing up even when ground-level ozone concentrations are relatively high, but still below the Mexican standard of 110 parts per billion, measured over one hour.

That clearly indicates that existing pollution regulations in Mexico are not adequately protecting the health of the country's children, says Dr. Matiana Ramirez Aguilar, a co-investigator in the project.

"It's time to change the standard," she says.

What should come as no surprise is the sheer volume of emissions coming from the lines of vehicles waiting in El Paso and Ciudad Juárez, says Dr. Carlos Rincon, Air Quality Project Director for Environmental Defense in El Paso, Texas. It's the busiest border crossing in the world, with an estimated daily average of 250,000 people going through the checkpoints and the adjacent bridges spanning the Rio Grande, he says.

Following 11 September 2001, heightened border security meant the average waiting time to get into the US catapulted from 45 minutes to two or three hours on an ordinary day, says Rincon. And, on days when US security has posted an "Orange Alert," waits can easily go to four hours or more, he says.

Now, tens of thousands of vehicles engines are kept idling in the snake-like lines at any time of the day, each waiting to inch forward, and collectively spewing tons of pollutants into the air. The delays are far longer to get into the US than to get into Mexico. And, not surprisingly, air pollution levels in Ciudad Juárez are consistently much higher than in neighboring El Paso.

"We're finding that in our preliminary results, children in schools in areas of high traffic counts have more airway inflammation," says Holguin.

In August 2003, the Texas Commission on Environmental Quality found that vehicles idling on the international bridges are a major factor in local air pollution, producing 22% of area-source carbon monoxide emissions in the El Paso-Ciudad Juarez area.

2.1.2 Bi-National Issue

A spirit of cooperation and desperation has led to recent improvements. The 2002 Center for Responsible Environmental Strategies (CRES) survey on Air Quality reported “When Juarez sneezes, we catch a cold” and “Only a bridge divides us.” This understanding of the interwoven nature of our communities has been fundamental to many recent successes.

These successes include collaborative air monitoring, requiring oxygenated gas in the winter to reduce carbon monoxide, installing vapor collection systems for tanker trucks and personal vehicles, converting major Ciudad Juarez roads into one-way streets to reduce emissions and conversion of brick kilns in Ciudad Juarez. As a result, El Paso air quality has improved so that we meet the National Ambient Air Quality Standards (NAAQS) with the exception of particulate matter (PM10).

> Congressman Silvestre Reyes' web site clearly conveys the nature of our challenges:
>
> *"In El Paso-Juárez, we know that the traditional approaches to protecting the environment do not always apply. Just as we talk about living in a binational community, we must realize we also inhabit a binational environment. El Pasoans and Juarenses draw upon common sources of water and breathe the same air. For this reason, we cannot simply rely on regulation to ensure a clean environment. A binational problem requires a binational solution."*
>
> *http://wwwc.house.gov/reyes/*

The Ciudad Brick-Makers Project is a prime example of how we have achieved these successes. The bi-national Joint Advisory Committee for Air Quality Improvement (JAC), El Paso Electric Company and the El Paso Community Foundation collaborated to research, fund and implement upgrades to open brick kilns in Ciudad Juarez. The upgrades to the new kilns have reduced fume emissions by 90% and allow operation of the kilns with less fuel.

The Paso del Norte Joint Advisory Committee's (JAC) One Basin Resolution is consistently cited as a model that should be employed in other shared airsheds.

Ciudad Juarez has seen dramatic improvements in air quality. Historically, our sister city had 30 to 40 violations a year; now they have none. Ciudad Juarez started distributing oxygenated gas, reducing carbon monoxide violations from 40 to 0 in two years. Turning major roads such as 16 de Septiembre, Lopez Mateos and Plutarco Elias Calles into one-way streets in 2000, dramatically reduced traffic congestion, which improved traffic flow, resulting in improved air quality.

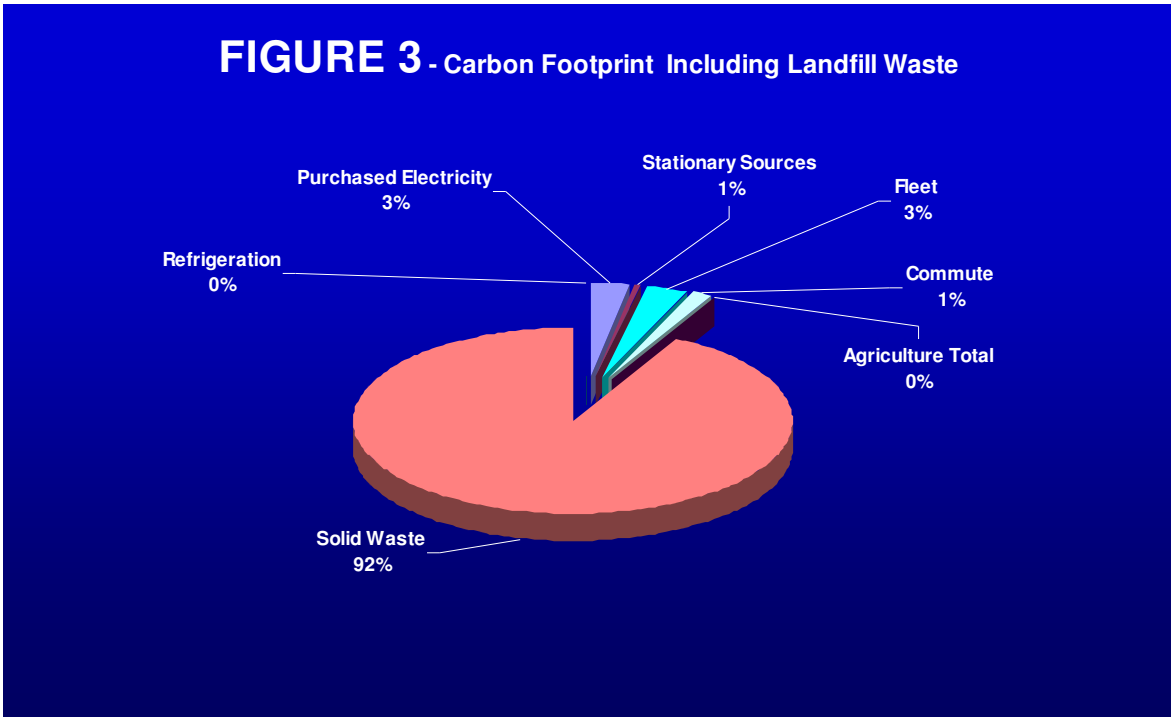
However, we still have significant room for improvement. El Paso is currently classified as non-attainment for particulate matter. The city will also likely become a nonattainment area for ozone when the new EPA ozone limits take effect.

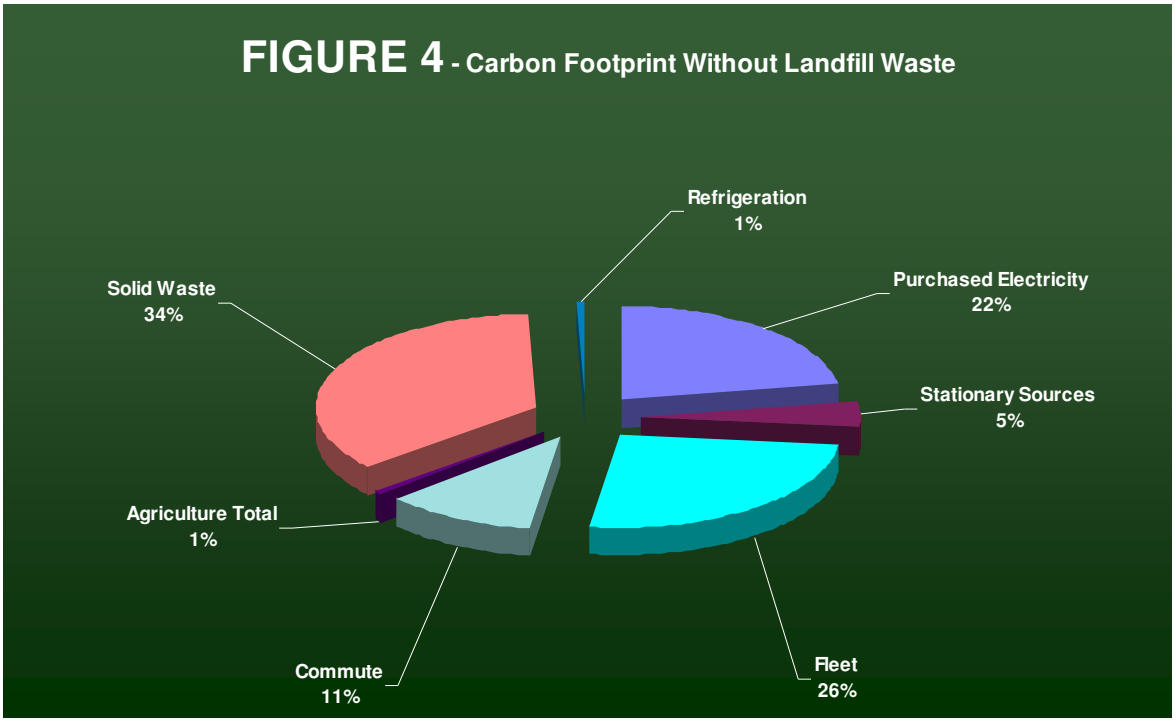
2.1.3 Climate Change and Greenhouse Gasses

Climate change is an issue that has moved quickly to the forefront of national issues. The correlations between increasing fossil fuel usage, escalating atmospheric CO_2 levels and rising global temperatures cannot be ignored. The worldwide anecdotal evidence of climate change, including melting glaciers, polar ice loss and frequent severe weather events is compelling.

While federal and international efforts to mitigate climate change are necessary, the real battle will be fought and won on the local level. Local governments influence development patterns, spur the use of renewable energy, build transit infrastructure and act as leaders in their communities.

Recognizing the need to address climate action at the local level, City Council voted unanimously to allow our Mayor to endorse the U.S. Council of Mayor's Climate Protection Agreement.





Figures 3 and 4 portray preliminary estimates of the greenhouse gas emissions generated by City operations. Figure 3 illustrates the contribution from City operations including all the waste placed at the City landfill, while Figure 4 includes only the waste generated from City facilities.

Based on these figures, the obvious areas to focus greenhouse gas reduction efforts are landfill gas collection, fleet fuel efficiency and energy efficiency projects.

2.2 Key Issues

The strategic planning process identified the following key air quality issues that must be addressed for us to be successful:

- ✓ The City must improve local air quality to provide a healthier place to live and better place to do business.
- ✓ The entire Paso del Norte region must collaborate to achieve improvements in air quality.

2.3 Improvement goals

The collaborative efforts of many agencies on both sides of the border have been called out as a model for success. This collaboration has led to significant improvements in regional air quality. El Paso has been a partner in all of these efforts and will continue to play a key role in revitalizing our air so that once again we can say that "the dry refined air of the region is a luxury to breathe."

In addition to these continuing efforts and in support of City Council's resolution to endorse the US Mayor's Conference Climate Protection Agreement, the City has set the following goals:

1. Complete greenhouse gas inventory and establish the 1990 baseline for the entire City by 2011.
2. Develop a plan to reduce greenhouse gas emissions to meet Kyoto protocol guidelines by 2011.
3. Reach attainment of federal air quality standards by 2019.
4. Reduce the number of days with poor AQI by 25%.

The detailed strategies and tactics to accomplish these goals are included in Appendix B.

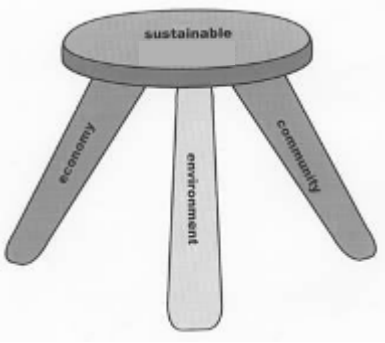
3.0 Community

El Pasoans are renowned for their genuine warmth and hospitality. Ask anyone that visits here. El Paso embodies the best of Texan, Mexican and southwest culture. We value our fabulous climate, safe, small-town feel and rich bi-national heritage. El Paso has been routinely ranked as one of the safest big cities in the country. Any attempt to move towards a sustainable community needs to preserve and enhance the essential qualities that make El Paso distinctive and attractive.

El Paso has many valuable attributes. According to the El Paso Regional Economic Development Corporation (Redco), El Paso can boast of:

- ✓ 302 days of sunshine per year
- ✓ Mild winters, with days averaging 50 degrees.
- ✓ An average commute time of 21 minutes where 72.7% of regional residents drive less than 30 minutes to work.
- ✓ Third safest major city in America. (Morgan Quinto Survey, 2006)
- ✓ One of the seven best cities in America for retirement. (Money Magazine, 2004)
- ✓ Second Happiest City in America (Men's Health Magazine, March 2005)

Any effort to move towards sustainability will fail if we do not ensure that everyone in our community has the same opportunities to enjoy the fruits of our labor. True sustainability will mean that we improve our natural environmental, boost our financial state and provide equally for our entire community. Many of our community members struggle with the daily aspects of life. Many can't focus on light bulbs and low-flow toilets when they lack access to well-paying jobs, affordable health care and quality education so they can meet their full potential.



Our efforts cannot be driven by environmental concerns alone. If we fail to address the human aspect of our challenge, we lose one of the three legs on the sustainability stool, and our efforts to transform our community will not endure.

3.1 Where are we?

Our community faces a myriad of both internal and external challenges. Rampant violence across the border looms as a potential threat to our security. Continued growth, primarily from Fort Bliss's massive expansion, and the associated urban sprawl challenge our core values. We also face the challenge of illegal dumping and widespread litter. The City has invested heavily in outreach and clean up efforts, but large swaths of the Chihuahuan desert and vacant land in our community are often piled with trash and construction debris.

Some have characterized the border counties in Texas as a fictional fifty-first U.S. state. If this state existed it would be described as:

- ✓ The poorest in the Union; total personal income would rank thirtieth among all states and last in per capita personal income.
- ✓ One of the country's highest unemployment rates.
- ✓ The third highest in the rate of death from diabetes and second in the rate of death from hepatitis and chronic liver diseases.
- ✓ The twenty-fourth largest in population, but would rank second youngest in population age (in 1994, almost 36% of the region's residents were under the age of 20).
- ✓ The highest birth rate in the nation.
- ✓ Lagging behind the United States overall and the other U.S. border states as a whole in educational attainment.

El Paso was recently identified by the Brookings Institute as the seventh poorest metropolitan region in the nation. The report states "Although the population in the El Paso metro area has doubled during the past three decades – today it has more than 600,000 residents – prosperity, unfortunately has not followed the strong population growth."

Project Bravo is a prime example of how we are striving to allow everyone in El Paso to lead a sustainable lifestyle. Project Bravo was established in 1965 and is funded by the Texas Department of Housing and Community Affairs through the Community Services Block Grant Program (CSBG) and other sources. Project Bravo strives to bring sustainability to all of El Paso by providing our underprivileged population with critical services in diverse areas such as healthcare, housing, education, and jobs. One of Project Bravo's specific programs involves providing energy efficiency and weatherization for low income families.

3.1.1 Let's Get to Work

The City of El Paso initiated an aggressive clean-up campaign designed to inspire community action, raise public awareness through education and instill community pride, ownership and a sense of place for El Paso residents. The Let's Get to Work project focuses on educating the community on various code enforcement areas such as weed control, illegal dumping, graffiti wipeout and community pride. The campaign was initiated in October 2008 with the creation of a user-friendly website that provides helpful information to the public such as the purpose of the project and suggestions for awareness-based attitude and involvement. The website also offers a community Pledge to obtain community commitment and infuse ownership from residents to participate in the City's clean up efforts.

Additionally, an informative video was produced to raise public awareness of community environmental issues by demonstrating the pollution problems present in the City's neighborhoods. The video currently runs on the City's dedicated public access channel. The website also allows community residents to post pictures of littered neighborhoods and other violations and instructions on how to report them. A list of collection stations and schedules, tips on waste management and code compliance issues are also found on the website.

Let's Get to Work Pledge

- ☐ I will get to work to clean up El Paso.
- ☐ I will not litter.
- ☐ I will pick up trash when I see it.
- ☐ I will comply with the City Code and will report violations.
- ☐ I will recycle.
- ☐ I will encourage others to do the same.

The Let's Get to Work campaign aims to:

- ✓ Build community capacity to address environmental issues through a self-help approach.
- ✓ Establish stakeholder opportunities with neighborhood groups, local businesses, community-based organizations and agencies.
- ✓ Organize on-going neighborhood clean up projects and other recycling efforts.
- ✓ Develop a "Tool Shed on Wheels" program that will identify appropriate equipment that can be used on trailers and use these trailers in Neighborhood-In-Action clean-up activities.
- ✓ Establish yearly "Amnesty Day" for tires and old furniture pick up.
- ✓ Partner with neighborhood groups to hold Let's Get to Work workshops and discussion forums to empower their immediate communities.
- ✓ Identify and partner with businesses and organizations that are committed to community participation and solicit their help in conducting frequent clean up events and in identifying areas needing Let's Get to Work attention.
- ✓ Develop requirements for a Commercial Litter Prevention Plan for commercial developers.

3.2 Key Issues

The strategic planning process identified the following key community issues that must be addressed for us to be successful:

- ✓ The message that a sustainable lifestyle is both attainable and attractive must be delivered to our entire community.
- ✓ Unemployment rates and per capita wages need to progress toward national standards.
- ✓ Sustainability programs must address the impacts and needs of each sector of the community.

- ✓ A transition to a “walkable” community must be undertaken.
- ✓ Civic and cultural pride in our community must be instilled.

3.3 Improvement goals

We must reach all segments of our community to achieve our mission of establishing El Paso as “the premier community of the Southwest” and our vision of a city that is “the most livable city in the United States”, “with the lowest unemployment rate and highest per capita wages in the United States.” To achieve our goal of a city that uses a sustainable approach to improve our economy and benefit our environment while providing equally for all, we have adopted the following goals:

- ✓ Increase civic pride by 30% above baseline levels by 2014.
- ✓ Increase participation in sustainability outreach programs by 25% above baseline levels by 2014.
- ✓ Increase understanding of general sustainability principles by 20% above baseline levels by 2014.

To achieve these goals we are developing a series of outreach and educational materials, including our Let’s Get to Work program. Primary examples would include regular newsletters for City employees and a city wide annual event for community members.

4.0 Development

Changing the way we develop and use our land and natural resources will have the most enduring impact on our community. Smart growth can be defined as growth management that advocates compact, transit-oriented, walkable, bicycle-friendly land use, including neighborhood schools, and mixed-use development with a range of housing choices.

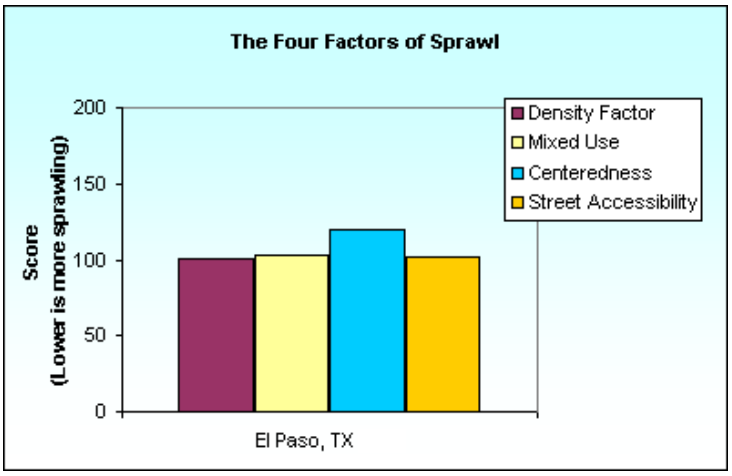
Emphasizing "smart" development will enable future generations of El Pasoans to live, work and play in close proximity without having to drive increasingly further for daily needs. By wisely managing growth today, many generations will continue to enjoy the beauty of the Franklin Mountains and Chihuahuan desert. The only way to achieve City Council's goals that El Paso "become the most livable city in the United States and be recognized as an international city" and "become the lowest car dependent city in the Southwest" is with balanced management of our land use and growth patterns.

For our children to enjoy a City with abundant natural resources, urban wildlife and a distinct southwest character, we must find ways to accommodate growth while preserving our environment. We must find a way to move away from sprawling development to more resource-conscious development.

The 2000 Sierra Club "Sprawl Costs Us All" Report – states that suburban sprawl leads to:

- ✓ Higher rates of driving and vehicle ownership. Cars are driven longer distances per person in sprawling regions than in places with lower-than-average sprawl.
- ✓ Increased levels of ozone pollution. The study found that the degree of sprawl is more strongly related to the number of days with high ozone than per capita income or employment levels.
- ✓ Greater risk of fatal crashes. Residents of more sprawling areas are at greater risk of dying in a car crash. In the nation's most sprawling region, Riverside CA, 18 of every 100,000 residents die each year in traffic crashes.
- ✓ Lower rates of walking and alternative transport use. In more sprawling places, people are far less likely to take the bus or train or to walk to work.

Smart Growth American ranked El Paso as the 13th worst sprawled community using their sprawl index which accounts for residential density, the mixture of homes, jobs, and services, the strength of our downtown area and the accessibility of our street network.



4.1 Buildings

It is easy to take our buildings for granted. They seem benign, unchangeable, things we have to deal with rather than tools we can

mold and improve. In reality, the buildings we work and live in dramatically affect us on a personal and group level. We have the ability to reshape our built environment so it minimizes waste, conserves energy and improves our health. The built environment has a profound impact on our natural environment, economy, health, and productivity. According to the United States Green Building Council (USGBC), in the United States, buildings account for:

- ✓ 72% of electricity consumption,
- ✓ 39% of energy use,
- ✓ 38% of all carbon dioxide (CO_2) emissions,
- ✓ 40% of raw materials use,
- ✓ 30% of waste output (136 million tons annually), and
- ✓ 14% of potable water consumption.

On a national level, construction makes up 13.4% of the $13.2 trillion U.S. Gross Domestic Product (GDP). This includes all commercial, residential, industrial and infrastructure construction. Commercial and residential building construction creates 6.1% of the GDP. Locally, the building industry accounts for 9,000 jobs that support our local economy.

According to the EPA Green Building web site, the building industry is increasingly focused on making its buildings greener, which includes using healthier, less polluting and more resource-efficient practices. Indoor environmental quality (IEQ) refers to the quality of the air and environment inside buildings, based on pollutant concentrations and conditions that can affect the health, comfort and performance of occupants -- including temperature, relative humidity, light, sound and other factors. Good IEQ is an essential component of any building, especially a green building.

4.2 Where are we?

El Paso has experienced explosive growth over the past five years. We were the 7th fastest growing city in the nation from 2000 to 2006. El Paso is currently the fifth largest city in Texas and the 23rd largest city in the U.S. Expansion at Fort Bliss is expected to bring a total of 30,000 new soldiers and 50,000 family members to El Paso by 2012. This growth poses both opportunities and challenges for our community.

Our initial development efforts have focused on downtown revitalization, revamping our regulatory system to promote smart growth, raising the bar for our own buildings and overhauling our transportation system to reduce dependence on automobiles.

El Paso realized early that efforts to become a more livable city begin and end with the downtown core. Catalyzing the growth of a vibrant, livable downtown is key to success. A partnership between local private investors and the City has resulted in dramatic changes of the downtown skyline. A wide range of incentives and fee reductions were used to encourage infill investment. El Paso's success in downtown redevelopment was highlighted in the following article from a recent edition of the Wall Street Journal article.

With A Little Help from Its Friends

For years, governments have tried and failed to revive El Paso. Then local investors decided to take action.

July 28, 2008 Wall Street Journal By Kris Hudson

EL PASO, Texas -- This border city, once the thriving commercial hub of the U.S. Southwest, is reviving its moribund downtown with the help of some native benefactors.

Still in its early stages, the effort to overhaul dormant hotels and office towers has delivered results already. Over the past two years, property values in a 288-acre section of downtown defined by a new tax-reinvestment district jumped 40% to almost $446 million. And many prominent El Paso structures that have stood empty for decades, including the Plaza Hotel, are being renovated.

This border city, once the thriving commercial hub of the U.S. Southwest, is reviving its moribund downtown with the help of some native benefactors. WSJ's Kris Hudson reports.

The difference between this and earlier revitalization efforts that fizzled is the involvement of deep-pocketed investors, who decided in 2004 to gather their own resources and chart a course for revival. Among them: longtime El Pasoan William Sanders, the founder of real-estate firms Security Capital Group Inc. and LaSalle Partners, and Paul Foster, chief executive officer of Western Refining Inc., an independent oil refiner and marketer based in El Paso.

"This is El Paso's shot to revitalize downtown," says Brent Harris, managing partner of Mr. Foster's real-estate interests. "With the folks that are involved in this, if it doesn't happen now, it's never going to happen."

El Paso, a city of 610,000 tucked into the far western corner of Texas between the borders of Mexico and New Mexico, was one of the first cities settled by Spanish explorers in what is now the U.S. El Paso established itself as the primary stop on the trail from the Mexican state of Chihuahua to Santa Fe, N.M., and later served on the all-weather route for travelers headed from the East Coast to California and back. In 1913, Texas established its college of mines -- now the University of Texas at El Paso -- in the city. For much of the last century, El Paso's major industries were cattle, cotton, textiles, copper refining and the neighboring Fort Bliss U.S. Army post.

El Paso began to lose momentum in the 1960s and 1970s. City leaders point to myriad causes. The spread of suburbanization after World War II produced greater growth in southwestern cities such as Phoenix, Ariz. El Paso lost big industries as the textile trade migrated to Asia and copper refineries and smelters shut down. As the city of Ciudad Juárez, directly across the border in Mexico, grew rapidly -- there are 2.6 million residents in the "borderplex" region of El Paso, Juárez and surrounding suburbs -- El Paso's economy became more intertwined with its neighbor's and subsequently suffered from the devaluation of the Mexican peso.

Hotels closed downtown, as did the Kress department store, leaving its iconic storefront vacant at a prominent street corner. Many floors in downtown buildings remain vacant with boarded-up windows, and department stores are mixed in with pawn shops and an outdoor swap meet.

Various levels of government have tried to boost El Paso's downtown, building a county courthouse in the 1980s, a state office building in the 1990s, a parking garage in recent years and a federal courthouse now under construction.

"For years, the city had tried redoing downtown on its own," says Verónica Rosales-Soto, redevelopment manager in the city's economic-development division. "But none of that mattered because the private investment didn't follow."

Led by Mr. Sanders, the newly formed Paso Del Norte Group, a club of El Paso's business elite, hired a San Francisco-based consultant to help it draft a plan for overhauling downtown. The group brought in city officials to advise it on the plan's feasibility, but in a move that proved controversial, the business group elected not to subject the plan to widespread public scrutiny in its early phases, reasoning that too many opposing viewpoints might stymie the process.

By 2006, the plan was finalized. The Paso Del Norte Group unveiled it for an audience of 1,200 business owners, city officials and citizens at the historic Plaza Theatre downtown. The plan envisioned separate zones for an entertainment district, historic preservation, mixed-use development and a Mercado shopping district, among other things. In October 2006, the City Council adopted a revised version of the plan, which included changes such as removing a few blocks from the revitalization area to avoid disturbing adjacent neighborhoods. The council voted two months later to form a downtown tax-reinvestment district, where property-tax revenue in excess of 2006 amounts is used to help finance new city infrastructure, such as streets and sidewalks.

Mr. Sanders, who declined to comment for this article, formed the Borderplex Community Trust REIT in early 2007, specifically to buy and rehabilitate buildings in El Paso and Juárez. A REIT can pool its investors' money; buy and sell properties; and forgo paying corporate taxes as long as it pays out 90% of its income as dividends.

Deep Pockets

- ✓ **The Problem:** El Paso's downtown was dying, and various government efforts to revive it had failed to take root.
- ✓ **The Economic Game Plan:** A group of local investors decided to gather their resources and chart a course for revival that included buying and overhauling dormant hotels and office towers.
- ✓ **The Results So Far:** Property values downtown have jumped 40% to almost $446 million over the past two years.

The REIT, with 216 investors so far, has purchased more than a dozen properties, investors say, including the O.T. Bassett Tower, a 15-story office building erected in 1930, and the 18-story Chase Bank Building, where occupancy has risen to 93% from 43% over the past 17 months.

The REIT intends to sell most of the O.T. Bassett Tower to apartment developer TVO Groupe and retain the first floor to convert to retail space. TVO will begin converting the tower to 30 luxury condominiums later this year. The El Paso-based developer anticipates the project will yield less than half of the 20% return it typically seeks in its investments, but it is willing to accept that to support the broader revitalization push, Chief Executive Charles Garrett says.

Mr. Foster, meanwhile, purchased the 98-year-old, 12-story Mills office building in 2006 and the adjacent, six-story Centre building last year. He also bought the 294-room Plaza Hotel, built in 1929 but vacant for the past two decades, directly across the street from his two office buildings. Mr. Foster has begun a renovation and expansion of the office buildings and moved Western Refining's headquarters there. Plans for the hotel still are in flux, though eventually it will be reopened.

Developments elsewhere in El Paso have added momentum to the downtown revitalization. Texas Tech University has begun construction of a medical campus in El Paso. The U.S. Army's realignment of its domestic and foreign forces stands to nearly double the size of Fort Bliss to almost 37,000 soldiers within the next five years.

But even with the rise in property values, not everyone supports the revitalization unequivocally. Some business and property owners object to the Paso Del Norte Group devising the plan privately before unveiling the final version. Their biggest fear is that the city will use eminent domain to seize properties and turn them over to developers if multiblock projects such as shopping centers are proposed.

"To have the city being manipulated by developers into scaring people out of their property is an un-American process," says Enoch Kimmelman, whose family has operated the Starr Western Wear store since 1964 and owns the store's 40,000-square-foot building.

Mayor John Cook denies that developers are steering the city government. A two-year moratorium on the use of eminent domain downtown is set to expire in November, but Mr. Cook says, "I don't really see that the city is going to have to use" it.

Meanwhile, El Paso's problems extend well beyond the vacancies downtown, according to Tom Fullerton, a University of Texas at El Paso economics professor. He says below-average graduation rates in El Paso's public schools and community colleges remain the city's biggest problem, resulting in a loss of $1 billion in personal income annually. The city's median household income measures $33,103, well below the national median of $48,451.

Still, James Scherr, a native El Pasoan, is betting the renaissance downtown is the beginning of something bigger. The attorney bought the 38-year-old, 200-room International Hotel downtown out of foreclosure for $1 million in 2004. He is spending $20 million, including $5 million in city-provided incentives, to get it back in operation as a Doubletree hotel by the end of the year.

"El Paso is going into the 21st century with our running shoes on," he says. "Right now, this town is poised for takeoff."

Downtown redevelopment efforts began with the preservation and restoration of the historic Plaza Theatre. The City was honored with the Entrepreneurial American Leadership Award by the Partners for Livable Communities in recognition of the public, private, and community collaboration in the development and restoration on The Plaza Theatre & Performing Arts Centre. Through a successful partnership between the City of El Paso and the El Paso Community Foundation, as well as various funding grants, the City has recovered a significant historical landmark and important element of El Paso's unique and rich heritage. First built in the 1920's and recognized as El Paso's most architecturally grand theatre, The Plaza Theatre Performing Arts Centre, previously known as The Showplace of the Southwest, is now a centerpiece of downtown. The completion of this initiative is the largest private investment ever made to a public facility in the City.

The American Planning Association (APA) Texas Chapter recognized El Paso as the 2008 Community of the Year Award in acknowledgement of the massive planning initiatives undertaken over the past two years and the resulting changes. Additionally, the City is also the recipient of the 2008 Current Planning Award in recognition of the new Subdivision Ordinance.

The 2008 Community of the Year Award is a prestigious recognition that is bestowed upon a community that demonstrates exemplary work and high quality planning. The City of El Paso was selected for this award based on its substantive and dedicated efforts that were realized and reflected in the adoption of the following ordinances and technical documents:

- ✓ The Parks and Recreation Master Plan
- ✓ The Downtown 2015 Plan
- ✓ A Green Infrastructure Plan for El Paso
- ✓ A revised Zoning Ordinance
- ✓ A revised Subdivision Ordinance

- ✓ A revised Design Specifications for Construction Manual
- ✓ The first Drainage Design Manual
- ✓ The first Smart Code for El Paso

The new El Paso Subdivision Ordinance was recognized by the APA (TX) for its state-of-the-art approach in complying with current Texas law while further positioning the City for sustainable comprehensive development. Notably, the adoption process was indicative of the combined efforts of various interest groups within the community.

We are in the midst of a revolution – a change in the way the world around us is constructed. Efforts like Leadership in Energy and Environmental Design (LEED), Energy Star and Green Globes have successfully raised our awareness of the impacts our buildings have on our personal health, our energy budgets, and our waste streams. We are also in the midst of a paradigm shift on how we can and should design, construct and operate these facilities to enhance our lives and our environment.

In El Paso, 26 buildings have registered and are pursuing United States Green Building Council (USGBC) LEED certification. Our neighbors in Ciudad Juarez already have a certified building (Eiffel's Centro Internacional de Negocios). The City is in design stages for a LEED certified library and several transit terminals. The City Council adopted the USGBC LEED Silver standard for all new and large renovation projects – recognizing the true lifetime costs of a building and the savings that could be achieved by investing time and creativity during the construction and design process.

The City is also offering one of the richest green building grants in the country, offering to reward developers who construct buildings to USGBC's standards. Builders are eligible for awards from $50,000 up to $400,000 depending on the level of LEED Certification they achieve.

Green building in El Paso is in its infancy. Government organizations are leading the way by requiring green building standards on their facilities. These projects are growing the knowledge and experience necessary to transform the local market. A handful of federal, state and local government projects have been completed and more are in the design process.

On the private side, Southwest Energy Conservation, LLC is a home energy rating company serving the local market. Southwest Energy Conservation was recently recognized as an EPA ENERGY STAR "Partner of the Year" for being instrumental in the growth of ENERGY STAR qualified homes in the region. The local company contributed to the residential green building community by aggressively recruiting builders through seminars, training, advertising, marketing materials, and media coverage. The company verified that 536 local homes met the Energy Star criteria in 2007.

The attendance at the Eco Build Symposium recently organized by local architects to educate the local design and construction community on green building practices is a good indication of the desire to design and construct green buildings and the need for more training and experience.

4.3 Key Issues

The strategic planning process identified the following key development issues that must be addressed for us to be successful:

- ✓ Smart and sustainable development that decreases urban sprawl and encourages adaptive reuse of buildings must be achieved.
- ✓ Natural habitat must be identified, preserved and increased.
- ✓ A viable mass transit system must be developed as a preferred mode of transportation.
- ✓ Green building practices must be adopted citywide to reduce energy consumption and environmental impacts.

4.4 Improvement goals

To achieve our City Council's vision that El Paso "become the most livable city in the United States" and "become the lowest car dependent city in the Southwest," we have adopted the following goals:

- ✓ Become the least car dependent city in the U.S. by promoting smart growth and integrated user-friendly transit systems.
- ✓ Establish green building practices as standard business practice in El Paso
- ✓ Achieve international recognition for successful preservation of our Chihuahuan desert heritage for all time.

5.0 Energy

Sustainable energy can be defined as "Energy which is replenishable within a human lifetime and causes no long-term damage to the environment." For several generations, our society has thrived on energy sources that have not been sustainable. Each of those generations has acknowledged that they were essentially mortgaging their children's future.

In the 1970's, President Nixon launched Project Independence, declaring, "Let this be our national goal: At the end of this decade, in the year 1980, the United States will not be dependent on any other country for the energy we need to provide our jobs, to heat our homes, and to keep our transportation moving." In 1970, he proclaimed to Congress: "I am inaugurating a program to marshal both government and private research with the goal of producing an unconventionally powered virtually pollution free automobile within five years." Every President since has made similar pledges. Unfortunately, we are no closer to energy independence today than we were 30 years ago.

Energy issues affect many aspects of our lives. The extraction, transport, refinement and eventual combustion of fossil fuels have left a legacy of dramatic impacts on the natural environment. National and international security issues revolve around foreign sources of energy. International economics are tilted by the huge transfers of wealth required to continue our use of fossil fuels.

The existing fossil fuel system is incredibly complex and efficient. We pay more for a gallon of milk from a nearby dairy than for a gallon of gasoline that has been pumped from a deep aquifer, pushed through a pipeline, shipped on a supercarrier across the ocean, chemically distilled, treated in a refinery, and trucked to the local gas station. However, the easy oil sources have already been tapped. Oil companies are being forced to drill deeper in the ocean, use more expensive technologies to pull more oil from existing fields and use oil that is much harder to treat to keep up with growing worldwide demand.

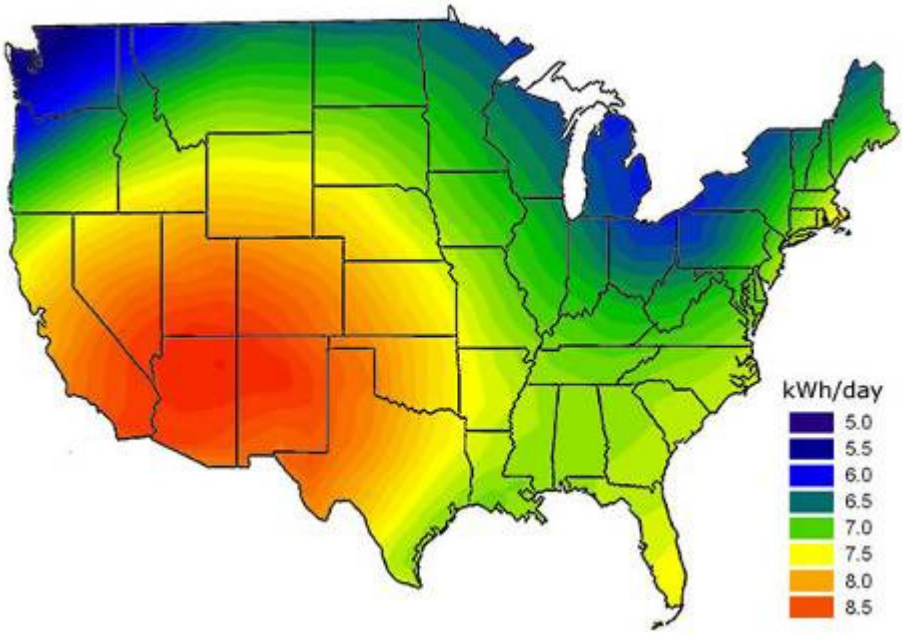
Our entire development approach and economy has been fired by the use of inexpensive, plentiful fossil fuels. Recent events have demonstrated the inherent instability in this system. Our energy supply is so tenuous and stretched that a band of pirates off the Somalian coast can influence energy markets worldwide.

Fortunately the spiraling cost of energy and the steady march of technological progress are combining to make sustainable energy a realistic aspiration. A new economic model is being assembled that will provide a steady stream of new, well-paying jobs and a secure energy source.

5.1 Where are we?

El Paso is well known as the Sun City. We have hosted the Sun Bowl since 1934, making it the second oldest continuously played bowl game. According to National Weather Service data, El Paso receives 88.2% of the possible sunshine, and experiences over 300 sunny days per year. The El Paso area benefits from some of the richest solar radiation in the Western Hemisphere. The energy from sunshine falling on a single acre of land in West Texas is capable of producing the energy equivalent of 800 barrels of oil each year.

Along with our abundant solar resource, we also enjoy the benefit of having the El Paso Solar Energy Association (EPSEA). EPSEA was founded in 1978 and is the oldest, continuously active, local solar organization in the United States.



However, our rich heritage and plentiful supply have not been enough for solar energy to gain a toehold in El Paso. We are the Sun City, but not the Solar City, at least not yet.

While solar energy is the obvious source of renewable energy in El Paso, there are many other viable options. Biodiesel, landfill gas, wind and even municipal solid waste are all potential energy sources. Specifically, the gas produced from degrading waste in our landfills is an excellent source of energy. A recent study of our landfills indicated that as our landfills age, we will have the opportunity to produce up to 4.8 MW of power by collecting gas from the decaying trash within the landfill.

Probably the easiest source of new energy isn't really new energy at all, but conserved energy generated through energy efficient upgrades. Our operations and facilities are a virtual goldmine of quick, clean, affordable energy.

We are mining the energy efficiency source on many fronts. The City has employed a dedicated Energy Manager for over 10 years. Our Energy Manager's sole priority is finding ways to drive down our energy use. We are engaged in a city-wide energy efficiency project that involves 52 of our facilities. We are also in the midst of the evaluation and planning process for energy efficiency retrofits at our remaining 132 facilities. Finally, many of our departments are pushing for new and innovative ways to reduce energy consumption by rethinking the way we do business. Recently, our IT department was able to consolidate a room full of computers onto one server with the use of advanced technology.

Growing local alternative energy firms to stimulate the local economy and address global demand is one of our highest priorities. El Paso has used a combination of City incentives, abundant sunshine and economic advantages to help a number of new alternative energy company startups that are providing jobs and meeting the growing demand for new energy sources. We have seen a yellow grease biodiesel refinery, two algae biodiesel producers and a feedlot biogas facility start operations within the past year.

5.2 Key Issues

The strategic planning process identified the following key energy issues that must be addressed for us to be successful:

- ✓ The City should take advantage of its own renewable resources to generate clean cost-effective energy.
- ✓ El Paso must become an internationally recognized center for clean energy research, development, manufacturing and generation.
- ✓ The City must direct a dialog with utility providers to reach alignment with our pursuit of sustainable energy.
- ✓ The City must develop a comprehensive energy plan, both internal to City operations and external for community use.

5.3 Improvement goals

To use our energy more efficiently and find cleaner energy sources and enable our citizens those same opportunities, we have adopted the following goals:

- ✓ Reduce City of El Paso total energy consumption by 30% by 2014.
- ✓ Implement 20 City of El Paso renewable energy projects by 2015.
- ✓ Transition 20% of City of El Paso energy use to renewable sources by 2020.
- ✓ Transition 10% of Community energy use to renewable sources by 2020.
- ✓ Aggressively use partnerships and incentives to create a clean energy core business sector in El Paso.

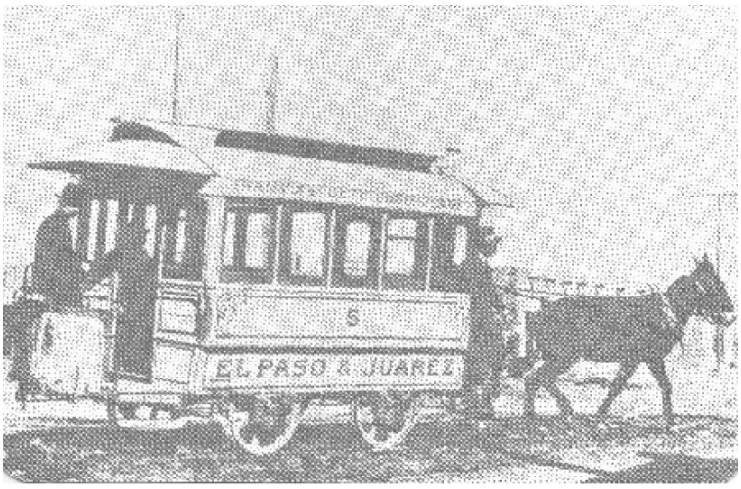
The City recognizes that public/private partnerships with education, workforce and economic development stakeholders are the building blocks for quality, clean energy employment opportunities for El Pasoans.

6.0 Transportation

Sustainable transportation is based on the premise that our existing systems that rely on cars have proven unsustainable, consuming excessive energy, affecting the health of our community, and delivering a declining level of service despite increasing investments. Many of these negative impacts fall disproportionately on those social groups who are also least likely to own and drive cars. Driving impacts the environment with increased air pollution from vehicles and refineries. Economically, our personal budgets are impacted by rising fuel costs, while the national economy is strained by the huge transfer of wealth to oil-producing states. Socially, the disadvantaged portions of our society that cannot afford personal vehicles face huge challenges in access to work, education and health care.

6.1 Where are we?

6.1.1 Transit



El Paso public transportation began with trolley service in 1881. Horse and mule-drawn trolleys provided service both within the city and across the border. Mandy was one of El Paso's favorite streetcar mules. She was widely known and loved throughout the city. One story concerns a traveling salesman who was a passenger on Mandy's trolley one hot afternoon when Mandy decided to stop for awhile and rest. The impatient passenger told the trolley operator he was in a hurry and asked why he wouldn't hit the mule and make her go. "Hit Mandy?!" exclaimed the driver, "why if I was to lay a hand on that mule the town wouldn't stand for it."

Eventually the trolleys were replaced by electric streetcars which were, in turn, replaced by buses. Sun City Area Transit began in 1977. In 1987, El Pasoans approved a one-half cent tax increase dedicated to funding transit within the El Paso city limits, and the transit system was renamed Sun Metro.

As recently as 2006, our Sun Metro bus system was in disarray. An internal audit of the system concluded that we had not maintained proper financial controls, that preventative maintenance was inadequate and "…most importantly previous Sun Metro's Management did not adapt to change over the last 20 years and as such the quality of service has suffered." In June of 2006 our fleet was in such bad shape that more than 15% of all our busses failed to show up on their routes. Those that did arrive were often late and lacked air conditioning.

Through a concerted effort with support from City leadership, Sun Metro has changed course. In the summer of 2008, 95% of the busses were on time and less than 1% missed service. The fleet has been upgraded and one of the complaints heard recently is that the air conditioning is too cold.

Sun Metro is a leader in the use of alternative fuels. The program operates natural gas powered busses on all of the City's 112 fixed routes.

El Paso is committed to providing viable alternatives to single car travel for our citizens. Our investment in restoring Sun Metro is just a hint of that commitment. One of our City Council's primary policy goals is that El Paso "…become the most livable city in the United States and be recognized as an international city." To help make that vision a reality, City Council recently approved the creation of the Camino Real Regional Mobility Authority (CRRMA). The CRRMA has authority to finance, design and construct its own transportation infrastructure projects. The CRRMA and City Council also recently submitted a billion dollar Comprehensive Mobility Plan that included funding for roadways, international bridges and rapid transit corridors along Mesa Street on the west side and Montana Street on the east side.

6.1.2 Fleet

The City of El Paso operates a substantial fleet with over 2,200 vehicles that travel over 23 million miles a year. We use 3 million gallons of diesel and unleaded gasoline to fuel those vehicles. In light of recent fuel prices and environmental impacts, we are transforming our fleet. Recent additions to the fleet include five new hybrid vehicles and 93 compact, high-efficiency vehicles.

Our police force is also evaluating Dodge Chargers that come with a special system that can switch off half the cylinders in the V8 engine to conserve up to 20% more fuel than standard police cruisers.

In addition, the City Manager recently authorized departments to implement flex-time scheduling where feasible to reduce the number of employee commutes.

6.2 Key Issues

The strategic planning process identified the following key transportation issues that must be addressed for us to be successful:

- ✓ The City must develop an integrated approach to transportation that is directed and approved by City leadership.
- ✓ The City must leverage its success with natural gas and lead the integration of alternative fuel use in the region.
- ✓ Acceptable costs must be maintained while providing world class service levels.

6.3 Improvement goals

To demonstrate El Paso's commitment to becoming "the most livable city in the United States and be recognized as an international city" and to "establish a comprehensive transportation system and become the lowest car dependent city in the Southwest" we have adopted the following goals:

- ✓ Determine the benchmark for productive vehicle miles per gallon for different vehicle classes and map out plan to achieve world class rates (complete schedule by 2011).
- ✓ Decrease the baseline number of fleet vehicles on the road by 20% from 2008 levels by 2015.

7.0 Waste and Resources

Using our resources in a sustainable manner implies that we consume, conserve and preserve our natural resources at rates that can be maintained for the long term.

The increasing demands on resources, caused by growing population levels, the impact of contemporary western lifestyles, expanding industrialization, the disparity between rich and poor and other issues are bringing widespread degradation and destruction of the natural environment on which all life ultimately depends.

To be sustainable, we must use our resources at a rate that can be replenished. Clearly, our society is depleting our available resources and we need to take steps to bring our use to within sustainable limits.

The widely-distributed documentary "The Story of Stuff" explores the connections between a number of environmental and social issues. The documentary describes the materials economy, which it defines as a system of extraction, production, distribution, consumption, and disposal. Some of the assertions include:

- ✓ In the past three decades, one-third of the planet's natural resources base has been consumed.
- ✓ Less than 4% of the original forests in the United States are left.
- ✓ Forty percent of waterways in the US have become undrinkable.
- ✓ The U.S. has 5% of the world's population but consumes 30% of the world's resources and creates 30% of the world's waste.
- ✓ The average U.S. person now consumes twice as much as they did 50 years ago.
- ✓ We each see more advertisements in one year than people 50 years ago saw in a lifetime.
- ✓ Average U.S. house size has doubled since the 1970s.
- ✓ Each person in the United States makes 4 ½ pounds of garbage a day, twice what we each made thirty years ago.
- ✓ For every one garbage can of waste you put out on the curb, 70 garbage cans of waste were made upstream to make the junk in the garbage can you put out on the curb.
- ✓ Of the 100 largest economies on earth now, 51 are corporations.
- ✓ 80% of the planet's original forests are gone.
- ✓ The Amazon rainforests are losing 2000 trees a minute.
- ✓ In the U.S., we are targeted with more than 3,000 advertisements a day.

7.1 Where are we?

Recycling is one of the most significant ways we can directly impact the health of the environment. Recycling saves energy, reduces greenhouse gas emissions, diminishes consumption of natural resources, and reduces dependence on landfills, allowing land to be cultivated in more environmentally preferable ways.

- ✓ For every one million sheets of paper not printed, 85 pulp trees are saved.
- ✓ If all morning newspapers read in the United States were recycled, 41,000 trees would be saved daily and 6 million tons of waste would never end up in landfills.
- ✓ Recycling an aluminum can saves enough energy to run a television set for three hours.
- ✓ Each year, steel recycling saves the energy equivalent to electrically power about one-fifth of U.S. households for one year.
- ✓ By using plastic in packaging, American product manufacturers save enough energy each year to power a city of one million homes for three-and-a-half years.
- ✓ The aluminum beverage can returns to the grocer's shelf in as little as 60 days after collection.
- ✓ Americans buy over 85 million tons of paper per year-that's about 700 pounds per person.
- ✓ Most aluminum recovered is used to manufacture new cans.
- ✓ 99% of all beer cans and 97% of all soft drink cans are made of aluminum.

Prior to implementing our current curbside recycling program, the City of El Paso collected recyclable materials at six citizen collection stations (CCS) with a participation rate of only about 2%. The City of El Paso was one of the largest communities in the nation that did not have a curbside recycling collection program. However, once the City rolled out its curbside recycling program our community jumped at the opportunity. Around 16% of waste that could end up in the landfill is currently diverted for recycling. Recycling Today reported that we were the 19th largest program in the nation in terms of the number of participating households.

A successful recycling program is defined by whether citizens actually use it. Approximately 86% of El Pasoans participate in the “Drop it in the Blue” recycling program. The curbside program has increased our recycling rate from an average of 625 tons per month to 3,750 tons per month. This high level of

participation can be in part accredited to the City's extensive outreach efforts prior to and during the first year of the curbside recycling program. These outreach efforts ranged from standard advertisements to the "Sea Lion Recycling Program" at the City Zoo.

The City also recently began a pilot test for recycling of a new material. The City has teamed up with a local biodiesel refiner (Global Alternative Fuels, Inc.) to collect yellow grease at citizen collection stations that will ultimately be converted to biodiesel.

7.2 Key Issues

The strategic planning process identified the following key issues that must be addressed for us to be successful in moving towards sustainability:

- ✓ A City-wide procurement program that minimizes waste and increases the use of recyclable materials and environmentally-friendly products must be implemented.
- ✓ Waste reduction and resource conservation must be achieved.

7.3 Improvement goals

To become more sustainable by both reducing our impact on the environment and saving money, we have adopted the following goals:

- ✓ Achieve residential waste diversion rate of 25% by 2013 to become a leader among Texas cities.
- ✓ Reduce waste produced by City departments by 10% by 2011
- ✓ Increase environmentally-friendly products purchased by 5% by 2011

Appendix A – City-Wide Issues Strategic Plan

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City-wide Integrated Sustainability Strategic Planning Elements

Issue 1 –

<u>Stakeholder Engagement & Education:</u> The citizens of our community/region and our employees must be educated and engaged to support the City's sustainability direction.

<u>Strategies</u>

Strategy 1: Understanding of citizen perspectives, needs and desires provides the background for effective engagement.

<u>Tactical Concepts:</u>

- ✓ Define market segments
  - Residential/Commercial/Industrial/Institutional
  - Further segmentation possible along demographic and other parameters (e.g., Internet usage, generational)
  - Outreach will be specific to our low and moderate income population and Spanish speakers
- ✓ Conduct secondary market research
  - Explore best practices
  - Gather available data to support programs under consideration (e.g., adoption rates)
- ✓ Conduct primary (direct) market research
  - Initial effort: statistically valid telephone methodology; bi-lingual
  - Consider Internet research options

Strategy 2: A comprehensive, thematic stakeholder education/communication plan builds understanding and support.

<u>Tactical Concepts:</u>

- ✓ Develop thematic approach
  - Highlight and dovetail with focus areas
  - Graphic identity such as logo/mascot
  - Message should: inspire, educate, use practice (not theory), demonstrate bottom line, be creative
  - Showcase projects
- ✓ Build on success of recycling program for example; others
- ✓ Use multiple communications channels to reach all audiences

- Channel 15 and all media, utility bill inserts, billboards, TV ads
- Utilize city website
- Education through schools and youth organizations
- Neighborhood coalition
- Speakers Bureau
- City/community events
- Others

✓ Develop City "green" volunteerism program

✓ Develop partnerships

- Partner with other events and facilities
- Develop partnerships with community organizations such as EPISO/Interfaith, scouts, non-profits, regional leaders, others

✓ Develop and implement plan

Strategy 3: Expanding relationship with key stakeholders builds trust and positive community connections.

Tactical Concepts:

✓ Identify key community thought leaders

✓ Engage and charter an Advisory Panel; collaboratively develop approach

Strategy 4: An effective internal communications program builds buy-in and support.

Tactical Concepts:

✓ Develop and implement internal communications plan

✓ Define workforce engagement and incentives

Goal

We will increase sustainability awareness to world-class levels (defined as 80% of top two ratings on a five-point scale) by 2013.

Issue 2

<u>Triple Bottom Line (TBL):</u> All city processes and procedures must employ a triple bottom line – economic, environmental, and social – approach.

<u>Strategies</u>

Strategy 1: Refined procedures support performance that aligns with TBL practices.

<u>Tactical Concepts:</u>

- ✓ Research/identify TBL best management practices
- ✓ Implement best management practices for operational and capital activities
- ✓ Review and revise procedures by department
- ✓ Assess and prioritize departments according to highest impact
- ✓ Process map to define gaps and improvements
- ✓ Develop streamlined/sustainable standards for city purchasing, including equipment

Strategy 2: Policies that align with triple bottom line support performance.

<u>Tactical Concepts:</u>

- ✓ Identify and resolve any departmental common and conflicting goals
- ✓ Review policies for alignment with TBL approach

Strategy 3: Educating the workforce regarding TBL concepts creates buy-in for implementation.

<u>Tactical Concepts:</u>

- ✓ Embed educational elements in all sustainability presentations/forums
- ✓ Create reading list for department and portfolio managers
- ✓ Hold TBL workshop for department and portfolio managers

<u>Goal</u>

All City processes will employ TBL concepts by 2016 and 50% of City procedures account for TBL concerns by 2016.

Issue 3

<u>Leadership & Workforce:</u> City leadership and the workforce must have the knowledge and skills necessary to support sustainability.

<u>Strategies</u>

Strategy 1: Understanding baseline perspectives directs cultural change.

<u>Tactical Concepts:</u>

- ✓ Conduct sustainability values survey within organization.

Strategy 2: An empowered workforce contributes positively to sustainability.

<u>Tactical Concepts:</u>

- ✓ Create sustainability point position in each department (shared duties not full-time)
- ✓ Define areas in which employees can actively engage
- ✓ Identify how it will impact/benefit them
- ✓ Create employee communication loop to share information (dovetails with Issue 1/Strategy 4)

Strategy 3: Training support builds workforce competencies.

<u>Tactical Concepts:</u>

- ✓ Field trips to other cities to review best practices
- ✓ Develop formal training program – not training by vendors; commit necessary funds

Strategy 4: Council education and alignment with sustainability direction creates necessary support.

<u>Tactical Concepts:</u>

- ✓ Conduct policy review with Council (dovetails with Issue 2/Strategy 2)
- ✓ Prepare detailed proposals with options, benefits for council
    - In depth, comprehensive

<u>Goal</u>

All City workforce will be trained in sustainability impacts and programs by 2012.

Appendix B – Focus Area Strategic Plan

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Air

Definition: Air is a fundamental building block of life that directly impacts our health, aesthetics, economy, and climate. It knows no boundaries.

Sponsor: Elda Hefner (Air Quality Manager)

Issue 1

The City must improve local air quality to provide a healthier place to live and better place to do business.

Strategies

Strategy 1: Assessing and documenting the background and current situation forms the baseline for improvement.

Tactical Concepts:

- ✓ Develop/update (or disseminate if completed) an emissions inventory for the following categories (to be refined):
  - Transportation
  - Power generation
  - Industrial
  - Land development/Buildings
  - Miscellaneous
- ✓ Document emissions sources in baseline audit
- ✓ Inventory existing programs, their performance and potential to contributing to development of a framework for program prioritization.
- ✓ Define connections with other focus areas to leverage efforts

Strategy 2: Reducing emissions from buildings improves air quality.

Tactical Concepts:

- ✓ Continue and publicize City LEED building program
- ✓ Green Building grant and awards program
- ✓ Green building training for contractors and consultants

Strategy 3: Efficient management of mobility infrastructure improves air quality.

Tactical Concepts:

- ✓ Implement rapid transit.
- ✓ Enhance existing transit options (terminals/routes)
- ✓ Provide real time transit information to improve user confidence

Strategy 4: Clean businesses contribute to improved air quality through their business practices.

Tactical Concepts:

- ✓ Create incentive programs that attract, support and promote desirable businesses
- ✓ Enforce applicable codes and ordinances to improve air quality
- ✓ Research enhanced code requirements implemented by other entities

Issue 2

The entire Paso del Norte region must collaborate to achieve improvements in air quality.

Strategies

Strategy 1: The City must educate the citizens and partners in the Paso del Norte region to improve our combined airshed

Tactical Concepts:

- ✓ Use events like Eco Fiesta to engage citizens
- ✓ Engage local partners including: Joint Advisory Committee for Air Quality, Border 2012, Rio Grande Council of Governments, Santa Teresa/Sunland Park, and Redco.
- ✓ Dovetail and support City-level Issue 1 ("The citizens of our region and our employees must be educated and engaged to support the City's sustainability direction")

Strategy 2: Creating a Clean Cities Coalition facilitates collaboration and partnerships that can expand the use of alternative fuels.

Tactical Concepts:

- ✓ Partner with New Mexico Land of Enchantment Clean Cities Coalition to create a Paso del Norte Department of Energy Clean Cities coalition.

Goals

- ✓ Complete greenhouse gas inventory and establish the 1990 baseline for the entire City by 2011.
- ✓ Develop a plan to reduce greenhouse gas emissions to meet Kyoto protocol guidelines by 2011.
- ✓ Reach attainment of federal air quality standards within by 2019.
- ✓ Reduce the number of days with poor AQI by 25%.

Community

Definition: City of El Paso efforts to promote sustainable lifestyles for all in El Paso

Sponsor: Tammy Fonce (Environmental Services)

Issue 1

The message that a sustainable lifestyle is both attainable and attractive must be delivered to our entire community.

Strategies

Strategy 1: Public leadership and outreach can influence society.

Tactical Concepts:

- ✓ Conduct both large-scale (Eco Fiesta) and small-scale (neighborhood associations) outreaches with City sustainability initiatives and direction.
- ✓ Develop user-friendly web site that demonstrates benefits of City sustainability initiatives.
- ✓ Distribute regular newsletter with usable information on City initiatives and simple sustainability measures for citizens.

Issue 2

Unemployment rates and per capita wages need to progress toward national standards

Strategies

Strategy 1: Education and training can catalyze job growth in renewable energy and related businesses.

Tactical Concepts:

- ✓ Guide and facilitate workforce development system resources by working with educational and training partners to develop initiatives for quality employment opportunities in renewable energy and related businesses
- ✓ Develop and promote sustainable business development through community education and training in community redevelopment/reinvestment areas
- ✓ Promote/develop programs that focus in community redevelopment/reinvestment, specifically people & places.
- ✓ Develop partnerships with other organizations.

Issue 3

The impacts and needs of each sector of the community must be addressed for specific sustainability programs.

Strategies

Tactical Concepts:

Strategy 1: Targeted City sustainability efforts can move all sectors of society towards sustainability.

- ✓ Conduct sustainability-focused needs assessment.
- ✓ Promote awareness of energy audits.
- ✓ Increase awareness of available quality of life programs targeting low-income families and other special populations.
- ✓ Fast-track green development projects.

Issue 4

A transition to a "walkable" community must be undertaken.

Strategies

Tactical Concepts:

Strategy 1: The City's development framework can mold and shape future development to benefit residents.

- ✓ Increase/improve mass transit options.
- ✓ Implement smart growth principles.
- ✓ Extend bike lane system and develop a bike trail system.

Issue 5

Civic and cultural pride in our community must be instilled.

Strategies

Strategy 1: Rewarding positive behavior and correcting negative behavior catalyzes change

Tactical Concepts:

- ✓ Recognize citizens who have implemented sustainable programs.
- ✓ Develop a sustainable business practices recognition program/competition.
- ✓ Promote health and wellness programs at schools and worksites to educate our citizens about the value of sustainable practices.

- ✓ Track cleanups and graffiti removal.
- ✓ Aggressively prosecute and eventually reduce code violations.

Goals

- ✓ Civic pride will increase by 30% above baseline levels by 2013.
- ✓ Participation in sustainability outreach programs will increase by 25% above baseline levels by 2013.
- ✓ Understanding of general sustainability principles will increase by 20% above baseline levels by 2013.

Development & Buildings

Definition: Utilize smart growth and development principles that conserve, preserve and enhance urban nature enabling present and future generations of El Pasoans to live, work, play and prosper.

Sponsor: Philip Etiwe (Development Services)

Issue 1

Smart and sustainable community-based development that decreases urban sprawl and encourages adaptive reuse of buildings and land must be achieved.

Strategies

Strategy 1: Defining leadership, roles and responsibilities results in a clear path forward.

Tactical Concepts:

- ✓ Develop organizational chart with roles and responsibilities for growth management.
- ✓ Prepare an estimate of the resources required to initiate, conduct and disseminate work and move forward.
- ✓ Compile a timeline for completion of key tasks.

Strategy 2: Updating the El Paso Plan with sustainability principles sets the course for sustainable development and a smart growth community (includes refining growth boundaries).

Tactical Concepts:

- ✓ Define key sustainability and triple bottom line principles to be embedded into plan prior and include in RFP for consultant services.
- ✓ Prepare an estimate of the resources required to initiate, conduct and disseminate work and move forward.
- ✓ Compile a timeline for completion of key tasks.

Strategy 3: Supporting and enhancing our Brownfields redevelopment program contributes to reduction in urban sprawl while providing economic growth opportunities.

Tactical Concepts:

- ✓ Educate ASARCO redevelopers on Brownsfields tools
- ✓ Include Brownsfields sites and development approach in the El Paso plan.
- ✓ Develop and use good working relationships with the staff of local developers, school districts, universities, colleges, El Paso County, and the appropriate state and federal agencies, to optimize possible Brownfields use;
- ✓ Champion collaboration and information on location, benefits and limiting factors of existing Brownfields sites.

- ✓ Ensure that all development entities are kept current with changing Brownfields availability information.
- ✓ El Paso City staff will maintain an appropriate and current knowledge base on all state and federal programs that provide incentives for developers of Brownfields.
- ✓ Develop a combined City & County of El Paso based incentive program for developers of Brownfields.
- ✓ Estimate the resources needed to initiate, conduct, disseminate work and move forward.
- ✓ Denote an estimated timeline for completion of all associated tasks

Strategy 4: Effectively communicating with all stakeholder groups builds necessary buy-in to embed sustainability into the comprehensive plan and future growth.

Tactical Concepts:

- ✓ Conduct outreach with stakeholders on triple bottom line approach
  - Small scale – Neighborhood Associations
  - Large scale – Eco Fiesta.
- ✓ Identify key stakeholders and thought leaders.
- ✓ Include and encourage all employees to be involved in the process and endorse the plan.

Strategy 5: Downtown redevelopment is the catalyst for successful transition of our community to a livable city.

Tactical Concepts:

- ✓ Provide upgraded transit connections for downtown.
- ✓ Use available incentives to promote smart downtown redevelopment.
- ✓ Continue to focus on conducting popular public events in the downtown area. Consider moving existing events to downtown while leading efforts to develop additional downtown events.

Issue 2

Natural habitat must be identified, preserved and potentially enhanced.

Strategies

Strategy 1: Acquiring, analyzing and understanding baseline natural habitat data forms the foundation for effective program development.

Tactical Concepts:

- ✓ Benchmark other southwestern communities approach to such issues and determine what elements can be used in our city, either as is, or with modification so as to provide a 'best fit' for El Pasoans

- ✓ Effectively communicate the goal and objectives of this project to all stakeholders and encourage their participation in this process via the provision of their own locally based expert knowledge information, as well as some goals and objectives of each of the City's neighborhood associations.
- ✓ Include large natural site landholders in this process, possibly to include religious groups, local developers, school districts, universities, colleges, El Paso County, EPWU, and the appropriate state and federal agencies.
- ✓ Conduct various types of scientifically valid citizen surveys for residents of all of the City's neighborhood associations, to determine citizen knowledge, concerns and value/importance that they place on our natural habitat resources [for various natural area elements such as fauna, flora, spiritualism, contemplative, aesthetic, etc.].
- ✓ Complete a biodiversity inventory.
- ✓ Identify and prioritize habitat that will be protected.
- ✓ Develop a mechanism and resource base to enable natural areas preservation, acquisition and possible enhancements.
- ✓ Develop a mechanism to increase the knowledge base of our wonderful natural area site for citizens and visitors, so that ecotourism benefits are realized [bat roosts, lakes and ponds, trails & scenic views, etc.].

Strategy 2: Developing a comprehensive natural habitat plan outlines long-term direction.

Tactical Concepts:

- ✓ Based on Strategy 1 efforts, develop long-term plan that balances potentially competing priorities
- ✓ Build City and community buy-in to direction
- ✓ Expand current education programs
- ✓ Expand guest opportunities for enjoyable, safe and sustainable use of the City's natural habitat sites.
- ✓ Coordinate and encourage long-term biological monitoring and research opportunities between local stakeholders. Analyze, disseminate and use resultant data to ensure that natural habitat-smart growth processes are adequate.

Issue 3

A viable mass transit system must be developed as a preferred mode of transportation.

Strategies

Strategy 1: Convenient and dependable mass transit increases confidence and use of the system.

Tactical Concepts:

- ✓ Continue world class maintenance efforts
- ✓ Conduct user surveys to determine user route preferences

- ✓ Construct new terminals and move away from hub and spoke route system
- ✓ Install route maps and schedules at stops
- ✓ Install real-time monitoring equipment at transit terminals
- ✓ Continue to provide increasing numbers of bus stop bench and shade shelter units.

Strategy 2: Integrating development, transit and transportation planning produces development that enables use of transit systems

Tactical Concepts:

- ✓ Implement SMART 101 route from downtown to hospital center/UTEP
- ✓ Document use, success and challenges with SMART 101 implementation
- ✓ Pursue federal funding for advanced rapid transit deployment

Issue 4

Green building practices must be adopted citywide to reduce energy consumption and environmental impacts with local governments championing these efforts.

Strategies

Strategy 1: Implementing green building practices on City facilities will demonstrate viability and train local professionals.

Tactical Concepts:

- ✓ Conduct training on City building requirements
- ✓ Benchmark, monitor and publicize City building performance
- ✓ Pilot LEED for existing buildings on City facility.
- ✓ Audit facilities for Energy Star requirements, become Energy Star partner.
- ✓ Develop and use good working relationships with local developers, school districts, universities, colleges, El Paso County, and appropriate state and federal agencies, to optimize construction of green buildings and facilities; El Paso City staff will champion green building practices and end results.
- ✓ Conduct research and determine those green building elements can be used in our region, either as is, or with modification so as to provide a 'best fit' for El Pasoans. Utilizing all available academic resources from regional universities.
- ✓ Effectively encourage the development of green building businesses which will have positive local economic effects [increased tax base, increased job base, etc.].

Strategy 2: Education and outreach increases understanding and can bridge the gap to implementation.

Tactical Concepts:

- ✓ Market City LEED project successes

- ✓ Conduct open houses during City LEED projects
- ✓ Benchmark, monitor and publicize City building performance
- ✓ Implement Green Building award/recognition program (City, corporate and private).
- ✓ Pilot LEED for existing buildings on City facility.

Goals

- ✓ Become one of the least car dependant city in the U.S. by promoting smart growth and integrated user-friendly transit systems.
- ✓ Establish green building practices as normal business case in El Paso
- ✓ Achieve international recognition for successful preservation of our Chihuahuan desert natural heritage for all time.
- ✓ Complete a biodiversity inventory by 2011.
- ✓ Identify and prioritize habitat that will be protected by 2012.

Energy

Definition: Use our energy more efficiently and find cleaner energy sources while also enabling out citizens to do so as well.

Sponsor: Gerardo Velazquez (Sustainability)

Issue 1

The City should take advantage of its renewable resources to generate clean cost-effective energy.

Strategies

Strategy 1: Landfill gas and wastewater digester gas provide opportunities for clean energy development.

Tactical Concepts:

- ✓ Pursue unique opportunities to overcome capital funding obstacles.
- ✓ Prepare feasibility studies on the availability and economics of City renewable resources.
- ✓ Identify partnering opportunities with other local entities.
- ✓ Establish regular working interface meetings with local utility providers.

Issue 2

El Paso must become a internationally-recognized center of excellence for clean energy research, development, manufacturing and generation.

Strategies

Strategy 1: Public/private partnerships with education, workforce and economic development stakeholders are the building blocks for quality clean energy employment opportunities for El Pasoans:.

Tactical Concepts:

- ✓ Develop partnerships with private sector, academia, associations and other government agencies
- ✓ Work with local higher education to pursue funding and research opportunities
- ✓ Support innovation and foster entrepreneurship

Strategy 2: Economic development programming supports the growth and expansion of existing businesses as well as the attraction of new renewable energy and related business to El Paso.

Tactical Concepts:

- ✓ Provide City resources to support collaborative efforts to attract and retain renewable energy firms that will create quality jobs

- ✓ Use available local economic development incentives to catalyze renewable energy businesses
- ✓ Promote strengths of El Paso as a location for renewable business and mitigate barriers to growth.
- ✓ Evaluate and utilize existing local, state and federal incentives to help local renewable businesses and develop and attract new ones

Issue 3

The City must direct a dialog with utility providers to reach alignment with sustainability direction.

Strategies

Strategy 1: Improving the City of El Paso's involvement in energy planning enhances sustainability opportunities.

Tactical Concepts:

- ✓ Establish and charter a City Energy Planning/Interface Board.
- ✓ Conduct a study of best practices which may include field trips to other cities.
- ✓ Establish regular working interface meetings with local utility providers.
- ✓ Incorporate sustainable principles into franchise agreement negotiations.

Strategy 2: Reviewing utility provider franchise agreement creates opportunity for further alignment with El Paso sustainability direction.

Tactical Concepts:

- ✓ Identify win-win opportunities.
- ✓ Incorporate sustainable principles into franchise agreement negotiations.

Strategy 3: Understanding and influencing specific utility energy efficiency programs and future plans allows for enhanced sustainability.

Tactical Concepts:

- ✓ Explore possibility of pilot projects/beta tests.
- ✓ Research and develop understanding of the approach to and support of distributed generation.
- ✓ Research and understand Advanced Metering Infrastructure/Smart Grid developments.
- ✓ Establish a dialogue on demand management with utilities/City to shed load, reduce peak load, and reduce costs.
- ✓ Discuss energy efficiency programs and future plans to identify highest impact direction.
- ✓ Understand key accounts programs related to largest users (military, industrial, commercial).

Issue 4

The City must develop a comprehensive energy plan, both internal to City operations and external for community use.

Strategies

Strategy 1: Reducing the City of El Paso's energy consumption has positive impact and models desired behavior.

Tactical Concepts:

- ✓ Conduct baseline assessment of City usage and establish reduction target.
- ✓ Prioritize high impact areas for retrofits.
- ✓ Empower Energy Board (established in Issue 1/Strategy 1 above) to oversee the City's energy consumption reduction efforts.

Strategy 2: Identifying immediate and direct energy reduction impacts for development/construction produces near-term gains.

Tactical Concepts:

- ✓ Update and improve city building and energy codes (2007 code).
- ✓ Dovetail with Development Focus Area efforts.

Strategy 3: Engaging the community will reduce energy consumption and increase clean energy use.

Tactical Concepts:

- ✓ Identify appropriate education and incentives.
- ✓ Combine and share City, State, Federal and utility incentives and outreach for efficiency and renewable energy measures.
- ✓ Develop/augment incentive programs in high impact areas.

Goals:

- ✓ Reduce total City of El Paso energy consumption by 30% by 2014.
- ✓ Implement 20 renewable energy projects by 2015.
- ✓ 20% of City energy use will be renewable by 2020.
- ✓ 10% of Community energy use will be renewable by 2020.
- ✓ Clean energy will become a core business sector in El Paso through the aggressive use of partnerships and incentives.

Transportation

Definition: The City's commitment to efficient fleet and infrastructure and to becoming the least car dependent city in the nation.

Sponsor: Edel Romero (Fleet)

Issue 1

The City must develop an integrated approach to transportation that is directed and approved by City leadership.

Strategies

Strategy 1: Development of leadership-directed transportation master plan will provide the authority and direction necessary to transform the City fleet.

Tactical Concepts:

- ✓ Meet with leadership to gain endorsement on approach.
- ✓ Assemble planning team
- ✓ Research similar efforts
- ✓ Assemble potential alternative technologies
- ✓ Develop technology testing approach

Issue 2

The City must leverage its success with natural gas and lead the integration of alternative fuel use in the region.

Strategies

Strategy 1: Creation of a regional alternative fuel implementation plan will accelerate implementation.

Tactical Concepts:

- ✓ Identify stakeholders, budget sources, fleet compositions, schedules
- ✓ Research similar efforts.
- ✓ Assemble GIS alternative fuel infrastructure information
- ✓ Pursue Clean Cities Coalition membership

Strategy 2: Transition major equipment fleets to natural gas as appropriate

Tactical Concepts:

- ✓ Use federal funding and incentives to obtain trial vehicles
- ✓ Collect detailed data on operational costs and savings

Issue 3

Acceptable costs must be maintained while providing world class service levels.

Strategies

Strategy 1: Fleet costs can be controlled with education and outreach

Tactical Concepts:

- ✓ Research other fleet education programs
- ✓ Implement outreach program with benchmarking and competitive data

Strategy 2: Fleet costs can be controlled with management

Tactical Concepts:

- ✓ Empower fleet services with ability to right-size vehicles
- ✓ Create mechanism to transfer fuel/vehicle operational savings to capital budget
- ✓ Research whole-system costs for city-wide web conferencing systems

Goals

- ✓ Determine the benchmark for productive vehicle miles per gallon for different vehicles classes and map out plan to achieve world class rates (complete schedule by 2011)
- ✓ Decrease the baseline number of vehicles on the road by 20% from 2008 levels by 2015 (accounting for service area growth).

Waste & Resources

Definition: Managing our waste and resources to minimize environmental impacts and build a sustainable future.

Sponsor: Valerie Joosten (Environmental Services)

Issue 1

A City-wide procurement program that minimizes waste and increases the use of recyclable materials and environmentally friendly products must be implemented.

Strategies

Strategy 1: Establishing a sustainability-oriented procurement policy contributes to minimizing environmental impacts.

Tactical Concepts:

- ✓ Review current policies and procedures
- ✓ Identify sustainability-orientated bidders, vendors and products
- ✓ Develop new policies and procedures
- ✓ Educate City purchasing decision makers and users
- ✓ Dovetail with City-level Issue 2 (TBL)
- ✓ Develop program for tracking environmentally friendly purchases and reevaluating policies

Issue 2

Waste reduction and resource conservation must be achieved.

Strategies

Strategy 1: Develop resource-use policy to reduce wastes.

Tactical Concepts:

- ✓ Conduct baseline assessment of City usage and waste generation and establish reduction target
- ✓ Evaluate technologies, alternatives, and tradeoffs
- ✓ Identify high impact areas
- ✓ Develop policies to reduce usage and waste
- ✓ Educate City staff.
- ✓ Develop program for tracking reductions.

Strategy 2: Increase recycling opportunities and participation within City facilities.

Tactical Concepts:

- ✓ Facilitate recycling practices by providing educational background on positive impacts
- ✓ Provide more recycling opportunities by providing recycle bins in public areas and individual spaces. For bins in public spaces use universal bins or wording to identify types of materials that can be recycled.

Strategy 3: Increase recycling opportunities and participation city-wide.

- ✓ Facilitate recycling practices by providing educational background on positive impacts through a public outreach program.
- ✓ Provide more recycling opportunities and expand recycling programs (refer to Environmental Services Strategic Plan for specific strategies).
- ✓ Develop incentives for commercial recycling participation.
- ✓ Pilot City use of materials with 'hard-to-recycle' materials (e.g., crumb rubber from used tires)
- ✓ Promote and support businesses in the 'hard-to-recycle' sector.

Goals:

- ✓ Achieve residential waste diversion rate of 25% by 2013 to become a leader among Texas cities.
- ✓ Reduce waste produced by City departments 10% by 2011
- ✓ Increase environmentally friendly products purchased by 5% by 2011