



KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

September 28, 2010

Motion 13344

Proposed No. 2010-0434.1

Sponsors Hague and Phillips

1 A MOTION accepting a report and an action plan by the
2 fleet administration division in the department of
3 transportation and the office of management and budget to
4 identify and generate the potential efficiencies and cost
5 savings of further consolidation of county fleets, as
6 required in the 2010 Budget Ordinance, Ordinance 16717,
7 Section 19, Proviso P2, Section 134, Proviso P1, Section
8 135, Proviso P1, and Section 136, Proviso P1.

9 WHEREAS, K.C.C. 2.16.140.D. states "The duties of the fleet administration
10 division shall include the following: 1. Acquiring, maintaining and managing the motor
11 pool and equipment revolving fund for fleet vehicles and equipment including, but not
12 limited to, vehicles for the department of natural resources and parks, facilities
13 management division, and transportation nonrevenue vehicles," and

14 WHEREAS, the fleet administration division provides fleet support services to
15 most county agencies, and

16 WHEREAS, efficient and effective management of a fleet of diverse vehicles and
17 equipment is the core business of fleet administration division, and

18 WHEREAS, fleet administration division uses data-driven decision making and
19 fleet management best practices to achieve efficiencies for its client agencies, and

20 WHEREAS, there are agencies whose fleets are not managed by fleet
21 administration division - transit nonrevenue vehicles, solid waste division, King County
22 international airport, Seattle-King County department of public health, department of
23 assessments and the biosolids program in the wastewater treatment division, and

24 WHEREAS, any further consolidation of fleets or of activities within fleets must
25 be beneficial to customers in the form of cost savings or efficiencies, and

26 WHEREAS, the analysis indicates that the county could gain efficiencies and cut
27 costs if all agencies adopted some or all of fleet administration's management practices
28 for vehicles and equipment;

29 NOW, THEREFORE, BE IT MOVED by the Council of King County:

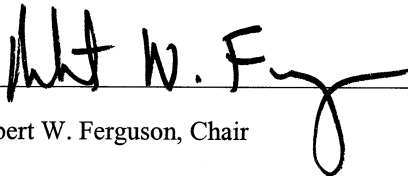
30 The report summarizing the analysis and recommendations of the potential

31 efficiencies and cost savings that could be realized by further consolidation of county
32 fleets, is hereby accepted.
33

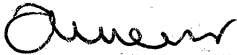
Motion 13344 was introduced on 8/23/2010 and passed by the Metropolitan King
County Council on 9/27/2010, by the following vote:

Yes: 9 - Ms. Drago, Mr. Phillips, Mr. von Reichbauer, Mr. Gossett,
Ms. Hague, Ms. Patterson, Ms. Lambert, Mr. Ferguson and Mr. Dunn
No: 0
Excused: 0

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON


Robert W. Ferguson, Chair

ATTEST:


Anne Norris, Clerk of the Council

Attachments: A. Consolidation of County Fleets: Potential Efficiencies and Cost Savings

13344



King County

**Consolidation of County Fleets:
Potential Efficiencies and Cost Savings**

Response to a Proviso in King County Ordinance 16717,
Section 19, P2; Section 134, P1; Section 135, P1; and Section 136, P1

Prepared by the Office of Management and Budget and the
Fleet Administration Division, Department of Transportation

July 2010

Consolidation of County Fleets: Potential Efficiencies and Cost Savings

2010 Budget Proviso Response Prepared by the Office of Management and Budget
and the Fleet Administration Division of the Department of Transportation

This report responds to the following proviso in King County's 2010 budget ordinance, Ordinance 16717 (Section 19, P2; Section 134, P1; Section 135, P1; and Section 136, P1):

*Of this appropriation, \$100,000 may not be expended or encumbered until the executive has submitted a report, and a motion for council acceptance of the report, on possible efficiencies and cost savings that could result from assigning the fleet administration division responsibility for maintaining county fleets, other than the transit revenue vehicle fleet, that are not currently maintained by the fleet administration division. This report and motion shall be transmitted to the council by May 1, 2010.**

This report shall address, but not be limited to: (1) efficiencies that could result from further consolidation of maintenance operations within the fleet administration division; (2) cost savings that could result from such consolidation; (3) additional costs of staffing, facilities, equipment, and financial/accounting systems that would be required for this consolidation; (4) potential savings from schedule efficiencies and revised overtime policies; (5) impact on any county contracts for services provided by private sector firms; and (6) the steps necessary for the fleet administration division to assume the management and maintenance of each fleet.

The report and motion required to be submitted by this proviso must be filed in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers and to the committee coordinator the physical environment committee or its successor.

* The County Council granted an extension of this deadline to July 31.

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Executive Summary

This report makes two major findings:

- King County could gain efficiencies and reduce costs by implementing some best practices with regards to fleet management consistently across the county.
- While there are efficiencies to be gained through consolidation of county fleets, there are still outstanding questions about whether actual cost savings could be achieved through consolidating county fleets under the management of the Fleet Administration Division of the Department of Transportation.

These findings lead to the following recommendations:

- Implement some early efficiency savings in the next one-to-three years: utilizing Fleet Administration for warranty work, mobile repair units, and vehicle purchase support; capturing and utilizing vehicle data consistently county-wide; and migrating the Department of Assessments' fleet from the Runzheimer program to Fleet Administration.
- Further evaluate the costs and benefits of consolidating specific agencies' fleets with a more thorough understanding of the complexity of these agencies' business needs and the trade-offs between cost and quality or level of service. Benefits of consolidating agency fleets could best be realized by moving the fleets to Fleet Administration in stages over several years. A phased approach would allow the agencies involved to manage this change, apply lessons learned in early phases to subsequent phases, and time the consolidation of each fleet to fit agency budgets and other plans.

Today, the Fleet Administration Division provides fleet support services to most county agencies. The division manages three equipment rental and revolving funds and the acquisition, maintenance, replacement and disposal of more than 2,600 vehicles and equipment. Fleet Administration uses data-driven decision-making and fleet management best practices to achieve efficiencies for its client agencies. The division's management practices include asset management over the life of the vehicle, in-house warranty services, inventory management, and volume purchasing.

Fleet Administration manages approximately 60 percent of the non-revenue vehicles owned and operated by the county. The agencies that do not use Fleet's vehicle and equipment management services are the Transit Division (non-revenue vehicles), the Department of Public Health (whose fleet is managed by the City of Seattle), the Department of Assessments, King County International Airport, and the Solid Waste Division of the Department of Natural Resources and Parks. In many cases, these agencies have geographic and functional requirements specific to their unique business needs that have led to the practice of managing these fleets separately.

The analysis performed by Fleet Administration and the Office of Management and Budget concluded that the county could gain efficiencies and cut costs if these agencies adopted some or all standard best practices for fleet management. Some of the agencies have previously incorporated standard best practices, in whole or in part. The potential benefits vary by agency

and by the unique needs and characteristics of the vehicles and equipment they use. While it appears that there may not be significant potential savings for the consolidation of NRV and KCIA, we believe there are opportunities to streamline the county's business.

How This Report Was Developed

The Department of Transportation's Fleet Administration Division and the Office of Management and Budget (OMB) jointly prepared this report by conducting an assessment of the county's fleets, analyzing the data provided by fleet managers, and identifying potential efficiencies that could result from further consolidating management of vehicles and off-road equipment into the Fleet Administration Division.

Any consolidation of fleets or of activities within fleets must be beneficial to customers, whether they are taxpayers, ratepayers, or tenants at King County International Airport. As we examined potential cost efficiencies, we were mindful that if these efficiencies would come at the cost of reduced service to customers, consolidation might not be the solution.

To gain a full understanding of the various fleets in King County government, we sent a questionnaire to all departments in the Executive Branch and to the separately elected county officials. The questions were designed to obtain information on the vehicle inventory, fuel costs, maintenance costs, labor costs, fleet management systems and other matters. (The consolidated responses to the questionnaire are available from Fleet Administration upon request.)

In addition to the questionnaire, we interviewed staff members from the county and the City of Seattle (which manages the Public Health fleet) to expand on the information provided in survey responses and to gain a deeper understanding of their fleet management practices.

We found that agencies whose vehicles and equipment are not managed and maintained by Fleet fall into two categories: agencies with fewer than 10 vehicles; and agencies that self-manage their fleets. This report does not analyze the first category in great depth; it accounts for only a couple of dozen vehicles that in most cases are used for purposes different from typical fleet functions. Fleet Administration will continue to work with these agencies to assess the best way to meet their business needs. In some cases, the way the agency maintains their few vehicles makes the most business sense.

The other category—agencies that manage and maintain all or nearly all of their own vehicles—is more relevant to the county's consideration of fleet consolidation. We identified five agencies whose fleets are not managed nor maintained by Fleet Administration. These are the Transit non-revenue vehicles (NRV), the Solid Waste Division, King County International Airport (KCIA), Public Health, and the Bio Solids Program in the Wastewater Treatment Division. These five fleets are the focus of this report.

We also looked at the Department of Assessment's program that reimburses employees for business use of their personal vehicles.

Fleet Administration Division Overview

Fleet Administration manages the acquisition, maintenance, repair, replacement and disposal of more than 2,600 vehicles and equipment. Fleet Administration's budget includes three equipment rental and revolving funds that support the services the division provides to most county agencies. Fleet Administration purchases and warehouses a large and diverse inventory of construction materials and supplies, traffic signals, safety equipment and hand tools for use primarily by DNRP and the Road Services Division. Fleet also accounts for approximately \$2 billion worth of the county's capitalized personal property assets, conducts an annual inventory in cooperation with all county agencies, and disposes of all surplus property.

Fleet Administration charges customer agencies based on a full-cost recovery model. The rates are based mainly on three factors: vehicle use, vehicle maintenance, and vehicle replacement. The rates are based on actual use and expenditures from two years prior. For example, the 2010 rates are recovering actual costs incurred in 2008. This model provides predictability to the customer. Fleet Administration's funds include a fund balance sufficient to address unpredictable costs due to fuel price increases, vehicle accidents and major repairs.

Fleet Administration uses an industry-standard model to determine the economically efficient time to replace a vehicle. This model considers variables such as annual costs, resale or salvage value, and purchase price.

As costs have risen over the past few years, Fleet Administration has adopted additional cost-saving measures. An example is the unattended dispatch system at the Goat Hill and King Street Center garages, which provides around-the-clock access to county vehicles and decreases the costs of the Motor Pool Daily Rental (Dispatch) vehicle system. Fleet Administration works collaboratively with customers to identify efficiencies and changes in practices that result in cost savings while still meeting the business needs of the agencies.

Fleet Administration administers the county's take-home vehicle authorization program and helps departments "right-size" their fleets. In response to a performance audit recommendation, the division formed a Vehicle Utilization Committee including participants from departments throughout the county. This committee determined that the county could cut overall costs by reducing the number of vehicles assigned to work groups, meeting their needs with dispatch vehicles or other agency vehicles. The committee convenes each year to review vehicle utilization across all county fleet with the goal of continually exploring more efficient way of delivering county services. With fewer assigned vehicles, Fleet Administration expects the number and use of dispatch vehicles to increase.

The county is committed to environmentally sound practices, exemplified through its membership in the Chicago Climate Exchange and by other actions taken pursuant to executive policies concerning environmental protection. Although county agencies seriously consider environmental impacts when they choose replacement vehicles, it is often difficult for them to pay the additional cost of an alternative, clean-fueled vehicle. By aggressively pursuing grant funding, Fleet Administration has been able to produce a more environmentally friendly fleet in a shorter period of time than would otherwise be possible.

Efficient and effective management of a fleet of extremely diverse vehicles is the core business of Fleet Administration. In the current economic environment, it is timely to ask whether the needs of county agencies that manage their own fleets would be better served through a consolidation into the Fleet Administration Division.

Fleet Efficiency Processes

Over the past few years, Fleet Administration has implemented several processes and programs to ensure that the right number of vehicles is available when needed at the most economical cost to the agency. These are described below.

Vehicle Utilization Review

In January 2009, the Light Duty Vehicle Utilization Policy, FES 12-6 (AEP), was adopted. This policy was developed in response to a 2007 King County performance audit which recommended that the county establish a committee to develop and enforce policies for county vehicle utilization. The policy was crafted with input from a broad-based committee of 22 representatives of county agencies. The committee established guidelines for the types of vehicles to be purchased, standards for vehicle usage, exceptions to the guidelines and standards for unique circumstances, and a process for periodically monitoring vehicle utilization to ensure that the standards are met.

Pursuant to this policy, Fleet Administration annually gathers and distributes vehicle usage data to all county agencies that use county vehicles (even in different fleets), and convenes a Vehicle Justification Review Committee. This committee is comprised of representatives from the departments of Transportation, Executive Services, Public Health, and Natural Resources as well as the King County Sheriff's Office. It is facilitated by Fleet Administration. Users of light-duty vehicles submit a justification form for each vehicle that does not meet the minimum usage threshold. The committee reviews and discusses these forms, and then formulates a recommendation. In 2010, this review resulted in a reduction of 45 vehicles from the county's fleet. Future consolidation of county fleets may create opportunities to rotate vehicles among agencies or reassign vehicles that have useful life remaining, ensuring that vehicles are used until the optimal time for replacement. Some funding sources may limit the transfer of a vehicle to another agency.

The committee also ensures that users are fully aware of the variety of fleet services available to meet their business needs and reduce their costs.

Vehicle Replacement Best Practice

Vehicle costs can be a significant part of both capital and operating budgets. Knowing when to retire vehicles from the fleet and replace them with new equipment is critical to minimizing costs.

Fleet Administration determines the best time to replace a vehicle using a computerized lifecycle cost model based on the Mean Annual Cost Equivalent (MACE). This nationally recognized model uses all costs relating to vehicle ownership, drawing comprehensive information on vehicle costs from the fleet management database for different classes of vehicles. The MACE model uses the costs for vehicle purchase, depreciation, operation, maintenance, downtime, obsolescence, and interest as well as salvage value. The model calculates the optimal mileage at

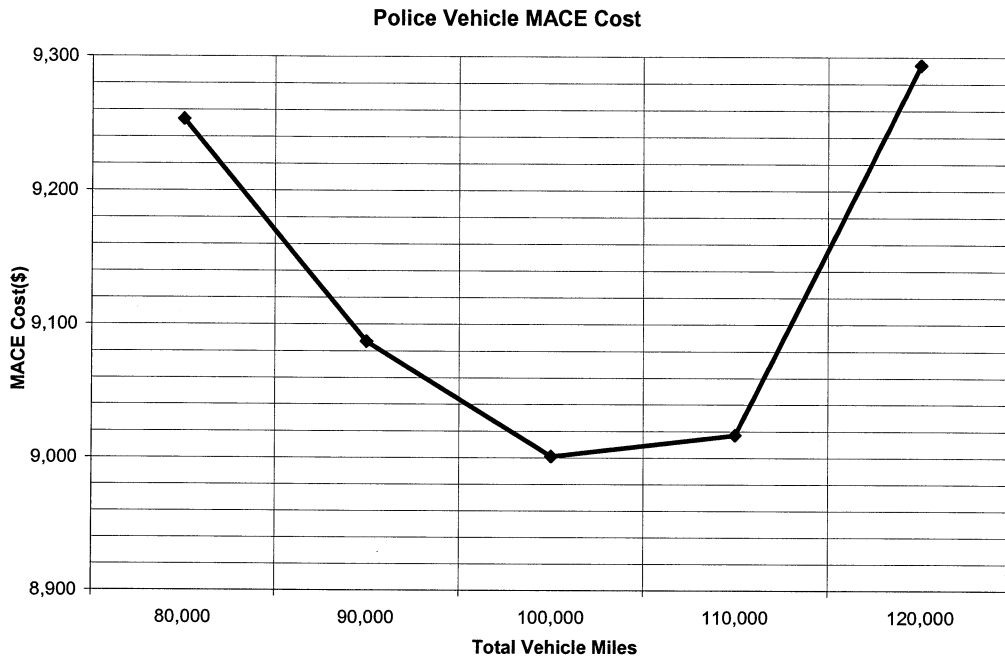
which a vehicle should be replaced based on its economic life. The model also projects the cost of keeping a vehicle longer than the optimal replacement point.

In addition to enabling Fleet Administration to minimize costs by replacing vehicles at their optimal replacement mileage, the MACE model yields indirect benefits. By replacing vehicles before they need frequent repairs, Fleet Administration reduces vehicle and staff downtime, and the need for spare vehicles.

The table below is an example of the data MACE generates. It shows the costs associated with the King County Sheriff's Office patrol cars for each 10,000 mile period (PRD). Notice that the lowest ownership costs occur between 100,000 and 110,000 miles, as shown in the graph below the chart as well. This is the optimal replacement period for this type of vehicle.

MACE Cost Table

PRD (A)	Miles (B)	Replace Price (C)	Resale Price (D)	Discount Factor (E)	Discounted Resale (F)	Capital Cost (G)	Total PRD Costs (H)	Adjusted Costs (I)	Total Cost (J)	Annual Factor (K)	MACE (J * K)
					(D * E)	(C - F)		(H * E)	(G + I)		
1	10,000	24,900	19,475	0.982	19,131	5,769	1,141	1,120	6,890	1.6939	11670
2	20,000	24,900	15,233	0.965	14,698	10,202	1,081	2,163	12,365	0.8545	10566
3	30,000	24,900	11,914	0.948	11,293	13,607	2,067	4,122	17,729	0.5747	10190
4	40,000	24,900	9,319	0.931	8,676	16,224	3,214	7,114	23,338	0.4349	10149
5	50,000	24,900	7,289	0.915	6,666	18,234	2,900	9,766	28,000	0.3510	9828
6	60,000	24,900	5,701	0.898	5,122	19,778	3,213	12,652	32,431	0.2951	9569
7	70,000	24,900	4,459	0.882	3,935	20,965	3,926	16,117	37,082	0.2551	9461
8	80,000	24,900	3,487	0.867	3,023	21,877	3,568	19,209	41,086	0.2252	9253
9	90,000	24,900	2,728	0.851	2,323	22,577	3,773	22,422	45,000	0.2019	9087
10	100,000	24,900	2,133	0.836	1,785	23,115	4,256	25,982	49,097	0.1833	9001
11	110,000	24,900	1,668	0.822	1,371	23,529	5,024	30,109	53,638	0.1681	9017
12	120,000	24,900	1,305	0.807	1,053	23,847	7,232	35,945	59,792	0.1554	9294



Online Dispatch

In 2008, Fleet Administration began using an electronic reservation and dispatch system. This system allows a user to reserve a vehicle online up to several months in advance. The user is given a code that allows him or her to retrieve and return the vehicle’s keys to a locked key box. This efficiency made it possible for Fleet Administration to eliminate an FTE in 2009 for staffing the dispatch function at the Goat Hill garage.

With this efficient and cost effective online system we have been able to expand to include key boxes for pooled vehicles at King Street Center and at the Black River complex. Fleet Administration is currently working with the Department of Natural Resources and Parks and the Road Services Division to possibly consolidate their vehicles into the King Street Center key box dispatch system. By making the use of pooled vehicles more convenient and accessible for employees, agencies are more comfortable reducing their dedicated fleets which saves the county money.

Contract Services

Fleet Administration provides contract services to several county and other government agencies. The division provides contract vehicle maintenance for Link light rail, the U.S. Marshall, six State of Washington agencies, and several water districts and small cities. While the Transit Division manages and maintains light-duty vehicles in its non-revenue fleet, Fleet Administration maintains and repairs a large portion of heavy-duty vehicles in this fleet on a time-and-materials basis.

Benefits Provided by Fleet Administration

Fleet Administration could provide a variety of benefits to agencies that currently self-manage their fleets. Opportunities lie in the following areas: consistent / shared use of a common fleet management system (FASTER), coordinated ABT side-system interface management, warranty service, consistent vehicle lifecycle cost analysis and management (MACE), procurement, and stores management.

Fleet Management System (FASTER)

Fleet Administration uses a robust fleet management system called FASTER for vehicles, heavy equipment and other rolling stock.

Supervisors and mechanics on the shop floor use FASTER's real-time work-order component. FASTER tracks preventive maintenance schedules and execution, equipment repairs, and overall equipment operating costs. FASTER also provides parts-room management and warranty reimbursement tracking. It supports cost-recovery tracking, vehicle replacement planning, and customer billing. It provides detailed equipment history, including fuel consumption and outsourced work.

FASTER produces more than 100 standard reports, and can support ad hoc reporting tools. Its reporting mechanisms allow managers to compare technician productivity and equipment cost per mile or per hour. FASTER also enables direct comparisons of equipment maintenance, repair, and operating costs. This kind of detailed information is critical for data-driven decision-making. For example, with this data, pinpointing the most cost-effective replacement cycle for a particular type of vehicle is a straightforward analysis.

It has been very difficult for the county to compare the costs and operations of agencies that manage their own fleets and use a variety of systems to generate data about them. Consistent data gathering and reporting would enable timely, accurate, and data-driven decision-making. If all county agencies with fleets begin using FASTER—even if they continue to use other unique systems during a transition period—the county could benefit from having consistent data elements during the transition and will have information to support data-driven decision-making in the long term.

Consistent use of FASTER also could yield efficiencies. Today, each agency employs a different data management system and support staff. Efficiencies might be found in eliminating duplicate support staff for these systems. Fleet Administration could maintain the FASTER system for all agencies with existing staff. However, the agencies may need to retain their systems used to manage the vehicles since they may also be used to manage other components in their operation, which may negate any benefit.

ABT Side-System Interfaces

As the county moves towards countywide implementation of the ABT/EBS Financials system, each side system¹ must be interfaced to the new Financials. Development of interfaces is a major undertaking, with varying levels of inherent risk.

¹ A system that feeds information into the new Financials system.

Fleet Administration will interface FASTER data to the upcoming ABT/EBS Financials system by employing the most up-to-date technology available to the county (Web Services). It will do so in a way that does not change the processes carried out by FASTER users. Other fleets could benefit from Fleet Administration's development of these interfaces, and the county as a whole could benefit from not maintaining several different interfaces, if the other systems are no longer needed.

Warranty Service

Fleet Administration can provide a variety of benefits in the area of warranty repair services. Both of the division's shops are Blue Seal certified by the National Institute for Automotive Service Excellence (ASE), meaning 75 percent of the shop's mechanics are ASE certified. Fleet Administration's technicians have ready access to online manufacturer repair manuals, live real-time technical help, current classroom and online manufacturers' training and information along with state-of-the-art diagnostic equipment and technology.

In addition, Fleet Administration is certified to provide warranty repair service for Ford, Chrysler, General Motors, and several heavy truck and equipment manufacturers. The factory technician training results in efficient repairs and maintenance and reduced vehicle downtime. Warranty repairs at dealerships typically take three days; at Fleet Administration's shops they typically take one day.

Fleet Administration maximizes warranty revenue for the vehicles it manages by employing a warranty administrator who determines a vehicle's eligibility for warranty repairs. The division receives an average of about \$320 in warranty revenue per light-duty vehicle. Warranty revenues are credited to customer vehicle rates. Overall, warranty reimbursement revenue from vehicle manufactures can average \$300,000 or more per year depending on the age of the fleet.

Without a warranty administrator and warranty certification, repair work either would be performed in-house without the warranty revenue, or would be performed by an outside dealer. Fleet Administration can perform non-safety-related recalls at the same time as preventive maintenance, minimizing trips to dealers. For vehicles located remotely from the main garages, much of the warranty and recall work can be completed on site by field mechanics, eliminating the need to ferry vehicles.

Vehicle Life-cycle Cost Analysis and Management (MACE)

Vehicle replacement cycles are not consistent among the county's fleets. While Fleet Administration has a rigorous and data-driven process—MACE—to determine the optimal time to replace a vehicle, some of the other agencies do not have demonstrated life-cycle analyses for vehicle replacement. In some cases, these agencies use equipment long after the determined economic life. Conversely, low-mileage vehicles are being retired and auctioned prematurely. Many agencies do not have a replacement reserve, making it difficult to pay for replacement vehicles.

Procurement

Fleet Administration has expertise in procuring vehicles and specialized heavy-duty equipment tailored to meet diverse customers' needs. Efficiencies would be gained by coordinating the specifications for similar vehicles and equipment as well as the subsequent procurement process.

The resulting purchasing contracts could be used by other agencies, saving considerable staff time both in the agencies and in the Procurement and Contract Services Section. This could be achieved by including “optional items” in bids to meet the needs and objectives of multiple fleets.

Stores Management

Fleet Administration operates the Equipment and Construction Materials Supply Section (Stores) which was established to provide acquisition, warehousing and distribution support to Fleet Administration and the Road Services Division’s Traffic Operations and Roads Maintenance sections. Fleet Administration also provides Stores service to more than 220 local cities and jurisdictions under a reimbursable arrangement.

Stores provides one-stop shopping and can place special orders. Agencies that use Stores recognize an immediate benefit of lower prices from volume purchasing and competitive bidding. These agencies also benefit from a reduction in paperwork and effort related to the separate procurement of parts and supplies. These agencies spend less time writing contracts, processing invoices, making accounts-payable transactions, issuing checks, maintaining files, and reconciling invoices. Stores provides detailed cost accounting to track costs at a project level.

Over the years, Fleet Administration has implemented policies and practices to reduce costs while continuing to provide high quality service that is responsive to users’ needs. An example is parts inventory: Instead of sending obsolete parts to surplus, where the parts are sold at a significant loss, the current vendor contracts require that obsolete items be returned to the vendor for the market price minus a nominal restocking fee. In addition, all invoices are processed for payment to take advantage of early payment discounts negotiated in the contracts. This provides annual savings of over \$40,000. An additional \$40,000 is saved annually as a result of Stores’ comparison shopping to purchase parts at the lowest possible price.

Challenges

While efficiencies could be gained by further consolidating the county's fleets, potential challenges must be overcome. These include contractual issues, remote locations, differing operating hours, and concerns about fund restrictions.

Contractual Issues

The majority of mechanics employed by the various fleets are in JCC Local 289. However, the mechanics in the Transit Division are in ATU Local 587. Any changes in the organizational structure of vehicle and equipment maintenance would have to be accomplished in consultation with the unions.

Remote Locations and Different Operating Hours

Consolidation of fleet maintenance and repair functions may provide efficiencies by reducing the overall number of fleet maintenance facilities in the county; however, we expect the majority of efficiency gains to come from consolidated management and maintenance of light-duty vehicles. Because these vehicles are kept in many locations, Fleet Administration would likely need more than the two maintenance shops it currently occupies. Although Fleet Administration's current shops have some capacity to serve additional vehicles, there is a limit to the number of vehicles that could be efficiently accommodated at these sites. An additional issue is that any potential efficiency of facility consolidation could be negated by longer driving distances to service vehicles and by a corresponding increase in vehicle downtime. (A map showing the location of county fleet shops is in Appendix A.)

The Solid Waste Division informed us that its heavy-duty equipment must be maintained and repaired on site to support the continual hours of operation of the transfer stations and landfill. This challenge could be addressed by deploying Fleet Administration's five field mechanics to various locations in King County to make emergency repairs quickly. Because of the complexity of Solid Waste's operations and the number of transfer stations that could require mobile repair support, current Fleet Administration resources may not be sufficient to perform this work. Field mechanics in Fleet Administration Division could be utilized as back-up resources for Solid Waste and Airport mechanics (for vacation and / or emergency call-outs) as a near term efficiency.

The Transit Division currently maintains equipment such as the wreckers and forklifts at base locations throughout the county. These vehicles are on 24/7 operations or emergency standby. The light duty vehicles may also undergo repair in the event of an emergency at the bases.

The hours of operation at the shops must be further evaluated. At present, the Orcas Garage is open from 7 a.m. to 4 p.m., Monday through Friday, and the Renton Garage is open 6 a.m. to 7:30 p.m., Monday through Friday. The hours of operation at each shop can be extended when necessary to provide vehicle and equipment maintenance and repair service during an emergency event. To serve the needs of all the agencies, Fleet Administration may need to extend the hours of operation to include a swing shift as well as weekend hours for certain business lines. This could add to the costs will require further refinement of the numbers.

Fleet Administration currently manages the purchase and replacement of vehicles and equipment for the Wastewater Treatment Division's Biosolids program. However, as the equipment is used either in eastern Washington or Hancock Tree Farm—formally known as Weyerhaeuser Timber Company—it would be impractical and inefficient to deploy a field mechanic to the sites or bring the equipment into a Fleet Administration garage for service. Continued use of contract maintenance services would be more cost-effective for this program.

While all the agencies we evaluated have need for remote service and expanded service hours, the frequency and magnitude of the need differs. This issue is addressed later in this report's agency analysis.

Fund Restrictions

RCW 43.09.210 requires that all services rendered or property transferred from one fund or department to another must be paid for at true and full value by the receiving fund or department, and that no fund or department can benefit financially from another. Fleet Administration's rates have been audited by the State Auditor's Office, the King County Auditor, and Executive Audit Services. All have found that the division's rates are in full compliance with state and local law and policies.

OMB Circular A-87 regarding allowable costs charged to federal awards allows equipment depreciation but does not allow equipment replacement charges. The Washington State BARS manual requires that Equipment Rental and Revolving (ER&R) funds identify the replacement component of rates to ensure that federal grants are charged only for the allowable portion of the rate. Fleet Administration is in full compliance with the BARS manual regarding A-87 allowable costs.

Because of these requirements, fleet assets can be managed and accounted for at a fund level. This was addressed with earlier fleet consolidations by establishing Wastewater ER&R and Public Works ER&R funds for Wastewater and Road Services Divisions' assets (respectively). Any transfer of assets and/or establishment of new funds would require some administrative resources in the customer agencies for financial analysis, audit, and verification.

In addition, before Fleet Administration could begin managing the fleet of another division, it would have to be demonstrated that this is the fiscally prudent option for the division in question.

Agency Analysis

A key part of our study was an estimate of cost savings and efficiencies that might be gained by consolidating fleets currently maintained separately by Public Health, King County International Airport, Transit non-revenue vehicles, and Solid Waste. This section includes the following information for each of these agencies:

1. A description of the agency's current fleet maintenance operations, noting any special requirements.
2. Cost comparisons based on the data provided by the agency and Fleet Administration's cost estimates for the vehicles in the agency's fleet.
3. Additional potential efficiencies unique to the agency.
4. The steps necessary for Fleet Administration to assume the management and maintenance of the fleet.

This section also includes information about the Department of Assessment's use of the Runzheimer program to manage employees' use of their own vehicles.

Department of Public Health

Current Fleet Maintenance Operations

Public Health's fleet is maintained by the City of Seattle under a memorandum of agreement (MOA). The city provides vehicle equipment leases, vehicle fuel, and vehicle maintenance and repair. This MOA is authorized by King County Ordinance No. 5232 and City of Seattle Ordinance No. 109478, and has been in place since 1981.

The city currently leases 228 vehicles to Public Health; Fleet Administration owns and maintains an additional 20 Public Health vehicles. All of the vehicles leased to Public Health are light-duty vehicles similar to those Fleet currently maintains.

Public Health's fleet has relatively low mileage. On average, Public Health vehicles traveled 406 miles per month or 4,872 miles per year in 2009. The Vehicle Utilization Committee has determined that most Public Health vehicles with low mileage were justified based on the number of days used and the agency's business needs.

To perform scheduled preventative maintenance, the City of Seattle shuttles Public Health's leased vehicles from its 30 sites to the city's maintenance shops after Public Health's operating hours. The city has three maintenance facilities where Public Health vehicles are maintained, two in downtown Seattle (at SeaPark and Charles Street) and one in the North Haller Lake area. The majority of Public Health's locations with vehicles are in the Seattle downtown core. Maintenance and repair is performed overnight so that Public Health employees have access to their vehicles during business hours. Public Health indicated that losing this service would affect employees' productivity.

Comparison of Operations and Maintenance Costs

We compared the operating and maintenance costs charged by the City of Seattle with Fleet Administration's estimated costs using the average costs of maintaining a fleet similar to the Public Health fleet. We concluded that Fleet Administration would charge about \$211,000 less per year than the city currently charges for the maintenance of the same mix of vehicles. The assumptions are identified in the footnotes.

2010 City of Seattle total charges to Public Health:	\$1,073,811 ²
2010 Fleet Administration estimated operations and management costs:	\$862,809 ³

Public Health provided the costs of maintaining their fleet vehicles in response to the questionnaire and in several follow up communications. The \$1,073,811 represents City of Seattle lease cost for 2010, 2008 fuel costs, after-hours maintenance services, vehicle damage, special maintenance and vandalism repairs.

Fleet Administration's 2010 estimated operations and management costs were developed using Fleet's existing rental rate methodology applied to the existing Public Health vehicles and replacement cycle. The average cost per mile (which includes Fleet's overhead) of similar Fleet vehicles was then multiplied by the actual annual miles driven for each vehicle.

Additional Potential Efficiencies

We identified the following potential efficiencies that could be achieved by consolidating the Public Health fleet into Fleet Administration:

Overhead Costs

Public Health paid about \$64,000 to the City of Seattle to cover overhead costs. Consolidation of Public Health's vehicles would eliminate these overhead payments, for immediate savings. The county's total overhead costs would not increase due to consolidation of Public Health vehicles, but per-unit overhead allocation would decrease as it is spread to a larger number of units, benefiting the county as a whole.

Shuttle Service Costs

If Public Health's fleet was maintained by Fleet Administration, Public Health could choose to pay for shuttle services to maintenance shops, paying the fully-burdened shop labor rate for the shuttle time. This would increase the cost estimate listed above. Cost savings from the current model (represented by the City of Seattle charges listed above) might be found if Public Health employees were to shuttle vehicles to the maintenance shops or field mechanics serviced vehicles on site. An analysis must consider the fully-burdened shop labor rate charged by Fleet Administration (\$79.50 per hour) and the salaries of Public Health employees assigned fleet vehicles (assuming a 30 percent burden rate). Many Public Health employees' work is revenue

² Total charges include 2010 contract for vehicle use and 2008 fuel and unforeseen maintenance charges.

³ This estimate does not include after-hours maintenance services. Fleet Administration is not currently equipped to provide after-hours services for scheduled maintenance. Fleet could provide this service by adding a second shift, at additional cost for the shift differential. The shuttle services could also be provided during normal Fleet business hours at additional cost.

This estimate also assumes a similar 10-year vehicle lifecycle.

backed by fees or reimbursements, so those revenues would need to be considered in cost benefit analysis as well. A list of Public Health job classifications and salaries is available upon request.

Necessary Steps for Consolidation

The following steps would have to be taken for the Fleet Administration to successfully assume the management and maintenance of Public Health's fleet.

MOA Amendment

King County reserves the right to amend the MOA and terminate the City of Seattle's fleet management services. Amendment of the MOA would require the signatures of authorized representatives of the parties. The City of Seattle has indicated a willingness to consider amendment of the MOA to address King County's needs.

Vehicle Ownership

The county would need to resolve the question of vehicle ownership and identify contributions for replacement.

Assuming that Public Health has no ownership interest in any City of Seattle vehicles, Public Health could phase in the purchase of similar vehicles within its existing budget.

Assuming that Public Health has some ownership interest in the City of Seattle's vehicles, the value of ownership could be used to offset the transfer of vehicle ownership to King County.

Fleet Administration's Needs

Based on an assumption that Public Health would be the only agency to consolidate its fleet into Fleet Administration,⁴ Fleet Administration would require the following additional resources to responsibly assume the management and maintenance of the Public Health fleet:

1. Additional staff:
 - 2 automotive technicians
 - 1 equipment maintenance specialist
 - 1 stores inventory specialist (needed if the Motor Pool Maintenance shop must extend its operating hours to 7:30 p.m. to accommodate additional vehicles)
2. Other needs, estimated at a cost of about \$35,000:
 - Equipment (hoists)
 - Diagnostic and other miscellaneous equipment

The cost of the staff is included in the estimated operations and management costs listed above.

Agency Review

Any proposal to transfer vehicles and maintenance must meet the agency's business needs. Further review of the agency's business needs would be required.

⁴ Full consolidation of vehicles and equipment for all agencies would provide additional savings by requiring fewer additional staff and less equipment and infrastructure due to economies of scale.

King County International Airport

Current Fleet Maintenance Operations

King County International Airport's fleet vehicles and equipment are maintained on site by two staff technicians.

KCIA must maintain strict compliance with FAA regulations. Any changes to the airport's fleet operations must be made in consultation with the FAA. However, nothing legally prohibits Fleet Administration from maintaining KCIA's fleet.

KCIA currently owns and maintains a fleet of 48 light-duty vehicles and 49 pieces of heavy-duty equipment. This fleet's mix of vehicles is similar to that which Fleet Administration currently maintains. The light-duty vehicles averaged 5,900 miles each in 2008, for a total of approximately 290,000 miles in 2008.

KCIA also owns and maintains 41 small tools and smaller non-vehicle pieces. Our analysis concluded that these pieces should not be consolidated as it is more cost-effective to have a vendor repair shop perform the maintenance. The labor rate of small tool repair shops is lower than that of Fleet Administration's shop. This practice is consistent with most agencies' maintenance operations for small equipment. Fleet Administration could maintain this equipment and charge on a parts-and-labor basis, without providing inventory management services.

Special Maintenance Services

KCIA currently owns and maintains 18 vehicles for the King County Sheriff's Office (KCSO). These vehicles are not associated with the airport's police/fire-service contract with the KCSO. The airport's two fleet technicians also maintain and repair the Airport Rescue and Fire Fighting vehicles. Any technicians working on KCIA property and on specialized airport vehicles must have special training on airport procedures, operations and safety.

Special Support Needs

KCIA requires 24/7 on-call support in case of a winter weather event or other special need. Fleet Administration has established procedures to provide 24/7 on-call and emergency support services to customers.

Comparison of Operations and Maintenance Costs

We compared KCIA's operating and maintenance costs with Fleet Administration's estimated costs using data made available by KCIA and Fleet Administration's average costs of maintaining a fleet similar to the KCIA fleet. We concluded that Fleet Administration would charge about \$20,000 more per year than KCIA's current costs for maintaining the same mix of vehicles. However, the KCIA costs do not include the division's overhead costs. Other assumptions are identified in the footnotes.

2008 Airport maintenance cost report:	\$258,055 ⁵
2010 Fleet Administration estimated operations and management costs:	\$278,198 ^{5/6}

⁵ Excludes costs of special fire rescue vehicles. KCIA's O&M cost for these vehicles was \$31,002 in 2008. Because Fleet Administration has no comparable vehicles in its fleet, further analysis would be needed to provide cost estimate for these vehicles

KCIA provided the costs of maintaining their fleet vehicles in response to the questionnaire and follow up communications. The \$258,055 represents 2008 fleet maintenance costs excluding costs for three fire rescue vehicles and 56 pieces of small shop equipment.

Fleet Administration's 2010 estimated operations and management costs for light duty vehicles were developed using Fleet's existing rental rate methodology applied to the existing KCIA vehicles and replacement cycle. The average cost per mile (which includes Fleet's overhead) of similar Fleet vehicles was then multiplied by the actual annual miles driven for each vehicle. The operations and management costs of heavy equipment averages about 125 percent of annual replacement costs, including Fleet Administration's overhead costs. The actual costs will vary based on usage. To be consistent with KCIA's costs, this also excludes the costs for three fire rescue vehicles and 56 pieces of small shop equipment.

Additional Potential Efficiencies

We identified the following potential efficiencies that could be achieved by consolidating KCIA's fleet into Fleet Administration.

Vehicle Replacement Budgeting

KCIA's vehicle replacement costs are similar to Fleet Administration's, due to a similar procurement practice. However, the airport does not collect replacement funds annually—a practice that enables timely replacement of vehicles and equipment and helps to avoid increased lifecycle costs. The airport funds vehicle replacement through transfers from its operating fund to its capital improvement program fund. In recessionary periods, these transfers from the operating fund may not be sufficient to fund timely replacements, as has been the case in past years.

Optimum Lifecycle

Our analysis of the airport's equipment inventory found that the majority of the inventory, including emergency equipment, has exceeded its useful and economic life. When equipment becomes obsolete, repair parts become hard to obtain, increasing downtime and jeopardizing the availability of vehicles and equipment during an emergency event. Timely replacement eliminates the need for additional, underutilized back-up equipment or the use of outside vendors. Benefits of timely replacement are further discussed elsewhere in this report.

Necessary Steps for Consolidation

The following steps would have to be taken for Fleet Administration to successfully assume the management and maintenance of KCIA's fleet.

Asset Transfer

KCIA's fixed assets would have to be transferred to Fleet Administration in strict consultation with FAA. Contributions for equipment replacement may be identified within the Airport Fleet Capital Project fund. The benefits of creating a separate equipment rental and revolving fund for the KCIA fleet should be further assessed.

⁶ Based on Fleet Administration's experience developing rates, the operating and maintenance costs of heavy equipment averaged about 125 percent of annual replacement costs, including Fleet Administration's overhead costs. Actual cost may vary based on actual usage, Fleet Administration's best practices, and critical scheduled preventative maintenance to ensure maximum equipment availability and readiness..

Training

Fleet Administration would have to work with KCIA to identify any necessary training required for Fleet staff working on KCIA property.

Fleet Administration's Needs

Based on the assumption that KCIA would be the only agency to consolidate its fleet into Fleet Administration,⁷ Fleet would require the following resources to responsibly assume the management and maintenance of the KCIA fleet:

1. Additional staff:
 - 2 automotive technicians
 - 1 equipment service maintenance specialist
 - 1 stores inventory specialist (needed if the Motor Pool Maintenance shop must extend its operating hours to 7:30 p.m. to accommodate additional vehicles)
2. Other needs, estimated at a cost of about \$35,000:
 - Equipment (hoists)
 - Diagnostic and other miscellaneous equipment
3. Field maintenance truck, possibly, depending on existing mechanics truck in KCIA inventory

The cost of the staff is included in the estimated operations and management costs listed above.

Management System Installation

The FASTER fleet management system software would have to be made installed on KCIA's computer.

Agency Review

Any proposal to transfer vehicles and maintenance must meet the agency's business needs and be in strict compliance with FAA regulations.

Transit Non-Revenue Vehicle Fleet

Current Fleet Maintenance Operations

The Transit Division has 11 employees who maintain the light-duty vehicles in its non-revenue vehicle (NRV) fleet on site. This group is responsible for the procurement of all NRV vehicles and other mobile equipment for the Transit Division. The employees are in the following positions:

- 1 lead technician
- 4 technicians
- 1 equipment service worker
- 1 millwright – would need to be retained by Transit

⁷ See note 4 on page 17.

- 1 supervisor
- 1 chief
- 1 project program manager II
- 1 buyer

NRV's technicians are included in the Local 587 union contract, which provides for annual "pick" assignment. The Local 587 contract expires on 10/31/2010 and is currently under negotiation.

Fleet Administration currently maintains some of Transit NRV's heavy equipment at direct charge for parts and labor and maintains the Division's vehicles used in support of Sound Transit's LINK light rail system.

Vehicle Mix and Utilization

Transit currently owns and maintains a fleet of 413 light-duty vehicles and 120 pieces of heavy-duty equipment. The fleet's mix is similar to the fleet that Fleet Administration currently maintains. The light duty vehicles averaged 8,004 miles per light-duty vehicle in 2008, for a total of 3,457,707 miles in 2008. The Transit Division implemented a motor pool at the King Street Center for Transit employee use and has reduced the fleet by six vehicles. The Division also increases the utilization of vehicles through a rotation schedule between lower and higher utilized vehicles.

Special Maintenance Services

The King County Sheriff's Office contracts with the Transit Division for security services. Transit NRV maintains KCSO's 77 transit-security vehicles in its maintenance shop. The South Lake Union Street Car vehicles are also maintained by the Transit Division.

Special Support Needs

NRV's current shop hours are 6 a.m. to 2:30 p.m., Monday-Friday. However, seven Transit bus bases provide 24/7 repair on-demand to meet service needs. The Transit Division maintains its heavy-duty wreckers, forklifts and push balls at the transit bases because they are on 24/7 operational or emergency standby. The light duty vehicles may also be repaired at the bases in the event of an emergency. Fleet Administration has established procedures to provide 24-7 on-call and emergency support services to customers.

Transit vehicles must be clearly marked as "Transit" and only driven by Transit employees per Homeland Security requirements, which would preclude rotation with other agencies.

Comparison of Operations and Maintenance Costs

We compared Transit NRV's operating and maintenance costs to Fleet Administration's estimated costs using the average costs of maintaining a fleet similar to the Transit NRV fleet. We concluded that Fleet Administration would charge about \$176,000 more per year than Transit NRV's current costs for the maintenance of the same mix of vehicles. However, Transit NRV's costs do not include fully loaded overhead but are allocated as a cost of supporting the

revenue fleet, while Fleet Administration’s estimates do include overhead. Neither estimate includes county overhead allocation measures. Other assumptions are identified in the footnotes.

Light-duty vehicles	\$1,962,641 ⁸
Heavy-duty vehicles (maintained by Fleet Administration)	<u>\$308,032</u>
Total 2008 NRV maintenance cost:	\$2,270,942
2010 Fleet Administration estimated operations and management costs:	\$2,446,865 ⁹

Transit staff provided the costs of maintaining their fleet vehicles in response to the questionnaire and follow up communications. The \$2,810,497 represents 2008 fleet maintenance costs including the following items: intragovernmental payments to Fleet Administration- \$294,136, salaries (includes procurement labor) - \$1,064,578, services - \$-34,453, supplies - \$909,656, tires - \$22,860, and fuel - \$553,720.

Fleet Administration’s 2010 estimated operations and management costs for light duty vehicles were developed using Fleet’s existing rental rate methodology applied to the existing NRV vehicles and replacement cycle. The average cost per mile (which includes Fleet’s overhead) of similar Fleet vehicles was then multiplied by the actual annual miles driven for each vehicle. The operations and management costs of heavy equipment averages about 125 percent of annual replacement costs, including Fleet Administration’s overhead costs. The actual costs will vary based on usage. To be consistent with KCIA’s costs, this also excludes the costs for three fire rescue vehicles and 56 pieces of small shop equipment.

Additional Potential Efficiencies

We identified the following potential efficiencies that could be achieved by consolidating Transit NRV’s fleet into Fleet Administration.

Vehicle Replacement Budgeting

Transit NRV’s vehicle replacement costs are similar to Fleet Administration’s, due to a similar procurement practice. However, replacement funds are not collected annually—a practice that enables timely replacement of vehicles and equipment and helps to avoid increased lifecycle costs. Vehicle replacement is funded by Transit’s capital funds. However, in recessionary periods, capital funds may not be sufficient to fund timely replacements. The Transit Division follows the best management practices for fleet replacement as generated by the Fleet Administration MACE model; this was reviewed and confirmed as part of the recent 2006 and 2009 County Audits that included NRV. As a result, the majority of vehicles are replaced using the same criteria as Fleet Administration.

The Transit Division currently funds NRV vehicle replacement as a line item in the capital budget. The Division stated that the highest priority of the capital program is to maintain

⁸ Includes the costs of salaries, services, fuel, supplies and tires. Does not include Transit Division or County overhead or the cost of the NRV facility.

⁹ This estimate includes Fleet Administration overhead less County overhead. This cost estimate uses Fleet’s cost-per-mile measure for similar light duty vehicles. Fleet Administration estimated the operating and maintenance cost for heavy equipment at 125 percent of the annual replacement cost, based on its rental rate’s latest two-year average ratio, and Fleet’s best practices in maintaining heavy equipment.

infrastructure and as a result, systematic replacement of NRV vehicles is fully funded in the program.

Fleet Administration rental rates include both an operation and maintenance cost and a contribution for replacement. These costs are considered an operating expense for the agencies. A shift from the current method of accounting for these costs as a Transit capital expense to an operating expense would result in an increase in Transit's cost per hour with no change in the operation.

Staff Reductions

A reduction of one employee would be feasible if this fleet was consolidated, as Fleet Administration could eliminate one of the lead/supervisor positions to maintain these vehicles.

Data-Driven Decision-Making

Transit NRV staff have indicated that although Transit NRV's data management system, M5, is not identical to Fleet Administration's FASTER system, it could produce data comparable to that produced by the FASTER system. Continued comparison of maintenance and operational costs, as done for the 2006 and 2009 county audits help identify cost-savings measures, whether or not Transit NRV is consolidated into Fleet Administration.

Use of the NRV facility

The NRV facility was funded with FTA funds, which restrict any use to only Transit related activities. If the existing maintenance shop can be retained, no additional infrastructure needs were identified.

Necessary Steps for Consolidation

The following steps must be taken for Fleet Administration to successfully assume the management and maintenance of Transit NRV's fleet.

Asset Transfer

Transit NRV's fixed assets would have to be transferred to Fleet Administration. Contributions for equipment replacement may be identified within Transit's Capital Fund. Also, the benefits of creating a separate equipment rental and revolving fund for the Transit NRV fleet would have to be further assessed.

Fleet Administration's Needs

Based on the assumption that Transit NRV would be the only agency to consolidate its fleet into Fleet Administration,¹⁰ Fleet would require the following resources in order to responsibly assume the management and maintenance of the Transit NRV fleet:

1. Additional staff:
 - 4 automotive technicians
 - 1 equipment service maintenance specialist
 - 1 stores inventory specialist

¹⁰ See note 4 on page 17.

1 chief or lead technician

1 supervisor

1 administrative staff

The cost of the staff is included in the estimated operations and management costs listed above.

Management System Installation

The FASTER fleet management system software would have to be installed on the Transit Division's computers.

Agency Review

Any proposal to transfer vehicles and maintenance must meet the agency's business needs.

Solid Waste Division

Current Fleet Maintenance Operations

Solid Waste Division staff maintains its own fleet on site, at Cedar Hills shop/Cedar Hills Landfill. Staffing at the maintenance shops consists of 54 employees, as follows:

2 supervisors

2 maintenance planners/schedulers

13 equipment service and maintenance specialists/heavy-duty (HD)

16 automotive machinists HD1

2 automotive machinists HD2 (lead)

10 metal fabricators

4 utility worker assistants*

2 technical information processing*

1 electrician I*

1 carpenter I*

1 automated scale technician*

Solid Waste maintenance staff are included in either the Local 289 or the Local 302 contracts.

Vehicle Mix and Utilization

Solid Waste currently owns and maintains a fleet of 59 light-duty vehicles and 522 pieces of heavy-duty equipment. The Solid Waste fleet inventory also includes 89 pieces of other equipment, including box containers and fuel pumps.¹¹ The mix of the fleet is similar to that which Fleet Administration currently maintains. In 2008, the light-duty vehicles averaged 12,214 miles each, for a total of 5,215,434 miles. The heavy equipment averaged 468 hours per piece of equipment, for a total of 89,344 hours used. The vehicles, however, do require additional maintenance beyond which Fleet Administration currently provides that are specific to the

* These positions would be required at the Solid Waste maintenance shop whether or not the fleet is consolidated into Fleet Administration.

¹¹ At this time, box containers and fuel pumps are not included in the Fleet Administration cost estimates.

business needs for solid waste transfer and disposal. These include frequent power washing and repairs due to the demanding operating environment and materials that are present in the solid waste stream.

Maintenance Shop Details

The Solid Waste maintenance shop consists of the following infrastructure: 3.5 mechanic bays, one tire shop bay, two weld shop bays, and one parts/stores bay. The shop hours are 6 a.m. to 11 p.m., Monday-Friday, and 6 a.m. to 4:30 pm, Saturday and Sunday. To staff the weekend shop hours, Solid Waste historically used overtime hours. In 2008, Solid Waste's overtime measured 10,874 hours at a cost of \$313,585. In addition to the fleet inventory, the Solid Waste maintenance shop maintains static equipment unique to solid waste disposal such as tippers and box containers. Mobile mechanics service equipment at transfer stations and drop boxes in addition to equipment at the Cedar Hills Landfill.

Capital Replacement

Solid Waste has a capital equipment recovery fund (CIP fund 3810) that provides for the scheduled replacement of all fixed assets. The current funding policy for the Capital Equipment Replacement Program (CERP) is based on a six-year rolling average of the estimated replacement value of equipment due for replacement within that time frame. The estimated replacement value is asset original cost adjusted for capitalized repairs and factors for inflation and salvage value. The goal of this funding policy is to maintain a recovery fund balance between 15 percent and 20 percent of total CERP Inventory replacement value. As of 2009, the fund balance was approximately 18 percent of the net replacement cost of currently held CERP Inventory. Fund contributions are made monthly as required by King County Code 4.08.280.

Comparison of Operations and Maintenance Costs

We compared Solid Waste's operating and maintenance costs to Fleet Administration's estimated costs using the average costs of maintaining a fleet similar to the Solid Waste fleet. Due to the complexity of the operations and the unique business needs for Solid Waste, as well as recent and pending operational process changes, it is not possible to identify a meaningful comparison of costs at this time. There will need to be follow-up analysis regarding cost comparisons when Solid Waste's new operating practices have been in effect and are more static.

Additional Potential Efficiencies

We identified the following potential efficiencies that could be achieved by consolidating the Solid Waste fleet into Fleet Administration.

Vehicle Replacement Budgeting

Solid Waste's vehicle replacement costs are similar to Fleet Administration's, due to a similar procurement practice. However, Solid Waste's replacement budget calculation is different from that of Fleet Administration. Solid Waste's replacement budget is based on a six-year rolling average of the estimated replacement value of equipment due for replacement within that time frame. Fleet Administration's budget is based on current purchase price and is identified as a part of the rental rate calculation. Although our analysis, based on Fleet Administration's methods, identified more than \$1 million difference in the annual budget authority, Solid Waste's method allows for relatively constant contribution from the operating fund, mitigating fluctuations in the

annual operating budget, stabilizing the operating budget against the effects of dramatic tonnage decreases, and smoothing the effect of large equipment purchases on the rate model used to calculate solid waste fees.

Solid Waste collects replacement funds annually—a practice that enables timely replacement of vehicles and equipment and helps to avoid increased lifecycle costs. Vehicle replacement is funded by the division's capital asset recovery fund. This means that even, in recessionary periods, capital funds will be sufficient to fund timely replacements.

Overtime Costs

The use of overtime hours could be significantly reduced with appropriate scheduling and shift schedules. The labor contract does not state that Solid Waste must provide for overtime hours, and current practice is to schedule weekend overtime coverage at the beginning of the year. However, SWD is in the process of changing staffing to meet the needs of the operation while reducing overtime, including staffing on weekends with regular schedules rather than overtime.

Light-Duty Vehicles

Fleet Administration could maintain the Solid Waste Division's 59 light-duty vehicles; however most are stationed at the Cedar Hills landfill, so on-site maintenance of these vehicles is the most practical way to address these vehicles. Seven of these vehicles are currently stationed at King Street Center and could be maintained at the Orcas shop rather than being transported to Cedar Hills for maintenance.

Optimum Lifecycle

Analysis of Solid Waste's equipment inventory indicates that some of the inventory has exceeded its useful and economic life. Repair parts for obsolete equipment become hard to obtain, increasing downtime and decreasing the vehicles' and equipment's availability. However, some equipment has been rebuilt in order to extend its useful life in an economic manner. Benefits of timely replacement are discussed elsewhere in this report. Solid Waste has been extending equipment lifetime while the transfer system is being renovated. The Bow Lake transfer station is currently being rebuilt, which will result in a significant change in equipment needs. After this project has been completed, they will reassess equipment needs for the waste transfer system. This assessment will be ongoing as other new facilities are constructed and as further operational changes occur.

Heavy-Duty Equipment

Further examination of the shop operation, including work schedules and staffing, would be necessary to determine further potential cost savings that could result from Fleet Administration maintaining the large inventory of heavy-duty equipment.

Data-Driven Decision-Making

Solid Waste Division uses the FASTER system for their equipment maintenance, but utilizes the system differently due to its different business needs. There are opportunities to identify ways to make data collection and management more consistent to enable more comparable analysis. The business needs of both divisions will need to be further assessed to see if there are additional opportunities for efficiencies in licensing or support.

Necessary Steps for Consolidation

The following steps would have to be taken for Fleet Administration to successfully assume the management and maintenance of the Solid Waste Division's vehicles and equipment.

Asset Transfer

Solid Waste's equipment and vehicles/fixed assets would have to be transferred to Fleet Administration. Contributions for equipment replacement may be identified within the capital project fund. Also, the benefits of creating a separate equipment rental and revolving fund for the Solid Waste Division's fleet must be further assessed.

Fleet Administration's Needs

Based on the assumptions that the Solid Waste Division would consolidate its vehicles and equipment and would be the only agency to consolidate its fleet into Fleet Administration,¹² Fleet Administration would require the following additional resources to responsibly assume the management and maintenance of the division's fleet:

Additional staff:

- 1 auto machinist—light-duty
- 2 supervisors
- 13 equipment service and maintenance specialist—heavy-duty (HD)
- 15 automotive machinists (HD1)
- 2 automotive machinists (HD2)
- 10 metal fabricators
- 2 Stores inventory specialists

(No additional infrastructure needs by maintaining the existing shop location at Cedar Hills)

Agency Review

Any proposal to transfer vehicles and maintenance must meet the agency's business needs.

Department of Assessments

The Department of Assessments (DOA) reimburses employees for use of their personal vehicles on the job in accordance with collective bargaining provisions. Approximately 100 employees—appraisers who are assessing property value—use their personal vehicles for their work. The department uses the services of Runzheimer International, a widely used business vehicle management company. Runzheimer calculates vehicle reimbursements for both the fixed and operating costs of vehicle ownership and operation based upon an employee's city of residence, annual business miles, driving territory and conditions.

¹² See note 4 on page 17.

While reducing costs is a primary goal of DOA, there are additional considerations about employees using personal vehicles while on county business. It is important to the Assessor that appraisers be clearly identified as representing the county when performing the field work necessary for the appraisal process. The appraisers are out in the field every other day, a schedule that lends itself to having a single county vehicle assigned to two appraisers who alternate days. The remaining employees of DOA can use the online dispatch system for Motor Pool vehicles stationed downtown and at the Black River office complex in Renton.

As a result of recent discussions, Fleet Administration and DOA are working towards phasing in the purchase of Fleet vehicles. Because of budget constraints, the transition will happen over the next several years with the goal of purchasing approximately six to seven vehicles each year (or more pending funding availability) and using vehicles with remaining life that were turned in by other agencies.

In 2008, DOA investigated potential cost savings of using county fleet vehicles rather than the current system, and found that it could potentially save approximately \$710,000 over a three-year period.

Summary of Agency Information

	Fleet Administration	Transit NRV	Solid Waste	Airport	Public Health
Number of vehicles: ▪ Light duty ▪ Heavy duty ▪ Shop, tools, other	1581 698	432 142	59 572	48 49 41	228 0
Systems: ▪ Fleet management ▪ Fuel management ▪ Parts inventory	FasterCS Fuelforce FasterCS	M5 FuelFocus M5	FasterCS Petrovend FasterCS	Maximo No fuel system indicated Maximo	City of Seattle
Replacement life cycle	Mean Annual Cost Equivalent (MACE)	Fleet Administration's MACE output	FasterCS replacement model	Fleet Administration's MACE output	10-year life cycle model
Certified warranty repair shop	YES	NO	YES	NO	YES
Unions represented	289 17 117	587 17 117	289, 302, 104 17 117	289 17 117	City of Seattle
Maintenance shop hours	M-F 6 am–7:30 pm	M-F 6 am–2:30 pm	M-F 6 am–11 pm S-S 6 am–4:30 pm	M-F 6 am–11 pm	City of Seattle
After-hours support	24/7 on call	24/7 base facilities	Yes	Weather events: Staff are on call	Not applicable
Replacement funds model	Equipment Rental and Replacement Funds	Transit CIP Fund	Capital Equipment Recovery Fund (CERP)	Airport CIP Fund	Contributes a monthly capital amount to the City of Seattle
Maintenance shop's proximity to Fleet's maintenance shops	<u>Motor Pool Shop</u> 707 S Orcas, Seattle <u>Renton Shop</u> 155 Monroe Ave NE, Renton	2.96 miles to Motor Pool Shop 16.33 miles to Renton Shop	10.67 miles from Cedar Hills to Renton Shop (not inclusive of transfer stations)	.61 miles to Motor Pool Shop 12.54 miles to Renton Shop	Variable
Procurement	Light duty: Purchase by state contract Heavy duty: Individual contracts with vendors	Light duty: Purchase by state contract Heavy duty: Individual contracts with vendors. Sometimes collaborates with Fleet Admin.	Light duty: Purchase by state contract Heavy duty: Individual contracts with vendors. Sometimes collaborates with Fleet Admin.	Light duty: Purchase by state contract Heavy duty: Individual contracts with vendors. No current collaboration with Fleet Admin.	City of Seattle: purchase by state contract for light duty
Overtime costs	\$1,024	\$3,915	\$313,585	\$3,602 (2008)	Unknown
Level of satisfaction with current maintenance operation	99% customer service survey ratings – for past 4 years	High	Satisfied	Very Satisfied	Very Satisfied

Recommendations

Our study found that King County can achieve many benefits and efficiencies by utilizing the best practices that Fleet Administration has put into place. However, it is important to note that the costs of Fleet Administration listed for each agency's fleets are planning level estimates based on historical costs of similar vehicles. Because the methods of tracking costs amongst the agencies are different between each agency and Fleet Administration further discussion of the agency's business needs and data analysis would be required before exact cost savings can be identified. After analyzing the data and reviewing the business needs of the various agencies, we recommend determining if the county should proceed with any fleet consolidation in phases. It will be vital for Fleet Administration to develop positive relationships with the agencies to facilitate a smooth transition. We recommend immediate implementation of practices that would not require supplemental budget authorization. We also recommend that any full consolidation be phased in over the next several years to allow for change management and to ensure success.

Potential Immediate Efficiencies

As we analyzed the information provided by agencies that maintain separate fleets, we identified the following potential efficiencies that could be achieved immediately without the necessity of revising budgets.

Warranty Repair Services

Fleet Administration could immediately provide warranty repair services to all county fleet vehicles for which Fleet Administration is certified. This service would also include administration and processing of paperwork. By having Fleet Administration provide this service, the agency would be assured that the work is being done by a certified shop with the proper documentation and would minimize vehicle and equipment downtime.

Service at Remote Locations

Fleet Administration employs five field mechanics equipped with the tools and technology to perform preventive maintenance and many repairs of heavy-duty vehicles and equipment used at the remote Road Service Division maintenance shops, at wastewater treatment plants and off-site facilities, and at all King County parks and associated facilities. These field mechanics can travel to locations where it would be exceptionally difficult or inconvenient to ferry vehicles or equipment to either the Renton or Orcas garages. They could provide service as needed to supplement the agencies' staff or to keep vehicles in service during emergencies. Fleet Administration could provide this service to agencies on a time-and-materials basis to supplement current operations, possibly eliminating some overtime costs for the agencies.

Equipment Purchases

There are immediate opportunities for agencies that are planning to purchase heavy equipment to partner with Fleet Administration. In some cases, these agencies may be able to utilize a contract Fleet has in place. If agencies are purchasing similar pieces in the next two years, Fleet will facilitate the coordination of these planned purchases into a joint bid document.

Potential Mid-Term Efficiencies

Countywide Use of FASTER

Fleet Administration has spent the past 12 years building and refining the FASTER system. The county could gain a variety of benefits by bringing all the fleets' data into the same platform, where a consistent level of detail would be maintained. With similar, detailed data for all vehicles, the county could more thoroughly track and report vehicle histories and compare performance measures. The costs of fuel consumption and preventive maintenance and repairs—including parts and labor—would be readily available for analysis and reporting.

The availability of detailed data would also allow agencies to determine the optimal time to replace a vehicle through data-driven analysis using the MACE model. Fleet Administration could provide this service to the agencies if they maintain their vehicle data in FASTER.

Department of Assessments Fleet

Fleet Administration has begun discussions with the Department of Assessments (DOA) to evaluate the possibility of phasing out the department's program that pays for employees' use of their personal vehicles. Fleet Administration is identifying vehicles that are no longer needed by other departments but have useful life remaining, so they can be redeployed to DOA to begin the transition from the current program to fleet vehicles.

Potential Long-Term Efficiencies

Pursue Consolidation of Other Agency Fleets

Our preliminary analysis found that the county potentially could cut costs and gain efficiencies by consolidating the Public Health, King County International Airport, Transit non-revenue vehicle, and Solid Waste fleets under Fleet Administration. However, many steps must be taken to accomplish any consolidation. Fleet Administration must consult further with the agencies to identify their business needs. Available data about the county's fleets is inconsistent, so we must obtain more comparable and detailed data in order to fully analyze consolidation opportunities. We must review the repair history of the agencies' vehicles in order to fully assess their age and condition. We also must review each agency's process for issuing work orders and repairing vehicles in order to compare current practice to a consolidated approach in which Fleet Administration would provide the full scope of vehicle and equipment maintenance and management. In the case of Public Health, the county must negotiate amendment of the memorandum of agreement with the City of Seattle. Many agencies have complex operational requirements that could negate the efficiencies that consolidation might bring. These complexities must be better understood to do a more detailed analysis. In the case of Solid Waste Division, long term planning decisions need to be made and operational process changes would need to be completed before this analysis could be done.

In addition, agencies' budgets would have to be revised and approved. If an agency requires segregation of costs, a separate fund must be created and a budget established. Fleet Administration would have to establish rental rates as well as depreciation amounts that would be transferred to the new funds to create a replacement reserve. These financial components as well as the necessary organizational changes would be incorporated into a proposed budget. Several of the agencies that might be involved in fleet consolidation (including Fleet

Administration) are on biennial budgets, so the optimal time to make these changes would be in 2011, when the next full budget will be transmitted to the County Council.

Because of the number of agency fleets involved, the complexities of moving toward consolidation, and the county's budget schedule, we recommend that Fleet Administration develop a timeline for pursuing consolidation in phases over the next several years.

Conclusion

The key to a successful transition to consolidated fleets is clear and thorough communication with the customer agencies regarding their expectations. OMB, Fleet Administration and the customer agencies need to work together closely to define business needs and performance measures. The dialog that has occurred as a result of the production of this report has indicated that all agencies are eager to identify any possible efficiencies and that they are willing to partner with Fleet Administration to see where there is potential for any cost savings. This approach could lead to lower costs for King County.

Appendix A

King County Fleet Locations

