



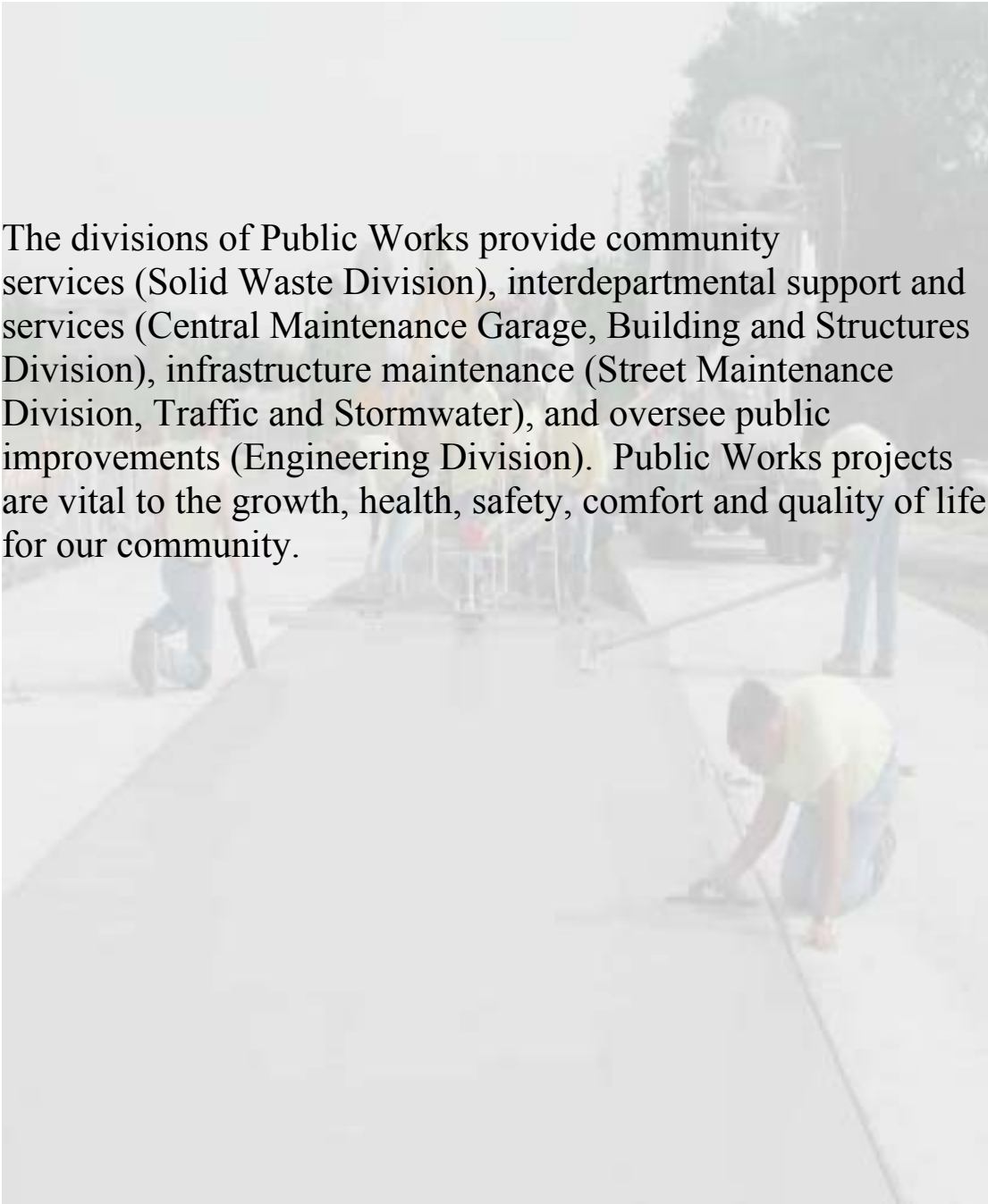
PUBLIC WORKS DEPARTMENT
END OF THE YEAR REPORT
2002

Charles Soules, P.E., Public Works Director
City of Lawrence, Kansas



INTRODUCTION

The divisions of Public Works provide community services (Solid Waste Division), interdepartmental support and services (Central Maintenance Garage, Building and Structures Division), infrastructure maintenance (Street Maintenance Division, Traffic and Stormwater), and oversee public improvements (Engineering Division). Public Works projects are vital to the growth, health, safety, comfort and quality of life for our community.



ADMINISTRATION

The Administrative function of Public Works provides professional support for all divisions and employees in areas such as budget and finance, personnel administration, risk management issues, policy and program development and administration.

Personnel functions: There are 173.5 authorized positions in the Public Works Department. In 2002, the department recruited for 32 vacant positions. In 2001 and 2000, we filled 36 positions and 19 positions, respectively.

Budget administration: The Public Works Department is responsible for budget development and administration for all divisions listed below. Revenue and expenditure numbers reported below for 2002 reflect those reported in the accounting system at the beginning of January and have not been audited or adjusted.

EXPENDITURES				
Fund	Division	Description	2001	2002
214	3800-578	Gas Tax Fund	\$ 2,690,728	\$ 2,829,897
001	2500-565	Health Department	\$ 651,748	\$ 751,082
001	3000-570	Street Maintenance	\$ 939,602	\$ 1,631,992
001	3100-571	Engineering	\$ 642,799	\$ 641,610
001	3200-572	Traffic Engineering	\$ 520,356	\$ 546,863
001	3300-573	Airport	\$ 95,803	\$ 105,069
001	3400-574	Building Maintenance	\$ 575,235	\$ 555,180
001	3600-576	Street Lights	\$ 439,423	\$ 410,878
001	3700-577	Levee	\$ 89,101	\$ 101,556
502	3510-571	Residential Solid Waste	\$ 3,025,767	\$ 3,427,780
502	3520-572	Commercial Solid Waste	\$ 2,635,518	\$ 3,173,900
502	3530-573	Waste Reduction / Recycling	\$ 631,443	\$ 631,726
504	3200-579	Central Maintenance Garage	\$ 1,829,960	\$ 1,861,765
505	3900-579	Stormwater	\$ 2,009,179	\$ 1,867,640
		Total Public Works	\$ 16,776,662	\$ 18,536,939
REVENUES				
214		Gas Tax Fund	\$ 2,572,332	\$ 2,579,943
502		Solid Waste Division	\$ 7,207,294	\$ 7,654,843
504		Central Maintenance Garage	\$ 1,869,881	\$ 810,242
505		Stormwater Utility	\$ 1,959,633	\$ 1,956,967
			\$ 13,609,140	\$ 13,001,995

Risk management function: Statistics are collected by the Administrative Services Department, Risk Management office tracking a workers' compensation incidents requiring medical attention, auto accidents including claims against the City for damage to private vehicles as a result of street conditions such as potholes, and general liability claims. Details for Public Works are reported below.

	2001	2002	2001	2002	2001	2002
	Workers' Comp requiring medical attention		Vehicle accident claims		General liability claims	
Building Maintenance	1	3	1	0	1	1
Central Maintenance Garage	2	1	0	0	0	0
Engineering Division	2	3	0	1	0	1
Solid Waste Division	40	35	8	2	10	8
Street Division	10	5	36	8	6	10
Total Public Works	55	47	45	11	0	20

Other accomplishments:

- Charles Soules became Public Works Director in February.
- The department successfully responded to the snow and ice storm of 2002 and was able to get significant reimbursement for our operations from FEMA following the disaster declaration.
- All employees completed Diversity Training.
- An all-employee function was held in May to honor Public Works Week.
- The Public Works Department hosted 3 days of training for all City departments and other communities and organizations in Douglas County on Public Works response to terrorist events.
- Regular meetings were held with representatives of Public Works who are participating in the Employee Relations Council to facilitate communication with all employee groups.
- Tammy Bennett, Senior Management Analyst, served as Past President of the Kansas Chapter of APWA.
- Charles Soules, Public Works Director, served as President-elect of the Kansas Chapter of APWA.
- Tammy Bennett and Terese Gorman served as steering committee members for the 2002 International APWA Congress held in Kansas City. They served as co-vice-chairs for the sub-committee for volunteers and staffing of educational sessions.

BUILDING MAINTENANCE

The Building Maintenance Division is responsible for building maintenance for municipal buildings except where such services are provided contractually. In addition to maintenance costs, utility costs for some buildings are paid out of this division's budget. The division provides maintenance services and/or technical support for approximately 30 facilities: City Hall; Court Services; five Public Works facilities; Fire/Medical facilities; six buildings at the Lawrence Municipal Airport; the Public Library; the Police annex facility; the Riverfront Parking Garage; the Downtown 2000 (New Hampshire Street) Parking Garage and four city owned buildings occupied by community service agencies – the Arts Center, Health Care Access, Lawrence/Douglas County Senior Center, and the Community Health facility. The division also provides assistance with downtown lighting, canopies, and various buildings at cemetery.

2002 Accomplishments

1. Participated in the HVAC replacement for PD West, put together specifications, sent out for bids, and awarded to Huxtables.
2. Assisted Parks and Recreation and Human Resources to their new offices, along with building electronics room in their new office area to handle computer and phone needs. Building maintenance brought networking for City to the new offices and the offices in the parking garage.
3. Performed a Building and Structures inventory.
4. Moved Information Systems into their new offices and assisted Helen's move back into City Hall.
5. Replaced imitation slate roof on the airport terminal with a new rubber slate roofing system.
6. Phase IV of the City Hall HVAC renovation was completed.
7. Redesigned the area around the GUT Works building to try to remove the water.
8. Demolished five houses for Storm Water in East Lawrence.
9. Performed inspection of Walker parking garage and Riverfront parking garage.
10. Participated in the space study for City Hall.
11. Remodeled Conference room at SWAN.
12. Evaluated elevator maintenance contracts and scanned them to agreements.

2002 Accomplishments

13. Purchased a back up beacon for the airport, and are in the process of negotiating a price to service the beacon twice a year through Capital Electric.
14. Painted handrail and parking stalls located at the Riverfront parking garage.
15. Remodeled Building Inspection storeroom to accommodate three additional employees.
16. Helped with the Lawrence Arts Center move to their new building.
17. Replaced lighting in bay area and had new overhead doors installed at Fire and Rescue Training building.
18. Moved Transit to their new location and installed phones and computer lines.
19. Replaced floor covering at the Senior Center, wrote specifications and sent out bids.
20. Worked with Cherisa to get her a workstation that was compatible.
21. Remodeled old office of the Human Resources Department, and installed new carpet, wall covering, and relocated a door.
22. Provided oversight for the remodeling project on the living quarters at Station #1.
23. Participated on a major cleanup for fire Station by the hospital. This included the removal of trees and shrubs around the building, replacement of lighting outside and inside, and fixed damaged sheetrock.
24. Bid janitorial contract for the Health building.
25. Hired a new licensed electrician for the maintenance staff.
26. Worked with Parks and Recreation to refine department responsibilities in downtown Lawrence.



CENTRAL MAINTENANCE GARAGE

The Central Maintenance Garage operates as an internal service fund to provide fuel, management, and repair services for the city's fleet of vehicles and equipment. The maintenance facility is located at 11th and Haskell. Fuel stations are located at 11th and Haskell and the "West 40" property near 18th and Wakarusa.

Repairs and Preventive Maintenance

One goal set for the Central Maintenance Garage is to reach a productivity level of 70% preventive maintenance and 30% repairs. The intent of this goal is to identify and repair problems while the unit is in for routine maintenance, which will reduce downtime and unscheduled repairs. Marked progress was made toward the goal. We will continue to strive towards it. The chart below shows the repairs versus preventive maintenance based on hours and dollars billed against the two types of work orders.

	2000	2001	2002
Repairs	69%	62%	53%
Preventive Maintenance	31%	38%	47%

Second Service Truck

A second service truck was budgeted that would be capable of doing tire work. The department determined that we could retrofit a unit coming out of service in the fleet that would be able to serve our needs for many years to come. The unit will be completed in 2003.

Concrete Repairs

Significant improvements were made to the surface and serviceability of the drive areas to the east of the maintenance garage. Street maintenance crews replaced all broken and crumbled concrete and added a turn apron at the north gate. New conduit was installed to provide electrical outlets along the fence. Central maintenance may now charge batteries and run engine heaters. Asphalt grindings were added to the area east of the concrete, what is commonly referred to as the "dead" and "ready" areas.

Building Improvements

Eight overhead doors on the east side were replaced. The new doors are insulated and weather-stripped. Improvements in the energy efficiency in the shop area were immediately evident. The overhead doors on the west side will be replaced in 2003. Renovations were made to the men's restroom. The large washbasin used by mechanics was removed and replaced. Minor repairs were made to other fixtures.

Fuel Station

In February, our electronic monitoring system indicated a leak in the two six- thousand gallon unleaded fuel tanks located at 1140 Haskell. Since these tanks were manifolded together, excavation was required to pin point the leak. After reviewing several options, a decision was made to replace the tanks. During the project, the original basin was backfilled along with the placement of new tanks at the north and south edges of the old basin.

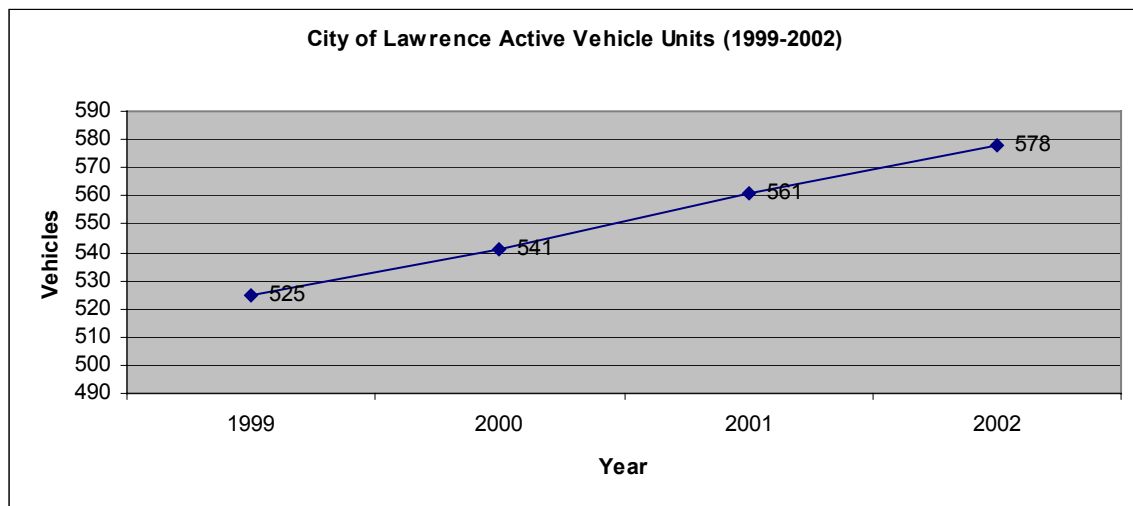


Crews lower a new fuel tank into the ground at 1140 Haskell Avenue.

Alternative and Hybrid Vehicles

The fleet of alternative fuel vehicles was expanded in 2002. Flex-fuel vehicles were acquired for Planning and Fire Medical that can use normal unleaded or the E-85 ethanol blend fuel. Two hybrid vehicles were purchased for Building Inspection.

Graph: City of Lawrence Fleet Vehicles



STATISTICS

Miles Driven

Police	1,087,347
Public Works	987,455
Fire/ Medical	297,166
Utility	285,157
Parks	270,086
Miscellaneous (Admin. B. I., Planning, Etc.)	201,331
Total Miles	3,128,542

Did you know that the 3,128,542 miles that were traveled by the City of Lawrence vehicles in 2002 is equivalent to 13 trips to the moon?

Off Road Equipment Usage by Hour Meter – Summary 27,856

Operations

	2001	2002	% Change
Repair Orders	3,223	2,298	-28.7%
Preventive Maintenance	946	996	+5.3%
Service Calls	254	273	+7.5%

BILLING

Total number of hours billed	12,892.7
Total dollars billed for repairs	\$1,370,772.49
Total Operational Billing 2002	\$1,943,232.67
Total Labor	\$ 602,659.54
Total Parts	\$ 598,538.94
Commercial (Sublet)	\$ 77,214.49
Miscellaneous	\$ 1,992.00

Fuel Usage

Total fuel sold for the year	441,870 gallons
Total diesel fuel sold	\$275,939.13
Total unleaded gasoline sold	\$295,031.92
Total fuel sales	\$570,971.05

ENGINEERING

The Engineering Division is responsible for the review and approval of all plans for streets, sanitary sewers, sidewalks, and storm sewers. The division administers these projects and inspects project construction. This division evaluates pavement condition and contracts for major pavement restoration and replacement. The Engineering Division solicits grants and other funding for major reconstruction or new construction projects.

Infrastructure Expenditures

In 2002, the City had budgeted \$2,700,000, in all the budgeted funds combined, to use for maintenance of our infrastructure. From these budgeted funds, we spent approximately \$1,300,000 milling and overlay existing streets, \$1,000,000 removing and reconstructing concrete curb and gutter, and \$400,000 on miscellaneous repairs such as removing and replacing sidewalk recreational paths, removing and replacing concrete pavement (that cannot be overlaid, white-topping an intersection, and reconstructing existing storm sewer inlets. In the summer of 2002, 13.13 miles of streets were overlaid. Furthermore, 9.7 miles of curb and gutter were reconstructed in 2002.

The Storm water Engineering Division focused on several capital improvement projects in 2002. The City Commission passed Resolution 6399 in July 2002, authorizing the issuance of \$7,700,000 in bonds to cover most of these projects. Bond and budget projections will have to be evaluated throughout 2003 as projects are completed.

Table: Summary of Projects Completed in 2002

ITEM	QUANTITY
Linear Feet of Pavement	26,219
Linear Feet of Curb & Gutter	98,446
Linear Feet of Waterline	23,142
Linear Feet of Storm Sewer	18,440
Linear Feet of Sanitary Sewer	24,257
Linear Feet of 4" x 5' Sidewalk	22,292
Linear Feet of 4" x 6' Sidewalk	16,798
Linear Feet of 10' x 6" Rein. Rec. Path	7,630
Linear Feet of Milling	54,252
Linear Feet of Asphalt Overlay	55,782
Linear Feet of Retaining Wall	331
Square Yards of 3.5" White Topping	470
Traffic Signal	2
Structures	4
TOTAL COST OF PROJECTS	\$10,639,922.30

Stormwater Maintenance

The Stormwater Maintenance Crew was busy with routine maintenance and reconstruction. A Maintenance Worker I position was added to the crew as planned, which brings the total to six crew members. Funds were available late in the year to purchase a skid-steer loader.

Over the course of the year, the crew replaced 15 curb inlets and repaired several damaged pipes and structures. The inlets at 634 Illinois and 700 Kentucky were long-term goals that required specific engineering design.

The crew completed several open channel-regrading projects. The City and County partnered on a sediment removal project at the intersection of 31st and Louisiana, at the request of the City Commission. The crew also widened the channel at the approach to the 31st and Kasold culvert.

Stormwater Administration

Development review continues to be the most time-consuming stormwater engineering task. Drainage studies, plats, site plans, development plans and construction drawings were reviewed for roughly 60 new developments. This is down from nearly 100 in previous years.

Revised floodplain regulations were proposed and completed in 2002. The division assisted the Planning Office with drafting and review of the new code, including overlay district mapping and technical text sections. Multiple public meetings were necessary with the Planning Commission, Special Projects Committee, interest groups and the City Commission. The new code was adopted in January 2003.

Work continued toward NPDES compliance goals. The division added the Stormwater Quality Technician position as planned and continued to implement the 2001 Stormwater Pollution Prevention ordinance. The stormwater engineer also assisted with startup of the statewide APWA Phase II consortium in preparation for the March 2003 permit deadline.

An audit of stormwater fees was initiated in late summer. The current focus has been on single-family residences using year 2000 aerial photography and GIS tools. Many changes have been necessary to update and/or correct these accounts.

In January 2002, 1,100 notices were mailed to landowners who have drainage easements on their property. The notice informed them of easement restrictions and pollution prevention requirements. This mailing was initially done in 2000 and will be done again in 2005.

Traffic Sign/Pavement Marking Division Projects

- Implemented Work Director Program
- Completed installation of Historic Street Name Signs in Old West Lawrence, Oread, and East Lawrence
- Began Upgrade of School Signs from black/yellow to black/fluorescent yellow-green
- Began Installation of LOOK pavement markings at official school crosswalks
- Installed temporary traffic calming devices on Crestline at Century
- Installed pavement markings and signing for pedestrian refuge islands on Louisiana Street and on 27th Street

Traffic Signal Division Projects

- Implemented Work Director Program
- Battery Backup Modules installed at 8th & KY, 23rd & LA, 23rd & Haskell, 15th & Kasold, and 23rd & IA
- Traffic Signal upgrades completed by contractors at 23rd & Barker, 27th & IA, Clinton & Lawrence, and US24-40-59
- Conducted Preventive Maintenance on all traffic signals
- Upgraded School Beacons on 11th Street EB at Haskell Avenue and Maine Street SB at 5th Street
- Upgrades Pedestrians signals to LED at 6th & MA, 9th & IA, 19th & Haskell, and 23rd & Harper
- Developed coordination plans for 23rd Street and Clinton Parkway
- Reevaluated and optimized coordination plans for 6th Street and Iowa Street
- Conducted 38 manual traffic counts for AM and PM peak periods
- Conducted 312 24-hour traffic counts/speed studies



A multi-cell reinforced concrete box located on the Crossgate project is being inspected.

SOLID WASTE DIVISION

The Solid Waste Division is comprised of three functional divisions: Residential Collection; Commercial Collection (which includes Maintenance Operations); and Waste Reduction and Recycling (WRR). In 2002, the Solid Waste Division collected 67,784 tons of solid waste for disposal, compared to 68,664 in 2001. An estimated 10,500 tons of material were collected by the Division to be recycled or composted compared to 8,191 tons in 2001. In 2001, Lawrence achieved a 30% recycling rate, which is likely the highest in the state and is higher than the national average for that year. Projected figures in 2002 show an increase.

Residential Collection

The Solid Waste Residential Collection Division of the Public Works Department is charged with collection of refuse generated from residential areas. Residential Collection is on Tuesday, Wednesday, and Thursday. Monday is used for yard waste pick-up and Friday is for training, equipment maintenance, bulk pick-up and special projects such as alley cleaning and neighborhood clean-ups.



An example of “move-in/move-out” accumulations and one of many sites Solid Waste cleaned up in 2002.

To accommodate growth, an additional three-person rear-loader collection crew was added to the residential routes in 2002 bringing the total number of crews to 16. These crews also pick up all rear-loader commercial waste along their residential routes as well as the grass and leaves for composting.

Residential crews performed alley litter collections on Fridays on a rotating basis among neighborhoods with alleys. Downtown alleys were patrolled for litter on every Friday.

Several neighborhood cleanups were performed in coordination with neighborhood associations. These were the Pinkney, Old West Lawrence, and North Lawrence neighborhoods.

Commercial Collection

The Solid Waste Commercial Collection Division of the Public Works Department is responsible for the collection and disposal of all refuse and solid waste generated by commercial establishments, apartment complexes, industry, and most of the University of Kansas. Commercial solid waste services include dumpster service with traditional rear-load containers, front-load containers, and roll-off container service.

Maintenance Operations maintains existing containers, prepares new containers for service, and delivers containers to new locations. They also do routine maintenance on collection vehicle packer bodies and other equipment used within the Division. A weekly schedule for packer maintenance was initiated in 2002.

Roll-off activity experienced a slight but insignificant decline in 2002 from 2001 record pace. Revenue billings for 2002 were \$1,238,655 compared to \$1,242,516 the previous year. Service calls decreased from 6,518 in 2001 to 6,099 last year. The number of permanent roll-off accounts accounted for about 63% of roll-off activity with the remainder being temporary customers, primarily construction or demolition projects.

The Division continued the rate audit of downtown businesses concentrating in the 700 block of Massachusetts (east side) and the 700 block of New Hampshire. Periodic rate reviews are necessary in the downtown area since many businesses use shared containers located on city-owned right-of way or parking lots. Those rates are determined by square-footage of the business and type of business.

Table: Solid Waste Collection Items

Solid Waste Collection Items	2001	2002
Freon	553	589
Tires	2,304	2,791
Bulky Items	4,027	4,236



Waste Reduction and Recycling

Waste Reduction and Recycling received an “Environmental Excellence Award” which is presented annually to an entity in the Kansas City Metro area from Bridging the Gap, a private resource conservation and recycling group.

Over 8,500 tons of grass and leaves were collected for composting in 2002. This is a significant increase over 2001 when just over 6,000 tons were collected. Avoided disposal costs due to composting will be greater than \$160,000 for the past year. The second annual compost giveaway was conducted over two weeks in November.

The yard waste management program continued to focus on preferred container set outs. 201 households from the Brook Creek, University Place, and Prairie Park neighborhoods participated in the compost bag pilot program. The program has raised the rate of “preferred” containers (carts, cans or compost bags instead of plastic) being set out to 25%, which is double the rate of two years ago. A complete copy of the yard waste management report is available upon request.

The Household Hazardous Waste (HHW) program collected over 100,000 pounds of HHW (a 16% increase from the previous year) from 1,992 participants. An office was built at the facility, which will enable an employee to staff the facility so that citizens will have easier access to drop off their HHW beginning this year. The office construction was financed primarily by a grant from the state.

The Small Quantity Generator (SQG) program became fully operational last year and served 24 small businesses and government units collecting over 10,000 pounds of hazardous materials.

Public education and outreach remained a strong component of WRR activities. Events in 2002 included the Parade for the Earth, Lawrence Home and Garden Show, Home Energy Conservation Fair, Eagle’s Day, as well as speaking at approximately 20 different venues and giving tours of the recycling facility to interested groups.

Other Accomplishments

A safety program was implemented which rewards those who have not been cited for any unsafe procedures over each six-month period. Employees must perform safely with no unsafe acts for the review period in order to receive a safety award.

Driver training programs included a training course for prospective drivers, driving in snow and ice, procedures for backing and maneuvering in restricted spaces, as well as targeted education for individuals who commit an unsafe act or procedure.

Nineteen individuals received annual hazardous waste training. Three 24-hour training which makes them eligible to work with HHW at our facility and sixteen received annual 8-hour refresher training as required by law.

Several drivers competed in the Solid Waste Association of North America's (SWANA) Sunflower Chapter Truck Road-e-o in Salina on September 21, 2002. Jim Garcia finished in first place in the rear loader competition and will be eligible to attend the national competition held later this year. David Pentlin finished in second place in the roll-off competition and Larry Devers finished in second place in the rear loader competition.

Bob Yoos, the Solid Waste Division Manager, is a member of the Board of Directors of SWANA's Sunflower Chapter and was elected president of the chapter for 2003 and 2004.



David Pentlin receiving second place in the roll-off competition at the Solid Waste Association of North America's (SWANA) Sunflower Chapter Truck Road-e-o in Salina on September 21, 2002.

STREET DIVISION

The Street Maintenance Division is responsible for the routine maintenance of the City's streets, alleys, curbs, and gutters. The budget provides funds for concrete, asphalt, sand, rock, and salt for snow and ice control. Additional funds are budgeted for outside firms to assist in removing snow. The work crews require the use of variety of equipment and vehicles. The cost of equipment maintenance and fuel is included in this budget. In order to continue a focus on training, four people attended the Snow Road-e-o/KDOT Training Conference.

Major Projects

During 2002, major projects completed were the reconstruction of the intersection of 15th and Wakarusa, the installation of new fuel tanks at the 11th, Natalie Drive, Haskell fueling station and the first phase of the 11th Street Compost Site.

Awards

KDOT and the American Concrete Pavement Association selected the 15th and Wakarusa Drive Intersection Project as the best municipal intersection project for 2002 in Kansas.



**15th and Wakarusa Intersection
2002 Best Municipal Intersection Project in Kansas**

STATISTICS

Paving

13 projects, 1,986 tons, 7,950 feet, 1,170 Man Hours

Patching

Hot Line, 5,301 calls, 397 tons, 1,351 Man Hours

Regular repairs, 3,260 tons, 5,167 Man Hours

Curb Replacement

1,735 feet, 633 Man Hours

Valley Gutter Replacement

22 projects, 568 cubic yards, 2,191 Man Hours

Sweeping

8,003 lane miles, 5,280 Man Hours

Crack Sealing

26,990 lbs of material, 94,465 lineal feet, 1,985 Man Hours



City workers crack-sealing on Lawrence Avenue

Snow Removal

6 storms, plowed twice, hauled from Downtown once,
3,845 Man Hours, 4,036 tons of material spread

Guard Rail Replacement

1,125 feet, 730 Man Hours

Mowing	Man Hours	Acres
Drainage areas and other right of way	370	4,070
Levee	1,740	19,140
Airport	883	9,713