

The City of Coppell Environmental Management System Success Story

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Summary

This success story documents the City of Coppell's Environmental Management Systems (EMS) implementation. It discusses benefits, barriers (and how to overcome them) and important lessons learned. This story is based on interviews with staff at the City of Coppell, key partners at the Texas Commission on Environmental Quality and the US Environmental Protection Agency. These organizations worked together to help promote improved compliance and environmental performance through an EMS.

The successful implementation of an ISO-certified EMS led to increased compliance, reductions in water use and a number of other environmental improvements. The city also realized several benefits for the organization, including increased interdepartmental communication and improved public image.

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Background

The City of Coppell, Texas, participated in a regional partnership to implement an Environmental Management System (EMS). The city formed a team with representatives from each different department. This team used the ISO 14001 standard as their guide in designing and implementing an EMS. Audits were conducted with internal auditors and a third party auditor in preparation for a TCEQ certified EMS for Clean Texas Gold.. The city also participated in a regional workgroup known as the North Texas Regional Environmental Management System (NTREMS) partnership.

1. Benefits

Participants in the EMS process agreed that it was well worth the effort. The city realized a number of savings, which they continue to document. The management was able to see a continuous improvement in performance.

Benefit 1: Improved Compliance and Regulatory Reduction

The team was able to identify and correct several risks that may have otherwise resulted in compliance issues. They were able to identify and document the regulatory status of the maintenance service center as a Conditionally Exempt Small Quantity Generator (CESQG).

Benefit 2: Environmental Improvement

The EMS team was able to implement a number of projects that resulted in environmental improvement.

- 28,370 kWh of electricity was conserved
- 9,095 gallons of fuel was conserved¹
 - 8,833 gallons of unleaded
 - 262 gallons of diesel

Benefit 3: Public Recognition

- The City of Coppell received an award from Keep Texas Beautiful in 2009 in recognizing outstanding contributions by government entities supporting the mission of Keep Texas Beautiful and efforts to educate Texans on environmental improvement.

¹ Using baseline year of 2006 fuel consumption compared to 2008 consumption. Normalization factors are under development.

- The City of Coppell is a member of the Clean Texas environmental leadership program run by the Texas Commission on Environmental Quality.

Benefit 4: Increased Communication

The EMS promoted inter-departmental cooperation. The EMS team meetings brought division managers together to work on the EMS. The increased communication resulted in several procedures being revised to improve efficiency of city operations.

2. Goals

The EMS team set long- and short-term goals. The short-term goals were compliance based. However, the overall goal of the EMS was to increase environmental performance by reducing the environmental impact of activities.

A. Short-Term Goals

The short-term goals were based in risk reduction, with a focus on increased compliance for stormwater, wastewater and hazardous waste. The audits identified several potential risks that were averted. Since these risks were controlled, it is difficult to measure the EMS's effectiveness for risk reduction. However, personnel from Coppell believe that the EMS was effective in this area.

The City of Coppell also committed² to reducing:

- 50,000 gallons of water
- 775 tons of Nitrogen Oxides (NO_x)

A regulatory compliance review identified City of Coppell as a Conditionally Exempt Small Quantity Generator (CESQG). Labeling and sorting of material, including hazardous waste material, makes it easier to maintain records needed to demonstrate compliance.

B. Long-Term Goals

- Long-term goals were performance based, seeking to improve on the environmental performance of the city. These goals had a three-year objective to reduce energy use from the 2007 baseline.

3. Level of Effort

Two departments with a total of nine divisions were involved in the initial EMS project at the Coppell Service Center: The Parks Department included operations, recreation and

² Source: 2008 application for Clean Texas membership

environmental health; The Engineering Department included public utilities, streets, facilities, fleets and field staff. Training was made available to all staff.

The City undertook and spent funds on a number of activities that were identified by the EMS team:

A. Electric Use Reduction

In 2007, energy use was 401,190 kWh; in 2008, energy use was reduced to 380,820 kWh. A total of 28,370 kWh (a 7% reduction) was conserved through:

- Motion sensors in common areas,
- LED exit lights,
- Lighting retrofits,
- Energy Star appliances,
- Removal of vending machines,
- Increase in temperature set points,
- Lights were retrofitted to include motion sensors for common areas
- Employees were instructed to turn off computers and printers when not in use
- An energy audit of buildings on-site revealed areas that did not need to be air conditioned.

B. Water Management

Water management for landscaping was implemented. A rain sensor on irrigation is being used now and will require less water. Reduction in water use was difficult to quantify due to changes in rainfall.

Landscaping is being changed to drought-tolerant growth. The initial change required more watering initially, but will result in long-term conservation as the plants are established.

C. Fuel Use Reduction

As of 2008, 11% of the fleet was converted to hybrid vehicles. This resulted in a reduction of 9,095 gallons of fuel. This was accomplished through a variety of actions undertaken under a clean-fleet policy was established to encourage lower reductions.

- As vehicles need replacement, more fuel efficient vehicles are purchased
- Vehicles were evaluated as to the correct size for each job – smaller sizes were identified for many areas and will be replaced as appropriate
- An anti-idling policy was established

- Fuel use was standardized due to the variety of factors over time. The rate to be used is for future comparisons: number of miles / number of gallons for 2008

D. Wastewater Management

A procedure for identifying potential violations and correcting them was implemented.

E. Erosion Control

An erosion control plan was implemented. In accordance with the plan, inspection occurs weekly and/or after a rain event.

F. Solid Waste Segregation and Control

Waste was gathered and segregated, labeled and stored in a covered waste area, resulting in an increase in recycling. Pallets are reused and fluorescent lights are recycled, and there is general recycling standard operating procedure implemented throughout the city facilities.

Solid waste management was improved by putting dumpster in enclosed, fenced areas. This deterred a tendency to place material around the dumpster and filling up the fenced in area. Also a 8 yd dumpster was removed from the property.

G. Stormwater Management

Efforts to improve compliance in stormwater management were implemented. Storage areas were reconfigured to covered areas and the City also built a new covered area.

4. Lessons Learned

The EMS provided opportunities for inter-departmental cooperation, consisting of two departments with nine divisions. The EMS was the first activity that had ever brought these departments together.

The City made the decision that the EMS policy would be for whole city, not just the service center. As a result, other departments began to contribute.

Currently, a “Green Team,” of which the EMS team is a part, meets once a month. The Deputy City Manager is the chair of this team. Many operational procedures have been written. For example, the purchasing agent implemented a greener products procurement policy.