

## LOCAL GOVERNMENT CASE STUDY:



# CITY OF EDEN - FULLY AUTOMATED SOLID WASTE COLLECTION PROGRAM

Jurisdiction:

Best Management Practice:

Purpose:

Ordinance:

Contact:

City of Eden

Fully Automated Solid Waste Collection Program

Way to adjust to the increases in regulations governing how solid waste is collected and processed; reduce costs associated with waste disposal services.

Solid Waste Ordinance is currently being updated and the revised ordinance will include the automated trash collection system.

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## DESCRIPTION

The City of Eden has a population of 15,500; 6,675 households receive waste disposal services in 2003. Since 1995, the city's Solid Waste Management Division has operated a fully automated solid waste collection program using two fully automated side-loading collection vehicles. Fully automated collection vehicles use hydraulically controlled arms to pick up and dump collection containers. An operator controls the collection arm from inside the vehicle. From his driving station, the operator lifts, dumps and then returns the collection container to the curb.

The City of Eden uses ROTO brand fully automated 90-gallon, city-provided collection containers. With the fully automated vehicle, only one staff member is required for each collection route. The fully automated system reduces staff and associated labor costs, and provides a safer work environment for employees, thus reducing workers' compensation costs. Under this system, the City of Eden services 6,675 households on two collection routes four days a week with an average of 890 stops per day.

## PURPOSE

The City of Eden wanted to find ways to adjust to the increases in regulations governing how solid waste is collected and processed as well as reduce costs associated with waste disposal services. The fully automated system provides the city with an option to better utilize fewer staff members and thus reduces labor costs. It also reduces the concerns of HIV and HBV exposures due to needle sticks and reduces work related accidents and injuries.

## IMPLEMENTATION

The City of Eden initially retrofitted two rear-loading vehicles with Perkins automated grabber units so that two of three collection routes had semi-automated operation. The semi-automated vehicles were in operation for six years prior to changing to the fully automated collection, and were then retained for use as backup vehicles. In 1994, to implement the first phase of fully automated collection, the City of Eden purchased its first fully automated collection vehicle (Heil 7000). By 1995, the second was purchased and all 5,545 households were serviced by fully automated collection. By 2003, the number of households receiving this service has increased to 6,675. The previous collection system consisted of three collection routes using rear-loading trucks and nine staff members (three-person crews). With the fully automated system, the city was able to condense to two collection routes with two employees.

The total cost for both fully automated collection vehicles was approximately \$245,000. In addition, the city purchased and distributed 90-gallon roll carts to each residence. The total cost for the roll carts was approximately \$342,000. The city's Solid Waste Management Division also implemented a tracking system and assigned a unique identification number to each container. Fully automated vehicle training was required and consisted of 30-45 days depending on the employee's previous level of experience. The majority of this time was dedicated to behind-the-wheel training with a short period at the beginning for vehicle orientation and development of route configurations.



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## RESULTS

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Changing from the previous more labor-intensive collection program to the fully automated system, the city was able to reduce its collection staff by seven. Out of the seven staff members, five were reassigned to other duties related to waste disposal operations and two were laid off. However, opportunities for further employment in other departments within the city were made available to both employees. At an average of \$20,000 per staff member per year, the city has realized a significant annual savings. Implementing a fully

automated collection system in the City of Eden was originally estimated to save \$1 million in 15 years. The City of Eden's solid waste superintendent feels that given the savings experienced since the program's inception in 1994, the original goal is definitely attainable. In addition to the costs savings, the new system provides a much safer work environment and reduces liability. Since implementation of the automated system in 1994, there has been only one workers compensation claim, which occurred when a driver attempted to quickly flee a snake occupying his vehicle.



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