

INTERNAL AUDIT REPORT

CITY OF MANCHESTER

NEW HAMPSHIRE



Update of July 1998 DMG-Maximus Fleet Management Report

Prepared by

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SCOPE

On July 2, 1998 DMG-Maximus submitted a report on fleet management and operations in the City of Manchester NH. The objectives of the report were to evaluate current fleet operations, evaluate alternatives to the current organizations, which were providing fleet services, and to review and recommend standards for fleet services to be used to evaluate the service and cost performance of the City's fleet.

The Maximus report included all departments and funds but concluded that Airport and Manchester Transit Authority (MTA) should be left on their own. Also during 1998 the School District was considered a department of the City and as such their vehicles were included in the analysis. In this update, the Airport, School and MTA have been left out and the prior audit numbers have been adjusted where possible. Testing was limited to that which was necessary to compile the numbers for the report.

BACKGROUND

The City (excluding Airport, School and MTA) owns and operates 469 vehicles and pieces of heavy equipment, leases an additional 4 police vehicles and operates 8 police vehicles on loan. This total does not include numerous pieces of motorized equipment and trailers that are under the \$5,000 reporting threshold. The City's fleet is decentralized. Ninety-two percent of the fleet belongs to and is maintained by the following departments with maintenance facilities:

	February 1998	February 2004
Fire Department	37	45
Highway Department (Also Maintains EPD & Traffic)		
Highway	137	133
Environmental Protection Division	11	16
Traffic Department	10	11
Parks, Recreation and Cemetery Department	97	101
Police Department (Includes 4 Leases & 8 Loaners in 2004)	55	63
Water Works	64	61
Sub-Total for Maintenance Facility Fleet	411	430

The balance of the fleet is assigned to the departments listed on the following page. Private sector firms had maintained these vehicles until July 1, 1996. After that date most began having their maintenance coordinated through the Department of Public Building Services (PBS) and is maintained by the Manchester Transit Authority. The Police shop maintains the Mayor's vehicle as well as the School and Nutrition Services vehicles. PBS used to be the agency in-charge of the Motorized Equipment Replacement Account. In 2004 these duties were taken over by the Highway Department.

	February 1998	February 2004
Building Department	13	13
City Clerk	2	2
Health Department	7	8
Information Systems Department	1	1
Mayor's Office	1	1
PBS (includes four pool vehicles)	15	13
Human Resources	0	1
Total All Vehicles	450	469

Since the prior report, the City shows a gain of nineteen vehicles.

NOTE: Some of the differences between the amounts reported by DMG and current year amounts may be due to a difference between what is considered a vehicle and what is considered equipment. IA has tried to follow the methodology used by DMG wherever possible.

EXECUTIVE SUMMARY OF MAXIMUS REPORT

DMG-Maximus's overall assessment was that the City's fleet was over age, lacking in a uniform approach to policy and procedure and overly costly to maintain. Although frequently assured during their interviews that service levels were high, the age and general condition of the fleet suggested otherwise. DMG concluded that the city's cost of maintaining the fleet was high. DMG attributed this high cost to the following factors:

- Old Equipment which was more costly to maintain
- Old maintenance shops which were generally too small and poorly equipped to provide maintenance technicians with the necessary environment in which to work efficiently
- Small maintenance technician team sizes which provided limited opportunities for improved efficiencies which would be available through larger more efficient team sizes
- Inadequate maintenance technician training
- Lack of accurate accounting for maintenance technician time utilization

DMG recommended the following improvements:

1. Based on appropriate economically based life cycle criteria, develop a multi-year replacement plan, develop a strategy for the financing of the plan, and develop a strategy for the long-term internal funding of the replacement plan. Their estimate was that the City should be spending approximately \$3.4 Million on fleet renewal in the average year. At the time of the report the City had been spending \$1.8 million in the average year.
2. Build a new fleet maintenance facility that is appropriately sized and equipped to maintain most of the City's vehicles and equipment. It was estimated that such a facility (excluding the site acquisition and site preparation costs) would be between \$2.7 and \$3.2 million dollars. This would include architect, engineering cost, consulting services and most capital equipment.
3. Centralize most of the fleet and fleet maintenance operations under a new fleet management organization. The airport would be the only organization excluded from the consolidation.
4. The centralized fleet management organization would be structured as an internal service fund. It would own the entire fleet and lease the vehicles out to the respective departments. It would also provide all the maintenance requirements for the City. Using departments should be charged the full burdened rates for the services provided.
5. Provide the organization with a fleet management information system.

The current status of the report recommendations as of February 2004 is as follows:

1. The current five-year average for fleet replacement has dropped from \$1.8 to \$1.4 Million per year. The amount budgeted for FY 03 was only \$750,000. The City still has no multi-year replacement plan. In the DMG report two thirds of the fleet was over six years old and half of the fleet was ten years or older. Currently two thirds of the fleet is still over six years old. However, the amount of vehicles over ten years old has dropped from one half to one third. The average age of the fleet is approximately 8.5 years.
2. The City still has several fleet maintenance facilities of various ages and conditions. The Fire Department and Parks and Recreation Department share a relatively new garage area however, the Highway Department, which maintains the largest fleet, has an old poorly equipped garage.
3. All fleet operations are still decentralized.
4. There is no central fleet management organization.
5. There are still no standard written policies and procedures covering the maintenance and procurement of vehicles or parts and service. It is still difficult to obtain good reliable information on the condition of the fleet or the efficiency and effectiveness of fleet maintenance facilities. When preparing schedules for this report using the HTE Continuing Property Records (CPR) Module it was noted that there were 49 vehicles that had been retired but were still listed as active. There were also 48 active vehicles that were not listed in the CPR module and some were purchased as far back as 1995. We noted some vehicles that had been transferred to other departments and the transfer had not been recorded as well as three sedans with an installed cost of \$15,812 each recorded as \$158.12 each. The Highway Department is using the HTE Fleet module and work orders to track repairs and cost jobs. The Water Department also uses a software package for fleet management.

SPECIFIC RECOMMENDATIONS

DMG Recommendation 1 - Fleet Management Program Mission and Organization

Uniform policies, practices and procedures need to be established. Uniform operator/driver requirements need to be documented and a process to ensure adherence needs to be established. Maintenance processes such as preventive maintenance, pre and post trip vehicle inspections by operators, handling of work orders, documentation of repair work performed, etc., should be unified and committed to writing.

Current Status

There has been some progress on this recommendation. Uniform procedures and written documentation is still not consistent between departments but the largest fleet departments have started to develop documentation. All maintenance operations are still decentralized and performed separately by the departments with the largest fleets. The smaller departments generally have their vehicles serviced by the MTA or Highway. All departments are generally satisfied with the service they are receiving.

DMG Recommendation 2 - Vehicle retention and replacement

Perform an economic life study to determine appropriate replacement criteria for various classes of vehicles and equipment in the fleet. This study should include replacement costs, residual value, maintenance and repair costs, average annual usage, the cost of capital (discount rate), and anticipated inflation rate. Use these criteria to determine replacement needs for the fleet.

Police cruisers should be subject to the same economically derived life cycle criteria. If it no longer economical for the vehicle to be used as a police cruiser, it is doubtful that it would be economical for the City to continue to deploy them.

We recommend the City develop a fleet replacement plan that quantifies the cost of the future replacement of the fleet.

We also recommend a rationalization, on an agency by agency basis, of the true fleet requirements given an appropriate level of new replacements and the new operating structure being proposed. This is important because a shift in cost and control accountability coupled with a properly renewed fleet provides the City with the appropriate infrastructure to optimally size the fleet. Thorough documentation of all vehicle needs should be developed by the departments, concurred with by the agency in charge of the MER account, approved by the Board of Mayor and Aldermen and maintained on file.

Current Status

The status of the recommendation remains unresolved. DMG had determined that the City's fleet should turnover on average once every 8.4 years and the City should be spending about 3.4 million per year for renewal. Actual replacement for the five years preceding the report was \$1.8 million. A report produced by the Highway department shows that in the last five years average spending was \$1.4 million for the General Fund MER account only. The DMG report could not quantify the relationship between vehicle age and maintenance cost in the City due to concerns they had about usage data. The same condition still exists. The Highway Department has been using the fleet management module in the HTE system, which is capturing some of the information needed for this type of analysis. However, inconsistent use of the system has rendered any analysis of limited use.

DMG Recommendation 3 - Vehicle Utilization and Operation

Improve the integrity of the usage data being gathered.

Examine the usage of vehicles and equipment.

Establish a central equipment pool from which any City agency can obtain vehicles and equipment.

Current Status

There has been some improvement with respect to the first two points but much work still needs to be done. The third point, of having a centralized pool, is still largely unresolved. However there is some centralization in purchasing vehicles using the MER account. The agency who is responsible for the account has changed a couple of times in the last few years and this has caused some problems in the recording of purchasing and disposal of vehicles.

There are no written requirements to determine when it is appropriate to purchase, lease, rent or use personal vehicles. From a review of vehicle usage it appears that some vehicles are under-utilized and it may be more appropriate to pool vehicles, make use of short-term rentals or pay mileage for personal vehicle usage. There are also several employees that use City vehicles for commuting purposes who do not appear to have a need for a City vehicle at their constant disposal. Even though they pay taxes on the commuter use of the vehicles it is a perk that is not available to other employees in similar positions who get paid on the same pay scale.

The report cites that the version of the GASBOY fueling software in use at the time does not block incorrect entries. The version currently in use does have edits that will stop the operator if the mileage input does not match some set criteria.

DMG Recommendation 4 - Vehicle Disposition

DMG recommended that the City contract with one or two vehicle auction firms in the area to handle most sales. DMG also recommended that the City look for a vehicle disposition company that specializes in the sale of used police cruisers and compare its results through some test sales with those achieved through local vehicle auctions. The City should dispose of vehicles quickly and those proceeds of the sale should be credited back to the using department.

Current Status

With the exception of Enterprise Fund agencies being allowed to retain the proceeds of sales or auction proceeds for reinvestment in their fleet, very little has changed. Many vehicles are still used as a trade-in by departments in order to retain the proceeds of the sale. Vehicles that are auctioned go to the State auction through a local auction house. Below is a list of the last three auctions that the City of Manchester has consigned vehicles to.

ITEM	PRICE
May 18, 2002	
Manchester Transit Authority	
1987 Chevrolet Bus	\$ 750
1990 Chevrolet Bus	900
1990 Chevrolet Bus	950
1992 Ford Bus	1,200
1992 Ford Bus	1,800
Manchester Highway Department	
1991 Chevrolet Caprice	500
1986 Ford F-350 Pickup	2,250
October 19, 2002	
Manchester Fire Department	
1991 Chevrolet Caprice	400
1992 Fire Truck	3,250
Manchester Transit Authority	
1988 Chevrolet Celebrity	900
1993 Ford 30Y Bus	2,600
1989 International Bus	900
1989 International Bus	1,000
1989 International Bus	900
1989 International Bus	900
May 17, 2003	
Manchester Transit Authority	
1982 Chevrolet Pickup w/Plow	3,750

City of Manchester Fire Department	
1985 Ford E150 Cargo Van	660
Total	23,610
Less 10% Commission	2,361
Total to City	\$ 21,249

SOURCE: James R. St. Jean, Auctioneers

As noted in recommendations 2 and 3 the integrity of equipment records make it difficult to analyze disposal of vehicles. From the HTE records 70 vehicles were retired between 7/1/00 and 2/29/04. The breakdown of vehicle disposal based on HTE is:

Trade	34	48.57%
Auction	17	24.29%
Destroyed/Scrapped	5	7.14%
Sent to MTA for Disposal	4	5.71%
Can't tell from records	10	14.29%

It must also be noted that several of the vehicles that were retired in 2001 were actually disposed of in 1999. The HTE module did not contain information of the disposal of 39% of the vehicles disposed of making analysis difficult. IA was able to determine the disposition from other records of all but 10 vehicles. Of the 61% of vehicles that the method of disposal was recorded, a majority had missing information and there was no standardization of what information was included in the record. IA also has identified 42 vehicles that have been disposed of that are still recorded as active in HTE. IA identified 3 police cruisers that were destroyed in accidents but neither the purchase nor retirements were posted to HTE. Other cruisers that were purchased during 1999 through 2002 were not posted to HTE until spring of 2004.

There are few or inadequate internal controls over the retirement of assets. Controls over the disposition of vehicles do not reduce the risk that an error or irregularity could occur and be detected in a timely manner.

DMG Recommendation 5 - Fleet Maintenance

DMG recommended that the City take a new approach to fleet management by creating a City Central Fleet Organization funded by an internal service fund. It was recommended that the City hire a knowledgeable fleet director who will be given overall responsibility for most of the City fleet. Most City vehicles and equipment would receive maintenance at this facility. DMG recommended that all City vehicles and equipment, with certain exceptions, be owned by the centralized fleet organization. DMG recommended that users of fleet resources internally lease the

resources from the centralized facility as well as buy their maintenance services from them. Monthly lease rates should be established in such a manner as to ensure there will be enough funds available to replace the items when they are due for replacement. The City Central Fleet Organization should be fully funded through the services it sells. An improved fleet management information system should be implemented and appropriate fleet related services and cost measurements should be implemented. Technician labor should be tracked using one of the industry flat rate manuals for the purpose of monitoring the competitiveness of the City's shop and to assist in identifying training needs. The only exceptions to this would be MTA and Airport.

DMG found that:

- Fleet maintenance costs were high and not competitive.
- The City employed an excessive number of technicians.
- The fleet that existed at the time was old.
- The maintenance facilities were old, small and poorly equipped.
- Practices and procedures needed to be standardized, committed to in writing, and followed.
- PM programs needed tightening.
- Training and technical discipline was needed for both the fleet supervision and technicians.
- The existing structure was over staffed for an up to date fleet and lacked the economies of scale necessary to be competitive.
- Parts management was inadequate.
- Record keeping did not permit easy analysis of service, cost and labor issues. What is available is being used to track vehicle costs only.

Current Status

The age of the existing fleet has come down slightly but is still old (the percent of vehicles over ten years old has dropped from 50% to 33%). This causes unusually high maintenance costs. There has been some progress on improving the facilities however the major facility at the Highway Department has changed very little since the report. There are few written policy and procedures and still little standardization between departments. Training has improved slightly with all shops reporting at least one technician with ASE certification or other professional recognition. The Highway Department is using the HTE Inventory module for its parts inventory and is using job costing through work orders in HTE. Record keeping and analysis is still generally weak over labor and service analysis but has improved over the tracking of vehicle costs in some departments.

DMG found that the City employed an excessive number of technicians to service a fleet of its size. The excess is at least partially due to the poor condition of the fleet. DMG calculated the number of technicians needed based on industry standards of vehicle equivalencies. One vehicle equivalent is equal to the amount of effort required to keep an average fleet sedan in good repair for one year. It is normally figured that one technician can normally maintain 90 to 110 vehicle equivalents. The recommended staff size and prior and current technicians are noted in the chart on the following page.

	Vehicle Equivalents	Computed # of Needed Technicians	February 1998 Staffing	February 2004 Staffing
Fire shop	129.5	1.4	2	2
Highway Shop	541.3	6.0	15	10
Parks and Rec Shop	161.5	1.8	4	3
Police Shop	126	1.4	3.5	3.5
Water Works Shop	135.1	1.5	2.3	2.3
Other Maintained	76.5	0.9	N/A	N/A
Total	1,169.9	13.0	26.8	20.8

DMG Recommendation 6 - Fleet Funding and Financial Management

DMG recommended that the Central Fleet Organization use an internal service fund system. DMG provided three reasons for using an internal service fund system.

1. Internal service fund systems improve the consumption and provision of fleet resources by illustrating linkages between the behavior of vehicle users and the cost of the vehicles and related services they consume; encouraging fleet users to hold fleet management organizations accountable for the quality and costs of the goods and services the later provides.
2. Internal service fund systems promote equitable treatment of fleet users. Fee supported departments and programs pay the full cost of the fleet resources they consume and do not receive any subsidies from the General Fund, which often occurs when a fleet management organization resides in a General Fund agency.
3. Internal service fund systems ensure the timely replacement of capital assets. Using an internal service fund system to accumulate replacement funds allows for vehicle capital costs to be amortized over several years thereby making it easier to accommodate peaks in asset replacement spending requirements.

Using an internal service fund system to finance fleet operations means selling vehicles and related services rather than giving them away, fleet users behave much more cost effectively then they do when such resources are given to them.

Current Status

The City has not made any moves toward a fleet organization. From conversations that Internal Audit has had with various department personnel the biggest concern was that if they were leasing equipment from a fleet organization they would be included in the budget and might have to eliminate vehicles during the budget process. This concern illustrates bullet 1 above. If the true annual cost of vehicles is reflected in the budget the departments would have incentive to request only the vehicles needed and to request vehicles that are less expensive to purchase and operate. For example, there has been a trend recently to select larger sport utility vehicles (SUV) instead of less expensive sedans or station wagons. In some cases it is questionable if an SUV is necessary.

IA has also noticed that money appropriated to the Motorized Equipment account 1700C10913 (cash MER account) is used to purchase fuel, equipment and repairs as well as vehicle purchases. From an analysis of expenditures to this account from FY 2001 through February of 2004, 18.49% of expenditures out of this account were used for other than motorized vehicle purchases. By not budgeting fuel use at the agency level it encourages the purchase of less fuel efficient and more expensive vehicles. IA has noticed a similar situation with the bonded MER account where some of the expenditures were used for equipment such as tires and tools.