

REPORT ON
FLEET MANAGEMENT STUDY UPDATE
PRESENTED TO
THE TOWN OF EXETER, NH
JULY 3, 2015

This report provides an update to a study that Mercury Associates completed for the Town of Exeter on Fleet Operations in 2009. The purpose of this update is to assess the degree to which the recommendations in the original report have been implemented, and for those that have not, to consider if the recommendations still make sense in light of changes that may have occurred over the past several years.

MATRIX OF RECOMMENDATIONS

Our 2009 report provided 29 recommendations. These recommendations, along with their implementation status, are shown in the table below:

Recommendation	Status	Comment
1. <i>Consider expanding the role of Public Works beyond fleet maintenance to asset management activities such as replacement planning, development of purchase specifications, and fleet utilization monitoring.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
2. <i>Centralize all fleet maintenance activities under Public Works including maintenance and repair of fire trucks and other fire operated vehicles.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
3. <i>Add a full-time experienced mechanic</i>	Not implemented	Public Works continues to struggle in recruiting and retaining a part-time

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<i>to Public Works to replace the current part-time mechanic helper (Option 2 as described in this section of the report).</i>		mechanic position. This has only gotten more difficult in recent years as the economy has improved.
4. <i>Revisit shop staffing requirements and the feasibility of performing all fire fleet maintenance in-house in a year or two (Option 3 as described in this section of the report).</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
5. <i>Consider establishing the fleet function as an Internal Service Fund.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
6. <i>Centralize fleet related costs under the ISF or at least within Public Works.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
7. <i>Discontinue the practice of having consumers pay parts and vendor service bills directly.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
8. <i>Develop fully burdened service-based cost charge-back rates for all of the various services that a centralized fleet function under Public Works provides.</i>	Implemented	But labor is still not charged back to departments nor to Public Works divisions.
9. <i>Develop a comprehensive, documented operating cost charge-back rate model. This model should be developed in Microsoft Excel® or a similar electronic spreadsheet program.</i>	Implemented	Public Works should implement this recommendation.
10. <i>Develop and implement a policy and procedure</i>	Not implemented	Public Works should implement this recommendation.

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<i>for updating rates annually and for estimating annual charges by fleet user agency for agency budget preparation services.</i>		
<i>11. Revise the CRF Vehicle Replacement Plan, developed by Public Works, to include all vehicles and pieces of fleet equipment owned by the Town irrespective of assigned department or funding source.</i>	Partially implemented	Departments still propose their own replacements and Budget Committees do not look at the City fleet from a strategic perspective but rather focus on organizations assigned to them.
<i>12. Adopt lease-to-own or other appropriate debt financing method as the primary means to fund acquisition of vehicles and fleet equipment.</i>	Not implemented	Attitudes are changing and there appears to now be an interest in considering alternative financing.
<i>13. Provide sufficient funding to maintain an average fleet age of six years, which corresponds to an average fleet replacement cycle of 12 years.</i>	Not implemented	The fleet is about the same age as when we completed the original study.
<i>14. Adopt the point system recommended in this report to help set priorities for replacing vehicles.</i>	Implemented	
<i>15. Establish a committee to review fleet utilization and types of vehicles purchased each year to insure that the size and composition of the Town's fleet is appropriate.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
<i>16. Public Works should</i>	Implemented	

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<i>improve its documentation of key workload statistics including the number of work orders processed and productive mechanic labor hours.</i>		
<i>17. Public Works should scale back its operational checks of police patrol cars from three times per week to once per week.</i>	Implemented	
<i>18. The Town should offer to perform maintenance and repair work for outside agencies</i>	Implemented	
<i>19. Public Works should develop a formal structured skills assessment and training program for mechanics. A minimum of 20 hours of technical training should be provided to each staff person each year.</i>	Implemented	
<i>20. Public Works should establish a perpetual inventory for its fleet parts stock. More formalized parts management procedures and internal controls should be put in place.</i>	No longer applicable	
<i>21. Public Works should purchase all parts and charge them back to customers as they are used.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
<i>22. Public Works should track key parts statistics such as costs by</i>	Not implemented	Public Works should implement this recommendation.

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<i>department and costs by vendor.</i>		
23. <i>Public Works should develop formal pricing agreements with key parts suppliers.</i>	Not implemented	Public Works should implement this recommendation.
24. <i>Public Works should explore feasibility of using State of New Hampshire contracts for automotive parts as it currently does with tires.</i>	Implemented	
25. <i>Public Works should consider converting space adjacent to the shop office into an additional work bay.</i>	Not implemented	This strategic issue is discussed in a separate section of this report.
26. <i>The Town should budget \$15,000 for the various upgrades to the shop noted in this report.</i>	Implemented	
27. <i>The Town should make acquisition of a fleet management information system its highest priority for the fleet program.</i>	Implemented	
28. <i>Public Works should develop an annual business plan and fleet report that details goals and significant initiatives, and provides concise information on the costs and performance of the Town's fleet program.</i>	Not implemented	Public Works should implement this recommendation.
29. <i>Public Works should develop a system of key performance measures.</i>	Not implemented	Public Works should implement this recommendation.

In all, 11 of the 29 recommendations have been implemented or are no longer applicable. Most of the 18 recommendations that have not been implemented are strategic in nature dealing with organizational issues, financial practices, and fleet replacement funding. In the following paragraphs we discuss each of these issues in turn.

ORGANIZATIONAL ISSUES

Management of the Town's fleet remains decentralized to a large degree. Diffusing management of a small municipal fleet is contrary to industry best management practices. Economies of scale exist when a municipal function is centralized. The Town implicitly recognizes this fact as it does not have multiple organizations performing overlapping services in the majority of its operations (such as fire suppression, recreation activities, or financial management). Fleet maintenance and management are an exception however.

Not only does it make little sense for a line department to engage in a support function like fleet management (detracts from focus on main mission activities, duplicative, inefficient), it also costs the Town money. This is because departments that send their vehicles directly to vendors are paying these vendors for mechanic labor when the Town already has mechanics on salary. In this respect, the Town pays for labor on fire vehicles and landscape equipment twice (Fire and Recreation are the two departments that do not use Public Works for most of their fleet maintenance). The amount of labor dollars is unknown as detailed records are not available.

In our original report we recommended that all departments have Public Works maintain their vehicles and that when vendors were needed (for specialty repairs or during peaks in workload) Public Works manage the sublet process. In this way the Town would have a better handle on vehicle maintenance workload and costs.

For this strategy to work Public Works would need one to two additional full-time mechanics. We recommended converting the existing part-time mechanic position to full-time and revisiting shop staffing requirements after a year. We continue to believe that this is the most rational solution for the Town, for the following reasons:

- As mentioned above there are economies of scale and efficiencies that would be gained from centralizing fleet maintenance.
- The Town would save money by converting from vendor hourly mechanic charges to its own mechanics that are on salary.
- Public Works has had a difficult time recruiting and retaining a part-time mechanic (the position is currently vacant). There is a shortage of mechanics in the fleet industry and talented individuals are unlikely to accept part-time positions while less talented mechanics that will work part-time are likely to leave for full-time work as soon as they find it.

Converting the part-time mechanic to full-time would, therefore, solve two problems – lower labor costs for departments and increase shop capacity for

peak work periods (such as winter storms) and cover for absences (such as vacations, sick leave, and training).

In our original report we estimated the demand for shop labor using an analytical technique known as the Vehicles Statistical Reverence System. The results of our analysis showed that Public Works required 3 fulltime equivalent (FTE) mechanics and Fire 0.7. Given the drop in the age of the fleet we would revise this assessment as shown in the table below.

Organization	Labor Demand FTE	Labor Avail FTE	Difference
Public Works	2.5	2.0	0.5
Fire	0.5	0	0.5
Total	3.0	2.0	1.0

At Public Works one of the two full-time salaried mechanics acts the shop lead and spends half his time on administrative issues such as parts. So shop resources are the equivalent of 2 full time mechanics (0.5 for the lead mechanic, 1.0 for the line mechanic, and 0.5 for the part-time mechanic). As we noted in our original report, this staffing is not adequate to meet the service requirements of Public Works, Police, and other departments that use the shop. As previously mentioned, Fire sends its vehicles to an outside vendor for repair.

While we are confident in our position that adding a full-time mechanic will pay for itself in lower vendor costs, we recognize that there is a lack of data to complete a detailed business case analysis. Since the City now has a work management system in place (Web TMA), the data to complete this business case analysis could be developed. To do this, the Town would need to require that all vendor invoices be input to the system at a detailed level (i.e. recording labor, parts, and other charges separately). Public Works already does this and Fire and Recreation would need to do so as well. Labor hours and costs could then be compared to what they would be if Public Works performed the maintenance. Demand for labor would also be known. Finally, parts costs could also be analyzed to determine if vendor charges are higher than if the Town purchased parts directly (as is likely the case from projects we have done for other clients in the past).

The analysis noted above will address the issue of adding a mechanic to meet labor demands if fleet maintenance is centralized. However, as previously noted Public Works does not have enough mechanics now to meet its current workload. This is particularly true as the part-time position is currently vacant. We believe that a good short-term solution would be to allow Public Works to hire two or three part-time staff with a cap on annual hours at 2,080 (as well as any weekly limits on hours per person required to meet Town human resources goals). Hourly pay should be boosted to be equivalent to the full-time mechanic positions.

This approach will provide Public Works with a more reliable supply of part-time mechanic labor until the decision is made on whether to hire additional full-time staff.

Recommendation #1: Require all departments that send vehicles to vendors for maintenance and repair open a work order in the Web TMA system and record detailed data on labor hours and charges, parts costs, and other costs. Public Works staff should provide training to departments on this process.

Recommendation #2: Once three to six months of data has been collected, conduct an analysis of comparative costs between vendors and costs if Public Works provided all fleet maintenance.

Recommendation #3: Add a second part-time mechanic to the shop so that Public Works has the equivalent of one additional full-time equivalent position. This will enable the shop to better meet customer expectations during staff absences, fulfill requirements for administrative duties such as managing the parts inventory, meet peak workload demands, and manage the inevitable turnover as part-time mechanics find full-time positions.

FINANCIAL ISSUES

In our original report we noted that cost information on fleet operations was not easy to obtain as it was spread among several departments and budget line items. Departments pay for parts and vendor services directly even if Public Works is responsible for maintaining the vehicles. Labor costs, while tracked by Public Works, are not billed back to departments.

All of these conditions are unusual in our experience and do not foster effective management of fleet operations. In a best practices fleet model Public Works would handle maintenance as it does fuel: providing or coordinating all fleet services and billing them back to departments that consume these services. When consumers of a service are consistently confronted with the fully burdened costs of those services through a cost charge-back system they tend to make better choices. The resulting improvement in cost data and reporting from centralization of fleet expenses would result in a corresponding improvement in management and control of costs.

Since departments are accustomed to this model as it is used for fuel, we can see no reason for the Town to not adopt this best practice for all fleet costs – even if Public Works is not directly providing services to some departments.

Recommendation #4: Centralize the budget for fleet maintenance in Public Works and charge service costs (including labor) back to benefiting departments and programs. Develop a system of rates that recover all direct and indirect fleet related costs so that the full cost of fleet ownership is reflected in charges to departments.

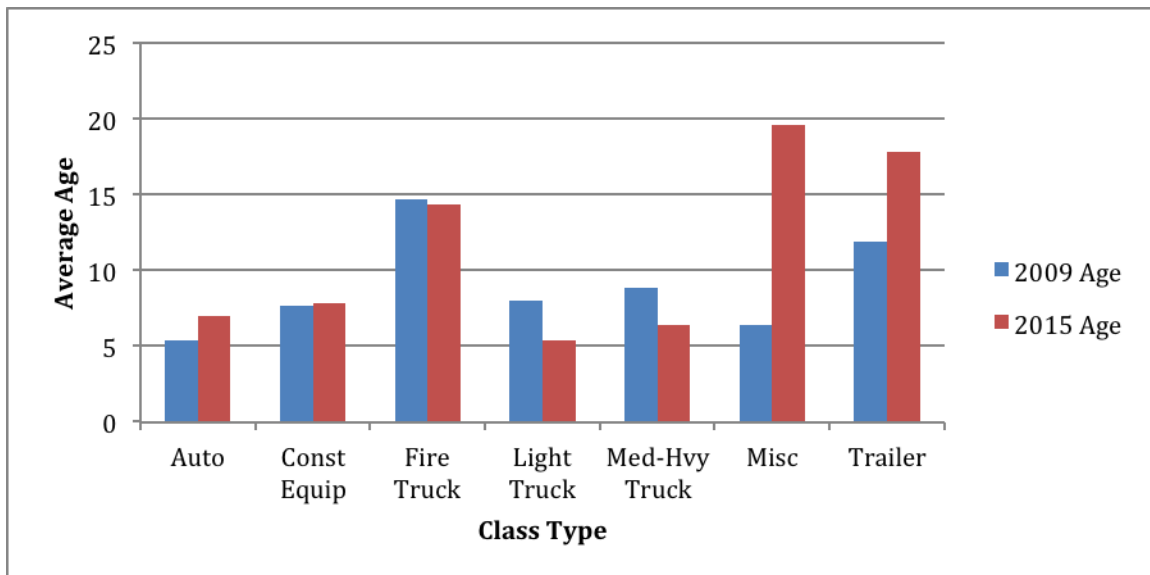
FLEET REPLACEMENT ISSUES

In our original report we noted that the Town's fleet was older than ideal, mostly resulting from the impacts of the great recession. The Town has done a good job of improving on this situation as shown in the table below. Note that we have not included long-lived assets such as fire trucks and trailers in the table so the status of the main fleet could be presented more clearly.

	2009	2015
Class Type	Avg Age	Avg Age
Auto	5.4	7.0
Const. Equip	7.6	7.8
Light Truck	8.0	5.3
Med-Hvy Truck	8.9	6.4
Fleet Average	7.7	6.2

As can be seen, the overall age of the fleet has dropped by 1.5 years – a 20% improvement. The City will gain advantages from this increased capital investment in the form of increased vehicle reliability, which will translate to crews getting more work done. Repair costs should also drop as older front-line vehicles are retired.

Despite this good news (and trend), the fleet is still older than ideal – which would be an average of 5 years given that the replacement cycle for assets in the table is 10 years. Thus another 20% reduction in fleet age is required to get the Town's fleet to an ideal condition. In fact, some segments of the fleet have gotten older since our original report, as shown in the chart below:



The Town currently uses lease (i.e. debt) financing for its more expensive fleet assets

such as fire trucks. This is an excellent practice because it spreads the capital cost of assets over several years rather than in the year the asset is acquired. Thus leasing is a more budget friendly and affordable approach than paying cash for fleet assets. The Town should adopt this approach for all of its fleet assets because the benefits of earlier replacement of vehicles (reduced downtime, lower repair costs, increased driver safety, better fuel economy, lower greenhouse gas emissions, modern technology) more than offset the relatively small interest changes.

In our original report we recommend a more strategic and holistic approach to fleet replacement where the fleet was considered a town-wide asset rather than each department fighting for its own funding. In our experience this is the most rational approach for a municipality to use in presenting the need for fleet replacement funding to elected officials.

The least expensive way for a municipality to lease-purchase vehicles is to use a bank or finance company to provide funds and then purchase the vehicle from the State contract. This approach normally results in lower interest rates and lower vehicle prices. However, this approach also requires a fair amount of administrative effort. Therefore, some organizations prefer to work with a fleet leasing company (such as Automotive Resources International or GE Capital). While leasing companies generally can't match banks on interest rates, they are close and also can purchase vehicles at the same low prices as states given the volume of purchasing they do. Moreover, large leasing companies provide a range of value added services such as writing technical specifications, vehicle licensing, and safety training.

Given the relative low volume of vehicles the Town purchases each year, the first approach would appear to be best. The Town can arrange for its own financing as it has with other vehicles such as fire trucks. Light-duty vehicles would be an excellent candidate for this approach as the Town could establish a recurring budget line item for replacing these vehicles across all departments on a more frequent basis.

Recommendation #5: Increase funding for fleet replacement to maintain an average fleet age of 5 years.

Recommendation #6: Adopt some sort of debt (e.g. lease purchasing, certificates of participation, bonds) as the main financing approach for replacing fleet vehicles and equipment.