Department of Public Works

Performance Audit of Vehicle Fleet Management

Clark County Auditor’s Office

Report #A04-03

May 26, 2004
EXECUTIVE SUMMARY

FLEET MANAGEMENT HAS ADOPTED INDUSTRY BEST PRACTICES

Clark County’s vehicle fleet is managed by the Public Works Department’s Equipment Services Division. We reviewed the department’s compliance with industry best practices related to fleet management.

We found that the department had successfully adopted 30 best practices we reviewed. These practices encompassed the major fleet management functions—purchasing, maintenance, repair, inventory management, customer service, rate-setting/cost recovery, and vehicle replacement/disposal. The report recommends the following additional actions.

RECOMMENDATION: TAKE ACTION TO ASSURE THAT THE COUNTY’S FLEET IS COST-EFFECTIVE

From 1997 through 2003 the county’s fleet increased by 31 percent—from 475 to 620 vehicles—and total expenditures grew from $5.4 million to $7.4 million, an increase of 37 percent. The growth in vehicle-related expenses related to the fleet’s two largest users—the Sheriff’s Office (15 percent) and the Public Works Department (13 percent) contributed to the overall increase. Overall, the fleet growth rate exceeded the 15 percent increase in the number of county employees over the same period.2

We found that the county can significantly reduce costs by eliminating underutilized vehicles and reducing fleet size.

Many fleet vehicles are driven less than 6,000 miles per year

In 2003, the county managed a fleet of 420 light-duty vehicles—passenger cars, pickup trucks, sport utility vehicles, and vans. We found that at least 50 of these vehicles were driven less than 4,000 miles during 2003, and an additional 31 were driven less than 6,000 miles.3 These numbers are minimums, since we could not obtain mileage data for 67 vehicles.

“Rollover” vehicles—which are retained in the fleet after having been replaced by new vehicles—accounted for 76 percent of those driven less than 4,000 miles.

The cost-per-mile for lightly-used vehicles can be substantial—particularly if the loss in resale value associated with keeping the vehicle is taken into account.

---

1 Or suitable alternatives were adopted. Appendix C lists the best practices reviewed.
2 Excludes addition of 128 Health Department employees in 2002.
3 15% of the vehicles for which we had adequate mileage data were driven less than 4,000 miles, and 25% were driven less than 6,000 miles in 2003.
Based on 2003 data, we estimated the cost of a typical lightly-used rollover vehicle to be $.73 per mile. This total does not include the cost of any major repairs that are necessary, or the county’s requirement that departments make a one-time $1,000 payment for each additional rollover vehicle acquired.

**Motor pool vehicles are underutilized**

We also reviewed use of the motor pool portion of the county’s fleet. The pool consists of eleven vehicles which are charged out to users at $.48 per mile. We found that these vehicles were only used during 51 percent of the vehicle-workdays\(^4\) in 2003. On only one day during the year were all 11 vehicles in use.

County employees have other transportation options. Employees can be reimbursed $.375 per mile for business use of their own vehicles. In addition, the county has a contract with Enterprise Rent-a-Car that allows unlimited mileage for a fixed daily or weekly rate.

**We recommend** that Fleet Management work with customers to evaluate vehicles and remove those which are not cost-effective from the fleet.

These decisions could be aided by the adoption of county-wide policy and standards. In 2003, a National Association of Fleet Administrators’ survey reported that government respondents used a 10,000 mile benchmark to justify vehicle assignments. Many counties have set minimum mileage standards—King County’s is 9,600 miles per year, and Multnomah County’s is 6,000 miles. Vehicles accumulating lesser mileages are evaluated to determine cost-effectiveness.

Consequently, we recommend that the county establish a mileage standard for light vehicles that Public Works and its customers can use to evaluate whether purchasing, retaining, or replacing vehicles is economic.

The development and implementation of the policy could be accomplished by establishing a Fleet Oversight Committee consisting of representatives from fleet management, from the fleet’s customers, and from other county stakeholders.

We also recommend that Fleet Management
- reduce the size of the motor pool, and take additional actions to assure the pool is cost-effective.
- publish a table showing relative costs of different vehicle transportation options available to county employees, and

\(^4\) Total number of days motor pool vehicles were used divided by total number of vehicle-workdays (Monday-Friday) in 2003.
• require written justification of the need for the four-wheel drive option and sport utility vehicles in circumstances where budget justification is not required.

RECOMMENDATION: CORRECT THE DATA IN THE FLEET’S MANAGEMENT INFORMATION SYSTEM
During this review, we attempted to obtain certain types of fleet management data from the fleet’s Vehicle Maintenance (VM) and Equipment Management Information System (EMIS) and found data reliability problems. Fleet Management is working to resolve these problems and assure that the new VM system (planned for implementation in mid-2004) is built on sound databases.

Examples of the data reliability problems we identified included:

• Outdated rates charged for use of fleet vehicles. Rates were last calculated for the 2001-2002 budget cycle.

• Inaccurate mileage data for 67 (16 percent) of 420 passenger-type vehicles reported for 2003.

• A vehicle replacement cash flow projection that had not been updated for two years. This projection is used to predict what replacement cost requirements will be.

• An incorrect fund balance in EMIS, because financial data in the system had not been updated over a two-year period. For example, EMIS had a total reserve estimate of $7.4 million at the end of 2002\textsuperscript{5}. The actual investment account balance (available funds) at that time was $4.0 million.

Without correct data, it is not possible to determine whether the fund balance being carried is in an amount reasonable to cover future capitalization needs. The fund balance in the past has been larger than required, resulting in a refund to customers.

We recommend that Fleet Management assure that financial, mileage, rate, and other vehicle-specific data are up-to-date and accurate in VM and EMIS. [Public Works is in the process of making these corrections, as detailed in the department’s comments in response to this report (see Appendix D)].

OTHER RECOMMENDATIONS
We recommend that Public Works adopt certain additional best practices, as follows:

\footnote{\textsuperscript{5} These data are for 2002 since the data for 2003 are not available in EMIS.}
• Establish performance measures in conjunction with implementation of the new VM system to measure cost-per-mile for each vehicle type. This measure was one of the “top ten performance measures for fleet management” identified by the American Public Works Association.

• Establish a “red flag” function to notify Fleet Management when preventive maintenance is overdue, and measure compliance with preventive maintenance schedules. Our review found a 90 percent compliance rate for 2003, in comparison to the 95 percent industry best practices goal.

• Adopt procedures to assure secure storage of parts, including limiting access to parts inventory to parts personnel. Spot-checks of inventory should be conducted periodically during the year.
Performance Audit of Vehicle Fleet Management

TABLE OF CONTENTS

BACKGROUND ...................................................................................................................... 7

FLEET MANAGEMENT HAS ADOPTED INDUSTRY BEST PRACTICES ................. 7
ACTIONS NEEDED TO ASSURE THAT THE COUNTY’S FLEET IS COST-EFFECTIVE ........................................................................................................................ 8

Many county vehicles were driven fewer than 6,000 miles in 2003 .................. 8
Motor pool vehicles are underutilized ...................................................................... 9
Lower cost options may be available ...................................................................... 10
Recommendations ........................................................................................................ 11

ACTIONS NEEDED TO ASSURE THAT FLEET MANAGEMENT 
INFORMATION SYSTEM DATA ARE ACCURATE AND RELIABLE ............. 12

Recommendations ........................................................................................................ 13

ADDITIONAL BEST PRACTICES ................................................................................. 13

Performance Measures Best Practices ................................................................. 14
Vehicle Acquisition Best Practices ........................................................................ 14
Maintenance and Repair Best Practices ............................................................... 14
Inventory Management Best Practices ................................................................. 15

DEPARTMENT COMMENTS .................................................................................. 15

APPENDIX A: SOURCES USED TO IDENTIFY FLEET MANAGEMENT BEST 
PRACTICES .................................................................................................................. 17

APPENDIX B: FLEET MANAGEMENT BEST PRACTICES ........................................ 19

APPENDIX C: COST-COMPARISON TABLE FOR TRANSPORTATION 
ALTERNATIVES ............................................................................................................ 23

APPENDIX D: DEPARTMENT OF PUBLIC WORKS COMMENTS ..................... 25
Performance Audit of Vehicle Fleet Management

BACKGROUND

Clark County’s fleet is managed by the Public Works Department’s Equipment Services Division. Fleet Management is responsible for all fleet-related services, including vehicle purchasing, maintenance, repair, inventory management, customer service, performance measurement, and vehicle replacement and disposal.

The fleet is financed by a revolving fund. Most revolving fund revenues come from county departments that use the fleet.


Total fleet expenditures grew from $5.4 million to $7.4 million during the 6-year period, a 37 percent increase. The growth in vehicle-related expenses associated with the fleet’s two largest users—the Sheriff’s Office (15 percent) and the Public Works Department (13 percent) contributed to the overall increase in fleet costs. Overall, the 37 percent fleet growth rate exceeded the 15 percent increase in the number of county employees over the same period.

“Rollover” vehicles—which are vehicles retained in the fleet after having been replaced by new vehicles—contributed heavily to fleet growth. The number of rollover vehicles increased from 118 to 171 over the six-year period, a 45 percent gain.

FLEET MANAGEMENT HAS ADOPTED INDUSTRY BEST PRACTICES

Our review objective was to identify industry best practices and determine whether they had been adopted by the county’s fleet managers. We identified and reviewed compliance with 30 specific practices covering several major fleet

---

6 “Fleet Management” is carried out by the Department of Public Works Equipment Services Division.
7 Excludes addition of 128 Health Department employees in 2002.
8 See Appendix A for a bibliography of sources used to identify best practices.
management functions—customer service, performance measurement, purchasing, repair, maintenance, and vehicle replacement and disposal.\textsuperscript{9} Through interview, document review, and observation we concluded that Fleet Management had largely adopted the best practices that we reviewed.

Importantly, we also observed that Fleet Management was working toward continuous improvement of the fleet operation. One aspect of this effort was substantial participation in professional organizations involved in developing best practices. We make several recommendations to further strengthen fleet management, as discussed below.

**ACTIONS NEEDED TO ASSURE THAT THE COUNTY'S FLEET IS COST-EFFECTIVE**

Best practices require that the fleet be the minimum size necessary to accomplish the organization's various missions. Many jurisdictions have minimum annual mileage benchmarks. For example, King County, Washington uses a 9,600 mile standard and Multnomah County, Oregon uses 6,000 miles. Vehicles accumulating lesser mileages are evaluated to determine cost-effectiveness. In 2003, a National Association of Fleet Administrators survey reported that government respondents used a 10,000 mile benchmark average\textsuperscript{10} to justify vehicle assignments.

Clark County has not established a minimum mileage benchmark. However, we found that many fleet vehicles accumulated relatively low mileages during 2003, as described below.

**Many county vehicles were driven fewer than 6,000 miles in 2003**

We found that at least 50 of the county's 420 light-duty vehicles were driven fewer than 4,000 miles during 2003, and an additional 31 were driven less than 6,000 miles.\textsuperscript{11} These numbers are minimums, since we could not obtain mileage data for 67 vehicles. The practice of retaining vehicles which would otherwise have been retired and sold contributed heavily to this percentage. These "rollover" vehicles accounted for 76 percent of those driven less than 4,000 miles. They averaged only 1,890 miles of usage per vehicle for the year.

The cost-per-mile for these lightly-used vehicles can become substantial. This is particularly true if the loss in resale value associated with keeping the vehicle is

\textsuperscript{9} See Appendix B for a listing of the best practices reviewed.
\textsuperscript{10} 10,000 miles was the median of the responses received.
\textsuperscript{11} The resulting percentages are that 15 percent of the vehicles for which we had adequate data were driven fewer than 4,000 miles, and 25 percent were driven fewer than 6,000 miles in 2003.
taken into account. For example, the following cost-per-mile estimate is for the most predominant type\textsuperscript{12} of lightly-used rollover vehicle in 2003.

\begin{itemize}
\item Operating cost (based on typical rate charged for use of this vehicle) \$0.38 per mile\textsuperscript{13}
\item Loss in resale value over a one-year period \$0.28 per mile\textsuperscript{13}
\item Allocated major repair cost \$0.07 per mile\textsuperscript{14}
\item Total cost \$0.73 per mile
\end{itemize}

This total does not include the cost of the county’s requirement that departments make a one-time $1,000 payment for each rollover vehicle acquired.

**Motor pool vehicles are underutilized**

In addition to vehicles assigned to individual departments, the county has a motor pool consisting of eleven vehicles—nine sedans and two vans. These vehicles are located at the county’s downtown campus and are available to all county employees on a single or multi-day basis.

As shown in the table below, motor pool vehicles were only used during 51 percent of the vehicle-workdays\textsuperscript{15} in 2003. The usage rate, by month, ranged from 28 percent to 65 percent. All eleven vehicles were in use on only one day during 2003.

\begin{itemize}
\item \textsuperscript{12}The most frequent type of lightly-used rollover vehicles during 2003 were Jeep Cherokees.
\item \textsuperscript{13}Assumes a $530 loss in value (based on Blue Book trade-in values) and 1,890 miles usage during the first year of use as a rollover vehicle.
\item \textsuperscript{14}Assumes one $500 major repair allocated over a 4-year usage period.
\item \textsuperscript{15}Total number of days motor pool vehicles were used divided by total number of vehicle-workdays (Monday-Friday) in 2003.
\end{itemize}
Lower cost options may be available

Motor pool and departmentally-assigned vehicles are not the only options available to county employees. Employees may also use the county’s contract with Enterprise Rent-a-Car, or obtain reimbursement for use of a privately owned vehicle.

Motor pool rates and privately owned vehicle reimbursements are on a per-mile basis. There is no fixed daily charge. The county’s contract with Enterprise Rent-a-Car offers a fixed daily rental charge (or a lower weekly rate) with no per-mile charge. The Flex-Car program, a contractually available motor pool operation, is a possible additional option. Flex-Car rates combine both fixed and per-mile charges. Public Works is considering use of hybrid Flex-Cars in conjunction with the City of Vancouver Transportation Department’s current contract for the service.
The following table shows that privately owned vehicles or motor pool vehicles are often the most economic alternative for trips that are short in terms of mileage and are one day in length. However, for high mileage trips the rental car contract with its “unlimited mileage” provision may be the best choice. The two lowest cost options for each trip length are enlarged and highlighted in bold type. Appendix C includes a table showing costs for longer trips.

<table>
<thead>
<tr>
<th>Trip Length in Miles:</th>
<th>20</th>
<th>50</th>
<th>80</th>
<th>100</th>
<th>250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Pool car at $0.48 per mile</td>
<td>$10</td>
<td>$24</td>
<td>$38</td>
<td>$48</td>
<td>$120</td>
</tr>
<tr>
<td>Enterprise rental compact car at $45.65 per day plus fuel cost(^{16})</td>
<td>$48</td>
<td>$51</td>
<td>$54</td>
<td>$56</td>
<td>$71</td>
</tr>
<tr>
<td>Privately owned vehicle at $0.375 per mile</td>
<td>$8</td>
<td>$19</td>
<td>$30</td>
<td>$38</td>
<td>$94</td>
</tr>
<tr>
<td>Rollover vehicle at $0.73 per mile (1,890 miles per year)</td>
<td>$15</td>
<td>$37</td>
<td>$58</td>
<td>$73</td>
<td>$183</td>
</tr>
</tbody>
</table>

**Recommendations**

We recommend that the Public Works Department work with customers to evaluate assigned vehicles and remove those which are not cost-effective from the fleet. These decisions could be aided by the adoption of county-wide policy governing fleet operations.

We recommend that the county establish a mileage benchmark for light vehicles that Public Works and its customers can use to evaluate whether purchasing, retaining, or replacing vehicles is economic.

The development and implementation of the policy could be accomplished by establishing a Fleet Oversight Committee consisting of representatives from fleet management, from the fleet’s customers, and from other county stakeholders.

We recommend that the department reduce the size of the motor pool. The department should also take other actions to assure the pool is cost-effective, such as advertising the availability of the pool to make it better known county-wide and continuing evaluation of alternatives such as the Flex-Car.

\(^{16}\) Fuel costs based on $2 per gallon and 20 miles-per-gallon estimates.
We recommend that the department publish a table for use by decision-makers that shows the relative costs of different vehicle transportation options available to county employees.

**ACTIONS NEEDED TO ASSURE THAT FLEET MANAGEMENT INFORMATION SYSTEM DATA ARE ACCURATE AND RELIABLE**

Fleet Management has various systems available for managing the operational efficiency and financial aspects of the fleet. These include the Vehicle Maintenance System (VM)—the legacy system—and the locally developed Equipment Maintenance Information System (EMIS). EMIS extracts data from VM and has the capability of developing numerous management reports. The fleet is also served by the county’s Oracle Financial Management System (FMS) which provides purchasing, accounts payable and receivable, payroll, fixed asset, and general ledger functions. The county is currently engaged in an effort to procure and implement a replacement system for VM and possibly EMIS.

We attempted to obtain certain primary types of fleet management data from VM and EMIS, and found significant data reliability problems. The problems appear to be primarily related to data input—either inaccurate input, or data that is obsolete because updating has not been done—rather than to defects in the software itself. Public Works recognizes that these problems need to be resolved in order to build the new VM system on reliable databases.

Examples of management data reliability problems include:

- **Outdated rates charged for use of fleet vehicles.** Rates were last calculated for the 2001-2002 budget cycle. Fleet Management is in the process of using current financial data to update the rates.

- **Inaccurate annual mileage data for at least 67 (16 percent) of 420 passenger-type vehicles were reported for 2003.** (Inaccuracies involved reporting either zero miles, negative mileage, or more than 50,000 miles for the year.) Vehicle users are required to enter mileage data into the system when obtaining fuel. According to Fleet Management, many inaccuracies can be traced to inaccurate entry of mileage data by vehicle operators.

- **Incorrect rates charged to customers for four vehicles.** Fleet Management has subsequently corrected the rates. Generally, an incorrect classification of vehicle type was the reason for the rate error.

- **An incorrect fund balance in EMIS, because financial data in the system had not been updated over a two-year period.** For example, EMIS had a
total reserve estimate of $7.4 million at the end of 2002\textsuperscript{17}. The actual investment account balance (available funds) at that time was $4.0 million. Fleet Management is in the process of reconciling this difference.

- An out-of-date vehicle replacement cash flow projection. This plan covers a ten-year period. It is generated by EMIS and used by Fleet Management to predict when vehicles are due to be replaced and what the replacement cost requirements will be for each year. The plan was last updated two years ago. Fleet Management is currently updating the plan.

The replacement fund balance in the past has been larger than required, resulting in a refund to customers. Fleet Management explained that at one time the fleet ran a negative balance, with the result that the fund could not be operated effectively. The current rate-setting practice was developed in response to that problem. Rates were developed with the goal of keeping the fund solvent and ensuring that the fleet could operate and that replacements could occur on schedule.

Since the vehicle replacement projection and other data in EMIS were out-of-date or inaccurate, we were unable to determine the reasonableness of the fund balance level.

**Recommendations**

We recommend that Fleet Management

- update rates charged to users to recover costs associated with vehicle use
- assure that mileage, rate, and other vehicle-specific data are accurate in VM and EMIS
- update the ten-year vehicle replacement plan, and
- update the financial data in EMIS, including a reconciliation to the general ledger.

**ADDITIONAL BEST PRACTICES**

We recommend additional implementation of best practices in four other areas, as discussed below.

\textsuperscript{17} These data are for 2002 since the data for 2003 are not available in EMIS.
**Performance Measures Best Practices**

Fleet Management has adopted several performance measures. These include “Rolling Stock Units per Full-Time-Employee;” and “Number of Repair Orders Closed.” Several other performance measures are based on labor hour comparisons.

We recommend that Fleet Management implement a cost-per-mile performance measure for each vehicle type. This measure has been specifically identified as one of the “top ten performance measures for fleet management” by the American Public Works Association.

**Vehicle Acquisition Best Practices**

Best practices require specific justification for costly options or models, such as for four-wheel drives and sport utility vehicles. Budget justification is required if the vehicle involved is an addition to a department or other users fleet, but is not required for vehicles that are replacements.

We recommend that Fleet Management require specific written justification of the need for four-wheel drive option and sport utility vehicles in circumstances where budget justification is not required. A significant portion of the county’s light vehicle fleet is four-wheel drive—106 (25 percent) of 420 during 2003.

**Maintenance and Repair Best Practices**

Fleet Management has adopted maintenance and repair procedures with the following best practices characteristics.

- Use of maintenance standards, such as tread depth for tires and pad depth for brakes.
- Use of a fully burdened labor rate (including a county-wide indirect cost allocation) for charging repair time internally.
- Identification of the full cost of in-house services, which is periodically compared to the cost to contract the service.
- Identification of work that is under warranty. Substantial warranty work is done by the dealer; small items are repaired in-house.
- Use of a work order system that distinguishes between preventive maintenance and repairs; permits categorization of work; and uses time standards to gauge workforce efficiency.
• Scheduling of preventive maintenance with the goal of reducing vehicle downtime—such as performing the work during the evenings or on days when the operator is off duty.

We recommend that the preventive maintenance program include a “red-flag” function to notify Fleet Management when maintenance is overdue, and monitor the percent of time preventive maintenance schedules are met. Our review indicated that notification and monitoring are needed. Our examination of 351 vehicle maintenance records showed that 317, or 90 percent, had received preventive maintenance during 2003. The industry best practices goal is to meet the preventive maintenance schedule standard 95 percent of the time.

**Inventory Management Best Practices**

Fleet Management has adopted an inventory management system with the following best practices characteristics.

• Stock numbering system
• Cross-referencing of parts
• Stock classification system
• Indirect parts cost recovery
• Recovery of parts warranties and expected life

We recommend that the following additional practices be adopted.

• Secure storage of parts. We found that when parts personnel are unavailable, mechanics are allowed to enter the parts room and obtain parts independently. As part of our review, we were able to enter the parts room unobserved.

Periodic spot-checks of inventory. As part of our review, we checked sixteen items and found minor discrepancies in quantity on hand for four items. The dollar amounts involved were minimal. However, the discrepancies indicate a need for additional management attention in the form of periodic spot-checks.

**DEPARTMENT COMMENTS**

The Department of Public Works commented on this report. The full text of those comments are provided in Appendix D. The department agreed with the audit’s findings, and provided details regarding progress made toward implementing the report’s recommendations.
APPENDIX A

SOURCES USED TO IDENTIFY FLEET MANAGEMENT BEST PRACTICES


APPENDIX B

FLEET MANAGEMENT BEST PRACTICES

Our review objective was to identify industry best practices and determine whether they had been adopted by the county’s fleet managers.

We found that Fleet Management was working toward continuous improvement in the fleet operation. One aspect of this effort was substantial participation by the county’s fleet manager in professional organizations involved in developing best practices.

We found that fleet management had substantially adopted the industry best practices that we reviewed, as listed below.

1. Fleet management functions such as maintenance and repair services, fueling services, and motor pool services were centralized.

2. Fleet managers discussed needs, costs, fleet utilization and size, replacement plan, vehicle abuse and accidents with customers.

3. Agreements with customers that described fleet services to be provided and rates to be charged were required.

4. A master file for each vehicle was established that contained detailed identification and descriptive information, as well as usage, repair cost, downtime, and preventive maintenance data.

5. Data systems had the capability to collect summary vehicle performance information by make, model, year and total fleet and user department.

6. Cost recovery procedures required inclusion of the total cost (direct and indirect) of fleet management in rates.

7. A revolving fund was established to account for operating and replacement costs of the fleet.

8. Revenues earned by the fleet agency were returned to the fleet’s revolving fund, including revenues from sales of services to outside purchasers.

9. Rates for permanent assignments could be set at on a standard monthly basis, or at a variable rate assessed for mileage or hours.
10. Reassignments, transfers, or rotation of assigned vehicles were recommended to customers.

11. A vehicle replacement schedule covering a 10-year period was established.

12. Retention/replacement guidelines for each class of vehicle were established.

13. A retain/replace/repair analysis and technical evaluation for vehicles which are candidates for replacement was required.

14. Summary vehicle performance information by make, model, year and total fleet and user department was collected.

15. Some fleet management performance measures were established.

16. Inventory was tracked via a parts inventory control system.

17. Full cost recovery of parts, including indirect costs, was implemented.

18. Multiple suppliers of parts were used.

19. The inventory system allowed for cross-referencing of parts.

20. A fuel inventory control system, which can track inventories by fuel tank and location, with data tied into the fleet management information system, was established.

21. A fuel system leak detection capability was established.

22. Fair market value was obtained for vehicle disposals via state-wide or local auctions.

23. The revolving fund received disposal revenues.

24. Disposal costs were reduced by using “offender-status” personnel.

25. Maintenance standards, such as brake pad and tire tread depth, were established.

26. A fully burdened labor rate was used to charge out repair time.

27. The full cost of in-house services was compared periodically to cost of contracting out.

28. Cost-effective procedures for handling warranty work were established.
29. A work-order system that categorizes work and uses time standards was established.

30. Preventive maintenance was scheduled to minimize vehicle downtime.
APPENDIX C

COST-COMPARISON TABLE FOR TRANSPORTATION ALTERNATIVES

THREE-DAY TRIP, EXTENDED MILEAGE

(Two Lowest-Cost Options Identified In Bold Type)

<table>
<thead>
<tr>
<th>Trip Length in Miles:</th>
<th>100</th>
<th>300</th>
<th>500</th>
<th>700</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Pool car at $.48 per mile</td>
<td>$48</td>
<td>$144</td>
<td>$240</td>
<td>$336</td>
<td>$432</td>
</tr>
<tr>
<td>Enterprise rental compact car at $45.65 per day plus fuel</td>
<td>$147</td>
<td>$167</td>
<td>$187</td>
<td>$207</td>
<td>$227</td>
</tr>
<tr>
<td>Privately owned vehicle at $.375 per mile</td>
<td>$38</td>
<td>$113</td>
<td>$188</td>
<td>$264</td>
<td>$338</td>
</tr>
<tr>
<td>Rollover vehicle at $.73 per mile (1,890 miles per year)</td>
<td>$73</td>
<td>$219</td>
<td>$365</td>
<td>$511</td>
<td>$657</td>
</tr>
</tbody>
</table>

18 Fuel costs based on $2 per gallon and 20 miles-per-gallon estimates.
DEPARTMENT OF PUBLIC WORKS COMMENTS

The Department of Public Works has reviewed the Review of Clark County Fleet Management and has the following comments.

We believe the audit was well done and fairly represents the facts and circumstances relating to the management of the County’s Fleet. We appreciate the review pointing out the strong aspects of our fleet operation, as well as those requiring improvement.

We have been engaged for over two years in a fleet management software replacement process. That process is nearing fruition as we will begin contract negotiations with the selected software vendor in the very near future. Because we believed that the software replacement was imminent, we elected to defer work on the existing Equipment Management Information System (EMIS), which will be replaced along with the county’s legacy system. In retrospect we should not have delayed that work; we should have continued to update rates and the EMIS database so that the fund balance and ten year vehicle replacement cash flow were more current. As it was, we used data from county legacy systems to continue to make sound fleet management decisions. While this was considerably more difficult, it did allow us to continue managing the fleet in a responsible and cost-effective manner. We have since updated the relevant aspects of EMIS to bring it up to current standards.

With specific regard to equipment rental rate setting, we did not update the rates for 2003 pending the implementation of new fleet software; which, as described above, still has not occurred. For 2004, we intentionally did not set new rates due to the uncertainties in the cost of fuel and other petroleum products and significant cost increases in administering the parts store due to the new Oracle purchasing program. Sufficient operating reserves in both cost centers were used to “subsidize” the 2004 rates. However, the Budget Office was advised that these extra costs would be recovered through an equipment rate surcharge starting with the 2005-2006 budget.

The following sections will address comments and the recommendation sections of the review in the same order as they appear in the basic document.

THE COUNTY FLEET HAS GROWN SIGNIFICANTLY

There is no disputing that the fleet has grown rapidly since 1997. It is also clear that the rollover component of the fleet has grown much more rapidly than the non-rollover component. We recognized this condition some years ago and have
worked to slow the growth rate in recent years with some success. Our successes in this regard have been confined largely to within Public Works due to the emphasis placed on controlling fleet size by the department. The bulk of the growth during this period occurred in the early years and although growth has continued at a still greater than acceptable rate, the rate has been significantly reduced. And, while fleet expenditures have grown by 37% over the same time period, much of that increase was due to sizable increases in spending for capital replacements.

We believe that to control fleet size and cost growth in the future that a county-wide fleet management body (a “Fleet Management Review Board”) must be created. This group would be charged with reviewing a wide range of fleet management issues such as cost, fleet growth, vehicle types, replacement policies, procurement policies, and others. This body would promulgate a new set of policies and guidelines, many of which are recommended in the basic report and in our response that, once approved by the Board of County Commissioners, would exert much beneficial influence on the growth and cost behavior of the fleet. These policies and guidelines would be published in a Fleet Management Manual for distribution to those in the county and to supported agencies. Up to this point, our Fleet Manager has been working to be a “customer service provider.” He has also tried to provide recommendations to non-Public Works departments that would have reduced fleet size and cost growth, but with limited success. A rule-setting body and Commissioner support will work effectively to address the growth issue.

FLEET MANAGEMENT HAS ADOPTED INDUSTRY BEST PRACTICES

We have placed much emphasis on using best practices in managing our fleet. As we proceed with implementing the replacement fleet management system, we will be aware of the full range of fleet management best practices. In fact, we used best practices to develop our system requirements and specifications. The new system, when implemented, will address many of the recommendations in this report. Until the new system is implemented we will implement interim solutions to accomplish the same objectives.

BEST PRACTICE: ASSURE THAT THE COUNTY’S FLEET IS COST-EFFECTIVE

Many county vehicles were driven fewer than 6,000 miles in 2003. We will implement a program to identify vehicles that are no longer cost-effective. This will involve the establishment of some standards, which could be promulgated by the new fleet management body.
We agree with establishing a minimum mileage standard. Exactly what level to use will require some study and could be one issue brought to the new fleet management body. Whether or not there is a mileage standard, the fact remains that there are a number of legitimate low mileage requirements in the county. The Assessor, for example, has a recurring annual requirement for its assessment period which occurs during select periods of the year and entails low mileage counts. We will investigate other methods for meeting their needs. Other low mileage requirements exist throughout the county, such as: facilities management, corrections, road construction inspectors, and surveyors. These vehicles are commonly dispatched short distances to work sites where they sit parked until the end of the work day when they are returned to their parking places. Two methods we will explore are 1) requiring the use of personal vehicles as a condition of employment in certain cases (mileage reimbursed at 37.5 cents per mile) and 2) rotating vehicles from department to department, such that all vehicles meet the minimum mileage standards. Rotating vehicles will require some work due to the fact that specific funds buy and own vehicles---rotating vehicles will raise concerns amongst the county’s customer departments.

This section refers to rollover vehicles as comprising the bulk of the lightly-used vehicles. The county has added many of these rollover vehicles in the past. Small, budget-poor departments rely on rollovers because they can’t muster the resources to buy new vehicles. In addition, since there are no significant barriers to obtaining them, some departments acquire many rather than acquiring fewer numbers of newer vehicles to perform their work. We plan to recommend to the new fleet management body that we work to eliminate the rollover fleet by charging capital replacement fees on rollover vehicles until new vehicles can be purchased.

We also believe that establishing and enforcing vehicle type standards for various uses will help the county reduce cost growth in the future. As an example, by limiting the number of SUV’s and four wheel drive vehicles to the uses that demand them, we can hold the line on costs. We believe that standard vehicle types should be established. Exceptions to the standard would require approval by the new fleet management review body.

Motor pool vehicles are underutilized. We agree that the motor pool could be made more effective and efficient in a number of ways. It appears as though the fleet could be reduced in size with little ill effect. Increased emphasis on the use of personal vehicles, which are reimbursed at a lower rate, would be helpful. In addition we are considering using the Flexcar as an augmentation to the fleet, once we reduce the number of full-time vehicles in the fleet. We need to increase the utilization rate for whatever vehicles remain in the fleet. We will accomplish this through an advertising campaign. We will develop a cost comparison tool for user departments to use in
evaluating the various transportation alternatives for trips of various mile length and day durations.

**BEST PRACTICE: ASSURE THAT FLEET MANAGEMENT INFORMATION SYSTEM DATA ARE ACCURATE AND RELIABLE**

We agree that accurate management information is essential to the proper management of the fleet. To that end we have been working to identify the appropriate fleet management system to use when replacing the legacy system soon to be retired. We believe the system we are implementing will have all the capabilities we seek in this effort. Because we intended to replace the existing information system, we felt it prudent to avoid spending large sums on modernizing it. As the time horizon for the replacement process grew substantially, we should have maintained the system and all related data to ensure the system remained relevant in all aspects.

- We are in the process of recalculating our rates. They will be available for departments to use in preparing their 2005-2006 budgets.
- We will redesign our mileage information management system to ensure more accurate data is maintained in the system. This is largely a customer compliance issue.
- We agree that the EMIS fund balance of $7.4 million was not correct but the error had little impact on our operations or management. The fund balance in question is a tool used to forecast fund balance—it was not an actual fund balance. It was not a calculated figure and did not figure in any management deliberations regarding the fleet. We do conduct a year-end reconciliation between EMIS fund balance figures and those in the county’s accounting records. That reconciliation had not been performed in some time, again because of what we believed to be the imminent replacement of EMIS. We have since completed that reconciliation and are now current.
- We have completed an updated vehicle replacement cash flow through 2014.
- We understand the concern regarding the size of the revolving fund balance. We believe the capitalization level to be appropriate for current and future requirements. We do believe, however, that some changes to how the fund balance is managed would help improve management of the fund and collective understanding of various concerned parties. We believe that the fund should be segmented into capital and operating components so that short term revenues are matched with short term operations and maintenance expenses. Likewise capital revenues should be accounted for separately.
OTHER BEST PRACTICES

Performance Measures Best Practices
We agree that a cost-per-mile measure for each vehicle would be a useful measurement and will develop one. This cost-per-mile can be compared to the rate-per-mile to determine the profit or loss per mile on each vehicle to assess its cost effectiveness.

Vehicle Acquisition Best Practices
We agree that standards should be established for all vehicle/equipment applications, including SUV’s and four wheel drive vehicles, and submitted to the Fleet Management Review Board for adoption. Exception requests to these standards would be subject to approval by this Board.

Maintenance and Repair Best Practices
We agree with the “red flag” concept for vehicles overdue for maintenance and tracking the percentage of time that preventive maintenance schedules are met. The new software system will provide this capability. We will develop an interim system pending the implementation of the new system.

Inventory Management Best Practices
We agree that secure parts storage is essential to preclude theft. Given our limited parts staff and the greatly increased workloads imposed on the staff due to Oracle, we must continue to grant access to the parts room to mechanics. Parts stores personnel will assure that the parts pulled by the mechanics are checked out of inventory to ensure all parts are accounted for. We will secure the parts room using some means, so that unauthorized/unsupervised use of the parts store is prevented.

We agree to conduct independent spot inventory counts of randomly selected inventory items on a periodic basis. In this regard we have requested authority to conduct cyclic inventories throughout the year, but have been told by the Auditor’s Office that we can’t do those because of the extra work involved. So we will proceed with an internal spot check program.