Release Statement: I certify that the information provided in this 2013 Excellence Award application is accurate and correct to the best of my knowledge. I understand that nominations become the property of SWANA. SWANA reserves the right to publish any or all of my application. My signature gives SWANA the right to reprint or make available for purchase any portion of this application.

Printed Name of Representative: John D. Garza

Organization Name: City of El Paso Environmental Services

Signature: [Signature]

Date: May 23, 2013
EXECUTIVE SUMMARY

A perfect blend of innovation, technology and a dedicated workforce enables the City of El Paso Environmental Services Department to empty out 99.6% of all garbage and recycling bins on the first attempt.

Environmental Services provides weekly residential curbside collection of garbage and recycling in El Paso, a West Texas community with a 750,000 population. Environmental Services credits its collections excellence to:

2007 Implementation of single-stream curbside recycling
2008 Implementation of electronic routing software
2009 Implementation of vehicle GPS system
2010 Purchase of first Compressed Natural Gas (CNG) automated side loader (ASL) and split-body rear loaders
2011 Purchase of solar-powered trash compactors for Downtown and reduce collection costs
2012 Purchase of onboard digital video cameras; grant award for an additional CNG ASL and incorporation of Managing for Results strategy
2013 Construction of CNG fueling stations and pilot testing smart phone apps to capture collection issues in real time
PROJECT DESCRIPTION

The City of El Paso Environmental Services Department (ESD) protects the public and the environment in El Paso through the provision of weekly residential garbage and recycling collections. El Paso, located in far West Texas, has a population of more than 750,000.

The Collections Division of ESD currently services approximately 172,000 households. The majority of customers are serviced through automated side loader (ASL) collection trucks, while rear loader collection trucks are used to service one way streets, alleys, dead ends, downtown merchants, and curbside exemption customers who are unable to place collection containers at the curb. The City provides separate 96-gallon containers for garbage and recycling collections. Each automated side loader services approximately 1,200 containers per day. The Collections Division collected more than 185,000 tons of garbage and more than 35,000 tons of recycling material in fiscal year 2012.

The City provides single stream curbside recycling as an easy and convenient way to recycle paper, metals and plastics in a single container. In 2012, the division implemented collection routes strictly for recycling in neighborhoods on the city’s west side. Previously, a single collection route included both garbage and recycling collection. The new routes involved 1,900 day changes for customers and required a transition period for drivers to get acquainted with their new routes. The change resulted in improved trip efficiency and placed a stronger emphasis on customer compliance issues, such as container placement, overflowing containers, and contamination. The new routes were combined with an effort to increase public outreach and education by having drivers place informational tags on containers not in compliance with collection rules.

The City’s manual collection routes utilize three split body rear loader trucks that collect both trash and recyclables in a single pass. The trucks primarily service curbside exemption customers. The manual collection routes also service downtown areas with high pedestrian traffic. The downtown area is kept clean and neat with 73 solar-powered trash compactors (BigBelly) that provide an easy way for downtown shoppers to dispose of waste. The BigBelly bins are equipped with sensors that transmit the available capacity of the unit to web-based software. Units are emptied when they reach capacity. The implementation of the solar-powered units resulted in cost savings because it reduced the collection frequency of each unit and eliminated the need for routine manual inspections of each unit’s capacity.

The Collections Division utilizes two Compressed Natural Gas (CNG) ASLs, and plans on purchasing an additional 21 alternative fuel trucks in the next three years. A CNG fueling station will be built in 2013 at the City’s east side yard so that drivers can fast-fill during the day and slow-fill the trucks at night.

Collection trucks are equipped with an Automatic Vehicle Location
(AVL) system and an electronic vehicle inspection system. Approximately 20 trucks are equipped with digital video cameras to enhance customer service. Several collection trucks are wrapped with information related to the City’s garbage and recycling program in an effort to boost public outreach and education. This year the division will test a smart phone application designed to enhance customer service by allowing drivers to key in a code that identifies the status of a container to provide real time updates for customer inquiries.

**Design of Collection Facility/Management System**

El Paso’s garbage and recycling collection system is designed to optimize efficiency like a high volume production line. Routes are designed so automated side loader drivers stay in the trucks and service containers without having to leave their cab. Manual rear loader routes are designed to pick up curbside exemption customers such as the elderly or disabled that cannot wheel out their container to the curb. The rear loader routes also service hard to access areas such as dead ends, cul-de-sacs, hammerheads, and one-way streets. In addition, drivers are educating citizens on proper placement of containers through tags. The division works closely with the City’s Code Enforcement Division to increase education and compliance through enforcement of city codes for proper placement of containers. This partnership ensures drivers maintain a steady production rate while on their routes and keeps costs down by allowing automated drivers to service more homes.

The philosophy behind this system is like a manufacturing assembly line – high volume production. It should take about 15 seconds to service a typical home with an automated side loader. It takes on average 3 minutes or longer to service a curbside exemption customer if the driver needs to stop the truck and get off to bring the container to the truck. The routes take into consideration hard to access areas such as cul-de-sacs which slow a driver’s productivity. Driver’s in cul-de-sacs have to pull forward, pull backwards, and spend more time trying to position trucks so they can access containers. Residents placing containers too close to a vehicle, mailbox, or other impediments also impact driver production time. Safety is of the utmost importance and drivers are rewarded for driving without any incidents (injury or property damage to themselves or the public). A driver’s quality of work is also reviewed by route audits. The audit reveals if containers at the time of collection were damaged, left upright and in the same general location. It also indicates if litter was left behind.

In summary, ESD utilizes the business model of a high volume production facility:

- Keep costs down;
- Deliver high-quality service;
- Maintain high production;
- Provide on-time delivery; and
- Maintain safety.

**Environmental Controls & Regulatory Compliance**

The Collections Division is part of an integrated solid waste system including landfill operations, special collection services, and public drop-off sites for the disposal of bulky items, used electronics, yard waste, recyclables, and Household Hazardous Waste (HHW). The City provides weekly residential waste collection in compliance with a state law mandate that garbage be collected at least once a week. Drivers are responsible for monitoring loads to ensure that contaminated materials such as oils, chemicals and tires are not placed in garbage.
containers. If a driver sees a container with contaminated material, the container is not serviced and left behind with an informational tag advising the customer of the proper disposal of waste material.

The State does not have a mandated recycling program but the City’s voluntary curbside recycling program has resulted in 17% of material diverted from the landfill in 2012. The recycling contamination rate is a focal point for the City to ensure that the local materials recycling facility, Friedman Recycling, remains in compliance with State law.

The Collections Division also adheres to best management practices with regards to the City’s stormwater permit. Collections trucks are inspected daily to identify potential sources of leaks. At the first sign of a petroleum or hydraulic leak from a collections truck, drivers stop and contact a supervisor to dispatch a crew to immediately contain and spray the spill with Microblaze. Microblaze is a bioremediation and spill control product that eliminates the flammability of hydrocarbons and helps breaks down the waste.

Many of the division’s collection trucks are equipped with a packer assist panel to eliminate trash or recycling from blowing out and causing litter problems. Drivers pick up trash that has fallen out of containers knocked down by the wind. Proper placement of containers is another measure of quality workmanship by drivers in an effort to keep streets clean.

The Collections Division has teamed up with the Code Compliance Solid Waste Task Force to address common solid waste collections issues such as container placement, proper bagging of garbage, overflowing containers and contamination. In addition to the efforts by collections drivers, the task force conducts audits to ensure residents are complying with local codes. The effort helps eliminate litter and assists drivers so that containers are more easily accessible to the garbage truck. The overall goal is to better serve customers so they can have quality service that is cost effective and uninterrupted.

Program Planning

The Environmental Services Department conducts planning in the areas of routing, staffing, capital equipment, and collection schedules to ensure a smooth collection operation. Collection routes are reviewed on a regular basis to provide the best customer service and an equal distribution of work load among drivers. New residential customers are added to the routes on a weekly basis. Population trends are monitored in order to rebalance routes and stay ahead of customer demand.

In 2013, ESD entered into a waste exchange agreement with a private waste company. Under this agreement, both parties are allowed to dispose of a fixed amount of waste in the other parties landfill. ESD projects that each year the agreement is utilized to its fullest extent it will allow El Paso to save $700,000 annually in fuel, maintenance, and tire replacement.

In 2012, routes were reconfigured to develop dedicated recycle-only routes for the City’s west side service area. The new routing scheme has created a more efficient collection per trip and a more concerted effort on customer compliance with the City’s solid waste collection rules. The City is committed to curtailing contamination in recycling and garbage containers. Educational tags left by the drivers on containers are the first step in educating customers about the rules.
For recycling collections, customers are given three notices to comply with the collection rules. Recycling containers are retrieved if the customer is not able to comply with voluntary recycling program rules.

The City plans for the purchase of 10 to 15 ASLs per year. Over the next three years, 21 of the ASLs will be CNG trucks. The move will help alleviate fuel costs and reduce air pollution. In addition, the department is purchasing a “small” rear loader (10 CY capacity) to service new “smart growth” areas which have narrower streets and tighter turns. Additional small rear loaders may also be purchased to take care of missed service calls. Lastly, the division will be testing out a smart phone application to allow the drivers to key in a code that identifies the status of a container and provide real-time updates to customer inquiries.

The department has driver training academies to keep staffing at appropriate levels and to accommodate for absenteeism and attrition. Refuse Operators Achieving Driving Success (ROADS) was implemented in 2012 as a means of providing drivers with both classroom instruction and field training to ensure successful job performance.

A collection schedule is published at the start of each calendar year. Collection dates that fall on a holiday are rescheduled for a Saturday collection. In the event of cancellation due to bad weather, service is rescheduled for the Saturday of the same week. Customers are advised of any changes to the schedule through press releases and updates to the City’s web page.

Performance, Economics & Cost Effectiveness

Performance, efficiency and effectiveness are primary goals of ESD. The Collections Division operates a cost effective and efficient operation. The current operating budget for the Collections Division is $11.6 million. The division operates within its allotted budget and strives to provide high quality, efficient service at a low cost.

The division is staffed with 99 ASL drivers, 10 rear loader drivers, 10 laborers and 8 supervisors. The current inventory of fleet is 97 ASLs and 11 rear loaders. El Paso is proud to maintain a relatively new fleet of automated side loaders and rear loaders. The department has steadily reduced the fleet’s average age over the years by investing in new equipment. The average ASL age in El Paso is 4.7 years. The industry average estimated life for these trucks is 7 to 10 years.

The City currently services 172,000 residential customers with a total of 193,000 garbage containers, and 1,711 commercial customers with a total of 1,916 garbage containers. Residential customers are charged a monthly fee of $16 plus tax for the weekly collection of one garbage container and one recycling container. Commercial customers are charged a monthly fee of $26 plus tax for the weekly collection of one garbage container and one recycling container.

The department is able to provide additional solid waste services including five Citizen Collection Stations, bulk waste pickups, public and private property cleanups, landfill operations, fleet maintenance, median and alley maintenance, and graffiti removal.

One of the major performance measures tracked by the department is the service of the container upon the first attempt or first visit. The measure was developed as part of the overall strategic and
The performance goal established for this measure is 98%. The Collections Division is exceeding this goal with a 99.6% performance rating. This means that 99.6% of the time the garbage bin is emptied when it is set out in accordance with municipal code requirements. The remaining 0.4% is attributed to either driver error or customers not complying with the municipal code (i.e., container too close to an object, container inaccessible, container not placed for collection, contamination, etc.).

Other performance measures maintained include tonnage collected per route and per driver. In fiscal year 2012, ESD collected more than 185,000 tons of garbage and more than 35,000 tons of recycling material. The average tonnage collected is 14 tons per garbage route and 3 tons per recycling route. The department also recognizes employees who are top performers. Drivers are evaluated on miles driven without an incident, customer service calls, average tonnage per load and tonnage for an entire year. Safety, customer service, attendance and efficiency are also measured. The top drivers are awarded with a letterman’s jacket and patches signifying their achievement.

El Paso fosters customer service by providing timely responses to citizen inquiries captured by the City’s 311 call center. The Environmental Services Department also provides outreach and education to customers through information tags, brochures, wraps on trucks, social media sites, press releases, and updates to the web page.

Lastly, drivers provide quality workmanship to customers through the proper placement of containers after emptying them.

Utilization of Equipment, Systems, & Technology

The City has made great strides in utilizing current equipment, systems and technology in the solid waste collections program. ESD utilizes a computer routing system by the Institute of Information Technology (IIT) to optimize collection routes (e-routes). The software is used to optimize routes by defining boundaries and dividing routes evenly based on the number of containers serviced. Routes are designed to eliminate U-turns, backing up and minimizing left hand turns. When the routes were first in 2009, a total of nine collection routes were eliminated as part of the new routing scheme. Dedicated recycle-only routes were configured for the City’s west side service area in 2012. Recycle only routes for the City’s east side service area will be implemented in 2013.

Collection trucks are equipped with an Automatic Vehicle Location (AVL) system and an electronic vehicle inspection system from Zonar Systems. Routes are tracked through Global Positioning Satellite (GPS) which provides information on the vehicle location, speed and distance traveled. This data allows management staff to monitor field conditions and run operations more efficiently. The system has also allowed staff to resolve customer service issues and has provided key information on accident investigations.

The electronic vehicle inspections are performed through the same web-based application that is used to monitor the vehicle location. With the inspection system, pre/post trip vehicle inspections become paperless, data is stored through the web based application and various reports can be compiled. ESD has also started to equip trucks with digital video recorders. Video data helps resolve customer service issues and is used to investigate accidents. Cameras are installed for rear, forward, hopper, residence and...
driver viewing angles.

Customer service calls are taken by the City’s 311 call center and dispatched to the Collections Division through a work order system (Accela Automation). Supervisors respond to work orders and service requests to address customer service concerns related to solid waste collections. Information is received and recorded real-time in the work order system, thus allowing a central repository for tracking the action taken to resolve the issue. Supervisors submit the action taken for each concern and document the communication history with the customers. In 2012, the division responded to 6,928 service requests and work orders related to solid waste and recycling collections.

This year ESD will be testing out a smart phone application to allow the drivers to key in a code to identify the field status of a container such as not out for collection, inaccessible, overflowing, or other container violation. The information will be uploaded real-time so that call takers will have timely access to the field conditions and will be better able to address the customer concern at the time of the call intake. Although still in pilot phase, it is the intent that this application will eliminate a driver’s paperwork and allow the driver to record the address, time, date and a description of the problem with the single push of a button.

In FY 2012, the incident rate for injuries decreased to five, an approximately 70 percent reduction compared to the previous year.

In FY2012, the total incident rate (TIR) for injuries in the Collections Division was five, an approximately 70 percent decrease from FY2011. This is a significant reduction in the previous year’s TIR of sixteen and made possible through the enhanced attention placed on safety awareness and corrective actions.

The value of safety is highlighted in the department’s training sessions for drivers. All new Collection drivers attend an extensive driver training program. The program consists of 80 hours of classroom instruction and 9 weeks of hands-on field training. Quizzes and a final exam are given to test comprehension of the subject matter.

Field training involves both observation and route driving experience. The trainee slowly ramps up to be able to perform a route without any assistance. In order to become a permanent full time driver with the department, the trainee must pass a certification issued by a supervisor and pass an efficiency test to demonstrate the ability to successfully complete a collection route.

addition, safety-based training has greatly improved the manner in which day-to-day tasks are accomplished. Daily safety chat meetings and monthly safety training are integral to the SM. ESD also provides personal protective equipment for all employees.

The City cares about the wellness of its employees and provides employees with a discounted membership at local fitness centers to encourage employees to stay fit. Employees enrolled in the health insurance program are provided wellness incentives to bring down their insurance costs. All safety related incidents are investigated and reviewed by an Incident Review Committee comprised of the employee, supervisor, human resources, safety manager and the department director. The root cause of the incident is identified and corrective action is taken to minimize future incidents.

In FY2012, the total incident rate (TIR) for injuries in the Collections Division was five, an approximately 70 percent decrease from FY2011. This is a significant reduction in the previous year’s TIR of sixteen and made possible through the enhanced attention placed on safety awareness and corrective actions.

The value of safety is highlighted in the department’s training sessions for drivers. All new Collection drivers attend an extensive driver training program. The program consists of 80 hours of classroom instruction and 9 weeks of hands-on field training. Quizzes and a final exam are given to test comprehension of the subject matter.

Field training involves both observation and route driving experience. The trainee slowly ramps up to be able to perform a route without any assistance. In order to become a permanent full time driver with the department, the trainee must pass a certification issued by a supervisor and pass an efficiency test to demonstrate the ability to successfully complete a collection route.

Employee health and safety is a high priority with ESD. A Safety Management Plan (SMP) provides guidance for worker safety throughout our operations. A Job Safety Analysis was developed for every task conducted in the department. In addition, safety-based training has greatly improved the manner in which day-to-day tasks are accomplished. Daily safety chat meetings and monthly safety training are integral to the SMP. ESD also provides personal protective equipment for all employees.

The City cares about the wellness of its employees and provides employees with a discounted membership at local fitness centers to encourage employees to stay fit. Employees enrolled in the health insurance program are provided wellness incentives to bring down their insurance costs. All safety related incidents are investigated and reviewed by an Incident Review Committee comprised of the employee, supervisor, human resources, safety manager and the department director. The root cause of the incident is identified and corrective action is taken to minimize future incidents.

In FY2012, the total incident rate (TIR) for injuries in the Collections Division was five, an approximately 70 percent decrease from FY2011. This is a significant reduction in the previous year’s TIR of sixteen and made possible through the enhanced attention placed on safety awareness and corrective actions.

The value of safety is highlighted in the department’s training sessions for drivers. All new Collection drivers attend an extensive driver training program. The program consists of 80 hours of classroom instruction and 9 weeks of hands-on field training. Quizzes and a final exam are given to test comprehension of the subject matter.

Field training involves both observation and route driving experience. The trainee slowly ramps up to be able to perform a route without any assistance. In order to become a permanent full time driver with the department, the trainee must pass a certification issued by a supervisor and pass an efficiency test to demonstrate the ability to successfully complete a collection route.

Employee health and safety is a high priority with ESD. A Safety Management Plan (SMP) provides guidance for worker safety throughout our operations. A Job Safety Analysis was developed for every task conducted in the department. In addition, safety-based training has greatly improved the manner in which day-to-day tasks are accomplished. Daily safety chat meetings and monthly safety training are integral to the SMP. ESD also provides personal protective equipment for all employees.

The City cares about the wellness of its employees and provides employees with a discounted membership at local fitness centers to encourage employees to stay fit. Employees enrolled in the health insurance program are provided wellness incentives to bring down their insurance costs. All safety related incidents are investigated and reviewed by an Incident Review Committee comprised of the employee, supervisor, human resources, safety manager and the department director. The root cause of the incident is identified and corrective action is taken to minimize future incidents.

In FY2012, the total incident rate (TIR) for injuries in the Collections Division was five, an approximately 70 percent decrease from FY2011. This is a significant reduction in the previous year’s TIR of sixteen and made possible through the enhanced attention placed on safety awareness and corrective actions.

The value of safety is highlighted in the department’s training sessions for drivers. All new Collection drivers attend an extensive driver training program. The program consists of 80 hours of classroom instruction and 9 weeks of hands-on field training. Quizzes and a final exam are given to test comprehension of the subject matter.

Field training involves both observation and route driving experience. The trainee slowly ramps up to be able to perform a route without any assistance. In order to become a permanent full time driver with the department, the trainee must pass a certification issued by a supervisor and pass an efficiency test to demonstrate the ability to successfully complete a collection route.
Public Acceptance

Public acceptance of the Collections Division performance is manifested through the public's compliance and understanding of collection services. The public's cooperation has allowed drivers to empty garbage containers 99.6 percent of the time when it is set out in accordance with municipal code requirements.

Solid waste collection activities are also measured through informal surveys. Collection activities also receive favorable ratings from the community as measured by a citizen’s survey developed by the Institute for Policy and Economic Development from the University of Texas at El Paso. Survey results indicate that approximately 90 percent of those surveyed were satisfied with the City’s solid waste services. The City is committed to keeping customers informed of any changes to the collection schedule. Notifications of schedule changes are provided to the media and through the City’s web page. For example, recycling collections are cancelled during extreme weather conditions so as to minimize wind blown litter that may get scattered when recycling containers are knocked over by high winds. Participation in the voluntary curbside recycling program has been strong and is currently at 83 percent.

The Department is focused on ensuring that those who participate are complying with the recycling rules to minimize contamination. ESD has allowed customers to rejoin the recycling program after an educational session on proper recycling is completed.

ESD maintains a clean appearance of collections fleet by washing vehicles on a monthly schedule. Several collection trucks are wrapped with information regarding the City’s garbage and recycling program in an effort to provide continuous public outreach and education.