

# Memorandum



CITY OF DALLAS

DATE August 23, 2012

TO Honorable Members of the Transportation and Environment Committee:  
Linda L. Koop (Chair), Sheffie Kadane (Vice Chair), Sandy Greyson,  
Delia Jasso, Vonciel Jones Hill, Pauline Medrano

SUBJECT **Sustainability Plan**

On Tuesday, August 28, 2012, the Transportation and Environment Council Committee will be briefed on a draft Sustainability Plan. The material is attached for your review.

Please feel free to contact me if you need additional information.

A handwritten signature in black ink, appearing to read 'Jill Jordan'.

Jill A. Jordan, P.E.  
Assistant City Manager

c: The Honorable Mayor and Members of the City Council  
Mary K. Suhm, City Manager  
Thomas P. Perkins, Jr. City Attorney  
Rosa Rios, City Secretary  
Craig Kinton, City Auditor  
Judge C. Victor Lander, Administrative Judge  
A.C. Gonzalez, First Assistant City Manager  
Ryan S. Evans, Assistant City Manager  
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Edward Scott, Director, Controller's Office  
Frank Libro, Public Information Office  
Theresa O'Donnell, Director, Sustainable Development and Construction  
Rick Galceran, Director, Public Works  
Stephanie Cooper -Thompson, Assistant to the City Manager – Council Office

# Sustainability Plan

Transportation and Environment Committee

Briefing presented by the Office of Environmental Quality

August 28, 2012



# Purpose of this Briefing

- The Council-developed Strategic Plan for FY11-12 includes an item requesting the City Manager to prepare and recommend a Sustainability Plan to Council.
- This briefing provides an overview of this draft plan for Council review and possible adoption.

# Background: What is Sustainability?

- Sustainability is the ability to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.



# Background: City Council Strategic Plan - Six Key Focus Areas (KFAs)

- **Clean, Healthy Environment**
- Culture, Arts, Recreation
- Economic Vibrancy
- Educational Enhancements
- Efficient, Effective, Economical Government
- Public Safety



# Background: Clean, Healthy Environment KFA Strategies

- Environmental Initiatives (e.g., cleaner air)
- Municipal Leadership (e.g., codes and ordinances)
- Community Enhancement (e.g., community outreach and education)
- Regional Collaboration (e.g., water resource planning)

# Background: ISO 14001 Environmental Management System (EMS)

- Implemented an EMS in 14 departments in order to:
  - Minimize the environmental impacts of our operations;
  - Enhance the efficiency of our environmental operations and therefore save money;
  - Improve environmental regulatory compliance via a systematic approach;
  - Set an example for other organizations and for our citizens that we “walk the talk”; and
  - Set objectives and targets for each department on improving their environmental performance by reducing impacts of their operations.



# The Challenge

The City has been setting and reporting on environmental goals through several ways, including:

- The City's Strategic Plan;
- The EMS;
- Performance Indicators for Individual City Services;
- Park Department's Environmental Sustainability Plan;
- Balanced Vision Plan; and
- New Programs (e.g., programs resulting from regulatory issues being imposed on the City or citizen requests for new services).

# The Need for a Sustainability Plan

- EMS achievements have not previously been presented to the Council and the public in a single plan.
- These environmental goals have never been compiled.



# Purpose of the Sustainability Plan

- The Sustainability Plan describes the environmental goals and objectives for environmental improvement in the following five categories:
  - Air quality
  - Land use
  - Water quality
  - Materials management
  - Energy
- Updates to the Sustainability Plan will provide a status of the progress toward meeting the goals in each of the five categories.

# Content of the Sustainability Plan

- Brief introduction to the challenges facing the City in each of the five categories, including:
  - Description of the challenges
  - Progress made to date
- Goal description.
- Objectives for each goal.
- Strategies for each objective.
- Measurable targets to assess progress made.



# Air Quality

AIR QUALITY GOAL: IMPROVE AIR QUALITY		
Objective	Strategy	Target
1. Increase alternative commute options	<ul style="list-style-type: none"> <li>Promote Green Ride.</li> <li>Expand street car service.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in single-rider vehicle miles travelled by 10% annually over previous year through 2014 (OEQ, EMS O&amp;T 00992).</li> <li>Completion of McKinney Avenue Trolley Loop by December 2013 (SDC, Strategic Plan, EV 8).</li> </ul>
2. Reduce emissions from idling	<ul style="list-style-type: none"> <li>Replace fleet with alternative fuel vehicles to reduce emissions.</li> <li>Enforce and educate around the anti-idling ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Replacement 20% of Sanitation Services' fleet with alternative fuel vehicles by September 2014 (SAN, EMS O&amp;T 01023).</li> <li>Reduction of NOx, VOC, PM and CO2 emissions by 5% from on-road and off-road vehicles through vehicle replacement by September 2015 (EBS, EMS O&amp;T 00961).</li> <li>Reduction of Code Compliance department's dependency on gas and diesel fueled vehicles by 1% over previous year by October 2012 (CCS, EMS O&amp;T 00982).</li> </ul>
3. Reduced emissions from industry	<ul style="list-style-type: none"> <li>Reduce air emissions through industrial process inspections.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection of 300 industrial sources of air pollution by October 2012 (PBW, EMS O&amp;T 01020).</li> </ul>

# Land Use

LAND DEVELOPMENT GOAL: PROMOTE SMART GROWTH AND DEVELOPMENT		
Objective	Strategy	Target
<b>1. Build “green” in Dallas</b>	<ul style="list-style-type: none"> <li>Identify green building standards and procedures for Phase II of green building ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of recommendations from Green Building Task Force for Phase II implementation of Green Building Ordinance by October 2012 (<b>PBW, Strategic Plan, CHE 5</b>).</li> </ul>
<b>2. Open space acquisition</b>	<ul style="list-style-type: none"> <li>Acquire vacant properties and designate them for future use or add to existing “green space”.</li> <li>Procure land for new parks and projects in Trinity River Corridor.</li> <li>Amend and update the Tree Ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in “green space” by adding to existing property and increasing natural and wildflower areas by 700 acres by October 2012 (<b>PKR, Environmental Sustainability Plan</b>).</li> <li>Continued development of neighborhood parks by implementing bond program by October 2012 (<b>PKR, Strategic Plan, CHE 7</b>).</li> <li>Revision of the Tree Preservation Ordinance that increases urban tree canopy in Dallas by October 2013 (<b>SDC, Strategic Plan, CHE 8</b>).</li> </ul>

# Land Use (cont'd)

LAND DEVELOPMENT GOAL: PROMOTE SMART GROWTH AND DEVELOPMENT		
Objective	Strategy	Target
3. Development and redevelopment	<ul style="list-style-type: none"> <li>Use MSD and economic tools to promote redevelopment and/or brownfield reclamation.</li> </ul>	<ul style="list-style-type: none"> <li>Completion of internal processing of MSD applications within nine months, excluding applicant response time to City comments* (OEQ).</li> </ul> <p>*new program</p>
4. Sustainable food options	<ul style="list-style-type: none"> <li>Develop land use policies that will guide placement and operation of community gardens on City land.</li> <li>Work with food groups to identify locations for neighborhood markets; work with local businesses to foster placement in those areas.</li> <li>Identify and explore removing through amendment any city code barriers that prohibit neighborhood markets and mobile food options.</li> </ul>	<ul style="list-style-type: none"> <li>Creation of land use policy governing community gardens on City land by spring 2013* (OEQ).</li> <li>Creation of a database of locations where neighborhood markets could be placed to address "food deserts" by spring 2013* (OEQ).</li> <li>Amendment of city code to allow for mobile food options, including sidewalk kiosks, food carts, and food trucks, throughout Dallas by October 2012 (CCS, Strategic Plan, CHE 7).</li> </ul> <p>* new program</p>

# Water Quality

WATER QUALITY GOAL: IMPROVE WATER QUALITY		
Objective	Strategy	Target
<b>1. Trinity River preservation</b>	<ul style="list-style-type: none"> <li>• Restore natural contour of River to allow for filtration.</li> <li>• Restore creeks to natural state.</li> </ul>	<ul style="list-style-type: none"> <li>• Commencement of the Trinity River relocation in the Dallas Floodway to create a more natural channel by end of 2014 (<b>TWM, Balanced Vision Plan</b>).</li> </ul>
<b>2. Protecting surface waters</b>	<ul style="list-style-type: none"> <li>• Implement a bacteria concentration reduction strategy to improve water quality.</li> <li>• Implement integrated pest management (IPM).</li> <li>• Reduce chlorine impacts to watershed.</li> <li>• Inspect for compliance and enforce existing regulations that protect the Trinity River watershed.</li> </ul>	<ul style="list-style-type: none"> <li>• Development of an interim Bacterial Reduction Plan to address bacteria concentrations in Dallas's streams and rivers by October 2012* (<b>TWM</b>).</li> <li>• Implementation of IPM at City facilities by September 2012 (<b>PKR, EMS O&amp;T 00628</b>).</li> <li>• Development of IPM for City facilities by September 2012 to implement by Spring 2013 (<b>PBW/TWM, EMS O&amp;T 00994</b>).</li> <li>• Dechlorination of water flows of 600 gallons per minute (gpm) or greater from Dallas Water Utilities flushing activities through September 2012 (<b>DWU, EMS O&amp;T 00899</b>).</li> <li>• Inspection of City-owned or operated industrial facilities by SWM by October 2012 (<b>PBW/TWM, EMS O&amp;T 01018</b>).</li> </ul>

\* new program

# Water Quality (cont'd)

WATER QUALITY GOAL: IMPROVE WATER QUALITY		
Objective	Strategy	Target
3. Education and outreach	<ul style="list-style-type: none"> <li>Continue the education and outreach efforts, and associated line cleanings, to reduce sanitary sewer overflows through the "Cease the Grease" program.</li> <li>Provide education and outreach to residents and businesses.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of the Cease the Grease program and completion of the cleaning of 36% of city's sanitary sewer lines by October 2012 (<b>DWU, Performance soft Measure</b>).</li> <li>Delivery of 150 outreach presentations or events on methods and techniques to reduce pollution by SWM through September 2012 (<b>PBW/TWM, EMS O&amp;T 01019</b>).</li> <li>Delivery of 72 outreach presentations on reducing pollution by OEQ through September 2012 (<b>OEQ, Performance soft Measure</b>).</li> </ul>

# Materials Management

## MATERIALS MANAGEMENT GOAL: BETTER MATERIALS MANAGEMENT

Objective	Strategy	Target
<p>I. Increase “household” recycling.</p>	<ul style="list-style-type: none"> <li>• Keep the “Too Good To Throw Away” message fresh and expand household recycling participation rate from 62% to 68%.</li> <li>• Increase recycling rates at City facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Achievement of 68% household participation recycling rate (<b>SAN, Strategic Plan, CHE 5</b>).</li> <li>• Increase in the tons recycled by 30% over FY09-10 totals by September 2013 (<b>SAN, EMS O&amp;T 01022</b>).</li> <li>• Increase in the percentage of solid waste that is recycled by 5% per year at Love Field through 2014 (<b>AVI, EMS O&amp;T 00706</b>).</li> <li>• Increase in the paper recycling by 5% annually at Detention Center by September 2013 (<b>CDS-DMO, EMS O&amp;T 01025</b>).</li> <li>• Development of a client voluntary recycling program by October 2013 and incorporation of the program in client meetings with event coordinators and sales staff by March 2014 to increase awareness of recycling options at Dallas Convention Center* (<b>CES</b>).</li> <li>• Increase in the paper recycling throughout Dallas Police Department by 2% over the baseline year FY11-12 through September 2013 (<b>DPD, EMS O&amp;T 01045</b>).</li> </ul> <p>*new program</p>

# Materials Management (cont'd)

MATERIALS MANAGEMENT GOAL: BETTER MATERIALS MANAGEMENT (continued)		
Objective	Strategy	Target
2. Process waste management.	<ul style="list-style-type: none"> <li>Implement process waste minimization programs.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in the purchase of nickel-metal hydride (NiMH) batteries by 10% annually at Radio Shop* (CIS).</li> <li>Increase in the percentage of waste wire recycling at Radio Shop by 10% annually using FY10-11 levels as baseline by October 2014 (CIS, EMS O&amp;T 01015).</li> <li>Increase in the scrap metal recycling at Dallas Water Utilities by 10% per year (DWU, EMS O&amp;T 01027).</li> <li>Increase in the amount of beneficial re-use items diverted from the landfill by 3% over FY08-09 baseline by September 2012 (SAN, EMS O&amp;T 00989).</li> </ul> <p>*new program</p>
3. Hazardous waste management.	<ul style="list-style-type: none"> <li>Reduce hazardous waste impacts to the environment.</li> </ul>	<ul style="list-style-type: none"> <li>Completion of two household hazardous waste collection events annually (SAN, Strategic Plan, CHE 5).</li> </ul>

# Materials Management (cont'd)

MATERIALS MANAGEMENT GOAL: BETTER MATERIALS MANAGEMENT (continued)		
Objective	Strategy	Target
4. Conserve water.	<ul style="list-style-type: none"> <li>Expand reuse and reduction strategies at City facilities.</li> <li>Reduce average consumption.</li> <li>Reduce water waste through inspection of mains.</li> <li>Use highly treated effluent for reuse.</li> </ul>	<ul style="list-style-type: none"> <li>Collection and reuse of approximately 142 million gallons annually of groundwater at Love Field by August 2014 (AVI, EMS O&amp;T 00702).</li> <li>Completion of 45 audits and issuance of up to \$2 million in incentives annually for Dallas Water Utilities customers under the industrial, commercial and institutional incentive program (DWU, Strategic Plan, CHE 5).</li> <li>Reduction in the average gallons per capita per day (gpcd) demand by 1.5% over FY10-11 by September 2015 (DWU, EMS O&amp;T 01028).</li> <li>Inspection of 2,500 miles of water main line annually for leaks (DWU, EMS O&amp;T 00537).</li> <li>Increase in the amount of highly treated wastewater effluent to 5 million gallons per day by September 2014 (DWU, EMS O&amp;T 01006).</li> </ul>

# Materials Management (cont'd)

<b>MATERIALS MANAGEMENT GOAL: BETTER MATERIALS MANAGEMENT (continued)</b>		
<b>Objective</b>	<b>Strategy</b>	<b>Target</b>
<b>5. Green purchasing.</b>	<ul style="list-style-type: none"><li>Buy green to minimize resource impacts.</li></ul>	<ul style="list-style-type: none"><li>Increase in the number of less toxic chemicals purchased through the Product Substitution Program by 4% by September 2012 and an additional 2% by September 2014 (<b>EBS, EMS O&amp;T 01031</b>).</li></ul>

# Energy

## ENERGY GOAL: REDUCE NON-RENEWABLE ENERGY USE, EXPAND AVAILABILITY OF RENEWABLE

Objective	Strategy	Target
<b>1. Green energy purchase.</b>	<ul style="list-style-type: none"> <li>Continue purchasing renewable energy.</li> </ul>	<ul style="list-style-type: none"> <li>Purchase of at least 40% of the City's energy from renewable energy sources (<b>PBW, Strategic Plan, CHE 5</b>).</li> </ul>
<b>2. Energy conservation.</b>	<ul style="list-style-type: none"> <li>Maintain EMS conservation efforts to achieve a 5% reduction in City usage annually.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in energy use throughout Dallas Police Department by 2% through September 2013 (<b>DPD, EMS O&amp;T 01044</b>).</li> <li>Reduction in average electric energy use per million gallons treated at wastewater treatment plants from FY08-09 baseline by December 2013 (<b>DWU, EMS O&amp;T 01029</b>).</li> </ul>
<b>3. Produce energy on-site.</b>	<ul style="list-style-type: none"> <li>Conduct feasibility research and develop a plan to generate energy at City facilities.</li> <li>Explore the construction of solar installations.</li> <li>Replace grid-dependent school zone flashers with solar powered flashers.</li> </ul>	<ul style="list-style-type: none"> <li>Development of an on-site energy production plan by October 2012 (<b>PBW, Strategic Plan, CHE 4</b>).</li> <li>Determination of the feasibility for solar installations by October 2012 (<b>PBW, Strategic Plan, CHE 4</b>).</li> <li>Replacement of 75 alternating current powered school zone flashers to solar powered flashers by December 2012 (<b>STS, EMS O&amp;T 01049</b>).</li> </ul>

# The Path Forward

Each year, there will be a sustainability progress report and a plan update.

- Report will document progress.
- Plan update will remove completed programs, revise goals when needed, and add new objectives, strategies, and/or targets.



# Next Step

- Council acceptance of the Sustainability Plan





# sustain ability

*n*: the ability to meet the needs of the present generation without compromising the ability of future generations to meet their own needs

DRAFT

Acknowledgements [PLACEHOLDER]

DRAFT

**DALLAS SUSTAINABILITY PLAN**

**Contents**

Introduction ..... 1

Air Quality..... 4

**Goal..... 5**

**AIR QUALITY SUMMARY OF OBJECTIVES ..... 7**

Land Use ..... 8

**Goal..... 9**

**LAND USE SUMMARY OF OBJECTIVES..... 12**

Water Quality ..... 13

**Goal..... 14**

**WATER QUALITY SUMMARY OF OBJECTIVES..... 16**

Materials Management..... 17

**Goal..... 18**

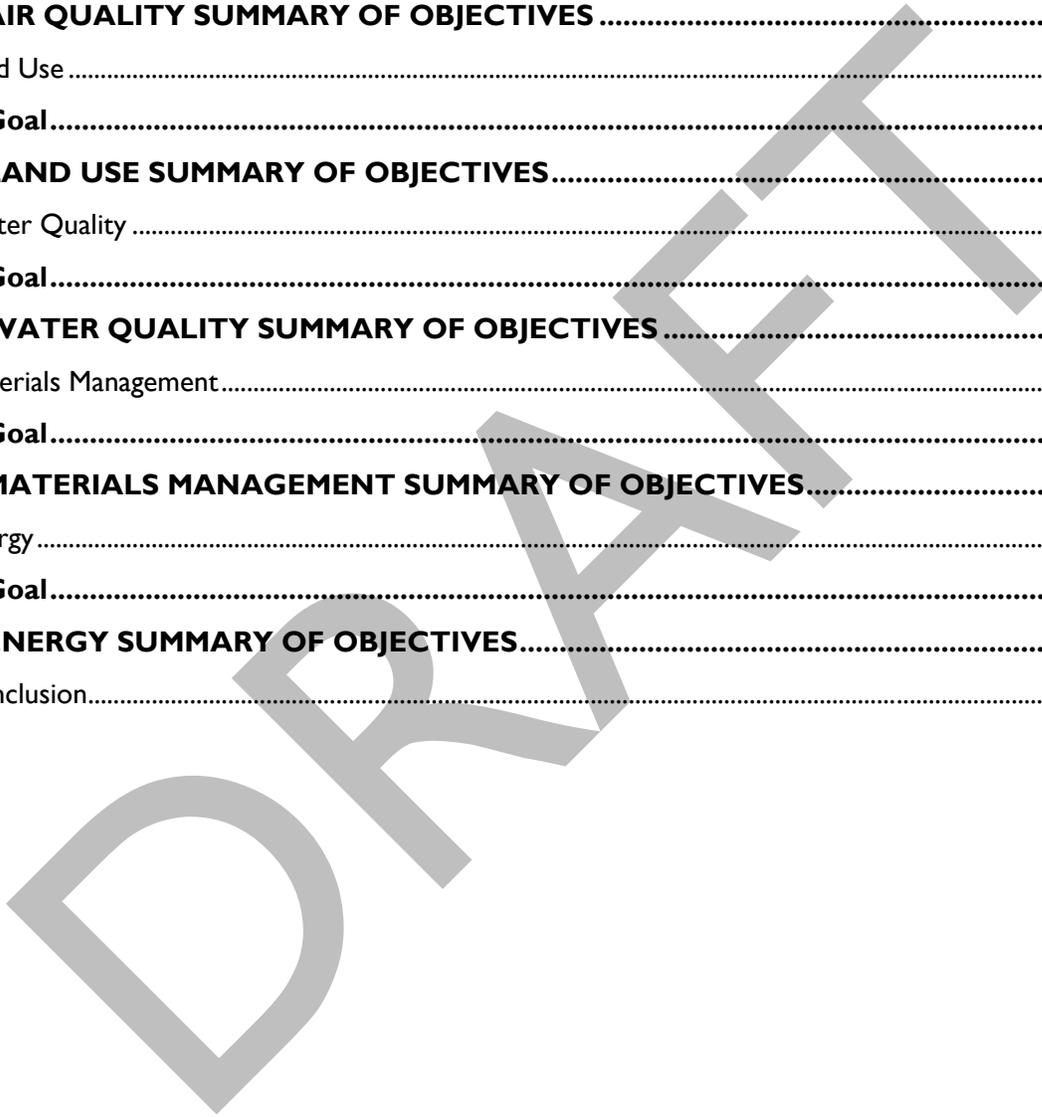
**MATERIALS MANAGEMENT SUMMARY OF OBJECTIVES..... 21**

Energy ..... 23

**Goal..... 24**

**ENERGY SUMMARY OF OBJECTIVES..... 27**

Conclusion..... 28



Letter from the Mayor [PLACEHOLDER]



RAFT



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## Introduction

The City of Dallas recognizes that to promote a vibrant, healthy future, it must actively balance economic needs, environmental stewardship and social equity. Dallas needs a robust and thriving economy to ensure families are self-sufficient, and it must protect the cultural and social identities that are the fabric of community. But to do this, Dallas must protect the environment to ensure that all can enjoy the prosperity and access the resources shared today for generations to come. To be successful protecting the environment, a multi-faceted approach is required: reduce the impact from what is used, use only what is needed, and replenish resources faster than they are used.

Dallas is the largest component of the Dallas-Fort Worth-Arlington metropolitan statistical area (MSA), which is currently the fourth largest MSA in the United States. The Dallas region continues to grow as more people move here to take advantage of the many opportunities North Texas has to offer. With that growth, more demands will be made of the natural environment. In an effort to be proactive and to preserve Dallas, *our Dallas*, this sustainability plan is offered to educate and inform on the steps the City as an organization and the city as a community can take to help create a prosperous future for all.

## Sustainability Priorities

To begin, five areas where activities have an impact have been identified: air quality, land use, water quality, materials management and energy. City leaders, since the 1950s, have, in one form or another, put in place measures or plans to address the impacts from the use of the resources in these five areas. As in those previous plans, this plan will showcase what is intended to be accomplished through environmental stewardship efforts and the policies in place that will help reach those goals.

## Sustainability, the Strategic Plan and Environmental Management

The City Council's Strategic Plan is driven by the six Key Focus Areas (KFAs) the City Council has identified as the roadmaps to creating a successful city. Every year, Council meets to affirm the priorities of each KFA and to identify the programs they feel best move the city toward fulfilling those priorities. From there, the City's Strategic Plan is updated to reflect the Council's goals, and the great work begins.

Enhancing the vitality and quality of life for everyone in Dallas is the ultimate goal of this sustainability plan. Reflecting on the Strategic Plan and the vision of a *City That Works: Diverse, Vibrant, Progressive*, the sustainability plan espouses the City's Core Values of accountability, commitment, customer service,



environmental stewardship, innovation, integrity, leadership, sensitivity and teamwork in order to achieve the objectives framed within.

The core value of Environmental Stewardship establishes the foundations by which the City of Dallas builds a Clean, Healthy Environment.

As one of the six Key Focus Areas which governs City activities and budget allocations, the concept of a Clean, Healthy Environment is critical to the future success of the City of Dallas. Although the other Key Focus Areas of Public Safety; Economic Vibrancy; Culture, Arts & Recreation; Educational Enhancements; and Efficient, Economical and Effective (E3) Government are equally important, this plan will focus on the cornerstone of it all – a Clean, Healthy Environment.

**DALLAS CITY COUNCIL  
KEY FOCUS AREAS**

-  CLEAN, HEALTHY ENVIRONMENT
-  CULTURE, ARTS, RECREATION
-  ECONOMIC VIBRANCY
-  EDUCATIONAL ENHANCEMENTS
-  E3 GOVERNMENT
-  PUBLIC SAFETY

A Clean, Healthy Environment in Dallas will be accomplished through Municipal Leadership, Regional Collaboration, Environmental Initiatives, and Community Enhancement. The strategy map shown in Figure 1 highlights the major strategies and activities that the City of Dallas uses to promote a “culture of health and cleanliness.”



Figure 1

To demonstrate its commitment as an organization to protecting the environment, the City has implemented an Environmental Management System (EMS) to guide internal operations. The EMS is a system based on a continual cycle of “Plan, Do, Check, Act” as shown in Figure 2 that requires us to minimize negative environmental impacts. Through “Planning”, one identifies activities that will have an environmental impact and then comes up with alternative methods to accomplish those activities but with a lessened or altogether eliminated environmental impact. By “Doing”, one implements the alternative



methods and trains others on the process to ensure consistency. Regular “Checking” ensures the effectiveness of the alternative methods at accomplishing those activities with a minimized or eliminated environmental impact. And “Acting” allows for continual improvements to be made through further planning.

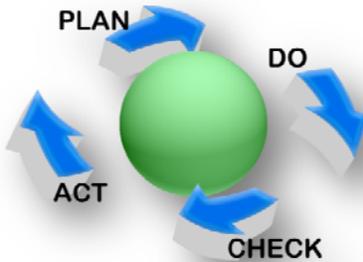


Figure 2

Fourteen City departments participate in the EMS and work closely with the City’s Office of Environmental Quality to keep the system running optimally. In January of 2005, the City Council approved an Environmental Policy that empowers every employee, not just those in the EMS, to minimize their environmental footprint in every aspect of their jobs and to go above and beyond to protect the environment, making Earth Day Every Day in Dallas.

This sustainability plan is the culmination of years of commitment and dedication to the environment within the City of Dallas. This plan serves to tie together elements of the Strategic Plan and the Environmental Management System with all applicable environmental policies as well as the work of City departments and all residents.

This plan is designed to inform the reader of the steps already taken and the direction in which to proceed as well as serving as a road map for those wishing to green their lives and ensure a bright and prosperous future for years to come.

### Plan Outline

The City of Dallas’ sustainability plan is divided into five categories that address a range of issues relating to sustainability: Air Quality, Land Use, Water Quality, Materials Management, and Energy. Each section of the plan includes an introduction to the topic, including the guiding principles and goal, and information on how the City of Dallas will take action to address the issue through programmatic objectives.

Four appendices are included that contain a listing of City of Dallas Programs, Tips & Tools, Selected City Council Ordinances, Resolutions and Authorizations and Administrative Directives, and the City’s Environmental Policy.



## Air Quality

Air quality impacts everyone every day. As pollution is released from human activities the world over, its impact can be seen on health and climate.

Today, children and the elderly spend much of their time indoors because of daily warnings about poor air quality. According to the Centers for Disease Control (CDC), roughly one in twelve Americans suffered from asthma in 2009<sup>1</sup>. Children are most prone to asthma, and respiratory ailments remain the number one reason youth under the age of eighteen visit emergency rooms in the United States.

While the public debate around the impact human activities have on the climate continues, more greenhouse gases build in the atmosphere. As a result, less solar radiation is able to escape back into space, and the atmosphere, like a pot with a lid, consequently warms. With a warmer climate come changes in weather patterns including fluctuations from normal temperatures and precipitation levels. It also causes coral bleaching, warmer seas, oceanic acidification, and shorter cold weather seasons that leave pest populations intact.

Everyone is familiar with “the haze” that can be seen over Dallas. The haze is the byproduct of internal combustion and sunlight. Emissions from the combustion of fossil fuels mix with volatile organic compounds in the presence of sunlight to produce ground-level ozone which then becomes trapped in place by weather patterns. In the stratosphere, ozone protects the planet from ultraviolet radiation; at the surface, it is an eyesore and a dangerous irritant to lung tissue.

The Dallas-Fort Worth-Arlington area has over six million individuals making an impact, positively or negatively to air quality, in the form of everyday decisions.

Emissions are local, but their impact is regional. As air quality standards become more stringent, this region may face financial sanctions from governing authorities if steps are not taken to help improve air quality and bring the region into full attainment with the National Ambient Air Quality Standards of the Clean Air Act.

In 2006, the mayor of Dallas joined mayors from across the United States in signing the U.S. Mayors Climate Protection Agreement to make a commitment to reduce greenhouse gas emissions in Dallas to 7% below 1990 levels by 2012. The City commissioned an update to its existing greenhouse gas (GHG) emission survey

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<sup>1</sup><http://online.wsj.com/article/SB10001424052748704740604576301342646270586.html>

to remain accountable to this commitment and track progress. The 2012 update shows that the City of Dallas has achieved a 33% reduction in its own emissions as an organization.

Efforts to reduce impacts to air quality include the installation of electric vehicle charging stations across Dallas. These stations allow commuters the security of knowing they can “top-off” their battery while conducting business in Dallas. Charging stations can currently be found at Dallas City Hall, Dallas Fair Park, Dallas Love Field and Dallas Executive Airport. For those eager to get out of the car altogether, the City is fast-tracking the Bike Plan, through the creation of a “trail czar”, and expanding the trail system to help provide more alternatives for commuting *sans automobile*. At Love Field, “green taxis”, taxis that generate fewer emissions, are now given front-of-the-line privileges to pick up passengers given their commitment to reduce emissions. Also at Love Field, the Voluntary Air Low Emissions (VALE) grants awarded to the City are being used to place twenty new 30-ton pre-conditioned air units to deliver temperate air to passenger and crew areas and reduce engine idling between flights.

The City has adopted and implemented an anti-idling ordinance to help curb idling of vehicles over 14,000 pounds within the City’s jurisdiction. The Dallas Marshal’s Office is charged with enforcing the ordinance while the Office of Environmental Quality works to educate residents and visitors through GreenDallas.net and placement of signage at truck stops and delivery areas.

The City encourages the surrounding communities and businesses in the region to do what they can to help reduce their own impact to air quality.

## Goal

**The City of Dallas is working to improve air quality.**

### Objective 1

Improve air quality: the City is promoting the use of alternative commutes, including mass transit, carpooling, biking and walking to reduce emissions and minimize single-rider vehicle trips.

#### Strategy:

Utilize *GreenRide* to assist staff to find carpool or biking buddies to reduce single-rider trips. *GreenRide* allows staff to track their alternative commutes, records emissions reductions and calculates reductions in vehicle miles travelled (VMT) and emission reductions of CO<sub>2</sub> and other greenhouse gases (GHG) based on the type of vehicle and distances travelled.

Expand the street car system to reach further into the community, coupled with expansion plans of Dallas Area Rapid Transit (DART), to increase interconnectivity between points all over Dallas and the surrounding areas to reduce single-rider trips.

**Target:** Reduction in single-rider vehicle miles travelled by 10% annually over previous year through 2014 (OEQ, EMS O&T 00992). Completion of McKinney Avenue Trolley Loop by December 2013 (SDC, Strategic Plan, EV 8).

### Objective 2

Improve air quality: the City is reducing emissions associated with idling vehicles and equipment.

**Strategy:**

Power-down City vehicles in observance of the Environmental Policy and as part of the Environmental Management System helps staff and City Departments minimize air emissions.

Continue purchasing alternative fuels and upgrading fleet vehicles with those that can operate on alternative fuels or hybrids of gasoline and electricity to reduce emissions.

**Target:**

Replacement of 20% of Sanitation Services fleet with alternative fuel vehicles by September 2014 (SAN, EMS O&T 01023). Reduction of NO<sub>x</sub>, VOC, PM and CO<sub>2</sub> emissions by 5% from on-road and off-road vehicles through vehicle replacement by September 2015 (EBS, EMS O&T 00961). Reduction of Code Compliance department's dependency on gas and diesel fueled vehicles by 1% over previous year by October 2012 (CCS, EMS O&T 00982).

**Objective 3**

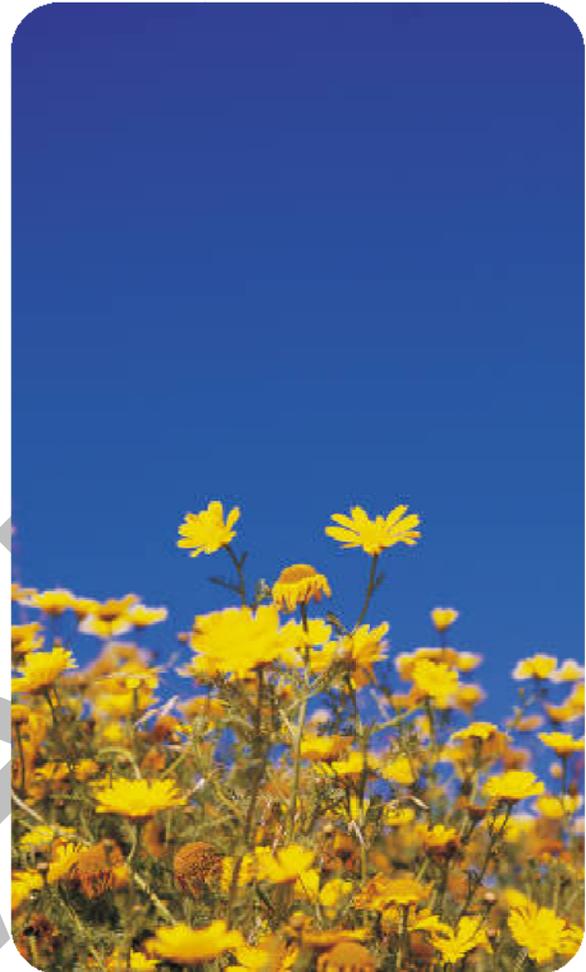
Improve air quality: the City promotes reducing emissions from community sources through compliance with regulations, process improvements and equipment replacement. Inspection of facilities and equipment coupled with replacement of aged or non-compliant equipment will minimize emissions.

**Strategy:**

City staff enforces sections of the Clean Air Act by monitoring industrial sources of air emissions for compliance with permit restrictions on the quantity of emissions allowed.

**Target:**

Inspection of 300 industrial sources of air pollution by October 2012 (PBW, EMS O&T 01020).



## AIR QUALITY SUMMARY OF OBJECTIVES

AIR QUALITY GOAL: IMPROVE AIR QUALITY		
Objective	Strategy	Target
<b>1. Increase alternative commute options</b>	<ul style="list-style-type: none"> <li>Promote Green Ride.</li> <li>Expand street car service.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in single-rider vehicle miles travelled by 10% annually over previous year through 2014 (<b>OEQ, EMS O&amp;T 00992</b>).</li> <li>Completion of McKinney Avenue Trolley Loop by December 2013 (<b>SDC, Strategic Plan, EV 8</b>).</li> </ul>
<b>2. Reduce emissions from idling</b>	<ul style="list-style-type: none"> <li>Replace fleet with alternative fuel vehicles to reduce emissions.</li> <li>Enforce and educate around the anti-idling ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Replacement 20% of Sanitation Services' fleet with alternative fuel vehicles by September 2014 (<b>SAN, EMS O&amp;T 01023</b>).</li> <li>Reduction of NOx, VOC, PM and CO2 emissions by 5% from on-road and off-road vehicles through vehicle replacement by September 2015 (<b>EBS, EMS O&amp;T 00961</b>).</li> <li>Reduction of Code Compliance department's dependency on gas and diesel fueled vehicles by 1% over previous year by October 2012 (<b>CCS, EMS O&amp;T 00982</b>).</li> </ul>
<b>3. Reduced emissions from industry</b>	<ul style="list-style-type: none"> <li>Reduce air emissions through industrial process inspections.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection of 300 industrial sources of air pollution by October 2012 (<b>PBW, EMS O&amp;T 01020</b>).</li> </ul>



## Land Use

Land use, in the scope of sustainability, is much more than the development of real estate. Land provides a place to live, grow food, nurture family, and create community. Land is the foundation upon which to build and shape cultural identity.

In Dallas, people value the features that create a community's identity. One can easily identify the parts of Dallas that are named after their environmental features: Oak Cliff, White Rock, Lakewood, Forest Hills, Oak Lawn, Cedars, Lake West, Bluffview, Elderwoods, Turtle Creek, Oak Highlands, Walnut Hill, to name a few. Effort is made to protect these areas and their identities through civic action and, in some cases, regulations. The White Rock Escarpment, one of Dallas's signature geological formations, is protected under Article V of the city code from any development or site alteration to protect it always.

It is important to protect the land to ensure its proper use and the use of the resources it provides – not just growth for the sake of growth but growth for a substantial and sustainable purpose. For the most part, Dallas is landlocked and has matured to understand the importance of finding a balance between preserving what has defined and shaped the

contextual make up of the community and the need for future growth.

*forwardDallas!* was adopted to help guide that balance and ensure Dallas continues to remain economically vibrant while connected to its heritage. Article X of the city code was passed to protect the trees that shade Dallas, provide natural habitat, and help clean the air. By adopting long range plans and passing ordinances to protect natural resources, Dallas will arrive at its future while preserving its past.

As more people move to Dallas, they will need more places to live and work. Over time, city leaders will be afforded the opportunity to demonstrate their commitment to preserving natural resources by embracing the land use principles that will ensure smart growth and keep the city economically strong while maintaining and protecting the features that make it unique.

Such opportunities will include the continued promotion of transit-oriented design (TOD) in Dallas and the promotion of mixed-use developments that allow for the creation of urban centers where individuals can live, work and play. Financial incentives toward this goal are being considered for inclusion in the 2012 bond issue. Leaders may also wish to explore

ways to preserve neighborhood identity around those areas perhaps through the use of a neighborhood stabilization overlay (NSO) for all properties within a quarter-mile of any City-assisted development project. The City could also develop a strategy to promote the restoration of historically designated structures to green standards to prevent demolition by neglect.

An existing example of leadership and commitment to preserving natural resources occurred in 2003 when the City Council passed the Green Building Resolution that requires all City facilities over 10,000 square feet in size to be built to the U.S. Green Building Council's Leadership in Energy and Environmental Design LEED® Silver levels. LEED® seeks to minimize a structure's construction and operational footprint to preserve resources over the life of the building. Today, the City is designing buildings so well that most could qualify for LEED® Gold ratings.

Then, in 2008, the City Council passed the Green Building Ordinance which essentially expanded the City's internal policy to govern all new construction within Dallas. This placed Dallas on the leading edge of green building efforts and ensures that future generations will have the incentives necessary to keep attracting businesses and home owners to Dallas.

When approving land use, city leaders have to balance the needs of the entire community against the needs of those who seek to make Dallas home. Whether it is new homes or a new retail center, leaders must weigh all the benefits and drawbacks to each proposed use so as to get the most from each parcel for the community economically while protecting the very qualities that made the parcel desirable to the community.



### Goal

***The City of Dallas promotes smart growth and development.***

### Objective I

Promote smart growth and development: the City promotes the use of green building practices to minimize a building's construction and use impacts on the environment, City infrastructure, and the surrounding community.

### Strategy:

The Green Building Task Force, charged with designing the adopted Green Building Ordinance, will reconvene in the summer of 2012 to prepare recommendations to City Council for the next steps to keep Dallas at the forefront of green building through implementation of a restructured Phase II of the Green Building Ordinance. Under consideration is the adoption of the international green construction code (IgCC).

### Target:

Preparation of Recommendations from Green Building Task Force for Phase II implementation of Green Building Ordinance by October 2012 (PBW, Strategic Plan, CHE 5).

## Objective 2

Promote smart growth and development: the City will work to secure and preserve in perpetuity open, green spaces for common uses like parks and trails and the Trinity River Corridor.

### Strategy:

Acquire vacant properties and designate them for future uses or add them to existing “green space” to increase natural and wildflower areas.

Procure land for new parks and future projects, including neighborhood parks and those planned for the Trinity River Corridor.

Amend and update the Tree Ordinance to protect and expand the existing tree canopy in Dallas.

### Target:

Increase in “green space” by adding to existing property and increasing natural and wildflower areas by 700 acres by October 2012 (PKR Environmental Sustainability Plan). Continued development of neighborhood parks by implementing bond program by October 2012 (PKR, Strategic Plan, CHE 7). Revision of the Tree Preservation Ordinance that increases urban tree canopy in Dallas by October 2013 (SDC, Strategic Plan, CHE 8).

Green buildings provide an average 30% reduction in energy use, as compared with minimum energy code requirements. For energy costs of \$1.47/sqft/yr, this indicates savings of about \$0.44/sqft/yr.

source: <http://www.usgbc.org/ShowFile.aspx?DocumentID=1992>, page 26

## Objective 3

Promote smart growth and development: the City encourages redevelopment of brownfields and other areas with historical contamination.

### Strategy:

Use municipal setting designation (MSD), alone or coupled with economic development tools and grants, to foster redevelopment of brownfields and other areas in Dallas.

### Target:

Completion of internal processing of MSD applications within nine months, excluding applicant response time to City comments\* (OEQ).

\*new program

## Objective 4

Promote smart growth and development: promote sustainable food options including community gardens, neighborhood markets and mobile food options in Dallas.

### Strategy:

Develop land use policies that will: identify which types of City-owned properties can be used; define responsibilities of parties using said property; and, identify what is required and permissible for community gardens on City owned land.

Working with Dallas Water Utilities, explore the creation of a water pricing policy for stand-alone community gardens identified as a primary use for their certificate of occupancy.

Work with community garden/sustainable food groups and City departments to identify areas where neighborhood markets can best serve those living in FDA identified “food deserts”. Foster placement and/or establishment of

markets in cooperation with businesses within identified areas.

Identify and explore removing through amendment any city code barriers that prohibit neighborhood markets and mobile food options in Dallas to allow for sidewalk kiosks, food carts, and food trucks in Dallas.

**Target:**

Creation of land use policy governing community gardens on City land by spring 2013\* (OEQ). Creation of a database of locations where neighborhood markets could be placed to address “food deserts” by spring 2013\* (OEQ). Amendment of city code to allow for mobile food options, including sidewalk kiosks, food carts, and on-street food trucks, throughout Dallas by October 2012 (CCS, Strategic Plan, CHE 7).

\* new program



Urban agriculture: the practice of cultivating, processing and distributing food locally,

- strengthens communities;
- increases access to nutritious food;
- diminishes food deserts;
- provides recreation and leisure to residents; and,
- improves individual and community health and well-being.

Urban agriculture expands the economic base of a region through production, processing, packaging and marketing of consumable products, which increases entrepreneur activities and lowers the cost of food.

In many cases, urban agriculture also reduces or eliminates waste streams through composting.

**LAND USE SUMMARY OF OBJECTIVES**

**LAND DEVELOPMENT GOAL:  
PROMOTE SMART GROWTH AND DEVELOPMENT**

Objective	Strategy	Target
<p><b>1. Build “green” in Dallas</b></p>	<ul style="list-style-type: none"> <li>Identify green building standards and procedures for Phase II of green building ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of recommendations from Green Building Task Force for Phase II implementation of Green Building Ordinance by October 2012 (<b>PBW, Strategic Plan, CHE 5</b>).</li> </ul>
<p><b>2. Open space acquisition</b></p>	<ul style="list-style-type: none"> <li>Acquire vacant properties and designate them for future use or add to existing “green space”.</li> <li>Procure land for new parks and projects in Trinity River Corridor.</li> <li>Amend and update the Tree Ordinance.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in “green space” by adding to existing property and increasing natural and wildflower areas by 700 acres by October 2012 (<b>PKR, Environmental Sustainability Plan</b>).</li> <li>Continued development of neighborhood parks by implementing bond program by October 2012 (<b>PKR, Strategic Plan, CHE 7</b>).</li> <li>Revision of the Tree Preservation Ordinance that increases urban tree canopy in Dallas by October 2013 (<b>SDC, Strategic Plan, CHE 8</b>).</li> </ul>
<p><b>3. Development and redevelopment</b></p>	<ul style="list-style-type: none"> <li>Use MSD and economic tools to promote redevelopment and/or brownfield reclamation.</li> </ul>	<ul style="list-style-type: none"> <li>Completion of internal processing of MSD applications within nine months, excluding applicant response time to City comments* (<b>OEQ</b>).</li> </ul> <p>*new program</p>
<p><b>4. Sustainable food options</b></p>	<ul style="list-style-type: none"> <li>Develop land use policies that will guide placement and operation of community gardens on City land.</li> <li>Work with food groups to identify locations for neighborhood markets; work with local businesses to foster placement in those areas.</li> <li>Identify and explore removing through amendment any city code barriers that prohibit neighborhood markets and mobile food options.</li> </ul>	<ul style="list-style-type: none"> <li>Creation of land use policy governing community gardens on City land by spring 2013* (<b>OEQ</b>).</li> <li>Creation of a database of locations where neighborhood markets could be placed to address “food deserts” by spring 2013* (<b>OEQ</b>).</li> <li>Amendment of city code to allow for mobile food options, including sidewalk kiosks, food carts, and food trucks, throughout Dallas by October 2012 (<b>CCS, Strategic Plan, CHE 7</b>).</li> </ul> <p>* new program</p>



## Water Quality

Until the Clean Water Act (CWA) started regulating discharges to American waters, rivers, streams and lakes were used as disposal sites to move industrial and commercial waste away from communities. History is replete with incidences where this practice resulted in undesirable side-effects that prompted the federal government to act to protect water and ensure its availability. Even with regulations now in place, many bodies of water in the United States remain threatened or “impaired” under the Clean Water Act either from decades old contamination that is persistent and accumulative, or from non-point sources that exist today.

Improving water quality requires understanding how it is impacted.

According to the Texas Commission on Environmental Quality, bacteria concentrations are occasionally elevated in portions of the Upper Trinity River (Segment 0805) that flows through Dallas. This places the River in an “impaired” state for activities identified as “contact recreation” in the state’s standards. The segment flows 100 miles through five

counties with a watershed that covers nearly 1,000 square miles of the region<sup>2</sup>.

Chemicals and bacteria loads are not the only issues facing the Trinity River; litter threatens the water quality as well. Participation in the Keep Dallas Beautiful litter survey annually helps the City identify threats to the Trinity River through drifting litter or deliberate illegal dumping. Education campaigns and inspections by staff emphasize the importance of protecting the Trinity throughout the watershed.

Dallas uses surface water reservoirs for its water supply, so the protection of these water bodies, including the Trinity River and its watershed, is imperative and a long-standing priority to City leaders and residents. Water conservation is discussed in the Materials Management section of this sustainability plan but the quality of the water in the watershed depends on the quantity of water in the watershed.

Between 1998 and 2010, Dallas averaged 37.6” of rain over 81 days annually. Comparably, Seattle, Washington, averaged 37.7” of rain over 149 days annually<sup>3</sup>. Precipitation, while

<sup>2</sup> <http://www.tceq.texas.gov/waterquality/tmdl/66-trinitybacteria.html>

<sup>3</sup> <http://www.currentresults.com/Weather/US/average-annual-precipitation-by-city.php>

comparable by amount to other “green” cities, comes infrequently to Dallas so when it falls it tends to occur suddenly and in heavy amounts. Due to the drier climate, the summer heat, and the geological formations upon which Dallas rests, soils here tend to become harder and less absorbent. As a result, flash-flooding from heavy rains running off hard clay soils are diverted to the storm sewer system bringing with it whatever contaminants it may contact in the 1,000 square mile watershed.

However, rainfall is not the sole source of water in the region. Dallas sits atop natural springs. These springs eventually make their way to surface waters so City leaders have made it a priority to protect them and their groundwater sources and to use them wisely so as to keep them clean and clear.

To protect the quality of these water sources, the City has implemented several education and outreach programs. One such program aims primarily to protect City infrastructure but in doing so it also works to protect surface waters from sanitary sewer overflows (SSOs) caused by fats, oils and greases improperly disposed of through the sanitary sewer. When an SSO occurs, it damages the city infrastructure and resources are diverted from other projects to repair the damage they cause. More importantly, SSOs threaten the watershed when they erupt to the surface and impact the municipal separate storm sewer system (MS4) or, more commonly, the storm sewer system. Through education and outreach, Dallas Water Utilities (DWU) Cease the Grease program has reduced the incidence of SSOs in Dallas and continues to provide information and materials to DWU customers. Accompanying the outreach programs are commitments to clean sanitary sewer lines annually to prevent blockages.

The City is also working through comprehensive plans, like the integrated stormwater management plan (iSWM) that encourages the application of best practices for site design to redirect rainfall and runoff to planting areas, bioswales and on-site detention or retention ponds; and cooperative agreements with regional partners aimed to educate everyone living in the watershed about the hidden threats facing our surface waters.

Yard chemicals, lawn clippings, trash, pet wastes, pesticides, industrial pollution, automobile fluids, detergents, sediment, loose soil, and other debris can result in contaminations that harm the ecological balance of the waterways and impair the water quality. In larger quantities, accumulated across the 1,000 square miles of watershed and draining into the Trinity River, obstructions can form and cause back-ups and floods that can damage or destroy nearby homes, neighborhoods and businesses.

When that happens, City resources are then diverted for avoidable damage repairs that could have otherwise been used to strengthen Dallas.

By protecting water quality, and the Trinity River watershed, from debris and contamination, the City can focus attention on building bettering communities and reducing environmental impacts to this vital resource.

### **Goal**

***The City of Dallas is working to improve water quality.***

### **Objective I**

Improve water quality: the City is taking steps to restore the Trinity River to a more natural state to mitigate and minimize impacts.

**Strategy:**

Recreating the natural meander of the river and restoring wetlands will slow the flow of the Trinity River, allow for settling of suspended solids and filtration of chemicals through biological means.

Restoring creeks in the watershed to their natural state to allow for natural and biological processes to filter the waters delivered to the Trinity River.

**Target:**

Restoration of the Trinity River to a more natural state (TWM, Balanced Vision Plan).

**Objective 2**

Improve water quality: utilize strategies and policies to protect the Trinity River watershed from discharges that can threaten water quality.

**Strategy:**

Implement a bacteria concentration reduction strategy to improve water quality.

Implement integrated pest management (IPM) practices reduce the frequency and quantity of pesticide applications at City facilities.

Reduce chlorine from flushing activities of water lines will help preserve the natural balance of the waterways into which the water flows.

Continue compliance inspections.

**Target:**

Development of an interim Bacterial Reduction Plan to address bacteria concentrations in Dallas's streams and rivers by October 2012\* (TWM). Implementation of IPM at City facilities by September 2012 (PKR, EMS O&T 00628). Development of IPM for City facilities by September 2012 to implement by Spring 2013 (PBW/TWM, EMS O&T 00994).

Dechlorination of water flows of 600 gallons per minute (gpm) or greater from Dallas Water Utilities flushing activities through September 2012 (DWU, EMS O&T 00899). Inspection of City owned or operated industrial facilities by Stormwater Management by October 2012 (PBW/TWM, EMS O&T 01018).

\* new program

**Objective 3**

Improve water quality: minimize threats to the watershed through outreach and education programs to inform and engage the public in local and regional efforts.

**Strategy:**

Continue Cease the Grease education and outreach campaign and pipe clean outs.

Provide outreach and training to contractors working within the levees that protect the city through Trinity Watershed Management's Stormwater Management (SWM) team.

Provide outreach and training on the protection of the watershed through the Office of Environmental Quality as part of the Environmental Management System.

**Target:**

Continuation of the Cease the Grease program and cleaning of 36% of city's sanitary sewer lines by October 2012 (DWU, Performancesoft Measure). Delivery of 150 outreach presentations or events on methods and techniques to reduce pollution by SWM through September 2012 (PBW/TWM, EMS O&T 01019). Delivery of 72 outreach presentations on reducing pollution by OEQ through September 2012 (OEQ, Performancesoft Measure).

**WATER QUALITY SUMMARY OF OBJECTIVES**

**WATER QUALITY GOAL:  
IMPROVE WATER QUALITY**

Objective	Strategy	Target
<p><b>1. Trinity River preservation</b></p>	<ul style="list-style-type: none"> <li>• Restore natural contour of River to allow for filtration.</li> <li>• Restore creeks to natural state.</li> </ul>	<ul style="list-style-type: none"> <li>• Commencement of the Trinity River relocation in the Dallas Floodway to create a more natural channel by end of 2014 (<b>TWM, Balanced Vision Plan</b>).</li> </ul>
<p><b>2. Protecting surface waters</b></p>	<ul style="list-style-type: none"> <li>• Implement a bacteria concentration reduction strategy to improve water quality.</li> <li>• Implement integrated pest management (IPM).</li> <li>• Reduce chlorine impacts to watershed.</li> <li>• Inspect for compliance and enforce existing regulations that protect the Trinity River watershed.</li> </ul>	<ul style="list-style-type: none"> <li>• Development of an interim Bacterial Reduction Plan to address bacteria concentrations in Dallas’s streams and rivers by October 2012* (<b>TWM</b>).</li> <li>• Implementation of IPM at City facilities by September 2012 (<b>PKR, EMS O&amp;T 00628</b>).</li> <li>• Development of IPM for City facilities by September 2012 to implement by Spring 2013 (<b>PBW/TWM, EMS O&amp;T 00994</b>).</li> <li>• Dechlorination of water flows of 600 gallons per minute (gpm) or greater from Dallas Water Utilities flushing activities through September 2012 (<b>DWU, EMS O&amp;T 00899</b>).</li> <li>• Inspection of City-owned or operated industrial facilities by SWM by October 2012 (<b>PBW/TWM, EMS O&amp;T 01018</b>).</li> </ul> <p>* new program</p>
<p><b>3. Education and outreach</b></p>	<ul style="list-style-type: none"> <li>• Continue the education and outreach efforts, and associated line cleanings, to reduce sanitary sewer overflows through the “Cease the Grease” program.</li> <li>• Provide education and outreach to residents and businesses.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the Cease the Grease program and completion of the cleaning of 36% of city’s sanitary sewer lines by October 2012 (<b>DWU, Performancesoft Measure</b>).</li> <li>• Delivery of 150 outreach presentations or events on methods and techniques to reduce pollution by SWM through September 2012 (<b>PBW/TWM, EMS O&amp;T 01019</b>).</li> <li>• Delivery of 72 outreach presentations on reducing pollution by OEQ through September 2012 (<b>OEQ, Performancesoft Measure</b>).</li> </ul>



## Materials Management

Waste happens. Yet, much of what is no longer valued can easily be reused, repurposed or recycled; individuals simply need to overcome the natural tendency to discard what is no longer needed and participate in the proper management of wastes, regardless of their source or nature, to reduce the impacts associated with waste.

At the same time, the creation of new items from virgin materials comes at a cost difficult to truly realize. What is more valuable: a mountain or the ore it contains? The lumber of a forest or the air it purifies? A lush, grassy lawn or drinking water? Consumers should also consider how much of the virgin material went into the product versus the amount that was trimmed away and disposed, and how much material was used just for packaging the items.

Since the dawn of the industrial revolution, the industrialized nations have evolved from a locality-based sustenance economy to a market economy that relies on the consumption choices of the individual to drive economies. As a result, people now “shop ‘til they drop” and fill their homes, garages and self-storage units with items that eventually end up in the trash or storage indefinitely. The supply of materials from which these goods are fashioned is finite. The space in which these goods are

stored is finite. The disposal site to which these goods are relegated at the end of their lives is finite. This model is unsustainable. Fortunately, the market economy responds to individual choices. As consumers, individuals can drive the market toward items that are more environmentally friendly to produce, transport, use and dispose.

The City is already working to reduce its impacts through EMS commitments, including the on-site recycling of concrete and asphalt during road and sidewalk repair and rehabilitation; and with regional and state entities like the Texas Product Stewardship Council, a division of the State of Texas Alliance for Recycling (STAR), to help raise awareness about end of life options for hard to recycle products and enhanced producer responsibility; staying informed on plastic bag reduction strategies and policies across the state and nation while encouraging the use of re-usable bags; and, investigating flow-control measures to expand the reclamation of recyclable materials going to landfill through ordinance. These strategies aim to complement other efforts in place in the City to help guide consumers and provide them with more options to reduce their environmental footprint.

Another material resource to consider is water. Water is vital for life. The City has multiple plans in place to explore, procure and develop future sources of water. As mentioned in the Water Quality section of this plan, the City uses surface waters for drinking water supplies. It is also the same source for the water applied to lawns, to flush wastes and as a resource in industrial applications.

The City is reducing the amount of water it uses at City facilities. As part of the effort to build green, new facilities have water saving measures in place like low-flow toilets, rainwater harvesting, and drip irrigation to reduce use. As part of the EMS, City departments commit to reducing overall water usage by 5% annually. City golf courses are now being watered with highly treated wastewater effluent to save billions of gallons of water annually.

Dallas Water Utilities has a dedicated team to provide outreach and education on the importance of water conservation privately and commercially to ensure everyone living in Dallas has access to clean, clear sustaining water.

As with all things, there are multiple considerations which influence decisions people make. Strengthening the environmentally preferred or green purchasing policy to cover all City functions and all City staff from City Council to third-party contractors will help reduce the City's footprint further.

While it is important to work toward the protection of the environment through materials management, it is also important to not allow *perfect* to become the enemy of *good*. In other words, if the technology or practices available today are better than what was available yesterday but not as good as what will be available tomorrow, one should not dismiss the improvement or depreciate its value and

remain steadfastly locked in the past or married to old technology while waiting for the next "next best thing".

### Goal

***The City of Dallas is working to protect natural resources through better materials management.***



### Objective I

**Better materials management:** increase "household" recycling, which aids in moving items away from the waste stream and back into the production cycle.

#### Strategy:

Keep the "Too Good To Throw Away" message fresh and expand household recycling participation rate from 62% to 68%.

Increase recycling rates at City facilities.

#### Target:

Achievement of 68% household participation recycling rate (SAN, Strategic Plan, CHE 5). Increase in tons recycled by 30% over FY09-10 totals by September 2013 (SAN, EMS O&T 01022). Increase in the percentage of solid waste that is recycled by 5% per year at Love Field through 2014 (AVI, EMS O&T 00706). Increase in the paper recycling by 5% annually at Detention Center by September 2013 (CDS-

DMO, EMS O&T 01025). Development of a client voluntary recycling program by October 2013 and incorporation of the program in client meetings with event coordinators and sales staff by March 2014 to increase awareness of recycling options at Dallas Convention Center\* (CES). Increase in the paper recycling throughout Dallas Police Department by 2% over the FY11-12 baseline through September 2013 (DPD, EMS O&T 01045).

### Objective 2

Better materials management: encourage the proper management of process wastes to divert these materials from landfilling.

#### Strategy:

Implement strategies and programs to increase recycling of process wastes to help minimize the footprint associated with providing services.

#### Target:

Reduction in the purchase of nickel-metal hydride (NiMH) batteries by 10% annually at Radio Shop\* (CIS). Increase in percentage of waste wire recycling at Radio Shop by 10% annually using FY10-11 levels as baseline by October 2014 (CIS, EMS O&T 01015). Increase in scrap metal recycling at Dallas Water Utilities by 10% per year (DWU, EMS O&T 01027). Increase in the amount of beneficial re-use items diverted from the landfill by 3% over FY08-09 baseline by September 2012 (SAN, EMS O&T 00989).

\*new program

### Objective 3

Better materials management: reduce the impacts of hazardous materials on the ecosystem through collection events.

#### Strategy:

Continued participation in the Dallas County inter-local agreement for household hazardous waste collection, and the hosting of hazardous waste roundups, will provide options for the disposal of hazardous materials.

#### Target:

Completion of two household hazardous waste collection events annually (SAN, Strategic Plan, CHE 5).

### Objective 4

Better materials management: saving water through conservation programs and infrastructure inspections.

#### Strategy:

As part of the EMS, City facilities commit to reducing water use 5% annually.

Use industrial, commercial and institutional incentive program to promote non-residential water conservation.

Inspections of water mains for leaks will reduce the amount of water loss in the potable system.

Increase the amount of highly treated wastewater effluent available for reuse.

#### Target:

Collection and reuse of approximately 142 million gallons of groundwater annually at Love Field by August 2014 (AVI, EMS O&T 00702). Completion of 45 audits and issuance of up to \$2 million in incentives annually for Dallas Water Utilities customers under the industrial, commercial and institutional incentive program (DWU, Strategic Plan, CHE 5). Reduction in the average gallons per capita per day (gpcd) demand by 1.5% over FY10-11 by September 2015 (DWU, EMS O&T 01028). Inspection of 2,500 miles of water main line annually for leaks

(DWU, EMS O&T 00537). Increase in amount of highly treated wastewater effluent to 5 million gallons per day by September 2014 (DWU, EMS O&T 01006).

#### Objective 5

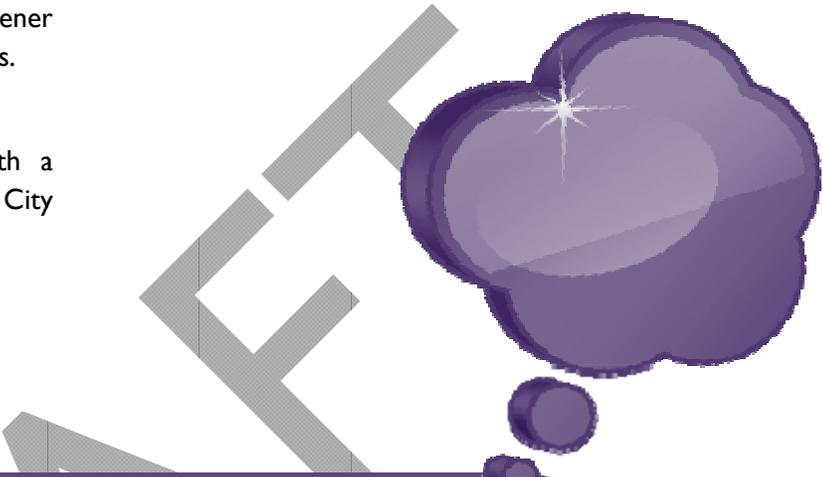
Better materials management: greener purchasing reduces environmental footprints.

#### Strategy:

Increasing the purchase of products with a smaller environmental footprint helps the City reduce its environmental footprint.

#### Target:

Increase in the number of less toxic chemicals purchased through the Product Substitution Program by 4% by September 2012 and an additional 2% by September 2014 (EBS, EMS O&T 01031).



## Reduce, Reuse, Recycle. Rethink.

While it is great to reduce what is needed to save resources; reuse items for other uses; and, recycle the items that are no longer needed or wanted, consumers need to rethink their choices and ask themselves if a product is needed or merely wanted, and, what the footprint was to create the item they need.

Remember, a product that is green to use may not have been green to make or transport. Keep that in mind when shopping to minimize the impact all around. *Sound idea: buy local.*

MATERIALS MANAGEMENT SUMMARY OF OBJECTIVES

**MATERIALS MANAGEMENT GOAL:  
BETTER MATERIALS MANAGEMENT**

Objective	Strategy	Target
<p><b>1. Increase “household” recycling.</b></p>	<ul style="list-style-type: none"> <li>• Keep the “Too Good To Throw Away” message fresh and expand household recycling participation rate from 62% to 68%.</li> <li>• Increase recycling rates at City facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Achievement of 68% household participation recycling rate (<b>SAN, Strategic Plan, CHE 5</b>).</li> <li>• Increase in the tons recycled by 30% over FY09-10 totals by September 2013 (<b>SAN, EMS O&amp;T 01022</b>).</li> <li>• Increase in the percentage of solid waste that is recycled by 5% per year at Love Field through 2014 (<b>AVI, EMS O&amp;T 00706</b>).</li> <li>• Increase in the paper recycling by 5% annually at Detention Center by September 2013 (<b>CDS-DMO, EMS O&amp;T 01025</b>).</li> <li>• Development of a client voluntary recycling program by October 2013 and incorporation of the program in client meetings with event coordinators and sales staff by March 2014 to increase awareness of recycling options at Dallas Convention Center* (<b>CES</b>).</li> <li>• Increase in the paper recycling throughout Dallas Police Department by 2% over the baseline year FY11-12 through September 2013 (<b>DPD, EMS O&amp;T 01045</b>).</li> </ul> <p>*new program</p>
<p><b>2. Process waste management.</b></p>	<ul style="list-style-type: none"> <li>• Implement process waste minimization programs.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in the purchase of nickel-metal hydride (NiMH) batteries by 10% annually at Radio Shop* (<b>CIS</b>).</li> <li>• Increase in the percentage of waste wire recycling at Radio Shop by 10% annually using FY10-11 levels as baseline by October 2014 (<b>CIS, EMS O&amp;T 01015</b>).</li> <li>• Increase in the scrap metal recycling at Dallas Water Utilities by 10% per year (<b>DWU, EMS O&amp;T 01027</b>).</li> <li>• Increase in the amount of beneficial re-use items diverted from the landfill by 3% over FY08-09 baseline by September 2012 (<b>SAN, EMS O&amp;T 00989</b>).</li> </ul> <p>*new program</p>

**MATERIALS MANAGEMENT GOAL:  
BETTER MATERIALS MANAGEMENT (continued)**

Objective	Strategy	Target
<p><b>3. Hazardous waste management.</b></p>	<ul style="list-style-type: none"> <li>• Reduce hazardous waste impacts to the environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of two household hazardous waste collection events annually (<b>SAN, Strategic Plan, CHE 5</b>).</li> </ul>
<p><b>4. Conserve water.</b></p>	<ul style="list-style-type: none"> <li>• Expand reuse and reduction strategies at City facilities.</li> <li>• Reduce average consumption.</li> <li>• Reduce water waste through inspection of mains.</li> <li>• Use highly treated effluent for reuse.</li> </ul>	<ul style="list-style-type: none"> <li>• Collection and reuse of approximately 142 million gallons annually of groundwater at Love Field by August 2014 (<b>AVI, EMS O&amp;T 00702</b>).</li> <li>• Completion of 45 audits and issuance of up to \$2 million in incentives annually for Dallas Water Utilities customers under the industrial, commercial and institutional incentive program (<b>DWU, Strategic Plan, CHE 5</b>).</li> <li>• Reduction in the average gallons per capita per day (gpcd) demand by 1.5% over FY10-11 by September 2015 (<b>DWU, EMS O&amp;T 01028</b>).</li> <li>• Inspection of 2,500 miles of water main line annually for leaks (<b>DWU, EMS O&amp;T 00537</b>).</li> <li>• Increase in the amount of highly treated wastewater effluent to 5 million gallons per day by September 2014 (<b>DWU, EMS O&amp;T 01006</b>).</li> </ul>
<p><b>5. Green purchasing.</b></p>	<ul style="list-style-type: none"> <li>• Buy green to minimize resource impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in the number of less toxic chemicals purchased through the Product Substitution Program by 4% by September 2012 and an additional 2% by September 2014 (<b>EBS, EMS O&amp;T 01031</b>).</li> </ul>



## Energy

Dallas has long been associated with energy, having once been an oil-boom town, and now stands ready to explore and embrace new energy technologies to decrease dependence on carbon-based fuels.

As anyone living in North Texas can attest, Dallas is blessed with an abundance of sunlight. The advancement and incorporation of solar energy production into the infrastructure and on buildings in Dallas, is logical, progressive and frees up financial resources for use on other infrastructure and social needs. Additionally, while the region does not fall into the ideal wind-generating zone, Texas remains firmly in Forbes' Top Five of America's Best Places For Wind Power Alternative Energy<sup>4</sup>. Large scale applications may currently be unattainable in Dallas, but small scale, individual unit applications are being realized and placed throughout the city.

But power generation is only one component of freeing Dallas and all of North Texas from the shackles of carbon-based energy. The region continues to grow more populated; more people means more demand and the associated cost fluctuations and resource competition. To shield consumers from the volatility of the

energy markets, conservation measures reduce what is used from conventional sources until such a time when local solar and wind based production exceeds consumption. With the sheer amount of energy that could be generated through solar and wind sources, the residents of Dallas stand to benefit from cheap, local energy over the coming years as Dallas becomes an energy leader once again through the placement of alternative energy sources. As an added benefit, any separation from carbon-based fuels reduces grid load and the associated environmental footprint by reducing the amount of air polluting emissions released from conventional coal or gas powered electric plants.

Dallas is on the leading edge of cities in America buying alternative forms of energy. In fact, for every year since 2008, the City has remained in the top three among municipalities on the EPA's Top 20 Local Government Green Power Partnership partners. The commitment, to



<sup>4</sup> Green Power America's Best Places For Alternative Energy  
[http://www.forbes.com/2008/07/09/energy-solar-green-biz-energy-cx\\_bp\\_0709atlas.html](http://www.forbes.com/2008/07/09/energy-solar-green-biz-energy-cx_bp_0709atlas.html)

purchase 40% of the City's annual energy needs from renewable energy sources, keeps Dallas eligible for federal and state dollars offered to cities moving toward energy independence and a more sustainable way of life.

Under the leadership of The United States Conference of Mayors, the Energy Efficiency and Conservation Block Grant (EECBG) Program was conceived, making it possible for the first time in U.S. history, for cities, counties and states to receive grants specifically to fund energy-efficiency projects.\*

The City of Dallas received \$19.1M in ARRA funds for energy efficiency and energy conservation measures which included \$11.7M in EECBG funds to help minimize its environmental footprint.\*\*

\* <http://www.usmayors.org/climateprotection/revise/>

\*\* Dallas City Council TEC Solar Briefing, February 2012

Additionally, the City continues to seek out opportunities to generate energy on-site at facilities to further reduce the amount of energy purchased from the grid. The City is currently generating energy from solar, landfill gas, and cogeneration. Photo-voltaic solar installations generate over 10kW of electricity for use on-site at City facilities. McCommas Bluff landfill captures over 900 million cubic feet of natural gas from natural breakdown of organic materials. And, the Southside Wastewater Treatment Plant Cogeneration operation is generating 4.2MW of energy with plans to expand that to 6.0MW by 2015 through DWU's long range plans.

Complementing these purchase reduction strategies, EMS commitments have yielded reductions in electricity consumption year after year through conservation measures.

Of course, there are days when the sun does not shine and times when the wind does not blow in Dallas. To address those contingencies, the development of high-efficiency storage and transmission methods of electrical energy by partner organizations, including ONCOR and ERCOT, is vital to keep consumers tied to other sources for those times.

The grid in Texas is aging and near capacity; consumers are rapidly approaching the choice to either pay for more power plants (and deal with their undesirable side effects which include the financial burden of construction and the environmental impact of operation) or reduce load and grid dependence through new solar and wind installations and conservation measures.

### Goal

***The City of Dallas is working to reduce the consumption of energy from non-renewable sources and expand the availability of renewable energy.***

### Objective 1

Reduce non-renewable energy use, expand availability of renewable: purchasing alternative energy removes the environmental impacts to air associated with energy production and safeguards against market volatility.

### Strategy:

The City of Dallas will continue in its negotiated energy contract to buy renewable energy credits that will allow for further investment in alternative energy.

At the end of this contract term, the City will continue to purchase renewable energy.

**Target:**

Purchase of at least 40% of the City's energy from renewable energy sources (PBW, Strategic Plan, CHE 5).

**Objective 2**

Reduce non-renewable energy use, expand availability of renewable: reduce consumption to minimize the impacts from traditional energy production methods.

**Strategy:**

Maintain conservation efforts internally as part of the EMS to continue reducing City demand on the grid by 5% annually.

In addition, the City will continue to pursue performance contracting to fund refits to existing building stock to reduce the amount of energy needed to power facilities.

**Target:**

Reduction in energy use throughout Dallas Police Department by 2% through September 2013 (DPD, EMS O&T 01044). Reduction in average electric energy use per million gallons treated at wastewater treatment plants from FY08-09 baseline by December 2013 (DWU, EMS O&T 01029).

**Objective 3**

Reduce non-renewable energy use, expand availability of renewable: explore and pursue the installation of alternative energy power sources at City facilities on a case by case basis.

**Strategy:**

Conduct feasibility research and develop a plan to generate energy at City facilities.

Explore the construction of solar installations.

Replace grid-dependent school zone flashers with solar powered flashers.

**Target:**

Development of an on-site energy production plan by October 2012 (PBW, Strategic Plan, CHE 4). Determination of the feasibility for solar installations by October 2012 (PBW, Strategic Plan, CHE 4). Replacement of 75 alternating current powered school zone flashers to solar powered flashers by December 2012 (STS, EMS O&T 01049).



## LOVE|EVOLUTION. Saving energy.

Love Field is leading the **EVOLUTION** of the Airport Experience.

Here's how.

- Changed 25 outside wall pack lights to LED on Terminal I saving around \$447 annually.
- Changed 12 outside lights to LED on chiller building saving around \$47 annually.
- Changed 120 inside lights to LED in triturator building saving around \$403 annually.
- Changed 6 outside lights to LED on triturator building saving around \$168 annually.
- All taxiway lights changed to LED. FAA has not approved LED runway lights.
- Pursuing plans to retrofit 2,500 parking garage lights to LED.
- Pursuing plans to retrofit 317 entrance lights along Cedar Springs Road to LED.

## Mind blowing!

Wind energy can provide more than one-quarter of the Texas grid's power!

source: ERCOT Grid Operations Wind Integration Report: 12/03/11: 27.97% at 04:39; [www.ercot.com](http://www.ercot.com)

**ENERGY SUMMARY OF OBJECTIVES**

**ENERGY GOAL:  
REDUCE NON-RENEWABLE ENERGY USE, EXPAND AVAILABILITY OF RENEWABLE**

Objective	Strategy	Target
<p><b>1. Green energy purchase.</b></p>	<ul style="list-style-type: none"> <li>Continue purchasing renewable energy.</li> </ul>	<ul style="list-style-type: none"> <li>Purchase of at least 40% of the City's energy from renewable energy sources (<b>PBW, Strategic Plan, CHE 5</b>).</li> </ul>
<p><b>2. Energy conservation.</b></p>	<ul style="list-style-type: none"> <li>Maintain EMS conservation efforts to achieve a 5% reduction in City usage annually.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in energy use throughout Dallas Police Department by 2% through September 2013 (<b>DPD, EMS O&amp;T 01044</b>).</li> <li>Reduction in average electric energy use per million gallons treated at wastewater treatment plants from FY08-09 baseline by December 2013 (<b>DWU, EMS O&amp;T 01029</b>).</li> </ul>
<p><b>3. Produce energy on-site.</b></p>	<ul style="list-style-type: none"> <li>Conduct feasibility research and develop a plan to generate energy at City facilities.</li> <li>Explore the construction of solar installations.</li> <li>Replace grid-dependent school zone flashers with solar powered flashers.</li> </ul>	<ul style="list-style-type: none"> <li>Development of an on-site energy production plan by October 2012 (<b>PBW, Strategic Plan, CHE 4</b>).</li> <li>Determination of the feasibility for solar installations by October 2012 (<b>PBW, Strategic Plan, CHE 4</b>).</li> <li>Replacement of 75 alternating current powered school zone flashers to solar powered flashers by December 2012 (<b>STS, EMS O&amp;T 01049</b>).</li> </ul>



## Conclusion

Sustainability is an important priority in the City's plans for the present and the future. Dallas has acted to support sustainability for some time. These actions are condensed in this sustainability plan into five broad goals:

- Improve air quality;
- Promote smart growth and development;
- Improve water quality;
- Better materials management; and,
- Reduce non-renewable energy use.

As support for these goals, the City has in place nineteen objectives built upon thirty-eight strategies for achievement. Finally, the strategies are actualized as the City progresses toward achieving forty-six specific performance targets. Successful completion of the tasks in this first sustainability plan is reflective of the City Council's determination to grow the City while preserving the environment.

Over time, this plan will evolve and it is upon the achievements reached through the plan that future efforts will be based. In the immediate future, the City will need to refine some performance targets by determining not only what will be done but also by when and to what extent. Over the life of the plan, the Office of Environmental Quality will provide annual updates and revisions to capture, track and report progress.

This plan is clearly a starting point, a means and not an end. There will be new inspiration and action incorporated into this plan as Dallas grows and learns. But, the journey has begun...

# appendices

DRAFT

## Green Your Life: City of Dallas Programs

The City of Dallas supports multiple programs to help residents and businesses protect the environment and save money.

More information on these programs can be found online or through [GreenDallas.net](http://GreenDallas.net).

### AirCheck Texas Drive a Clean Machine Program

A state funded program operated by the North Central Texas Council of Governments for persons living in the nine-county DFW region. The City of Dallas supports this program by advertising and helping to answer questions about application requirements. For more information, visit [www.DriveACleanMachine.org](http://www.DriveACleanMachine.org) or call 214-670-6971.

### Cease the Grease

Did you know that pouring fats, oils, or grease (FOG) down your kitchen sink drain can clog your pipes, or even the sanitary sewer lines? Prevent this by storing fats, oils, or grease in a container, then dropping it off at one of the City's waste transfer centers or The Green Spot. This not only keeps your drains clear, but the City of Dallas can convert FOG's to biodiesel. Visit [www.CeaseTheGrease.info](http://www.CeaseTheGrease.info) for more information.

### Hospitality Industry Program

Over the next several years, City of Dallas Water Utilities (DWU) will partner with Dallas hotels/motels and restaurants to encourage them to continue, and in some cases, expand their efforts to conserve water. The program will be voluntary and will not be regulated by the City of Dallas. The initiative is supported by the Hotel Association of North Texas, the Greater Dallas Restaurant Association, Downtown Dallas Inc., the Dallas Convention and Visitors Bureau, Tarrant Regional Water District and North Texas Municipal Water District. For more information on the Hospitality Industry Program, please visit [www.SaveDallasWater.com](http://www.SaveDallasWater.com) or call Yvonne Dupré at 214-671-9276.

### Irrigation Check-ups

Dallas Water Utilities conducts free automatic irrigation system check-ups to make sure that your system is operating properly and that watering schedules are appropriate for your yard's needs. To sign up for an appointment or get more information, go to [www.SaveDallasWater.com](http://www.SaveDallasWater.com).

### Minor Plumbing Repair Program

This program offers assistance with minor plumbing problems and fixtures that may cause water waste and higher water bills. [Click here to apply](#) or visit [www.SaveDallasWater.com](http://www.SaveDallasWater.com) for more information.

### New Throne for Your Home Toilet Voucher

Dallas Water Utilities offers up to \$90 per toilet to replace existing high-flow toilets (generally those installed before 1992) with low-flow or high-efficiency toilet models. A newer model could save more than 60 percent of water per flush, and save you money. For more information visit [www.SaveDallasWater.com](http://www.SaveDallasWater.com). To apply for a rebate, [click here](#) (purchase already made). To apply for a voucher, [click here](#) (for future purchase).

### Texas Emissions Reduction Plan (TERP) Grant Program

The State of Texas is providing financial assistance to those who own/operate heavy-duty diesel vehicles or equipment, i.e. semi-trucks, construction equipment, in order to improve air quality. Funding opportunities are offered once or twice each year. The City of Dallas is available to assist you through the application process. For more information about TERP visit [www.TerpGrants.org](http://www.TerpGrants.org) or call 214-670-6971.

## Green Your Life: Tips & Tools

There are many ways you can reduce your environmental footprint at home or work. When you do, you're not only saving natural resources by using less, you're also reducing emissions that impact our air quality and our water quality.

Below, we list some of the more popular suggestions. For a more in depth look, visit [GreenDallas.net](http://GreenDallas.net) or email us at [GreenDallas@dallascityhall.com](mailto:GreenDallas@dallascityhall.com).

### Save Energy

- **Unplug it!** Appliances and equipment that are plugged in are still sucking power even though they're off (think cell phone chargers, toasters, lamps). Turn off power strips when not in use to reduce "Vampire Power".
- **Install a programmable thermostat!** In the summer, keep your thermostat at least 78 degrees while you are at home and at least 85 degrees when gone; in the winter, try 68 when you're home and 60 when gone. Watch your energy bills drop!
- **Replace your air filter!** Just like you, the air conditioner needs to be able to move air to work best. Change your filter at least every 3 months because a blocked filter will make your system run longer causing higher energy costs and it could overwork and damage your system.
- **Seal it up!** Stop leaks and avoid intruding air. Replace weather stripping. Seal around window and door jambs. Add extra insulation in attics and in walls.
- **Turn your hot water heater down!** Adjust your heater to 110° in summer and 115° in winter. The water will still be hot but your energy bill will be much lower. And when you run the water to get it warm, capture that cool water and use it on plants outdoors in summer or save it in the washing machine for the cool water wash year round.

### Save Water

- **Turn it off!** Turn off water when brushing teeth.
- **Take shorter showers!** You'll save water and the energy used to heat it. Extra payoff: By taking shorter showers, you'll prevent 350 pounds of CO<sub>2</sub> and keep about \$100 in your pocket each year.
- **Install a low flow shower head!** There are many types of designs that put out less than 3 gallons per minute. They still have great pressure and conserve gallons of water from each shower.
- **Install an efficient toilet!** New toilets use around 1.6 gallons per flush – older models can use up to 6 gallons! That's a lot of water. [Find out if you qualify for a voucher](#) from the City of Dallas that helps homeowners and apartment managers/owners purchase water-saving low-flow toilets.
- **Wait until it's full!** Run the washing machine and dishwasher only when they're full. Depending on the age and performance level of your dishwasher, you may need to pre-rinse to remove food items that can be stuck on or are not filtered out prior to the rinse cycle to keep from having to rewash the same dish twice which costs more than a quick rinse before loading. If your dishwasher is a high performance model, the extra pay off by skipping pre-rinse is that you can reduce carbon dioxide from being released and save money each year.

### Clear the Air

- **Tune-ups and tires!** Keep your vehicle in tune, keep it inspected, and check the air pressure in your tires. An under-inflated tire will cause your vehicle to get poor gas mileage and wear down your tires faster. The payoff: you'll increase the life of your vehicle, get better gas mileage and reduce emissions by as much as half at the same time.
- **Report smoking vehicles!** Report smoking vehicles. Dial #SMOKE from your cell phone to anonymously report smoking vehicles. Call 1-877-NTX-IDLE to report vehicles idling for more than 5 minutes.
- **Share!** Carpool or use public transportation. Fewer vehicles on the roads mean fewer emissions. You'll save a few bucks each day in gasoline and you will not have to search for a parking space. Remember, you're not stuck in traffic, you *are* traffic.
- **Don't top off!** Topping off the tank releases gas vapors in the air and cancels the effectiveness of the pump's anti-pollution devices.
- **Wait 'til the P.M.!** Do not fuel your vehicle or mow your lawn during morning hours. Emissions released in the morning hours bake in the sun and cause ozone.

### Green Your Home

- **RECYCLE!** Recycle your cardboard, metal cans, plastics, and paper products. By recycling you help reduce the amount of waste going into the landfill.
- **Change a light bulb!** Sure...you've heard this one before...and we know it's tempting to buy the four-pack of bulbs for \$2 but compact fluorescent bulbs use two-thirds less energy and last 10 times longer than standard incandescent bulbs. So, replace the 5 most used light in your house with CFLs and save yourself about \$60 per year on electricity. Plus, the bulbs burn cooler so you will not have to overcome their heat in the summer. **The payoff:** If Americans replaced just one bulb in their home, it would save enough energy to light 2.5 million homes in one year and prevent an amount of greenhouse gases equivalent to the emissions of 800,000 cars from entering the atmosphere.
- **Buy energy-efficient appliances!** Let's say your old fridge gives out. There is a bright side! Replace it with an [Energy Star™](#) appliance and you'll use at least 15 percent less energy and water in your home. It might be a little pricier to buy up front, but you'll be saving money on your utility bills each month. And you'll be helping the environment. **The payoff:** If we all installed one Energy Star™ appliance, it would be like planting 1.7 million acres of new trees.
- **Reuse plastic bags!** Instead of contributing to the 100 billion plastic sacks a year that are thrown away, try to get a second, third, or even tenth use out of them. Tote your lunch to work or bring them with you and carry a second set of groceries home. Better yet, next time you shop, try a reusable bag and recycle those plastic bags at the grocer. At the very least, use them as garbage bags or to pick up pet waste. **The payoff:** You're reducing pollution. The amount of oil it would take to make just 14 plastic bags could run your car for one mile.
- **Cancel unsolicited mail!** Many of us have a steady flow of unwanted and unsolicited junk mail, catalogs, and magazines. Call 888-5-OPTOUT to get off the list. Also, make sure to recycle what you do receive. **The payoff:** Less energy is spent on creating paper (which kills trees we need) and less trash is created when we can reuse products. The immediate return? Less clutter at home! Long term? A cleaner planet!

### Green Your Lawn

- **Compost!** Green your garden with a compost pile. You'll save space in the landfill and in the process you'll create free, healthy fertilizer for your garden. A good compost pile consists of a balance of carbon and nitrogen materials. Carbon materials include leaves, shredded cardboard, shredded newspaper, straw, pine needles. Nitrogen materials include fresh grass clippings, kitchen scraps, manure (no cat or dog feces), coffee grounds and tea leaves. Check out [www.mastercomposter.com](http://www.mastercomposter.com) for more compost ingredients and more.
- **Leave it there!** Instead of bagging your lawn clippings leave them on the lawn. The clippings will naturally fertilize your yard.
- **Go Native Texan!** Use native plants for landscaping. They require less water and are more tolerant to our climate.
- **Plant a tree!** The shade it provides can lower your cooling bills if it shades your roof or walls. A single tree can absorb one ton (2,000 pounds) of carbon dioxide over its lifetime. One acre of tree cover can compensate for automobile fuel use equivalent to driving a car between 7,200 and 8,700 miles.
- **Water wise!** Only water your lawn when it needs it which is about 1 inch every 7 to 10 days. Watch for signs of stress between waterings. Bermuda will turn a bluish color or leave imprints when you step on it. St. Augustine blades will begin to roll. Call 214-670-3155 to get a free sprinkler system inspection and find out how some Dallas residents have already saved over 29,000 gallons of water a week!

### Know Your Impact

- Find out your "carbon footprint" aka your environmental impact on the planet. We all contribute to climate change when we do things like heat and cool our homes, drive our cars, and fly on airplanes.
- Find out how to begin decreasing the energy you use each day, and offset the rest of your carbon-emitting energy use through this easy-to-use carbon calculator and BeGreen Carbon Offsets. Once you do, tell the planet (or at least a few friends).
- Calculate your carbon footprint:  
[EPA Personal Emissions Calculator](#)  
[Be Green Carbon Calculator](#)

## Selected City Council Ordinances, Resolutions and Authorizations

Tree Resolution, 90-1496

Ozone Action Plan, Council Resolution 94-2201

Tree Preservation Ordinance, Council Resolution 94-1988, Ordinance 22053

Conservation Easement Ordinance, Ordinance 25155, 24843

Water Conservation Ordinance, Council Resolution 01-2840, Ordinance 24745

Green Building Program, Council Resolution 03-0367

Office of Environmental Quality Ordinance, Council Resolution 04-0810, Ordinance 25517

Environmentally-Preferred Procurement Green Purchasing, Council Resolution 04-1722

EMS Policy, Council Resolution 05-0362

Clean Fleet Vehicle Policy 01/25/06, Resolution 06-0323

“Too Good to Throw Away”, 10/11/2006 Consent Agenda

TCEQ Sanitary Sewer Outreach Agreement, Council Resolution 07-0279

Integrated Stormwater Management, Council Resolution 08-0421

Green Building Ordinance, Council Resolution 08-1070, Ordinance 27131

Great Trinity Forest Management Plan, Council Resolution 08-2779

Creation of Trinity Watershed Management, Council Resolution 09-2383, Ordinance 27697

Compressed Natural Gas Taxicab Ordinance, Council Resolution 10-0729, Ordinance 27831

Community Gardens Ordinance, Council Resolution 11-0434, Ordinance 28125

Green Cement Purchasing Policy, Council Resolution 11-0657

Idling Ordinance, Council Resolution 11-2976, Ordinance 28456

Neighborhood Farmers Markets, Council Resolution 10-2781, Ordinance 28046

### City of Dallas Policies

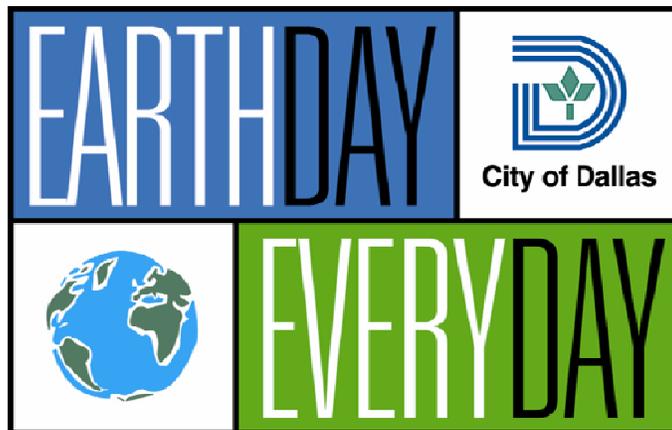
AD 2-49, “Environmental Management Systems”

AD 3-73, “Environmental Management Program”

AD 6-2, “Fleet and Equipment Utilization”

Ozone Action Plan

AD 6-15, “Inspection of City Vehicles”



## Environmental Policy

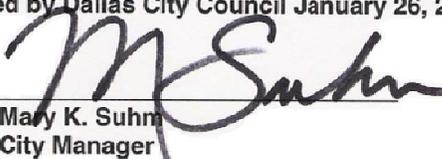
**The City of Dallas is committed to a clean, safe, and healthy environment. As such, we will exercise environmental stewardship in our dealings with employees, other governments, citizens, City contractors, business and others in the community for our world today as well as for future generations. Caring for the environment is one of our core values, and this is demonstrated by ensuring our activities are in harmony with the natural world around us.**

**This commitment is embodied by the following actions:**

- ❖ **Implementation of programs and procedures with an intent to meet or exceed all applicable environmental laws and regulations.**
- ❖ **Continual Improvement of our environmental performance through proactive environmental management and self-assessments and/or third-party assessments.**
- ❖ **Prevention of pollution at its source through implementation of best management practices and resource conservation measures to reuse, reclaim, and recycle materials we generate.**
- ❖ **Utilization of Environmental Management Systems, as appropriate for our operations, to provide a framework for systematically reviewing and reducing our environmental footprint.**
- ❖ **Employees will abide by all environmental regulations and demonstrate environmental compliance in their daily work practices.**
- ❖ **Educate City employees on Dallas' environmental policies and motivate and encourage employees to practice environmental stewardship by raising awareness and sensitivity to environmental issues through City policies, regulations, training, and interactive dialogue.**
- ❖ **Outreach to the citizens and businesses of our community by communication of this Policy and education on the importance of environmental stewardship for clean air and water and sustainable development for the City of Dallas.**

Approved by Dallas City Council January 26, 2005.

Signed

  
 Mary K. Suhm  
 City Manager