



# ***The Solid Waste Report***

**February, 2002**

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## Departmental Profile

### **Mission of Solid Waste Management Department**

"Ensure community and employee health, safety and conserve natural resources through efficient collection, disposal, code enforcement, and waste diversion while achieving excellence in customer service."

### **Overview**

The Solid Waste Management Department provides residential and commercial refuse collection services Citywide, operates the Los Reales landfill, and performs inspections and code enforcement in response to customer complaints. The Department provides residential curbside recycling collection and operates 15 neighborhood recycling drop-off centers. With 243 personnel, the department serves approximately 130,000 residential and 4,000 commercial customers. The Department of Solid Waste Management's activities are funded through the following: General Fund subsidy (43%), Solid Waste Management Fund revenues (38%), general obligation bonds (19%), and miscellaneous non-federal grants (<1%). The budget for 2001 was \$28m for operations and \$3.7m for capital costs. See Table 1.0 for a divisional breakdown of the expenses.

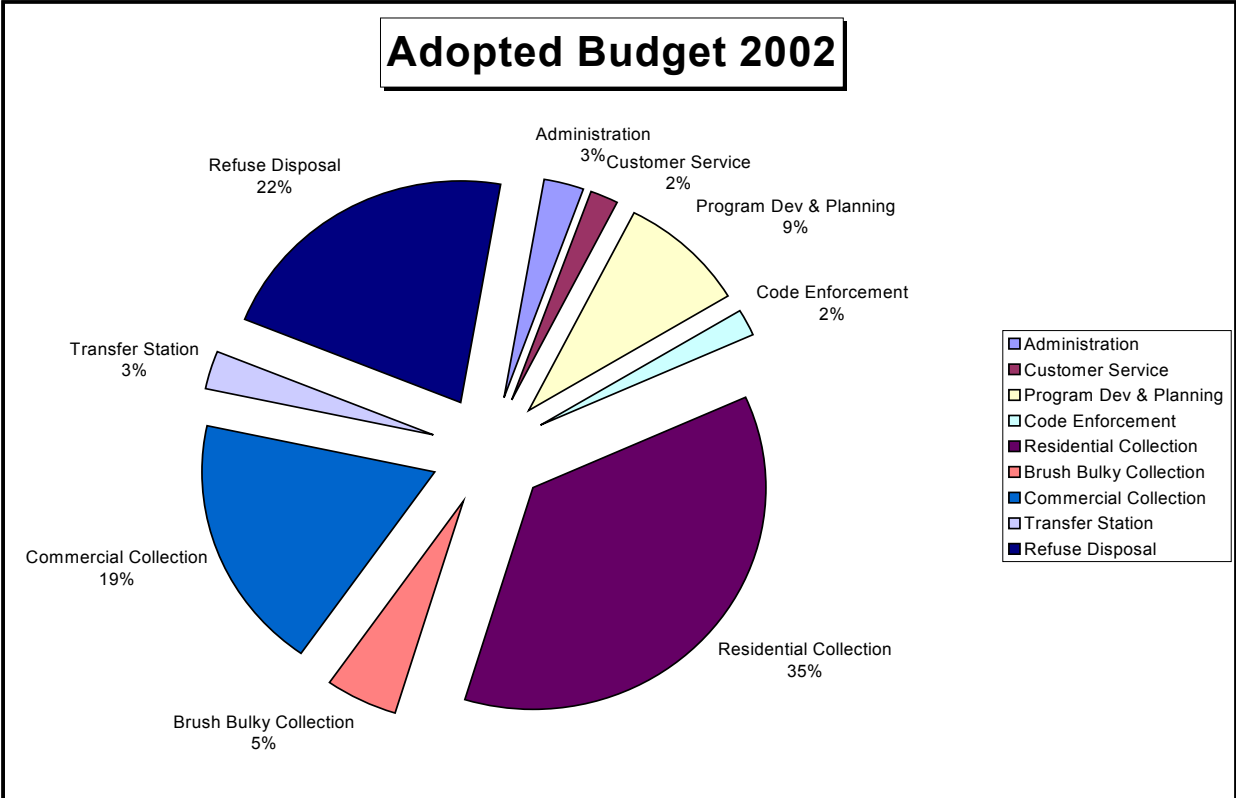
In 1984, the City of Tucson became one of the first communities in the nation to use an automated refuse collection system. This automation provided for the more efficient use of resources by reducing the number of collection personnel from two to one per vehicle. This efficiency has allowed the Solid Waste Management Department to offer other services, such as curbside recycling, while absorbing significant growth in all routes in the City.

Solid Waste residential collection services are a public good in Tucson. There is no fee. The General Fund funds support for this activity, which is heavily dependent on sales tax revenue. Since its inception as a City Department within the City of Tucson in 1993, the Solid Waste Management Department (SWMD) has established progressive solid waste programs to be more cost effective, to encourage waste reduction/diversion and recycling and to comply with Federal and State regulations for landfill management. What was once strictly a refuse collection department that just collected and disposed of trash is now an integrated waste management system where customer service, recycling, waste reduction, efficiency and effectiveness, and regulatory compliance are emphasized.

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SWMD has taken significant strides to demonstrate how programs such as once-per-week refuse collection, 10-hour four day work schedules, six day collection systems, GIS / GPS routing and gas to energy projects can be successfully designed and implemented with large customer acceptance and satisfaction. The Department continues to pursue innovative customer service and efficiency improvements that save the City of Tucson money.

Table 1.



**Cost of Service Analysis**

Last year, in an effort to find new ways to improve Solid Waste services, the Department contracted with a consultant, Reed, Stowe & Yanke (RS&Y) to do a cost of service analysis and rate review.

Based on the analysis performed during the course of RS&Y’s service study, four (4) primary recommendations were proposed. Adoption of these four recommendations is essential to ensure SWMD and the City of Tucson are prepared to meet projected costs – both in the short and long-term. Adoption would also ensure the long-term financial integrity of the SWMD and the City’s municipal refuse system.

The recommendations are as follows:

1. The City should strongly consider establishing the Solid Waste Management Department in an enterprise fund, a program accounting and budget management approach in which the fund balance each year is retained for the next year's operation, allowing the program more flexibility to handle variations in revenue and expenditures and address fluctuations in demand for services.
2. The City should consider the establishment of a residential user fee.
3. The City should consider increasing the commercial dumpster and roll-off rates.
4. The City should keep the landfill tipping fee at \$23 per ton.

The Department also asked RS&Y to complete a preliminary management review. The overall goal of the management review was to assist the SWMD in reviewing its current "management processes" so as to assist the Department in operating as efficiently and effectively as possible. In addition, if the decision is made at some point in the future to operate the Department as a "stand-alone" business unit, totally self-sufficient on user fees generated from its residential and commercial refuse collection business and its landfill operation business, the study will assist in preparing the Department for conversion from a General Fund subsidized department to a user fee funded department (i.e. enterprise fund).

RS&Y's management review recommended five (5) action subject categories. These findings and recommendations are essential to ensuring SWMD operates 'effectively' to increase the overall quality of the completed task while attaining 'efficiency to complete the task by achieving a cost and/or time savings both short-term and long-term. These recommendations would ensure the long-term operational integrity of the SWMD and the City's municipal refuse system.

The action subject categories are as follows:

\* Organizational Structure

In the area of Organizational Structure RS&Y examined the viability of code enforcement in an operating solid waste unit and made suggestions concerning new customer set-ups, customer billing and data collection functions. They interviewed routing personnel and supported the continuation of efforts to update route analysis functions.

They pointed out the need to have a recycling division within SWMD to emphasize the support for an improvement in recycling services. In conjunction

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with this idea they noted that many communities have advisory committees to help in the formulation of programs.

Given the proposed changes they further recommended some internal housekeeping such as making sure the organizational structure was kept current and consistent with the Departmental changes.

### \* Planning / Reporting Processes within the SWMD

Their examination of the planning and reporting processes within the SWMD resulted in observations about the staff meetings (SWMD needs to hold more of them), the value of monthly financial reports, timely data from the field (driver reports) landfill reports and suggestions to compile annual reports (such as this one) for Mayor & Council and others.

Other observations included a look at the SWMD Refuse Service Contracts and Commercial Billing Divisions where they found the system was similar to other jurisdictions that supply the same service and was consistent with standard industry practices.

### \* Communications between the Department and other City Departments

RS&Y observed that, as in any large organization, opportunities for enhanced communication exist particularly with key service providers like Operations and Procurement. It was suggested SWMD take a more active role in the selection of SWMD equipment, learn more about the allocation of fleet costs, support better data collection by Procurement and ask for monthly meetings with the respective departments. They found the agreement with Information Technology useful and suggested trying the same with other departments.

### \* Conversion to an Enterprise Fund

With respect to the comments about conversion to an Enterprise Fund, it is noted that currently Solid Waste Management is dependent on General Fund and general obligation bonds for operational and capital funding. Many municipalities have removed solid waste operations from the General Fund and account for them in a separate enterprise or special revenue fund. An enterprise fund, in addition to the advantages noted earlier will also allow the Department to plan, project and allocate revenues more accurately thus promoting fiscal accountability and accuracy. The Department creates capacity in the 6% bond category by moving to revenue bonds for its capital needs. Rates are also leveled over time.

\* Other Issues

Finally, RS&Y added a few minor observations supporting the use of pre and post checks, the need for prompt repairs and most importantly, the need to educate customers, the public and staff as well as the Mayor and Council about all the issues and efforts SWMD is working with at this time.

The Department has already started to use this list to perform internal analysis of our daily operations. Several changes have been implemented, most notably in the areas of inter-departmental communication and reporting processes.

The Department has also taken great strides to maintain and enhance landfill operations and management and meet regulatory compliance requirements. Subtitle D regulations have increased the need to be knowledgeable about waste disposal practices and procedures at landfills and have required the Department to pay greater attention to how the active City landfill is operated and managed. Additional regulations coming into effect will increase the need for a City commitment to the proper management of the Los Reales landfill and to continue to plan to provide the financial resources required to operate, close, and monitor the City's closed landfills.

**Summary of SWMD Accomplishments**

**Residential**

Implemented six day collection system  
Consolidated routes; reduced miles driven  
Successfully tested commingled collection system  
Increased cooperation in cross departmental programs  
Reduced fleet size; absorbed growth  
Redesigned holiday collection schedules; reduced overtime  
Drafted new employee evaluation system

**Brush & Bulky**

Increased total tons collected  
Lowered cost per ton  
Reduced missed stops  
Provided consistent support for NRC sites

**GIS/GPS**

Inventoried entire City for residential and commercial container placements  
Geo-coded more than a dozen sets of variable data  
Re-routed commercial section routes  
Integrated existing data to the new mapping system  
Created databases for use in One & One Plus, residential and commercial routes

**Recycling/Waste Diversion**

Tested commingled system in Fairgrounds and Davis-Monthan Neighborhoods  
Increased participation in Treecycle  
Improved customer service through better access  
Started planning process for proposed One & One Plus recycling advertising

**Landfill Services**

Maintained current rates  
Established a new rebate program to encourage covered loads  
Filled Cell One  
Acquired buffer zone  
Passed ADEQ inspections; no NOV's for 5 years in a row

**Departmental Goals**

- Ensure customer satisfaction.
- Ensure community health through effective refuse management.
- Promote waste reduction programs.
- Deliver residential and commercial solid waste collection services at a minimum unit cost.
- Develop, operate, and maintain City landfills in compliance with Federal and State regulations.
- Deliver comprehensive solid waste services that includes and emphasizes the operation of a commercial refuse billing system, capital improvement projects, budget and fiscal management, public education, and employee training and safety programs.

The SWMD has taken a look at other more long-term focus areas where organizational change could benefit the delivery of the operational core services the Department provides. Some of the brainstorm ideas and timelines are summarized in Table 2. For example, One & One Plus will be implemented but the success of the program depends on the Departments ability to track results and adapt the program to customer needs as circumstances and events change with the maturation of the service.

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Table 2.  
“Potential” Implementation Timeframe for Organizational Change

	2002	2003	2004	2005	2006
Waste Diversion and Performance Based Management	Set-up System	-Tracking---	-Tracking---	-Tracking---	-Tracking---
Incentives for Recycling and a Clean Community	Upgrade Ordinance and Outreach/SWAC	Ongoing ----	Ongoing ----	Ongoing ----	Ongoing ----
Performance Based Service Partnerships (MRF)	Set-up System	Contract Review	-Tracking---	-Tracking---	-Tracking---
Market Based Contracting For Support Services	Contract Review	Review Options	Implement	-Tracking---	-Tracking---
Explore Operation as an Enterprise Fund	Evaluate	Go / No Go	Transition	Implement	-Tracking---
Funding of Operations	General Fund Subsidy	Explore Alternatives	Establish User Fee	Pay as You Throw Fees	Ongoing ----
Capitalization of Equipment And Facilities	LF Upgrade Revenue Bond Funding	Implement	Tracking	Implement	Tracking
Environmental Sustainability	Alternative Fuel Conversions	Fuel Cell/Green Teams	Implement	-Tracking---	-Tracking---

SWMD has used other quality management tools like the matrix in Table 2 to encourage staff to begin to look at more long-term issues, to think more strategically and to begin to see the inter-relationships between common themes that will lead the Department toward an integrated management system.

Questions or comments? E-mail [schandl1@ci.tucson.az.us](mailto:schandl1@ci.tucson.az.us)

## Residential Collections

**Residential Automated  
Collection Truck.**



**Residential Collection**

The City of Tucson has a population of 505,000 (est.) The City provides residential collection services for Tucson's 130,000 single-family households (up to four-plex). Growth adds over 2300 new residential units to City routes each year. The City utilizes an automated side-load system on 108 routes, six days a week. Two routes provide special hand load services.

The City collects 178,000 tons of waste from the curb with the use of 80,000 90-gallon roll-out containers, or in the alley with 15,000 300-gallon shared stationary containers. (See Table 3.0) Last year the residential fleet of refuse trucks drove over 1.2 million miles on the routes. 223 square miles of service area is covered twice a week with 68 trucks and 81 employees. The average cost per route at \$89,725 or \$6.07 per household for collection costs is one of the lowest in the country. However, as the

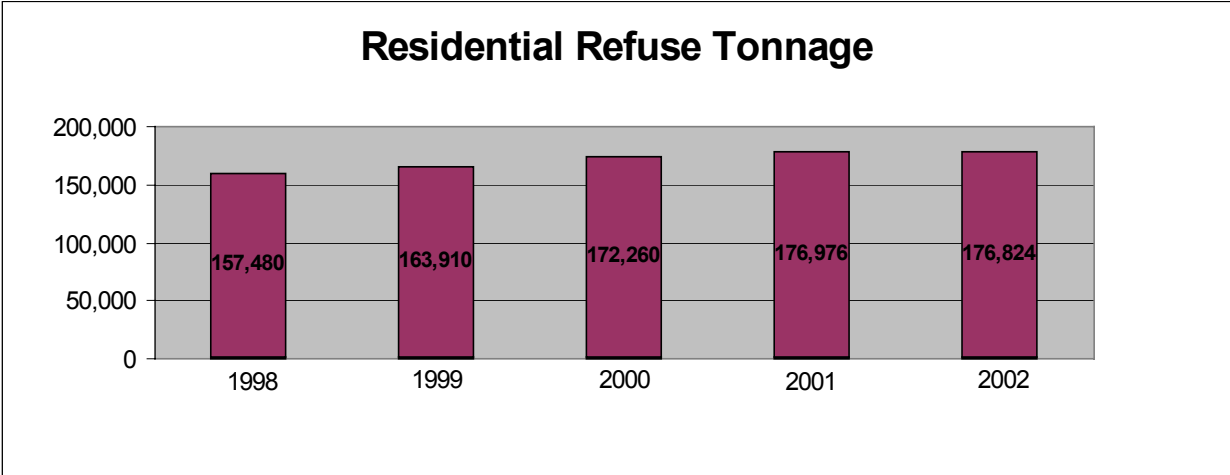


Table 3.0

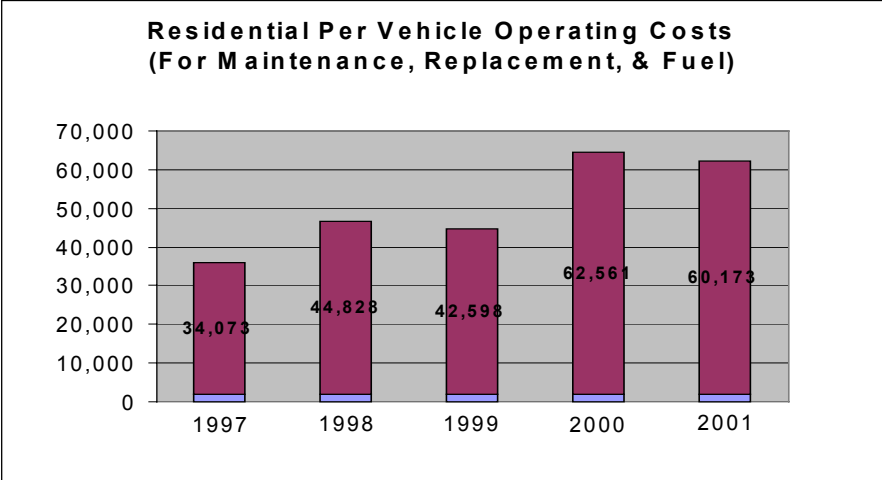
Budget pressures on Solid Waste Management services have come from significant increases in vehicle purchase prices and fleet maintenance fees over the last five years. Starting in 1997 expenditures for replacement, maintenance and fuel were \$2.794m for 82 vehicles. In 2001 they had increased to \$4.332m for 72 vehicles resulting in an annual expenditure of \$60,000 per vehicle, an amount that is 2x times the industry norm. (See Table 3.1)

Table 3.1

Other budgetary limitations have diminished the Department’s ability to keep up with a container replacement program. As noted above, Solid Waste has 95,000 containers in service at this time. Each 90-gallon container lasts an average of ten years suggesting that we should replace 8000 per year. Each 300-gallon container lasts an average of 5 years, suggesting that we should replace 3,000 per year. Unfortunately, Solid Waste has been limited to replacing approximately 6,000 containers (both sizes) per year. Priority has been given to the distribution of new containers to new housing and has not fallen behind in that category.

If a container is broken Solid Waste has encouraged our customers to call **791-3171** for a new trash can. The Department has kept up with the call-ins but has not inspected containers in the field to deliver the units that need to be replaced given the pressure on the budget.

However, with the proposed deployment of 130,000 recycling containers (subject to Mayor and Council approval), it would be prudent to establish a container replacement fund for current needs (approximately \$900,000 per year, not including blue barrels) plus retain monies for new growth (currently \$150,000) and earmark the funds so they



can not be diminished by annual budget exigencies. While the average life of the containers is ten years, replacement demand that grows over the period following the

initial deployment will be experienced. Therefore, building a fund to replace the containers should be considered for FY 2002-03.

The collections activity (both residential and commercial combined) uses more than half of the 243 employees in the Department. These field employees face an array of daily problems in the work environment unlike anything the office staff does. Therefore, over the last year a joint management-employee team re-designed the performance evaluation system with the goal of putting more value on quantifiable and measurable objective criteria. SWMD is seeking the means to recognize and reward drivers whose performance is in the top of the class. It is likely that the outcome of this effort will be an increase in production by all drivers, recognition of factors that impede high performance in the field and improved staff morale.

In an effort to absorb other aspects of the annual budget pressure, Solid Waste initiated a significant change in the residential collection schedule this past year. Prior to 2001 refuse was collected twice a week on a four-day schedule on 200 routes. Now, after going to a six day a week schedule with twice a week collection, 108 routes are run with 8 fewer trucks resulting in several thousands of dollars saved per year. These kinds of management techniques allow cost increases to be absorbed and minimize the growth of the SWMD budget while serving more customers. See Appendix 3.0 for a map of residential collection areas.

The refuse collection services that are provided twice per week on a Monday / Thursday or Tuesday / Friday or Wednesday / Saturday schedule will facilitate the implementation of the proposed once a week refuse, once a week recycling collection system (One & One Plus). It is expected that the current imbalance in the disposal tonnage collected on the first day of collection compared to the second day of collection will be eliminated with once a week refuse collection combined with once a week recycling collection on the same day. Currently the first day of collection runs 50% heavier than the second day but the refuse trucks have to drive the same number of miles to collect less. By shifting to the blue barrel system more tonnage will be diverted for recycling, landfill space will be conserved, and the remaining refuse will be collected more efficiently using fewer miles per route. The Department projects a significant savings to offset the initial \$5m investment in blue barrels by eliminating the current \$1.7m recycling collection contract and by gaining additional revenue from the sale of recyclables if the markets stay steady.

### **Curbside Garbage Collection Program Guidelines**

The Solid Waste Management Department provides customers with one of the nation's finest refuse collection systems that delivers maximum efficiency of service at minimum cost. The fully automated collection system uses state-of-the-art equipment. Customers

have been asked to familiarize themselves with a few easy guidelines to help SWMD help them get the trash collected. The guidelines are included in Appendix 1.0.

**Alley Garbage Collection Program**

The Solid Waste Management Department provides alley service to approximately 41,000 households with 15,000 300-gallon containers. Again, the Department has asked the customers to familiarize themselves with these easy guidelines to help us help them collect the trash and keep alleys free from litter. Most of these customers who also have curbside access will receive a 60 or 90 gallon container for recycling collection as the Solid Waste Management Department deploys the One & One Plus Program in the near future.

**Holiday Collection Schedule**

Another operational change was implemented this year that will improve service and result in budget savings. In prior years all refuse collection employees were off on all holidays. Landfill employees worked and kept the landfill open for all holidays except Thanksgiving, Christmas, New Years and July 4<sup>th</sup>. Refuse employees were asked to work the holidays this year (the same as landfill staff) and the results of that experiment demonstrated that significant savings in overtime and better customer service were the general outcomes. Consequently, the holiday schedule has been permanently changed to retain the savings and the improved customer service. The holiday schedule for the upcoming year is illustrated in Appendix 2.0:

Table 4.
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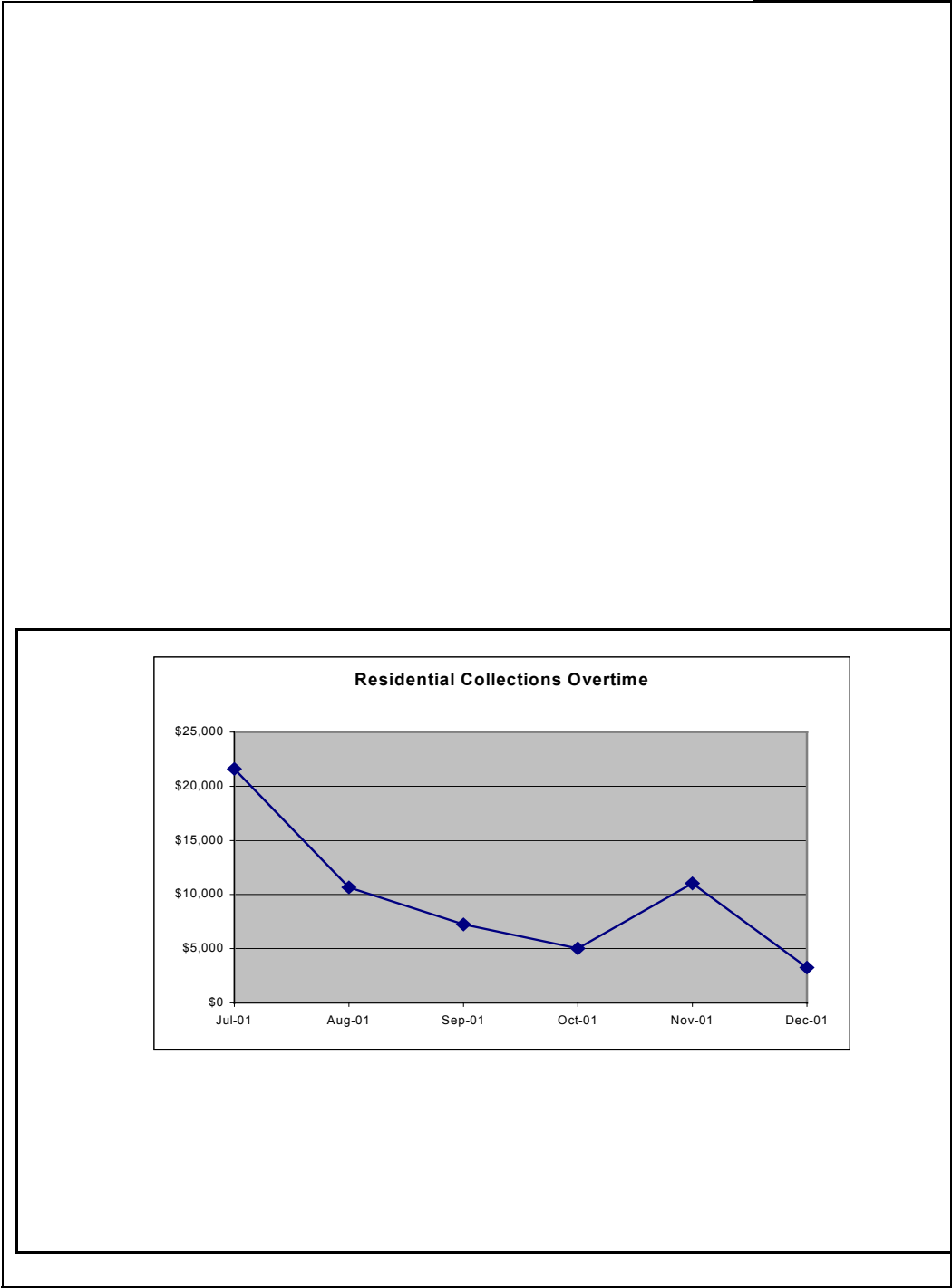


Table 4 illustrates the reduction in overtime due to the new holiday schedule. The first holiday under the new schedule was Labor Day in September. The residential division has effectively cut overtime in half while increasing service levels.

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When the City converts to once a week refuse collection and once a week recycling collection the residential division will not collect recycling on the four observed holidays nor on any day of that holiday week but will collect refuse on the day before or the day after the holiday depending on the day of the week. Notices will be published prior to implementation of the change.

### **Summary Of Residential Collections Accomplishments**

Implemented six day collection system  
Consolidated routes; reduced miles driven  
Successfully tested commingled collection system  
Increased cooperation in cross departmental programs  
Reduced fleet size; absorbed growth  
Redesigned holiday collection schedules; reduced overtime  
Drafted new employee evaluation system

### **Key Issues**

Secure dedicated revenue flow  
Implement One & One Plus Program  
Maintain improved service levels  
Develop alley vs. curb collection strategies

### **Planned Actions**

Develop and implement One & One Plus Program  
Investigate and propose "fair share" revenue source for M&C consideration  
Participate in five-year planning efforts for O&M and capital projects

### **"Brush / Bulky" Collection**

The Brush & Bulky collection program serviced 67,256 customers last year, picking up 13,690 tons of trash, 403 refrigerators/appliances, and 10,336 tires at a cost of \$999,370 for the twice a year residential service or \$73 per ton collected. Total program budget is \$1,500,000.

The difference between total program budget and the residential collection portion of the budget is \$500,000. This difference is used for non-curbside special services (that include for pay service collection, illegal wildcat dump clean-up, homeless camp clean-ups, out of zone call-backs NRC site maintenance, police call outs, Christmas in April, Treecycle, hot loads, hydraulic spills and other one on one requested services for private property clean up). It increases the program costs to \$110 per ton. Workload requirements and customer services requests have continued to increase the demands on the B&B Program.

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The activity uses 22 trucks, 14 loaders and trailers, and 17 employees. Program participation has been very steady over the last four years with increasing tonnages being collected. This service has experienced significant increase in vehicle cost and maintenance fees similar to the residential collection services. A rearloader vehicle that cost \$98k in 1995 now costs \$120k, for example.

The standard door hanger language that summarizes the rules for our customer set outs is reproduced in Appendix 6.0.

### **Summary Of Brush & Bulky Accomplishments**

- Increased total tons collected
- Lowered cost per ton
- Reduced missed stops
- Provided consistent support for NRC sites

### **Key Issues**

- Establish clear and consistent operational policies
- Establish a set of operational goals for near-term use
- Develop cooperative working agreements with intra-departmental divisions
- Clarify funding sources
- Investigate service delivery design parameters

### **Planned Actions**

- Write and get M&C approval of operational policies and rules
- Participate in intra-departmental planning

A **Brush / Bulky Collection Service Map** created by SWMD GIS team is illustrated in Appendix 7.0

Comments or questions? E-mail Danny Sainz: [dsainz1@ci.tucson.az.us](mailto:dsainz1@ci.tucson.az.us)

### **GIS/GPS/ Mapping Programs – Technology Upgrades**

For the last two years the Department has investigated new technologies that will make SWMD operations more efficient. Staff has worked closely with other regional and City partners to develop a very sophisticated GIS/GPS data system that will produce a variety of functional maps for field use. Many of the SWMD maps are very good for public use and information as well. A collection of sample maps is included in the Appendix to this report.

Staff has developed strategies for the procurement and use of a variety of innovations that will also accrue to the benefit of the Department and the customers. Some of the more likely and useful ideas are as follows:

**Technology Applications**

Digital Cameras – To be used in the documentation and communication of Code violation, field actions, customer complaints, service problems, and the like.

Wireless Tablets and PDAs – Mobil Internet and GIS technology that can provide database access, mapping, GIS, Global Positioning System (GPS) integration for data, allowing staff to create, update, query, get maps, and complete analysis in the field.

Vehicle Tracking - Routing – Wireless GPS Internet supported real-time vehicle location and tracking. Allows staff to determine deployment and collection activities, where trucks are needed and find service bottlenecks to improve customer service.

RF(Radio Frequency) Scale Entry – This feature would automate the daily entry of vehicles (both the City and the private customer) for processing for landfill sites, transfer stations, materials recovery facilities and other waste management operations. This allows the vehicle to communicate via module and assists with vehicle weighing.

Work Order System for SWMD – The work order part of the Pueblo billing System works well for water but poorly for refuse. The system is designed for water operations and business needs. Refuse operations and business needs are not addressed with any depth with respect to how our services are provided.

GIS Integration – SWMD has various data sets (for example, AS-400 data i.e.: work orders, Access databases, code violation databases and others) which need to be integrated with the GIS efforts to produce maps or visual displays of information for patterns and analysis. Information needs to be created, updated and shared from and to the field; from and to the office; on the WEB both internally and externally to the persons who can use the information the make up-to-date decisions or answer questions.

WEB Enabled Applications – Data entry, update, and use of information needs to be enabled to work over the WEB. This includes updated and shared information from and to the field; from and to the office; and on the WEB.

Credit Card or other forms of Payment over the WEB –Customers want this feature as a business and a 'good government', this value-added service should be considered as well.

**Summary Of GIS/GPS Accomplishments**

Inventoried entire City for residential and commercial container placements  
Geo-coded more than a dozen sets of variable data  
Re-routed commercial section routes  
Integrated existing data to the new mapping system  
Created databases for use in One & One Plus, residential and commercial routes

**Key Issues**

Establish clear and consistent operational policies  
Establish a set of GIS/GPS protocols  
Develop cooperative working agreements with intra-departmental divisions  
Identify long-term equipment needs

**Planned Actions**

Complete annual needs analysis  
Participate in 5-year planning effort  
Complete initial mapping system by Fall of 2002

Questions or comments? E-mail [lcassen1@ci.tucson.az.us](mailto:lcassen1@ci.tucson.az.us)

A good example of the work of the SWMD GIS team can be seen in the **Residential Collection Service Maps** in Appendix 3.0.

## Commercial Refuse Collection Operations

Commercial Collection Truck



### **Commercial Collection**

The Commercial Collections Division collected and disposed of more than 110,00 tons of refuse last year. It was collected from 4300 customers with frontload, rolloff and compactor services. More than 250 customers use the SWMD exclusive cardboard collection services that collected and recycled 1125 tons last year. The Division has a budget of \$4.72m for the year and projects expenditures to be less than the expected revenue of \$4.66m.

The Division has undergone several significant changes in the past year in an organized effort to minimize costs and maximize revenue. All routes were audited and re-routing has resulted in more compact and efficient collection zones. In cooperation with the Residential Division, Commercial also went to a six day a week schedule and experienced the same savings in overtime, and route mile reductions.

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To further reduce the cost of miles driven to and from the landfill the Division is in the middle of a fleet changeover that will increase the on-board capacity of vehicles from 34 yards to 40 yards. Unfortunately, like residential vehicles, commercial frontloaders have increased in cost from \$135K in 1996 to the current \$175K for the larger capacity frontloader.

Last year saw the beginning of a program to change metal dumpsters to side sleeves from the current triangle on the front. Only two cities use the triangle, Tucson and Ann Arbor, Michigan. RS&Y also has found that repair costs for the triangles outweigh the minor advantages afforded by the ease of connection provided by the triangle. It is estimated that over the next five years the conversion will save over 40% in maintenance costs or \$150K per year.

Reed, Stowe & Yanke developed a rate formula for commercial collections that proposed an average rate increase last year of about 10% for all customers. The greatest change occurred in roll-offs where the rate was changed to capture the actual tonnage cost, a change that is consistent with industry standards. The Mayor and Council approved a rate increase last fall in accordance with this recommendation.

RS&Y also recommended in concert with all other users (including residential collections) that Commercial pay the true allocated cost of disposal. Solid Waste fully supports this concept and will make it a part of any fee-based system that may be adopted in the future.

One of the biggest advantages that the existence of a municipal service in the commercial collections market has is that it helps keep consumer prices in equilibrium. Customers outside the jurisdictional boundaries of Tucson pay significantly more for the same service. Absent the City's competitive service, private haulers would set the market price resulting in greater costs to small businesses in the community. It is equally important that the refuse collected and disposed at Los Reales contribute to operating efficiencies that would be lost if the City did not control the delivery of over 110,000 tons. The increased efficiencies of scale help keep per ton operating costs and the attendant tip fee at reasonable levels at Los Reales.

### **Transfer Station**

The Commercial Division is responsible for the South 10<sup>th</sup> Transfer Station. The station currently operates at about 150 tons per day. Unfortunately, the optimum tonnage for effective and efficient cost recovery is closer to 300 tons per day. Infrastructure improvements to achieve 300 tons per day or ideally 700 tons per day to achieve even greater savings would cost more than \$2m to construct and procure new equipment. Closing the station will save approximately \$300K per year under current operational needs but the station is an important factor in long term planning if and when the waste

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needs to be transported to a different landfill or when traffic congestion makes the trip to Los Reales impractical with smaller trucks. Therefore, Solid Waste Management will continue to keep the upgrade of the station in the unfunded capital needs program as a planning tool.

Questions or comments? E-mail [jduarte1@ci.tucson.az.us](mailto:jduarte1@ci.tucson.az.us)

The Commercial Collection Division offers a full range of commercial refuse collection services for a fee. These services and fees are listed in Appendix 4.0.

### **Summary Of Commercial Collections Accomplishments**

- Implemented new rate structure
- Re-routed commercial section routes
- Started container conversion to sleeves
- Established six day collection schedule
- Started conversion to larger capacity trucks

### **Key Issues**

- Develop cooperative working agreements with Fleet Service
- Identify long-term equipment needs
- Investigate vehicle specifications for improved performance
- Draft plans for new and existing transfer station uses
- Reduce costs and increase revenue

### **Planned Actions**

- Complete annual rate review for M&C consideration
- Participate in 5-year strategic planning process
- Target an increase in market share by ten percent
- Improve support for NRC locations
- Continue triangle to sleeve conversion

### **Commercial Collection Service Map**

See Appendix 5.0

## Recycling, Waste Reduction and Diversion

The City of Tucson offers a variety of programs to increase the recycling, waste reduction and diversion rate. These include:

### Current Programs

#### **Curbside Recycling**

SWMD provides, with no service fee, twice-weekly residential garbage collection, plus once every other week recycling collection from 18-gallon green bins. The budget includes \$1.7 million per year to pay a private contractor to provide bins and collect the recyclables. The curbside program recycled about 13,440 tons of material during the most recent 12-month period for which data is available. The cost per ton recycled is \$126.50. The material recovery facility (MRF) receives, processes and markets the City's recyclables. The City receives a portion of the revenues from the sale of collected materials.

#### **Neighborhood Recycling Centers (NRCs)**

The City's 15 NRC drop-off sites are in place for small businesses and residents who do not have curbside service, although anyone can use them. The NRCs received more than 2,700 tons of material in the most recent 12-month period for which data is available. See Appendix 11.0 for a map of NRC locations.

#### **Other Programs**

The following programs combined recycle about 3,700 tons of material in a year.

- "One & One" pilot projects in four City neighborhoods provide weekly garbage and recycling (18-gallon bin) collection of about 565 tons per year. According to the "One & One Pilot Project Final Report, 1997," 86 percent of the residents in these areas support implementing the program citywide. Residential recycling pilot programs in the City have ranged from 16 to 24 percent diversion rates, compared to 9 percent for all residential recycling in the City.
- The City of Tucson and US EPA small business recycling pilot currently has 160 participating businesses that commingle recycling in 90-gallon blue barrels, which are collected weekly. Based on the initial 6-months of the project, it is expected to collect 79 tons in its first year.

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- Davis-Monthan AFB and about one-half of the Fairgrounds neighborhood are the first areas in the City to have commingled blue barrel weekly recycling using 60- or 90-gallon blue barrels. These 1,200 households, which received the new barrels in the fall of 2001, are expected to recycle about 286 tons in the first year.
- Cardboard collection from frontloader commercial service accounts totaled about 1,125 tons in 2001.
- The City white paper recycling program collects weekly from 110 blue barrels in 55 City of Tucson government locations, resulting in 98 tons of material per year.
- City Hall Recycle Plus pilot project collects an expanded list of recyclables commingled in blue barrels. More than 1200 pounds was collected in the last year.
- Scrap metal is collected at Los Reales Landfill; 1,288 tons were recycled and marketed in 2001. This produced \$15,000 in revenue last year.
- Computers collected at the ABOP site at Los Reales Landfill accounted for 12 tons in 2001. (The ABOP materials collected at Los Reales are part of the Household Hazardous Waste program operated by PDEQ.)
- TreeCycle collected 40,784 Christmas trees in 2001; an additional 3,247 were collected from streets and alleys. A total of 240 tons of trees were collected for mulching.

### Key Issues

- Curbside recycling may have reached a plateau. Participants in the current curbside recycling program cannot increase their recycling due to the limitations of the 18-gallon capacity bins, every other week collection, and limited materials accepted.
- People want more convenient recycling; currently they can only recycle limited materials, they must remember to set out recyclables every two weeks, and they must carry the loaded bin to the curbside.
- The City-contracted MRF will be a commingled system by July, 2002, suitable for commingled blue barrel collection.
- Most comparable cities have 20-40 percent diversion rates. Tucson is one of only five comparably sized cities in the country to collect garbage twice a week, the only one to do so without a fee and has an overall diversion rate of 9%.
- The most successful recycling programs share five traits: accept a wide range of materials; collect green waste; design a convenient program; have pay-as-you-throw refuse fee; require resident participation. They also have excellent data collection systems, advertise and educate the customers extensively and offer multiple options for services.

**Planned Actions**

- Continue to seek funding for the implementation of the One & One Plus Blue Barrel program approved by the City Council in December, 2000. This program will address several of the above concerns by providing more capacity, more frequent collection, and commingled recycling in 60- or 90-gallon wheeled carts, plus it provides regular green/yard waste collection. The program will also allow significant expansion of small business recycling. Once the program is started, the \$1.7 million for contracted recycling collection will be eliminated. With once weekly garbage collection, SWMD can use existing collection equipment and its second collection day to pick up recycling. The elimination of the inefficient second garbage collection each week will reduce garbage over-capacity, which should eliminate a disincentive to recycle. The program is estimated to increase Tucson's residential collection from nine percent to about 27 percent, thereby conserving landfill space, energy and natural resources and moving closer to the City Council's goal of a City that meets the standards of the 2001 Vision Statement. A separate Mayor and Council agenda item is scheduled for February, 2002 to discuss and seek direction for One & One Plus implementation.

**Education**

As per Mayor and Council direction, SWMD is embarking on a focused campaign to educate the community about the department and its cost of services. Research has been completed, including a literature review, a report from a focus group and a representative survey of 600 members of the community. Research data has been analyzed and an information/ education campaign is being developed. SWMD plans to make another presentation about the education programs associated with One & One Plus later this year that will contain additional details that are under construction at this time by the consultant.

**Current Education Programs**

SWMD staff has performed the following significant education activities in recent months.

- New recycling schedules and new SWMD newsletter, Diversion! were delivered to Tucson residents in October. Advance copies of the newsletter, along with a letter, were sent to the Department's Key Communicator list; Master Recyclers; area news media; Neighborhood Association Presidents; Mayor and Council and the City Manager.

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The Diversion! feedback mechanisms have generated approximately 34 written responses, 20 e-mails (at the new [recycle@cityoftucson.org](mailto:recycle@cityoftucson.org) address), and several phone calls. The newsletter triggered a lengthy Page One story in the Arizona Daily Star and other media attention.

- SWMD shared a large booth at the SAHBA Home Show in November with Tucson Organic Gardeners (TOG). Staff and information at the booth promoted composting, recycling and other Solid Waste services. Home composters were demonstrated and sold at the show to promote Beat the Heap, and TOG gave four composting presentations. Staff estimates that more than 1,500 contacts were made at the event. SAHBA provided the booth space at no cost to the City in exchange for SWMD's promotion of its participation in the home show.
- The Beat the Heap compost bin sale in November was very successful, with the public purchasing 2,009 bins at the City-subsidized price of \$25. Since its inception in 1997, SWMD has sold approximately 6,500 compost bins to residents during Beat the Heap.
- Outreach in the Fairgrounds One & One pilot area continued door-to-door (over 80% in Spanish) and included the ongoing implementation of Blue Barrel recycling. This outreach has resulted in exceptionally clean recyclables collected in Fairgrounds. Additionally, 55 more Blue Barrels were delivered this fall, raising the participation to about half of approximately 700 eligible households.
- In addition to the major story appearing in The Arizona Daily Star on Sunday, November 4, SWMD has received substantial recent media coverage, including print and broadcast stories and interviews about recycling, Blue Barrel, the Los Reales Landfill, a school waste audit, SWANA landfill award, TreeCycle, and holiday information, plus several Spanish-language radio interviews. A recycling message appeared on all Tucson water bills in the December cycle.
- More than 23 presentation/events were conducted by SWMD staff from September through December 31, 2001, reaching approximately 1,200 people (excluding the SAHBA Home Show), including sponsorship and participation in the Rio Nuevo First Run event on New Year's Eve.
- Waste reduction and recycling collateral materials are widely distributed by the department to schools, businesses, organizations and other departments and agencies.

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For more facts about our waste reduction & recycling programs, see appendix 8.0.

Questions or comments e-mail [whughes1@ci.tucson.az.us](mailto:whughes1@ci.tucson.az.us)

As noted earlier in this report, Tucson’s overall diversion rate is about 9%. As a comparison the table below lists a few typical communities and their rates.

**Household Curbside Recycling Benchmarks Cities**  
Table 5.

	Minneapolis MN	Portland OR	Madison WI	Seattle WA	Phoenix AZ	Tucson AZ
Population	358,785	505,000	200,800	540,000	1,362,191	504,450
Households	114,000	132,000	59,200	161,570	296,000	130,000
Diverted	29.4 %	50.3 %	46.3 %	43.0 %	22.7%	9 %
Recycled	16.6 %	27.4 %	19.1 %	33.0 %	22.7%	9 %
Composted	12.7 %	22.9 %	27.2 %	10.0 %	-0-	<.01 %
Curb LB/HH/YR	384	661	501	778	758	232.9
Yard Waste LB/HH/YR	360	742	809	492	-0-	1.1
Total Recycle LB/HH/YR	74	1,403	1,310	1,269	758	234

**Summary Of Recycling, Waste Reduction Accomplishments**

- Tested commingled system in Fairgrounds and Davis-Monthan Neighborhoods
- Increased participation in Treecycle
- Improved customer service through better access
- Started planning process for proposed One & One Plus recycling advertising

**Key Issues**

- Develop regional cooperation
- Strategic needs
- Public outreach programs
- Performance based services

**Planned Actions**

Seek funding approval to deploy the rest of One & One Plus City wide by October 2002

Expand small business recycling

Direct the drafting of a 5-year plan for integrated waste management

Organize a comprehensive education program to support solid waste systems

Increase diversion rate to 20% by 2003

## Landfill Operations

Los Reales Landfill  
Main Scale



### Landfill Overview

The City of Tucson operates the Los Reales Landfill at 5300 E. Los Reales Road (from I-10 exit at Craycroft Road, south to Los Reales Road to the Swan Road entrance). Last year the landfill buried 550,000 tons. While the landfill has current capacity to accept waste until 2016 it is important to note that a successful recycling program can significantly expand the life of the facility at a substantial savings in current dollars. The new lined cell 1 cost \$6M, covers 25 acres and will be full by December 2002. Future cell construction is not completely funded. Given the magnitude of the expense in constructing and maintaining the City's only landfill, the premise that all users – residential, commercial, private haulers, other City departments – need to pay an equitable tip fee for the use of the facility needs to be reexamined. A portion of the tip fee could be set aside for long term capital needs to defray the required expenses of new cell construction, closure costs and post closure maintenance.

The award winning Gas-to-Energy project developed for the landfill by ZAPCO in cooperation with TEP has helped absorb some of the costs and has assured regulatory compliance at the same time it has proved to be environmentally beneficial to the community. Los Reales currently produces enough landfill (50% methane) gas to power 4,000 homes for a year.

Los Reales accepts refuse from private self-haul customers. Solid Waste believes this activity could be much more cost effective, opportunities to recycle could be improved and long term capital costs reduced if we invested in a self haul facility built away from the existing operating face. This is another currently unfunded need that could be financed from a broad-based tip fee.

A new element was added to the rate structure this year—a Good Neighbor restrained or covered load fee rebate. In addition to all other charges set forth above, a five dollar (\$5.00) per ton fee rebate is applied at the entry to a city-operated sanitary landfill site or disposal facility for any refuse or other solid waste whose transportation vehicle or receptacle, as determined by the scalehouse clerk, is constructed, maintained, loaded and covered (by a securely fastened tarpaulin, netting or similar material of sufficient density and strength) in such a manner as to prevent the refuse or other solid waste from falling, leaking, spilling or being otherwise lost or ejected from the vehicle or receptacle.

See Appendix 10.0 for a map to Los Reales Landfill drawn by the Department's GIS team.

### **Current Programs/Trends – Landfill**

#### **Tonnage Trend (Years)**

The amount of waste generated in the community has generally increased as the population increased. However, the decisions of the large private haulers of waste have had an overriding effect on the total disposed at Los Reales in the past five years. As illustrated in Table 6, the amount of waste decreased for several years as one major private hauler moved its waste out the city landfills and into its own transfer station northwest of the city. Another major hauler then began to use the city landfill that combined with growth to create an increase in tons disposed. The projected decrease for the current fiscal year reflects a decrease in private hauler's trash that reflects the general downturn in the economy.

#### **Revenue/Cost Trend (Years)**

Table 6 illustrates the total cost to the City's general tax base to operate the landfill, to perform related engineering, and to provide needed supplementary funds to the capital improvement program budget. These costs decreased over several fiscal years due to the closing of the Harrison Landfill and the shrinkage in the heavy equipment fleet. The costs have generally increased since fiscal year 1999 due to increasing amounts of waste and escalating equipment charges.

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The revenue trend in Table 6 demonstrates that revenue from private haulers is variable and depends on their disposal decisions. The revenue is always less than costs because approximately half of the waste managed at the landfill comes from city programs (residential, commercial, and city departments) that produce no revenue.

A major function of the landfill division is to monitor landfill gas and ensure public safety is protected. Staff collects over 15,000 gas readings from 300 test points at 14 landfills over a typical year. Fewer than 10 of these readings last year exceeded allowable levels, and those gas migration problems were rapidly corrected with no public safety concerns. Gas migration is controlled with vacuum systems at five landfills. The total cost of the methane program is approximately \$350,000 per year.

The landfill division also maintains the surface of 13 closed landfills throughout the city. As final caps are constructed on two landfills over the next two years, the amount of maintenance as required by regulatory agencies will increase.

### **Los Reales Disposal Capacity**

The Los Reales Landfill has permitted disposal capacity to last through approximately 2016 at current disposal rates. Cell 1 (the first lined cell at the site) opened in July 1999 and will reach capacity by December 2002. Construction begins in February 2002 on Cell 2 and it will be ready to open in the Fall. The capacity in cell 2, combined with the capacity on top of old landfill area, will last through 2007.

Cell 2 will be constructed with general obligation bond funds from the 2000 authorization. That allocation does not include funds for the next cell. Therefore, an additional source of funding must be found in time to avoid running out of landfill disposal space.

### **Los Reales Master Plan**

In 1996, the Mayor and Council approved a plan to maximize the life of the landfill using the city owned land at the Los Reales site. Staff has completed the preliminary phase of a master plan for the Los Reales site to accomplish this objective. The plan reports that SWMD has the space to operate disposal activities for another 60 years.

The alternative to the proposed continued use of the Los Reales Landfill would be to find a new landfill site (likely much farther away than Los Reales) and

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transport (long haul) the waste. Another alternative would be to contract with private companies to dispose of the City's solid waste. Either alternative is much more expensive than continuing to use Los Reales.

In order to construct the master plan and realize the savings, some increases in costs in the short term are necessary. The costs would cover the excavation of new areas, construction of stormwater controls, land acquisition, relocation of facilities, and other tasks necessary to build the planned facility over the 1000-acre site. However, no funding is currently available for these tasks through bond issues or other sources of funds.

The preliminary master plan will be presented in full to the mayor and Council later this year.

### **Closure Of Old Landfills**

The city has used 23 known landfill sites over the past 30 years. Many of these have not been closed in the manner necessary to protect the environment and public safety. Over fiscal years 2003 and 2004, the city is (or will be) legally required by permits to build proper closure protections at three of these sites: Mullins, Irvington, and the industrial cell at the Los Reales Landfill. Of the \$11.3 million needed to complete these projects, only \$2.5 million is presently available in bond funds.

Many of other old landfill sites need improvements, especially when encroachments by residential development cause the facilities to become more visible. However, only \$190,000 is currently available to address these needs. Many of these old sites have the potential to be turned into beneficial end uses for the community, but construction of environmental protection features is a requisite for end use.

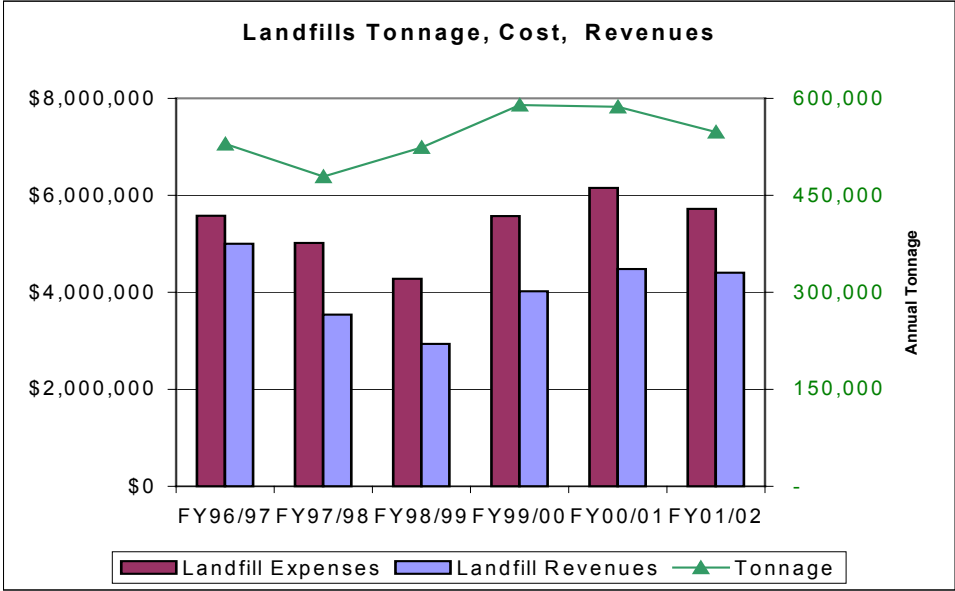
### **Remediation Of Groundwater Contamination (Environmental Management Division -- EMD)**

Contamination of groundwater is known at four of the larger landfill sites in the city. Although much of the cleanup projects are funded under the bond programs, costs of these cleanups tend to increase over time as unanticipated conditions are encountered. For example, at Los Reales Landfill, contamination was found over a larger area that increased the funding needed from \$1.3 to \$1.9 million.

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The City’s Environmental Management unit is conducting a project to investigate groundwater at old sites and it may find problems that will have to be remediated. For example, EMD found contamination at the Prudence landfill in the current fiscal year. The cost to correct the Prudence contamination could cost over \$1 million.

Table 6.



**Fiscal Trends**

**Capital Budget**

The Solid Waste Management capital improvement program expenditures and needs for the next five-year are summarized in Table 7. The total need over the next five years is projected to be \$50.6 million; \$44.9 million of this is unfunded. The mandated and urgent unfunded needs for landfill closures over the first two years total \$8.8 million. Other unfunded but mandated projects over the five years total \$13.7 million.

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The remaining \$22.4 million is for facilities that are optional but would improve service and generate operational budget savings. The projects included a drop-off and recyclables sorting facility for the Los Reales Landfill, and upgrade of the 10<sup>th</sup> Ave. transfer station, a new transfer station to serve the east side, and a solid waste administrative and training facility to relieve present overcrowding at the Price Service Center and provide training space for SWMD field and professional staff.

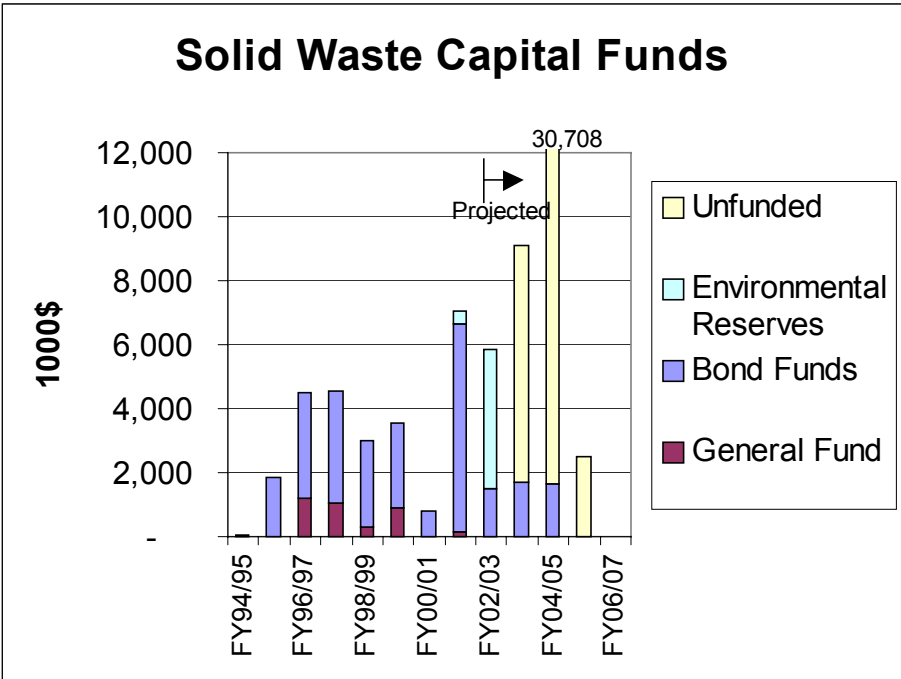
Table 7 also shows that over the past five years, it has been necessary to supplement bond funds with general fund capital totaling \$3.7 million in order to complete mandated projects. Also, the projected needs for the next two years are recommended to be met with \$9.4 million from the Environmental and Solid Waste Mandated Reserves fund. In essence, drawing down this reserve fund reduces the City's annual fund balance, which may have detrimental consequences in the future.

The major unfunded capital needs beyond the five years would pay for building capacity at the Los Reales Landfill and closing the landfill when it is completed. The next cell after Cell 2 will be needed in approximately five years, but at present there is no source of funding (approximately \$3.5 million). Without this cell, the city will run out of landfill space.

The city is required by law to assure its ability to close landfills and provide for post-closure for 30 years. At present this liability is estimated to be \$51 million, most of which would occur after 2007. No funding source exists for most of this liability. It is common practice to set aside part of current fee revenue to pay for these inevitable costs, but that is not possible with the present fee structure.

The City's limit on the amount of general obligation bonds that can be issued for the next potential 5-year bond program is approximately \$10m a year. Priorities for Parks, Fire, Police and General Government needs as well as Solid Waste are burdens against this capacity. However, the projected unfunded need through the potential period (ending 2010) for solid waste management and environmental management is approximately \$59 million.

Table 7.



For additional information about Los Reales and all SWMD landfill programs see Appendix 9.0 or e-mail <mailto:clevernz1@ci.tucson.az.us>

## Household Hazardous Waste Disposal

A B O P Facility at Los Reales



### Household Hazardous Waste

In an effort to keep the many hazardous materials that have become commonplace in households and businesses out of the landfill, the City of Tucson and Pima County have joined together to provide a place where residents and small businesses may bring hazardous items for recycling, exchange, or safe disposal. Residents may bring leftover chemical products to the main Household Hazardous Waste program (HHW) site or to one of the three outreach sites open the first Saturday of each month. The service is free to the public. The Small Business Waste Assistance Program (SBWAP) provides assistance to small businesses seeking to manage their hazardous waste.

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Site	Location	Hours Open
HHW Main Site	2440 W. Sweetwater Dr.	8 a.m.- 12 p.m. every Friday and Saturday
Eastside City Hall	7575 E. Speedway Blvd.	8 a.m.- 12 p.m., first Saturday of every month
Tucson Fire Dept.	797 E. Ajo Way	
Northwest Collection	Oracle/ Ina at Via Ponte	
<p><b><i>These materials are accepted:</i></b>  <input type="checkbox"/> paint <input type="checkbox"/> cleaners <input type="checkbox"/> acids <input type="checkbox"/> pool chemicals <input type="checkbox"/> lawn &amp; garden chemicals <input type="checkbox"/> drain openers <input type="checkbox"/> auto fluids <input type="checkbox"/> glues <input type="checkbox"/> flammable products <input type="checkbox"/> anything marked "toxic," "poison," or "danger"</p>		
<b>Information</b>	Household Hazardous Waste Program 888-6947	
	Small Business Waste Assistance Program 740-3340	

**Summary Of Landfill Operations Accomplishments**

Maintained current rates  
 Established a new rebate program to encourage covered loads  
 Filled Cell One  
 Acquired buffer zone

**Key Issues**

Regional cooperation  
 Strategic needs  
 Equipment planning  
 Landfill revenues

**Planned Actions**

Finalize Los Reales Master Plan  
 Participate in enterprise fund development  
 Complete annual rate review

## Refuse Code Enforcement Services

### Overview

The SWMD Environmental Inspections division is responsible for enforcing Chapter 15, Refuse Code, as well as various sections of other Code Chapters relating to property code violations. In 1996, the Mayor and Council authorized SWMD to take the lead on Consolidated Code Enforcement. Since 1996, SWMD has responded to over 150,000 reported code violations for a variety of property related issues, such as illegal dumping, junk residential storage, junk/abandoned vehicles, hazardous waste, weedy property, illegal/improper refuse disposal and trash, litter and debris. SWMD inspectors also provide support services for the department's collections division and waste diversion programs. For example, SWMD inspectors enforce violations of illegal use of refuse containers and overloaded containers, as well as monitoring the City's Neighborhood Recycling Centers.

SWMD Inspectors are also team members for the SABER program, and work cooperatively with other SABER inspectors to abate violations and issue citations for property related civil infractions of the SLUM Ordinance. As a result of the SABER Program Environmental Inspections is working closely with Information Technology and Development Services Center staff to implement Permit Plus, an ACCESS based computer tracking system currently used by DSC. Permit Plus will allow DS and SWMD inspectors access to the same database of reported code violations and will enhance communication and expedite enforcement efforts. The Mayor and Council have authorized funding to continue SABER for the next 18 months.

All SWMD Environmental Inspectors are members of the City's Neighborhood Enhancement Team. Inspectors work closely with Citizen and Neighborhood Services and Neighborhood Associations in coordinating neighborhood clean-ups, educating school children and residents about Solid Waste services and property owner responsibilities. Inspectors also attend community events and functions as part of NET Team outreach efforts.

In FY98-99, Inspectors responded to 22,944 reported code violations. Inspectors investigated 30,190 reported violations in FY00/01, representing a 24 percent increase. SWMD projects Environmental Inspections will receive approximately 34,000 requests for code inspections for FY01/02, based on current trends. This represents a projected 48% increase from FY 98-99. Due to an increases in reported code violations, the additional responsibilities associated with Consolidated Code Enforcement and SABER,

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as well as limited resources, the response time for initial site inspections has increased from three to five days in 1996 to seven to 10 days in 2001. In 2001, SWMD Environmental Inspectors have resolved or abated 90 percent of reported code violations within 60 days.

As the City increases efforts to abate slum properties and continues to grow by both population and square miles, the demand on SWMD Environmental Inspections will continue to increase. This may cause initial site inspection delays for all but the most hazardous of reported code violations. Increases in service demand with no additional increase in resources will ultimately result in a longer time frame in abating property related violations and will decrease the quality of life and health of our neighborhoods. As new programs come on line that require inspection services, additional inspectors will be required to keep pace with the demand for services.

### **Summary of Code Enforcement Accomplishments**

SWMD organized cross-training workshops for all inspectors in all City departments  
Inspections Division received two Public Service Excellence Awards  
Inspectors investigated 30,190 reported violations in FY00/01  
The Inspections Division contributed to the successful pilot of the SABER program

### **Key Issues**

Decrease response time for initial site inspections  
Decrease abatement timelines  
Continue cross-departmental coordination

### **Planned Actions**

Develop comprehensive clear and understandable information brochures  
Geo-code violations that can be graphically displayed by category  
Initiate a tracking system for court cases related to code violations

Please call **791-3171** and ask for Code Enforcement Services to ask for more information or to arrange an Inspector visit or e-mail [cmannar1@ci.tucson.az.us](mailto:cmannar1@ci.tucson.az.us)

## Customer Service

### Overview

The Customer Service Division (CSD) is comprised of nine (9) Customer Service Representatives (CSR) who respond to approximately 118,000 calls annually. The CSRs perform a variety of functions, serving as the central hub for customer inquiries and service requests. The CSD is also responsible for data entry, mailings, conducting research for billing purposes, maintaining landfill and collection services data and coordinating service requests between SWMD customers and the department's operations staff. The Customer Service Supervisor also serves as the Office Supervisor for the Department and in addition to overseeing the CSRs is responsible for office supplies and furniture and general administrative office management.

In 1998 SWMD upgraded its phone system to increase the capacity for receiving calls, and allow management the ability to track phone call volume usage and timeliness of response. As a result of this investment and enhanced customer service training and customer call-in options, SWMD has reduced the lost call rate from 27 to 4 percent. The CSD staff has received field training in all operational divisions of the department as well as extensive customer service training. The CSR have been trained in recycling and waste diversion issues and are now handling all requests associated with the Waste Management, Inc. contract for the City's curbside recycling program. This change has improved customer response time for new bins, and missed service reports are remedied more expeditiously. Receiving customer recycling service requests directly allows SWMD to better monitor contacted service performance and improve the quality of service to our 135,000 recycling curbside customers.

Along with these improvements, the CSD developed customer call-in options, that allow residents to select pre-recorded messages for frequently asked questions, such as the landfill's hours of operation, fees and location. These options can be accessed 24 hours a day, seven days a week. Customers can also leave messages via the phone or the internet round-the-clock. CSD provides information in both English and Spanish and bi-lingual CSRs are available during business hours. The CSD also initiated the use of "customer information and tips" while callers are on-hold. This low-cost education tool has proved useful in reaching a diverse and large audience to inform customers about SWMD programs and policies while waiting for their connection.

Through careful monitoring of business license activity, the CSD has assisted in increasing revenues through the Automated Plastic Container (APC) refuse fee, adopted by Mayor and Council in 1997. Working closely with Inspections and other key SWMD operational staff, the business APC refuse fee revenues have increased from

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\$320,208 in FY98/99 to \$375,398 in FY00/01, representing a 17 percent increase to the General Fund.

Customer Service training will be geared towards extensive education on understanding SWMD operational issues and our customer's needs. Future training will build upon a model CSD used successfully in 1997 that included integrated customer service training for all field supervisors, CSRs and landfill staff who interact with SWMD customers. This in-house, integrated training allows customer outreach staff to better appreciate and understand all aspects of SWMD's operations and programs, while fostering a team approach to customer service. Integrated customer service training also ensures greater consistency in dealing with the varied customer issues and inquiries that SWMD is challenged with on a daily basis.

CSD is working with Community Relations to develop a more customer oriented Web site that will include valuable information for residents about SWMD programs and policies, as well as useful links to other web sites. The Web site will provide geo-based neighborhood information detailing all SWMD programs, policies, fees, special services and geo-based code violation data, refuse and recycling route information and brush & bulky collection schedules. Customers will also be able to access information about the cost of SWMD programs and services and submit inquiries and service requests via the net.

As call volumes reduce through interactive Web communication and phone messages, CSR will be able to increase their ability to call back customers to obtain feedback on service satisfaction. This will provide the department with valuable information about the effectiveness of programs and services and the timeliness of response to requests for special services or complaints.

Additionally, the CSD is continuously working to improve data entry and reporting methods to provide management with useful data for critical operational decisions and daily functions. CSD is also responsible for ensuring the timely initiation of all service request work orders, billing services, and distributing work orders to appropriate staff. As the first line of contact with our 118,000 annual call-in customers, the CSRs serve as our public relations specialists, who play a significant role in fostering good will and a positive image for the department and the organization as a whole.

### **Summary of Customer Service Accomplishments**

- Upgraded the phone system
- Reduced lost call rate
- Completed field training for all CSRs
- Added customer automated call-in options
- Created customer message service
- Helped increase refuse fees from small business customers

**Issues**

Role in One & One Plus Program  
Equipment upgrades  
Needs analysis for training  
Scope public outreach systems

**Planned Actions**

Develop extensive education program  
Complete training for field supervisors  
Update Web site  
Complete customer call-backs to improve service

**Important Information Numbers**

**Telephone Numbers**

Residential Collection Inquiries & Complaints:	791-3171
Commercial Garbage Collection and Recycling Services:	791-3272
Curbside Recycling:	791-3171
Landfill-- Holiday Information:	791-5085
Weeds, Litter & Illegal Dumping:	791-3171
Solid Waste Administration:	791-3175
City/County <b>ReTHINKIt</b> Recycling Information Line:	791-5000
Tucson Organic Gardeners Compost Assistance Line:	670-9158
Household Hazardous Waste Disposal:	888-6947
Southwest Public Recycling Association:	791-4069
Tucson Clean and Beautiful:	791-3109
Pima County Solid Waste Management:	740-7649

## APPENDICES

### APPENDIX 1.0

#### Curbside Garbage Collection Program

#### Notice to Customers

**Each residence receiving curbside service is provided a 90 - gallon container at no cost.** The container gives each residence ample capacity for normal household garbage. The City will service this container only; please do not use other types of garbage cans, boxes, or receptacles. They will not be picked up. Because the container is the property of the City of Tucson, the City at no cost will perform all normal maintenance as a result of reasonable wear and use. Call **791-3171** if your container needs repairs or replacement.

(NOTE: When the One & One Plus system is implemented, each customer with curbside service or access will receive a second 60 or 90 gallon container to put recycling material into, also at no charge. The same rules will apply to the maintenance and care of the second container as apply to the existing refuse containers.)

**Do not take the container from the property if you move.** The container is assigned to the property address.

**These containers must not be used for dirt, mortar, concrete, plaster, building materials (particularly rebar), toxic and hazardous material, unwrapped animal waste, or any other similar items.** To eliminate wasted space, cardboard boxes may need to be dismantled, crushed or cut into small sections before placing in the container. **Better yet**, put flattened, cut corrugated cardboard out for your recycling collection. Do not put hot ashes, cinders, coals or any other burning materials into the container. Wood, limbs, window shades and green waste trimmings should be cut to less than 36" lengths and should not stick out of the lid more than 24".

To move the container, it is best to steady the container by placing your foot behind the container wheels before tipping and rolling. It is generally easier to pull the container up an incline and push or guide the container down an incline.

Your container **must be set out before 6:00 A.M.** on the days of collection; otherwise, the City cannot guarantee same day collection. The container must be placed out at the

## THE SOLID WASTE REPORT

curb between the sidewalk and the curb (within 2 feet of curb) and away from parked vehicles, mailboxes, and other obstructions. Be sure the container handle faces your house. We cannot service a container when the handles face the street. The container **must be brought in off the curb before 8:00 p.m.** the same day after collection. Your cooperation with this rule will help maintain your neighborhood's appearance. The Solid Waste Management Department recommends you do not set your container out the night prior to collection if possible.

The containers have a projected life of 10 years and it is the responsibility of the resident to prevent loss or undue damage and wear of the containers, as well as to keep them clean. Bag and tie your trash to keep the container clean and to minimize odors and flies.

Large yard waste may be bundled and set out for the **Brush & Bulky** collection program 2 times a year. Do not put any bundles, bags, boxes, or other items on top of the closed lid.

Newspaper bundles should NOT be placed in the trash. Newspapers may be recycled in your every other week curbside recycling collection program, or you may take them to your nearest Neighborhood Recycling Center.

If your trash can is broken (no lid, split sides, broken wheels, graffiti, melted sides or top) call **791-3171** to get it replaced.

Should you have any questions or problems, call the City Solid Waste Management Department, Customer Services at **791-3171**. You can report any problems with your container or your service. We appreciate your help and cooperation.

For safety reasons, children can not play near the refuse collection trucks or inside the containers!

### **REMEMBER, PLEASE DO NOT:**

- Dispose of dirt or rock/gravel
- Dispose of toxic or hazardous materials
- Dispose of hot or burning materials
- Dispose of construction or building materials
- Put bundles on lid

## **Alley Garbage Collection Program**

The Solid Waste Management Department provides alley service to approximately 41,000 households with 15,000 300-gallon containers. Again, the Department has asked the customers to familiarize themselves with these easy guidelines to help us help them collect the trash and keep alleys free from litter. Most of these customers who also have curbside access will receive a 60 or 90 gallon container for recycling collection within the next year as the Solid Waste Department deploys the One & One Plus Program.

**A 300-gallon container is placed in the alley and shared by 3 or 4 neighbors.** The container gives each residence ample capacity for normal household garbage. The City will service the 300-gallon container only; please do not use other types of garbage cans, boxes, or receptacles. They will not be picked up. Because the container will remain the property of the City of Tucson, all normal maintenance as a result of reasonable wear and use will be performed by the City at no cost to the resident. Do not move or relocate the container without approval from the Solid Waste Management Department.

**If your trash can is broken** (no lid, split sides, graffiti, melted sides or top) call **791-3171** to get it repaired or replaced.

**These containers must not be used for dirt, mortar, concrete, plaster, building materials (particularly rebar), toxic and hazardous material, unwrapped animal waste, or any other similar items.** To eliminate wasted space, cardboard boxes may need to be dismantled, crushed or cut into small sections before placing in the container. **Better yet**, put flattened, cut corrugated cardboard out for your recycling collection. Do not put hot ashes, cinders, coals or any other burning materials into the container. Wood, limbs, window shades and green waste trimmings should be cut to less than 36" lengths and should not stick out of the lid more than 24".

**All wet garbage** such as food scraps, etc. should be put in plastic bags and tied securely before placing them in the container. Use the container placed nearest to your residence and discard your garbage **before 6:00 A.M.** on the days of collection. Your cooperation will help maintain your neighborhood's appearance.

The containers have a projected life of 10 years and it is the responsibility of the resident to prevent loss or undue damage and wear of the containers, as well as keep them clean. Large yard waste may be bundled and set out for the **Brush & Bulky** collection program 2 times a year. Do not put any bundles, bags, boxes, or other items on top of the closed lid.

## THE SOLID WASTE REPORT

Newspaper bundles should NOT be placed in the trash. Newspapers may be recycled in your every other week curbside recycling collection program. You may take them to your nearest Neighborhood Recycling Center.

Should you have any questions or problems, call the City Solid Waste Management Department, Customer Services at **791-3171**. You can report any problems with your container or your service. We appreciate your help and cooperation.

For safety reasons, children can not play near the refuse collection trucks or inside the containers!

### **REMEMBER, PLEASE DO NOT:**

- Dispose of dirt or rock/gravel
- Dispose of toxic or hazardous materials
- Dispose of hot or burning materials
- Dispose of construction or building materials
- Put bundles on lid
- Move or relocate the container

## APPENDIX 2.0

### Holiday Collection Schedule

\* NOTE: The implementation of One & One Plus Programs will cause a change in the schedule for Thanksgiving, Christmas, New Years and the 4<sup>th</sup> of July. Residents will receive a new schedule when their new blue recycling barrel is delivered later this year. All other holidays will remain on the same schedule.

## MEMORIAL DAY MONDAY, MAY 27, 2002

### City garbage, recycling collection unchanged by Memorial Day

City of Tucson garbage and recycling collection will not be changed by the Memorial Day holiday.

All collection routes will be run on their regular schedule.

Los Reales Landfill will be **OPEN** 7 a.m. to 5 p.m.

## INDEPENDENCE DAY THURSDAY JULY 4, 2002

**Garbage Collection:** City employees will be off work on Independence Day, Thursday July 4, 2002.

- Monday's, Tuesday's, and Wednesday's refuse collection will **not** be changed;
- **Thursday** there will be **NO** garbage collection.
- Thursday's garbage will be collected on the regular schedule, Monday, July 8, 2002.
- If you have extra garbage on Monday, bag it, tie it and place it next to the trash can on Monday **ONLY** and the drivers will pick it up.
- Friday's and Saturday's refuse collection will **not** be changed.

**The City's Curbside Recycling** will **NOT** be collected on Independence Day.

- Monday's, Tuesday's and Wednesday's recycling collection will not be changed,
- Thursday's recycling collection will be picked up on Friday, July 5, 2002, and
- Friday's recycling collection will be picked up on Saturday, July 6, 2002.

**Pilot Areas:** If you are in one of the city's pilot project areas receiving once-a-week garbage and recycling pickup, all garbage and recycling collection for the week will **not** be changed.

Davis-Monthan Air Force Base will have garbage and recycling collection Friday, July 5, 2002.

Los Reales Landfill will be **CLOSED** on Independence Day, Thursday, July 4, 2002.

## LABOR DAY MONDAY, SEPTEMBER 2, 2002

### City garbage, recycling collection unchanged by Labor Day

City of Tucson garbage and recycling collection will not be changed by the Labor Day holiday.

All collection routes will be run on their regular schedule.

Los Reales Landfill will be **OPEN** 7 a.m. to 5 p.m.

## VETERANS DAY MONDAY, NOVEMBER 11, 2002

### City garbage, recycling collection unchanged by Veterans Day

City of Tucson garbage and recycling collection will not be changed by the Veterans Day holiday.

All collection routes will be run on their regular schedule.

Los Reales Landfill will be **OPEN**:

Sunday, November 11, 2001 7 a.m. to 4 p.m. and

Monday, November 12, 2001 7 a.m. to 5 p.m.

## THANKSGIVING DAY THURSDAY, NOVEMBER 22, 2001

**Garbage Collection:** City employees will be off work on Thanksgiving Day, Thursday, November 22, 2001.

- Monday's, Tuesday's, and Wednesday's refuse collection will **not** be changed;
- **Thursday** there will be **NO** garbage collection.
- Thursday's garbage will be collected on the regular schedule, Monday, November 26, 2001.
- If you have extra garbage on Monday, bag it, tie it and place it next to the trash can on Monday **ONLY** and the drivers will pick it up.
- Friday's and Saturday's refuse collection will **not** be changed.
- 

**The City's Curbside Recycling** will **NOT** be collected on Thanksgiving Day.

- Monday's, Tuesday's and Wednesday's recycling collection will not be changed,
- Thursday's recycling collection will be picked up on Friday, November 23, 2001, and
- Friday's recycling collection will be picked up on Saturday, November 24, 2001.

•  
**Pilot Areas:** If you are in one of the city's pilot project areas receiving once-a-week garbage and recycling pickup, all garbage and recycling collection for the week will **not** be changed.

**Davis-Monthan Air Force Base** will have garbage and recycling collection Friday, November 24, 2001.

**Los Reales Landfill** will be **CLOSED** on **Thanksgiving Day**, Thursday, November 22, 2001

## **CHRISTMAS DAY**

### **WEDNESDAY, DECEMBER 25, 2002**

**Garbage Collection:** City employees will be off work on Christmas Day, Tuesday, December 25, 2001.

- Monday's refuse collection will **not** be changed;
- **Tuesday** there will be **NO** garbage collection.
- Tuesday's garbage will be collected on the regular schedule, Friday, December 28, 2001.
- If you have extra garbage on Friday, bag it, tie it and place it next to the trash can on Friday **ONLY** and the drivers will pick it up.
- Wednesday's, Thursday's, Friday's and Saturday's refuse collection will **not** be changed.
- 

**The City's Curbside Recycling** will **NOT** be collected on Christmas Day.

- Monday's recycling collection will not be changed,
- Tuesday's recycling collection will be picked up on Wednesday, December 26, 2001,
- Wednesday's recycling collection will be picked up on Thursday, December 27, 2001,
- Thursday's recycling collection will be picked up on Friday, December 28, 2001, and
- Friday's recycling collection will be picked up on Saturday, December 29, 2001.
- 

•  
**Pilot Areas:** If you are in one of the city's pilot project areas receiving once-a-week garbage and recycling pickup, garbage and recycling collection for the week will **NOT** be changed.

**Business Recycling and White Paper Recycling:** If you are using one of these programs the collection day will be:

» Tuesday's recycling collection will be picked up on Thursday, December 27, 2001.

**Davis-Monthan Air Force Base** garbage and recycling collection will not be changed.

Los Reales Landfill will be **CLOSED** on **Christmas Day**, Tuesday, December 25, 2001.

## **NEW YEAR'S DAY WEDNESDAY, JANUARY 1, 2003**

**Garbage Collection:** City employees will be off work on New Year's Day, Tuesday, January 1, 2002.

- Monday's refuse collection will **not** be changed;
- **Tuesday** there will be **NO** garbage collection.
- Tuesday's garbage will be collected on the regular schedule, Friday, January 4, 2002. If you have extra garbage on Friday, bag it, tie it and place it next to the trash can on Friday **ONLY** and the drivers will pick it up.
- Wednesday's, Thursday's, Friday's and Saturday's refuse collection will **not** be changed.

**The City's Curbside Recycling** will **NOT** be collected on New Year's Day.

- Monday's recycling collection will not be changed,
- Tuesday's recycling collection will be picked up on Wednesday, January 2, 2002,
- Wednesday's recycling collection will be picked up on Thursday, January 3, 2002,
- Thursday's recycling collection will be picked up on Friday, January 4, 2002, and
- Friday's recycling collection will be picked up on Saturday, January 5, 2002.

**Pilot Areas:** If you are in one of the city's pilot project areas receiving once-a-week garbage and recycling pickup, garbage and recycling collection for the week will **NOT** be changed.

**Business Recycling and White Paper Recycling:** If you are using one of these programs the collection day will be:

- » Tuesday's recycling collection will be picked up on Thursday, January 3, 2002.

**Davis-Monthan Air Force Base** garbage and recycling collection will not be changed.

Los Reales Landfill will be **CLOSED** on **New Year's Day**, Tuesday, January 1, 2002.

## **MARTIN LUTHER KING, JR. DAY MONDAY, JANUARY 20, 2003**

**City garbage, recycling collection unchanged by Martin Luther King Day**  
City of Tucson garbage and recycling collection will not be changed by the Martin Luther King Day holiday.

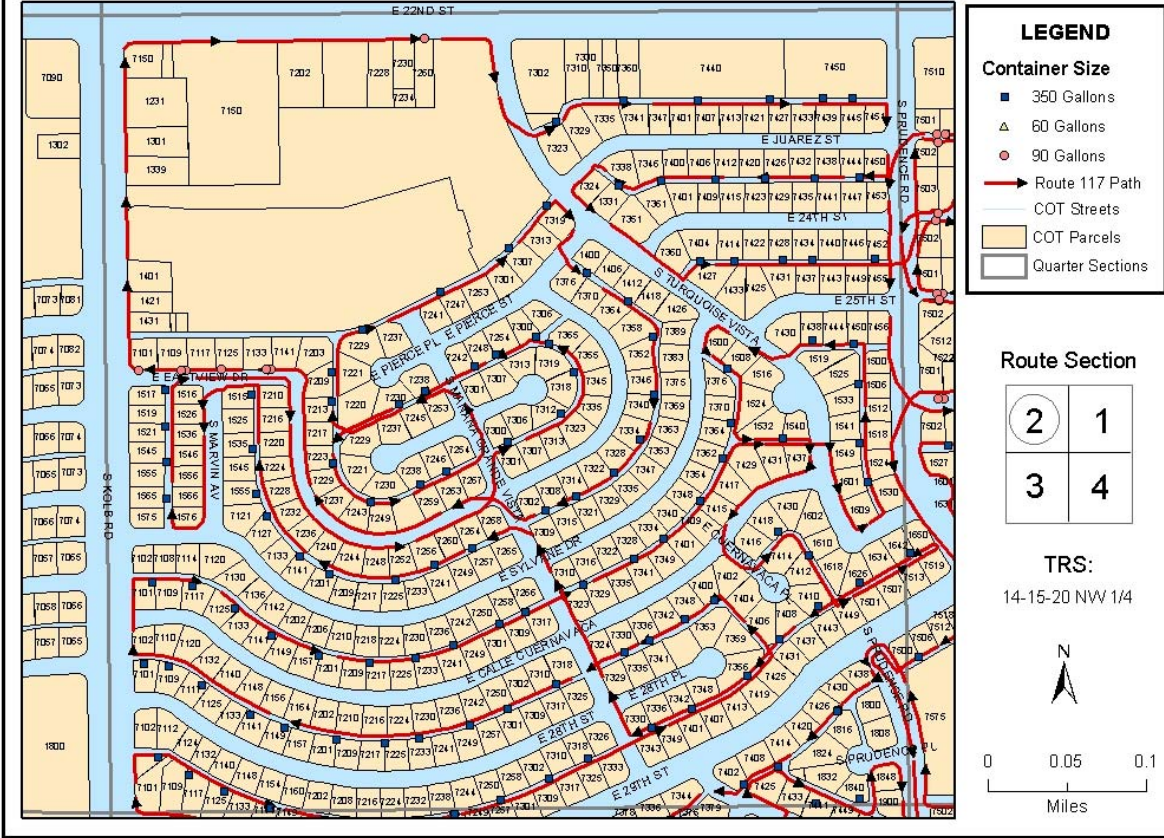
All collection routes will be run on their regular schedule.



Detailed Residential Route Map

RESIDENTIAL ROUTE 117 TUESDAY/FRIDAY ZONE 5

(Page 2 of 4)





APPENDIX 4.0

**Commercial Collection:**

Services include:

**Frontload service** with varied sizes of containers sized from 4 to 8 cubic yards and collection days [up to 6 days a week] to meet YOUR specific needs.

**Roll-off service** offering sizes ranging from a mini 20-yard container to 40-yard open-tops.

**Compactor services** are also offered to all size businesses including the multi-family/apartment communities throughout the City of Tucson.

**Temporary Roll-off service** offers businesses and homeowners placement of containers for clean-ups and construction. We offer sizes ranging from a mini 20-yard container to 40-yard open-tops.

Advance deposit is required to spot the roll-off equal to one-half estimated tip fee and pull. Please call **791-3272** and ask for a Customer Service Representative visit for more information.

**Commercial Rates:**

**Rates and Fees effective September 1, 2001**

FRONTLOADER MONTHLY FEES

		Collections per Week						
Cubic Yards	1	2	3	4	5	6	Extra Pickup	
4	\$43	\$63	\$85	\$106	\$129	\$147	\$15	
6	\$51	\$76	\$105	\$131	\$157	\$185	\$20	
8	\$57	\$91	\$123	\$156	\$188	\$221	\$25	

### SCHEDULED ROLLOFF FEES

Open Top Container Service	
Cubic Yards	Charges
20 (mini), 20, 30, 40	\$105 per pull plus landfill fees of \$23.00 per ton

### UNSCHEDULED / EXTRA PICK-UP TEMPORARY ROLLOFF SERVICE

Temporary Open Top Container Service	
Cubic Yards	Charges
20 (mini), 20, 30, 40	\$105 per pull plus landfill fees of \$23.00 per ton
Advance deposit required to spot the roll-off equal to one-half estimated tip fee and pull	

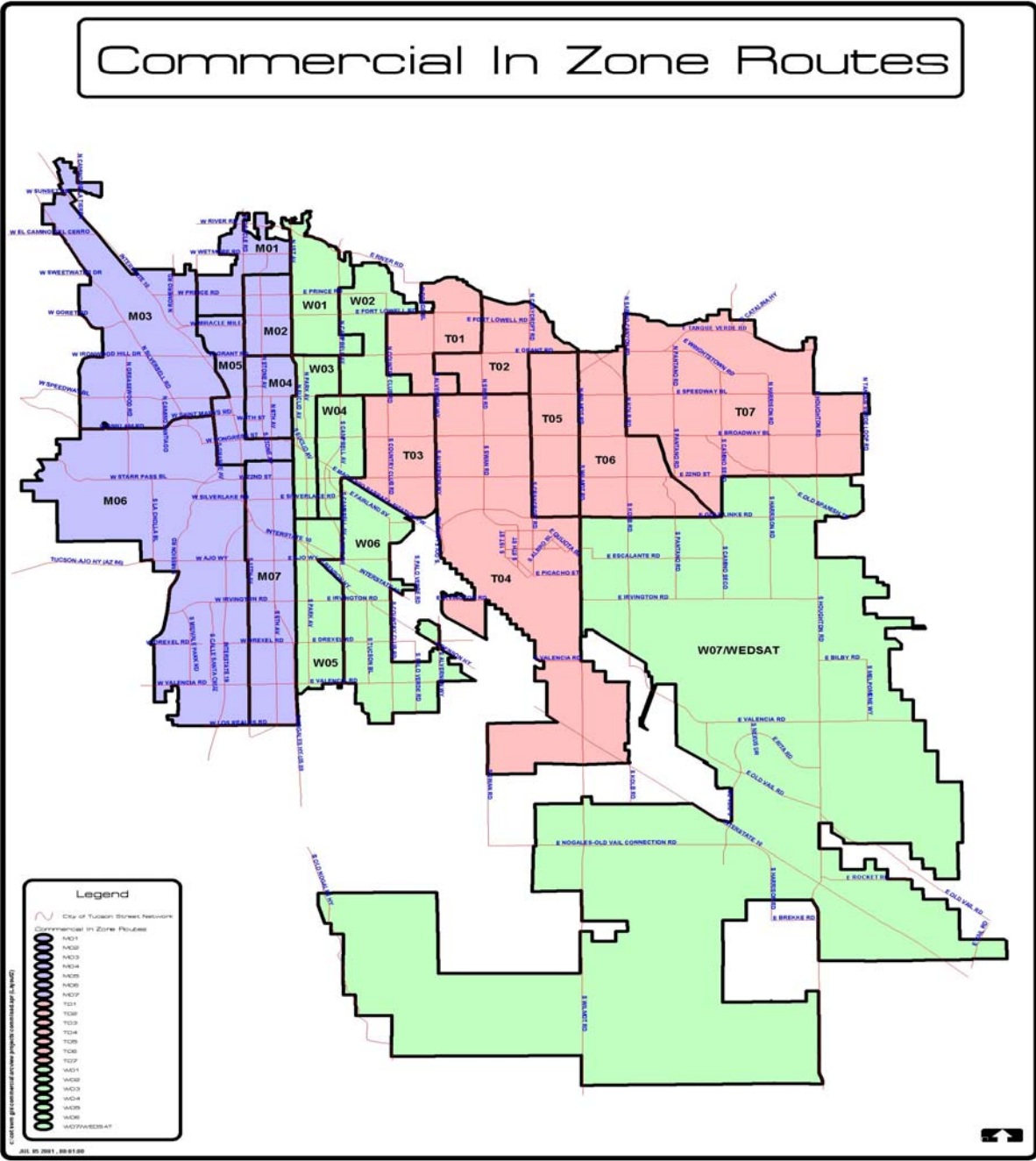
### ROLLOFF COMPACTOR SERVICE FEES

Break Away - Self Contained Service	
Cubic Yards	Charges
20 (mini), 20, 30, 40	\$105 per pull plus landfill fees of \$23.00 per ton

APPENDIX 5.0

Commercial Collection Route Maps:

Collection Zone Map



## APPENDIX 6.0

### **Brush & Bulky Information:**

The City provides every household twice-a-year collection of bulky items, such as large brush and yard trimmings, appliances, accumulated yard waste, furniture, and other bulky trash.

City of Tucson Solid Waste Management crews are coming to your neighborhood to collect large brush and bulky items from residential customers.

If your garbage is collected at the curb, place your items on the curb.

If your garbage is collected in the alley, place your items behind your property away from fences, walls, water & gas meters and electric, cable and telephone lines.

Items must be set at least 5 ft from your garbage container, mailbox, or other obstacle.

Your items must be set out by **6:00 a.m.** on **Monday**. They will be collected that week.

**Please separate brush, lumber, scrap metals, and tires into separate piles.**

Different trucks may pick up the various items.

### **WHAT We Will Collect:**

- brush (tree trunks, branches, and other "green waste"  
-max. 5 ft in length and 24 inches in diameter)
- lumber (stacked into separate piles) ✕ pallets ✕ furniture
- lawn mowers (fuel tank and crank case removed)
- scrap metal (bicycles, swing sets, etc.)
- boxed cactus (no more than 25 lbs./box) ✕ doors
- appliances (refrigerators: disable latch or remove door)
- car tires (limit: 5 tires) ✕ railroad ties

### **WHAT We Will NOT Collect:**

- household garbage ✕ paints ✕ solvents ✕ oils
- sheet glass ✕ stone ✕ pesticides ✕ concrete
- aggregates ✕ roofing ✕ insulation ✕ batteries
- shingles ✕ bricks ✕ motorcycles ✕ sheetrock
- trailers/boats ✕ chemicals ✕ flooring
- compressed gas containers ✕ car parts
- commercially-generated materials ✕ mirrors
- truck/tractor tires larger than 3/4 ton ✕ 55 gal. drums

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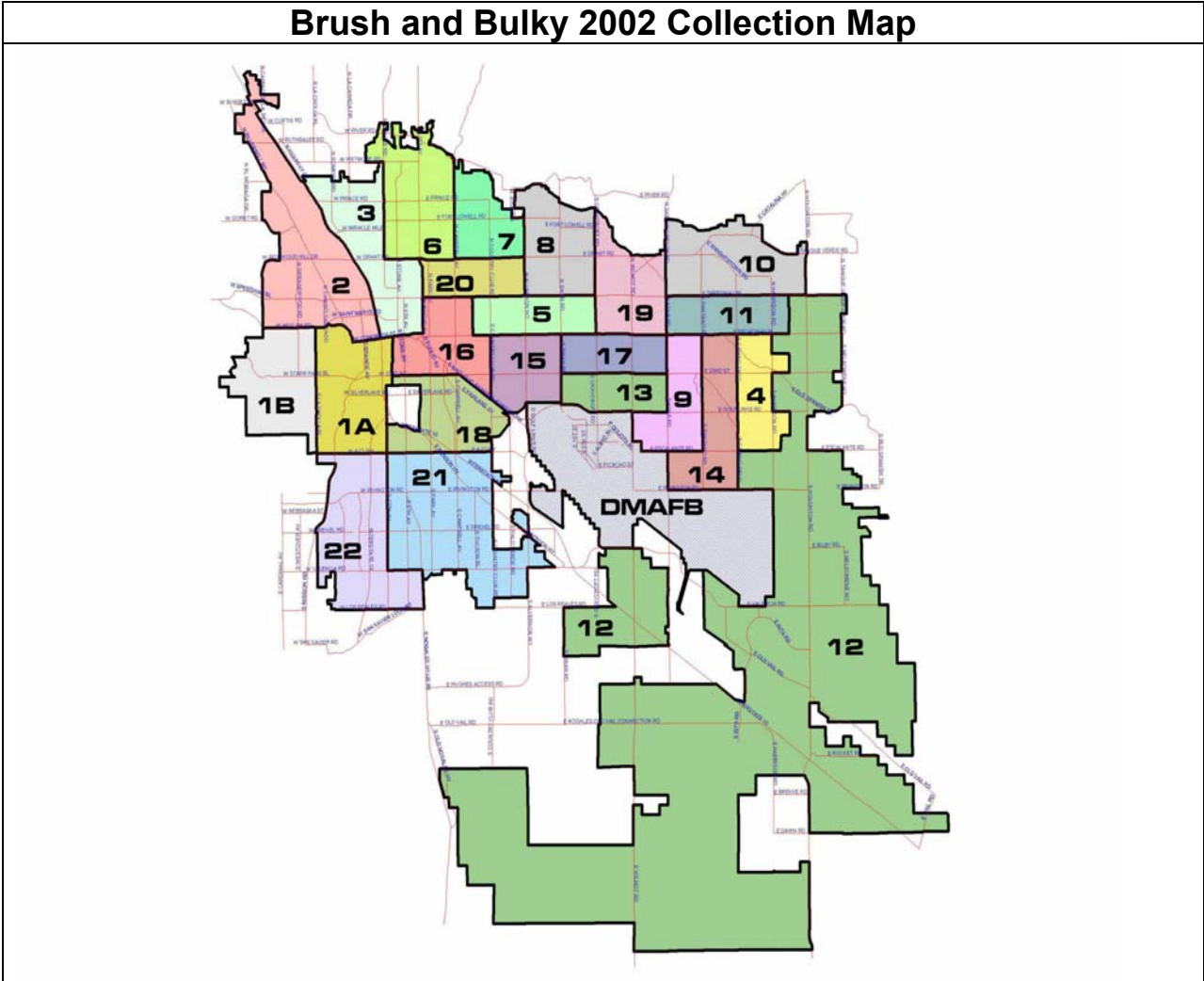
### **Please use CAUTION:**

- Please ensure easy and safe access to your brush and bulky piles.
- Do not place your items under electrical wires or low hanging trees, and do not block your mailbox or utilities.
- Dispose of home chemicals and paints at the City or County Household Hazardous Waste Collection Facility located at 2440 W. Sweetwater Dr. (Tel. 888-6947).

Questions or comments? Please call the Solid Waste Management Department at 791-3171

APPENDIX 7.0

Brush & Bulky Route Map



APPENDIX 8.0

**FACTS ABOUT THE CITY OF TUCSON WASTE REDUCTION, RECYCLING AND DIVERSION PROGRAMS**

**Residential Curbside Recycling:**

To order a recycling bin, call 791-3171

The City provides curbside collection of recyclables at your home if you live in a single family house, duplex, triplex or fourplex, and live within City limits. Place your recyclables in your personal green **ReTHINKIt** Curbside Recycling bin, then set it at your curb on your scheduled collection day.

<p><b>Materials to recycle:</b>          ✘ newspaper ✘ magazines ✘ brown bags ✘ corrugated cardboard ✘ tin cans ✘ aluminum foil and cans ✘ brown, green and clear glass jars and bottles ✘ #1 PETE plastic bottles ✘ #2 HDPE plastic bottles ✘ #6 polystyrene (Styrofoam) ✘ motor oil</p>
<p><b>Information:</b> Solid Waste Management Dept. 791-3171</p>

**Neighborhood Recycling Centers:**

The City of Tucson operates fifteen Neighborhood Recycling Centers at ten City parks, two school sites, TCC, D-M Air Force Base \* and the Los Reales Landfill, where residents may drop off their recyclables. Almost all City residents live within 3 miles of a Neighborhood Recycling Center. The centers are intended to give residents of apartments and small businesses the opportunity to recycle, but are open for use by all residents. \* Note: D-M Air Force Base requires base access for use.

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Materials Accepted	Neighborhood Recycling Center	Hours Open
<ul style="list-style-type: none"> <li>☐ newspaper ☐ magazines ☐ catalogs</li> <li>☐ brown bags ☐ corrugated cardboard</li> <li>☐ tin cans ☐ aluminum foil and cans</li> <li>☐ brown, green and clear glass jars and bottles</li> <li>☐ #1 PETE plastic (soda) bottles</li> <li>☐ #2 HDPE plastic bottles (milk jugs, shampoo bottles)</li> </ul>	<p>Joaquin Murrieta Park  Mansfield Park  McCormick Park  Morris K. Udall Park  Lakeside Park  Golf Links Sports Park  Rodeo Park  Kennedy Park  Randolph Park  1010 E. 10th St.  Booth-Fickett Magnet School  Jacobs Park  Tucson Convention Center  Davis-Monthan Air Force Base  * base access required</p>	<p>24 hours a day, every day</p>
<p><b>Information</b></p>	<p><b>ReTHINKIt</b> Information Line 791-5000</p> <p>Directions to Los Reales Landfill  <a href="#">[map to Los Reales]</a> 791-5085</p>	

**Small Business Recycling Pilot Project:**

The Solid Waste Management Department and the U.S. Environmental Protection Agency have begun a Small Business Recycling Pilot Project for qualified enterprises in Tucson. In addition, the Waste Reduction Unit helps small businesses learn about

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waste reduction opportunities, recycling, and recycled product purchasing through information packets and one-on-one assistance.

Many customers appreciate doing business with environmentally responsible establishments, and now qualifying small business owners in Tucson have an opportunity to join a new recycling program. There is no charge, and businesses may reduce their refuse collection fee if they need fewer garbage cans.

The City of Tucson Solid Waste Management Department is looking for up to 300 businesses to join this pilot program, which will help determine if small business recycling can be expanded successfully throughout the city. The pilot is partially funded by a grant from the U. S. Environmental Protection Agency.

### **How does the program work?**

Businesses will receive a blue plastic 90-gallon barrel for their recycling, which will be collected curbside once a week by the City of Tucson. With less going into the garbage, businesses may need to set it out only once a week or cut back on their number of garbage cans!

### **What can be recycled in the program?**

Newspaper · Junk Mail · Magazines · Corrugated Cardboard · Chipboard · Office Paper · Aluminum Cans · Tin Cans · #1 and #2 Plastic Bottles · Glass Bottles & Jars  
Participants will receive a collection schedule and a detailed list of recyclables.

### **How do businesses qualify for the recycling pilot program?**

To qualify, a business must: Currently have City of Tucson refuse collection service using plastic containers; Be located west of Craycroft; Have an area to store the barrels to prevent contamination by unauthorized users.

Businesses who are not eligible for the pilot program are encouraged to use the Neighborhood Recycling Centers.

### **When will the program begin?**

The program was phased in over several weeks in the spring and early summer of 2001, and new businesses will be added, as resources become available. Depending on the results of the pilot, the City expects to continue and expand the service when the EPA grant expires at the end of 2001.

### **How do businesses sign up?**

Contact Wilson Hughes at the City of Tucson Solid Waste Management Department at 791-5543 ext. 1115 [whughes1@ci.tucson.az.us](mailto:whughes1@ci.tucson.az.us), or Nicole Ventriello at Southwest

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Public Recycling Association at 622-8082. If the program is full, we will put your business on a waiting list, so you can join the project as soon as possible.

This project of the City of Tucson Solid Waste Management Department is funded in part by a cooperative agreement with the U.S. Environmental Protection Agency Region 9.

**Scrap Metal Recycling Site at Los Reales Landfill:**

The City of Tucson Solid Waste Management Department recycles refrigerated and non-refrigerated appliances and scrap metal. Tucson residents may bring these items to the Metal Recycling Site at no charge. To comply with federal regulations and prevent pollution in the landfill certified technicians remove freon before the metal appliances are baled for recycling.

**What to recycle:**  
 ✕ aluminum siding ✕ swamp coolers ✕ water coolers ✕ file cabinets ✕ chain link fencing ✕ bicycles ✕ refrigerators ✕ stoves ✕ other appliances ✕ anything that's mostly metal

**Information: ReTHINKIt** Information Line 791-5000  
 Directions to Los Reales Landfill 791-5085

**Household Hazardous Waste:**

In an effort to keep the many hazardous materials that have become commonplace in households and businesses out of the landfill, the City of Tucson and Pima County have joined together to provide a place where residents and small businesses may bring hazardous items for recycling, exchange, or safe disposal. Residents may bring leftover chemical products to the main Household Hazardous Waste program (HHW) site or to one of the three outreach sites open the first Saturday of each month. The service is free to the public. The Small Business Waste Assistance Program (SBWAP) provides assistance to small businesses seeking to manage their hazardous waste.

Site	Location	Hours Open
HHW Main Site	2440 W. Sweetwater Dr.	8 a.m.- 12 p.m. every Friday and Saturday
Eastside City Hall	7575 E. Speedway Blvd.	8 a.m.- 12 p.m., first Saturday of every month
El Pueblo Neighborhood Center	101 W. Irvington Rd.	
Northwest Collection	Oracle/ Ina at Via Ponte	

<b>These materials are accepted:</b> ☐ paint ☐ cleaners ☐ acids ☐ pool chemicals ☐ lawn & garden chemicals ☐ drain openers ☐ auto fluids ☐ glues ☐ flammable products ☐ anything marked "toxic," "poison," or "danger"	
<b>Information</b>	Household Hazardous Waste Program 888-6947
	Small Business Waste Assistance Program 740-3340

**ABOP “Antifreeze, Batteries, Oil, Paint” and now Computers!**

Items are only accepted from residential customers; no business-generated waste is accepted. For disposal of all other household chemicals, see the Household Hazardous Waste information. For medical syringe needle disposal, call 791-3171.

**TREEcycle (Christmas Tree Recycling):**

Save your Christmas tree and recycle it! The trees are chipped and processed into mulch or compost. Current guidelines and information will be available during the holidays.

*Wednesday, December 26th starting at noon, through January 21st 2002*

***IMPORTANT: The City of Tucson WILL NOT collect Christmas trees from curbs and alleys this year. Thank you for taking your tree to a TreeCycle drop-off site.***

**Here's how to prepare your tree for chipping!**

1. Remove the stand from your tree.
2. Remove all decorations, tinsel, lights and plastic bags.
3. NO wreaths please!
4. We cannot accept other greenwaste at TreeCycle.
5. Treepool! Bring your neighbor's tree. Save a trip, save the air.

**TreeCycle Locations**

TreeCycle your tree at any of the following 18 locations from December 26, starting at noon, through January 21, 2002. Sites are open during daylight unless otherwise noted, seven days a week.

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Please, bring trees only to locations listed below.

- \*1. 22nd Street & Alvernon Way **Northwest corner** - Near the Neighborhood Recycling Center.
2. Davis-Monthan Air Force Base **5600 E. Yuma** - Base Recycling Center (**base access required**).
3. Los Reales Landfill **5300 E. Los Reales Road - enter off of Swan Rd.** - Follow the signs to the designated drop off site.
- \*4. Morris K. Udall Park **7200 E. Tanque Verde Road** - South of ball fields (follow the signs).
- \*5. Rodeo Grounds **East of S. 6th Avenue, off of Irvington Rd.** - In the east parking lot.
6. Joaquin Murrieta Park **1400 N. Silverbell Road** - South of Boys & Girls Club, off El Rio Dr.
- \*7. Rillito Race Track **4502 N. 1st Avenue** - South side of the racetrack parking lot (please follow the signs).
8. Mesquite Elementary School **9455 E. Rita Ranch Road** - Please follow the signs to the drop off site.
9. Drexel Fire Station **5960 S. Cardinal Avenue.**
- \*10. Marana Airport (formerly Avra Valley Airport) **W. Avra Valley Road** - West of the main entrance and follow the signs.
- \*11. City lot at I-10 & Tangerine **East of I-10 on Tangerine Rd.** - Site will be at the curve on the southside of Tangerine Road.
12. Pima County Ina Road Landfill **West of I-10 on Ina Road (8 a. m. to 4 p. m. Mon. - Fri.)** Please follow the signs.
13. Rancho Vistoso **West Moore Road and North Copper Spring Trail** - On the east side of Moore Road.
14. Copper Creek **North Copper Creek Trail and Lost Dutchman Place** - Site will be on Copper Spring Trail, north of the Copper Creek Elementary School (11620 N. Copper Spring Trail).
- \*15. Oro Valley Public Works Yard **Oro Valley Department of Public Works, 680 Calle Concordia.** - West of Canyon Del Oro High School, east of Calle El Milagro.
16. Catalina Refuse & Recycling Transfer Station **14425 N. Oracle Rd. (State Hwy. No. 77) (7:30 a. m. to 5 p. m. every day)** - Site is three miles north of Tangerine Road on Oracle Rd.
17. Tangerine Landfill **10220 W. Tangerine Rd. (1 mile West of I-10) (7:30 a. m. to 5 p. m. every day)** - Please follow the signs to the drop off site.
18. Sahuarita Landfill **16605 S. La Canada Dr. (1 mile South of Helmet Peak Rd. on La Canada Dr. in Sahuarita) (7:30 a. m. to 5 p. m. every day)**

**\* Help You Unload:**

two days ONLY:

Saturday, January 5, from 8:00 am to 1:00 PM and

Sunday, January 6, from 11:00 am to 3:00 PM

Volunteers will "Help You Unload" at **seven TreeCycle** sites (above with \*).

A **TreeCycle** 2002 Site Location Map crafted by the Department's GIS team is illustrated in Appendix 12.0

Trees collected in the Christmas TreeCycle program will not use up valuable space in landfills. Instead they will be chipped and used for environmental projects, mainly as ground cover to reduce erosion and blowing dust on the outer banks of the Los Reales Landfill.

For more information or questions, call the City of Tucson Solid Waste Management Department at 791-3171.

This program was cooperatively sponsored and presented by:

City of Tucson's Solid Waste Management and Parks & Recreation and Fire Departments, Town of Marana, Town of Oro Valley, Pima County's Departments of Environmental Quality, Solid Waste Management and Adult Probation, Waste Management Inc., Saguaro Environmental Services, Vail School District, Drexel Heights Fire District, Davis-Monthan Air Force Base, Pima Community College, Tucson Clean & Beautiful, Friedman Recycling Companies, Home Depot, Picurro Pizzeria, and McDonalds at I-10 & Cortero.

**Commercial Recycling:**

The Solid Waste Management Department provides customized collection and hauling in various load sizes to businesses generating large volumes of recyclables, such as cardboard, tin cans, or newspaper. Commercial Customer Service-- 791-3272

**White Paper Recycling:**

Many City of Tucson offices are equipped with blue barrels where City employees may deposit their sorted white paper for recycling, instead of throwing it away. Currently, 21 City office locations are part of this program.

Small Business and residents, start saving your white paper! The white paper recycling program is a permanent program and collection bins are located at nine of the City's Neighborhood Recycling Centers.

For more information, please call 791-5000.

You may now recycle your white paper at fourteen Neighborhood Recycling Centers around Tucson. Small business and members of the public may bring clean, white office paper to specially marked "white paper" bins at the locations listed below.

**White Paper Recycling Locations:**

Hours of operation: 7:00 a.m. to 10:00 p.m. (unless otherwise noted)

1. **Joaquin Murrieta Park Neighborhood Recycling Center**, NW corner of Club View Dr. and El Rio Dr.
2. **Mansfield Park Neighborhood Recycling Center**, SW of Sahuaro St. and 4th Ave.
3. **McCormick Park Neighborhood Recycling Center**, on the east side of Columbus Blvd., 1/4 mile south of Ft. Lowell
4. **Morris K. Udall Park Neighborhood Recycling Center**, on Tanque Verde Rd., 1/4 mile east of Sabino Canyon Rd.
5. **Lakeside Park Neighborhood Recycling Center**, east of Pantano Rd. on the north side of Stella Rd.
6. **Golf Links Sports Park Neighborhood Recycling Center**, on the west side of Craycroft Rd. and north of Golf Links Rd.
7. **Rodeo Park Neighborhood Recycling Center**, south of Irvington Rd. and on the east side of 6th Ave. (Old Nogales Highway)
8. **Kennedy Park Neighborhood Recycling Center**, northwest of the library on the west side of Mission Road and north of Ajo Way
9. **Randolph Park Neighborhood Recycling Center**, northwest of 22nd St. and Alvernon Way; enter on the west side of Alvernon, 1/8 mile north of 22nd St.
10. **Los Reales Landfill Recycling Center \***, southwest of Los Reales Rd enter off of Swan Rd.  
**\* Note: Los Reales location does not have a white paper recycling container.**
11. **1010 E. 10th St.**, north of Broadway Blvd. (between Fremont and Park Ave.)
12. **Booth-Fickett Magnet School**, 7240 E. Calle Arturo (off Kolb Rd.)
13. **Jacobs Park Neighborhood Recycling Center**, on Fairview, south of Prince
14. **Davis-Monthan Air Force Base**, 5600 E. Yuma **(base access required)**.
15. **Tucson Convention Center**, northwest corner of Cushing St. and Granada Ave.

## Do It !

Please DO recycle any of the following WHITE papers:

- typing paper
- letterhead
- copy paper
- white scratch paper
- unbound reports
- computer paper (white, graybar or greenbar)
- envelopes without windows

You DO NOT need to remove staples, rubber bands, or paperclips

## Don't Do It !

Please DO NOT place any of the following items in a white paper recycling bin:

- packing paper
- paper marked with crayon
- plastic bags
- shredded paper (takes up too much room!)
- brown paper bags
- corrugated cardboard
- envelopes with plastic windows
- paperboard
- NCR (paper with carbonless copies)
- glossy or coated paper
- newspapers
- magazines
- wrapping paper
- reports with glue bindings
- wrappers, tissues, napkins, cup, etc.

## Want more recycling information?

To receive more detailed information about any of the City waste diversion programs, please contact the City of Tucson waste reduction staff at 791-5543 X 1119.

OR (e-mail Ernesto [Velarde..Evelard1@ci.tucson.az.us](mailto:Velarde..Evelard1@ci.tucson.az.us))

**ReTHINKIt Recycling Information Line:**

The **ReTHINKIt** Recycling Information Line provides information and referrals about waste reduction, reuse and recycling opportunities in the Tucson Metro area. The City of Tucson, Pima County and Tucson Clean & Beautiful cooperatively sponsor and operate the **ReTHINKIt** line.

**Education Programs and Volunteer Opportunities:**

The City of Tucson Waste Diversion staff make presentations about waste diversion and recycling to a variety of audiences, including school children, after-school and summer school programs, and neighborhood groups. If you are interested in arranging a presentation, or would like to receive information about waste diversion and recycling volunteer opportunities, please call Victoria Collier at 791-5543 x 1156 OR (e-mail Victoria Collier.vcollie1@ci.tucson.az.us)

The City of Tucson and Pima County provide funding to Tucson Clean & Beautiful to offer *E Pluribus Re- THINKs- It!*, an educational play targeted at kindergarten through third graders. Teachers may contact Tucson Clean & Beautiful at 791-3109 to schedule a performance at their school.

**Master Recycler Training:**

Master Recyclers are specially-trained volunteers who give presentations about recycling to civic, religious, neighborhood and other community groups, and who help staff outreach events. A Master Recycler is a trained expert on recycling in Tucson, makes presentations to community groups, helps distribute information at fairs and events, and is a valuable asset to Tucson and the planet! If you are interested in learning more or would like to sign up for Master Recycler training, call 791-5543 X 1119 OR (e-mail Ernesto [Velarde..evelarde1@ci.tucson.az.us](mailto:Velarde..evelarde1@ci.tucson.az.us))

The Waste Reduction Unit of Tucson's Solid Waste Management Department was recently awarded a grant from the Arizona Department of Environmental Quality. This grant enables the City to launch ***Ravin' about recycling!***, an education campaign which targets apartment residents, small businesses, and civic, neighborhood and religious organizations. An integral part of this campaign is the creation of a team of Master Recyclers.

**A Master Recycler**

- makes presentations to community groups
- helps distribute information at fairs and events (such as Earth Day and Kidsfest)
- completes a training course that covers topics such as concepts in waste reduction and recycling; how, what and where to recycle; the transformation of Tucson's recyclables into usable products; and presentation tips and techniques.
- volunteers at least four hours a month for six months
- is a valuable asset to Tucson and the planet!

**Apartment Recycling Assistance:**

The City offers brochures, posters, and newsletter articles to apartment managers who would like to educate their residents about the Neighborhood Recycling Centers available for their use in Tucson. Solid Waste Management staff is also available to present recycling information to tenant groups, as well as work directly with apartment managers to evaluate their recycling options.

**Recycling Raven Mascot:**

Solid Waste Management has adopted a lovable, friendly Recycling Raven mascot named Rupert! The Rupert is a very smart bird, and reuses materials he finds to line his nest. The Recycling Raven can frequently be spotted in crowds of children at community events, and his cousins are often seen flying around the Los Reales Landfill.

Quote the Raven, "**Recycle More!**"

**¡VIVA RECICLAJE! :**

*¡VIVA RECICLAJE!* provides enhanced services in waste reduction and recycling education to Tucson's Hispanic population of all ages. In order to motivate community participation, the City of Tucson Solid Waste Management Department is pleased to offer bilingual recycling education resources to neighborhood associations, schools, clubs and any other organization. Our bilingual staff and volunteers can:

- make presentations about waste reduction and recycling;
- help teachers assemble displays;
- train bilingual (Spanish) persons to be Master Recyclers;
- coordinate field trips to Los Reales Landfill and local recycling centers; and
- coordinate appearances of Rupert the Recycling Raven (our mascot) at school, community or organization sponsored events.

**Want more information?**

To receive more detailed information about any of the City waste diversion programs, please contact the City of Tucson waste reduction staff at 791-3175.

## APPENDIX 9.0

### Landfill Operations

The landfill is open 7:00 a.m. to 5:00 p.m. Monday through Saturday, and 7:00 a.m. to 4:00 p.m. on Sundays (residential traffic only).

For Los Reales Landfill holiday schedule, call <b>791-5085</b>	For Pima County landfill information, call <b>744-7649</b>
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### **COMMERCIAL CUSTOMERS:**

Commercial customers are charged \$28 per ton with a \$5 per ton rebate for covered loads\*.

Call (520) 791-3172 to get landfill account information or to set up an account.

### **RESIDENTIAL CUSTOMERS:**

Tucson residents may also bring their recyclables (newspaper, corrugated cardboard, #1 PETE and #2 HDPE plastic beverage containers, tin and aluminum cans) and old tires to Los Reales Landfill. Appliances and scrap metal items may be brought to Los Reales by self-haul customers at no charge. The scrap metal recycling site is just past the blue recycling bins after the scale house. Toxic or hazardous materials are prohibited at the City of Tucson landfill.

**Residential Self-haulers** are charged the following fees:

- \$9 for the first ton of material when the load is carried in a vehicle or trailer\*;
- \$14 for the first ton of material when the load is carried in a vehicle and a trailer\*;  
and
- \$28 per ton for loads weighing more than one ton with a \$5 per ton rebate for covered loads\*.

**NOTE: \*** A new element was added to our rate structure this year—a Good Neighbor restrained or covered load fee rebate. In addition to all other charges set forth above, a five dollar (\$5.00) per ton fee rebate is applied at the entry to a city-operated sanitary landfill site or disposal facility for any refuse or other solid waste whose transportation vehicle or receptacle, as determined by the scalehouse clerk, is constructed, maintained, loaded and covered (by a securely fastened tarpaulin, netting or similar material of sufficient density and strength) in

such a manner as to prevent the refuse or other solid waste from falling, leaking, spilling or being otherwise lost or ejected from the vehicle or receptacle.

**A B O P - Services:**

**Antifreeze, Batteries (auto and dry), motor Oil, and Paint [A B O P]**  
Los Reales has a permanent Household hazardous collection site that is open during landfill hours. The only wastes accepted at this site are **Antifreeze, Batteries (auto and dry), motor Oil, and Paint**. Therefor the name **A B O P**. This program is part of the City/County HOUSEHOLD HAZARDOUS WASTE DISPOSAL program. It must be emphasized that Los Reales cannot accept business-generated waste.

The City's Los Reales Landfill, located at 5300 E. Los Reales Road (off Craycroft Road, south of I-10), is open 7:00 a.m. to 5:00 p.m. Monday through Saturday, and 9:00 a.m. to 4:00 p.m. on Sundays (residential traffic only).

**Landfills Utilized by the City of Tucson**

**Information:**

The following landfill sites have been provided for general location information, ONLY. To receive more detailed information about any of the City owned or operated landfills on this page, please contact the City of Tucson Engineering and Compliance staff at (520) 791-3175, and ask for Ms. Catalina Sanchez. OR (e-mail Catalina Sanchez.. csanche2@ci.tucson.az.us)

**Table of Landfill Sites - by Name**

"A" Mountain Landfill	Rio Nuevo North Landfill
Broadway North Landfill	Rio Nuevo South Landfill
Cactus Landfill	Ryan Field Landfill
Columbus 1 & 2 Landfill	Ryland Landfill
Cottonwood Landfill	St. Mary's Landfill
Dragoon Landfill	Silverbell Jail Annex Landfill
Harrison Landfill	State Pit Landfill
Irvington Landfill	Tumamoc Landfill
Los Reales Landfill	29th Street Landfill
Mission Landfill	Vincent Mullins Landfill
Nearmont Landfill	Walnut Landfill
Prudence Landfill	