



OFFICE OF FINANCIAL AND PROGRAM AUDIT
June 2022 QUARTERLY REPORT

BOARD OF SUPERVISORS
AUDITOR OF THE BOARD

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Fairfax County
Office of Financial and Program Audit



Jim L. Shelton, Jr., MBA, CRP (Auditor of the Board)
Jim.Shelton@FairfaxCounty.gov

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**Fairfax County
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REPORT ABSTRACT

Working under the guidance and direction of the Audit Committee (AC), the Auditor of the Board provides an independent means for assessing management's compliance with policies, programs and resources authorized by the Board of Supervisors (BOS). Further to this process, efforts are made to gain reasonable assurance that management complies with all appropriate statutes, ordinances and directives.

This agency plans, designs, and conducts studies, surveys, evaluations and investigations of County agencies as assigned by the BOS or the AC. For each study conducted, the agency focuses primarily on the County's Corporate Stewardship vision elements. The agency does this by developing, whenever possible, information during the studies performed which are used to maximize County revenues or reduce County expenditures.

To assist the Office of Financial and Program Audit (OFPA) with executing the responsibilities under our charge, members of the Fairfax County BOS submit study recommendations of which the findings and management responses are included in published studies. This process is utilized to provide the constituents, BOS and management reasonable assurance that fiscal and physical controls exist within the County.

Additionally, this agency conducts follow-up work on prior period studies. As part of the post study work conducted, we review the agreed upon managements' action plans. To facilitate the process, we collaborate with management prior to completion of studies. Through this collaboration, timelines for the implementation of corrective action and status updates are documented for presentation at the upcoming AC Meetings.

The results of studies may not highlight all the risks/exposures, process gaps, revenue enhancements and/or expense reductions which could exist. Items reported are those which could be assessed within the scheduled timeframe, and overall organization's data-mining results. The execution of the OFPA's studies are facilitated through various processes such as; sample selections whereby documents are selected and support documentation is requested for compliance and other testing attributes. Our audit approach includes interviewing appropriate staff and substantive transaction testing. OFPA staff employs a holistic approach to assess agencies/departments whereby the review is performed utilizing a flow from origination to closeout for the areas under review.

There are several types of studies performed by OFPA, e.g.; operational, financial, compliance, internal controls, etc. To that end, it is important to note; OFPA staff reserves the option to perform a holistic financial and analytical data-mining process on all data for the organization being reviewed where appropriate. This practice is most often employed to perform reviews for highly transactional studies.

SPECIAL REVENUE AND ENTERPRISE

FUNDS REVIEW

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SPECIAL REVENUE AND ENTERPRISE FUNDS REVIEW

OVERVIEW AND UPDATES

The results of this study may not highlight all the risks/exposures, process gaps, revenue enhancements and/or expense reductions which could exist. Items reported are those which could be assessed within the scheduled timeframe, and overall organization's data-mining results. **Office of Financial and Program Audit (OFPA's) studies** are facilitated through several processes such as: sample selections, compliance support documentation and various testing approaches. There are several types of studies performed by OFPA, e.g.: performance, operational, financial, compliance, etc. To that end, it is important to note OFPA staff reserves the option to perform a holistic financial and analytical data-mining process on all data for the organization being reviewed where appropriate. This practice is most often employed to perform reviews for highly transactional studies.

We performed a review of the Department of Public Works and Environmental Services (DPWES) Special Revenue and Enterprise Funds. The Special Revenue Funds are managed by the Solid Waste Management Program (SW). The Enterprise Funds are managed by the Wastewater Management Program (WW). This review was performed to identify if opportunities exist for revenue enhancement or adjustments to the General Fund Offsets.

SW is responsible for managing the collection, recycling, and disposal of more than 1.5 million tons of trash and recyclables generated in Fairfax County each year. The following services were included in this Special Revenue Funds study: Fund 40130 Leaf Collection, Fund 40140 Refuse Collection & Recycling, Fund 40150 Refuse Disposal, and Fund 40170 Landfill Ash Disposal fee for services operations. These fees are approved by the Board annually during the budget process; no State of VA approved rates exist.

WW is responsible for treating wastewater from county homes and businesses. Treatment operations are performed at several facilities throughout the region. The county owns and operates the Noman M. Cole, Jr. Pollution Control Plant located in Lorton, which treats approximately 45 million gallons of wastewater per day generated from nearly 340,000 homes and businesses. WW services are included in the Enterprise Fund 69010 Sewer Operation and Maintenance. The fees for the services are approved by the Board annually during the budget process. No State of VA approved rates exist for these services.

The test attributes and datasets used to execute this study are operating costs vs revenues, vehicle replacement, General Fund Offset methodology, surrounding jurisdiction rates benchmarking, agreements and special contracts, and disposal route performance.

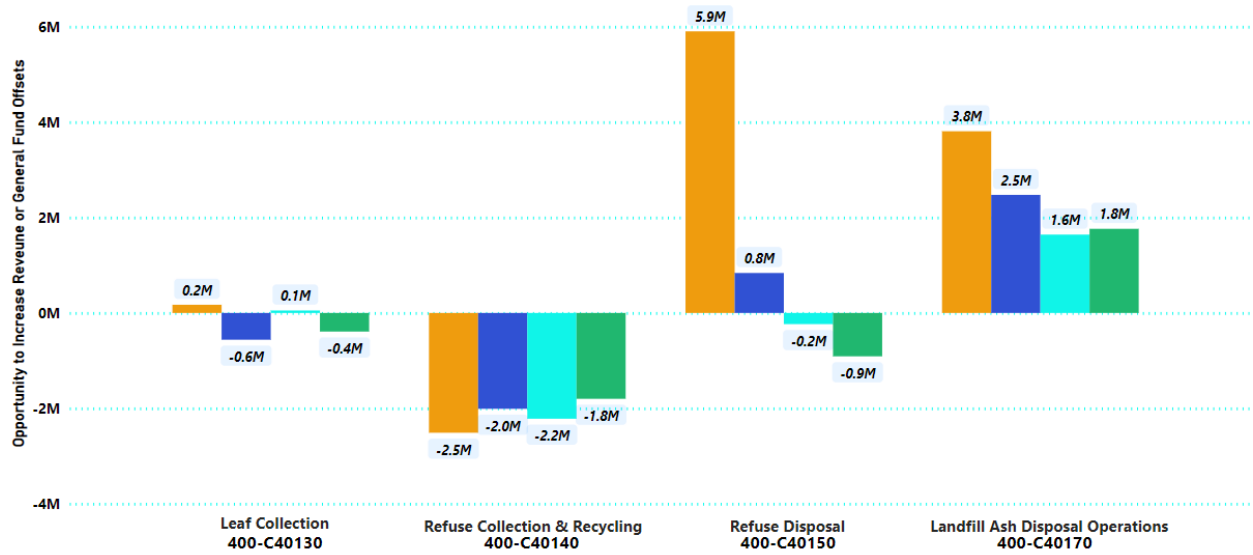
We liaised with SW and WW staff throughout the review to align our understanding of the operations with actual practices.

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Special Revenue Funds Summary

SW Operating Revenue vs Expense Analysis FY19-FY22

Fiscal Year: 2019 2020 2021 2022



Special Revenue Fund Summary FY22 Revised Budget				
Fund	Leaf Collection (40130)	Refuse (40140)	Refuse Disposal (40150)	Landfill Ash (40170)
Revenue:	\$2,367,104	\$19,659,767	\$52,383,100	\$11,063,444
Expenditures:	\$2,634,001	\$21,795,213	\$59,299,086	\$18,082,618
Unit of Measure:	~\$19B sum of Sanitary District Home Values	42,965 Homes	809,974 refuse tons	361,000 ash tons
Fee:	\$0.012 fee per \$100 of Home Value	\$400 per Unit	\$66 per Ton	\$28.44 per ton

Enterprise Fund Summary

Enterprise Fund Summary					
Fiscal Year	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Total Revenues:	\$101,440,000	\$100,470,000	\$109,220,000	\$109,250,000	\$116,713,000
Total Expenses:	\$97,498,466	\$99,233,045	\$104,645,960	\$105,517,872	\$120,126,915
General Fund Offsets:	\$2,850,000	\$2,850,000	\$2,850,000	\$2,850,000	\$2,850,000

OBSERVATION AND ACTION PLAN

The following table details the observation and recommendation for this study along with management's action plan to address it.

**Fairfax County
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LEAF COLLECTION FUND 40130 (SPECIAL REVENUE)

Observation

We performed a review of the SW Leaf Collection Fund 40130 for the purpose of identifying opportunities to adjust the fee for service rates and General Fund offset in the next fiscal year. Areas of review included: revenues, expenses, carryover, and service rates for FY18 – FY22. The FY22 financial data is from the Adopted Budget documents. Balances are transferred from this special revenue fund at year-end to the General Fund to partially offset central supports services. The central support services received by this operation are: Human Resources, Purchasing, Budget and other administrative services. The Leaf Collection Fund is supported by revenues (generated by a Levy/Fee per \$100 of Tax Assessed Value) for homes in the sanitary district. The FY18-FY22 revenues ranged between ~\$2.2M to ~\$2.4M.

The results of our analysis are below:

SW FY18 to FY22 Ending Balances Plus Carryover

Leaf Collection (40130) Operating Expenses and Rate					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Total Operating Revenues:	\$2,123,367	\$2,193,300	\$2,103,104	\$2,189,885	\$2,279,513
Total Operating Expenses:	\$1,857,212	\$1,981,341	\$2,238,098	\$2,004,246	\$2,259,001
Operating Balance:	\$266,155	\$211,959	(\$134,994)	\$185,639	\$20,512
General Fund Offsets:	\$0	\$0	\$54,000	\$54,000	\$54,000
Operating Balance minus Offsets:	\$266,155	\$211,959	(\$188,994)	\$131,639	(\$33,488)
Other Non Operating Revenue:	\$48,741	\$86,030	\$72,084	\$14,839	\$87,591
Other Non Operating Expenses:	\$0	\$0	\$354,504	\$12,986	\$375,000
Non Operating Balance:	\$48,741	\$86,030	(\$282,420)	\$1,853	(\$287,409)
Sub-Total Ending Balance:	\$314,896	\$297,989	(\$471,414)	\$133,492	(\$320,897)
Prior Year Carryover:	\$5,019,757	\$5,334,653	\$5,632,642	\$5,161,228	\$5,294,720
Total Ending Balance + Carryover:	\$5,334,653	\$5,632,642	\$5,161,228	\$5,294,720	\$4,973,823

SW FY18 to FY22 Reserve

Leaf Collection (40130)					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Percentage of Carryover:	106%	106%	92%	103%	94%
Ending Balance:	\$5,334,653	\$5,632,642	\$5,161,228	\$5,294,720	\$4,973,823
Operating Reserve 20%:	\$1,094,214	\$1,094,214	\$929,021	\$1,058,944	\$994,765
Capital Equipment Reserve 20%:	\$874,606	\$1,151,645	\$877,409	\$1,058,944	\$994,764
Rate Stabilization Reserve 60%:	\$3,365,833	\$3,386,783	\$3,354,798	\$3,176,832	\$2,984,294
Total Ending Balance:	\$0	\$0	\$0	\$0	\$0

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SW FY19 to FY22 Rate Evaluations

Leaf Collection (40130)				
Fiscal Years	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Agency Data
Actual Rate:	\$0.013	\$0.012	\$0.012	\$0.012
Effective Rate:	\$0.012	\$0.015	\$0.012	\$0.014
Rate Over/Under:	\$0.0010	(\$0.0032)	\$0.0003	(\$0.0021)
Opportunity:	\$171,555	(\$560,989)	\$51,715	(\$390,022)

Recommendation

The budget approved rate and the effective rate (calculated by OFPA) comparative analysis revealed no pattern that would lead to a conclusion which could assist in recommendations on rate adjustments or further analysis. **PFAW**

There does appear to be an opportunity to increase the general fund offset; these year-end funds have been reserved by the agency as contingencies. The funds at each year-end are carried over between **106%** and **92%**.

We recommend staff review the carryover allocation with DMB to assess opportunities to increase the agency's general fund offset.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	Will review again as part of the FY24 Annual budget process.	Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)		John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Management Response: SWM in collaboration with DMB reviews the general fund offset/general fund transfer annually in order to determine opportunities for adjustment. The review as part of the FY23 budget did not warrant an increase as the fund balances have been slightly declining over the past few years based on the rate of \$0.012 per \$100 assessment value.

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REFUSE COLLECTION & RECYCLING FUND 40140 (SPECIAL REVENUE)

Observation

We performed a review of the SW Refuse Collection & Recycling Fund 40140 for the purpose of identifying opportunities to adjust the fee for service rates and General Fund offset in the next fiscal year. Areas of review included: revenues, expenses, carryover, and service rates for FY18 – FY22. The FY22 financial data is from the Adopted Budget documents. This transfer to the General Fund partially offsets central support services in Fund 40140. The indirect costs in this fund are: Human Resources, Purchasing, Budget and other administrative services. The Refuse Collection & Recycling Fund is supported by revenues (generated by Sanitary Districts Collection Rates) for homes in the Sanitary District.

The results of our analysis are below:

SW FY18 to FY22 Ending Balances Plus Carryover

Refuse Collection (40140) Operating Expenses and Rate					
Financial Activity	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Total Operating Revenues:	\$16,593,599	\$16,892,636	\$18,549,632	\$17,882,243	\$19,150,745
Total Operating Expenses:	\$17,502,396	\$18,411,073	\$17,928,482	\$17,781,595	\$19,326,823
Operating Balance:	(\$908,797)	(\$1,518,437)	\$621,150	\$100,648	(\$176,078)
General Fund Offsets:	\$548,000	\$548,000	\$494,000	\$494,000	\$494,000
Operating Balance minus Offsets:	(\$1,456,797)	(\$2,066,437)	\$127,150	(\$393,352)	(\$670,078)
Other Non Operating Revenue:	\$558,318	\$648,428	\$877,291	\$623,069	\$509,022
Other Non Operating Expenses:	\$383,172	\$220,349	\$2,337,555	\$1,551,316	\$2,468,390
Non Operating Balance:	\$175,146	\$428,079	(\$1,460,264)	(\$928,247)	(\$1,959,368)
Sub-Total Ending Balance:	(\$1,281,651)	(\$1,638,358)	(\$1,333,114)	(\$1,321,599)	(\$2,629,446)
Prior Year Carryover:	\$9,069,970	\$7,788,319	\$6,149,961	\$4,816,847	\$3,495,248
Total Ending Balance + Carryover:	\$7,788,319	\$6,149,961	\$4,816,847	\$3,495,248	\$865,802

SW FY18 to FY22 Reserves

Refuse Collection (40140)					
Financial Activity	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Percentage of Carryover:	86%	79%	78%	73%	25%
Ending Balance:	\$7,788,319	\$6,149,961	\$4,816,847	\$3,495,248	\$865,802
Rate Stabilization Reserve 25%:	\$1,989,425	\$687,473	\$1,204,211	\$873,812	\$216,451
Capital Equipment Reserve 50%:	\$3,758,083	\$3,921,677	\$2,408,424	\$1,747,624	\$432,901
Operating Reserve 25%:	\$2,040,811	\$1,540,811	\$1,204,212	\$873,812	\$216,450
Total Ending Balance:	\$0	\$0	\$0	\$0	\$0

**Fairfax County
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SW FY18 to FY22 Rate Evaluations

Refuse Collection & Recycling (40140)					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Agency Data
<i>Actual Rate:</i>	\$345	\$350	\$385	\$370	\$400
<i>Effective Rate</i>	\$394	\$409	\$432	\$422	\$442
<i>Rate Over/Under:</i>	(\$49)	(\$59)	(\$47)	(\$52)	(\$42)
<i>Opportunity:</i>	(\$2,087,217)	(\$2,511,038)	(\$2,008,994)	(\$2,217,362)	(\$1,799,669)

Recommendation

There does not appear to be an opportunity to increase the general fund offset; the reserved year-end funds have been increasingly used over the past five years. **PFAW**

The budget approved rate and the effective rate (calculated by OFPA) comparative analysis revealed that revenue generation using the approved rates have not been sufficient to cover costs; thus, there has been consistent reliance on the agency's reserves.

We recommend staff review the established rates for Board consideration for adjustments.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	July 1, 2022	Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)		John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Concur with the recommendation to adjust established rates; the rates for 40140 will increase from \$400/unit to \$475/unit as part of the FY23 Budget.

This increase is necessary to keep pace with increased program cost, inflation, and market conditions.

This rate will be reviewed annually during the FY budget review process to determine opportunities for adjustment and to keep the program sustainable.

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REFUSE DISPOSAL FUND 40150 (SPECIAL REVENUE)

Observation

We performed a review of the SW Refuse Disposal Fund 40150 for the purpose of identifying opportunities to adjust the fee for service rates and General Fund offset in the next fiscal year. Areas of review included: revenues, expenses, carryover, and service rates for FY18 – FY22. The FY22 financial data is from the Adopted Budget documents. This transfer to the General Fund partially offsets central support services in Fund 40150. The indirect costs in this fund are: Human Resources, Purchasing, Budget and other administrative services. The Refuse Disposal Fund is supported by revenues (generated by a Disposal Billing Rate) for residents and private collectors. The FY18-FY22 revenues ranged between ~\$49.4M to ~\$52.4M.

The results of our analysis are below:

SW FY18 to FY22 Ending Balances Plus Carryover

Refuse Disposal (40150) Operating Expenses and Rate					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Total Operating Revenues:	\$47,298,505	\$50,156,310	\$49,457,455	\$49,424,427	\$50,560,780
Total Operating Expenses:	\$51,996,622	\$47,273,088	\$50,014,214	\$52,255,890	\$53,138,146
Operating Balance:	(\$4,698,117)	\$2,883,222	(\$556,759)	(\$2,831,463)	(\$2,577,366)
General Fund Offsets:	\$626,000	\$626,000	\$626,000	\$626,000	\$626,000
Operating Balance minus Offsets:	(\$5,324,117)	\$2,257,222	(\$1,182,759)	(\$3,457,463)	(\$3,203,366)
Other Non Operating Revenue:	\$2,053,294	\$1,424,499	\$1,094,626	\$1,024,990	\$1,822,320
Other Non Operating Expenses:	\$369,863	\$2,733,774	\$2,341,650	\$4,129,647	\$6,160,940
Non Operating Balance:	\$1,683,431	(\$1,309,275)	(\$1,247,024)	(\$3,104,657)	(\$4,338,620)
Sub-Total Ending Balance:	(\$3,640,686)	\$947,947	(\$2,429,783)	(\$6,562,120)	(\$7,541,986)
Prior Year Carryover:	\$76,567,190	\$72,926,504	\$73,874,451	\$71,444,668	\$64,882,548
Total Ending Balance + Carryover:	\$72,926,504	\$73,874,451	\$71,444,668	\$64,882,548	\$57,340,562

SW FY18 to FY22 Reserves

Refuse Disposal (40150)					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Percentage of Carryover:	302%	101%	97%	91%	88%
Ending Balance	\$72,926,504	\$73,874,451	\$71,444,668	\$64,882,548	\$57,340,562
Capital Equipment Reserve 10%:	\$4,983,657	\$10,436,562	\$7,144,467	\$6,488,255	\$5,734,056
Operating Reserve 15%:	\$9,942,847	\$7,086,305	\$10,716,701	\$9,732,382	\$8,601,084
Rate Stabilization Reserve 52%:	\$47,000,000	\$45,351,584	\$37,151,227	\$33,738,925	\$29,817,093
Environmental Reserve 8%:	\$1,000,000	\$1,000,000	\$5,715,573	\$5,190,604	\$4,587,245
Construction and Infrastructure Reserve 15%:	\$10,000,000	\$10,000,000	\$10,716,700	\$9,732,382	\$8,601,084
Total Ending Balance:	\$0	\$0	\$0	\$0	\$0

**Fairfax County
Office of Financial and Program Audit**

SW FY19 to FY22 Rate Evaluations

Refuse Disposal (40150)				
Fiscal Years	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Agency Data
Actual Rate:	\$64.00	\$66.00	\$66.00	\$66.00
Effective Rate:	\$57.15	\$64.96	\$66.28	\$67.12
Rate Over/Under	\$6.85	\$1.04	(\$0.28)	(\$1.12)
Opportunity:	\$5,903,290	\$837,678	(\$233,853)	(\$909,009)

Recommendation

The budget approved rate and the effective rate (calculated by OFPA) comparative analysis revealed no pattern that would lead to a conclusion which could assist in recommendations on rate adjustments or further analysis. **PFAW**

There does appear to be an opportunity to increase the general fund offset; these year-end funds have been reserved by the agency as contingencies. The funds at each year-end are carried over between **302%** and **88%**.

We recommend staff review the carryover allocation with DMB to assess opportunities to increase the agency's general fund offset.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	July 1, 2022	Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)		John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Concur with the recommendation to increase the general fund offset/general fund transfer; this amount will increase from \$626,000 to \$707,000 as part of the FY23 Budget.

**Fairfax County
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LANDFILL ASH DISPOSAL OPERATIONS FUND 40170 (SPECIAL REVENUE)

Observation

We performed a review of the SW Landfill Ash Disposal Operations Fund 40170 for the purpose of identifying opportunities to adjust the fee for service rates and General Fund offset in the next fiscal year. Areas of review included: revenues, expenses, carryover, and service rates for FY18 – FY22. The FY22 financial data is from the Adopted Budget documents. This transfer to the General Fund partially offsets central support services in Fund 40170. The indirect costs in this fund are: Human Resources, Purchasing, Budget and other administrative services. The Leaf Collection Fund is supported by revenues (generated by an Ash Rate) for Covanta Fairfax, Inc. transporting ash debris from the E/RRF facility to the landfill. The FY18-FY22 revenues ranged between ~\$6.4M to ~\$11.1M.

The results of our analysis are below:

SW FY18 to FY22 Ending Balances Plus Carryover

Landfill Ash Disposal Operations (40170) Operating Expenses and Rate					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
<i>Total Operating Revenues:</i>	\$5,901,520.00	\$9,664,252.00	\$10,150,962.00	\$9,901,355.00	\$10,405,200.00
<i>Total Operating Expenses:</i>	\$5,603,522.00	\$4,546,350.00	\$6,567,989.00	\$6,141,078.00	\$7,050,843.00
<i>Operating Balance:</i>	\$297,998.00	\$5,117,902.00	\$3,582,973.00	\$3,760,277.00	\$3,354,357.00
<i>General Fund Offsets:</i>	\$186,000.00	\$186,000.00	\$186,000.00	\$186,000.00	\$186,000.00
<i>Operating Balance minus Offsets:</i>	\$111,998.00	\$4,931,902.00	\$3,396,973.00	\$3,574,277.00	\$3,168,357.00
<i>Other Non Operating Revenue:</i>	\$501,475.00	\$882,859.00	\$665,250.00	\$324,979.00	\$658,244.00
<i>Other Non Operating Expenses:</i>	\$643,421.00	\$1,258,640.00	\$878,370.00	\$2,349,787.00	\$11,031,775.00
<i>Non Operating Balance:</i>	(\$141,946.00)	(\$375,781.00)	(\$213,120.00)	(\$2,024,808.00)	(\$10,373,531.00)
<i>Sub-Total Ending Balance:</i>	(\$29,948.00)	\$4,556,121.00	\$3,183,853.00	\$1,549,469.00	(\$7,205,174.00)
<i>Prior Year Carryover:</i>	\$33,050,773.00	\$33,020,825.00	\$37,576,946.00	\$40,760,799.00	\$42,310,268.00
<i>Sub-Total + Carryover Balance:</i>	\$33,020,825.00	\$37,576,946.00	\$40,760,799.00	\$42,310,268.00	\$35,105,094.00

SW FY18 to FY22 Reserves

Landfill Ash Disposal Operations (40170)					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
<i>Percentage of Carryover:</i>	100%	114%	108%	104%	83%
<i>Beginning Balance</i>	\$33,020,825	\$37,576,946	\$40,760,799	\$42,310,268	\$35,105,094
<i>Active Cell Closure Liability Reserve:</i>	\$10,002,713	\$0	\$0	\$0	\$0
<i>Environmental Reserve 1.8%:</i>	\$0	\$0	\$3,261,532	\$3,384,821	\$2,808,408
<i>Capital Equipment Reserve 4%:</i>	\$0	\$13,054,194	\$4,068,560	\$4,231,027	\$3,510,509
<i>Post-Closure Reserve 78%:</i>	\$23,018,112	\$24,522,752	\$33,430,707	\$34,694,420	\$28,786,177
<i>Total Ending Balance:</i>	\$0	\$0	\$0	\$0	\$0

**Fairfax County
Office of Financial and Program Audit**

SW FY18 to FY22 Rate Evaluations

Landfill Ash Disposal Operations (40170)					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Agency Data
Actual Rate:	\$25.5	\$26.5	\$26.5	\$27.50	\$28.44
Effective Rate:	\$30.50	\$15.77	\$19.67	\$22.74	\$23.55
Rate Over/Under:	(\$5)	\$11	\$7	\$5	\$5
Opportunity:	(\$1,018,288)	\$3,808,812	\$2,475,092	\$1,642,580	\$1,763,624

Recommendation

The budget approved rate and the effective rate (calculated by OFPA) comparative analysis revealed, revenue generation using the approved rates has been sufficient to cover costs; thus, there has not been consistent reliance on the agency's reserves. **PFAW**

There does appear to be an opportunity to increase the general fund offset; these year-end funds have been reserved by the agency as contingencies. The funds at each year-end are carried over between **114% and 83%**.

We recommend staff review the carryover allocation with DMB to assess opportunities to increase the agency's general fund offset.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	July 1, 2022	Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)		John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Concur with the recommendation to increase the general fund offset/general fund transfer; this amount will increase from \$186,000 to \$209,000 as part of the FY23 Budget.

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SEWER OPERATIONS AND MAINTENANCE FUND 69010 (ENTERPRISE)

Observation

We performed a review of the WW Sewer Operations and Maintenance Fund 69010 for the purpose of identifying opportunities to adjust the fee for service rates and General Fund offset in the next fiscal year. Areas of review included: revenues, expenses, carryover, and service rates for FY18 – FY22. The FY22 financial data is from the Adopted Budget documents. This transfer to the General Fund partially offsets central support services in Fund 40130. The indirect costs in this fund are: Human Resources, Purchasing, Budget and other administrative services. The Sewer Operations and Maintenance Fund is supported by revenues (generated by connection fees, sewer service fees, availability fees, etc.) for County homes and businesses. The FY18-FY22 revenues ranged between ~\$100.47M to ~\$116.40M.

The results of our analysis are below:

WW FY18 to FY22 Ending Balances Plus Carryover

Sewer Operations & Maintenance (69010) Operating Expenses and Rate					
Fiscal Years	FY18 Actuals	FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Revised Budget
Total Operating Revenues:	\$101,440,000.00	\$100,470,000.00	\$109,220,000.00	\$109,250,000.00	\$116,713,000.00
Total Operating Expenses:	\$97,548,872.00	\$99,222,202.00	\$102,889,306.00	\$104,951,307.00	\$117,935,379.00
Operating Balance:	\$3,891,128.00	\$1,247,798.00	\$6,330,694.00	\$4,298,693.00	(\$1,222,379.00)
General Fund Offsets:	\$2,850,000.00	\$2,850,000.00	\$2,850,000.00	\$2,850,000.00	\$2,850,000.00
Operating Balance minus Offsets:	\$1,041,128.00	(\$1,602,202.00)	\$3,480,694.00	\$1,448,693.00	(\$4,072,379.00)
Other Non Operating Revenue:	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Non Operating Expenses:	(\$50,406.00)	\$10,843.00	\$1,756,654.00	\$566,565.00	\$2,191,536.00
Non Operating Balance:	\$50,406.00	(\$10,843.00)	(\$1,756,654.00)	(\$566,565.00)	(\$2,191,536.00)
Sub-Total Ending Balance:	\$1,091,534.00	(\$1,613,045.00)	\$1,724,040.00	\$882,128.00	(\$6,263,915.00)
Prior Year Carryover:	\$4,520,581.00	\$5,612,115.00	\$3,999,070.00	\$5,723,110.00	\$6,605,238.00
Total Ending Balance + Carryover:	\$5,612,115.00	\$3,999,070.00	\$5,723,110.00	\$6,605,238.00	\$341,323.00
Percentage of Carryover:	124%	71%	143%	115%	5%

Conclusion

There does not appear to be an opportunity to increase the general fund offset; the reserved year-end funds have been increasingly used over the past five years. **PFAW**

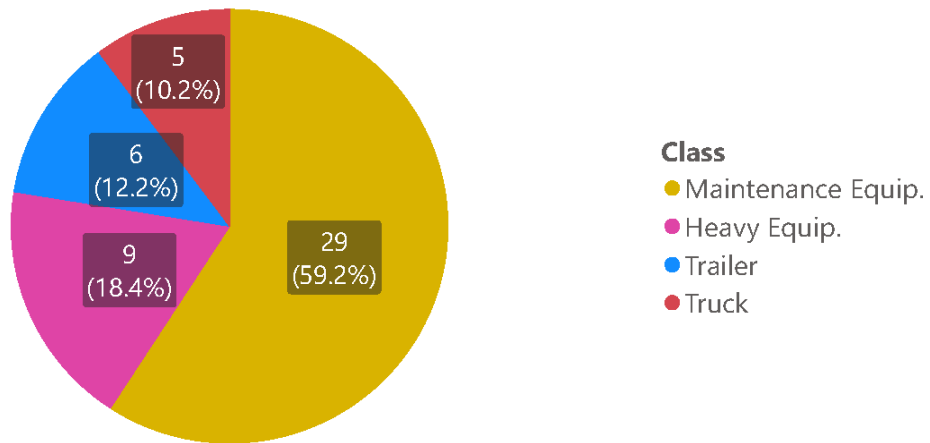
The budget approved rate and the effective rate (calculated by OFPA) comparative analysis could not be performed. This agency has many variable rates and multipliers. This analysis required fiscal and cumulative testing that could not be performed under our process. **PFAW**

WASTEWATER ROLLING STOCK/EQUIPMENT DUE FOR REPLACEMENT

Observation

We identified **49 out of 198 (or 25%)** WW rolling stock exceeding useful life and mileage (or useful life for equipment). Purported by DVS management, rolling stock/equipment are replaced when they meet age and mileage requirements. Rolling stock/equipment are reviewed annually during budget development. The past due replacement months and mileage ranged between **3 to 287 months** and **3 to 40,541 miles**. The Board issued a directive requiring **100%** of eligible fleet to be replaced with electric vehicles (EVs). The use of EVs would generate savings through electric charging by reducing fuel costs. Based on research, the United States Environmental Protection Agency (USEPA) states “switching one of your main cars to an EV could save your household approximately \$500–\$1,000 on fuel costs per year. EVs also tend to have lower maintenance costs than gasoline cars, which also reduces ownership costs”. If these estimated savings are applied to the 49 rolling stock/equipment due for replacement, it could save the county between **~\$25k - ~\$49k** annually in fuel costs. The chart below provides further details for this observation:

WW Equipment Past Replacement Date and Expected Usage (Mileage), by Class



Recommendation

We recommend WW review the rolling stock/equipment identified in this analysis as these exceed the criteria (useful life and mileage) for replacement. The continued use of rolling stock/equipment meeting these criteria will result in increased maintenance costs. Abated costs garnered from implementing these processes could be used to support costs associated with fleet replacement (including adding

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EVs/Hybrids to the fleet). Implementing this process would also reduce maintenance and fuel costs over the life of the fleet.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	<i>End of FY22, FY23, and FY24</i>	Christopher.Herrington@fairfaxcounty.gov
Ellie Codding (Deputy Director, WW)		Eleanor.Codding@fairfaxcounty.gov
Anand Goutam (Financial Manager, WW)		Anand.Goutam@fairfaxcounty.gov

MANAGEMENT RESPONSE:

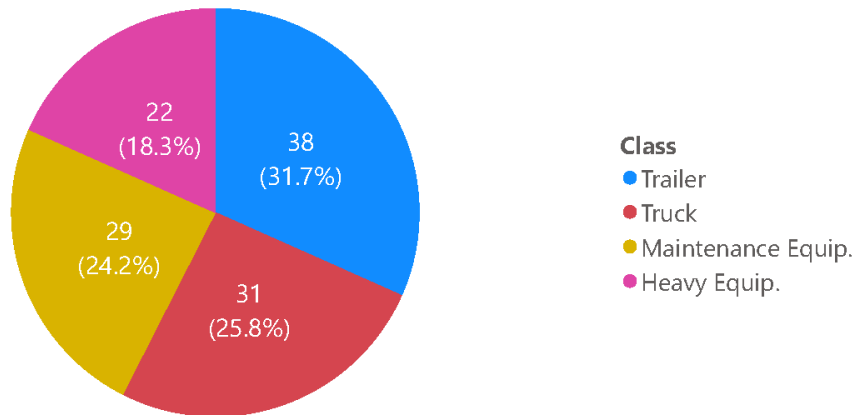
At the beginning of each budget cycle, Wastewater Management uses several criteria including age, mileage, condition, department usage, maintenance cost, and replacement cost to determine when it is necessary to replace a vehicle and/or equipment. Due to limited annual budgetary resources, the replacement cost must be balanced with other departmental needs. The WW Inventory list of 49 items contains five vehicles and 44 equipment. Two of the vehicles are on order and scheduled to be replaced in FY2022 while the other 3 are slated for replacement in the FY2023 budget. Five of the 44 equipment will be replaced in FY2022, FY2023 and/or FY2024. The remaining 39 are in good condition and we will continue to analyze them each year to determine when appropriate for replacement.

SOLID WASTE ROLLING STOCK/EQUIPMENT DUE FOR REPLACEMENT

Observation

We identified **120 out of 303 (or 40%)** SW rolling stock exceeding useful life and mileage (or useful life for equipment). Purported by DVS management, rolling stock/equipment are replaced when they meet age and mileage requirements. Rolling stock/equipment are reviewed annually during budget development. The past due replacement months and mileage ranged between **3 to 329 months** and **2 to 224,170 miles**. The Board has issued a directive requiring **100%** of eligible fleet to be replaced with EVs. The use of EVs would generate savings through electric charging by reducing fuel costs. Based on research, the United States Environmental Protection Agency (USEPA) states “Switching one of your main cars to an EV could save your household approximately \$500–\$1,000 on fuel costs per year. EVs also tend to have lower maintenance costs than gasoline cars, which also reduces ownership costs”. If these estimated savings are applied to the 120 rolling stock/equipment due for replacement, it could save the county between **~\$60k - ~\$120k** annually in fuel costs. The data graphics and table below provide further details for this observation

SW Equipment Past Replacement Date and Exceed Usage (Mileage), by Class



Recommendation

We recommend SW review the rolling stock/equipment identified in this analysis as these exceed the criteria (useful life and mileage) for replacement. The continued use of rolling stock/equipment meeting these criteria will result in increased maintenance costs. Abated costs garnered from implementing these processes could be used to support costs associated with fleet replacement (including adding

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EVs/Hybrids to the fleet). Implementing this process would also reduce maintenance and fuel costs over the life of the fleet.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)		Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)	<i>Budget Review Partial FY23 / Remainder FY24</i>	John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

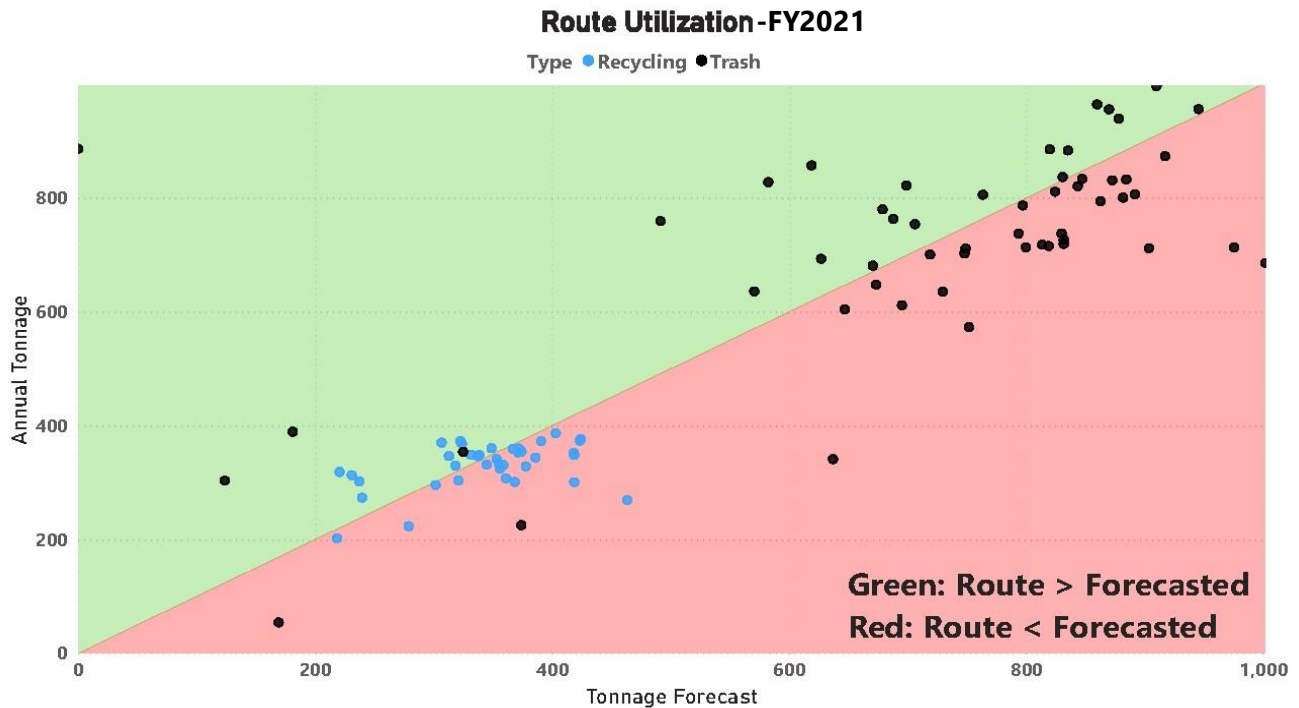
MANAGEMENT RESPONSE:

SWMP replaces 10 to 12 vehicles, three trailers and 2 to 4 pieces of heavy equipment per year. Over the past 3 budget cycles the availability and delivery of equipment has been significantly impacted, causing delays of up to 12 to 18 months. Moving forward management will review equipment age and mileage to identify and replace those units exceeding the standards, with particular emphasis on equipment with higher average overall maintenance costs.

DISPOSAL ROUTE PERFORMANCE

Observation

Included in this study was a review of the Residential Waste Route Performance for FY21. SW provides trash and recycle services to **42,915** homes in the County's Sanitary District. As of FY21, there were **54** trash pickup routes and **38** recycle pickup routes that provide these services Monday thru Friday. For this analysis, we assessed total annual tonnage collected vs projected tonnage to collect. Purported by SW staff, collection projections for trash and recycle are 35lbs and 12lbs per home weekly. For our analysis, we used these projections and converted into tonnage. The review of trash pickup route performance revealed: **31 out of 54** trash pickup routes (or **57%**) collected less than forecasted, ranging from **10.06 to 315.66 tons**, and **23 out of 54** trash pickup routes (or **43%**) collected greater than forecasted, ranging from **6.24 to 268.30 tons**. The review of recycle pickup route performance revealed: **25 out of 38** recycling pickup routes (or **66%**) collected less than forecasted, ranging from **5.83 to 193.61 tons**, and **13 out of 38** recycling pickup routes (or **34%**) collected greater than forecasted, ranging from **9.19 to 98.24 tons**. The graphic below presents the route performances by collection type:



Recommendation

We recommend SW assess the trash and recycling routes identified as greater/less than forecasted in this review to identify if routes can be consolidated, removed, or if an assessment of alternative approaches is needed. This analysis should be performed at a time or frequency deemed appropriate

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by management with existing staff. We also recommend that this type of analysis is used to perform management oversight on an annual basis. These efforts could assist in decreasing operating costs for trash and recycling services.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Christopher Herrington (Director, DPWES)	<i>July 1, 2022</i>	Christopher.Herrington@fairfaxcounty.gov
John Kellas (Deputy Director, SW)		John.Kellas@fairfaxcounty.gov
Julie Wang (FS III, SW)		Xiaojing.Wang@fairfaxcounty.gov

MANAGEMENT RESPONSE:

SWMP is currently planning for the addition of 1100 customers effective July 1, 2022. With the addition of these customers the entire route system has been reviewed, balanced, and optimized for greater efficiency and cost effectiveness. Routes were balanced primarily based on the number of homes, with projected tonnage used as a secondary measure. The resulting route structure will create five additional routes per week and provide a more equal demand for equipment on a daily basis. This will not require additional staffing as FTE demand will be approximately the same each day. Routes will be stored in a GIS database that will allow for updates as necessary to insure efficiency.

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GENERAL FUND OFFSET METHODOLOGY

Observation

Purported by the Department of Management and Budget (DMB), no formalized and documented General Fund methodology exists. Offset amounts are discussed between DMB and the respective agencies to determine offset amounts based on support service costs provided by the General Fund. The support services from the General Fund include Human Resources, Purchasing, Budget, and other administrative services. Based on our review of the Special Revenue and Enterprise Funds Approved Budgets, the offset amounts have changed over time, but there still appears to be bandwidth for adjustments. This assertion is supported with data in the above sections of this report.

Recommendation

We recommend DMB develop and document a formalized General Fund Offset methodology to be used during the annual budgeting process. Offset methodology provides a consistent approach to identifying opportunities to generate General Fund support.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Kimberly Panzer (COO, DMB)	July 1, 2023 - FY24 Budget	Kimberly.Panzer@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Indirect costs are county-wide, general management costs and consist of administrative activities for the general operation of the County such as finance, budgeting, payroll, personnel services, purchasing and information technology support. The indirect cost rate is a method of charging individual funds for their share of the indirect costs. All Solid Waste funds pay indirect costs through a general fund transfer, or offset, as referred to in this report. When initially established, the indirect cost rate established for each fund was significantly impacted by affordability. Currently, these rates range from 5% to 13.5% for Solid Waste funds. The transfer amounts have been reviewed periodically, and adjusted at times, with the latest adjustments included in the FY 2023 budget. As a result of this audit, DMB will formalize the Indirect Cost Rate review in order to provide a more consistent approach through incorporating the review into the annual budget process beginning with the FY 2024 budget. It should be noted that rates established for each fund will continue to be impacted by other factors, including affordability and other pressures facing each fund.

STATE APPROVED FEE AMOUNTS VS ACTUAL FEES

For Your Situational Awareness

Included in this study was a review of State Approved Fees vs Actual Fees charged by the County for SW and WW services. Purported by SW and WW management, no State Approved fees exist. The rates used by SW and WW are presented to and approved by the Board of Supervisors. A comparative analysis was performed on the Board approved rates to OFPA's calculated effective rates which yielded results that are being presented to management in the sections above.

This analysis was performed in lieu of a comparative analysis of State approved rates (*which do not exist*) to actual fees to accomplish this study area. **PFAW**

DRAFT

FUEL COSTS

REVIEW

DRAFT

FUEL COST REVIEW

OVERVIEW AND UPDATES

The results of this study may not highlight all the risks/exposures, process gaps, revenue enhancements and/or expense reductions which could exist. Items reported are those which could be assessed within the scheduled ***timeframe, and overall organization's data-mining results***. ***Office of Financial and Program Audit (OFPA's) studies*** are facilitated through several processes such as: sample selections, compliance support documentation and various testing approaches. There are several types of studies performed by OFPA, e.g.: performance, operational, financial, compliance, etc. To that end, it is important to note OFPA staff reserves the option to perform a holistic financial and analytical data-mining process on all data for the organization being reviewed where appropriate. This practice is most often employed to perform reviews for highly transactional studies.

This study included a review of operations, cost and use of fuel managed by the County's Department of Vehicles Services (DVS). The County participates in a cooperative purchasing program with the Metropolitan Washington Council of Governments (COG) established in 1971. The purpose of this agreement is to reduce fuel costs for participating jurisdictions using economies of scale procurements. Unleaded and diesel fuels are both supplied by Mansfield Oil under the cooperative agreement. DVS manages the County's **53** fuel pumps (of which 48 are automated), fleet of **3,852** vehicles (which includes hybrid vehicles), road-side emergency repair services, the vehicle replacement reserve fund, the County motor pool of 41 vehicles, and technical support and review for all County vehicle purchases. DVS does not maintain vehicles owned by the Water Authority, Connector Bus or FASTRAN. DVS employees work at the Government Center and at four maintenance facilities throughout the County (Alban, Jermantown, Newington and West Ox). DVS also provides management and maintenance services for the County's fleet. Voyager Fleet Credit cards are used for fuel purchases by staff when outside of the County. The cards should only be used inside the County if a County-owned fuel pump is not available or in emergencies.

Test attributes and datasets used to execute this study include: average fuel prices vs costs, fuel credit card purchases, hybrid or electric vehicle replacement status, vehicle replacement status, missing and/or non-descriptive text, and maintenance costs vs current vehicle values. The physical details on the county's fleet are housed in the M5 system; fuel procurement and usage data are maintained in the FuelForce system. We liaised with DVS staff throughout the review to align our understanding of the operations with actual practices.

DVS's goal is to provide efficient and effective delivery of vehicle fleet management services through safe, reliable, economically, and environmentally sound transportation that serve the needs of our customers while preserving the value of the vehicle and equipment investment. Through this mission, we practice sound environmental stewardship and management of county assets and resources. We provide a key capability to our customer agencies who deliver or support direct public services to maintain safe and caring communities.

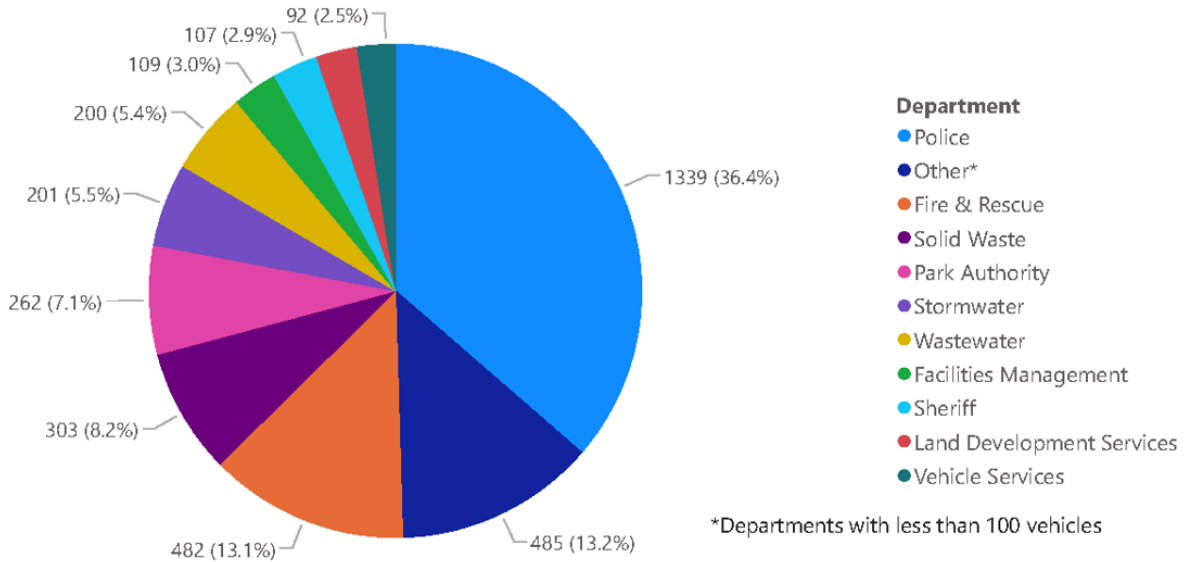
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Fuel Costs Over the Last Five Years

Fairfax County Fuel Expenses					
Fuel Type	FY2018	FY2019	FY2020	FY2021	FY2022
<i>Commercial:</i>	\$144,356	\$165,183	\$211,851	\$156,378	\$111,028
<i>Diesel:</i>	\$12,336,128	\$15,659,717	\$16,008,496	\$11,707,118	\$7,044,537
<i>Unleaded:</i>	\$3,758,912	\$4,808,317	\$4,400,724	\$3,623,681	\$3,369,265
Total:	\$16,239,396	\$20,633,218	\$20,621,071	\$15,487,177	\$10,524,830

Current Vehicle Fleet Inventory

Fairfax County Fleet Summary



OBSERVATION AND ACTION PLAN

The following table details the observation and recommendation for this study along with management's action plan to address it.

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AVERAGE FUEL PRICES VS COSTS

For Your Situational Awareness

Included in the work plan for this study was an assessment of average fuel prices vs costs paid by the County. The County participates in an agreement with the Metropolitan Washington Council of Governments to obtain fuel prices below market rates. Based on the fuel price log provided by DVS, the County's average fuel prices have been consistently lower than retail fuel prices. The table below represents a comparative analysis of the average fuel prices for FY17 – FY21:

County vs Federal ¹ EIA Retail Fuel Costs w/o Taxes					
Entity	FY17	FY18	FY19	FY20	FY21
₂ County	\$1.53	\$1.89	\$1.86	\$1.69	\$1.79
₃ Retail	\$1.74	\$2.28	\$2.03	\$1.77	\$1.94
Diff	(\$0.21)	(\$0.39)	(\$0.18)	(\$0.08)	(\$0.15)

Footnote Legend:

- ¹U.S. Energy Information Administration (EIA)
- ²Weighted DVS Average (Including \$0.125 Markup)
- ³EIA Avg Retail

Given the County fuel costs are consistently lower than retail. For these reasons we **Pass Further Audit Work** on this section.

IN-COUNTY VOYAGER FLEET CREDIT CARD TRANSACTIONS

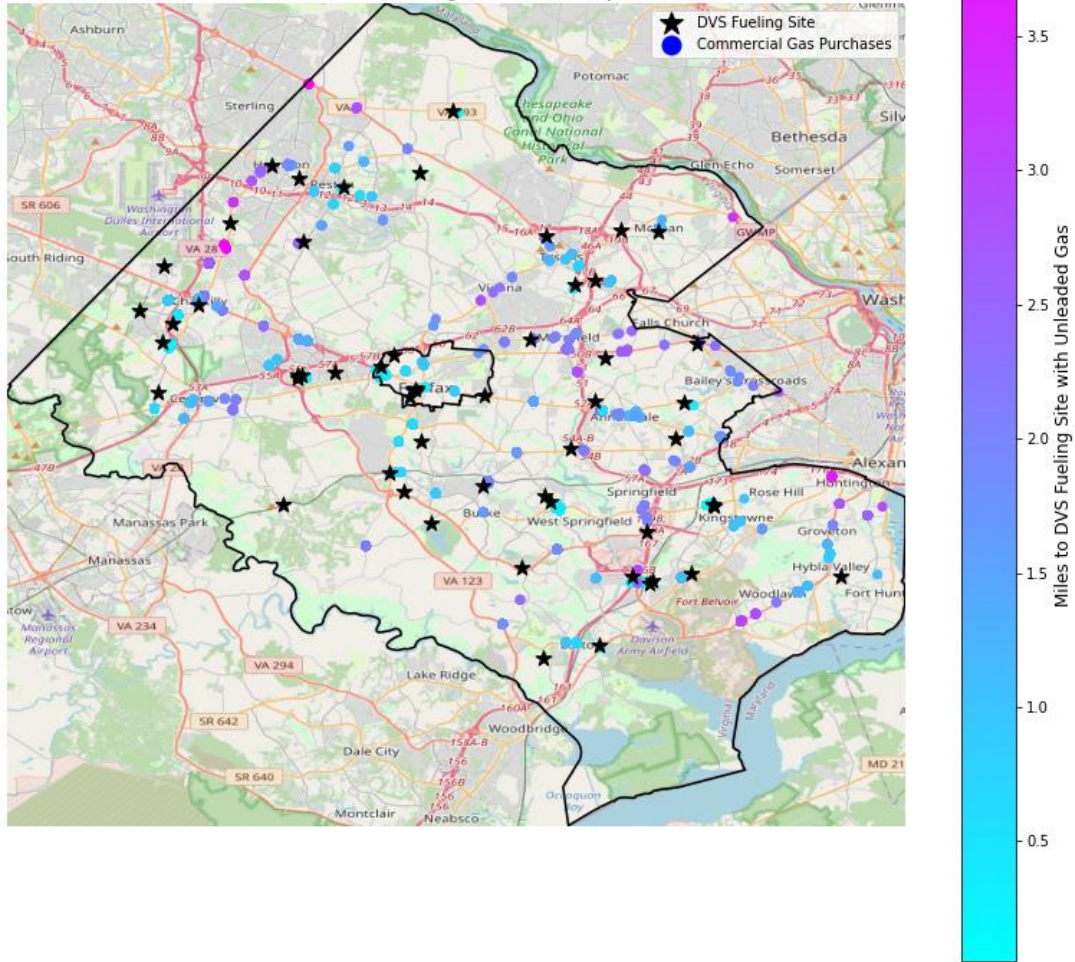
Observation

We reviewed the Voyager Fleet Credit Card usage by agencies/departments to assess the exposure of fuel purchased at retail pumps. DVS is responsible for the Voyager program oversight and card issuance. Per County Policy Procedural Memorandum No. 10-05, “fuel credit cards are primarily for use while on official business outside the County and should be used within the County only at times and locations where use of a County fuel site is not feasible”. For this analysis, we reviewed all Voyager Fleet Credit Card usage between FY17 – FY21 which included a total of **32,891** transactions. The results of this analysis were **16,713 of 32,891 or 51%** of Voyager Credit Card transactions totaling **~\$337k** occurred within the County. Some County vehicles (e.g., motorcycles) require premium fuel which is only available at retail pumps. Additionally, all County fuel pumps are not open 24/7 and some are restricted for use by specific personnel. Excluding premium fuel purchases and transactions where County fuel pumps were unavailable, we identified **5,239** in-County transactions totaling **~\$173k** within 5 miles of an available County fuel pump, which is noncompliant with memorandum guidance. Of these, **2,243** transactions totaling **~\$72K or 42%** of these purchases were within 1 mile of a county fuel pump.

The data graphics and table below provide further details regarding these in-County fuel transactions at retail pumps:

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Unleaded Gas is Commonly Purchased at Commerical Stations Near County Fuel Pumps



In County Credit Card Transactions		
Distance to County Fuel Pump (Miles)	Cost of Gas	No. of Transactions
<i>Within 1</i>	\$72,118.74	2,243
<i>Between 1 and 5</i>	\$101,191.02	2,996
<i>Within 5</i>	\$173,309.76	5,239

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Recommendation

We recommend DVS review staff fuel purchases (Voyager financial and location data), and lack of access to county pumps to identify gaps that are driving financial exposure. These processes should be incorporated in the oversight of the Voyager program’s management and card issuance.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Mark Moffatt (Director, DVS)	11/30/2022	Mark.Moffatt@fairfaxcounty.gov
Marguerite Guarino (Deputy Director, DVS)		Marguerite.Guarino@fairfaxcounty.gov
Daniel Gonzalez (Deputy Director, DVS)		Daniel.Gonzalez@fairfaxcounty.gov

MANAGEMENT RESPONSE:

DVS will review and update Procedural Memorandum No. 10-05, Control and Use of Fuel Credit Cards, to include guidance for agencies that require premium fuel that is only available at retail pumps.

Also, DVS will meet with all departments that procured fuel with a Voyager card within five miles of an operational County fuel pump. When reviewing the data closer, DVS noted that Public Safety completed 99 percent of the in-county transactions. Meeting with Public Safety agencies will help DVS understand whether the transactions were driven by operational requirements and discuss appropriate levels of oversight that can be included in the Voyager program without impacting operations.

CURRENT COUNTY VEHICLES DUE FOR EV/HYBRID REPLACEMENT (EXCLUDING SW & WW)

Observation

We identified **511 out of 3,852 (or 13%)** County vehicles exceeding useful life and mileage. As purported by DVS management, vehicles are replaced when they meet age and mileage requirements which are reviewed annually during budget development. The past due replacement months and mileage ranged between **1 to 478 months** and **1 to 196,914 miles**. The user agencies with the highest number of vehicles due for replacement include: Fairfax County Police Department (FCPD) with **296**, Fairfax County Fire & Rescue Department (FCFRD) with **73**, and Fairfax County Park Authority (FCPA) with **62**. Purported by DVS, the Board has issued a directive requiring **100%** of eligible fleet to be replaced with electric vehicles (EVs). The use of EVs would generate savings through electric charging by reducing fuel costs. Based on research, the United States Environmental Protection Agency (USEPA) states “switching one of your main cars to an EV could save your household approximately \$500–\$1,000 on fuel costs per year. EVs also tend to have lower maintenance costs than gasoline cars, which also reduces ownership costs”. If these estimated savings are applied to the 511 vehicles due for replacement, it could save the county between **~\$256k - ~\$515k** annually in fuel costs. The table and graphics below provide further details for this observation:

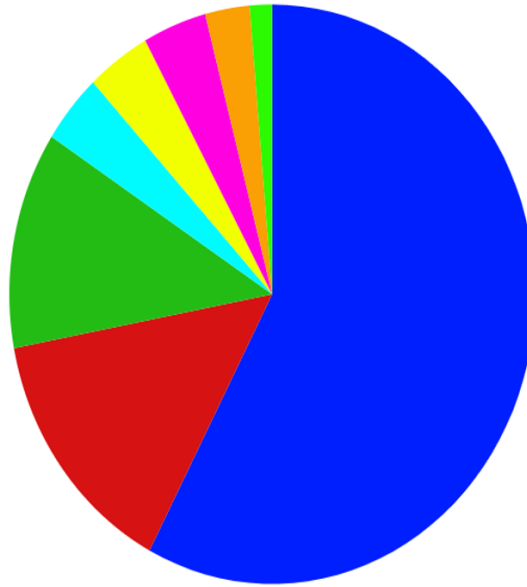
Vehicles Exceeding Usage and Useful Life	
Replacement Schedule	Count
Total Due for Replacement	511
FY22 Purchased Not in Operations	60
FY23 Scheduled for Purchase Not in Operations	141
<i>Replacement Not Purchased/Scheduled/Operations</i>	310
<i>These vehicles did not meet the criteria of our analysis.</i>	160
Additional Fleet Purchased/Scheduled Not in Operations.	160
Total Purchased by DVS	361

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Vehicles Past Replacement Date and Exceeding Expected Mileage, By Department

Department

- Police 295 (57.73%)
- Fire & Rescue 73 (14.29%)
- Park Authority 62 (12.13%)
- Other 20 (3.91%)
- Sheriff 20 (3.91%)
- Vehicle Services 20 (3.91%)
- Facilities Management 14 (2.74%)
- Transportation 7 (1.37%)



County Vehicles Exceeding Useful Life & Expected Mileage			
Department	Number of Vehicles	Total Mileage vs. Expected Mileage	Total Months Overdue for Replacement
<i>Police</i>	295	4,233,697	8,943
<i>Fire & Rescue</i>	73	3,944,430	4,218
<i>Park Authority</i>	62	98,408	5,439
<i>Other</i>	20	562,509	1,057
<i>Sheriff</i>	20	320,145	504
<i>Vehicle Services</i>	20	159,931	2,386
<i>Facilities Management</i>	14	266,420	439
<i>Transportation</i>	7	177,796	195
Total	511	9,763,336	23,181

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Recommendation

We recommend DVS review the vehicles identified in this analysis as they exceed the criteria (useful life and mileage) for replacement. The continued use of these vehicles will result in increased maintenance costs; these abated costs could be used to support costs associated with fleet replacement. Implementing this process would reduce maintenance and fuel costs over the life of the fleet.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Mark Moffatt (Director, DVS)	06/30/2023	Mark.Moffatt@fairfaxcounty.gov
Marguerite Guarino (Deputy Director, DVS)		Marguerite.Guarino@fairfaxcounty.gov
Daniel Gonzalez (Deputy Director, DVS)		Daniel.Gonzalez@fairfaxcounty.gov

MANAGEMENT RESPONSE:

At the request of the Office of Financial and Program Audit, DVS provided a spreadsheet of the active County fleet. Of the 511 units identified as exceeding the criteria (age and mileage), 201 replacements have been ordered or received, or are scheduled for replacement in FY 2023. Of the remaining balance, 310 units identified in the OFPA analysis, 95 did not meet the requirement for replacement in the FY23 budget package. The remaining 215 units are not included in the vehicle replacement fund. Examples of units that are not in the vehicle replacement fund include equipment (i.e. chipper, crane, yard pusher), trailers, units in specialty replacement funds (i.e. Fire and Rescue Apparatus and Ambulance, Boat, Police Specialty, FASTRAN), and units owned by Volunteer Fire and Rescue. Staff will review the identified vehicles in the analysis provided by OFPA for appropriate action. Staff is also incorporate and distribute processes to partnering agencies re: useful life and maintenance cost analysis to assist in managing the County's fleet.

VEHICLES EXCEEDING USEFUL LIFE/USAGE/MAINTENANCE

Observation

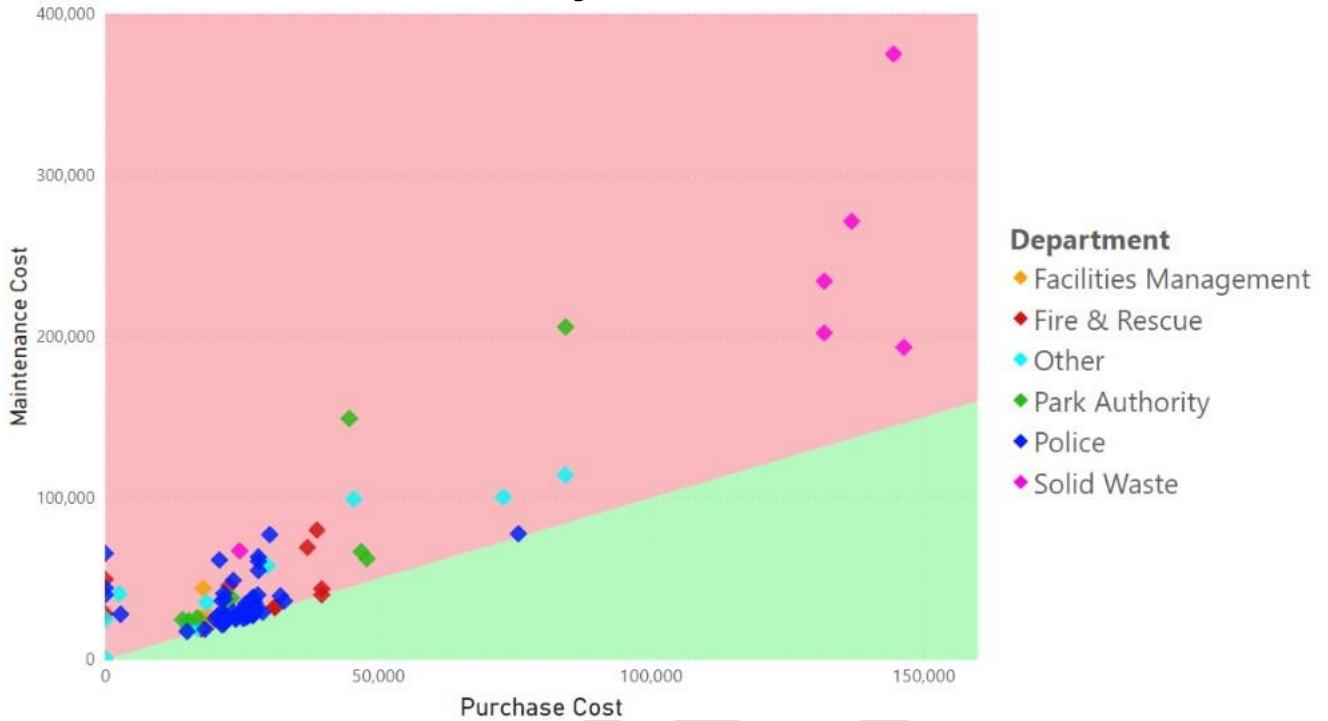
During our review of the County vehicle fleet, we identified **130 out of 3,852** vehicles where the life-to-date (LTD) maintenance costs exceed the original purchase costs. Increased maintenance costs can result from vehicle age and usage (mileage). **130 out of 3,852** vehicles exceed useful life, expected usage, and had maintenance costs greater than original purchase cost. The ranges of exposures are: useful life (**1 to 125 months**), usage (**516 to 166,235 miles**), and maintenance costs (**\$728 to \$375k**). The total LTD maintenance costs are **~\$6.01M** (for the 130 vehicles) of which **~\$2.46M** (for the 130 vehicles) were expended on vehicles with maintenance costs greater than the original vehicle purchase costs. The LTD maintenance costs were more than double original purchase costs for **15 out of 130** vehicles.

Further to the maintenance cost analysis whereby these costs exceeded current vehicle value, in our prior June 2019 Vehicle Replacement study we recommended DVS enhance the current process to include analytics such as maintenance thresholds (e.g., **30%**) greater that current value is replaced. We selected a new sample of **30** vehicles to compare current values vs maintenance costs. This analysis could not be performed over the full population of **130** vehicles due to missing information in data fields in the file provided (purchase cost, expected usage, meter, etc.) and the complexity of obtaining vehicle fair market values. For **30** vehicles sampled, the LTD maintenance costs exceeded current value between **~\$15.7k to ~\$320.4k**. Total maintenance costs exceeded current values by **~\$2.2M**.

The data graphics and table below provide further details regarding these vehicles by agency/department:

**Fairfax County
Office of Financial and Program Audit**

Maintenance Cost Exceeding Purchase Cost YTD FY2021 (Count: 130)



Vehicle Maintenance vs Purchase Cost

Department	Number of Vehicles	Maintenance Cost	Purchase Cost	Cost Differential
<i>Police</i>	84	\$2,805,439.49	\$2,093,367.49	\$712,072.00
<i>Other</i>	11	\$540,171.01	\$307,284.82	\$232,886.19
<i>Fire & Rescue</i>	10	\$440,683.68	\$257,984.23	\$182,699.45
<i>Facilities Mngmnt</i>	10	\$250,848.13	\$182,661.90	\$68,186.23
<i>Park Authority</i>	9	\$632,035.63	\$316,025.35	\$316,010.28
<i>Solid Waste</i>	6	\$1,343,884.14	\$716,283.44	\$627,600.70
Total	130	\$6,013,062.08	\$3,873,607.23	\$2,139,454.85

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Recommendation

We recommend DVS update and document the vehicle replacement criteria to include a maintenance cost evaluation. This enhancement should assist management with oversight of vehicles to be replaced with a focus on those with the highest maintenance costs.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Mark Moffatt (Director, DVS)	11/30/2022	Mark.Moffatt@fairfaxcounty.gov
Marguerite Guarino (Deputy Director, DVS)		Marguerite.Guarino@fairfaxcounty.gov
Daniel Gonzalez (Deputy Director, DVS)		Daniel.Gonzalez@fairfaxcounty.gov

MANAGEMENT RESPONSE:

Of the 130 vehicles identified as having maintenance costs greater than the purchase price 75 are scheduled to be replaced in FY 2022 or FY 2023. The remaining 55 units are not included in the vehicle replacement fund or did not meet replacement criteria when the FY 2023 budget was drafted. DVS uses fleet management software for preventative maintenance scheduling, work order and labor tracking, and parts and inventory tracking. The software extends the useful life of vehicles by keeping up with effective maintenance schedules and documentation. Technicians can view assigned work, look-up asset information and maintenance history, which is discussed with management when work exceeds the value of the vehicle. DVS will document the maintenance cost evaluation in the replacement criteria guidance and include in the FY 2024 Budget Review.

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INCOMPLETE VEHICLE AND FUEL DATA

Observation

A review of the M5 and FuelForce system data files provided by DVS for this study revealed critical data attributes with information left blank or incomplete. We identified a total of **3,760** data fields with missing information and **1,097** data fields with incomplete information. Maintaining complete and accurate information in these systems improves the staff's ability to track vehicle usage, purchase costs, maintenance costs, expected usage, vehicle replacement and other critical processes needed for oversight.

The data table below provides further details regarding these missing and incomplete data:

Fuel Study Missing Data and Incomplete Data				
File Dataset	% of Missing Data	% of Incomplete Data	Missing Data	Incomplete Data
Fleet Inventory	0.03%	17.02%	1	627
Fleet Replacement Criteria	2.61%	0.03%	96	1
Mansfield Voyager	38.66%	0.00%	2,264	0
County Pump Transaction	0.43%	0.15%	1,399	469

Recommendation

We recommend DVS obtain and complete the missing/incomplete information in the M5 and FuelForce systems. This enhancement would assist staff in oversight of the vehicle fleet including fuel related retail purchases and fleet replacements.

Action Plan

Point of Contact	Target Implementation Date	Email Address
Mark Moffatt (Director, DVS)	12/31/2022	Mark.Moffatt@fairfaxcounty.gov
Marguerite Guarino (Deputy Director, DVS)		Marguerite.Guarino@fairfaxcounty.gov
Daniel Gonzalez (Deputy Director, DVS)		Daniel.Gonzalez@fairfaxcounty.gov

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MANAGEMENT RESPONSE:

DVS understands the importance of maintaining complete and accurate data. A high percentage of the missing data was for the Mansfield Voyager File Dataset, which is maintained by Mansfield. DVS will review the database and meet with representatives from Mansfield to update fields with missing data. Incomplete fleet inventory and replacement data will require additional review as fields of importance to some vehicles are not used by other vehicles. For example, public safety units are replaced by age and the mileage field is not populated. Also, fuel systems are not customized to Fairfax County and standard reports often contains fields that are not populated because they are not used/necessary.

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HYBRID OR ELECTRIC VEHICLE REPLACEMENT STATUS

For Your Situational Awareness

Included in the work plan for this study was an assessment of hybrid and electric vehicle replacement status. The replacement processes were thoroughly reviewed and reported out in this document. Based on the vehicle fleet inventory file provided by DVS, **169 of the 3,852 (or 4%)** vehicles in the fleet are hybrid and electric vehicles. OFPA performed research to identify cost savings if more hybrid vehicles were procured when vehicles are replaced. Given the low hybrid and electric vehicle count and equally low mileage, a linear analysis did not prove valuable for reporting. The **~\$27k** of financial exposure identified for this limited population was deemed di minimis. For these reasons we **Pass Further Audit Work** on this section. We recommend a commissioned study be given consideration.

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ADDENDUM SHEET

OFPA (June 2022 /Agency Report and/or Debriefing)

6/14/2022

The table below lists discussions from the Audit Committee.

<i>Location in Report</i>	<i>Comments</i>

~End~

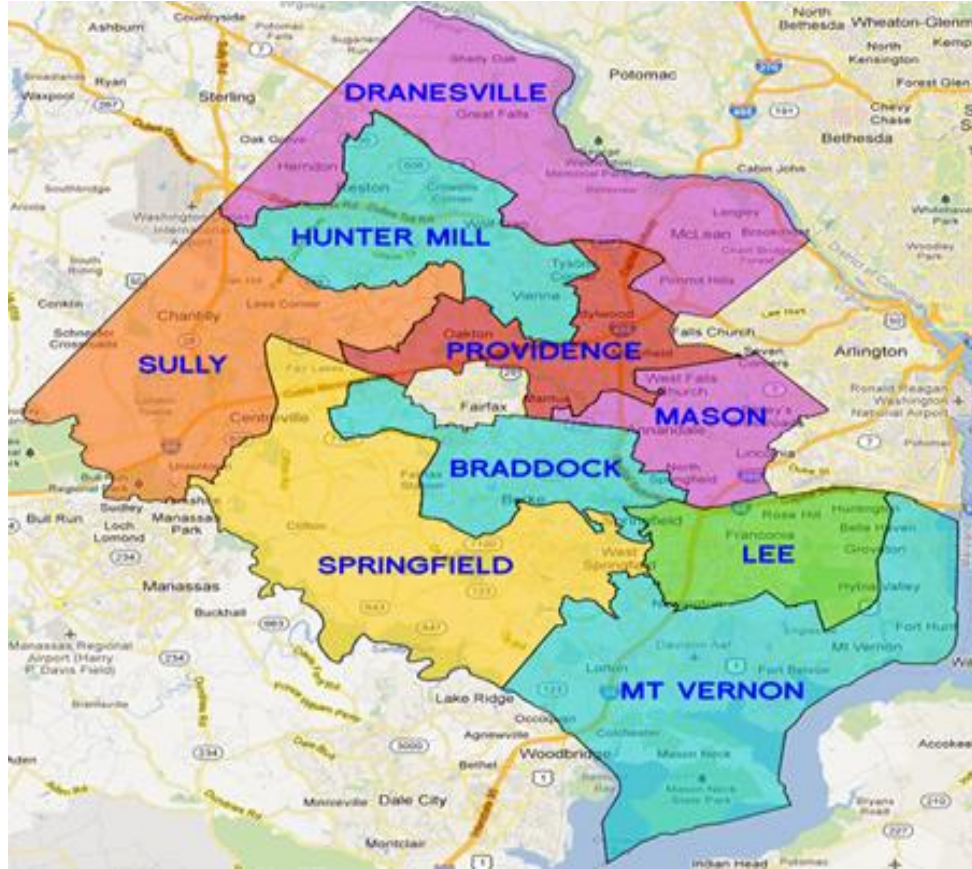
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LIST OF ACRONYMS

AC	Audit Committee
BOS	Board of Supervisors
COG	Council of Governments
DMB	Department of Management and Budget
DPWES	Department of Public Works and Environmental Services
DVS	Department of Vehicle Services
E/RRF	Energy Resource Recovery Facility
EV	Electric Vehicle
FCFRD	Fairfax County Fire & Rescue Department
FCPA	Fairfax County Park Authority
FCPD	Fairfax County Police Department
FTE	Full-Time Equivalent
FY	Fiscal Year
GIS	Geographic Information System
IRS	Internal Revenue Service
LDS	Land Development Services
LDS	Land Development Services
LTD	Life-to-Date
OFPA	Office of Financial and Program Audit
PFAW	Pass Further Audit Work
SW	Solid Waste Management Program
USEPA	United States Environmental Protection Agency
WW	Wastewater Management Program

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www.fairfaxcounty.gov/boardauditor
**Office of the Financial and Program Audit
12000 Government Center Parkway, Suite 233
Fairfax, Virginia 22035**