CITY OF Tulsa
A New Kind of Energy.

EQUIPMENT MANAGEMENT DIVISION

State of the Fleet Report

Fiscal Year 2021

Government Fleet "Leading Fleets" Competition – the City of Tulsa Equipment Management Division (EMD) was recognized as a 2021 Elite Fleet by the Government Fleet organization. Elite Fleets are former No. 1 fleets that continue to perform at a high level and show leadership across the public fleet industry. In 2018, the EMD was recognized as the #1 Leading Fleet in North America. The Leading Fleets contest is a rigorous fleet competition, involving head-to-head competition against the best public fleet organizations from all 50 States plus Canada. No other Oklahoma fleet has placed in the top 50.

National Association of Fleet Administrators "100 Best Fleets" Competition – In 2021, the City of Tulsa Equipment Management Division (EMD) achieved the #1 ranking in the 100 Best Fleets competition. Tulsa's fleet operation competed in categories including accountability; use of technology and information; collaboration; creativity; celebration; evidence of a high trust culture; performance recognition; "doing it right the first time," quick, efficient turnaround; competitive pricing; staff development and resources stewardship. Tulsa's fleet is one of only two to win both this award and the No. 1 Leading Fleet in North America. Tom C. Johnson, founder of The 100 Best Fleets organization, recognized Tulsa's Equipment Management team as "a best-in-class organization applying innovative thinking to real world results."

National Association of Fleet Administrators "Green Garage" Competition – In 2020, the City of Tulsa Equipment Management Division (EMD) was named the #1 Green Garage winner in the annual Green Fleet Awards, a contest that honors the country's most progressive and environmentally-committed fleets. Rhea Bozic, Chief Judge for the competition, had this to say of the City's efforts: "Not only does the Equipment Management Division make a concerted and sustained effort to help the environment, they help people and the community in the process. I think all the judges agreed, this fleet does it all. They recycle EVERYTHING, and do constant training with both their staff and student interns to make sure things from large vehicle parts to small aerosol cans go to the proper recycling area. We're always looking at how fleets reach out to the community, and last year the Tulsa fleet worked with the Oklahoma Public Fleet Management Association to host a fleet conference for 300 government professionals and technicians from across Oklahoma, Arkansas, Kansas and Texas. They use sustainable products, biodegradable cleaners, and bring careful consideration to their procurement process. I especially like the commitment they have to training tomorrow's technicians through their five-day-a-week intern training program, and their use and sharing of waste oil for heating the buildings."

The EMD is a **Certified Fleet Management Operation (CFMO)** with the Government Fleet Management Alliance. CFMO certification ensures the EMD remains efficient and competitive.

The EMD obtained **CLEANFleet Certification (CFC)** through the Coalition for Green Fleet Management. The CFC is a national program to certify both private and public fleet operations as energy efficient and environmentally responsible.

The EMD is recognized as a **Fleet Masters Operation** by the Government Fleet Management Alliance (GFMA). The GFMA created the Fleet Masters Operation Award to recognize fleet operations that are considered to be exceptional in their industry.

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EXECUTIVE SUMMARY

This State of the Fleet Report looks at the past fiscal year to explain what significant and operational activities took place in the Equipment Management Division (EMD). The main purpose of this report is to inform management, employees, and customers about what took place during FY21 that could impact the EMD's ability to operate effectively and efficiently in the future. This report also addresses the EMD's challenges, opportunities, and planned activities for FY22.

EMD Mission Statement:
To provide our customers with safe, economical, environmentally efficient and reliable services to ensure maximum utilization of the fleet.

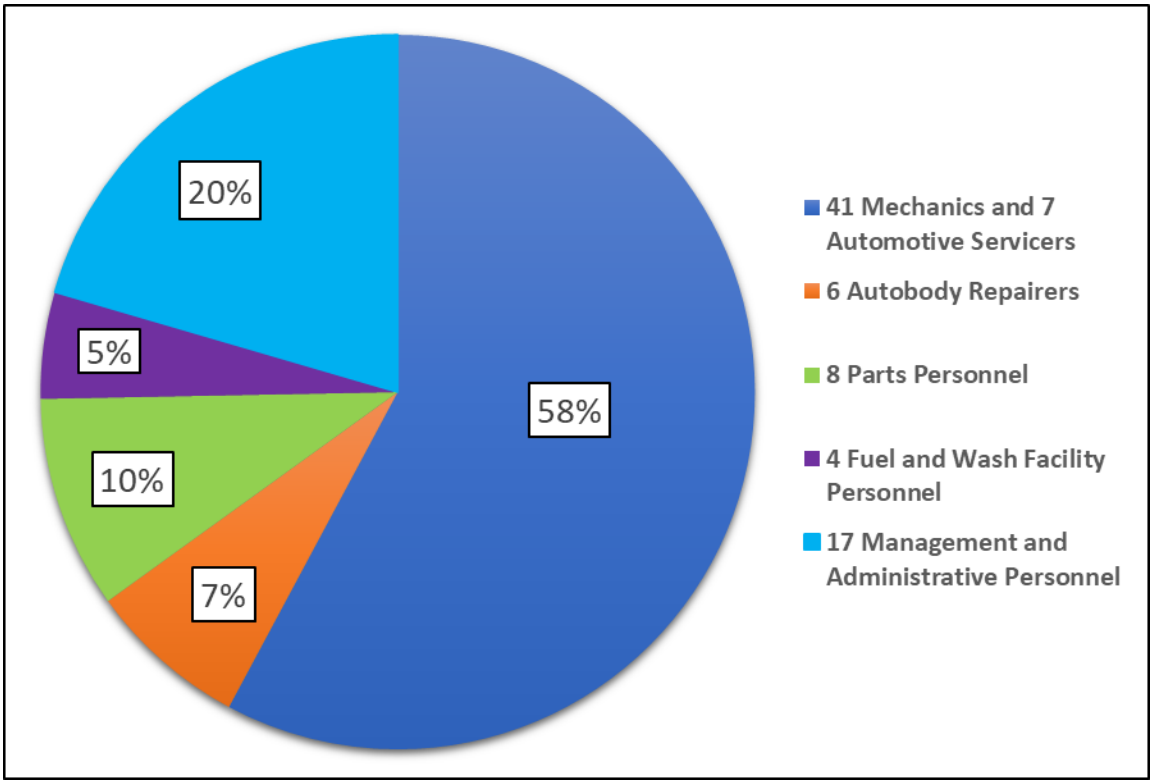
Going forward, the EMD will update the State of the Fleet Report by August 31st of each year in order to provide transparency of fleet operations. According to Carolina Software Technologies (CST), an outside consultant who audited EMD's fleet operations, "By becoming transparent and showing other departments exactly how EMD is trying to be of service, communication lines are opened, and cooperation is encouraged."

OPERATIONAL OVERVIEW

The EMD began FY21 with an approved operating budget of $16.2 million. The budget included a 10% furlough reduction for four administrative positions. It also included additional funds for two new mechanics, automotive parts and supplies, and outside motor vehicle repairs. For FY21, the fuel budget was set at $1.85 per gallon, a $0.15 per gallon decrease from the previous year. A Mayoral Transfer was processed during the year to cover higher than expected salary and benefits costs.

EMD's FY21 budget provided funding for 83 positions. As identified in Chart 1, Mechanics and Automotive Servicers made up the greatest percentage of positions (58%), followed by management and administrative support (20%), parts personnel (10%), body shop personnel (7%), and fuel and wash facility personnel (5%).

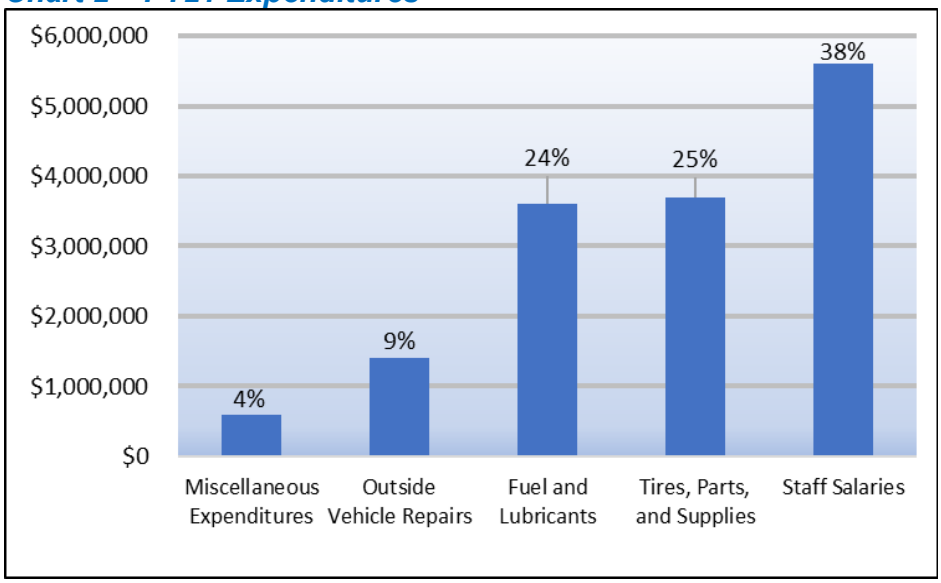
Chart 1 – EMD Positions



EMD EXPENDITURES

FY21 actual expenditures totaled $14.9 million: $5.6 million for staff salaries; $3.6 million for fuel and lubricants; $3.7 million for tires, parts and supplies; $1.4 million for outside motor vehicle repairs; and, $600,000 for miscellaneous expenditures (e.g. utilities, M5 maintenance, and training). Per Chart 2, the greatest percentage of expenditures were related to staff salaries (38%); followed by tires, parts and supplies (25%); fuel and lubricants (24%); and outside vehicle repairs (9%).

Chart 2 – FY21 Expenditures



POSITIONS

During FY21, the EMD's mechanics and automotive servicers worked 67,543 hours to maintain and repair the City's fleet; the EMD's body shop personnel worked 8,527 hours to modify equipment and repair vehicles damaged in collisions; the EMD's fuel facility personnel procured, stored, and dispensed 2.137 million gallons of fuel; and, the EMD's parts personnel procured, stored, and issued 140,986 fleet parts for four maintenance shops and one body shop. During 2021, EMD technicians and body shop personnel performed 32,765 jobs for vehicle repairs and 4,254 jobs for equipment repairs (see Tables 2 and 3, Appendix 1, pgs. 21-22).

During FY21, the EMD averaged 7.75 vacancies per month. The monthly vacancy rate averaged 6.58 for mechanics and automotive servicers; 0 for auto-body repairers; 0 for fuel and wash facility personnel; 0.25 for parts personnel; and 0.92 for management and administrative personnel. Table 1 (Appendix 1, pg. 21) provides vacancy data for FY21. To meet customer needs and reduce downtime, the EMD prioritizes filling mechanic, automotive servicer, and autobody repairer vacancies. During FY22, the EMD will collaborate with the Human Resources Department to identify and implement strategies for improving the monthly attrition rate.

RATES & CUSTOMER BILLINGS

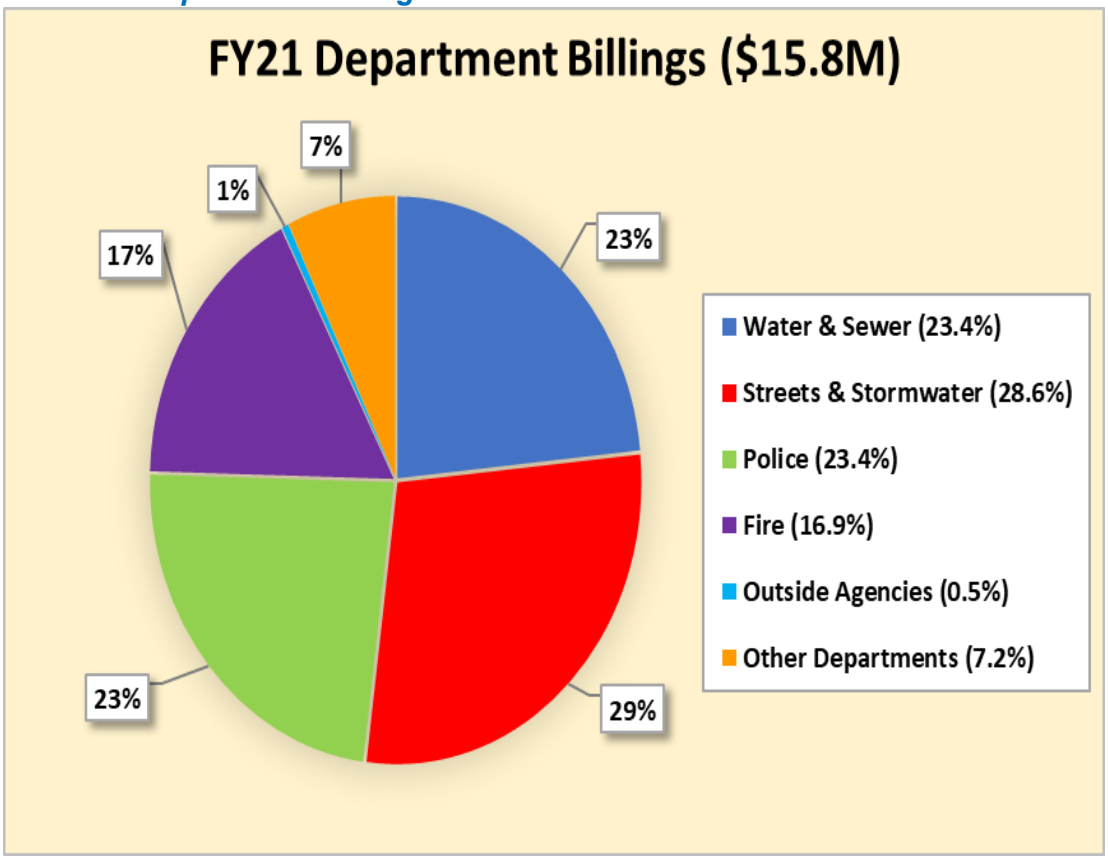
For FY21, the EMD developed Internal Service Fund (ISF) revenue projections and a customer rate model to recover 100% of the predicted costs to perform core services. EMD core services included vehicle repairs, regular preventive maintenance, body shop repairs, fuel for on-road and off-road vehicles, car/truck washes, and a motor pool of vehicles available for City business. The FY21 customer rate model allocated the cost of 83 EMD positions across all core services.

FY21 rates were $64 per hour for light duty maintenance labor; $85 per hour for heavy duty maintenance labor; $47 per hour for body shop labor; cost +6% markup for commercial charges; cost +25% markup for contract parts; cost +$0.18 markup for fuel; $3.28 per month, per unit for car/truck washes; and, $30/half day, $60/full day for motor pool rental. FY21 billings for services rendered were processed through the EMD's Equipment Management Information System. During FY20, department billings totaled $15,870,393 for all core services. Each month we provided departments with detailed billing statements to help them manage their fleet expenses. Table 4 (Appendix 1, pg. 22) provides billing data for FY21.

FY22 rates did not increase for maintenance labor, body shop labor, and fuel administration. In FY21, rates were increased to cover escalating costs for parts and commercial repairs, and the addition of two new technicians to work on vehicles and equipment added from the Public Safety Tax. In FY21, the maintenance labor rate was increased from $78/hr. to $85/hr. for heavy duty repairs; the body shop labor rate was increased from $46/hr. to $47/hr.; the commercial repairs markup was increased from 5% to 6%; motor pool rental was increased from $40 to $60 per day; and the fuel markup was increased from $0.16 to $0.18 per gallon.

Parts and outside repair costs continue to rise due to vehicles and equipment being retained for longer periods of time. FY22 appropriations are being increased by $560K to cover rising parts and commercial repair costs.

Chart 3 – Department Billings



Resources dedicated to EMD will continue to address the Mayor and City Council's goals and objectives, which include improving public safety and making local government efficient and reliable. FY21 funding allowed EMD to continue to provide preventive maintenance and unscheduled repairs as well as fuel services to the Police, Fire and Water and Sewer departments, among others, for their vital operations.

VENDOR SURVEYS

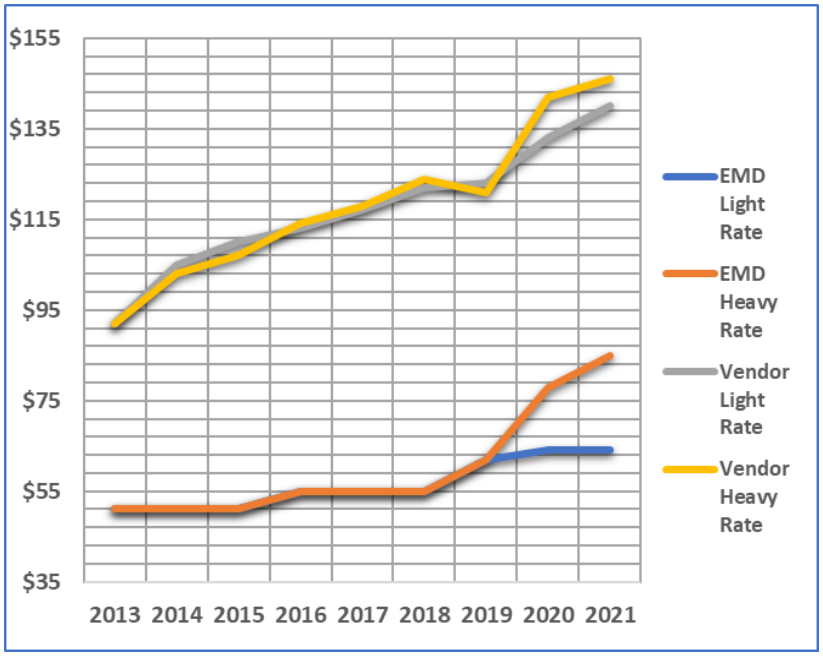
As part of the FY21 cost of operations review, the EMD surveyed local businesses and dealerships to understand labor costs in Tulsa. Table 5 (Appendix 1, pg. 23) provides survey results for the past 9 years. The FY21 labor rate for automotive and light trucks was $120-$159 per hour; and the labor rate for heavy trucks and heavy equipment was $115-$176 per hour.

For FY21, the EMD's light maintenance labor rate was approximately 118% below the market; $64 versus average vendor rate of $139.50; and the heavy maintenance labor rate was approximately 71% below the market; $85 versus $145.50 (see Chart 4. The FY21 labor rate was increased by $7 for heavy duty repairs ($85/hr.). This was needed to cover higher benefits and training costs, and permanent pay increases for technicians obtaining professional certifications.

During FY21, the EMD saved City departments $4.6 million by performing 67,543 hours of maintenance on the City's fleet instead of outsourcing this work. The $4.6 million savings is derived by multiplying the approximately $68 per hour savings by 67,543 maintenance hours performed by EMD technicians.

The EMD annually surveys local vendors to ensure its rates are reasonable and cost competitive. Rate comparisons are provided to all City departments.

Chart 4 – EMD Labor Rate versus Vendor Rates



FY21 CONTRACT REPAIRS

In some cases, it is more efficient to subcontract specialized maintenance and repair work. For example, by subcontracting basic oil changes (PMAs), the EMD is able to redirect labor hours towards critical repair and maintenance needs. The PMA vendor operates at multiple locations around the City and is open on evenings and weekends. This enables City drivers to get an oil change at a time and location that is convenient for them.

For FY21, the EMD subcontracted $1.353 million for vehicle maintenance and repairs. Table 6 (Appendix 1, pg. 23) identifies some of the maintenance and repair work that was subcontracted in FY21. The EMD will continue to subcontract repair work when efficiencies and/or cost savings benefit City departments.

PREVENTIVE MAINTENANCE PROGRAM

The EMD's Preventive Maintenance (PM) program helps bolster fleet availability. The EMD's three levels of PMs are based on time, miles/hours, and gallons. Table 7 (Appendix 1, pg. 23) identifies the services provided for each PM level. The EMD interfaces with the Fleet Management Information System (FMIS) fueling system to record up-to-date odometer readings in order to properly schedule PMs. The EMD tracks maintenance in its M5 Fleet System and provides a monthly PM schedule to equipment coordinators. EMD's goal is to achieve a 95% PM compliance rate for all fleet equipment. FY21 preventive maintenance compliance results were 85% for vendor PMs and 86% for in-house PMs. These percentages reflect PM compliance for the 10-month period July 2020 through April 2021. Due to a Ransomware attack, PM compliance data is not available for the last two months of the fiscal year (May and June 2021). These percentages are calculated as follows:

Vendor PMs

1	FY21 Scheduled Vendor PMs Completed	1,005
2	FY21 Unscheduled Vendor PMs Completed	649
3	Total FY21 Vendor PMs Completed (1,005 + 649)	1,654
4	FY21 Vendor PMs Scheduled	1,947
5	FY21 Vendor PM Compliance Rate (1,654/1,947)	85%

In-House PMs (Light Duty and Heavy-Duty Units)

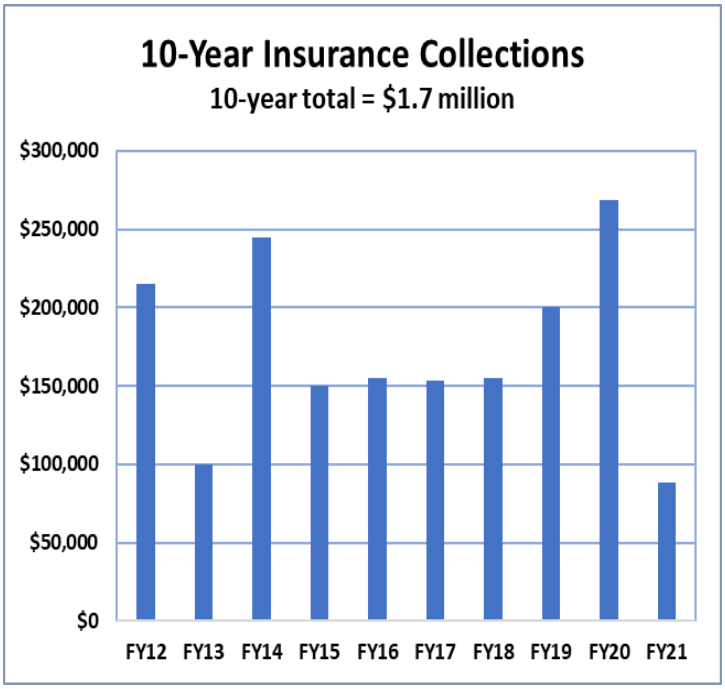
1	FY21 Scheduled In-House PMs Completed	2,212
2	FY21 Unscheduled In-House PMs Completed	1,719
3	Total FY21 In-House PMs Completed (2,212 + 1,719)	3,931
4	FY21 In-House PMs Scheduled	4,556
5	FY21 In-House PM Compliance Rate (3,931/4,556)	86%

INSURANCE COLLECTIONS

EMD subrogates, settles, and collects insurance claims for drivers who are involved in accidents with City vehicles where the City driver was not at fault. These claims help pay for the damage to repair the vehicle, or in situations where the damage costs are greater than the value of the vehicle, to compensate the City for the total loss of the vehicle.

During FY21, the EMD subrogated and collected insurance proceeds of $87,772 for 52 collectable accidents. At year-end FY21, the EMD was still in the process of collecting an additional $665,691 of which $353,463 is being pursued with help from the City's legal department. During the past ten years, the EMD has subrogated and collected $1.7 million in insurance claims for the benefit of City departments (see Chart 5).

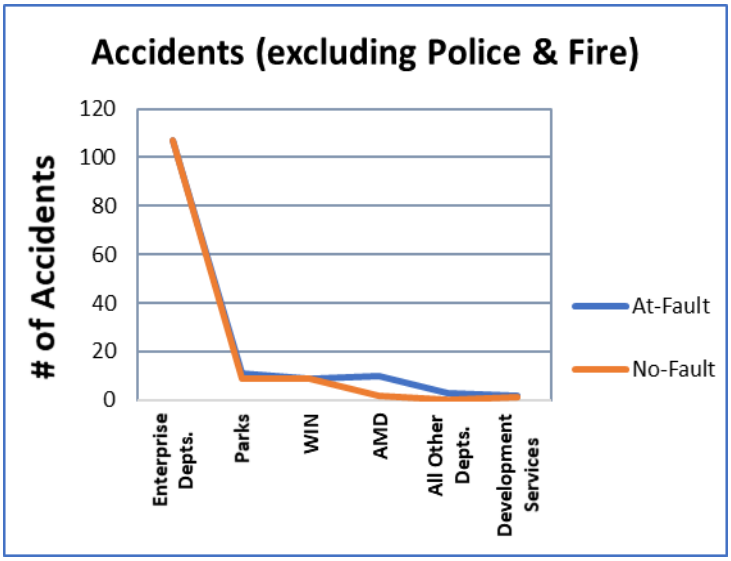
Chart 5 – Insurance Collections



NUMBER OF ACCIDENTS

During FY21, City drivers were involved in 270 accidents (excluding Police and Fire). Of the 270 accidents, 142 were at-fault accidents (53%), and 128 were no-fault accidents (47%). The ratio of accidents to positions is 12.6% (270 accidents divided by 2,146 positions). As depicted in Chart 6, City drivers assigned to Enterprise Departments were involved in 214 accidents: 107 at-fault accidents and 107 no-fault accidents. The ratio of accidents to Enterprise Department positions is 18% (214 accidents divided by 1,186 positions). The ratio for AMD is 9% (12 accidents divided by 132 positions; the ratio for Parks is 11.9% (20 accidents divided by 168 positions); and the ratio for the WIN Department is 22% (18 accidents divided by 82 positions).

Chart 6 – Accidents



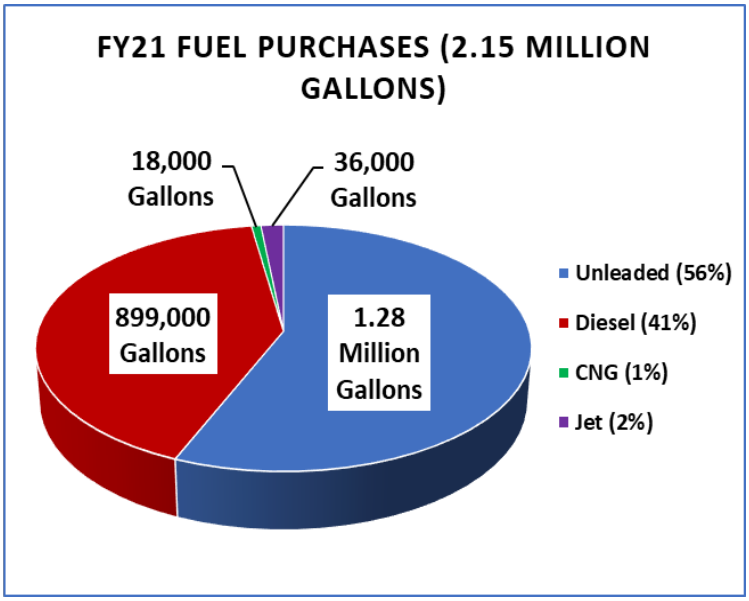
FUEL COSTS

During FY21, the EMD purchased 2.15 million gallons of petroleum and CNG for the City's fleet. The quantities purchased by fuel type were: 1.21 million gallons of unleaded fuel; 889,000 gallons of diesel fuel; 15,000 gasoline gallon equivalents (GGE) of compressed natural gas (CNG); and, 36,000 gallons of jet fuel (see Chart 7).

Unleaded fuel purchased from SC Fuel (TAC 071B) was -$0.0112 per gallon **BELOW** OPIS (Oil Price Information Service); and, diesel fuel was +$0.0082 **ABOVE** OPIS.

During FY21, the City's fuel depot at 420 West 23rd Street was used to transfer fuel from EMD's underground storage tanks to EMD's fuel truck.

Chart 7 – FY21 Fuel Purchases



The fuel truck delivered 87,404 gallons to offsite facilities (e.g., water/sewage treatment plants, chipping sites). If we use a 3rd party vendor to deliver fuel to offsite facilities instead of delivering the fuel ourselves, the added cost is $0.25 per gallon. The fuel depot saved $21,851 by reducing 3rd party fuel deliveries of 87,404 gallons.

During second quarter FY14, the EMD switched from 100% gasoline (E0) to E10 (10% Ethanol) due to the escalating costs of Ethanol-free fuel. The EMD will continually monitor any problems the switch to E10 may cause fuel tanks and vehicle filtration systems.

The FY21 average price per gallon was $1.52 for Unleaded Fuel, $1.63 for Diesel fuel, and $0.81 for CNG (see Charts 8-10). For FY21, the EMD saved City departments approximately $196,000 by acquiring fuel at a lower cost than the street price. The City's Unleaded and Diesel Fuel was approximately $0.09 per gallon less than the street price, and CNG was about $0.74 less than the street price.

Fuel purchased in FY21 was primarily stored and dispensed at the following EMD fuel facilities:

- 3411 N. Columbia (TPD Gilcrease Division)
- 4234 N. Mingo (Sewer Base)
- 10122 E. 11th (TPD Mingo Valley Division)
- 1720 Newblock Ave (Transportation Garage)
- 420 West 23rd Street (Westyard)
- 5675 S. Garnett Rd (Heavy Maintenance)
- 7515 Riverside Pkwy (TPD Riverside Division)

Chart 8 – Average Price for Unleaded Fuel

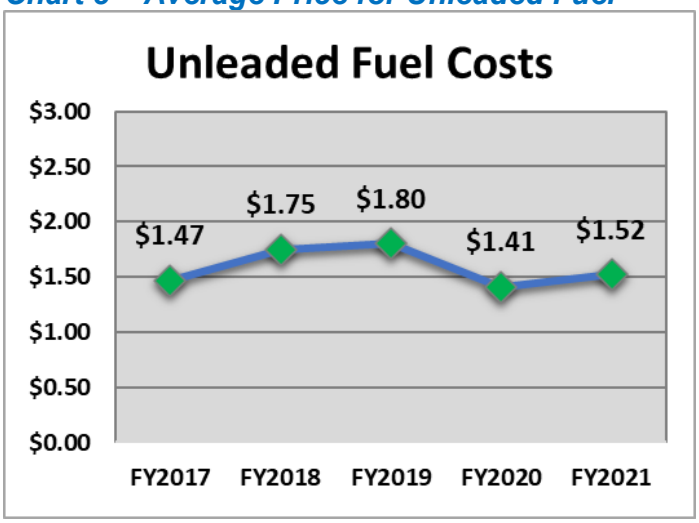


Chart 9 – Average Price for Diesel Fuel

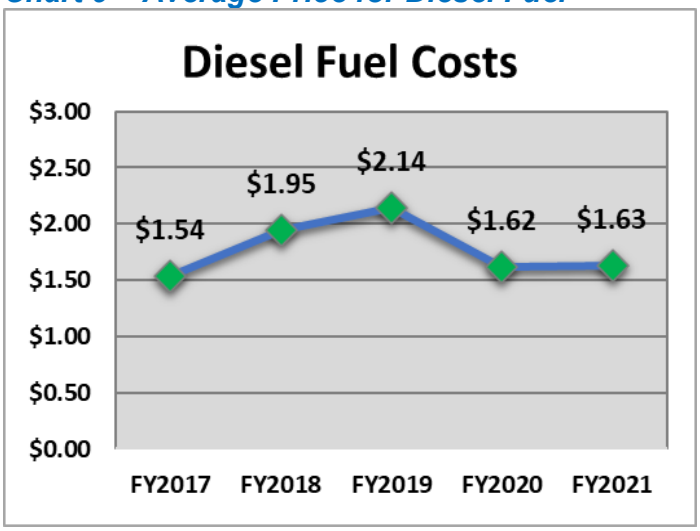
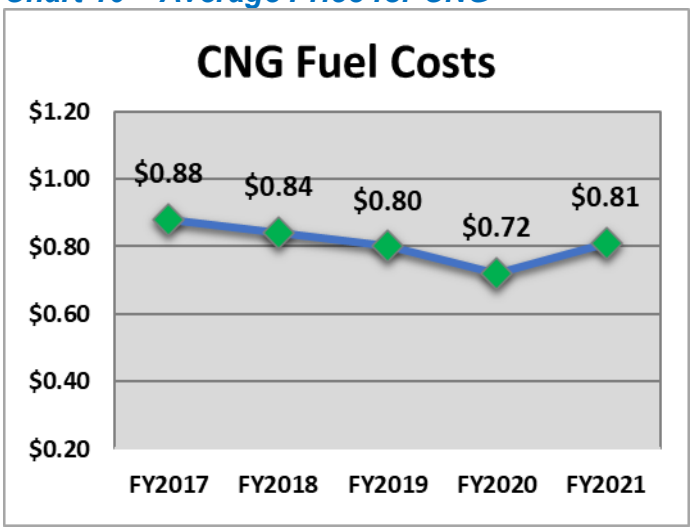
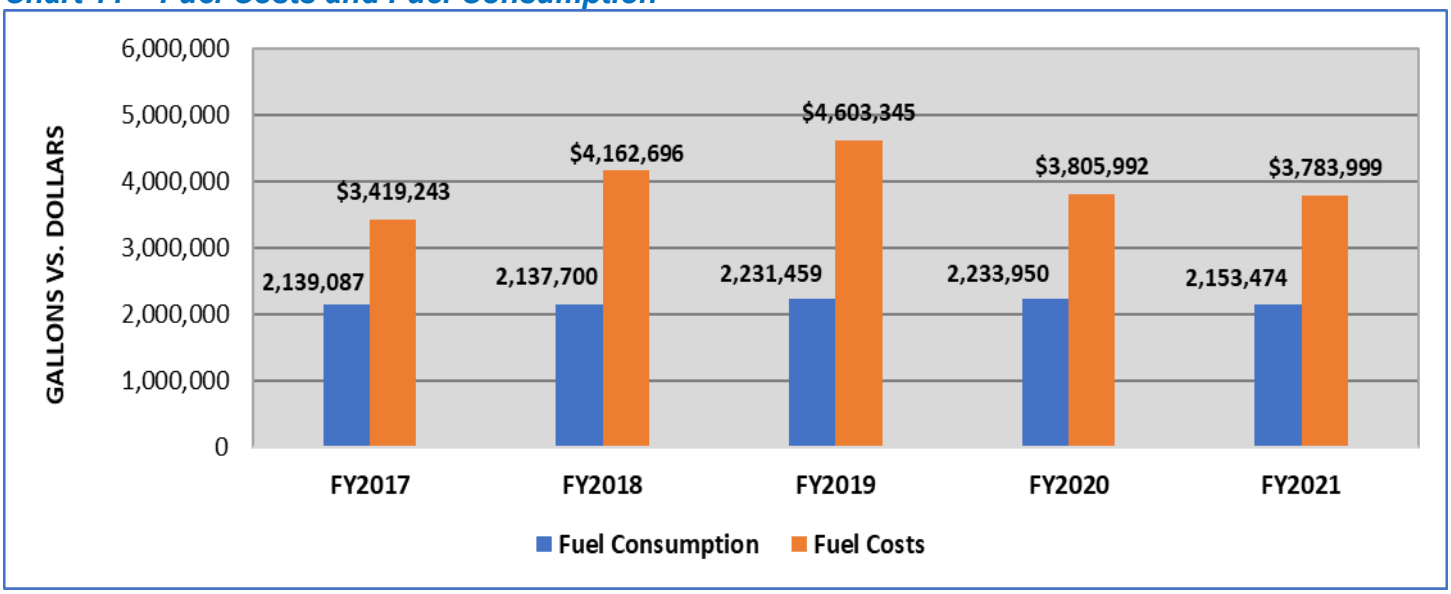


Chart 10 – Average Price for CNG



For FY21, the EMD's fuel costs were $3,783,999. Tables 8-9 (Appendix 1, pg. 24) provide a departmental itemization of fuel costs and consumption. Chart 11 provides a 5-year history of fuel costs and fuel consumption.

Chart 11 – Fuel Costs and Fuel Consumption



FUEL CONSUMPTION

During FY21, Departments and Agencies consumed 2.15 million gallons of fuel (see Chart 12). Quantities consumed by fuel type were: 1.21 million gallons of Unleaded Fuel; 889,000 gallons of Diesel Fuel; 15,000 gasoline gallon equivalents (GGEs) of Compressed Natural Gas (CNG); and, 36,000 gallons of Jet Fuel.

For FY21, fuel consumption was 3.6% lower than the previous year and fuel costs decreased 0.6%. To reduce fuel consumption and costs, the EMD encourages drivers to employ energy conservation strategies identified in Table 10 (Appendix 1, pg. 24). Strategies include reducing idle times, route planning, and keeping tires properly inflated.

FUEL CONSUMPTION (continued)

The City's long range plan to reduce fuel consumption includes replacement of vehicles at the end of their lifecycle with more fuel efficient vehicles. The long range plan encompasses the following steps: 1) An Equipment Study is developed by the Finance Department to determine how much funding is needed to replace vehicles over a 10-year timeframe. The Study then recommends a funding allocation for each department; 2) An Automotive Life-End Replacement Tool (ALERT) is developed by EMD to identify which vehicles are eligible to be replaced; 3) Departments must submit Fleet Justification Forms (FJFs) to obtain approval for vehicle replacements; and, 4) The Fleet Management Steering Committee (FMSC) must review all FJFs and either approve or deny vehicle replacement requests. The collaborative goal of the Equipment Study, ALERT, FJFs, and FMSC is to reduce annual fuel consumption by 3-5% as specified in Tulsa Revised Ordinances, Title 12, Chapter 1.

Chart 12 – Fuel Consumption

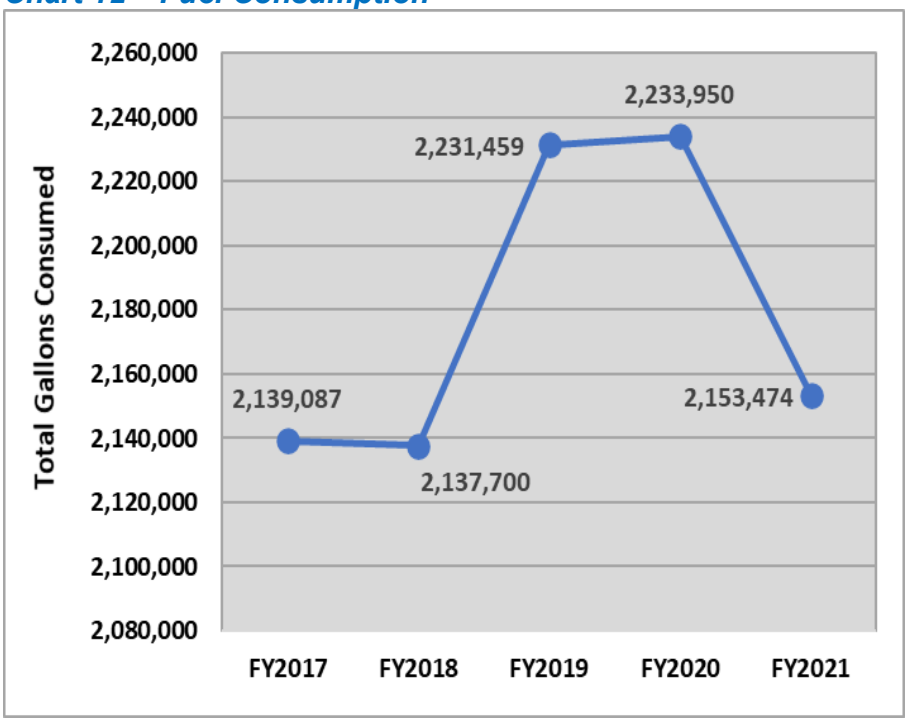


Table 9 (Appendix 1, pg. 24) provides a four-year comparison of fuel consumption data for public safety departments, enterprise departments, and all other departments. Public Safety departments are Police and Fire. Enterprise departments are Water & Sewer, Streets & Stormwater, and Engineering. As depicted in Table 9 (Appendix 1, pg. 24), the Police and Fire departments experienced moderate decreases in fuel consumption, and enterprise fund departments experienced a significant increase in certain areas. Fuel consumption decreased by 5.4% in the Police Department and 1.8% in the Fire Department. Consumption increased 2.6% in General Fund-Enterprise Departments, 26.7% in PST Fund-Enterprise Departments, 4.5% in Stormwater Fund-Enterprise Departments, and 0.3% in Water Fund-Enterprise Departments. The 3.6% decrease for all departments can be attributed to reduced activity due to the COVID pandemic.

TOTAL ASSETS MANAGED

The Equipment Management Division performs maintenance and repairs on a wide variety of City assets ranging from on-road vehicles to off-road equipment. EMD is tasked with performing maintenance and repairs on approximately 3,800 City assets. These assets consist of: 2,900 on-road vehicles, 275 trailors, 20 generators, 50 tractors and mowers, 30 compressors, 25 pumps, 225 heavy construction units (e.g. dozers, backhoes, graders, loaders), and 275 miscellaneous items (e.g. weedeaters, meters, boat moters).

The EMD's Automotive Life End Replacement Tool (ALERT) was used to identify the rolling stock count for FY 21. The rolling stock count is constantly changing as existing units are surplused and new units are added. For this reason, the data contained in this section represents a snapshot in time. According to Tables 11-14 (Appendix 1, pgs. 25-26) and Charts 13-14, the rolling stock count increased by 231 units, or 8.7% during

FY21. The most significant change was in the Marked Unit category which increased from 845 to 995 units, a 17.8% increase.

Chart 13 – Rolling Stock Count (by Vehicle Type)

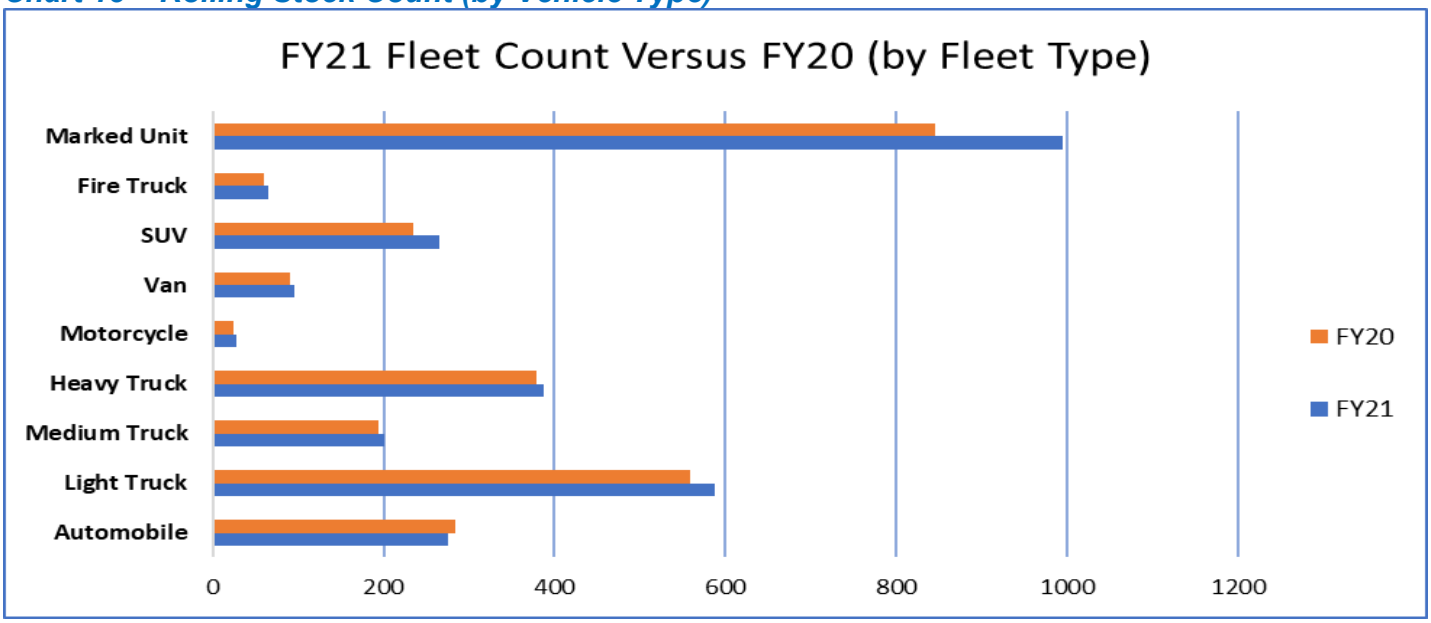
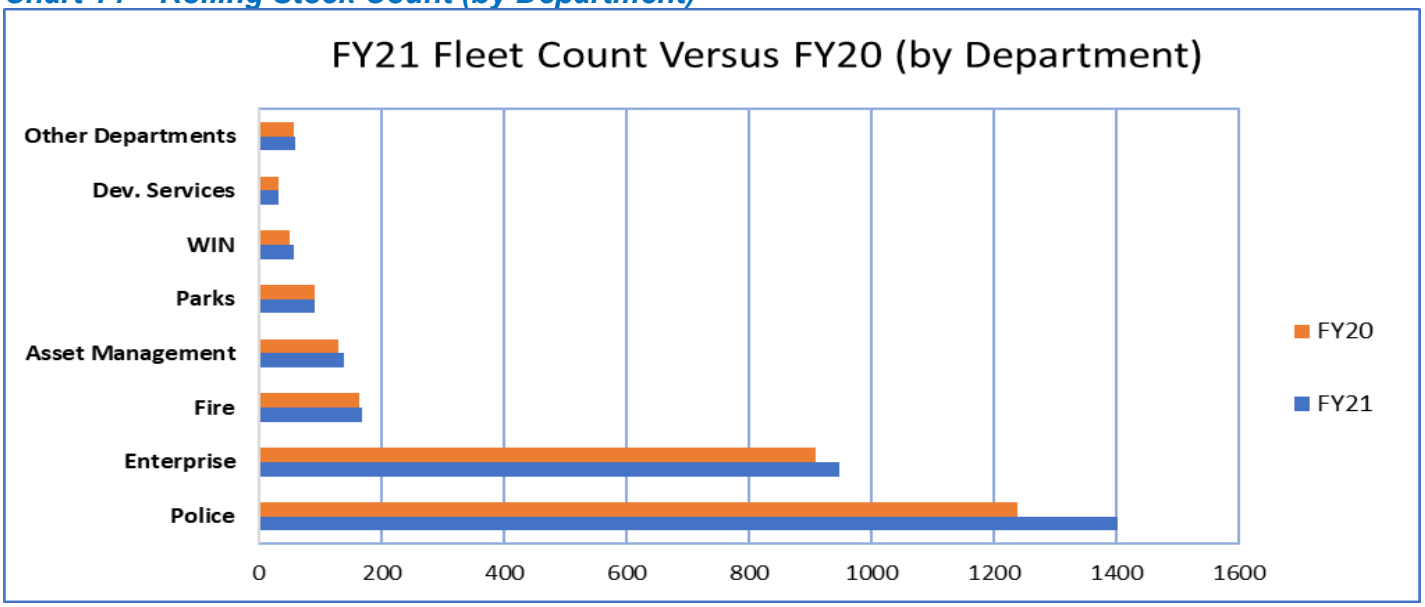


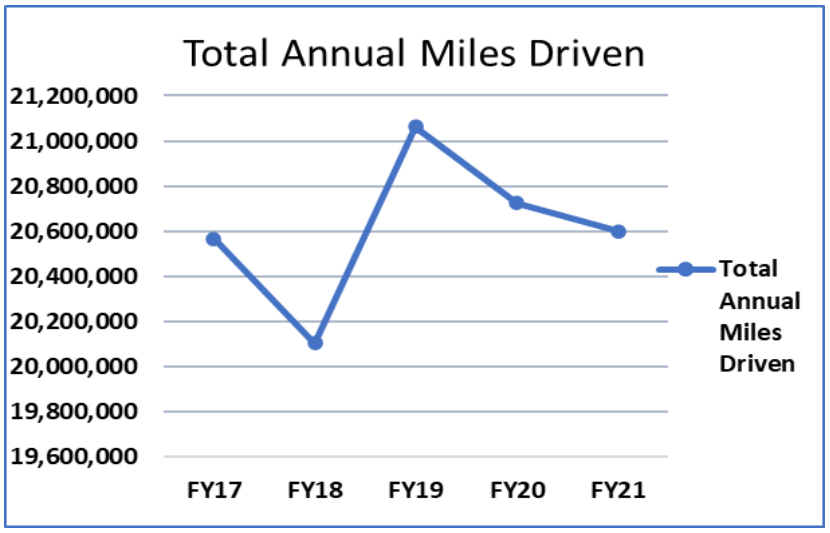
Chart 14 – Rolling Stock Count (by Department)



During FY22, the EMD will continue to implement fleet efficiency initiatives outlined in the City's 2011 Sustainability Plan. These initiatives include reducing energy costs, increasing efficiencies, and improving air quality. The Plan's initiatives related to EMD are: 1) develop and implement a plan to right-size the City's fleet; 2) increase the net fuel efficiency of the fleet; 3) increase the use of CNG in the City fleet; and, 4) integrate fleet data into an overall sustainability and energy data management program. The Sustainability Plan recommends the City reduce its fleet of on-road vehicles by 550 within 5 years. The FMSC, EMD, and City departments continue to identify under-utilized vehicles that can be surplused without replacement.

TOTAL ANNUAL MILES DRIVEN

Chart 15 – Miles Driven



During FY21, the City's on-road fleet drove 20,600,773 miles. Compared to the previous fiscal year, miles driven increased 1.3% in the Police Department (+151,130); decreased 18.1% in the Fire Department (-230,201); decreased 2.7% in the enterprise departments (-158,898); decreased 6.1% in the Parks Department (-25,230); decreased 2.2% in the Development Services Department (-5,178); decreased 6.6% in the WIN Department (-26,424); increased 17% in the AMD Department (+118,807); and, increased 34.6% in all other departments (+51,148). Miles driven by all departments were 124,846 less than the previous FY (0.6% decrease). For the past five fiscal years, average miles driven by the City's fleet is approximately 20.6 million. Chart 15 and Table 15 (Appendix 1, pg. 26) provide a 5-year comparison of annual miles driven by the City's fleet. Table 1 (Appendix 1, pg. 26) provides a 2-year comparison of miles driven by department (FY21 versus FY20).

RATIO OF VEHICLES TO EMPLOYEES

For FY21, the ratio of on-road vehicles compared to the number of City employees equals 0.713 vehicles for every City employee (7.5% increase from the previous FY). As identified in Table 17 (Appendix 1, pg. 27), the greatest change from FY20 to FY21 was in the Police Department (19.8% decrease). The ratio increased because position and fleet counts increased.

COUNT OF VEHICLES DRIVEN LESS THAN 5,000 MILES, 2,500 MILES, AND 1,000 MILES

Data from the EMD's Automotive Life End Replacement Tool is used to identify the number of fleet units driven less than 5,000 miles in a one-year period. Because the fleet count is constantly changing as existing units are surplused and new units are added, the data contained in this section represents a snapshot in time.

Tables 18 and 19 (Apendix 1, pgs. 27-28) identify vehicles utilized less than 5,000 miles in a 1-year period for FYs 20 and 21. According to Table 18, the number of units driven less than 5,000 miles equals 1,299 units; units driven less than 2,500 miles equals 885; and, units driven less than 1,000 miles equals 580. Compared to FY20, vehicles driven less than 1,000 miles increased by 38.4%; vehicles driven less than 2,500 miles increased by 28.6%; and, vehicles driven between 2,500 and 5,000 increased by 20.4%.

Reasons vehicles are driven less than 5,000 miles in a one-year period include: 1) new units were not in service for the full year; 2) usage was based on hours instead of miles; 3) vehicles were not used due to vacancies; 4) vehicles were out of service due to mechanical deficiencies; and, 5) vehicles were underutilized.

The EMD recommends that departments with under-utilized vehicles consider the following actions in order to improve fleet utilization and avoid fleet creep: 1) rotate under-utilized vehicles with high-use vehicles within their department; 2) rotate under-utilized vehicles with high-use vehicles owned by other departments; 3) surplus under-utilized vehicles without replacement; and, 4) transfer under-utilized vehicles to the EMD motor pool for multi-departmental use.

The City of Tulsa's Utilization Management Policy requires the EMD to generate an Annual Utilization Report for vehicles and motorized equipment. This report is presented to the FMSC and identifies: a) vehicles that have been in-service a minimum of 12-months and utilized less than 2,500 miles or 20 hours per fiscal year; and, b) motorized equipment that has been in-service a minimum of 12 months and utilized less than 20 hours per fiscal year. Department representatives are required to appear before the FMSC and justify retaining these units. The FMSC will consider department justification responses and then approve one of the following actions: 1) removal from the fleet; 2) re-assignement of the unit; 3) exchange for another unit of a similar type with higher miles/hours; or, 4) exchange for a different type of unit that better suites the mission.

YEAR-END AVERAGE FLEET AGE

M5 Fleet Management System data was used to calculate the FY21 year-end fleet age for the City's fleet. Per M5, the average year-end age for trucks ranged from 9-20 years; and, the average year-end age for light vehicles (e.g. automobiles, marked units, SUVs and vans) ranged from 3-14 years.

Table 20 (Appendix 1, pg. 29) identifies the average age of each fleet category. This table also provides examples of makes and models in each category.

In Charts 16 and 17, the blue line represents the average age for each fleet category, and the red line depicts the life expectancy. Where the blue line extends above the red line is indicative of aging fleet kept beyond the recommended replacement timeframes. Fleet dependability suffers when units are not replaced at appropriate intervals. Keeping vehicles beyond recommended replacement timeframes leads to a higher frequency of vehicle breakdowns, higher maintenance and parts costs, and increased downtime. Parts and outside vehicle repair costs continue to escalate due to vehicles and equipment being retained for longer periods of time.

Chart 16 – FY21 Year-End Fleet Age (Light Fleet)

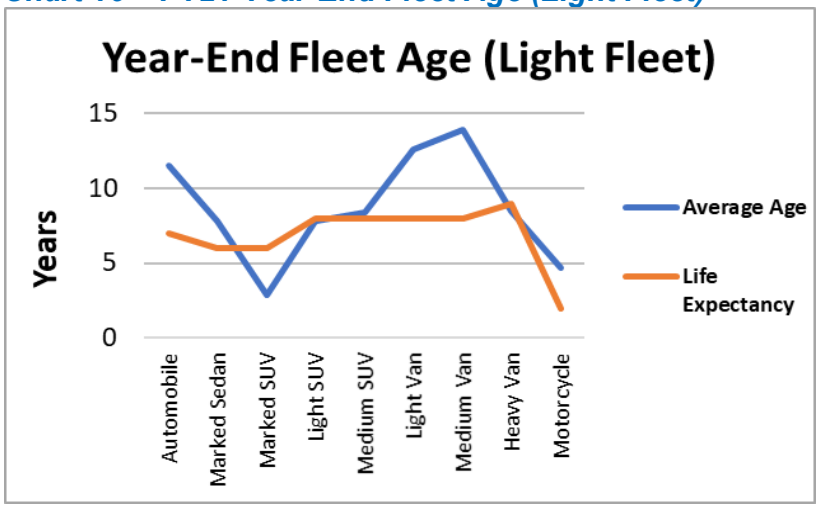
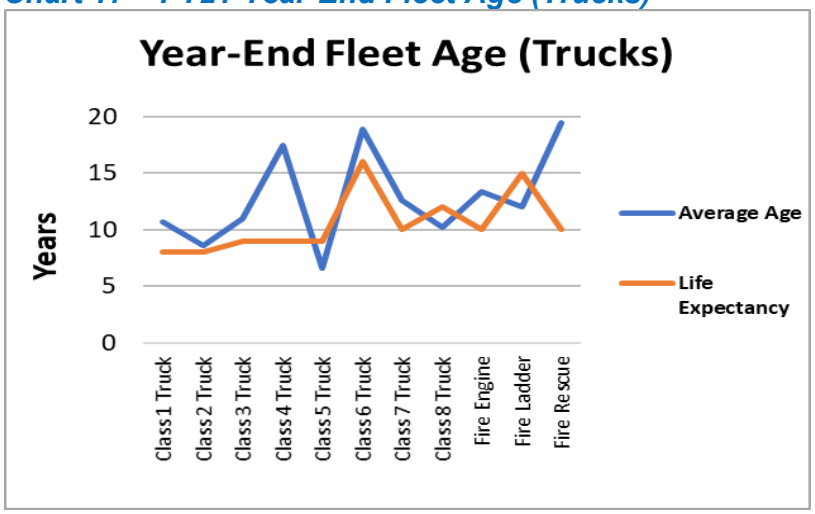


Chart 17 – FY21 Year-End Fleet Age (Trucks)



The replacement timeframes for each category are published in the Finance Department's Equipment Study. The EMD developed the Automotive Life End Replacement Tool (ALERT) to help set annual replacement priorities for each department. The current ALERT identifies 1,034 units for replacement. Timely replacement of these units will help ensure the average fleet age does not exceed the life expectancy timeframes.

OPERATIONAL DOWNTIME

Dowtime refers to the period of time when a vehicle or piece of equipment is unavailable for normal use. This may be due to factors such as planned or unplanned maintenance. Charts 18 and 19 depict the FYs 20 and 21 average downtime statistics for City vehicles. These statistics reflect the average number of days a unit is out of service due to maintenance and repairs. Downtime has an impact on revenue, reputation and fleet management costs. By concentrating on controllable factors to downtime, costly periods of interrupted service can be measured, prevented and managed. Strategies for reducing downtime include:

Chart 18 – Average Downtime (by Category)

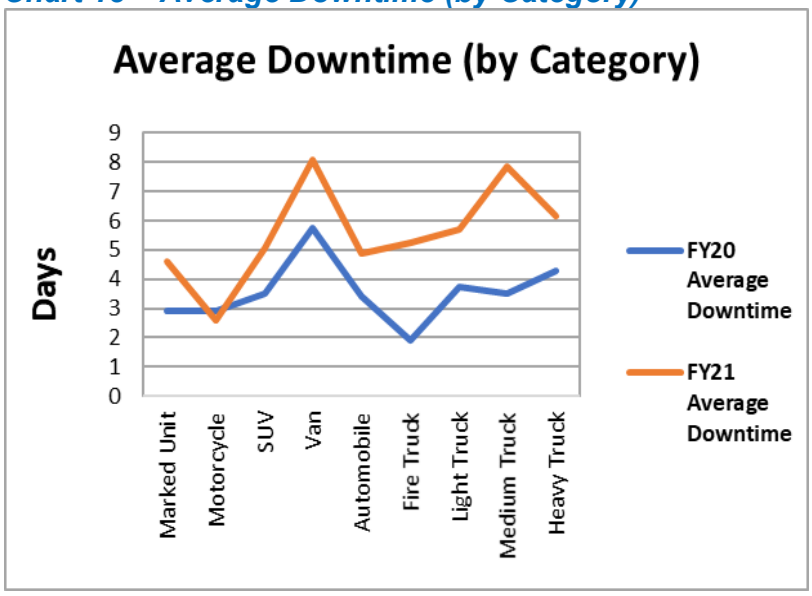
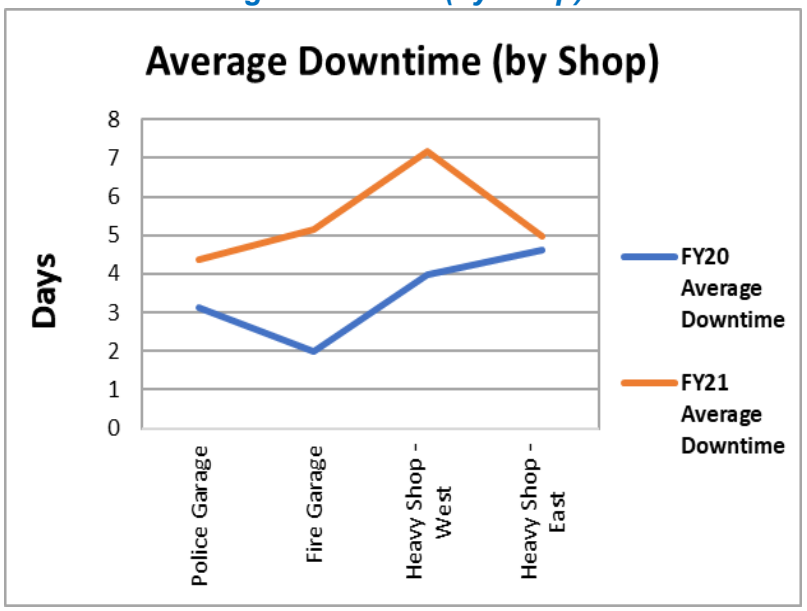


Chart 19 – Average Downtime (by Shop)



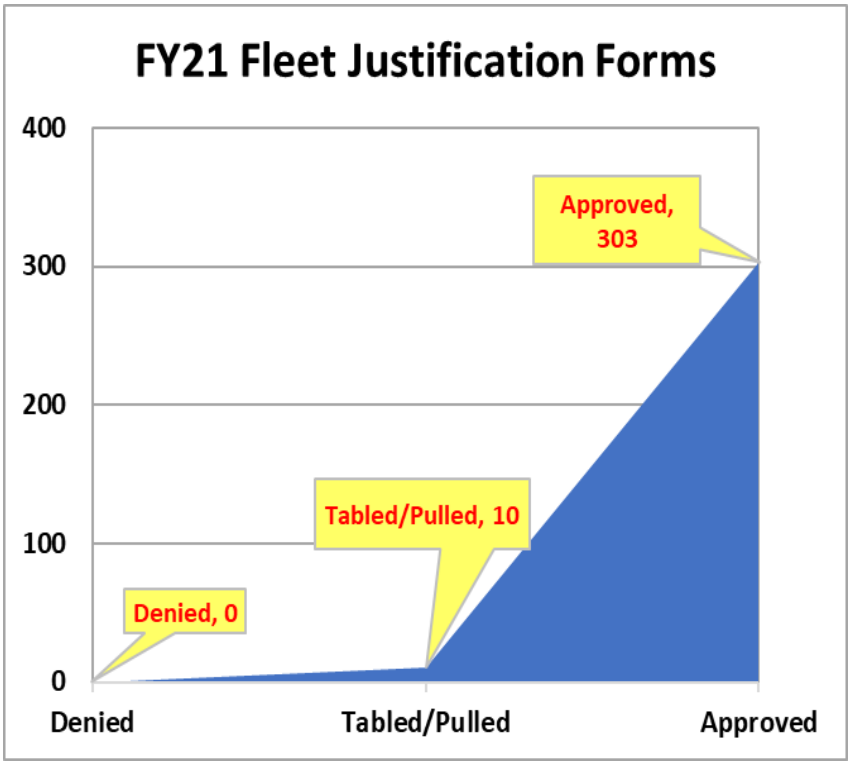
1) Regular servicing, maintenance and repair. A regularly serviced vehicle that is maintained and repaired to a high standard is less likely to breakdown and cause problems. When possible, vehicle servicing and essential maintenance can be completed after-hours to reduce downtime.
2) Departments should replace older vehicles that incur exorbitant maintenance and repairs. New vehicles are less likely to breakdown and arrive with a warranty.
3) Equipment Management will continue to work with departments to prioritize the order in which vehicles/equipment should be serviced.
4) Equipment Management will work with departments to develop preventive maintenance schedules that maximize the number of vehicles on the road without extending the periods between services. Planned preventive maintenance helps limit the number of breakdowns by ensuring vehicle parts are replaced at correct intervals, minimizing extensive wear and tear.
5) According to Bob Stanton of Stanton Consulting, much of the downtime a fleet experiences during maintenance and repair events is not related to actual wrench turning. Inefficiencies in the maintenance and repair process have ramifications throughout the entire fleet operation. From accounting to administration and dispatch to operations, every facet of a fleet's operation feels the pinch when the maintenance and repair process is not as efficient as possible. Equipment Management will continue to audit its maintenance and repair processes to correct inefficiencies that contribute to higher downtime.

Tables 21 and 22 (Appendix 1, pg. 30) provide FY21 downtime statistics by class and shop.

FLEET MANAGEMENT STEERING COMMITTEE

The Fleet Management Steering Committee (FMSC) includes representatives from 11 departments. The FMSC determines policy and provides oversight for all aspects of specifying, purchasing, assigning to departments, re-assigning between departments and retiring vehicles for the City. To avoid fleet creep, departments must surplus one unit for every new unit that is purchased and introduced into the fleet. FMSC has resulted in sharing under-utilized equipment/vehicles previously purchased; asking difficult questions of peers; reviewing all requests for repurposing; and, collaborating to save the City money. During FY21, the FMSC reviewed 313 Fleet Justification Forms (FJF): 303 were approved; and 10 were tabled or pulled (see Chart 20). Departments are required to answer the following questions on the FJF: 1) explain why a dedicated CNG or Bi-fuel vehicle cannot be used for this application; 2) can you reduce the size and weight of your current vehicle by specifying a smaller, lighter vehicle, for improved MPGs, and reduced operating costs; and, 3) how will you ensure the requested vehicle has a fuel efficiency rating better than the vehicle being replaced.

Chart 20 – FY21 Fleet Justification Forms



AUTOMOTIVE LIFE END REPLACEMENT TOOL (ALERT)

The EMD developed the ALERT to help set replacement priorities and ensure the most deserving City vehicles are replaced with the level of available funding. Table 23 (Appendix 1, pg. 31) provides detailed ALERT findings for FY21. In September 2021, the ALERT results were distributed to departments.

The ALERT recommends replacement quantities based on six criteria: 1) Age; 2) Life-to-Date (LTD) Mileage or LTD Hours; 3) LTD Maintenance and Repair Costs; 4) Depreciation; 5) Vehicle Condition; and, 6) Use. The data used to determine ALERT recommended replacement quantities is obtained from the M5 Fleet Management System. The current ALERT provides recommended replacement quantities for 2,898 vehicles purchased from approximately 25 different funds. The ALERT scores each vehicle based on the six criteria mentioned above. The maximum total score a vehicle can obtain is 35 points. Vehicles scoring between 28 to 35 points are rated, "Needs Immediate Consideration for Replacement."

Previous versions included scoring categories for "Fuel Consumption" and "Miles per Gallon." These categories were removed and replaced with "Vehicle Condition" and "Use." The new EMD policy is to annually inspect all vehicles and assign a Vehicle Condition Score based on criterion from the National Auto Auction Association (NAAA). Units that score a 1 in the Vehicle Condition category represent vehicles in the best condition, and units that score a 5 represent vehicles in the worst condition. Scoring criteria for the "Use"

category is as follows: administrative vehicles receive a score of 1, light and medium trucks receive a score of 2, and public safety vehicles and heavy trucks receive a score of 3.

ALTERNATIVE FUELED VEHICLES (AFVs)

For FY21, 5.9% of the City's on-road fleet consisted of AFVs. The department with the largest percentage of AFVs was Development Services at 46.9%. Table 24 (Appendix 1, pg. 31) identifies the number of AFVs in each department. Because AFVs are fuel efficient and good for the environment, departments should consider replacing eligible fleet units with AFVs. Per the City of Tulsa Revised Ordinances (TRO), Title 12, Chapter 1, Section 102, "Before the acquisition of any vehicle, consideration of need, use, vehicle size and efficiency shall be carefully examined. In all cases, replacement vehicles shall have a fuel efficiency rating equal to or better than the vehicle being replaced. Prior to the acquisition of vehicles, serious consideration must be given to AFVs and hybrid vehicles."

The City's AFV fleet is comprised of 61 CNG vehicles, 108 Hybrid vehicles, and 2 electric vehicles. The total number of AFVs in the City's fleet is 171. Tables 25 and 26 (Appendix 1, pgs. 31-32) provide detailed AFV data. The City has approximately 275 flex fuel vehicles. During FY21, these vehicles were fueled with E10 gas instead of flex fuel (E85). During FY22, the EMD will determine the viability and efficiency of purchasing flex fuel (E85) for these units. Lastly, City departments are replacing older diesel vehicles with cleaner-burning diesel vehicles that require Diesel Exhaust Fluid (DEF). The EMD purchases and stores DEF for these vehicles.

ALTERNATIVE FUELS INFRASTRUCTURE AND PRODUCTS

In August 2012, the EMD opened two new CNG stations. One of the new stations is a CNG time-fill fueling station to fuel City green waste collection trucks, and the other is a public-only CNG fast-fill fueling station. A fourth public-private CNG station opened in July 2017 near 33rd and Memorial. During 2021, the City's CNG stations displaced 32,000 petroleum gallons (15,000 GGEs from City vehicles and 17,000 GGEs from public vehicles) and reduced harmful carbon dioxide (CO2) emissions in Tulsa's airshed by over 100 tons. For 2022, the City's four CNG stations (3 opened prior to 2013 and 1 opened in 2017) are expected to dispense over 40,000 GGEs of CNG.

During FY21, the City used approximately 50,000 gallons of propane to fuel generators and small off-road equipment (e.g. forklifts, hotboxes).

The EMD collaborated with the Tulsa Parking Authority to install Electric Vehicle (EV) charging stations in five downtown parking garages. During FY21, the City utilized grant funding to install Electric Vehicle (EV) charging stations in the OTC Parking Garage and at two EMD shops. The EV stations are available for City and public use. The EMD will also ask departments to consider replacing administrative vehicles (meeting the replacement criteria) with electric vehicles.

During the past decade, the EMD has obtained grants and donations totaling nearly $700,000 for alternative fueled vehicles and infrastructure. We research and annually apply for federal, state, and local grants. EMD's goals are: 1) identify and apply for at least one state or federal grant each year (related to alternative fuels infrastructure and vehicles); 2) obtain a minimum of one state or federal grant award per year; 3) achieve 100% project compliance in accordance with the grant requirements; and, 4) provide accurate plans, progress reports, and projected results within established time frames.

KEY PERFORMANCE INDICATORS

The EMD monthly and annually tracks 11 Key Performance Indicators (KPIs). Table 27 (Appendix 1, pg. 33) provides KPI results for FYs 19-21. The KPIs provide a snapshop of our overall performance; promote long-term strategic goals; and, lead to actionable steps in order to achieve our goals. For FY21, 10 of 11 KPI objectives were met. The following KPI was not met: car/truck wash availability meets or exceeds 95%. To meet the car/truck wash standard, the EMD has replaced three aging wash facilities to help reduce downtime.

CURRENT ISSUES, ONGING ACTIONS, AND FUTURE INITIATIVES

The COVID pandemic drastically impacted operations during the year. Some administrative employees were furloughed and worked from home. All other staff were required to follow social distancing guidelines and wear masks when working close to others. Face to face meetings were replaced with virtual meetings. Shops, offices and vehicles were sanitized multiple times each day. Staff quarantined at home if they had high temperatures, displayed symptoms, or were exposed to other people with the virus. Quarantined employees were cleared by City Medical before returning to work. This was a very stressful time as employees were fearful of being exposed to the virus. Over time, anxiety levels tapered down as employees gained more confidence in the safety protocols. The pandemic will continue to impact operations and production hours the remainder of 2021 and potentially much of 2022. For the foreseeable future, social distancing, virtual meetings, disinfecting and mask wearing will be the new norm.

EMD authored the Interdepartmental Customer Protocol (ICP) which was approved by the Mayor's Office on June 24, 2015. The ICP is a working document that reflects priorities of the EMD and City departments. The ICP reflects values that support superior customer service and quantifiable performance standards. The purpose of the ICP is to hold EMD accountable for the effectiveness, efficiency and competitiveness of its service. During FY22, the EMD will collaborate with departments to update the ICP.

Tools to improve customer service include EMD's Internet-based Service Board, Automotive Life End Replacement Tool (ALERT), Quick Response (QR) Codes, and the EMD Website. The on-line Service Board allows customers to obtain "Real-Time" information about the status of their vehicle repairs. Customers access the Service Board at https://www.cityoftulsa.org/city-employees/resources/emd-status-board/. The Service Board identifies completed work, pending work, and the status of work being performed. The Automotive Life End Replacement Tool (ALERT) has been updated to help customers determine which vehicles to replace. Signs with Quick Response (QR) Codes are posted at each shop for customers to provide input about EMD services via a smart phone. The EMD website communicates our initiatives, best practices and accomplishments (www.cityoftulsa.org/EMD).

For FY22, the EMD will place a greater emphasis on virtual training. Technicians are required to obtain four hours training per month using the Ford Standardized Training and Resource System (STARS) or the International On-Command Navistar Learning Management System. We plan to engage in succession planning and cross-training to identify and train internal employees to fill key positions. The EMD will continue to be on the leading edge of industry standards and strive to be a benchmark operation. We will endeavor to improve our tracking and reporting of internal benchmarks. These benchmarks will include measurement of comeback rates, staffing levels, PM compliance rates, scheduled repair rates, average repair turnaround times, and vehicle utilization metrics. Please contact EMD staff for questions and concerns about the fleet. Appendix 2 (pg. 34) provides a listing of EMD contacts with their telephone numbers and email addresses.

Other initiatives that will be considered during FY22 include:

1) Pursue vehicle leases between the Water and Sewer Department and General Fund Departments to reduce capital costs and narrow replacement timeframes.
2) Put in place a certification and progression program for all technicians and body shop personnel.
3) Pursue grant funding to replace gasoline fueled vehicles with electric vehicles.
4) Improve the accuracy of fleet data in EMD's M5 Fleet Management System. M5 data cleanup and improvements will include standardizing descriptions, makes, and models; creating shift codes for all equipment; populating class codes and operational codes for all vehicles and equipment; implementing a new vehicle in-service sheet with drop down menus; entering FEMA codes for vehicles/equipment; updating maintenance class codes; and, upgrading the Oracle Server so we can merge to the latest M5 version.
5) Create and utilize M5 dashboards to improve data transparency and decision making.
6) Adjust job descriptions for all EMD employees so 100% of staff can obtain pay increases for obtaining and maintaining professional certifications.
7) Collaborate with the Water and Sewer Department to determine the feasibility of replacing EMD's current fleet software system (M5 AssetWorks) with Lucity. Lucity is a work order system used by other City departments.
8) Participate in planning to move Westyard operations to 145th and Pine and a new heavy shop at Eastyard.
9) Pursue cooperative procurement to buy goods and services at the lowest cost.
10) Install GPS devices on fleet units to improve collection of odometer readings, reduce idling and engine speeds, help track units, and optimize routes. The Water and Sewer Department installed GPS devices in approximately 300 vehicles. We expect this program to be expanded citywide.
11) Shop equipment and diagnostic tools – improve issuance, tracking, and inventory control.
12) Automate parts issuance and parts availability tracking. Explore the feasibility of converting all storerooms to bar code technology.
13) Create a mobile APP so departments can use their mobile devices to access EMD's on-line service board and obtain pertinent fleet information.
14) Consider purchasing renewable diesel (a cleaner burning fuel) for the City's heavy truck fleet.
15) Complete Government Fleet Management Alliance (GFMA) requirements to recertify EMD as a Certified Fleet Management Operation (CFMO). Recertification is required every 3 years.
16) Develop Standard Operating Guidelines (SOG's) for critical EMD processes.
17) Major infrastructure repairs and improvements are being studied for all facilities. Repairs include concrete repairs, painting of exterior siding, painting of fuel facilities and above ground fuel tanks, LED lighting upgrades, break room improvements, car wash replacements, crane replacement, insulation replacement, and other structural repairs.

APPEND//IX 1: TABLES

Table 1 – EMD Positions, Vacancies, and Major Tasks

Positions	Number of Positions	Average Vacancies Per Month	FY21 Major Tasks
Mechanic and Automotive Servicer	48	6.58	Worked 67,543 hours to maintain and repair the City's fleet equipment
Autobody Repairer	6	0	Worked 8,527 hours to modify equipment and repair vehicles damaged in collisions
Fuel & Wash Facility Personnel	4	0	Procured, Stored, and Dispensed 2.1 million gallons of fuel; maintained 7 fuel facilities and 6 car and truck wash facilities
Parts Personnel	8	0.25	Procured and issued 140,986 fleet parts from 4 storerooms
Management and Administrative Personnel	17	0.92	Directed department and division activities; and, provided accounting, payroll, administrative, and fleet management support
TOTALS	**83**	**7.75**	

Table 2 – Number of Vehicle Repairs (by Class and Shop)

Class	Police Garage	Fire Garage	Fire Garage Service Truck	Body Shop	West 23rd Street Heavy Garage	56th & Garnett Heavy Garage	Total # of Repairs
Automobile	1,636	1	0	149	50	34	1,870
Marked Unit	6,867	0	0	824	0	0	7,691
Light Truck	2,227	148	35	313	1497	689	4,909
Medium Truck	117	86	51	28	1,288	673	2,243
Heavy Truck	0	106	23	29	5,207	3,039	8,404
Fire Truck	0	1,478	2,426	60	13	0	3,977
SUV	1971	16	0	314	21	15	2,337
Van	263	37	2	50	236	145	733
Motorcycle	600	0	0	1	0	0	601
Number of Vehicle Repairs	**13,681**	**1,872**	**2,537**	**1,768**	**8,312**	**4,595**	**32,765**

Table 3 – Number of Equipment Repairs (by Class and Shop)

Class	Police Garage	Fire Garage	Fire Garage Service Truck	Body Shop	West 23rd Street Heavy Garage	56th & Garnett Heavy Garage	Total # of Repairs
Generator	6	0	0	0	2	7	15
Heavy Equip	0	18	9	0	1,061	929	2017
Trailer	73	25	8	7	701	314	1128
Pump	0	0	0	0	19	61	80
Mower	0	0	0	0	24	44	68
Tractor	0	1	0	0	48	63	112
Compressor	0	0	0	0	81	42	123
Miscellaneous	104	59	29	43	43	433	711
Number of Equipment Repairs	**183**	**103**	**46**	**50**	**1,979**	**1,893**	**4,254**

Table 4 – FY21 Department Billings

Department / Agency	Labor Billing	Parts Billing	Outside Repairs Billing	Fuel Billing	Car Wash Billing	Motor Pool Billing	Credits	Total Billing
Convention Center	$0	$0	$96	$5,986	$240	$0	$0	$6,322
Engineering	$60,240	$41,635	$4,356	$56,728	$3,432	$0	$0	$166,391
Finance	$20,558	$7,202	$10,501	$2,889	$600	$1,960	$0	$43,710
Fire	$1,204,234	$955,594	$168,129	$351,434	$7,548	$0	-$1,147	$2,685,792
Human Resources	$3,865	$2,705	$273	$1,904	$180	$30	$0	$8,957
Information Technology	$15,734	$9,985	$12,701	$9,004	$648	$120	$0	$48,192
Agencies	$140	$136	$31	$69,830	$552	$0	$0	$70,689
Parks	$143,143	$102,057	$60,276	$73,136	$3,756	$0	$0	$382,368
Development Services	$19,674	$12,853	$10,208	$22,361	$1,056	$0	-$2,072	$64,080
Police	$1,034,365	$946,639	$176,783	$1,537,181	$43,224	$0	-$23,604	$3,714,588
Streets & Stormwater	$1,806,494	$1,391,584	$674,581	$659,223	$14,796	$60	-$5,960	$4,540,778
Water & Sewer	$1,359,086	$1,036,584	$476,592	$823,440	$21,444	$2,720	-$3,736	$3,716,130
WIN	$50,760	$30,670	$6,656	$53,899	$1,548	$0	-$2,672	$140,861
Asset Mgmt.	$99,675	$75,622	$14,298	$87,041	$2,880	$0	$0	$279,516
Small Departments	$817	$473	$247	$206	$96	$180	$0	$2,019
TOTALS	**$5,818,785**	**$4,613,739**	**$1,615,728**	**$3,754,262**	**$102,000**	**$5,070**	**-$39,191**	**$15,870,393**

Table 5 – Rate Comparison

FY	EMD Rate	Vendor Light Rate	Vender Heavy Rate
2013	$51	$92	$92
2014	$51	$105	$103
2015	$51	$110	$107
2016	$55	$113	$114
2017	$55	$117	$118
2018	$55	$122	$124
2019	$62	$110-$135	$85-$157
2020	$64 – Light $78 - Heavy	$125-$142	$115-$168
2021	$64 – Light $85 - Heavy	$120-$159	$115-$176

Table 6 – FY21 Contract Repairs

#	Contract Repairs	$-Amount of Outside Repairs
1	Light Vehicle Repairs	$286,000
2	Fire Truck Repairs	$83,000
3	Hydraulic Systems Repairs	$49,000
4	Heavy Truck Repairs	$383,000
5	Off-Road Equip. Repairs	$342,000
6	Automotive Glass Repairs	$50,000
7	Lift Inspections, Licensing Fees, Other	$160,000
8	**Totals**	**$1,353,000**

Table 7 – Three Levels of PMs

PM-A (Performed by Vendor)	PM-B (Performed by EMD)	PM-C (Performed by EMD)
✓ Change Oil and Filter ✓ Lube Chassis ✓ Ensure Proper Tire Pressure ✓ Check/Fill Transmission Fluid ✓ Check/Fill Differential Fluid ✓ Check/Fill Windshield Washer Fluid ✓ Check/Fill Power Steering Fluid ✓ Check/Fill Antifreeze/Coolant ✓ Check/Fill Battery ✓ Inspect Belts and Hoses ✓ Check Air Filter ✓ Vacuum Interior (Outside Vendor Only) ✓ Wash Exterior Windows (Outside Vendor Only)	✓ Change Oil and Filter ✓ Lube Chassis ✓ Ensure Proper Tire Pressure ✓ Check/Fill Transmission Fluid ✓ Check/Fill Differential Fluid ✓ Check/Fill Windshield Washer Fluid ✓ Check/Fill Power Steering Fluid ✓ Check/Fill Antifreeze/Coolant ✓ Check/Fill Battery ✓ Inspect Belts and Hoses ✓ Replace Cabin Air Filter ✓ Check/Replace Air Filter Replace Fuel Filter, if applicable ✓ Inspect Brakes & Pads ✓ Inspect and Lube Control Arms, Steering Linkages, Ball/U Joints, and Driveshaft's	✓ Change Oil and Filter ✓ Lube Chassis ✓ Ensure Proper Tire Pressure ✓ Check/Fill Transmission Fluid ✓ Check/Fill Differential Fluid ✓ Check/Fill Windshield Washer Fluid ✓ Check/Fill Power Steering Fluid ✓ Check/Fill Antifreeze/Coolant ✓ Check/Fill Battery ✓ Inspect Belts and Hoses ✓ Replace Cabin Air Filter ✓ Check/Replace Air Filter ✓ Replace Fuel Filter, if applicable ✓ Inspect Brakes & Pads Inspect and Lube Control Arms, Steering Linkages, Ball/U Joints, and Driveshaft's ✓ Inspect and Rotate Tires Flush Automatic Transmission Fluid ✓ Replace Wheel Bearing Grease, and grease seals ✓ Replace Spark Plugs

Table 8 – Four-Year Comparison of Fuel Costs ($'s)

#	Department	FY18	FY19	FY20	FY21	% Increase or Decrease
1	Police	$1,664,138	$1,847,836	$1,539,014	$1,537,181	-0.1%
2	Fire	$381,860	$421,707	$358,958	$351,434	-2.1%
3	Enterprise Departments (Fund 100)	$252,137	$313,733	$231,872	$242,067	+4.4%
4	Enterprise Departments (Fund 151)	0	0	$13,145	$17,804	+35.4%
5	Enterprise Departments (Fund 560)	$318,937	$334,316	$272,359	$290,105	+6.5%
6	Enterprise Departments (Fund 730)	$136,633	$155,845	$126,077	$123,335	-2.2%
7	Enterprise Departments (Fund 740)	$595,664	$635,543	$500,909	$507,865	+1.4%
8	Enterprise Departments (Fund 750)	$428,337	$460,454	$380,621	$352,176	-7.5%
9	All Other Departments	$384,990	$433,911	$383,037	$362,032	-5.5%
10	**TOTALS**	**$4,162,696**	**$4,603,345**	**$3,805,992**	**$3,783,999**	**-0.6%**

Table 9 – Four-Year Comparison of Fuel Consumption (gallons)

#	Department	FY18	FY19	FY20	FY21	% Increase or Decrease
1	Police	894,908	951,143	955,051	903,727	-5.4%
2	Fire	186,152	190,686	195,507	192,033	-1.8%
3	Enterprise Departments (Fund 100)	124,675	144,773	128,908	132,264	+2.6%
4	Enterprise Departments (Fund 151)	0	0	7,699	9,755	+26.7%
5	Enterprise Departments (Fund 560)	153,939	148,136	150,139	156,821	+4.5%
6	Enterprise Departments (Fund 730)	72,404	79,913	75,781	73,453	-3.1%
7	Enterprise Departments (Fund 740)	292,249	289,786	280,048	280,853	+0.3%
8	Enterprise Departments (Fund 750)	210,952	211,177	212,640	195,307	-8.2%
9	All Other Departments	202,421	215,845	228,177	209,261	-8.3%
10	**TOTALS**	**2,137,700**	**2,231,459**	**2,233,950**	**2,153,474**	**-3.6%**

Table 10 – Strategies to Reduce Fuel Consumption and Costs

#	Strategy	Description
1	Slow Down!	Speeding, rapid acceleration, and rapid braking all waste gas and cut down mileage potential by as much as 33 percent at highway speeds, according to the U.S. Department of Energy (DOE). End sudden, jack-rabbit starts, opting instead for slow acceleration. Keep in mind that speeding wastes gas and money. Each mile per hour driven over 60 mph is like paying an extra 10 cents per gallon according to DOE.
2	Don't Idle	When your car is idling in traffic or warming up, it gets 0 miles per gallon. Even sitting still for 60 seconds uses more gas than shutting off the engine and restarting it.
3	Keep Tires Properly Inflated	Under-inflated tires results in vehicles using more fuel than necessary and causes tires to wear incorrectly. Over-inflated tires also wear incorrectly and can increase blowouts.
4	Lighten Up!	Check your trunk for unnecessary weight. Just carrying around an extra 100 pounds can raise your gasoline use 1%.
5	Reduce the Number of Trips	When running errands, have a plan. Map out your stops and use a logical route. Being organized can save fuel costs not to mention the mileage on your car's odometer.
6	Use AFV's & Efficient Vehicles	When possible, use Alternative Fueled Vehicles (AFVs) & vehicles that achieve the greatest MPGs. CNG fuel is typically $2 per gallon cheaper than traditional fuels.
7	Right Typing	Reduce the size and weight of your current vehicle, by specifying a smaller, lighter vehicle, for improved MPGs and reduced operating costs.
8	Route Planning	Employ route planning as a way of limiting the daily mileage of fleet vehicles while reducing total vehicles on the road.

Table 11 – FY20 Fleet Count for each Department

#	Fleet Type	Police	Fire	Enterprise Depts	Parks	WIN	Dev. Services	AMD	All Other Depts	TOTALS
1	Automobile	192	20	25	1	9	1	24	11	283
2	Light Truck	66	26	314	51	33	12	38	19	559
3	Medium Truck	3	18	140	17	0	0	13	2	193
4	Heavy Truck	5	14	332	14	0	0	11	3	379
5	Motorcycle	24	0	0	0	0	0	0	0	24
6	Van	18	10	21	6	1	0	24	10	90
7	SUV	86	16	77	1	6	18	19	11	234
8	Fire Truck	0	60	0	0	0	0	0	0	60
9	Marked Unit	845	0	0	0	0	0	0	0	845
10	**TOTALS**	**1,239**	**164**	**909**	**90**	**49**	**31**	**129**	**56**	**2,667**

Table 12 – FY21 Fleet Count for each Department

#	Fleet Type	Police	Fire	Enterprise Depts	Parks	WIN	Dev. Services	AMD	All Other Depts	TOTALS
1	Automobile	186	17	24	1	8	2	26	11	275
2	Light Truck	71	27	327	52	40	11	41	19	588
3	Medium Truck	3	18	146	18	0	0	14	2	201
4	Heavy Truck	5	14	340	14	0	0	11	3	387
5	Motorcycle	27	0	0	0	0	0	0	0	27
6	Van	19	11	23	5	1	0	26	10	95
7	SUV	99	18	88	2	7	19	20	13	266
8	Fire Truck	0	64	0	0	0	0	0	0	64
9	Marked Unit	994	0	0	0	0	0	1	0	995
10	**TOTALS**	**1,404**	**169**	**948**	**92**	**56**	**32**	**139**	**58**	**2,898**

Table 13 – Fleet Count by Vehicle Type (FY21 versus FY20)

#	Fleet Type	FY20	FY21	Difference	% Increase or Decrease
1	Automobile	283	275	-8	-2.8%
2	Light Truck	559	588	+29	+5.2%
3	Medium Truck	193	201	+8	+4.1%
4	Heavy Truck	379	387	+8	+2.1%
5	Motorcycle	24	27	+3	+12.5%
6	Van	90	95	+5	+5.5%
7	SUV	234	266	+32	+13.7%
8	Fire Truck	60	64	+4	+6.7%
9	Marked Unit	845	995	+150	+17.8%
10	**TOTALS**	**2,667**	**2,898**	**+231**	**+8.7%**

Table 14 – Fleet Count by Department (FY21 versus FY20)

#	Department	FY20	FY21	Difference	% Increase or Decrease
1	Police	1,239	1,404	+165	+13.3%
2	Enterprise Departments	909	948	+39	+4.3%
3	Fire	164	169	+5	+3.0%
4	Parks	90	92	+2	+2.2%
5	WIN	49	56	+7	+14.3%
6	Development Services	31	32	+1	+3.2%
7	Asset Management	129	139	+10	+7.8%
8	All Other Departments	56	58	+2	+3.6%
9	**TOTALS**	**2,667**	**2,898**	**+231**	**+8.7%**

Table 15 – Miles Driven by City's On-Road Fleet

FY	Miles Driven	Quantity Increase or Decrease Compared to Previous Fiscal Year	Percent Increase or Decrease Compared to Previous Fiscal Year
FY17	20,567,425	+17,896	+0.1%
FY18	20,103,285	-464,140	-2.3%
FY19	21,061,380	+958,095	+4.8%
FY20	20,725,619	-335,761	-1.6%
FY21	20,600,773	-124,846	-0.6%

Table 16 – Miles Driven by Department (FY21 versus FY20)

#	Department	FY20 Miles Driven	FY21 Miles Driven	Difference	% Increase or Decrease
1	Police	11,640,862	11,791,992	+151,130	+1.3%
2	Enterprise Departments	5,915,596	5,756,698	-158,898	-2.7%
3	Fire	1,271,542	1,041,341	-230,201	-18.1%
4	Parks	412,956	387,726	-25,230	-6.1%
5	WIN	399,971	373,547	-26,424	-6.6%
6	Development Services	238,350	233,172	-5,178	-2.2%
7	Asset Management	698,615	817,422	+118,807	+17.0%
8	All Other Departments	147,727	198,875	+51,148	+34.6%
9	**TOTALS**	**20,725,619**	**20,600,773**	**-124,846**	**-0.6%**

Table 17 – Ratio of Vehicles to Employees

#	Dept.	FY20 Fleet Size	FY21 Fleet Size	FY20 # of Positions	FY21 # of Positions	Diff # of Positions FY21 -v- FY20	FY20 Ratio of Vehicles to Positions	FY21 Ratio of Vehicles to Positions	Diff. Ratio FY21 -v- FY20	% Increase or Decrease
1	Police	1,239	1,404	1,127	1,161	+34	1.009	1.209	+0.2	+19.8%
2	Enterprise Departments	909	948	1,184	1,186	+2	.768	.799	+.031	+4.0%
3	Fire	164	169	760	760	0	.218	.222	+.004	+1.8%
4	Parks	90	92	168	168	0	.548	.548	N/A	N/A
5	WIN	49	56	80	82	+2	.675	.683	+.008	+1.2%
6	Dev. Services	31	32	69	69	0	.449	.464	+.015	+3.3%
7	AMD	129	139	130	132	+2	1.046	1.053	+.007	+0.7%
8	All Other Departments	56	58	504	508	+4	.113	.114	+.001	+0.9%
9	**TOTALS**	**2,667**	**2,898**	**4,022**	**4,066**	**+44**	**.663**	**.713**	**+.05**	**+7.5%**

Table 18 – FY21 Fleet Units Driven Less than 5,000/2,500/1,000 Miles

#	Department	Units Driven Less than 1,000 Miles	Units Driven Less than 2,500 Miles	Units Driven Less than 5,000 Miles
1	Police	274	377	514
2	Enterprise Departments	156	288	485
3	Fire	37	54	70
4	Parks	25	34	50
5	WIN	16	19	24
6	Development Services	10	14	16
7	AMD	35	55	82
8	All Other Departments	27	44	58
9	**TOTALS**	**580**	**885**	**1,299**
10				
11	**Percent of fleet driven less than 1,000/2,500/5,000**	**20.0%**	**30.5%**	**44.8%**

Table 19 – FY20 Fleet Units Driven Less than 5,000/2,500/1,000 Miles

#	Department	Units Driven Less than 1,000 Miles	Units Driven Less than 2,500 Miles	Units Driven Less than 5,000 Miles
1	Police	164	253	366
2	Enterprise Departments	118	249	447
3	Fire	31	41	57
4	Parks	20	29	49
5	WIN	14	18	22
6	Development Services	6	6	9
7	AMD	42	57	81
8	All Other Departments	24	35	48
9	**TOTALS**	**419**	**688**	**1,079**
10				
11	**Percent of fleet driven less than 1,000/2,500/5,000**	**15.7%**	**25.8%**	**40.5%**

Table 20 – FY21 Year-End Average Fleet Age in Years

#	Fleet Category	Average Age	Life Expectancy	Examples of Vehicles in this Class
1	Automobile	11.5 yrs	7 yrs	Chevrolet Cavalier, Chevrolet Impala, Dodge Intrepid, Ford Contour, Ford Crown Victoria, Nissan Leaf
2	Class 1 Light Truck	10.7 yrs	8 yrs	Dodge Dakota, Toyota Tacoma, Ford F150, Ford Ranger
3	Class 2 Light Truck	8.6 yrs	8 yrs	Chevrolet Silverado, Dodge Ram 2500, Ford F250, Toyota Tundra
4	Class 3 Medium Truck	11.0 yrs	9 yrs	Ford F350, Freightliner Sprinter, Mitsubishi 639
5	Class 4 Medium Truck	17.5 yrs	9 yrs	Ford F450
6	Class 5 Medium Truck	6.6 yrs	9 yrs	Ford F550, Freightliner M Line Walk-In Van, International 4700
7	Class 6 Light Heavy Truck	18.9 yrs	10 yrs	Chevrolet C6000, Ford CF7000, Freightliner F160, International 4300
8	Class 7 Heavy Truck	12.6 yrs	10 yrs	Ford F750, International 4900, Isuzu FTR-FVR, Kenworth T370, Nissan UD3300, Sterling Acterra
9	Class 8 Heavy Truck	10.2 yrs	12 yrs	Crane Carrier, Chevrolet ME6500, Freightliner 114SD, International 2554 and 7500, Mack 700, Peterbilt 337, Sterling 8500
10	Fire Apparatus (Engine)	13.4 yrs	10 yrs	Fire Pumper Truck
11	Fire Apparatus (Ladder)	12.0 yrs	15 yrs	Fire Ladder Truck
12	Fire Apparatus (Rescue)	19.5 yrs	10 yrs	Fire Rescue Truck
13	Marked Police Car	7.8 yrs	6 yrs	Chevrolet Impala, Dodge Charger, Ford Crown Victoria, Ford Taurus
14	Marked Police SUV	2.9 yrs	6 yrs	Ford Explorer
15	Light SUV	7.8 yrs	8 yrs	Chevrolet Blazer, Chevrolet Suburban C1500, Chevrolet Tahoe, Ford Bronco, Ford Escape
16	Medium SUV	8.4 yrs	8 yrs	Chevrolet Suburban C2500, Chevrolet Traverse
17	Light Van	12.6 yrs	8 yrs	Chevrolet Astro, Dodge Caravan, Ford Aerostar, Ford Club Wagon, Ford E150, Ford Freestar, Ford Windstar
18	Medium Van	13.9 yrs	8 yrs	Ford E250 and E350
19	Heavy Van	8.5 yrs	9 yrs	Ford E450
20	Motorcycle	4.7 yrs	2 yrs	Harley Davidson

Table 21 – FY21 Vehicle Downtime by Class and Shop (expressed in days)

Class	Police Garage	Fire Garage	West 23rd Street Heavy Garage	56th & Garnett Heavy Garage
Automobile	4.48	1.24	8.39	10.12
Marked Unit	4.19	0	0	0
Light Truck	4.58	4.58	7.04	4.93
Medium Truck	2.51	4.51	7.51	4.40
Heavy Truck	2.18	7.01	7.13	5.10
Fire Truck	0	5.13	0	0
SUV	5.00	2.41	2.61	0.79
Van	9.50	5.04	8.17	5.36
Motorcycle	2.60	0	0	0
Avg. Shop Downtime	**4.37**	**5.15**	**7.17**	**4.98**

Table 22 – FY21 Equipment Downtime by Class and Shop (expressed in days)

Class	Police Garage	Fire Garage	West 23rd Street Heavy Garage	56th & Garnett Heavy Garage
Generator	17.00	0	4.37	28.21
Heavy Equip	1.00	10.43	11.46	6.77
Trailer	9.36	6.02	7.83	7.84
Pump	0	0	3.78	7.30
Mower	0	0	15.09	6.74
Tractor	0	0.41	18.22	18.28
Compressor	0	0	5.10	7.89
Miscellaneous	7.19	6.81	6.80	15.12
Avg. Shop Downtime	**9.23**	**7.01**	**9.47**	**8.78**

Table 23 – ALERT Results

Vehicle Type	Excellent	Good	Fair	Replace	Total
Automobile	78	21	60	116	275
Marked Unit	493	89	111	302	995
Motorcycle	10	3	6	8	27
SUV	112	35	60	59	266
Van	33	3	16	43	95
Light Truck	214	68	81	225	588
Medium Truck	80	15	28	78	201
Heavy Truck	113	31	81	162	387
Fire Truck	21	2	0	41	64
Totals	**1,154**	**267**	**443**	**1,034**	**2,898**

Table 24 – AFV Fleet (Department Rollup)

#	Dept	Fleet Count	# of AVFs	% of AFVs in Fleet
1	Police	1,404	23	1.6%
2	Fire	169	31	18.3%
3	Finance	13	4	30.8%
4	Human Resources	6	3	50%
5	Parks	92	0	0%
6	Asset Mgmt	139	20	14.4%
7	Dev. Services	32	15	46.9%
8	Enterprise Depts	948	74	7.8%
9	WIN	56	0	0%
10	All Other Depts	39	1	2.6%
11	**TOTALS**	**2,898**	**171**	**5.9%**

Table 25 – AFV Fleet (by Vehicle Type)

AFV Description	Number of AFVs
CNG - Ford Ranger Pickup	10
CNG - Crane Carrier Trash Truck	6
CNG - Ford F150, F250 & F350, F550 Bi-Fuel Pickup	24
CNG – Ford E250 Van Bi-Fuel, Ford Transit Van Bi-Fuel	3
CNG - Chevrolet Impala Bi-Fuel	1
CNG - Honda Civic GX	17
Hybrid - Honda Civic	8
Hybrid - Toyota Prius, Ford Fusion	5
Hybrid - Ford Escape, Explorer SUV	66
Hybrid - Chevrolet Silverado Pickup	29
Electric – Nissan Leaf	2
TOTAL	**171**

Table 26 – AFV Fleet (Department Breakdown of CNG and Hybrid Units)

Department	Quantity	Vehicle Type
Communications	1	CNG – Honda Civic GX
Engineering	20	Hybrid – Ford Escape SUV
Engineering	1	Hybrid – Chevrolet Silverado Pickup
Engineering	1	Hyrid – Ford Fusion
Engineering	3	CNG – Honda Civic GX
Asset Management	1	CNG – Chevrolet Impala Bi-Fuel
Asset Management	7	CNG – Honda Civic GX
Asset Management	1	Hybrid – Toyota Prius
Asset Management	2	Hybrid – Ford Escape SUV
Asset Management	3	CNG – Ford F150, F250, F350 Bi-Fuel Pickup
Asset Management	3	Hybrid – Chevrolet Silverado Pickup
Asset Management	2	Electric – Nissan Leaf
Asset Management	1	CNG – Ford Ranger
Finance	1	CNG – Honda Civic GX
Finance	3	CNG – Ford Ranger
Fire	5	Hybrid – Ford Escape SUV
Fire	8	Hybrid – Honda Civic
Fire	3	Hybrid – Toyota Prius
Fire	9	Hybrid – Chevrolet Silverado Pickup
Fire	3	CNG – Ford F150, F250, F350 Bi-Fuel Truck
Fire	3	CNG – Ford Transit Van Bi-Fuel
Human Resources	3	Hybrid – Ford Escape SUV
Development Services Department	5	CNG – Ford Ranger Pickup
Development Services Department	10	Hybrid – Ford Escape SUV
Police	3	CNG – Honda Civic GX
Police	13	Hybrid – Ford Escape SUV
Police	6	Hybrid – Chevrolet Silverado Pickup
Police	1	Hybrid – Ford Explorer SUV
Streets and Stormwater	3	Hybrid – Ford Escape SUV
Streets and Stormwater	5	Hybrid – Chevrolet Silverado Pickup
Streets and Stormwater	6	CNG – Crane Carrier Trash Truck
Streets and Stormwater	11	CNG – Ford F150, F250, F350 Bi-Fuel Truck
Streets and Stormwater	1	CNG – Ford Ranger Pickup
Streets and Stormwater	1	CNG – Ford F550
Water and Sewer	2	CNG – Honda Civic GX
Water and Sewer	9	Hybrid – Ford Escape SUV
Water and Sewer	5	Hybrid – Chevrolet Silverado Pickup
Water and Sewer	6	CNG – Ford F150 & F250 Bi-Fuel Pickup
TOTALS	**171**	

Table 27 – Key Performance Indicators

#	KPI OBJECTIVE	GOAL	FY 19 achieved	FY 20 achieved	FY 21 achieved
1	Meet or Exceed Industry Standards of 93% for Designated Fleet Availability	Be responsive to and accountable for meeting our customers' fleet mission requirements	92.7%	93.0%	93.2%
2	Maintain a 15% ratio of CNG Certifications to EMD Technicians	Provide highly trained and certified personnel to deliver the City's consolidated fleet services in a safe work environment	16%	16%	16%
3	75% of EMD Technicians will obtain at least one ASE, EVT, or Ford certification	Same as above	75%	78%	77%
4	Meet or Exceed Industry Standards of 70% for Maintenance Direct Labor	Provide quality fleet services efficiently and economically	71.1%	71.0%	72.8%
5	Meet or Exceed Industry Standards of 70% for Body Shop Direct Labor	Provide quality fleet services efficiently and economically	75.2%	73.3%	70.5%
6	Meet or Exceed Industry Standards of +/- 3% for Parts Variance	Provide quality fleet services efficiently and economically	-1.13%	-0.39%	-1.05%
7	Meet or Exceed Industry Standards of 4 Parts Annual Inventory Turns	Provide quality fleet services efficiently and economically	4.18	5.02	4.78
8	85% of the time, fleet parts are issued to the Requestor within the first 15 minutes of the request	Provide quality fleet services efficiently and economically	87%	87%	89%
9	Meet or Exceed Industry Standards of +/- 1% for Fuel Variance	Provide quality fleet services efficiently and economically	0.31%	0.30%	-0.17%
10	Meet or Exceed Industry Standards of 98% for Designated Fuel Availability	Provide quality fleet services efficiently and economically	99.9%	99.9%	99.9%
11	Meet or Exceed Industry Standards of 95% for Designated Car/Truck Wash Availability	Provide quality fleet services efficiently and economically	93.5%	89.3%	87.7%

APPENDIX 2: CONTACT INFORMATION

#	Position Title	Duties	Position Name	Location	Phone Number	Cell Number	Email Address
1	Director	Department Director, FMSC Chair	Mark Hogan	490 W. 23rd	591-4070	527-0170	mhogan@cityoftulsa.org
2	Maintenance Manager	Manager of Body Shop, Maintenance, Fuel, Parts	Mike Wallace	490 W. 23rd	596-1235	906-6563	mwallace@cityoftulsa.org
3	Administrative Manager	Admin, Budget, Rate Model, Data Analysis, Grants	Brian Franklin	490 W. 23rd	596-9810	697-6188	bfranklin@cityoftulsa.org
4	Mechanical Shop Supervisor	Supervisor of Body Shop & Police Garage	Kevin Jones	1720 Newblock Park Dr.	596-9840	695-6324	kjones@cityoftulsa.org
5	Mechanical Shop Supervisor	Supervisor of Fire Garage	Danny Taylor	1790 Newblock Park Dr.	596-9817	636-9256	dannytaylor@cityoftulsa.org
6	Mechanical Shop Supervisor	Supervisor of Westyard Garages	Jeff Ostler	480 W. 23rd	596-9842	521-5149	jostler@cityoftulsa.org
7	Mechanical Shop Supervisor	Supervisor of Eastyard Garages	Gary Burr	5675 S. Garnett Rd.	596-8131	697-6176	gburr@cityoftulsa.org
8	Accountant	Accounting	Kevin Rice	490 W. 23rd	596-9839		krice@cityoftulsa.org
9	Maintenance Operations Analyst	Safety and PMs	Diane Whalen	490 W. 23rd	596-1244	322-2116	dwhalen@cityofulsa.org
10	Administrative Supervisor	M5 Support, Vehicle In-Service, Fuel Keys, FMSC Administrator	John Reel	490 W. 23rd	596-9815	850-8470	jreel@cityoftulsa.org
11	Maintenance Operations Analyst	Accident Collections	Sherron Wilson	490 W. 23rd	596-2853	630-5278	srwilson@cityoftulsa.org
12	Support Operations Supervisor	Supervisor of Fuel & Car Wash Operations	Robert Fazendine	480 W. 23rd	596-1236	527-0002	rfazendine@cityoftulsa.org
13	Inventory Control Supervisor	Supervisor of Parts Operations	Jesse Robbins	490 W. 23rd	596-9825	697-6177	jrobbins@cityoftulsa.org
14	Warranty and Training Admin	Warranties, Recalls, Training	Tim Keiffer	1720 Newblock Park Dr.	596-9820	850-8470	tkeiffer@cityoftulsa.org